brisbane australia

IT'S LIVE! in Queensland

Congress Program

Australasian International Breast Congress (AIBC)

Australasian Society for Breast Disease

World Congress on Controversies in Breast Cancer (CoBrCa)

BREAST SURGEONS of Australia & New Zealand

Brisbane, Australia
October 13-15, 2022

www.aib-congress.org

Timetable

Thursday, October 13, 2022

	Hall A (Great Hall 1)	Hall C (Room M1)	Hall D (Room M2)
08:30-10:00	**Pre-Congress Workshop 1:** Breast cancer in young women: Understanding differences to optimise outcomes	**Pre-Congress Workshop 2:** Contrast based breast imaging	**Pre-Congress Workshop 3:** Bioethical dilemmas
10:00-10:20	Coffee break		
10:20-11:30	**Pre-Congress Workshop 1 ctd:**	**Pre-Congress Workshop 2 ctd:**	**Pre-Congress Workshop 3 ctd:**
11:30-12:30	*Lunch break*		
12:30-14:00	**Pre-Congress Workshop 4:** Hereditary breast cancer	**Pre-Congress Workshop 5:** Radiation oncology: Clinical updates and clinical challenges	**Pre-Congress Workshop 6:** Challenging communication
14:00-14:20	*Coffee break*		
14:20-15:30	**Pre-Congress Workshop 4 ctd:**	**Pre-Congress Workshop 5 ctd:**	**Pre-Congress Workshop 6 ctd:**
15:30-16:00	*Break*		
16:00-16:15	**Congress Opening**		
16:15-17:45	**Plenary Session 1:** Neoadjuvant therapy		
17:45	*Networking Reception*		

Friday, October 14, 2022

	Hall A (Great Hall 1)	Hall B (Great Hall 2)	Hall C (Room M1)
07:30-08:30	**Morning Industry Symposium:*** The role of Enhertu (trastuzumab-deruxtecan) in changing the treatment paradigm for HER2-positive Metastatic Breast Cancer *Supported by AstraZeneca*	**Morning Industry Symposium:*** DCISionRT: Personalising treatment for women with DCIS *Supported by GenesisCare/PreludeDX*	**Morning Industry Symposium:*** Risk adjusted screening *Suported by Hologic*
08:30-09:30	**Parallel Session 2:** Screening	**Parallel Session 3:** Fear of cancer recurrence	**Industry Symposium:** Evolution of treatment sequencing in patients with mTNBC *Supported by Gilead*
09:30-11:00	**Plenary Session 4:** Genetics		
11:00-11:30	*Coffee break, poster viewing and exhibition visit*		
11:30-12:30	**Parallel Session 5:** Lymphoedema	**Industry Symposium:** Improving outcomes in high-risk HER2-positive patients post-KATHERINE *Supported by an educational/research sponsorship by Roche*	**Industry Symposium:** Touch and go: Removing the guesswork in detecting residual cancer *Supported by OncoRes*
12:30-13:30	*Lunch break, poster viewing and exhibition visit*		
13:30-14:30	**Parallel Session 6:** DCIS	**Parallel Session 7:** Triple negative breast cancer	**Parallel Session 8:** Free Papers: Supportive care
14:30-15:50	**Parallel Session 9:** Adjuvant endocrine therapy		**Parallel Session 10:** Free Papers: Locoregional therapy
15:50-16:10	*Coffee break, poster viewing and exhibition visit*		
16:10-17:30	**Parallel Session 11:** Imaging	**Parallel Session 12:** Metastatic breast cancer	

Saturday, October 15, 2022

	Hall A (Great Hall 1)	Hall B (Great Hall 2)	Hall C (Room M1)
07:30-08:30	**Morning Industry Symposium:*** Future-proofing breast surgical guidance with Sentimag® A total magnetic conversion *Supported by Endomag/GRC Surgical*	**Morning Industry Symposium:*** Time to start CDK4&6 inhibition in EBC: Verzenio in HR+ HER2- node positive EBC at high risk of recurrence *Supported by Lilly*	**Morning Industry Symposium:*** The role of the nurse in assessing, triaging and managing metastatic TNBC *Supported by Gilead*
08:30-10:00	**Parallel Session 13:** Controversies in reconstruction	**Parallel Session 14:** Survivorship	**Parallel Session 15:** Free Papers: Medical oncology
10:00-11:00	**Parallel Session 16:** Locoregional therapy	**Industry Symposium:** A CDK4/6i is a 'once in a lifetime treatment' for patients with HR +ve HER2 -ve breast cancer *Supported by Novartis*	
11:00-11:30	*Coffee break, poster viewing and exhibition visit*		
11:30-13:00	**Parallel Session 17:** Local therapy	**Parallel Session 18:** HER2 positive disease	
13:00-14:00	*Lunch break, poster viewing and exhibition visit*	**Lunch Industry Symposium:**** Innovative approaches to help improve patient outcomes: Case-based discussion *Supported by 3M*	
14:00-15:00	**Plenary Session 19:** Palliative care		
15:00-16:15	**Plenary Session 20:** Breast Cancer 2030		
16:15-16:30	**Congress closing and Award presentation**		

*Breakfast will be served to session participants from 07:00-07:30 **Lunch boxes will be served to session participants

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Welcome Letter

Dear Friends and Colleagues,

We are pleased to welcome you to the Australasian International Breast Congress (AIBC) held jointly with the Australasian Society for Breast Disease (ASBD), 6th World Congress on Controversies in Breast Cancer (CoBrCa), and Breast Surgeons of Australia and New Zealand (BreastSurgANZ) in Brisbane, Australia.

The Joint Congress will continue the tradition of directly addressing key issues facing clinicians in their daily practice, including medical oncology, surgery, radiation oncology, breast imaging, pathology, reconstruction, allied health and survivorship issues.

We are delighted to have assembled a stellar international and national faculty and thank all those who have agreed to participate and those who have submitted abstracts.

We would like to thank the supporters, without whose backing, this congress could not take place, as well as all of you who have travelled from across the country or the world to attend the congress.

We look forward to your participation in the sessions and trust that it is an informative and enjoyable experience.

Enjoy your time in the beautiful city of Brisbane.

Sincerely,

Congress Chairpersons

Elisabeth Elder, *Australia*
Australasian Society for Breast Diseases (ASBD)

Bruce Mann, *Australia*
6th World Congress on Controversies in Breast Cancer (CoBrCa)

Melanie Walker, *Australia*
Breast Surgeons of Australia and New Zealand (BreastSurgANZ)

Message from the Minister for Tourism, Sport and Innovation and Minister Assisting the Premier on Olympics and Paralympics Sport and Engagement

Welcome to the Australasian International Breast Congress (AIBC), a highlight on the *It's Live in Queensland* events calendar and a wonderful opportunity to showcase Brisbane as a tourism destination.

The Brisbane community is grateful to welcome visitors who fill their cafes and restaurants, stay in their accommodation, use local transport and explore our unique tourism experiences.

That's why we support events through Tourism and Events Queensland's Business Events Fund because they bring a welcomed boost to the local community and supports local jobs.

Events like the Australasian International Breast Congress (AIBC) allows friends and family to reconnect and creates community pride. We hope you enjoy your stay and return again in the near future.

Be sure to immerse yourself in the local culture and get the opportunity to explore some of our world-class tourism experiences in this beautiful region.

Congratulations to the event organisers and volunteers – we wish you all the best for a successful event.

The Hon. Stirling Hinchliffe MP
Minister for Tourism, Sport and Innovation and
Minister Assisting the Premier on Olympics and
Paralympics Sport and Engagement

General Information

Congress Venue

Brisbane Convention & Exhibition Centre
Brisbane, Australia
www.bcec.com.au

Language

The official language of the Congress is English.

Registration Desk

The registration desk will be open at the BCEC during the following hours:

Thursday, October 13, 2022	07:30-18:30
Friday, October 14, 2022	06:45-17:30
Saturday, October 15, 2022	06:45-16:30

Name badge

All participants are kindly requested to wear their name badges throughout the congress in order to be admitted to the lecture halls and scheduled activities.

Certificate of attendance (non CME/CPD)

Certificates of attendance will be sent electronically to all registered participants after the congress.

Exhibition Hours

The exhibition area is open during the following hours:

Thursday, October 13, 2022	17:30-18:45
Friday, October 14, 2022	09:00-16:30
Saturday, October 15, 2022	09:00-14:00

Clothing

Business casual for all occasions

Smoking policy

This is a non-smoking event

Refreshments

A Networking Reception will be held on Thursday, October 13, 2022 at 17:45.

Breakfast will be served outside session halls prior to the morning symposia at 07:00 on Friday, October 14 and Saturday, October 15, 2022.

Coffee and lunch will be served in the exhibition area during the breaks throughout the congress.

Speakers' Preview Room

Invited speakers and oral presenters are invited to visit the Speaker's Preview Room to upload their presentations. The Centre is situated in M10 on the Mezzanine Level.

Poster Display

Please check the Scientific Program for the board number on which you should display your poster(s).
There will be 2 poster shifts as follows:

Shift 1 (P01-P37)

Posters should be mounted between 17:00-17:30 on Thursday, October 13 and removed by 13:00 on Friday, October 14.

Shift 2 (P38-P76)

Posters should be mounted between 14:00-14:30 on Friday, October 14 and removed by 14:00 on Saturday, October 15.

Safety and Security

Please do not leave any bags or suitcases unattended at any time, whether inside or outside session halls.

Liability

The Congress Secretariat and Organizers cannot accept liability for personal accidents or loss or damage to private property of participants either during or directly arising from the Australasian International Breast Congress (AIBC). Participants should make their own arrangements with respect to health and travel insurance.

Congress Organizer

Congress Organizer

CongressMed

www.congressmed.com

CPD Accreditation

Australian College of Nursing (ACN)

This congress is endorsed by ACN according to their Continuing Professional Development (CPD) Endorsed Course Standards. It has been allocated 24 CPD hours according to the Nursing and Midwifery Board of Australia – Continuing Professional Development Standard.

This is also valid for virtual participation.

The Royal Australian and New Zealand College of Radiologists (RANZCR)

A total of 20.75 RANZCR CPD hours can be claimed for attendance at the Australasian International Breast Congress (AIBC).

7 CPD hours may be claimed for attendance on 13/10/2022.

7.25 CPD hours may be claimed for attendance on 14/10/2022.

6.5 CPD hours may be claimed for attendance on 15/10/2022.

For anyone who attends only part of a session, CPD hours may be claimed pro rata at 1 hour per hour.

This is also valid for virtual participation.

Royal Australasian College of Surgeons (RACS)

This educational activity has been approved in the RACS CPD Program and qualifies for 23 points in Educational Activities. RACS Fellows, Specialist International Medical Graduates (SIMGs) and surgeons participating in the RACS CPD Program can claim one point per hour in Educational Activities.

Participation in this activity will be entered into your RACS CPD which can be accessed through ehub.

This is also valid for virtual participation.

The Royal Australian College of General Practitioners (RACGP)

Fellows of the Royal Australian College of General Practitioners (RACGP) may claim CPD points via quick log www.racgp.org.au

This is also valid for virtual participation.

Society profiles

Australasian Society for Breast Disease

Australasian Society for Breast Disease (ASBD)

The Australasian Society for Breast Disease (ASBD) is the only multidisciplinary society for medical professionals with an interest in the prevention, diagnosis, treatment and research aspects of breast disease. ASBD provides professional development, online education, resources, cross discipline education and networking opportunities to medical professionals. The society structure reflects the multidisciplinary model for breast cancer diagnosis and management.

ASBD's mission is to strive to improve outcomes for patients with breast disease by fostering education and multidisciplinary collaboration. Our members come from all Australian States, New Zealand and the Pacific region. ASBD celebrates its 25th anniversary in 2022.

www.asbd.org.au

BREAST SURGEONS of Australia & New Zealand

Breast Surgeons of Australia and New Zealand (BreastSurgANZ)

BreastSurgANZ is the peak professional body representing over 400 plus member surgeons treating benign and malignant breast disease across Australia and New Zealand.

Our mission is to ensure best practice standards of patient care are upheld by developing expertise in breast surgery and treatment. To achieve this, we actively encourage the evolution of breast surgery practice and the expansion of the surgical and oncological skills of our members. We prioritise ongoing knowledge and learning and actively influence public policy and best practice guidelines around breast cancer management.

For more information on our Society and membership please visit www.breastsurganz.org

World Congress on Controversies in Breast Cancer (CoBrCa)

World Congress on Controversies in Breast Cancer (CoBrCa)

The World Congress on Controversies in Breast Cancer (CoBrCa) was founded in 2015 by Professors Bruce Mann (Australia), Richard DeBoer (Australia), Javier Cortes (Spain) and Alastair Thompson (USA) in collaboration with CongressMed Ltd., a Tel-Aviv based leader in innovative medical education.

CoBrCa is based on the worldwide successful concept of controversies in medicine in a wide range of medical specialties. CoBrCa addresses the most controversial topics in breast cancer management with key issues explored and audience participation encouraged. Through debates and ample time for expert-audience discussions, the congress focuses on issues faced by clinicians in daily practice and strives to provide practical take-home messages. The CoBrCa Scientific Program is aimed for medical oncologists, breast surgeons, radiologists, nurses and others to meet and debate novel treatments.

Since its launch, CoBrCa has been held in Melbourne, Barcelona, Tokyo, San Francisco and Brisbane. The 7th edition of CoBrCa will be held in Dubai on Sep 7-9, 2023 (www.cobrca.org).

Scientific Program

Thursday, October 13, 2022

08:30-11:30 **Pre-Congress Workshop 1:**
Breast cancer in young women: Understanding differences to optimise outcomes

Hall A (Great Hall 1)

Chairpersons: **Sanjeev Kumar,** *Sydney, Australia*
Jenny Gilchrist, *Sydney, Australia*

08:30-09:00 Fertility and breast cancer
Ying Li, *Sydney, Australia*

09:00-09:30 Management of menopausal side effects
Martha Hickey, *Melbourne, Australia (virtual)*

09:30-10:00 Goserelin (Zoladex) in young women
Prudence Francis, *Melbourne, Australia*

10:00-10:20 *Coffee break*

10:20-11:10 The art of oncology: Treating young women with a focus on pregnancy after breast cancer
Ann Partridge, *Boston, MA, USA (virtual)*

11:10-11:30 Q&A

08:30-11:30 **Pre-Congress Workshop 2:**
Contrast based breast imaging

Hall C (Room M1)

Chairperson: **Nick Repin,** *Lismore, Australia*

08:30-08:35 Welcome
Nick Repin, *Lismore, Australia*

08:35-08:55 Implementation of Contrast Imaging: Challenges and opportunities
Allison Rose, *Melbourne, Australia*

08:55-09:40 Indications for Contrast Imaging
Julia Camps Herrero, *Valencia, Spain*

09:40-10:00 Contrast Enhanced Mammography (CEM) in surveillance
Allison Rose, *Melbourne, Australia*

10:00-10:30 *Coffee break*

10:30-11:30 MDM hypothetical-case presentations and discussion
Julia Camps Herrero, *Valencia, Spain*
Allison Rose, *Melbourne, Australia*
Bruce Mann, *Melbourne, Australia*
Michael Christie, *Melbourne, Australia (virtual)*

08:30-11:30 **Pre-Congress Workshop 3:**
Bioethical dilemmas: Q&A, cases and discussion

Hall D (Room M2)

Chairperson: **Jennifer O'Sullivan,** *Sydney, Australia*

08:30-10:00 Cases and discussion
David Kirchhoffer, *Brisbane, Australia*
Bridget Pratt, *Brisbane, Australia*

10:00-10:20 *Coffee break*

10:20-11:30 Cases and discussion contd.

11:30-12:30 *Lunch break*

12:30-15:30 **Pre-Congress Workshop 4:**
Hereditary breast cancer

Hall A (Great Hall 1)

Chairperson: **Nirmala Pathmanathan,** *Sydney, Australia*

12:30-15:30 Management of common genetic predisposition syndromes
Milita Zaheed, *Sydney, Australia*

13:20-14:00 The "extended panel" of genetic testing; implications and management
Helen Mar Fan, *Brisbane, Australia*

14:00-14:20 *Coffee break*

14:20-14:55 Molecular mechanisms, diagnostic and therapeutic implications of hereditary breast cancer syndromes
Sunil Lakhani, *Brisbane, Australia*

14:55-15:30 Psychological impact and management of patients with hereditary breast cancer
Jemma Gilchrist, *Sydney, Australia (virtual)*

12:30-15:30 **Pre-Congress Workshop 5:**
Radiation oncology: Clinical updates and clinical challenges

Hall C (Room M1)

Chairperson: **Marcus Dreosti,** *Adelaide, Australia*

Speakers: **Frank A. Vicini,** *Royal Oak, MI, USA*
Boon Chua, *Sydney, Australia*

Topics:

1. DCIS – Clinical decision making for adjuvant radiation therapy reflections on BIG 3-07/TROG 07.01 and the evolving use of biomarker tools and consideration of potentially radiation refractory disease.
2. Tailoring the management of low-risk invasive disease - where do we sit in 2022? Perspectives on partial breast radiation and techniques and radiation omission data and controversies.
3. Optimising locoregional radiation therapy following neoadjuvant systemic therapy in node positive patients including updates from NSABP-51 and other trials.

14:00-14:20 *Coffee break*

14:20-15:30 **Q&A**

12:30-15:30 **Pre-Congress Workshop 6: Challenging communication** — **Hall D (Room M2)**

Chairperson: **Jenny Gilchrist,** *Sydney, Australia*

12:30-14:00 Cases and discussion
Jane Turner, *Brisbane, Australia*

14:00-14:20 *Coffee break*

14:20-15:30 Cases and discussion contd.

15:30-16:00 *Break*

16:00-16:15 **Congress Opening** — **Hall A (Great Hall 1)**

Chairperson: **Bruce Mann,** *Melbourne, Australia*

Welcome to Country

Welcome from Congress chairpersons

16:15-17:45 **Plenary Session 1: Neoadjuvant therapy** — **Hall A (Great Hall 1)**

Chairpersons: **Elisabeth Elder,** *Sydney, Australia*
Richard de Boer, *Melbourne, Australia*

16:15-16:45 **DEBATE:** That cT1cN0 HER2+ve and TNBC should have NAST
16:15 **Yes: Alistair Ring,** *London, UK*
16:25 **No: Nicholas Wilcken,** *Sydney, Australia*
16:35 Discussion

16:45-17:15 **Lessons learnt:** The UK experience of Neo Adjuvant Endocrine Therapy (NAET) during the COVID-19 pandemic
Stephen Johnston, *London, UK (virtual)*

17:15-17:45 **DEBATE:** That LN positive patients achieving pCR with NAST should still receive regional nodal radiotherapy
17:15 **Yes: Frank A. Vicini**, *Royal Oak, MI, USA*
17:25 **No: Steven David,** *Melbourne, Australia*
17:35 Discussion

17:45 **Networking Reception**

Friday, October 14, 2022

07:30-08:30 **Morning Industry Symposium:**
The role of Enhertu (trastuzumab-deruxtecan) in changing the treatment paradigm for HER2-positive Metastatic Breast Cancer
Supported by AstraZeneca

Hall A (Great Hall 1)

Breakfast will be served prior to the session
For full details, please refer to page 106

07:30-08:30 **Morning Industry Symposium:**
DCISionRT: Personalising treatment for women with DCIS
Supported by GenesisCare/PreludeDX

Hall B (Great Hall 2)

Breakfast will be served prior to the session
For full details, please refer to page 106

07:30-08:30 **Morning Industry Symposium:**
Risk adjusted screening
Supported by Hologic

Hall C (Room M1)

Breakfast will be served prior to the session
For full details, please refer to page 107

08:30-09:30 **Parallel Session 2:**
Screening

Hall A (Great Hall 1)

Chairpersons: **Allison Rose,** *Melbourne, Australia*
Owen Ung, *Brisbane, Australia*

08:30-08:45 Tailored screening: The Netherlands experience
Ritse Mann, *Nijmegen, The Netherlands*

08:45-09:15 **DEBATE:** That women at low risk for breast cancer should only be screened every 5 years
08:45 **Yes: Christobel Saunders**, *Melbourne, Australia*
08:55 **No: Jane Fox, Melbourne**, *Australia*
09:05 Discussion

09:15-09:30 Risk adjusted screening: Considerations and lessons from COVID-19
Carolyn Nickson, *Melbourne, Australia*

08:30-09:30 **Parallel Session 3:**
Fear of cancer recurrence

Hall B (Great Hall 2)

Chairpersons: **Kerry Shanahan,** *Melbourne, Australia*
Belinda Yeo, *Melbourne, Australia*

08:30-08:50 Fear of cancer recurrence: What is it, and how common is it?
Jane Turner, *Brisbane, Australia*

08:50-09:10 Is it possible to conquer fear of recurrence?
Charlotte Tottman, *Adelaide, Australia*

09:10-09:30 Discussion

08:30-09:30 **Industry Symposium:**
Evolution of treatment sequencing in patients with mTNBC
Supported by Gilead
Hall C (Room M1)

For full details, please refer to page 107

09:30-11:00 **Plenary Session 4:**
Genetics
Hall A (Great Hall 1)

Chairpersons: **Nicole McCarthy,** *Brisbane, Australia*
Jane Fox, *Melbourne, Australia*

09:30-10:10 **DEBATE:** That ~all patients with breast cancer should be panel tested for germline mutations
09:30 **Yes: Yoland Antill,** *Melbourne, Australia*
09:45 **No: Helen Mar Fan,** *Brisbane, Australia*
10:00 Discussion

10:10-10:35 The 'new genes': What do they mean for patients and families?
Paul James, *Melbourne, Australia*

10:35-11:00 Tailored treatments for BRCA+ early breast cancer: The time is now!
Mark Robson, *New York, NY, USA (virtual)*

11:00-11:30 *Coffee break, poster viewing and exhibition visit*

11:30-12:30 **Parallel session 5:**
Lymphoedema
Hall A (Great Hall 1)

Chairpersons: **Kerry Patford,** *Benalla, Australia*
Rajiv Dave, *Manchester, UK*

11:30-11:50 What is the evidence behind advice regarding lymphoedema prevention?
Louise Koelmeyer, *Sydney, Australia*

11:50-12:10 Evidence based treatment modalities for established lymphoedema: What works? What doesn't?
Robyn Box, *Brisbane, Australia*

12:10-12:30 Discussion

11:30-12:30 **Industry Symposium:**
Improving outcomes in high-risk HER2-positive patients post-KATHERINE
Supported by an educational/research sponsorship by Roche
Hall B (Great Hall 2)

For full details, please refer to page 107

11:30-12:30 **Industry Symposium:**
Touch and go: Removing the guesswork in detecting residual cancer
Supported by OncoRes
Hall C (Room M1)

For full details, please refer to page 107

12:30-13:30 *Lunch break, poster viewing and exhibition visit*

13:30-14:30 **Parallel Session 6: DCIS**

Hall A (Great Hall 1)

Chairpersons: **Steven David,** *Melbourne, Australia*
Caroline Baker, *Melbourne, Australia*

13:30-14:00 **DEBATE:** That most patients with DCIS should have radiotherapy after Breast Conserving Surgery
13:30 **Yes: Boon H. Chua,** *Sydney, Australia*
13:40 **No: Alastair Thompson,** *Houston, TX, USA*
13:50 Discussion

14:00-14:30 **DEBATE:** That active surveillance for low risk DCIS is a reasonable option
14:00 **Yes: Jocelyn Lippey,** *Melbourne, Australia*
14:10 **No: Heidi Peverill,** *Brisbane, Australia*
14:20 Discussion

13:30-14:30 **Parallel Session 7: Triple negative breast cancer**

Hall B (Great Hall 2)

Chairpersons: **Nicholas Wilcken,** *Sydney, Australia*
Catherine Shannon, *Brisbane, Australia*

13:30-14:10 **DEBATE:** Immunotherapy should be part of standard of care in neoadjuvant treatment for TN ESBC
13:30 **Yes: Javier Cortes,** *Madrid, Spain*
13:45 **No: Alistair Ring,** *London, UK*
14:00 Discussion

14:10-14:30 TNBC subtypes and their clinical significance
Nirmala Pathmanathan, *Sydney, Australia*

13:30-14:30 **Parallel Session 8: Free Papers: Supportive Care**

Hall C (Room M1)

Chairpersons: **Yoland Antill,** *Melbourne, Australia*
Marisa Stevens, *Melbourne, Australia*

13:30-13:40 "Linking risk with screening" – the impact of an online decision aid for risk-stratified breast screening on understanding, acceptance and decision-making
Jocelyn Lippey, *Melbourne, Australia*

13:40-13:50 What is women with breast cancers' experience and perception of genitourinary symptoms?
Antonia Pearson, *Sydney, Australia*

13:50-14:00 Estimating end of life care costs to different funders for breast cancer patients in Queensland, Australia: A data linkage study
Shafkat Jahan, *Brisbane, Australia*

14:00-14:10 Supporting LGBTQI communities impacted by breast cancer: Results and translational outcomes of the out with cancer study
Julie Rae, *Red Hill, Australia*

14:10-14:20 Patient perceptions of physical rehabilitation and its method of delivery for a variety of adverse physical effects following breast cancer surgery
Deirdre McGhee, *Wollongong, Australia*

14:20-14:30 No association between breast pain and breast cancer. A prospective cohort study of 10,830 patients presenting to a Breast Cancer Diagnostic Clinic
Rajiv Dave, *Manchester, UK*

14:30-15:50 **Parallel Session 9:**
Adjuvant endocrine therapy

Hall A (Great Hall 1)

Chairpersons: **Prudence Francis,** *Melbourne, Australia*
Alistair Ring, *London, UK*

14:30-15:05 **DEBATE:** That CDK4/6i's should be part of adjuvant treatment of high-risk ER+HER2- early breast cancer
14:30 **Yes: Richard de Boer**, *Melbourne, Australia*
14:40 **No: Nick Zdenkowski,** *Newcastle, Australia*
14:50 Discussion

15:05-15:15 Real world evidence and its value in breast cancer management?
Sheau Wen Lok, *Melbourne, Australia*

15:15-15:50 **DEBATE:** That all pre-menopausal women with LN+ve ER+HER2- EBC should have adjuvant chemotherapy
15:15 **Yes: Nicole McCarthy,** *Brisbane, Australia*
15:25 **No: Belinda Yeo,** *Melbourne, Australia*
15:35 Discussion

14:30-15:50 **Parallel Session 10:**
Free Papers: Locoregional therapy

Hall C (Room M1)

Chairpersons: **Michael Alvarado,** *San Francisco, CA, USA*
Jill Dietz, *Pittsburgh, PA, USA*

14:30-14:40 Outcome of atypical or b3 lesions in Breastscreen NSW
Richard Chou, *Condell Park, Australia*

14:40-14:50 Contrast Enhanced Mammography in further assessment of screen-detected breast cancer
Caroline MacCallum, *Melbourne, Australia*

14:50-15:00 Comparison of local recurrence after simple and skin-sparing mastectomy performed in patients with pure ductal carcinoma in situ
Rajiv Dave, *Manchester, UK*

15:00-15:10 Using Radio-Occult Lesion Localization (ROLL) techniques to identify the clipped node in Targeted Axillary Dissections (TAD)
Alec Winder, *Townsville, Australia*

15:10-15:20 Comparing direct-to-implant and two-stage breast reconstruction in the Australian breast device registry
Sheymonti Hoque, *Melbourne, Australia*

15:20-15:30 Trends and variations in post-mastectomy breast reconstruction rates in Australia over 10 years
Nirmal Dayaratna, *Sydney, Australia*

15:30-15:40 Surgical outcomes of post-mastectomy radiotherapy following immediate prosthetic breast reconstruction: Six-year experience
Negin Sedaghat, *Sydney, Australia*

15:40-15:50 Therapeutic mammaplasty with contralateral symmetrising reduction mammaplasty: Oncologically safe with satisfied patients
Susannah Graham, *Camperdown, Australia*

15:50-16:10 *Coffee break, poster viewing and exhibition visit*

16:10-17:30 **Parallel Session 11: Imaging** **Hall A (Great Hall 1)**

Chairpersons: **Jane Fox,** *Melbourne, Australia*
Alastair Thompson, *Houston, TX, USA*

16:10-16:30 How can imaging assist management of patients receiving neoadjuvant therapy?
Julia Camps Herrero, *Valencia, Spain*

16:30-16:50 The PROSPECT of selective omission of RT based on MRI findings
Bruce Mann, *Melbourne, Australia*

16:50-17:10 That Contrast Enhanced Mammography (CEM) is ready for prime time
Allison Rose, *Melbourne, Australia*

17:10-17:30 Discussion

16:10-17:30 **Parallel Session 12: Metastatic breast cancer** **Hall B (Great Hall 2)**

Chairpersons: **Nick Zdenkowski,** *Newcastle, Australia*
Javier Cortes, *Madrid, Spain*

16:10-16:30 Should molecular testing of tumours be routine for patients with metastatic breast cancer?
Elgene Lim, *Sydney, Australia*

16:30-17:15 **DEBATE:** Routine imaging vs clinical follow-up for high risk EBC: Time to change the paradigm?
16:30 **Yes: Sally Baron-Hay,** *Sydney, Australia*
16:45 **No: Catherine Shannon,** *Brisbane, Australia*
17:00 Discussion

17:15-17:30 What's the optimal timing for Bone Targeted Agents in MBC?
Belinda Yeo, *Melbourne, Australia*

Saturday, October 15, 2022

07:30-08:30 **Morning Industry Symposium:**
Future-proofing breast surgical guidance with Sentimag®
A total magnetic conversion
Supported by Endomag/GRC Surgical

Hall A (Great Hall 1)

Breakfast will be served prior to the session
For full details, please refer to page 108

07:30-08:30 **Morning Industry Symposium:**
Time to start CDK4&6 inhibition in EBC: Verzenio in HR+ HER2- node positive EBC at high risk of recurrence
Supported by Lilly

Hall B (Great Hall 2)

Breakfast will be served prior to the session
For full details, please refer to page 108

07:30-08:30 **Morning Industry Symposium:**
The role of the nurse in assessing, triaging and managing metastatic TNBC
Supported by Gilead

Hall C (Room M1)

For full details, please refer to page 109

08:30-10:00 **Parallel Session 13:**
Controversies in reconstruction

Hall A (Great Hall 1)

Chairpersons: **Kirsten Pilatti,** *Melbourne, Australia*
Sanjay Warrier, *Sydney, Australia*

08:30-09:10 **DEBATE:** That immediate breast reconstruction prior to post-mastectomy radiotherapy should be avoided

08:30 **Yes: Caroline Baker,** *Melbourne, Australia*
08:40 **No: Dean Trotter,** *Melbourne, Australia*
08:50 Discussion

09:10-09:30 Patient-reported outcomes to guide decisions regarding breast reconstruction
Douglas MacMillan, *Nottingham, UK*

09:30-09:50 Consumer voice informing the future of breast reconstruction Australia
Sam Mills, *Melbourne, Australia*
Jodi Steel, *Sydney, Australia*

09:50-10:00 Discussion

08:30-10:00 **Parallel Session 14: Survivorship** **Hall B (Great Hall 2)**

Chairpersons: **Jenny Gilchrist,** *Sydney, Australia*
Jocelyn Lippey, *Melbourne, Australia*

08:30-08:35 Introduction
Jenny Gilchrist, *Sydney, Australia*

08:35-08:45 What matters most to consumers?
Andrea Smith, *Sydney, Australia*

08:45-08:55 GP perspective
Elysia Thornton-Benko, *Sydney, Australia (virtual)*

08:55-09:05 Survivorship MoC based around nurse led clinics
Kerry Shanahan, *Melbourne, Australia*

09:05-09:15 McGrath model of survivorship care
Kerry Patford, *Benalla, Australia*

09:15-09:25 #JustTextMe: Empowering women's health during survivorship
Anna Singleton, *Sydney, Australia*

09:25-09:35 IBIS
Raymond Chan, *Adelaide, Australia*

09:35-10:00 Discussion

08:30-10:00 **Parallel Session 15: Free Papers: Medical oncology** **Hall C (Room M1)**

Chairpersons: **Nick Zdenkowski,** *Newcastle, Australia*
Sally Baron-Hay, *Sydney, Australia*

08:30-08:40 Update on the use of topical estrogens in symptomatic women with early breast cancer
Antonia Pearson, *Sydney, Australia*

08:40-08:50 Contrast Enhanced Mammography in breast cancer surveillance
Kenneth Elder, *Melbourne, Australia*

08:50-09:00 Contralateral breast cancer: Influence of molecular subtype, clinical features and treatment given in a single institution study
Mohammad Amira, *Perth, Australia*

09:00-09:10 The effect of age and menstrual cycling on gene expression profiling tests
Wendy Ingman, *Adelaide, Australia*

09:10-09:20 Concordance between core needle biopsy and surgical excision for breast cancer tumor grade and biomarkers
Aswin Shanmugalingam, *Sydney, Australia*

09:20-09:30 The design and development of an individualised training program for Metastatic Breast Cancer (MBC) nursing incorporating remote and onsite learning experiences during a pandemic
Gillian Kruss, *Sydney, Australia*

09:30-09:40 ATNEC – patient experience sub-study (IRSCTN: 36585784):
What patients think about taking part in breast cancer treatment de-escalation trials?
Janet Dunn, *Coventry, UK*

09:40-09:50 Monitoring of breast cancer treatment response by analysis of breast cancer-derived extracellular vesicles
Katherine Wongtrakul-Kish, *Sydney, Australia*

09:50-10:00 Enhanced toxicity with trastuzumab emtansine and concurrent adjuvant radiotherapy: Non-consecutive case series
Steven David, *Melbourne, Australia*

10:00-11:00 **Parallel Session 16:**
Locoregional therapy

Hall A (Great Hall 1)

Chairpersons: **Heidi Peverill,** *Brisbane, Australia*
Caroline Baker, *Melbourne, Australia*

10:00-10:30 **DEBATE:** That patients with heavy axillary nodal disease pre-NACT should have axillary dissection irrespective of response to NACT
10:00 **Yes: Alastair Thompson,** *Houston, TX, USA*
10:10 **No: Ben Green,** *Brisbane, Australia*
10:20 Discussion

10:30-11:00 **DEBATE:** That omission of SNB should be considered for all women >70 with clinically negative axillae
10:30 **Yes: Melanie Walker,** *Melbourne, Australia*
10:40 **No: Sanjay Warrier**, *Sydney, Australia*
10:50 Discussion

10:00-11:00 **Industry Symposium:**
A CDK4/6i is a 'once in a lifetime treatment' for patients with HR +ve HER2 -ve breast cancer
Supported by Novartis

Hall B (Great Hall 2)

For full details, please refer to page 109

11:00-11:30 *Coffee break, poster viewing and exhibition visit*

11:30-13:00 **Parallel Session 17:**
Local therapy

Hall A (Great Hall 1)

Chairpersons: **Christobel Saunders,** *Melbourne, Australia*
Melanie Walker, *Melbourne, Australia*

11:30-12:30 **Time to cut the wire?**

11:30 That hook needles are perfectly satisfactory for lesion localisation
Owen Ung, *Brisbane, Australia*

11:40 The case for SCOUT
Cindy Mak, *Sydney, Australia*

11:50 The case for Magseed
Michael Alvarado, *San Francisco, CA, USA*

12:00 The case for ROLLIS
Rhea Liang, *Gold Coast, Australia*

12:10 Discussion

12:30-13:00 **DEBATE:** That five-fraction radiotherapy should be standard of care for most patients
12:30 **Yes: Alice Ho,** *Boston, MA, USA (virtual)*
12:40 **No: Frank A. Vicini,** *Royal Oak, MI, USA*
12:50 Discussion

11:30-13:00 **Parallel Session 18:**
HER2 positive disease

Hall B (Great Hall 2)

Chairpersons: **Nicole McCarthy,** *Brisbane, Australia*
Elgene Lim, *Sydney, Australia*

11:30-12:15 **DEBATE:** Do anthracyclines still have a place in the treatment of early stage HER2+ve BC?
11:30 **Yes: Nick Murray,** *Adelaide, Australia*
11:45 **No: Fran Boyle,** *Sydney, Australia*
12:00 Discussion

12:15-12:35 HER2 heterogeneity: Interpretation of low HER2 amplification and HER+ve hotspots
Cameron Snell, *Melbourne, Australia*

12:35-13:00 Management of brain mets in those with HER2+ve disease
Rebecca Dent, *Singapore, Singapore (virtual)*

13:00-14:00 *Lunch break, poster viewing and exhibition visit*

13:10-13:55 **Industry Lunch Symposium:**
Innovative approaches to help improve patient outcomes:
Case-based discussion
Supported by 3M

Hall B (Great Hall 2)

Lunch boxes will be served to session participants
For full details, please refer to page 110

14:00-15:00 **Plenary Session 19:**
Palliative care

Hall A (Great Hall 1)

Chairpersons: **Fran Boyle,** *Sydney, Australia*
Nick Murray, *Adelaide, Australia*

14:00-14:30 **DEBATE:** That palliative care should ditch the word 'palliative'
14:00 **Yes: Brian Le,** *Melbourne, Australia*
14:10 **No: Andrew Broadbent**, *Gold Coast, Australia*
14:20 Discussion

14:30-15:00 Medicinal cannabis in advanced cancer: Pot or panacea?
Phillip Good, *Brisbane, Australia*

15:00-16:15 **Plenary Session 20: Breast cancer 2030** — **Hall A (Great Hall 1)**

Chairpersons: **Bruce Mann,** *Melbourne, Australia*
Richard de Boer, *Melbourne, Australia*

15:00-15:15 Early detection in 2030
Ritse Mann, *Nijmegen, The Netherlands*

15:15-15:30 A pathologist's view of breast cancer in 2030
Sunil R. Lakhani, *Brisbane, Australia*

15:30-15:45 Systemic therapy in 2030
Prudence Francis, *Melbourne, Australia*

15:45-16:00 Locoregional therapy in 2030
Douglas MacMillan, *Nottingham, UK*

16:00-16:15 A consumer's perspective of breast cancer in 2030
Kirsten Pilatti, *Melbourne, Australia*

16:15-16:30 **Congress closing and Award presentation** — **Hall A (Great Hall 1)**

Chairpersons: **Bruce Mann,** *Melbourne, Australia*
Melanie Walker, *Melbourne, Australia*
Elisabeth Elder, *Sydney, Australia*

Posters


BRISBANE
what do i love about Brisbane?
Enriching
Educating

Onsite and Online Posters

Shift 1: P01-P37

Posters should be mounted between 17:00-17:30 on Thursday, October 13 and removed by 13:00 on Friday, October 14

Breast imaging

P01 DEVELOPMENT OF A CELL-SENSITIVE ELASTOGRAPHY MODEL TO DETECT ULTRA-SMALL BREAST CANCERS
Ali Farajpour Ouderji, *Iran*

P02 PET SCANS FOR LOCALLY ADVANCED BREAST CANCER AND DIAGNOSTIC MRI TO DETERMINE THE EXTENT OF OPERATION AND RADIOTHERAPY (TROG 12.02 PET LABRADOR)
Kirsten Gadsby, *Australia*

P03 THE APPEARANCE OF FAT NECROSIS ON CONTRAST ENHANCED SPECTRAL MAMMOGRAPHY
Natalia Garibotto, *Australia*

P04 INJECTION MAMMOPLASTY: NORMAL IMAGING APPEARANCES AND IMPLICATIONS FOR MAMMOGRAPHIC SCREENING
Winfred Xi Tai Goh, *Singapore*

P05 RELATIONSHIP BETWEEN PATIENT AGE, MAMMOGRAPHIC BREAST DENSITY AND BACKGROUND PARENCHYMAL ENHANCEMENT ON CONTRAST-ENHANCED MAMMOGRAPHY
Yen Huynh, *Australia*

P06 CASE DIFFICULTY AS EVALUATED BY BREAST PHYSICIANS AND RADIOLOGISTS: DATA FROM THE BREAST MAMMOGRAM TEST SETS
Sarah Lewis, *Australia*

P07 BENEFITS OF BREAST TOMOSYNTHESIS IN BREASTSCREEN ASSESSMENT CLINICS
Daniel Liu, *Australia*

P08 BREAST BIOPSY PRACTICE AND BREAST BIOPSY MARKER UTILISATION: AUSTRALIAN AND NEW ZEALAND PERSPECTIVE
Rose Radic, *Australia*

P09 BREAST BIOPSY MARKER COST AND AVAILABILITY INFLUENCES UTILISATION IN RADIOLOGY PRACTICE
Rose Radic, *Australia*

P10 CLINICALLY AND RADIOLOGICALLY OCCULT PAGET'S DISEASE OF THE BREAST: A 14-YEAR RETROSPECTIVE CASE SERIES AT A SINGLE TERTIARY INSTITUTION
Ananda Kallyani S.M. Ponniah, *Australia*

DCIS

P11 LOCAL RECURRENCE IN DCIS TREATED PREDOMINANTLY WITHOUT RADIATION
Christina Kozul, *Australia*

P12 BREAST SURGEONS' VIEWS ON ENDOCRINE THERAPY FOR TREATMENT OF DUCTAL CARCINOMA IN SITU
Ben Lancashire, *Australia*

P13 ENDOCRINE THERAPY FOR TREATMENT OF DUCTAL CARCINOMA IN SITU – A CASE FOR RESEARCH IN THE AUSTRALIAN AND NEW ZEALAND SETTING
Ben Lancashire, *Australia*

P14 NOTORIOUS DCIS WITH LOBULAR CANCERIZATION, MULTIPLE RECURRENCES AND CONTRALATERAL AXILLARY METASTASES(CAM) - A CASE REPORT
Swathi Prakash, *India*

HER2 positive breast cancer

P15 PIPPA: A PROSPECTIVE OBSERVATIONAL STUDY OF MOBILE APP-BASED PATIENT-REPORTED OUTCOMES IN PATIENTS TREATED WITH PALBOCICLIB FOR ADVANCED BREAST CANCER IN AUSTRALIA
Richard De Boer, *Australia*

Locoregional therapy

P16 OUTCOMES OF AXILLARY CLEARANCE FOR POSITIVE MACROSCOPIC SENTINEL NODE BIOPSY IN BREAST CANCER, A REGIONAL CENTRE EXPERIENCE
Maxwell Jambor, *Australia*

Medical oncology

P17 SYNCHRONOUS OPERABLE PANCREATIC AND BREAST CANCER WITHOUT GENETIC MUTATION: A LITERATURE REVIEW AND DISCUSSION
Adam Ofri, *Australia*

Molecular assays

P18 OPTIMA, A PROSPECTIVE INTERNATIONAL RANDOMIZED TRIAL TO VALIDATE THE CLINICAL UTILITY AND COST-EFFECTIVENESS OF GENE EXPRESSION TEST-DIRECTED CHEMOTHERAPY IN HIGH CLINICAL RISK EARLY BREAST CANCER
Janet Dunn, *Australia*

Neoadjuvant therapy

P19 NEOADJUVANT CHEMOTHERAPY UTILISATION AND OUTCOMES IN BREAST CANCER PATIENTS AT A TERTIARY HOSPITAL IN NORTH QUEENSLAND
Tony Mallett, *Australia*

Pathology

P20 PARANEOPLASTIC CHOREA SECONDARY TO INVASIVE CARCINOMA OF THE BREAST: A CASE REPORT
Ali Hooshyari, *New Zealand*

P21 WARFARIN INDUCED BREAST NECROSIS: CASE REPORT
Vaishnaivy Mahendravarman, *Australia*

P22 COMPARISON OF BREAST CANCER HER2 STATUS TESTING WITH IMMUNOHISTOCHEMISTRY AND IN-SITU HYBRIDISATION
Aswin Shanmugalingam, *Australia*

Prevention

P23 DEVELOPING ALTERNATIVE PREVENTION STRATEGIES: CAN COLLEGE STUDENTS HAVE AN IMPACT ON BREAST CANCER SCREENING?
Adam Johnson, *United States*

Radiation oncology

P24 A RETROSPECTIVE AUDIT OF DOSE AND LOCAL CONTROL IN POST-MASTECTOMY BREAST CANCER PATIENTS. IS STANDARD BOLUS REQUIRED WITH CONTEMPORARY IMRT/VMAT TREATMENT PLANNING?
Susan Carroll, *Australia*

P25 A REVIEW OF WOMEN WITH A SOLITARY EXTRACRANIAL METASTASIS FROM BREAST CANCER
Patrick Dyer, *Australia*

P26 ACUTE TOXICITY IN ADJUVANT BREAST RADIOTHERAPY USING KNOWLEDGE-BASED VOLUMETRIC MODULATED ARC THERAPY PLANNING
Alexandra Knight, *Australia*

P27 INTERIM ANALYSIS OF THE PREDICT REGISTRY AUSTRALIA: CHANGES IN TREATMENT RECOMMENDATION FOR A BIOLOGIC SIGNATURE PREDICTIVE OF RADIATION THERAPY (RT) BENEFIT IN PATIENTS WITH DCIS
Yvonne Zissiadis, *Australia*

P28 INTRAOPERATIVE RADIOTHERAPY FOR EARLY BREAST CANCER: EARLY EXPERIENCE AND QUALITY OF LIFE OUTCOMES FROM A WESTERN AUSTRALIAN REGISTRY
Yvonne Zissiadis, *Australia*

Reconstruction

P29 AUTOLOGOUS VERSUS IMPLANT-BASED BREAST RECONSTRUCTION: IMPACT OF SCAR QUALITY (SCAR-Q) IN BREAST AND ABDOMINAL SCARRING AND QUALITY OF LIFE (BREAST-Q) FOLLOWING BREAST RECONSTRUCTION
Nirmal Dayaratna, *Australia*

P30 PROSPECTIVE EVALUATION OF ROBOTIC-ASSISTED DEEP INFERIOR ARTERY PERFORATOR (DIEP) FLAP HARVEST IN BREAST RECONSTRUCTION
Nirmal Dayaratna, *Australia*

P31 TREATMENT OF COMPLEX BREAST WOUNDS WITH PLATELET RICH FIBRIN
Gagandip Sanghera, *Australia*

P32 BREAST IMPLANT ASSOCIATED - ANAPLASTIC LARGE CELL LYMPHOMA DIAGNOSIS AND MANAGEMENT - CASE SERIES
Gagandip Sanghera, *Australia*

P33 CARBON DIOXIDE VS. SALINE TISSUE EXPANDERS FOR BREAST RECONSTRUCTION - LITERATURE REVIEW AND CURRENT PRACTICE
Gagandip Sanghera, *Australia*

P34 PATTERNS OF BREAST RECONSTRUCTION AND THE INFLUENCE OF A SURGICAL MULTIDISCIPLINARY CLINIC
Yuan Tian, *Australia*

P35 3D BREAST SCAFFOLD RECONSTRUCTION: A PRECLINICAL ANIMAL MODEL
Clement Wong, *Australia*

Screening

P36 BENEFITS VERSUS HARMS OF BREAST CANCER SCREENING REVISITED: A LARGE, RETROSPECTIVE COHORT STUDY QUANTIFYING ADDITIONAL TREATMENT ASSOCIATED WITH LATER DIAGNOSIS IN AUSTRALIA AND NEW ZEALAND
Kathy Dempsey, *Australia*

Triple negative breast cancer

P37 INVESTIGATING THE ROLE OF BANF1 IN TNBC
Maddison Rose, *Australia*

Shift 2: P38-P76

Posters should be mounted between 14:00-14:30 on Friday, October 14 and removed by 14:00 on Saturday, October 15

Surgery

P38 REGIONAL BLOCK VS WOUND INFILTRATION OF LOCAL ANAESTHETIC IN ONCOLOGICAL BREAST SURGERY – A SYSTEMATIC REVIEW AND META-ANALYSIS
Tess Asgill, *Australia*

P39 OUTCOMES FOLLOWING RE-EXCISION OF MARGINS FOR LOBULAR BREAST CANCERS AFTER BREAST CONSERVING SURGERY - REFLECTIONS FROM THE BREASTSURGANZ QUALITY AUDIT
Philip Britten-Jones, *Australia*

P40 DIFFERENCES IN BREAST CANCER SURGERY IN INDIGENOUS AND NON-INDIGENOUS WOMEN IN AUSTRALIA
Nirmal Dayaratna, *Australia*

P41 PERCEPTION OF UPPER CHEST CHEMOTHERAPY PORT (PORT-A-CATH) SCARRING IN BREAST RECONSTRUCTION AND MASTECTOMY PATIENTS
Nirmal Dayaratna, *Australia*

P42 ATNEC: A RANDOMIZED TRIAL INVESTIGATING WHETHER AXILLARY TREATMENT CAN BE AVOIDED IN T1-3N1M0 BREAST CANCER PATIENTS WITH NO RESIDUAL CANCER IN THE AXILLARY NODES AFTER NEOADJUVANT CHEMOTHERAPY
Janet Dunn, *United Kingdom*

P43 WHAT'S THE ATTRACTION - MAGTRACE AS AN ALTERNATIVE TO LYMPHOSPHINGRAPHY IN SENTINAL NODE BIOPSY IN BREAST CANCER
Megan Emonson, *Australia*

P44 LOCAL BREAST CANCER RECURRENCE FOLLOWING AUTOLOGOUS RECONSTRUCTION: CLINICAL AND RADIOLOGICAL CHALLENGES RELATING TO SURVEILLANCE
Cheng Feng, *Australia*

P45 SYSTEMATIC REVIEW OF LONG THORACIC NERVE INJURY IN BREAST CANCER AXILLARY SURGERY
Natalia Garibotto, *Australia*

P46 DE-ESCALATING AXILLARY SURGERY IN BREAST CANCER: TARGETED AXILLARY DISSECTION. OUR EXPERIENCE AT THE ROYAL PERTH AND FIONA STANLEY HOSPITALS, WESTERN AUSTRALIA
Ji Gu, *Australia*

P47 CHYLE LEAK POST MASTECTOMY AND AXILLARY CLEARANCE: A RARE BUT CHALLENGING COMPLICATION
Ji Gu, *Australia*

P48 PATIENT REPORTED OUTCOME MEASURES AFTER BREAST AUGMENTATION – USING THE BREAST-Q IS
Randi Jayasinghe, *Australia*

P49 INTRAOPERATIVE SENTINEL NODE ANALYSIS USING TOUCH IMPRINT CYTOLOGY – A WESTERN AUSTRALIAN EXPERIENCE OF DIAGNOSTIC ACCURACY IN 779 PATIENTS WITH BREAST CANCER
Anitha Karunairajah, *Australia*

P50 BORDER REOPENING AND COVID-19 PREPARATION: IMPACT ON BREAST CANCER HEALTHCARE PROVISION FROM A WEST AUSTRALIAN PERSPECTIVE
Thomas England, *Australia*

P51 LEARNING CURVE AND SURGICAL OUTCOMES FOLLOWING INTRODUCTION OF RADIO-GUIDED OCCULT LESION LOCALISATION USING IODINE-125 SEEDS (ROLLIS) AT A TERTIARY BREAST UNIT
David Lim, *Australia*

P52 COMPLICATIONS OF INJECTABLE BREAST AUGMENTATION 21 YEARS LATER
Oscar Brett, *Australia*

P53 OUTCOMES AFTER RADIOACTIVE 125-IODINE SEED LOCALISATION FOR IMPALPABLE IN SITU AND INVASIVE BREAST CANCER: THE EARLY EXPERIENCE
Tony Mallett, *Australia*

P54 A DISSECTION STUDY OF THE GROSS ANATOMY OF THE ATTACHMENTS OF THE FEMALE BREAST TO THE CHEST WALL
Deirdre McGhee, *Australia*

P55 ALTERNATIVE LOCALISATION METHOD FOR NON-PALPABLE BREAST CANCER: AUDIT OF RE-EXCISION RATES MAGSEED® LOCALIZATION OF NON-PALPABLE BREAST CANCERS IN AN AUSTRALIAN REGIONAL NON-TERTIARY HOSPITAL
Su Su Naing, *Australia*

P56 OCCULT BREAST CANCER: WHERE ARE WE AT?
Adam Ofri, *Australia*

P57 DIAGNOSIS AND MANAGEMENT OF PHYLLODES TUMOURS FOR THE SURGEON: AN ALGORITHM
Adam Ofri, *Australia*

P58 THE LIMBERG FLAP IN MASTECTOMY T-JUNCTION NECROSIS: AN UNDERUTILISED TECHNIQUE
Adam Ofri, *Australia*

P59 OLDER BREAST CANCER: A DEDICATED SENTINEL LYMPH NODE METASTASIS NOMOGRAM
Adam Ofri, *Australia*

P60 BREAST SURGERY IN A TEACHING PUBLIC HOSPITAL: DOES TRAINING INCREASE COMPLICATION RATES
Adam Ofri, *Australia*

P61 OLDER BREAST CANCER: NOT ALL T1 HR+ BREAST CANCERS ARE EQUAL
Adam Ofri, *Australia*

P62 OLDER BREAST CANCER IN AUSTRALIA: TUMOUR CHARACTERISTICS OF SCREENED VERSUS SYMPTOMATIC BREAST CANCERS
Adam Ofri, *Australia*

P63 BREAST SURGERY IN A TEACHING PUBLIC HOSPITAL: DOES ONCOPLASTIC TRAINING SIGNIFICANTLY IMPACT SURGICAL DURATION
Adam Ofri, *Australia*

P64 SKIN SPARING MASTECTOMY(SSM) WITH TOTAL AUTOLOGOUS FAT GRAFTING WITH PLATELET-RICH-PLASMA(PrP) VERSUS BREAST CONSERVATION THERAPY(BCS) IN EARLY BREAST CANCER(EBC) PATIENTS: RANDOMISED CONTROLLED TRIAL(RCT) WITH FOLLOW-UP OF 34 MONTHS
Swathi Prakash, *India*

P65 SENTINEL LYMPH NODE BIOPSY UNDER LOCAL ANAESTHESIA EFFECTIVE AND FEASIBLE - A 5-YEAR EXPERIENCE IN A TERTIARY CARE CENTER IN INDIA
Vandhana Rajgopal, *India*

P66 THE EVOLUTION OF MAGSEED™ LOCALIZATION IN THE MANAGEMENT OF IMPALPABLE BREAST CANCERS
Syed Ali Abbas Rizvi, *Australia*

P67 SENTINEL NODE RE-MAPPING IN PATIENTS WITH A SECOND PRIMARY BREAST CANCER AND PREVIOUS AXILLARY LYMPH NODE DISSECTION (ALND)
Nikolaos S. Salemis, *Greece*

P68 MICROPOROUS POLYSACCHARIDE HEMOSPHERES (MPH) AND SEROMA FORMATION AFTER MASTECTOMY AND SENTINEL NODE BIOPSY - A PROSPECTIVE RANDOMISED CLINICAL TRIAL
Gagandip Sanghera, *Australia*

P69 HISTORY AND EVOLUTION OF SENTINEL LYMPH NODE MAPPING
Gagandip Sanghera, *Australia*

P70 REVIEW OF MANAGEMENT AND OUTCOMES OF BORDERLINE AND MALIGNANT PHYLLODES TUMOURS OF THE BREAST AT A UK TERTIARY CENTRE
Gausihi Sivarajah, *Australia*

P71 BREAST FIBROMATOSIS: 2000 TO THE PRESENT
Mike Wu, *Australia*

Survivorship

P72 HOW THINK PINK FOUNDATION OVERCAME COVID-19 LOCKDOWNS AND FLOURISHED DURING THE PANDEMIC
Andrea Cannon, *Australia*

P73 MALE BREAST CANCER: A SINGAPORE PERSPECTIVE
Joshua Sheng Hao Lim, *Singapore*

P74 BREAST CANCER SURVIVORSHIP CLINIC: A PILOT STUDY
Ananda Kallyani S.M. Ponniah, *Australia*

Symptom Management

P75 COVID-19: A RISK FACTOR FOR RECURRENT BREAST IMPLANT-RELATED SEROMA?
Diana Tam, *Australia*

P76 REACH, ACCEPTABILITY, USEFULNESS AND ENGAGEMENT WITH A HEALTH SUPPORT PROGRAM FOR BREAST CANCER SURVIVORS DELIVERED VIA TEXT MESSAGES: A MIXED-METHODS EVALUATION OF THE EMPOWER-SMS RANDOMISED CONTROLLED TRIAL
Anna C. Singleton, *Australia*

Online Posters only

Bone health

V01 USE OF BONE MODIFYING AGENTS IN ADJUVANT SETTING FOR EARLY BREAST CANCER PATIENTS: A REAL WORLD EXPERIENCE AT A REGIONAL CANCER CENTRE IN AUSTRALIA
Vinod Kalapurackal Mathai, *Australia*

Breast imaging

V02 NON-INVASIVE PREDICTORS OF AXILLARY LYMPH NODE BURDEN IN BREAST CANCER: A SINGLE INSTITUTION RETROSPECTIVE ANALYSIS
Victoria Ngai, *United Kingdom*

V03 THE CLINICAL UTILITY OF THREE-DIMENSIONAL SURFACE IMAGING IN BREAST CANCER SURGERY: A SYSTEMATIC REVIEW
Justina Cheh Juan Tai, *United Kingdom*

V04 UNDERSTANDING COMMON ARTEFACTS ON CONTRAST-ENHANCED SPECTRAL MAMMOGRAPHY: A NATIONAL CANCER CENTRE SINGAPORE (NCCS) EXPERIENCE
Shiu Suwn Kelly Yeo, *Singapore*

Molecular assays

V05 DEVELOPMENT OF APTAMER BASED ASSAY FOR DIAGNOSIS OF BREAST TUBERCULOSIS
Muhammed Huzaifa, *India*

Neoadjuvant therapy

V06 AXILLARY RECURRENCE IN BREAST CANCER AFTER NEOADJUVANT CHEMOTHERAPY, AND SENTINEL NODE BIOPSY WITH MICROMETASTASIS
Xavier Field, *New Zealand*

Pathology

V07 FIBROADENOMA VS PHYLLODES - IS CORE BIOPSY ADEQUATE OR IS EXCISION BIOSPY NECESSARY
Lina Hua, *Australia*

Prevention

V08 IMPORTANCE OF EARLY BREAST CANCER DIAGNOSIS
Jonathan Wiener, *Australia*

Radiation oncology

V09 COMMONPLAN - ADJUVANT HYPOFRACTIONATED SIMULTANEOUS INTEGRATED BOOST RADIOTHERAPY: RETROSPECTIVE STUDY OF DOSIMETRY FEATURES
Ana Vasconcelos, *Portugal*

Reconstruction

V10 FEASIBILITY OF CHEST WALL PERFORATOR FLAPS FOR WHOLE BREAST RECONSTRUCTION
Samantha Chen, *Australia*

V11 OUTCOMES OF SUBMUSCULAR RECONSTRUCTION WITH POST-MASTECTOMY RADIOTHERAPY: A GOLD COAST EXPERIENCE
Sara Izwan, *Australia*

V12 INDOCYANINE GREEN ANGIOGRAPHY FOR CONSERVATIVE MASTECTOMY AND RECONSTRUCTION IN NORTH QUEENSLAND
Amit Keret, *Australia*

Screening

V13 REFLECTIONS FROM WOMEN WITH AN INTERVAL BREAST CANCER DIAGNOSIS: A QUALITATIVE ANALYSIS OF OPEN DISCLOSURE IN THE BREASTSCREEN WESTERN AUSTRALIA PROGRAM
Meagan Brennan, *Australia*

V14 THE ADDED VALUE OF MAMMOGRAPHY IN ABUS AND HHUS FOR IMPROVING THE DIAGNOSTIC ACCURACY OF BI-RADS ULTRASOUND CATEGORIES 4A ASSESSMENTS: A MULTICENTER HOSPITAL-BASED STUDY IN CHINA
Wenhui Ren, *China*

Surgery

V15 WIRE-FREE BRACKETING OF EXTENSIVE OR MULTI-FOCAL/CENTRIC CANCER TO ACHIEVE BREAST CONSERVATION
Samantha Chen, *Australia*

V16 CHEST WALL PERFORATOR AS PARTIAL VOLUME REPLACEMENT TO AVOID MASTECTOMY
Samantha Chen, *Australia*

V17 THE CLINICAL UTILITY OF MARKERS IN THE DE-ESCALATION OF AXILLARY SURGERY
Samantha Chen, *Australia*

V18 RETROSPECTIVE REVIEW OF NON-SENTINEL LYMPH NODE POSITIVITY IN BREAST CANCER PATIENTS WITH SENTINEL LYMPH NODE MICROMETASTASIS USING ONE-STEP NUCLEIC ACID AMPLIFICATION
Eugenia Ip, *Australia*

V19 PRIMARY ANGIOSARCOMA OF THE BREAST IN A 17-YEAR-OLD FEMALE
Chanyang Lee, *Australia*

V20 XANTHOGRANULOMATOUS INFLAMMATION AND SPINDLE CELL PROLIFERATION AS RESPONSE TO SILICONE BREAST IMPLANT LEAKAGE: A CASE REPORT
Kyra Lee, *Australia*

V21 DOES ONCOPLASTIC BREAST SURGERY DELAY ADJUVANT CHEMOTHERAPY? A RETROSPECTIVE CASE SERIES
Fatema Mohammed Ali, *Australia*

V22 FIVE YEARS OF BREAST CANCER SURGERY THROUGH CALVARY PUBLIC HOSPITAL SPECIALIST CLINIC, CANBERRA, ACT
Susan Hawes, *Australia*

V23 CROSS-DISCIPLINARY WORKFLOW IMPROVEMENTS WITH MAGSEED LOCALISATION FOR NON-PALPABLE BREAST LESIONS IN NON-TERTIARY HOSPITALS IN QUEENSLAND
Munasinghe Silva, *Australia*

V24 PC (PEDICLE CONSERVING) NIPPLE SPARING MASTECTOMY FOR THE LARGE PTOTIC BREAST: OVERCOMING THE CHALLENGING BREAST FOR A BETTER AESTHETIC OUTCOME
Sara Wu, *Australia*

Symptom Management

V25 EFFECTIVE CLINICIAN STRATEGIES TO ENCOURAGE CANCER PATIENTS TO SEEK PSYCHOSOCIAL SUPPORT: A NARRATIVE LITERATURE REVIEW
Kyra Lee, *Australia*

Abstracts

INVITED SPEAKER ABSTRACTS

DEBATE: ROUTINE IMAGING VS CLINICAL FOLLOW-UP FOR HIGH RISK EBC: TIME TO CHANGE THE PARADIGM? YES

Sally Baron-Hay, *Sydney, Australia*

The old guidelines recommending physical examinations and annual mammography (minimal follow-up) as standard of care to detect breast cancer (BC) recurrence are outdated. In the last decade there has been significant progress in imaging modalities and with the availability of new effective therapies, secondary metastatic breast cancer is no longer considered as a fatal condition. Patients with a limited number or sites of metastases can be considered for targeted therapies. In addition, most patients with metastases are now candidates for biological treatments including new HER2 therapies, CDK inhibitors and immune check point inhibitors that have significantly increased survival. Detection of a low metastatic burden could lead to better control of the disease, prevent disabling symptomatic presentations and improve long term outlook. Despite the lack of evidence that active surveillance for metastatic disease improves outcomes in breast cancer survivors, intensive follow-up aimed at identifying metastases by the same imaging used for advanced disease has become common in clinical practice. It is time to review those guidelines and bring management of high risk early breast cancer patients into the 21st Century."

EVIDENCE BASED TREATMENT MODALITIES FOR ESTABLISHED LYMPHOEDEMA: WHAT WORKS? WHAT DOESN'T?

Robyn Box, *Brisbane, Australia*
MPhty PhD, APA
Cancer & Lymphoedema Physiotherapist, QLD Lymphoedema & Breast Oncology Physiotherapy, Brisbane Australia

Lymphoedema may manifest in the upper body during and after breast cancer treatment as a variety of clinical presentations. While advances and changes in the diagnosis and management of breast cancer have reduced the incidence, the development of breast cancer related upper quadrant and/or arm lymphoedema remain significant long-term sequelae for many survivors. Incidence rates are dependent upon the criteria used to diagnose lymphoedema and vary considerably between reported studies. Evaluation of the effectiveness of treatment modalities is affected by the appropriateness of the intervention used for research study populations. The outcome measures used to assess changes will impact the treatment effect. Symptom severity reporting, questionnaires, assessment tools, objective measurements and technological devices have improved the identification of the heterogeneous presentations that can occur in clinical practice. This enables person-specific treatment plans to be implemented for optimal cost-effective outcomes in service provision. Modalities used in the clinical management of breast cancer related lymphoedema may include compression therapy, manual therapies, exercise and physical activity, electrotherapeutic devices, psychosocial support and a number of other interventions with limited research evaluation to date. Treatment of a person with lymphoedema requires individualised assessment to determine goals of therapy. This is additional to modalities used to address lymphatic fluid stasis, tissue changes arising from chronic inflammation, erysipelas or cellulitis infection and/or fat cell deposit/growth over time. Minimisation of lymphoedema progression is fundamental to early intervention. A clinical case series will be presented to highlight the need for targeted, individualised lymphoedema management with interventions selected to achieve optimal outcomes for persons living with breast cancer related lymphoedema and other treatment related morbidity.

In **conclusion**, evidence based lymphoedema management requires determination of the clinical manifestation for selection of modalities in addition to using appropriate outcome measure(s) to achieve the goals agreed upon with the individual patient.

No conflict of interest disclosed

DEBATE: DO ANTHRACYCLINES STILL HAVE A PLACE IN THE TREATMENT OF HER 2 POSITIVE EARLY BREAST CANCER?
THE NO CASE: TIME TO RAISE OUR SIGHTS.

Fran Boyle, *Sydney, Australia*
Prof; AM

The narrow therapeutic window in breast oncology is often as narrow as an arrow slit. We aim to hit our target, the cancer, whilst minimising harm to our patient, particularly long-term harm. When we had few arrows, and fewer long-term survivors, the strategy of pouring burning oil over the battlements, scorching everything in its path, seemed reasonable. Not so in 2022!

The potential for synergy between chemotherapy and Her 2 directed therapies has been evident from the outset. Logically, blocking an overactive cellular repair pathway would be most effective when damage was being done by another agent. And tumour heterogeneity, which increases in the metastatic setting, indicates that not all cells in all sites would have Her 2 amplification, so something else would need to target these. Early cell line data identified multiple agents that could improve cell kill, but only two of these entered clinical trials – doxorubicin and paclitaxel. Why? Because these were the current standards of care. In 2022, we have many more choices of cytotoxic agents with better toxicity profiles. We also recognise the ability of Her 2 directed therapies to stimulate immune activation, or deliver drugs closer to the target cells using antibody drug conjugates. Some of these also release small amount of drug that can target bystander cells, which may not need to be Her 2 amplified. The manifest acute toxicities of anthracyclines – nausea, hair loss, neutropaenia, mucositis, early menopause – have been better managed in the modern era with improvements in supportive care. But the longer lasting effects that plague survivors – fatigue, cognitive impairment, cardiotoxicity – are not yet able to be prevented or treated effectively. Until such time as we are able to do so, we should avoid anthracyclines unless other measures have failed in the neoadjuvant setting to produce a pathological complete response. Its time to raise our sights comrades. We are no longer desperate defenders without options. Our patients with early breast cancer will survive, and the boiling oil should be a last resort.

UPDATE ON IMPLEMENTATION OF A NURSE-ENABLED, SHARED-CARE FOLLOW-UP MODEL FOR EARLY BREAST CANCER SURVIVORS (THE IBIS-SURVIVORSHIP STUDY)

Raymond Chan, *Adelaide, Australia*
on behalf of IBIS-Survivorship and McGrath Foundation investigators

Background: In partnership with the McGrath Foundation and seven clinical sites across four States, the IBIS-Survivorship Investigators received funding from the National Health and Medical Research Council (NHMRC) Partnership Grant Scheme to conduct a stepped-wedge cluster randomised controlled trial to implement and evaluate the IBIS-Survivorship Model of Care intervention.

Methods: This IBIS-Survivorship Model of Care intervention strategically utilises the breast care nurses, an existing workforce already embedded in the system, to implement a shared follow-up care model between cancer specialists and General Practitioners (GPs) for people who

have completed treatment for early breast cancer. These nurses will systematically overcome the barriers to GP involvement in survivorship care. The intervention incorporates evidence-based care components that are essential to enable shared-care. Drawing on the international expertise of the research team, the specialist breast care nurses have been trained and supported to (1) engage all stakeholders (patients, GPs and specialists) to take an active role in the patient's survivorship care; (2) ensure timely information exchange and negotiation of shared-responsibilities; and (3) ensure GPs have access to a range of tools and resources including existing Medicare Benefits Schedule (MBS) reimbursement items for team case-conferencing/care planning. The implementation and evaluation of IBIS-Survivorship is guided by Reach Effectiveness Adoption Implementation Maintenance (RE-AIM) Framework.
Discussion: In this presentation, the Chief/Principal Investigator will report on the updates on (1) models of care developments in cancer survivorship more widely; (2) the rationale for the active ingredients of the IBIS-Survivorship Model of Care intervention; and (3) a brief, high-level progress on the trial.

DEBATE: THAT LN POSITIVE PATIENTS ACHIEVING PCR WITH NAST SHOULD STILL RECEIVE REGIONAL NODAL RADIOTHERAPY: NO
Steven David, *Melbourne, Australia*
MBBS, FRANZCR, Radiation Oncologist
Peter MacCallum Cancer Centre

The use of comprehensive locoregional radiotherapy to improve local control and overall survival in node positive breast cancer has been demonstrated in the adjuvant setting through randomised controlled trials. However, there is a paucity of prospective evidence supporting the use of radiotherapy in the setting of neoadjuvant systemic therapy. The use of neoadjuvant systemic therapy in patients with node positive breast cancer has increased in recent times due to the ability to down-stage tumours as well as assess real-time systemic treatment efficacy. Improved oncological outcomes, both in terms of local control and overall survival have been demonstrated in node positive patients in which a complete pathological response is achieved. Axillary surgical treatments have been de-escalated in node-positive tumours that respond well to pre-operative systemic therapy with increasing use of less toxic targeted axillary dissections and sentinel lymph node biopsies. In the absence of prospective randomised data, it is reasonable to de-escalate radiotherapy treatments by omitting regional radiotherapy in patients achieving a complete pathological response, as the benefit may be negligible. Thus, unnecessary radiotherapy related toxicities can be avoided.

PSYCHOLOGICAL IMPACT AND MANAGEMENT OF PATIENTS WITH HEREDITARY BREAST CANCER
Jemma Gilchrist, *Sydney, Australia*
Dr. Clinical Psychologist, Mind My Health

Being diagnosed with an identified genetic mutation which increases the risk of breast cancer can lead to psychological distress, anxiety, and depression (Lombardi et al, 2019). Individuals face a complex decision-making path to reduce risk with surgery, endocrine treatment or intensified screening being options to consider (NICE, 2019). Women and men confront a plethora of emotions triggered by issues such as the genetic testing results of other family members, the potential impact on children, how to communicate to others, decision making about relationships or family planning, outcomes of surgery and/or reconstruction and body image. Many choose risk reducing and contralateral prophylactic mastectomies to reduce the risk of developing breast cancer (Metcalf et al, 2019) or, for those who have already been diagnosed, of developing a recurrence. Risk-reducing surgery has the potential for both physical and emotional challenges (McNamara et al, 2022). As a reflection of this, Braude et al (2018) have developed a template for the psychological assessment of individuals considering risk-reducing mastectomy to assist the discussion of key concerns during pre-operative, psychological consultations and reducing decisional regret (Braude, 2017). This presentation will provide an overview of the psychological impact of managing breast cancer risk for those with identified genetic mutations as well as providing an insight into the psychological strategies that may be helpful in assisting patients to choose an optimal decision for them, emotionally prepare for surgical outcomes and changes to appearance, improve adjustment, communication with those they care about and to manage distress.

MEDICINAL CANNABIS: POT OR PANACEA
Phillip Good, *Brisbane, Australia*

Medicinal cannabis prescriptions have undergone an exponential increase in Australia. Whilst popular with consumers there is still a great reluctance by doctors to be involved in prescribing, and currently a distinct lack of high quality evidence of efficacy. . This talk will explore a research program investigation medicinal cannabis for symptom control in patients with advanced cancer. It will also discuss patient motivation for enrolment and non-enrolment in randomised controlled trials of medicinal cannabis.

WHAT DO THE "NEW" BREAST CANCER GENES MEAN FOR PATIENTS AND THEIR FAMILIES?
Paul A James, *Melbourne, Australia*
Parkville Familial Cancer Centre, Peter MacCallum Cancer Centre and Royal Melbourne Hospital, Melbourne, Australia

Germline genetic testing for inherited breast cancer predisposition has been established in practice for a generation but in recent years the clinical indications, the number of genes tested, and the potential implications for patients have all expanded. Large scale case-control studies have helped to refine risk estimates and the cancer spectrum associated with specific genes as well as definitively ruling out a number of proposed genes that had already appeared on some commercial gene panels. This new data allows us to consider the known breast cancer genes in three groups: 1. Established high risk genes – including the best described genes *BRCA1* and *BRCA2*, where the strong risk means that the clinical implications are clear for nearly all patients. Pathogenic variants in rare syndromic genes (e.g. *TP53*, *PTEN* etc), along with *PALB2*, fall into this group. 2. Moderate risk genes – associated with ~2-4 fold increased risk, most notably *CHEK2* and *ATM*. Modification of the risks associated with pathogenic variants in genes in this group by personal risk factors, family history and other genetic contributions (such as polygenic risk) can have large impacts on the clinical implications for patients and unaffected family members. 3. Minor risk genes and variants – including the group of triple negative breast cancer associated genes *RAD51C*, *RAD51D* and *BARD1*. Care needs to be taken interpreting the results for these genes as other risk factors may be just as significant, or even more so, for a specific individual. Clinically validated models that are able to combine personal, family and genetic risks to provide a personalised risk assessment have been described and are likely to prove essential to achieving the correct clinical interpretation for individuals found to harbour a moderate or minor risk variant. The large scale of available data has also effectively excluded genes such as *RAD50*, *NBN*, *RECQL* from having a significant role in breast cancer predisposition and

suggests that any further monogenic contributions are individually very rare, accounting for only small numbers of additional hereditary breast cancer families.

IMPLEMENTING A PROSPECTIVE SURVEILLANCE AND EARLY INTERVENTION MODEL OF CARE FOR BREAST CANCER–RELATED LYMPHOEDEMA INTO CLINICAL PRACTICE

Louise Koelmeyer, *Sydney, Australia*
ALERT

Despite national guidelines and evidence-based research supporting a prospective surveillance and early intervention model of care for breast cancer related-lymphoedema, bridging the gap between research and clinical practice has been difficult. Understanding the process of translating effective interventions into standard care practice is important for improving uptake and sustainability. Implementation science aims to facilitate the translation of clinically efficacious interventions into practice. The use of the RE-AIM framework to evaluate implementation effectiveness acknowledges the importance of other factors that influence the value of an intervention in real-world settings. The RE-AIM framework consists of five dimensions: Reach, Effectiveness, Adoption, Implementation and Maintenance.
At the conclusion of this workshop attendees will be able to:

- Describe the clinical and governance literature that support a prospective surveillance and early intervention model of care in breast cancer
- Describe how bioimpedance spectroscopy can aid in the early detection of breast cancer related lymphoedema
- Describe the components of a prospective surveillance and early intervention model of care
- Describe how to implement the prospective surveillance and early intervention model of care using the RE-AIM framework across public and private health systems
- Describe barriers to implementing the prospective surveillance and early intervention model of care

DEBATE: THAT PALLIATIVE CARE SHOULD DITCH THE WORD 'PALLIATIVE': YES

Brian Le, *Melbourne, Australia*

"Palliative Care has an image problem" – we all know that. Patients, carers and clinicians fear what it means, and often delay, until either it is very late in the illness or it never happens, and the consequences can be poor care and sub-optimal end of life care. So are there any alternatives and is there evidence to say these are more acceptable to patients and clinicians? And does changing the name make any difference to patient outcomes? We will explore the data and examine the hype – which will leave you in no doubt that it is time to ditch the 'Palliative' in Palliative Care.

TIME TO CUT THE WIRE?: THE CASE FOR ROLLIS

Rhea Liang, *Gold Coast, Australia*
A/Prof; Gold Coast Health, Queensland, Australia

Radioguided Occult Lesion Localisation using Iodine 125 Seed (ROLLIS)- also known as Radioguided Seed Localisation (RSL) to distinguish it from a similar technique using liquid injectable Tc-99- is one of a new generation of breast localization techniques using solid-state point source markers.
ROLLIS has several advantages over hookwire. The I-125 seed has a long half life of 60 days, which means the insertion procedure can precede the day of surgery by days or weeks. The seed is accurate to place and has minimal displacement once in situ, with no external portion that can be dislodged. The insertion procedure is more comfortable for patient, and the surgical excision procedure is guided by the seed as a point source rather than the axial approach required by a hookwire, which facilitates perception of the lesion depth and optimal placement of wounds for cosmesis. The learning curve for surgeons who are already experienced with other localization techniques is short, approximately 3-5 procedures. ROLLIS is versatile, having been successfully used for in-situ lesions, as a bracketing technique for diffuse lesions, for node localization, and in the neoadjuvant setting. The signal strength does decay with time, but as most gamma probes have a detection sensitivity that can be calibrated several thousand-fold, the typical length of neodjuvant therapy (2-3 half lives of I-125, or a decay of one-quarter to one-eighth of the original signal) is seldom a problem. If the delay is so long that the signal decays below the detectable range, the seed itself still functions as a metallic clip marker for repeat localization by any modality. Compared to other solid-state point-source markers, ROLLIS is more likely to use equipment that is already existing in units, which may be a consideration in resource-limited settings. It also has a small MRI artefact, comparable to inert breast clips. The main barrier to its use are the licensing and tracking requirements due to its radioactivity. These requirements vary by location and will be the main challenge for units looking to implement ROLLIS as a localization technique.

ACTIVE SURVEILLANCE FOR LOW RISK DCIS IS A REASONABLE OPTION

Jocelyn Lippey, *Melbourne, Australia*

The introduction of population wide breast screening programs has led to a significant increase in the number of women diagnosed and treated with Ductal Carcinoma in Situ (DCIS) without the corresponding drop in numbers of invasive disease we should expect if DCIS is an obligate precursor to cancer. This indicates a proportion of women with DCIS undergoing unnecessary treatments. DCIS encompasses a wide range of pathologies, being a particularly heterogeneous disease. Low risk DCIS is classified as such because of small volume, low grade without concerning features such as comedo necrosis seen histologically or a mass seen either clinically or radiologically. An accurate prediction of which patients will progress and who will not does not exist so that currently all women diagnosed with DCIS receive similar locoregional treatments as those with invasive disease. This has a significant physical and psychological impact and if we could refine who did and didn't need treatment this would be hugely beneficial to our patients. The exact percentage of women treated for DCIS whom are overtreated is hotly debated but given the lack of observational data, the precise number is unknown. Internationally, randomised control trials are underway assessing the safety and acceptability of observation for low risk DCIS. These trials compare observation with or without endocrine therapy to standard current treatment and are the COMET trial in the USA, LORD in Europe and LORIS in the UK. Outcome measures are ipsilateral invasive cancer rates and include a variety of patient reported outcome measures (PROMs) that will address the issue of patient experience and preference. The equipoise demonstrated by these trials supports the argument that in certain situations active surveillance for low risk DCIS is a reasonable option.

THE CASE FOR SCOUT

Cindy Mak, *Sydney, Australia*

Wire localization has been the standard for breast surgery for many years, but is inefficient and uncomfortable. When

evaluating wire-free options our aims are to de-couple surgery and radiology, reduce re-excision rates, reduce volume of tissue taken, decrease discomfort and the number of procedures for a patient while being able to perform effective surveillance of the breast radiologically. Hookwires are liable to fracture, dislocate and make planning for oncoplastic breast surgery difficult. Radioactive isotope or seed localization cannot fully de-couple surgery and placement because of issues with half life. Additionally, there are onerous training, licensing and tracking issues. Magseed has significant MRI artefact (limiting its use in neoadjuvant chemotherapy as progress MRI is impaired), and requires the use of non metal instruments. Our institution evaluated all these techniques in our decision to employ SCOUT as our preferred wire localization technique. Our choice was based on the accuracy and ease of use of the SCOUT system, allowing pinpoint accuracy of its location within 1mm and in 360^{O}. The SCOUT Reflector is clearly visible in all imaging modalities and, most importantly does not cause significant artifact with MRI. The reflector can be placed any time before surgery, and we are increasingly employing it at time of biopsy for lesions that clearly need excision. We also use it to target axillary lymph nodes in neoadjuvant chemotherapy. We have not failed to retrieve a reflector, and have found minimal issues with diathermy disabling the device. Unlike other wire-free devices, clinical data on SCOUT consistently shows a significant reduction in re-excision rates compared to wires across multiple studies. Further improvements in the new generation SCOUT include a mini reflector, improved reflector diathermy resistance and a smaller surgical guide. Our institution will be contributing data to the iBRA-net study group SCOUT audit in the future. For us, SCOUT has proven superior to other localization techniques in many ways.

DEBATE: THAT ALL PRE-MENOPAUSAL WOMEN WITH LN+ve ER+HER2- EBC SHOULD HAVE ADJUVANT CHEMOTHERAPY – YES

Nicole McCarthy, *Brisbane, Australia*

International guidelines have recommended adjuvant chemotherapy in combination with endocrine therapy for node positive, hormone receptor positive breast cancer for decades. The availability of biomarker assays has changed the landscape and they help guide clinicians in making decisions regarding adjuvant systemic therapy in the node negative space. The prospective RX Ponder trial uses Oncotype DX in women with ER+/HER2- with 1-3 nodes involved. Postmenopausal women with breast cancer with a Recurrence Score (RS) in low or intermediate range can now be safely spared chemotherapy. However, in premenopausal women (women <50yrs), there was no subgroup that did not benefit from chemotherapy. Hence the recently updated ASCO guideline recommends specifically not to use Oncotype DX in this age group with node positive disease as it will not impact on management. The MINDACT trial recent update showed that women under 50 years with 0-3 nodes and a high clinical risk and a low genomic risk benefited from adjuvant chemotherapy. Thus, there is no evidence that ordering a MammaPrint will guide adjuvant chemotherapy and endocrine therapy decisions. It is well established that the benefit of adjuvant chemotherapy in ER+/HER2+ breast cancer is derived from both its cytotoxic effect and the induction of ovarian function suppression (OFS). There is no clinical trial data that addresses which node positive patients need OFS only rather than the combined effects. In the quest to achieve the maximum chance of long-term cure, adjuvant chemotherapy in combination with endocrine therapy should be the default for all premenopausal women with node positive, ER+/HER2- breast cancer.

CONSUMER VOICE INFORMING THE FUTURE OF BREAST RECONSTRUCTION IN AUSTRALIA

Sam Mills, *Melbourne, Australia*
Jodi Steel, *Sydney, Australia*
Breast Cancer Network Australia

Background: Australia's best practice care recommendations for breast cancer recommend people are informed of their options regarding breast reconstruction (BR) surgery. Despite this, rates of BR in Australia are lower than in comparable countries, and many people report receiving no information about BR at the time of their mastectomy. Breast Cancer Network Australia (BCNA), has been working to improve access to BR surgery for anyone who chooses mastectomy. The aim of this presentation is to provide details of findings from a survey of BCNA members regarding their experiences of BR and to highlight how findings from this survey have been used to develop policy and advocacy strategies to improve access to BR across Australia.
Method: Cross sectional online survey of members on BCNA's membership database (n=44,963). BCNA emailed members with breast cancer or at high risk of breast cancer to invite them to participate in the online survey about BR experiences. Questions assessed cancer and treatment and BR experiences. Those having or intending to have BR answered questions about type of reconstruction, health system treated in, waiting times, costs and satisfaction with decision and outcome. Factors influencing those undecided or decided against BR were explored. Open ended questions captured thoughts on how BR processes could be improved.
Results: 3350 members completed the survey with 59% deciding to have BR (41% completed, 10% having; 9% planning to have), 28% deciding against BR and 13% undecided. BR was more common for women who were younger, from metropolitan or socio-economically advantaged areas, and from Victoria (65%), Western Australia (66%) and Tasmania (64%). Most BR was in the private system with only 35% in the public system. 40% of those having BR in the public system in the previous 3 years waited for this procedure, with 35% of these waiting longer than 12 months. 50% of those having BR in the private system had out-of-pocket costs between $5,000-$10,000. 84% of women having BR were satisfied with their decision, and of those with completed BR, 77% were satisfied with the outcome. Factors commonly influencing women still deciding about BR were importance (68%), lack of information (32%), recovery time (31%) and costs (24%).
Conclusion: BCNA is leveraging consumer insight gathered through the survey to shape subsequent policy and program recommendations and drive advocacy, consumer leadership, and service delivery to help improve access to BR in Australia.

RISK ADJUSTED SCREENING: CONSIDERATIONS AND LESSONS FROM COVID-19

Carolyn Nickson, *Melbourne, Australia*

Since 2018, Cancer Council has been funded by the Australian Government Department of Health to explore options for risk-based breast screening in Australia, through the Breast ROSA project (Roadmap to Optimising Screening in Australia). In 2019 we delivered an initial Roadmap identifying priority activities to be addressed to work towards risk-based screening, and since then we have continued to progress various aspects of this work, with a series of technical reports provided to government. Project activities have included evidence reviews, workforce surveys, epidemiological data analyses and clinical and health economics modelling. The project will

soon deliver a set of recommendations and an updated Roadmap outlining how a national, collaborative effort between health services, researchers, clinicians, policy-makers, consumers, and stakeholders can best enable the introduction of risk-based breast cancer screening in Australia, with careful consideration of the balance of benefits and harms for women at different levels of risk, equitable access, and cost-effectiveness. The Breast ROSA project has coincided with the onset and ongoing impacts of the COVID pandemic. The Australian population breast screening program (BreastScreen) closed nationally for a short period in 2020. Each state and territory program has continued to navigate the challenges of providing this essential health service while their workforce and target population 'learns to live' with COVID. We expanded our project focus to include considerations and lessons arising from the pandemic. Separate to the Breast ROSA project, Cancer Council NSW was contracted by the Australian Government Department of Health to produce modelled estimates of the COVID pandemic on breast cancer outcomes, for a range of potential scenarios. This presentation will provide an overview of the Breast ROSA project and modelled estimates of COVID impacts, and how the COVID pandemic might impact and inform considerations of risk-based breast screening in Australia.

MCGRATH MODEL OF SURVIVORSHIP CARE
Kerry Patford, *Benalla, Australia*
The McGrath Foundation: Model of Care for Breast Care Nursing in Australia

The McGrath Model of Care defines and standardises the way breast care nursing is delivered across the continuum of care including diagnosis, treatment, rehabilitation, follow-up and palliative care; with guiding principles that are patient centric, locally flexible, and support equity of access. The Model was developed in 2018-2019 and launched in November 2020 to all McGrath Breast Care Nurses to support and enhance the delivery of multi-disciplinary care and evidence-based practices for all people with breast cancer, early or metastatic. An expert working group and expert reference group guided the development and endorsed the final content of the Model. These groups included patients, industry experts, researchers and representatives of peak bodies, professional bodies and Government. In addition, breast care nurses and patients were consulted at workshops around the country. The Model is designed to be used by breast care nurses in Australia and we hope that its use will improve learning and development, drive further research and, most importantly, improve the care and outcomes for patients diagnosed with breast cancer.

DEBATE: THAT CLINICAL T1CN0 HER2 POSITIVE AND TNBC SHOULD HAVE NAST: YES
Alistair Ring, *London, UK*

Neoadjuvant systemic therapy is a routine standard of care, supported by a number of national and international guidelines for patients with tumours more than 2cm or with axillary lymph node involvement (stage II and III). However, the reasons to use neoadjuvant systemic therapy, may also extend to patients with smaller (>10mm T1c ≤20mm) node negative tumours, particularly when a patient has a triple negative or HER2 positive breast cancer. When patients have tumours of this biology, they will almost invariably need systemic therapy, and pre-operative therapy may provide additional advantages. If breast-conserving surgery is not possible due to a high tumor-to-breast ratio, or if anticipated cosmetic outcome would be suboptimal due to tumor location, pre-operative downsizing of even smaller tumours may facilitate surgery. In patients who require genetic testing (the majority if not all patients with triple negative breast cancer) offering pre-operative systemic therapy enables time for genetic testing results to be available prior to definitive surgery. However perhaps the most compelling argument for neoadjuvant therapy is as a measure of in vivo chemosensitivity. Patients who achieve a pathological complete response may be reassured that their risk of recurrence is low. For triple negative breast cancer no further systemic therapy will usually then be offered. Patients with HER2 positive breast cancer may complete antibody therapy alone, with perhaps consideration of de-escalation of therapy (trastuzumab monotherapy rather than dual antibodies or shorter treatment durations). Patients who do not achieve a pathological complete response may be offered additional/escalated adjuvant therapy: capecitabine for patients with triple negative breast cancer (or Olaparib for those with a germline BRCA mutation) and trastuzumab-emtansine for patients with HER2 positive breast cancer. This tailoring of individual treatment is only possible with the neoadjuvant approach. In patients with HER2 positive tumours.

DEBATE: IMMUNOTHERAPY SHOULD BE PART OF STANDARD OF CARE IN NEOADJUVANT TREATMENT FOR TN ESBC: NO
Alistair Ring, *London, UK*

Immunotherapy including anti-PD1 and anti-PDL-1 therapies have had a significant impact on the management of a number of malignancies, including melanoma, lung and urological malignancies. Pembrolizumab and Atezolizumab also have approval in some parts of the world for the first line treatment of PDL-1 positive triple negative metastatic breast cancer. As a result of the early positive results in the metastatic setting a number of trials examining the role of immunotherapy in the neoadjuvant treatment of triple negative early breast cancer were initiated. In this setting up to 50% of patients may achieve a pathological complete response with conventional cytotoxic treatment, (usually comprising an anthracycline and taxane with or without a platinum). Patients who do achieve a pathological complete response are known to have a low risk of subsequent relapse. A number of trials have now reported and shown an increase in pathological response rates with the addition of immunotherapy to chemotherapy in the neoadjuvant setting. The largest of these trials to publish: KEYNOTE 522 has also demonstrated an improvement in both disease-free and overall survival. It will be debated whether the magnitude of benefit is sufficient to justify routine use. We will review which patients, based on the clinical trial data, will benefit. This will clearly need to take into account that a significant proportion of patients may have a good outcome with chemotherapy alone. It will be argued that alternative strategies exist for those patients who do not achieve a pathological response, including those with germline BRCA mutations. Finally we will discuss the treatment related toxicities and costs of treatment. Overall the debater will argue that whilst the results of the trials to date are impressive, immunotherapy should not be regarded as a standard of care for all patient.

CONTRAST ENHANCED MAMMOGRAPHY (CEM) IS READY FOR PRIME TIME
Allison Rose, *Melbourne, Australia*

Contrast enhanced Mammography is becoming an established technique in breast imaging with sensitivity approaching that of MRI and slightly better specificity.The technique involves intravenous injection of standard non-ionic iodinated contrast followed by a dual energy mammogram with subtraction. This yields a low energy

mammogram (equivalent to a 2D mammogram) and a co-registered image showing enhancing lesions and background parenchymal enhancement. The contrast images can be interpreted in much the same way as MRI and there is even a preliminary BIRADS lexicon of descriptors for reporting. The co-registered mammogram adds valuable lesion information. Some vendors are able to provide tomosynthesis in the same acquisition (2D/3D/Contrast combination). This provides further diagnostic information and may identify lesions enhancing on the contrast series, to facilitate biopsy if required. Depending on the vendor, the tomosynthetic views do not show contrast. The radiation dose is approximately 1-1.5 times the dose of a standard mammogram but still falls well within the allowable 3mGy limit. CEM is useful for screening, staging, surveillance and problem solving. It improves the efficiency of workup and is quick and easy to perform. It provides a simplified roadmap, often independent of breast density, in a very familiar landscape. It has reduced the need for supplemental US screening in our practice to a large extent and promoted a more targeted approach. It is offered to all women who attend our hospital for mammography as the first test. (but not used in population screening programs). We have found that surgeons find CEM easier to understand than MRI and women prefer the technique.

Reasons for the slightly reduced sensitivity of CEM compared with MRI include:

- Lesion outside the mammographic field of view
- Previous core biopsy (especially large VABB) with hematoma/lesion removal
- Marked BPE (lesion obscured)
- Pure mucinous lesions

Many lesions detected on CEM examinations are not seen on mammography (2Dor 3D) or US and therefore need a contrast - based technique to perform biopsy. First generation CEM biopsy devices are currently being released to market in Europe and USA and are similar to stereotactic devices in operation. The ability to perform CEM Biopsy will make the technique even more attractive. In the meantime MR guided biopsy is a very reliable alternative and there is excellent correlation of CEM and MRI images. Modern breast imaging should provide tailored precision diagnosis to enable appropriate and informed choices for treatment. Inherent in these goals is recognition that early breast cancer may be overtreated, and contrast based imaging will facilitate de-escalation. Underdiagnosis, where significant lesions missed by conventional imaging and remaining untreated can be detected. Contrast based tests (MRI and Contrast Enhanced Mammography) currently offer higher sensitivity and specificity for cancer detection with a bias towards detection of more biologically relevant disease than conventional methods (FFDM 2D/ 3Dtomosynthesis and US). Contrast based tests will be very important components of remodelled tailored breast screening programs.

SURVIVORSHIP MODEL OF CARE – NURSE-LED CLINIC

Kerry Shanahan, *Melbourne, Australia*
Breast Oncology Clinical Nurse Consultant – Royal Melbourne Hospital, Australia

In 2010, the integrated Breast Service of the Royal Melbourne Hospital and Royal Women's Hospital developed a Nurse-Led early breast cancer survivorship model for patient care. Initial development and funding support was provided through collaborative project work with Cancer Australia, and then the Department of Health and Human Services, Victoria. Breast cancer specialists, General Practitioners and consumers worked in partnership with project staff to develop, evaluate and formalise the program which is now well established and internally funded. The program provides consistent, co-ordinated, supported follow-up for patients with early breast cancer, to inform and empower them and their care team, as they transition into the follow-up phase of their care. An invitation based, patient self-reported questionnaire informed, single consultation with a specialist breast oncology nurse involved in the patient's care, enables discussion and development of an individualised care plan provided to the patient, their nominated General Practitioner and the specialist hospital team. Specialist breast oncology nurses provide important contact, education and support for patients from diagnosis and through-out their acute treatment, and are well placed to provide survivorship care at the transition to follow-up. A diverse range of patient reported issues are discussed, including endocrine medication tolerance and adherence, menopause, sexuality, fertility, body image, emotional wellbeing, family, relationships, work, exercise, sleep, nutrition, lifestyle, weight management, bone health, fear of recurrence, family cancer risk, resilience and life experience. Importantly, this program also enables an efficient transfer of patient care over time, from acute to community based shared follow-up, enabling additional new patients to be seen in the specialist clinic. Electronic Medical Record incorporation of this program is enabling an efficient process for sharing information between patients and the breast service whilst providing data collection for future analysis of important patient reported outcome measures. Collaboration, sharing of our work, and involvement in further survivorship care development initiatives, has been significant and rewarding, to observe the growth in this important area of care across a range of organisations and cancer streams. More than 10 years on from initiation of our program, reflection on the development and learnings of our work, and the research and guidelines from other strategic organisations nationally and internationally, enables an opportunity to encourage others who may be new or developing in this space.

ROUTINE IMAGING VS CLINICAL FOLLOW-UP FOR HIGH RISK EBC: TIME TO CHANGE THE PARADIGM?

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Mater Cancer Care Centre, South Brisbane

The case for clinical follow-up: Local and international guidelines for follow-up after treatment for early breast cancer recommend imaging for distant metastases only in the presence of patient signs and/or symptoms. Guidelines from Cancer Australia, NCCN, ASCO, and ESMO recommend regular history and clinical examinations and yearly mammography. These guidelines specifically recommend against the routine use of laboratory or imaging in surveillance and follow-up. The focus of campaigns such as "Choosing wisely" have been to drive quality and value in health care by doing only those tests, procedures and treatments that are right for the patient and supported by evidence. The downside for performing routine imaging for which there is no evidence of benefit range from additional lifetime radiation exposure, heightened anxiety, additional exposure to invasive procedures and the financial toxicity of patient co-payments. The use of PET, CT or radionucleotide bone scans to find metastatic disease in asymptomatic patients has not been shown to extend survival, is costly and in some cases false positive results lead to unnecessary invasive procedures and overtreatment which will ultimately adversely impact quality of life. Early detection of asymptomatic metastatic disease does not lead to improved overall survival in any of the randomised studies to date. At the current time we do not have evidence that survival or quality of life are improved with intensive imaging surveillance following curative intent treatment for

early breast cancer and should adhere to international consensus guidelines.

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#JustTextMe: EMPOWERING WOMEN'S HEALTH DURING SURVIVORSHIP

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Problem statement: Text message programs offer a low-cost way to provide health support for people living with chronic diseases. However, there was limited evidence for effectiveness, acceptability and utility of these programs among breast cancer survivors. EMPOWER-SMS is a consumer co-designed health and wellness program for people who finished active treatment for early-stage breast cancer. This presentation will explore the effectiveness, acceptability and utility of EMPOWER-SMS and clinical implications for integration into usual care.

Methods: Mixed-methods (quant-qual) single-blind randomised controlled trial (n=160) comparing intervention (n=80) to usual care (n=80) at 6-months (intention-to-treat). Setting: Westmead Breast Cancer Institute (Western Sydney, Australia). Eligibility criteria: adult (>18-years) females, <18-months since completing active breast cancer treatment (stage I-III), owned a mobile phone, written informed consent. Primary outcome: Self-Efficacy for Managing Chronic Disease Scale at six-months. Secondary outcomes: Quality of life (EORTC-QLQ-C30 and BR23), Depression, Anxiety, Stress (DASS-21), Medication adherence (self-reported missed doses in past 7 days), Physical activity (GPAQ; validated using Accelerometers in 32/160 participants). Process data sources included text message delivery software analytics, intervention feedback survey and focus groups (n=16), which were summarised thematically based on the Framework approach.

Results: Multicultural participants (N=160; mean age±SD 55.1±11.1years) were recruited 29th-March-2019 to 7th-May-2020 and randomised (n=80 EMPOWER-SMS: n=80 control). Baseline mean self-efficacy was high (I: 7.1 [95%CI 6.6, 7.5], C: 7.4 [7, 7.8]). Six-month self-efficacy was not significantly different between groups (I: 7.6 [7.3, 7.9], C: 7.6 [7.3, 7.9], mean difference$_{adjusted}$ 0 (95%CI 0.4, 0.4). Proportion of participants who missed ≥1 endocrine therapy medication doses was significantly lower for EMPOWER-SMS than control (I: 3/42[7.1%], C: 8/47[17.0%], RR$_{adjusted}$: 0.13 [95%CI 0.02, 0.91]. Other secondary outcomes: no significant differences. Text message delivery cost $15CAD/participant. Feedback respondents (64/80; 80%) felt the messages were easy-to-understand (64/64; 100%), useful (58/64; 91%) and motivating (43/64; 67%). The focus groups (n=16) revealed five factors influencing engagement: i) feelings of support/continued care ii) convenience/flexibility of messages delivery iii) weblinks iv) information from a credible source and v) options to save or share messages.

Conclusion: EMPOWER-SMS was inexpensive, useful and acceptable to breast cancer survivors, with potential for improved treatment adherence to endocrine therapy medication. Clinical benefits include continuity-of-care without increasing clinician workloads and improved patient access to evidence-based survivorship information and resources.

Disclosures: *None*

A GENERAL PRACTITIONER/PRIMARY CARE PHYSICIAN PERSPECTIVE

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General Practitioners/Primary Care Physicians (GPs/PCPs) are central to community health and provide a gateway to tertiary care. With the increasing numbers of Cancer Survivors and "Thrivors", GPs/PCPs have an increasing and evolving role to play. Breast Cancer Survivorship initiatives need to acknowledge this crucial role, with the establishment of local policy and implementation strategies. Collaboration, timely and multi-way communication systems are key, along with clarified role definitions and patient empowerment. Recognition and Government support is much needed to ensure optimal quality of life for those who have been affected by cancer at some point in their lives. GPs/PCPs are trained and well placed to provide holistic care throughout the cancer continuum and life journey, and it is now time that they are formally included and supported in related policy and care pathways**.**

IS IT POSSIBLE TO CONQUER FEAR OF RECURRENCE?

Charlotte Tottman, *Adelaide, Australia*
Clinical Psychologist
PhD (Clin Psych)

Living with the visceral fear that cancer may recur, and this time likely as metastatic disease, can be distressing, distracting, and at worst debilitating. Fear of cancer recurrence (FCR) is perhaps the most common cancer related psychological phenomenon in those diagnosed and treated for breast cancer. A persistent, uninvited companion in one's cancer treatment and post treatment experience. It is a normal response to an abnormal situation. A rational fear, reflecting a possible threat to one's survival. Plentiful triggers across a lifetime perpetuate FCR, providing only short periods of respite and little hope of elimination in time. The spectrum of fear of cancer recurrence ranges from mild to severe, with the latter often reflected in an incapacitating need for reassurance, and/or avoidance behaviours. Patients and health professionals alike reflect high interest in understanding and addressing this specific anxiety. Can fear of cancer recurrence be conquered? What do we mean by conquer? Perhaps Game of Thrones-esque……not so much elimination as gaining control, recognising there will be some regular insurrections when control is temporarily lost. Can FCR be better understood, and better managed? Does FCR have any benefits?

Despite its prevalence, effective scalable treatment for FCR remains elusive. Research indicates that some psychological interventions may be helpful, incorporating strategies from Acceptance and Commitment Therapy (ACT), metacognitive therapy and self-regulation theory, as well as traditional and contemporary Cognitive Behaviour Therapy (CBT) approaches. Results however generally reflect small effect sizes, and these therapies require intensive application by specialist mental health professionals, which present barriers including cost, location, availability, and stigma. Interestingly, baseline FCR has been found to moderate the effect of some psychological interventions, with greater improvement seen in those with higher baseline FCR. Researchers thus suggest that simpler interventions may be useful in supporting individuals with less severe FCR. Expanding on this idea, from a clinical and an applied perspective, FCR triggers and exacerbators will be highlighted, as well as specific, simple, and effective strategies to address it. The application of these may be helpful in settings beyond psychological therapy, providing benefit to a greater number of individuals experiencing FCR.

DEBATE: THAT IMMEDIATE BREAST RECONSTRUCTION PRIOR TO POST-MASTECTOMY RADIOTHERAPY SHOULD BE AVOIDED: NO

Dean Trotter, *Melbourne, Australia*

Breast reconstruction is a well-established procedure with enormous benefits to patients who undergo mastectomy as part of their breast cancer treatment. Unsurprisingly, the prevalence of breast reconstruction continues to increase as the awareness of the benefits increases and access improves. Breast reconstruction has evolved beyond simply reconstructing breasts that are symmetrical in a bra. Modern reconstruction aims to create breasts that compare aesthetically to and have many of the physical properties of the native breast such as warmth, softness, and mobility. Breast reconstruction can be undertaken using tissue (autologous reconstruction) or implants (alloplastic reconstruction). Historically, immediate alloplastic reconstruction was generally a two-step procedure, involving the insertion of a tissue expander at the time of mastectomy, followed by the insertion of a definitive implant at a second procedure. More recently, it has become common to perform “direct to implant” reconstruction whereby an implant is inserted at the time of mastectomy. Autologous breast reconstruction using tissue is also known as “free flap” breast reconstruction. It is generally regarded as the gold standard method of reconstruction because it most consistently achieves the modern reconstructive goals and has a reduced requirement for revisional procedures. Radiotherapy remains an important treatment for many patients with late-stage breast cancer. Improved techniques in recent years have seen reduced side effects however doubts remain regarding its application. Specifically, the ideal timing of radiotherapy for patients undergoing immediate breast reconstruction is yet to be established. For many years, there have been concerns that radiotherapy will have deleterious effects on immediate breast reconstruction, or that ideal treatment pathways would be compromised due to delays in treatment secondary to surgical complications arising from immediate breast reconstruction. As a result, immediate autologous reconstruction was not offered routinely in many centres, with a preference for alloplastic reconstruction using tissue expanders. With time, it has become apparent that excellent results can be achieved with autologous breast reconstruction even in the setting of radiotherapy. A question now arises regarding the ideal timing of immediate reconstruction and radiotherapy. Three clear pathways seem to be emerging.

1. Delayed reconstruction
2. Immediate autologous reconstruction followed by post-mastectomy radiotherapy
3. Neoadjuvant radiotherapy followed by immediate autologous reconstruction

I will demonstrate that immediate breast reconstruction prior to post-mastectomy radiotherapy should not only NOT be avoided, but it should also be regarded as the ideal pathway for many patients.

FEAR OF RECURRENCE? WHAT IS IT AND HOW COMMON IS IT?

Jane Turner, *Brisbane, Australia*
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Fear of cancer recurrence (FCR) has been defined as “The fear, concern or worry that cancer could return or progress”. It has been the focus of research for approximately the past two decades and is now considered to a multidimensional construct with key features being high levels of preoccupation, high levels of worry, persistence over time, and hypervigilance towards physical symptoms. It is estimated that nearly 59% of cancer survivors experience moderate FCR and 19% experience severe FCR. This is concerning as those who have high FCR experience lower quality and life. In addition, this poses a burden on the health care system because of unscheduled appointments and requests for non-routine tests. High levels of FCR in caregivers have also been reported, and it is likely that this leads to “contagion” of distress. Although some risk factors for the development of FCR have been described, the precise evolution has not been fully elucidated. A variety of models for understanding FCR have been developed. Cognitive factors are likely to play an important role, in particular attempts to control and/or suppress thoughts, combined with self-preoccupation. The circumstances of the diagnosis (for example perceived delay in diagnosis) and treatment complications and residual symptoms are likely to also play a role. Clinical experience highlights the contribution of personal factors including past life experiences which may lead to vulnerability when facing stress.

This presentation provides an overview of these issues and raises questions about the ways in which clinician-patient communication may also be important.

DEBATE: THE OMISSION OF SENTINEL NODE BIOPSY SHOULD BE CONSIDERED FOR ALL WOMEN >70 WITH CLINICALLY NEGATIVE AXILLAE: YES

Melanie Walker *MBBS(Hons) FRACS, Melbourne, Australia*

Traditionally, for patients with invasive breast cancer, the surgical management has included axillary staging. Currently sentinel node biopsy is the standard of care for surgically staging the axilla in clinically node negative patients, replacing axillary clearance because of its lower surgical morbidity. We know that overtreatment of early stage breast cancer results in increased morbidity and cost without improvement in overall survival. Morbidity still exists following sentinel node biopsy. A Cochrane review published in 2017, showed rates of lymphoedema of 4.8%, subjective arm movement impairment 4%, paraesthesia 34%, pain 8.6% and numbness 18.5% following sentinel node biopsy. Older women also generally have more comorbidities, a shorter life span and greater risk of side effect from chemotherapy. This presentation will outline the argument supporting the safe omission of sentinel node biopsy in clinically node negative women over 70.

MANAGEMENT OF COMMON BREAST CANCER PREDISPOSITION SYNDROMES

Milita Zaheed, *Sydney, Australia*

Some of the most common and well-described heritable cancer predisposition syndromes are associated with a high to moderately increased lifetime risk of developing breast cancers. Advancements in sequencing and bioinformatic technologies combined with ease of access to databases and global knowledge sharing are providing us with an improved ability to integrate genomic medicine into care. Identifying individuals and families at increased risk of developing malignancies allow us an opportunity to implement risk management strategies appropriate to the risk toward precision prevention. I will discuss risk management strategies that we consider for women carrying a pathogenic variant in more common predisposition genes such as *BRCA1, BRCA2, PALB2, TP53, CHEK2* and *ATM* and some of the challenges we are experiencing in estimating risk and therefore determining the best-suited risk management strategy. Additionally, in women who have had a breast cancer diagnosis some of the considerations their clinicians may have when determining risk management for a second breast primary.

DEBATE: THAT CDK4/6I'S SHOULD BE PART OF ADJUVANT TREATMENT OF HIGH RISK ER+HER2- EARLY BREAST CANCER: NO

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[1]*Breast Cancer Trials, Newcastle, NSW, Australia*
[2]*University of Newcastle, NSW, Australia*
[3]*Hunter Valley Oncology, Newcastle, NSW, Australia*

Cyclin dependent kinase 4/6 inhibitors (CDK 4/6i) are in routine clinical practice for metastatic ER-positive and HER2-negative breast cancer. The drugs that are currently approved in this setting are palbociclib, ribociclib and abemaciclib. Trials in first and second line metastatic treatment have demonstrated statistically and clinically significant progression-free and overall survival benefits. The natural progression has been to conduct adjuvant trials of these agents in combination with standard endocrine therapy to test the hypothesis that this strategy will lead to a greater number of patients being cured of their breast cancer. The adjuvant trials that have reported outcomes include PALLAS, MonarchE and PenelopeB, with the results from NATALEE awaited. The primary outcome of these trials is invasive disease-free survival, and results with relatively short follow-up have been mixed. There have also been proof of principle neoadjuvant trials with biological endpoints. This breast cancer subtype is the most common, with substantial implications to patients, providers, health care services and payers when an additional therapeutic agent may be added to routine treatment. Drug-related and financial toxicity are not inconsequential, and must be considered. The case will be presented that the sum of evidence is insufficient to recommend adjuvant CDK4/6i for patients with high risk early stage breast cancer.

FREE PAPERS ABSTRACTS

SUPPORTIVE CARE

"LINKING RISK WITH SCREENING" – THE IMPACT OF AN ONLINE DECISION AID FOR RISK-STRATIFIED BREAST SCREENING ON UNDERSTANDING, ACCEPTANCE AND DECISION-MAKING

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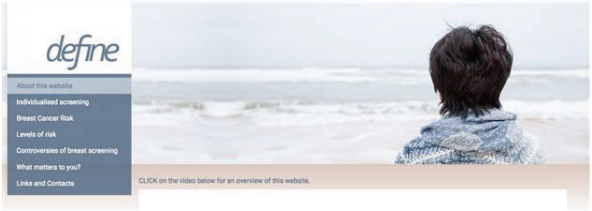
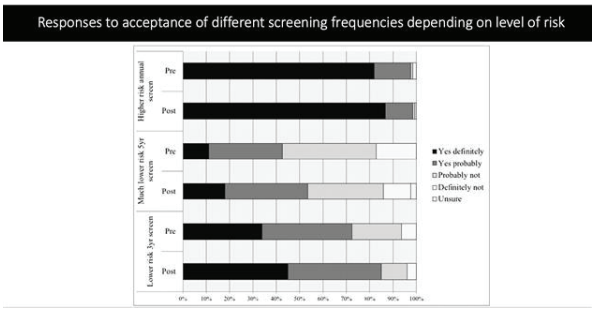
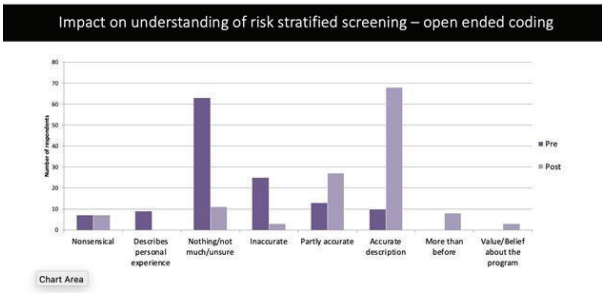
Problem statement: Population breast cancer screening in Australia was established 30 ago with subsequent successful reduction in breast cancer mortality over this time. However, very little change has occurred to reflect the growth in knowledge in breast cancer risk, genetic advancements or shift towards personalised medicine. A risk-stratified approach would offer breast cancer screening at differing frequencies and modalities dependent on an individual's risk. An international groundswell towards a risk-stratified approach is underway but requires engagement and acceptance from consumers and current screening clients. Education, values clarification, acceptance and informed decision making are critical components to any process change and decision aids offer an effective platform to carry these simultaneous needs.
Methods: An online decision aid (www.defineau.org) was developed based on qualitative work exploring BreastScreen clients views, values and knowledge needs on risk-stratified breast cancer screening. Evaluation of the decision aids impact on knowledge, understanding, risk perception, acceptance of risk assessment, change of screening frequency and informed decision-making measures was performed used a purpose built, mixed methods questionnaire pre and post website review.
Results: 3200 initial invitations sent to current BreastScreen Victoria clients. 242 women initially responded with 127 participants completing both pre and post surveys. Participant demographics were representative of the current screening population. There was a significant shift in both knowledge of, acceptance of risk stratified breast cancer screening as well as acceptance of decreased frequency for lower risk participants after reviewing the online decision aid. High levels of acceptance of risk stratification, genetic testing and broad support for tailored screening persisted pre and post decision aid review.
Conclusion: The DEFINE decision aid facilitated informed decision making and understanding of risk stratified breast cancer screening. Importantly, it had a positive impact on acceptance of lower frequency screening, a major barrier to the success of a risk-stratified program. Educational tools with patient-focused values at the forefront play an important role in facilitation of informed decision making and should be used for any major change to the breast screening program in Australia.
Disclosure of Interest: None to disclose







WHAT IS WOMEN WITH BREAST CANCERS' EXPERIENCE AND PERCEPTION OF GENITOURINARY SYMPTOMS?

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Abbreviations
BC Breast Cancer
BCNA Breast Cancer Network of Australia
BCT Breast Cancer Trials
GUS Genitourinary symptoms

Problem statement: We aimed to improve understanding of the perceptions and experiences of genitourinary symptoms (GUS) in women with breast cancer (BC).

Methods: Oncology clinic attendees from eight NSW cancer services and Breast Cancer Network Australia members completed a survey addressing the type and impact of GUS experienced, and perceptions of treatment options.
Results: Surveys were completed by 458 women: median age 60 years (range 30 – 83); 53% currently sexually active; 58% currently on endocrine treatment and 83% had early stage BC. 71% of respondents reported experiencing GUS, with a minority reporting changing (5%) or stopping (4%) their endocrine treatment as a result. Vaginal dryness was the most common symptom reported (64%), followed by pain on penetration (43%) and itch (34%). Only 38% of respondents recalled being warned by their cancer doctor that GUS can be a side effect of BC treatment, and 51% reported never being asked about GUS. Being uncomfortable talking to a male health professional was reported as a moderate or major barrier to seeking help for GUS by 27% of respondents. Few respondents reported using vaginal: lubricants (41%); moisturisers (25%); or oestrogens (16%). Amongst women reporting use of vaginal oestrogens, 42% found they helped their GUS "quite a bit" or "very much". The most frequently reported moderate to major barriers preventing use of vaginal oestrogens were: packaging saying "not to use if you have been diagnosed with breast cancer" (64%), "my cancer doctor has not recommended vaginal oestrogens" (59%), "worry that vaginal oestrogen will increase my risk of breast cancer returning" (59%).
Conclusions: GUS are a common symptom for women with BC yet the majority are not warned about these symptoms. Healthcare professionals could provide more information about GUS and treatment options and monitor for symptoms to reduce their impact on women after BC.
Disclosures of Interest
Haryana Dhillon: Honoraria paid to my institution from BMS, MSD, Janssen-Cilag
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Belinda Kiely: funding for giving talks from Eisai, MSD, Novartis, funding for advisory boards from Roche and Gilead, registration for online meetings – MSD, Novartis, Pfizer
Antonia Pearson: Financial support to attend virtual education meetings from GSK

ESTIMATING END OF LIFE CARE COSTS TO DIFFERENT FUNDERS FOR BREAST CANCER PATIENTS IN QUEENSLAND AUSTRALIA: A DATA LINKAGE STUDY
Shafkat Jahan, Daniel Lindsey, Gail Garvey
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Problem statement: Cancer care expenditure in Australia is highest for breast cancer, owing to its significantly increasing incidence and survival rate and expensive treatment options. While previous research shows high healthcare expenses during the early stages of the illness course, the costs associated with end-of-life care for breast cancer remains unclear. This data linkage study will investigate the end-of-life care expenditures to public and private healthcare funders, as well as to individuals through Medicare and pharmaceutical claims for women diagnosed with breast cancer in Queensland, Australia.
Methods: The study utilised a linked administrative database to extract female breast cancer diagnoses for Queensland, Australia, between July 2011 to June 2015 (n= 1,832). Each Queensland Cancer Registry record was linked to the Queensland Admitted Patients Data Collection, Emergency Department Information System, Medicare Benefit Scheme, and Pharmaceutical Benefit Scheme records to quantify the number of health care services used and its related costs over the last six months of life. Individuals over the age of 18 who had sufficient information for at least the last six months of care before death were included in the study sample.
Results: While the average number of private hospital admissions was significantly greater (M=18, SD=22) than the number of public hospital admissions (M=4, SD=2) in the last six months of life, the average cost per person for hospital admissions was higher for public funders (M=$56,969, SD=$63,478) compared to private funders (M=$47,025, SD=$49,495). The number of ED presentations (M=2, SD=1) and their associated expenses (M=$2,448, SD=$1,497) during this period were low. Individuals with breast cancer had an average of 77 (SD=61) MBS and 42 (SD=19) PBS claims in the end-of-life period, costing those with breast cancer an average of $4,316 (SD=$4,619) and $353 (SD=$384), respectively.
Conclusion: The study indicates that health care utilisation and associated costs to different funders are high during the end-of-life period for individuals with breast cancer. During the end-of-life period, further subsidies to healthcare or other methods of financial relief could be provided to individuals to alleviate the major burdens experienced at this crucial time.

SUPPORTING LGBTQI COMMUNITIES IMPACTED BY BREAST CANCER: RESULTS AND TRANSLATIONAL OUTCOMES OF THE OUT WITH CANCER STUDY
Julie Rae, Jane Ussher, Janette Perz, Kimberley Allison, Rosalie Power
Out with Cancer Study Team

Problem statement: Lesbian, gay, bisexual, transgender, queer, and intersex (LGBTQI) communities are increasingly recognised as a vulnerable population in cancer care. They experience disproportionate cancer burden and unique psychosocial challenges, such as higher distress and sexual concerns, less family support, gaps in patient-provider communication and lower satisfaction with cancer care. Further investigation of the needs of specific LGBTQI populations is needed to guide service improvement initiatives and resource development.
Methods: Out with Cancer is a mixed-methods project involving surveys, interviews, and photo-elicitation exercises with LGBTQI patients/survivors and caregivers, across a range of LGBTQI identities and ages. 430 patients/survivors and 132 carers completed surveys (93 breast cancer patients/survivors and 37 carers), and 105 patients/survivors and 31 carers completed interviews (17 breast cancer patients/survivors and 10 carers). The project adopted an integrated knowledge translation framework, with LGBTQI and cancer community organisations, clinicians, and LGBTQI patients/survivors and carers advising on all stages of the project.
Results: Over 40% of LGBTQI patients/survivors and carers reported high distress, a rate 3-6 times higher than non-LGBTQI patient/survivor studies. Significantly higher distress and lower quality of life (QOL) were identified in younger, transgender, intersex, bisexual, and queer participants. Distress and QOL were associated with minority stress (discrimination, discomfort in being LGBTQI, outness), impact on gender and LGBTQI identities, lack of social support, physical concerns, and sexual concerns. Qualitative data provided further insights into participants' experiences of heterosexism in healthcare, how they navigated changes in embodied gender and sexuality, and how LGBTQI communities organised to provide care where family and formal support services lacked.
As part of knowledge translation, the Out with Cancer research team collaborated with Breast Cancer Network of Australia and LGBTQI patient/caregiver representatives to co-create tailored information resources for LGBTQI people

impacted by cancer addressing identified information needs. These resources are accessible via the MyJourney app.
Conclusion: Despite increasing societal acceptance, LGBTQI communities continue to face disparities in psychosocial outcomes and experiences of care. Findings and translational outcomes of the Out with Cancer study will assist organisations such as BCNA to develop resources and services and progress advocacy to improve equity of access to care.
Authors: *Jane Ussher, Janette Perz, Kimberley Allison, Rosalie Power, Julie Rae, and the Out with Cancer Study Team*

PATIENT PERCEPTIONS OF PHYSICAL REHABILITATION AND ITS METHOD OF DELIVERY FOR A VARIETY OF ADVERSE PHYSICAL EFFECTS FOLLOWING BREAST CANCER SURGERY

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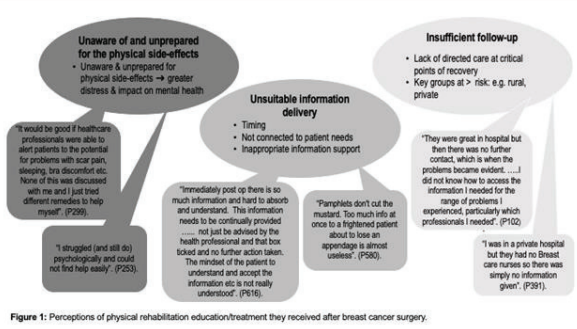
Problem statement: Women are recommended to exercise following breast cancer surgery to maximise disease prevention, health, and long-term survival. The ability to exercise, however, is perceived by women to be limited by the frequent and severe adverse physical effects of breast cancer surgery. This study investigated patient-perceptions of the physical rehabilitation received for a variety of adverse physical effects following breast cancer surgery, in conjunction with quantitative data on the physical rehabilitation received.
Methods: 509 Australian women (55 years SD 6.5) who previously had breast cancer surgery retrospectively completed an online survey that investigated their perceptions of and satisfaction with the content and delivery of physical rehabilitation received for six common adverse physical effects. Respondents were also asked to recommend strategies to improve the quality of physical rehabilitation. Quantitative data of the percentage of respondents that received each delivery method, for each adverse physical effect and their satisfaction levels were tabulated. Qualitative data of patient perceptions and recommendations were analysed using a thematic analysis.
Results: Overall, the most common delivery method were pamphlets and the least common were sessions with a health professional. Less than 50% of respondents were satisfied with their physical rehabilitation. The adverse physical effects included in the physical rehabilitation content varied; issues related to lymphedema and shoulder issues were commonly included, whereas issues related to scars, torso and donor site issues or physical discomfort disturbing sleep were included for less than 50% of respondents Three major themes emerged: women perceived (i) they were unaware of and unprepared for the adverse physical effects of their surgery/treatment, (ii) information delivery was unsuitable in terms of the timing, delivery format and cognisance of patient needs, and (iii) follow-up was insufficient at critical time points of recovery (Figure 1). Strategies to improve physical rehabilitation were identified.
Conclusion: Women perceived the content, delivery method and follow-up of physical rehabilitation they received after breast cancer surgery was inadequate because their needs at various stages of recovery were not met, which limited their ability to exercise and be physically active. Physical rehabilitation needs to improve after breast cancer surgery.
Disclosure of Interest: *Nil*

Figure 1: Perceptions of physical rehabilitation education/treatment received after breast cancer surgery.



NO ASSOCIATION BETWEEN BREAST PAIN AND BREAST CANCER

A Prospective Cohort Study of 10,830 Patients Presenting to a Breast Cancer Diagnostic Clinic

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Problem Statement: Breast pain accounts for 13% to 41% of attendances in breast outpatient services. This leads to unnecessary concern for patients referred in to a 'cancer clinic' and presents resource and capacity challenges.
Methods: This was a prospective cohort study of consecutive women referred to a diagnostic clinic for breast symptom assessment over a course of 12 months. The aim was to investigate the incidence of breast cancer in women presenting with breast pain alone, to determine the clinical utility of imaging investigations and to establish the health economics of referring women with breast pain alone to secondary care. Patients were categorised by presentation into; 'breast pain' alone, breast 'lump', 'nipple symptoms', and 'other' breast symptoms.
Results: Of 10 830 women, 1972 (18%) were referred with breast pain alone, 6708 (62%) with lumps, 480 (4%) with nipple symptoms and 1670 (15%) with 'other' symptoms. Of the women referred with breast pain alone, breast cancer incidence was 0.4% compared with ~5% in each of the three other clinical groups. This is similar to women undergoing breast screening. Three of the eight breast cancers found in patients referred with breast pain were in the contralateral,

asymptomatic breast. Compared to 'breast lump', the odds ratio of a cancer diagnosis in the 'breast pain' group was 0.05 (95% C.I. 0.02 – 0.09; P<0.001). Compared to reassurance in primary care, referral was costlier (net cost £262 per patient) and did not confer additional health benefits (net Quality Adjusted Life Years (QALY) -0.012). When accounting for any QALY loss due to anxiety associated with referral to 'cancer clinic' was excluded, the incremental cost effectiveness ratio (£45,528/QALY) was still greater than typical cost-effectiveness thresholds used in decision-making in the UK National Health Service.
Conclusions: Referring women with breast pain alone to a breast cancer diagnostic clinic is a clinically inefficient use of limited resources. In order to improve capacity, reduce financial burden, and improve patient care, management pathways without referral to diagnostic breast clinics should be developed.

LOCOREGIONAL THERAPY

OUTCOME OF ATYPICAL OR B3 LESIONS IN BREASTSCREEN NSW

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Problem statement: Atypical or B3 lesions comprise a heterogeneous group of lesions of uncertain malignant potential. B3 lesions diagnosed on needle biopsies are therefore recommended for excision. The aim of this study was to determine the upgrade rate to malignancy for B3 lesions identified within BreastScreen NSW.
Methods: All lesions categorized as B3 on core needle biopsy between 2011 and 2018 in all BreastScreen services in NSW were included in this study. Lesion nature on mammogram, excision histology result including size and type were included for analysis.
Results: In the study period, a total of 2219 lesions undergoing core needle biopsy in BreastScreen NSW were categorized as B3 lesions. The median lesion size was 10.0mm (1-150mm). Of the 2219 core biopsy B3 lesions, on excision, 519 (26.5%) were malignant, 607 (31.0%) atypical and 835 (42.6%) benign. The overall upgrade rate of the core biopsy B3 lesions to malignancy was 23.4%. Atypical papillary lesion, followed by atypical ductal hyperplasia and other atypical lesions had upgrade rates of 54.6%, 36.2% and 27.4%, respectively, compared to papilloma, radial scar and benign lesions which had lower upgrade rates of 18.8%, 10.8% and 13.2% respectively. Lesions with atypia on core biopsy had an upgrade rate of 34.8% compared to 13.6% for lesions without atypia. The median size of malignant lesions was significantly larger than atypical and benign lesions at 12.0mm (2-140mm) compared to 9.0mm (1-150mm) and 10.0mm (2-100mm) respectively with a p-value of <0.0001.
Conclusion: This study found that almost a quarter of screen-detected core biopsy B3 lesions in BreastScreen NSW were upgraded to cancer. The upgrade rate was higher at 1 in 3 for B3 lesions with atypia on core biopsy, confirming the need to excise B3 lesions with atypia. On excision, lesions which were malignant were significantly larger than atypical and benign ones.

CONTRAST ENHANCED MAMMOGRAPHY IN FURTHER ASSESSMENT OF SCREEN-DETECTED BREAST CANCER

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Problem statement: Bilateral mammogram and ultrasound is the standard local assessment after diagnosis of early breast cancer. MRI is selectively used but remains controversial. Contrast enhanced mammography (CEM) is reported to have higher sensitivity than mammography, better specificity than ultrasound, and similar performance with better accessibility than MRI. We introduced CEM as near-routine for assessment of patients with screen-detected breast cancer, to identify mammographically occult lesions. Here we report imaging/biopsy findings for occult lesions and impact on surgical decisions.
Methods: Women with screen-detected breast cancer underwent CEM as supplementary imaging. CEM findings were documented and pathology of lesions identified by CEM was described.
Results: 212 screen-detected breast cancer patients underwent CEM. 65/212 (31%) had additional findings on CEM. 32/65 (49%) were true positives (TP), with 23 invasive cancers and 6 DCIS cases, while 31/65 (48%) were false positives and 2/65 had neoadjuvant CT and were unclassifiable. TPs were found with high (17/32) and low (15/32) mammographic densities. TPs were identified in older and younger patients (14/32 <60 years old, 18/32 □60 years old). CEM resulted in management change in 45/65 patients, including wider resection (21/65), conversion to mastectomy (10/65), contralateral breast surgery (6/65), additional ipsilateral excision (4/65), bracketting (2/65), and neoadjuvant therapy (2/65).
Conclusion: CEM for further assessment in screen-detected breast cancers identified occult malignancy in 15% of patients, with even distribution of TPs over low and high mammographic density and age. This indicates CEM may supplement standard imaging in screen-detected breast cancers. The impact on longer-term outcomes requires further investigation.

COMPARISON OF LOCAL RECURRENCE AFTER SIMPLE AND SKIN-SPARING MASTECTOMY PERFORMED IN PATIENTS WITH PURE DUCTAL CARCINOMA IN SITU

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Problem statement: With the onset of the screening programme there has been an increasing incidence of ductal carcinoma in situ (DCIS). Over a third of women with DCIS will require mastectomy with an increasing demand for immediate reconstruction, requiring Skin-sparing (SSM) or

Nipple-sparing mastectomy (NSM). We have previously demonstrated there is no difference in local regional recurrence (LRR) comparing simple mastectomy (SM) against SSM when performed for invasive disease. In this study we aimed to evaluate LRR after simple and SSM for pure DCIS, so we can adequately inform patients.

Methods: We undertook a retrospective analysis, collecting clinico-pathological data for all patients at single high-volume unit in the UK, who underwent a mastectomy with/without reconstruction for DCIS between 2000-2016.

Results: 336 patients underwent a mastectomy for pure DCIS (147 SM vs 189 SSM/NSM). Rates of SSM increased from 51.2% (102/199) of mastectomies 2000-2010 to 63.5% (87/137) between 2011 and 2016. Other than median age (62 years vs 54 years, p=0.001), there was no difference in other clinico-pathological variables between the SM and SSM/NSM groups, including grade of DCIS (HG DCIS; 76% vs 72%, p=0.573) and resection margins of <1mm (16.4% vs 18.5%, p=0.726). Higher LRR of 7.9% (15/189) was seen after SSM/NSM compared to 0.6% (1/147) seen after SM. There was a trend to suggest high grade of DCIS was associated with recurrence 93.8% (15/16) vs non-recurrence 73.2% (232/320) p=0.08. Of the 16 recurrences, one patient developed metastatic disease and died.

Conclusions: LRR was higher after SSM/NSM for DCIS, than SM despite no differences in clinico-pathological factors that would influence recurrence. Patients and clinicians should be aware of the potential greater risk of LRR after SSM/NSM than SM and there may be a role for post-reconstruction imaging surveillance. Further multicentre/national data is required to evaluate long term outcomes after mastectomy for DCIS and to understand the pathological drivers for this.

Type of mastectomy	Simple	S-NSM	p
N	147 (43.8%)	189 (56.2%)	
Recurrences	1 (0.6%)	15 (7.9%)	<0.001, Fishers exact
Age (IQR)	62.3	54.3	<0.001, t-test
Symptomatic	25.7%	29.2%	0.563, x^2
High grade	76.6%	72.3%	0.573, x^2
Tumour size (mm)	40 (25-60)	42 (20-60)	0.813, Wilcoxon rank
Multifocal	18.1%	23.1%	0.325, x^2
ER positive	58.2%	67.2%	0.129, x^2
Comedonecrosis	35.3%	43.8%	0.199, x^2

Table 1: Summarising clinico-pathological characteristics of cohort, stratified by mastectomy type

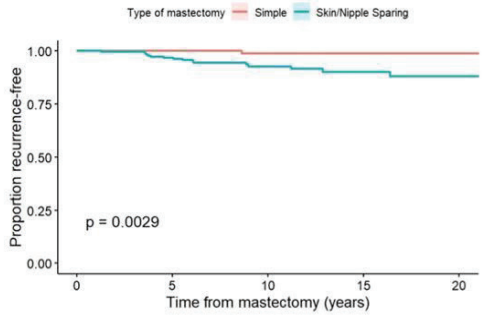


Figure 1: Kaplan-Meier estimator simple vs skin/nipple sparing mastectomy

	No LRR, N=320	LRR, N=16	p
Type of mastectomy N (%)			
Simple	146 (45.6)	1 (6.2)	0.001, Fisher's exact
Skin/Nipple Sparing	174 (54.4)	15 (93.8)	
Age (median [IQR])	58 [51-65]	51.5 [47.8-57]	0.009, Wilcoxon rank
Grade (%)			0.071, Fisher's exact
Low	17 (5.3)	1 (6.2)	
Intermediate	68 (21.5)	-	
High	232 (73.2)	15 (93.8)	
Grade = High (%)			0.08, Fisher's exact
Low/Intermediate	85 (26.8)	1 (6.2)	
High	232 (73.2)	15 (93.8)	
Max tumour size (mm) (median [IQR])	42 [21-60]	40 [35-55]	0.69, Wilcoxon rank
Multifocal (%)			1, Fisher's exact
Unifocal	248 (79)	13 (81.2)	
Multifocal	66 (21)	3 (18.8)	
Comedo necrosis (%)			0.37, Fisher's exact
No	150 (59.3)	9 (75)	
Yes	103 (40.7)	3 (25)	
ER status (%)			1, x^2
Negative	108 (36.6)	6 (37.5)	
Positive	187 (63.4)	10 (62.5)	

Table 2: LRR comparing confounding variables

USING RADIO-OCCULT LESION LOCALIZATION (ROLL) TECHNIQUES TO IDENTIFY THE CLIPPED NODE IN TARGETED AXILLARY DISSECTIONS (TAD)

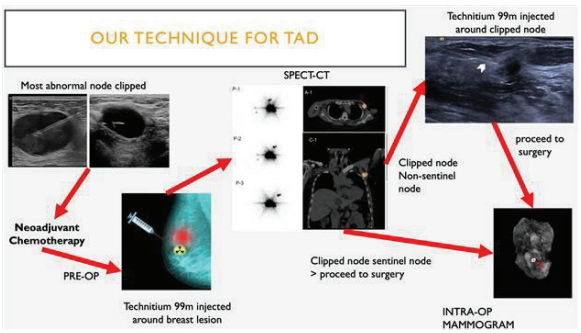
Alec Winder, Andrew Spillane, Samriti Sood, Merran Mckessar, Deborah Cohn, Kylie Snook

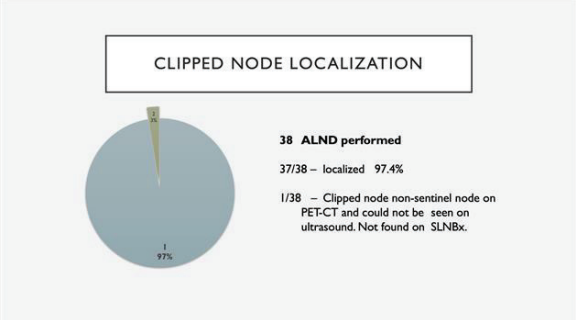
Problem statement: Multiple techniques for identifying the clipped node (CN) in TAD after NACT have been described. Some of these methods involve additional equipment or safety regulations. We describe our approach.

Methods: Consecutive patients between 2018 and 2021, having NACT with biopsy proven positive lymph node(s), had a clip placed into the most abnormal node(s). The UltraCor Twirl™ clip was utilized since it is easily seen on ultrasound. Sentinel node and occult lesion localization (SNOLL) was performed with peritumoral technetium-99m labelled nanocolloidal human serum albumin (^{99m} Tc-Nanoscan) injected under ultrasound guidance. Planar and single photon emission computed tomography (SPECT-CT) images were used to identify sentinel nodes (SN) and the CN. If the CN was not a SN, then additional ^{99m} Tc-Nanoscan was injected directly into the CN using ultrasound. TAD was performed using a gamma probe and intra-operative specimen radiographs to confirm excision of the CN.

Results: Thirty-eight patients underwent TAD. 20/38 CNs were SNs on SPECT-CT. 17/38 CN were localized separately. 1/38 CN was not a SN and could not be identified on ultrasound. 37/38 (97.4%) of the CNs were identified intra-operatively except for the node not identified on ultrasound. Pathological complete response in the axilla was identified in 18/38 cases. The CN was the only positive node in 10/20 cases. In 18/20 cases the CN contained the largest tumour deposit.

Conclusion: Combining SNOLL and ROLL techniques to identify the CN for TAD is very reliable and logistically robust, especially for units already performing peritumoral lymphoscintigraphy.





COMPARING DIRECT-TO-IMPLANT AND TWO-STAGE BREAST RECONSTRUCTION IN THE AUSTRALIAN BREAST DEVICE REGISTRY

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**SH and JZ – joint first author*

***GF and IH – joint senior author*

Problem statement: Implant-based breast reconstruction is the most common method of reconstruction after mastectomy in Australia. Implant-based breast reconstruction is performed as a two-stage procedure, involving temporary tissue expander insertion followed by a definitive implant, or direct-to-implant procedure without a tissue expander. However, there remains a lack of clarity surrounding the benefits, risks and outcomes between two-stage expander/implant reconstruction and single-stage direct-to-implant reconstruction. This study utilised a national dataset to examine real-world outcomes of two-stage and DTI reconstructions.

Methods: A cohort study was conducted examining patients in the Australian Breast Device Registry from 2015-2018 who underwent prosthetic breast reconstruction post-mastectomy. Direct-to-implant and two-stage cohorts after definitive implant insertion were compared. Rate of revision surgery, reasons for revision and patient-reported outcome measures were recorded. Statistical analysis was undertaken using Fisher's exact or chi-square, Wilcoxon rank-sum or student t-tests, Nelson-Aalen cumulative incidence estimates and Cox proportional hazards regression.

Results: 5,152 breast reconstructions were recorded, including 3,093 two-stage and 2,059 direct-to-implant reconstructions. Overall revision surgery rates were 15.6% for direct-to-implant (median follow-up 24.7 months), compared with 9.7% in the two-stage cohort (median follow-up 26.5 months) ($p<0.001$). Most common reasons for revision for DTI and two-stage were capsular contracture (25.2% vs 26.7%, $p=0.714$) and implant malposition (26.7% vs 34.3%, $p=0.045$). Multivariate analysis found acellular dermal matrix usage ($p=0.028$) was significantly associated with a higher risk of revision. The influence of radiotherapy on revision rates was unable to be studied. Patient satisfaction levels were similar between reconstructive groups; however, patient experience was better in direct-to-implant than two-stage.

Conclusion: The Australian Breast Device Registry dataset demonstrated that direct-to- implant reconstruction had a higher revision rate than two-stage, but with comparable patient satisfaction and better patient experience. Capsular contracture and device malposition were leading causes of revision in both cohorts.

Disclosure of interest: *The Australian Breast Device Registry is supported by funding from the Australian Commonwealth Department of Health. The authors have no other financial disclosures.*

TRENDS AND VARIATIONS IN POST-MASTECTOMY BREAST RECONSTRUCTION RATES IN AUSTRALIA OVER 10 YEARS

Nirmal Dayaratna, Chu Luan Nguyen, Niveditha Yalarmathi, Andrew Spillane, Cindy Mak, Sanjay Warrier, Joseph R Dusseldorp

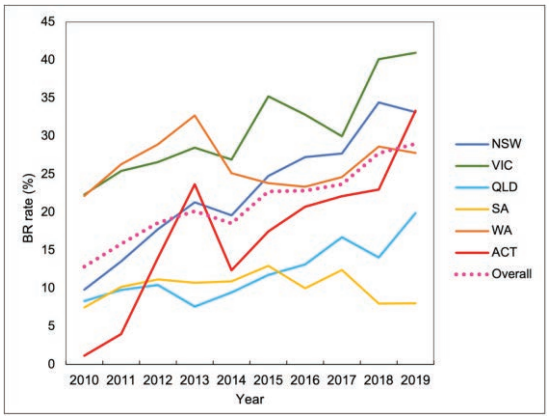
Chris O'Brien Lifehouse/University of Sydney, Australia

Purpose: Offering breast reconstruction (BR) at the time of mastectomy is standard of care in Australia with proven quality-of-life benefits. Previously BR rates in Australia have been low compared to similar countries. Accurate up-to-date information is needed to promote equity in access to BR and inform future planning of services. This study analysed recent trends and variations of BR uptake in Australia.

Methodology: Data from the Breast Surgeons of Australia and New Zealand Incorporated (BreastSurgANZ) Quality Audit (BQA) database were used to identify patients who underwent mastectomy with or without reconstruction for invasive or in situ breast carcinoma from 2010 to 2019. The association between BR uptake and the variables of jurisdiction (state or territory), age, hospital type and remoteness, and remoteness of patients' home address were analysed.

Results: 41,880 women underwent mastectomy between 2010 to 2019. The national BR rate steadily increased from 12.8% in 2010 to 29% in 2019 with a 10-year national average of 21.3%. Statistically significant differences in BR uptake ($p < 0.001$) were found between states, with BR more likely in private hospitals and in younger women ($p < 0.001$), and less likely in remote areas ($p <0.001$).

Conclusion: The Australian BR rate has increased over the 10-year period, but significant variation still exists between states. BR is lower in older women and those living in regional and remote areas. While the steady increase in BR uptake is encouraging, barriers that exist to equitable provision of reconstructive surgical services for all women living with breast cancer still need to be corrected.



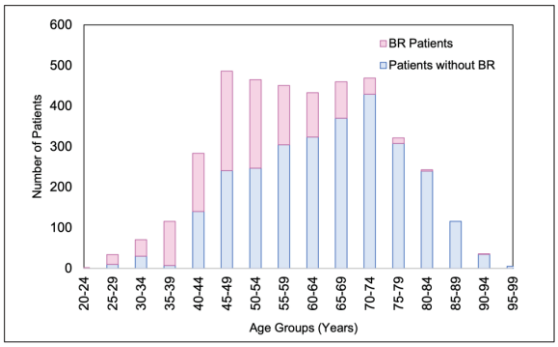
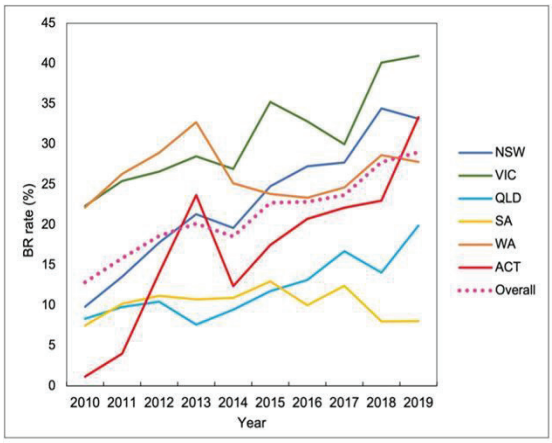


Figure 1: State and territory breast reconstruction rates from 2010 – 2019. BR, Breast reconstruction. Data source: BreastSurgANZ, 2021. Note: Due to low caseload, Tasmania and Northern Territory have been omitted from this figure. BR rates in Tasmania have increased from 10.2% in 2010 to 18%. BR rates have decreased in NT from 45.5% to 7.1%.



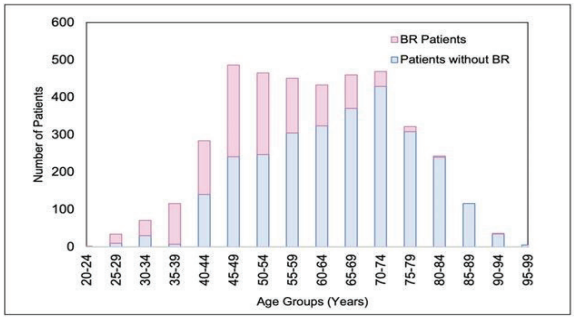


Figure 2: Numbers of BR patients and patients without BR in 2019 by age. BR, Breast reconstruction. Note: There were no patients <20 and >99 years old who underwent mastectomy or BR in 2019. Data source: BreastSurgANZ, 2021

SURGICAL OUTCOMES OF POST-MASTECTOMY RADIOTHERAPY FOLLOWING IMMEDIATE PROSTHETIC BREAST RECONSTRUCTION: SIX-YEAR EXPERIENCE

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Westmead Breast Cancer Institute, Westmead Hospital, Sydney, Australia

Problem Statement: The utilisation of post-mastectomy radiotherapy (PMRT) following immediate prosthetic breast reconstruction is increasing as the indications for its use are expanding. It is important for both patients and treating teams to understand the potential impacts of PMRT on prosthetic breast reconstruction outcomes.
Methods: A single-institution retrospective analysis of surgical outcomes on consecutive patients who underwent PMRT following skin- or nipple-sparing mastectomy with immediate prosthetic breast reconstruction (two-stage or direct-to-implant) between January 2015 and December 2020 was completed.
Results: A total of 94 cases were included. Prosthesis placement was pre-pectoral in 33 cases (35.1%). Median follow-up was 40 months (range: 5–79 months). PMRT consisted of 50Gy in 25 fractions over five weeks to the neo-breast and supraclavicular fossa in the majority of cases (85%), with a permanent implant in-situ in 58 cases (61.7%). After accounting for the different combinations of sub/pre-pectoral implant placement, direct-to-implant/two-stage reconstruction and PMRT to permanent implant/expander, six different clinical pathways were identified. In the short term (within 60 days), infection was the most common complication (n=19, 20%), of which the salvage rate was 100% after mastectomy (n=8/8) and 43% after radiotherapy (n=3/7). In the long-term (after 60 days), the most common complication was moderate/severe capsular contracture (n=37, 39%). After completing the clinical pathway, over a third of patients (n=34, 36%) underwent at least one episode of autologous fat grafting. Subsequent revision of the breast pocket was undertaken in 7 cases (7%). Unplanned conversion to autologous reconstruction occurred in 14 cases (15%). The reconstruction failure rate (loss of implant and no conversion to autologous reconstruction) was 5% (n=5). Although no statistically significant difference was observed between the six different clinical pathways, unfavourable trends were observed with outcomes of direct-to-implant sub-pectoral and two-stage pre-pectoral reconstruction.
Conclusion: This study suggests that PMRT following prosthetic-based reconstruction is feasible and that the method of reconstruction may not significantly influence surgical outcomes. Patients need to be counselled about the more common long-term risk of moderate/severe capsular contracture.
Disclosure of Interest: *The authors have no conflicts of interest.*

THERAPEUTIC MAMMAPLASTY WITH CONTRALATERAL SYMMETRISING REDUCTION MAMMAPLASTY: ONCOLOGICALLY SAFE WITH SATISFIED PATIENTS

Susannah Graham, Iva Ihren, Farid Meybodi, Jeremy Hsu, Jeremy Hsu, James French, Elisabeth Elder

Problem statement: Therapeutic mammaplasty (TM) is an oncological procedure that combines breast cancer wide local excision with breast reduction mammaplasty (RM) techniques. The timing of symmetrising surgery has been

debated as the effect of radiotherapy can be unpredictable. Immediate symmetrising procedures are advantageous in improving overall patient satisfaction (1) and quality of life (2). This study aimed to assess surgical and oncological outcomes as well as patient reported outcome measures (PROMs) in women undergoing TM with simultaneous contralateral symmetrisation (CS-RM).

Methods: We performed a retrospective study of 124 patients who underwent TM with simultaneous CS- RM by four breast surgeons at Westmead Breast Cancer Institute between January 2010 and August 2017. Inclusion criteria were women with macromastia who underwent TM for breast cancer with simultaneous CS-RM with specimen weight 100g. Patients were selected from a prospectively maintained database. Surgical and oncological measures were identified and analysed. PROMs were assessed using BREAST-Q.

Results: Of 124 women, 118 (95%) underwent wise pattern RM. A variety of pedicles were utilised with superomedial (42%) and inferior (20%) being the most common. 18 (14.8%) required re-excision and 10 (8%) ultimately required mastectomy. Overall surgical complication rate was 35.4%, the majority being Clavien-Dindo grade 1 (16.9%) or 2 (11.3%). 6 patients (4.8%) had a delay to adjuvant therapy. At a mean follow up of 58 months, 7 (6%) had local recurrence, 13 (10%) distant metastasis and 7 (6%) died. BREAST-Q was completed by 57% of the eligible study population (65 patients). Median satisfaction with breasts was 70.2 (0-100 scale), compared to 52.1 (+/-21.3) in normative general population (3). 70% of the patients reported that they were more satisfied with the appearance of their breasts compared to before surgery, and 60% reported reduced pain. Higher BMI significantly (p=0.03) predicted lower reported satisfaction with breasts and more adverse outcomes from radiation.

Conclusions: Breast conservation surgery combined with bilateral breast reduction using individualised modification of reduction techniques offers an oncologically safe option for women with macromastia. The complication risk is manageable and comparable to other studies. Patients undergoing simultaneous TM and contralateral RM have high rates of satisfaction.

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Medical oncology

CONTRAST ENHANCED MAMMOGRAPHY IN BREAST CANCER SURVEILLANCE

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Background: Women with a personal history of breast cancer or DCIS (PHBC) are at increased risk of either a local recurrence or a new primary breast cancer. Adjunctive screening ultrasound or MRI is often used to supplement mammography. Contrast enhanced mammography (CEM) is reported to have higher sensitivity than MG and ultrasound, and similar performance with better accessibility than MRI.

Methods: We introduced CEM as a routine single imaging modality for surveillance of those with PHBC. This report is of the first surveillance round outcomes.

Results: 73/1191 (6.1%) patients were recalled for further assessment. 35 (48%) were true positives (TP), with 26 invasive cancers and 9 cases of DCIS, while 38 (52%) were false positive (FP). Positive predictive value (PPV) 47.9%. 32/73 were recalled due to findings on MG, while 41/73 were only recalled due to Contrast. 14/73 had 'minimal signs' with a lesion identifiable with knowledge of the Contrast finding while 27/73 were 'contrast only'. 41% (17/41) of those recalled due to contrast were TP. Contrast-only TPs were found in those with low and high mammographic density (MD). Bilateral screening breast US reduced by 55% in the year after routine surveillance CEM was implemented.

Conclusion: Compared to MG, CEM as a single surveillance modality for those with PHBC has higher sensitivity and comparable specificity, identifying additional malignant lesions that appear to be clinically significant. Further investigation of interval cancer and subsequent round cancer detection rates is warranted.

CONTRALATERAL BREAST CANCER: INFLUENCE OF MOLECULAR SUBTYPE, CLINICAL FEATURES AND TREATMENT GIVEN IN A SINGLE INSTITUTION STUDY

Mohammad Amira, Nikita Bhatt, Emily Basford, HuiJun Chih, Peter Willsher, Arlene Chan

Problem Statement: Contralateral breast cancer (CBC) has an incidence of 2-5% in patients (pts) following a diagnosis of unilateral early breast cancer (EBC). This study assessed the relationship between molecular subtype, clinical features and treatment of first BC on developing metachronous CBC.

Methods: We interrogated a prospective database of patients seen be a single oncologist between January 2000 and May 2021. Key inclusion criteria for this analysis included unilateral invasive BC, complete data on initial locoregional and adjuvant treatment and a minimum of 12 months follow-up. CBC patients were defined as in situ or invasive BC in the contralateral breast at least 12 months after initial BC diagnosis. The control group did not undergo contralateral mastectomy (CM) and remained disease-free. Multiple logistic regression model was used.

Results: In total, 3727 EBC patients were treated, 143 (5.8%) developed CBC and 2308 were controls. Initial bilateral mastectomies were performed in 392 patients (120 synchronous BC, 272 prophylactic). Metastatic recurrence without prior CBC occurred in 664 patients and 220 pts underwent prophylactic CM after initial BC diagnosis. Patient, tumour and treatment characteristics shown in table

	CBC	Control	p value*	Adjusted Odds Ratio+(95% CI); p-value
Age, median (years)	51	51		
Follow-up, median (months)	145.4	69.2		
BC-susceptible gene mutation present	5.6%	1.9%	0.008	2.15 (0.80, 5.76) p=0.127
Subtype: Luminal A	11.9%	8.5%	<0.001#	2.04 (1.16, 3.61); p=0.014
Luminal B	44.1%	55.4%		
Her2Amplified	15.4%	20.2%		
Triple Negative	16.8%	15%		

Stage 3	4.9%	17.4%	<0.0001	
Treatment: Chemotherapy administered	70.6%	78.1%	0.047	
Completed recommended endocrine therapy	87.5%	95.7%	<0.0015	
Premenopausal	29.4%	41.1%	0.006	0.30 (0.17, 0.54); p<0.001
Lymph node positive	42.5%	53%	0.016	0.68 (0.47, 0.99); p=0.046

* p-value derived from Chi-squared test; # was across all subtypes

+Logistic regression model adjusted for age, menstrual status at diagnosis, nodal status, gene status molecular subtypes

Conclusion: This study showed higher rates of CBC in luminal A and BC gene carriers; with lower rates in premenopausal pts. Pts with Luminal A tumours may benefit from tailored surveillance program. Compliance with endocrine treatment and chemotherapy is associated with lower CBC rates.

THE EFFECT OF AGE AND MENSTRUAL CYCLING ON GENE EXPRESSION PROFILING TESTS

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Problem Statement: Gene expression profiling tests are becoming a critical part of the clinician's toolbox to guide treatment decisions for early-stage estrogen receptor positive (ER+) breast cancer patients. Women over the age of 50 with intermediate 21-gene Recurrence Scores can safely avoid chemotherapy, as endocrine therapy alone is not inferior to chemo-endocrine therapy in terms of disease-free and overall survival[1]. However, there are differences in chemotherapy benefit for women under the age of 50 which are not well understood. We have examined how age and the menstrual cycle affect the 21-gene signature using paired breast cancer samples[2] and a mouse model of breast cancer[3].

Methods: To investigate whether age affects variability in the 21-gene signature, paired formalin-fixed paraffin-embedded invasive ER+ breast cancer samples were collected approximately 2 weeks apart (median age 48 years; age range 36-77 years; n=25). To determine whether fluctuations in ovarian hormones affect the 21-gene signature, ER+ mammary tumours were dissected from naturally cycling *Mmtv-Pymt* mice at either the estrus or diestrus phase of the ovarian cycle (estrus n=25; diestrus n=28). In both human and mouse studies, gene expression was assessed through quantitative real time-PCR, and a 21-gene experimental recurrence score based on the published Oncotype DX Recurrence Score was calculated.

Results: There was a significant inverse association between patient age and discordance in recurrence score (Figure 1). For every one-year decrease in age, discordance in recurrence scores between paired samples increased by 0.08 units (95% CI: -0.14, -0.01; p=0.017). Discordance in recurrence scores for women under the age of 50 were driven primarily by proliferation- and HER2-associated genes. Tumours collected at diestrus in the mouse model show significant differences in expression of six 21-gene signature genes (*Ki67*, *Ccnb1*, *Esr1*, *Erbb2*, *Grb7*, *Bag1*; p≤0.05) and a significant increase in recurrence score compared to tumours dissected at estrus (Figure 2).

Conclusion: Age and menstrual cycle stage may critically affect the 21-gene signature and treatment decision-making in premenopausal breast cancer patients. These findings emphasize the need for the consideration of patient age and menstrual cycle stage in development and application of gene expression profiling tests for breast cancer care.

Disclosure of Interest: *None to declare*

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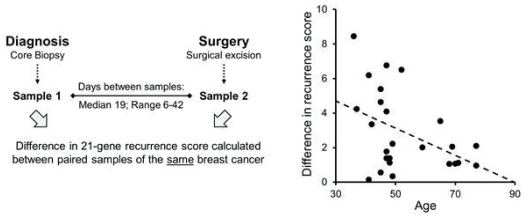

Figure 1: Variability in 21-gene experimental recurrence scores between paired breast cancer samples in relation to patient age[2]. Experimental recurrence scores were calculated from reference-normalised gene expression and discordances were quantified by calculating the absolute difference in recurrence score between sample 1 and sample 2 (n=25 patients). Linear regression was performed to investigate the association between the difference in recurrence score and age as a continuous variable.

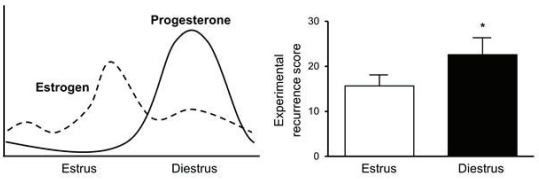

Figure 2: The effect of ovarian cycle stage on 21-gene experimental recurrence scores[3]. Estrogen receptor-positive mammary tumours were collected from *Mmtv-Pymt* transgenic mice at either the estrus (n=25) or diestrus (n=28) phase of the ovarian cycle. Experimental recurrence scores were calculated from reference-normalised gene expression. Data are presented as mean+SEM. Statistical significance was determined when p<0.05 using Student's t-test. *signifies p<0.05

CONCORDANCE BETWEEN CORE NEEDLE BIOPSY AND SURGICAL EXCISION FOR BREAST CANCER TUMOR GRADE AND BIOMARKERS

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Problem statement: Pre-operative histopathological biomarker information obtained with core needle biopsies (CNB) guide breast cancer treatment. The American Society of Clinical Oncology and College of American Pathologist (ASCO/CAP) guidelines recommend utilising CNB for

estrogen receptor (ER), progesterone receptor (PR), human-epidermal growth factor receptor 2 (HER2) testing. Likewise, the International Ki-67 in Breast Cancer Working Group (KIWG) also suggests performing Ki-67 on CNB. Therefore, repetition of histopathological testing on surgical excisions (SE) in patient who are treated with upfront surgery is unnecessary if there is high level of concordance between CNB and SE and hence patient management is not altered. This could lead to significant cost savings which can be redirected to service breast cancer patients in other ways. The main aim of our study was to investigate the concordance between CNB and SE for ER, PR, HER2 receptors, grade and ki-67 in invasive breast cancer on patient treated with primary surgery. This is the largest multicentre breast biomarker concordance study conducted in Australia and one of the largest international studies which was recently published in the *Breast Cancer Research and Treatment* journal.

Method: Histopathological biomarkers were retrospectively collected from preoperative CNB and SE on patients diagnosed with breast cancer between January 2017 and December 2020. We analysed a total of 504 cases of invasive breast cancers diagnosed through the BreastScreen NSW Sydney West program. Percentage of agreement and concordance levels using kappa values were calculated for each biomarker.

Results: There was substantial level of concordance for ER (96.7% (CI:95.1 – 98.3), □=0.687) and PR (93.2% (CI:90.9 – 95.4), □=0.69). Percentage of agreement for HER2 negative and positive tumours on CNB was 100% (CI:98.4 – 100.0), (□=1.00). Tumour grade and Ki-67 only showed moderate level of agreement at 72.6% (CI:68.7 – 76.5), (□=0.545) and 70.5% (CI:66.4 – 74), (□=0.453), respectively.

Conclusion: ER, PR positive tumours and HER2 positive or negative tumours on CNB show excellent levels of concordance hence routine re-testing on SE is not required unless otherwise clinically indicated. However, grade and Ki-67 levels only show moderate level of concordance hence will benefit re-testing if these results will change clinical management of patients.

THE DESIGN AND DEVELOPMENT OF AN INDIVIDUALISED TRAINING PROGRAM FOR METASTATIC BREAST CANCER (MBC) NURSING INCORPORATING REMOTE AND ONSITE LEARNING EXPERIENCES DURING A PANDEMIC

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Problem statement: Those diagnosed with metastatic breast cancer (MBC) have complex supportive care needs and the Australian Government funded 30 new dedicated MBC nurse roles across Australia in 2019 to better meet these needs. A pilot training program was designed to meet the individual learning needs of these nurses to increase their level of expertise in MBC nursing. Initially this program was designed to be delivered in-person, however recurrent COVID-19 restrictions required a change of approach to enable remote participation.

Methods: An expert working group created a curriculum of 20 learning modules addressing key elements of MBC nursing. From these modules a bespoke training program was designed for each participant to address their identified learning needs based on the validated Cancer Nurse Self-Assessment Tool for Metastatic Breast Cancer (CaN-SAT-MBC) and baseline interviews. During the pilot program, four intakes of two nurses (n=8) participated from August 2021 to June 2022. Participants completed a suite of online learning modules, 'attended' a 3-day clinical practicum, and commenced 12 months of bi-monthly clinical supervision for ongoing support. Participants attended the clinical practicum component either in-person or via a telepresence robot. Knowledge, skills and confidence in relation to MBC nursing are being measured by the CaN-SAT-MBC, and learner goals, expectations and experiences are being explored via qualitative interviews at three-time intervals: pre-training; post-practicum; and 12 months post-clinical supervision.

Results: The final results of the evaluation will be available in 2023. It is hypothesised that nurses will report increased knowledge, skills and confidence in the areas of MBC nursing relevant to their identified learning needs following completion of the training program. Furthermore, it is also hypothesised that remote participation using robot technology will offer an equivalent learning experience to in-person training in this current pandemic environment.

Conclusion: This study will test an individualised and innovative approach to breast cancer nurse education that may be utilised across Australia to upskill nurses in the provision of supportive care to those with MBC. There is potential for wide-spread adoption of robot technology for cancer education across Australia and beyond.

Disclosure of interest: *This project is partially funded by Astra Zeneca*

ATNEC – PATIENT EXPERIENCE SUB-STUDY (IRSCTN: 36585784): WHAT PATIENTS THINK ABOUT TAKING PART IN BREAST CANCER TREATMENT DE-ESCALATION TRIALS?

Janet A. Dunn[1], Sophie Gasson[1], Sophie Nicholls[1], Jan Rose[2], Helen Teresa Edwards[2], Andrea Marshall[1], Natalie Hammonds[1], Beatrix Elsberger[3], Amit Goyal[4] on behalf of the ATNEC Trial Management Group

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Problem statement: Recruitment to de-escalation trials is challenging because of strong patient and clinician preferences and worry around 'under-treatment'. ATNEC is a phase III, randomised (1:1), multi-centre trial to assesses whether axillary treatment can be de-escalated, post-surgery, in T1-3N1M0 breast cancer patients who have no residual nodal disease post-neoadjuvant chemotherapy. Understanding why patients do/do not wish to participate is important as it can influence recruitment strategies.

Methods: ATNEC has registered 168 patients of which 58 have been randomised against the 1900 target. The patient experience sub-study uses semi-structured interviews to explore how patients process information about the trial and their decision to take part.

Results: Fifteen trial participants have been interviewed and talked openly about their personal cancer pathway and their decision-making process regarding the trial.

Initial analysis suggests that participation is often altruistic:

'…there wasn't really much of a decision to make…. I just thought to myself, well, anything that I can do to try and help people in the future then…. why wouldn't I do that? [TNO 0001]

Understanding of lymph nodes and axillary treatment ranges from a little:

Interviewer: *'And before that did you have any understanding of why……they might want to take out lymph nodes from under your arm?'* Participant: *'Uh, I think I'm gonna say no to that.' [TNO 0011]*
to a lot:
'…what I understood from that was the lymph nodes are really, really good at holding on to the cancer for like a really long time.' [TNO 0001]
All participants interviewed who have been randomised to no further axillary treatment have said they are happy with this allocation. One participant randomised to receive axillary radiotherapy is concerned about potential side-effects: *'I'm having great reservations about going ahead and having radiotherapy.' [TNO 0035]*
Conclusion: Patients taking part in the ATNEC trial do not appear to be worried about de-escalation of treatment. Apart from altruism, a reduction of potential treatment side-effects is a key motivating factor for participation. Patients who decline randomisation may have a preconceived treatment preference possibly guided by initial contact with the clinical team; exploring information exchange and understanding is key to successful recruitment.

MONITORING OF BREAST CANCER TREATMENT RESPONSE BY ANALYSIS OF BREAST CANCER-DERIVED EXTRACELLULAR VESICLES

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Funding source: NSW Cancer Council Grant

Problem statement: Extracellular vesicles (EVs) are nanoscale biomaterials used for cell-to-cell communication where signals for proliferation and resistance are passed between tumour cells and their environment. EVs may therefore be a powerful circulating tumour marker that can be used to predict and monitor for treatment response and resistance. However, due to technical challenges, limited clinical studies have been performed to date to validate the utility of EVs as a tumour marker.
Methods: We developed a novel portable microfluidic device that overcomes significant technical challenges of EV analysis. (Fig 1) It is a portable microfluidic chip where EVs can be simply pulled from the blood and subsequently analysed on-chip. The whole process takes less than an hour. Breast cancer patients from St Vincent's Hospital Melbourne are enrolled into the study. Bloods from pre-, during- and post-systemic or surgical therapy are collected and have their EVs analysed.
Results: The level of breast cancer derived EVs from patients 1-week post curative surgery dropped significantly, demonstrating the utility of using EVs as a monitoring tool for disease burden. It may be used clinically to monitor for disease response in treatment monitoring group and disease recurrence in the surveillance group. As well as concentration, EVs' phenotype also changed during systemic therapy, indicating the possibility of using EVs to monitor for treatment resistance.
Conclusion: This study demonstrated the utility of using EV as a tumour marker to monitor breast cancer treatment response. It also validated the novel microfluidic device as an accurate tool for EV capture and analysis. The portable nature of the device means EV analysis may be performed by any pathology lab and not limited to tertiary centres. With longer term study, we aim to identify unique EV changes associated with treatment resistance.

ENHANCED TOXICITY WITH TRASTUZUMAB EMTANSINE AND CONCURRENT ADJUVANT RADIOTHERAPY: NON-CONSECUTIVE CASE SERIES

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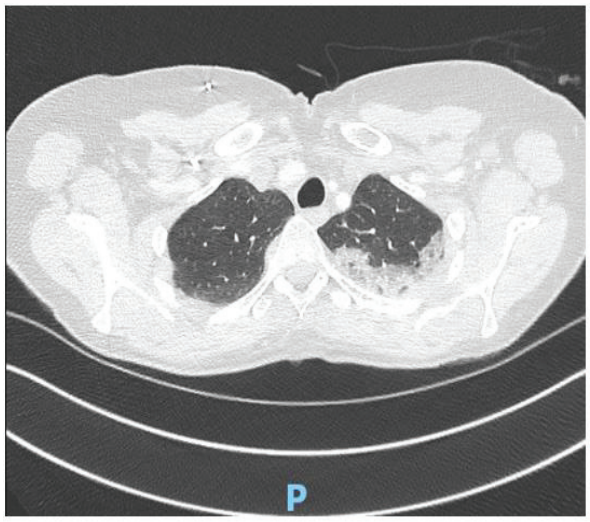
Background: Trastuzumab emtansine (T-DM1) has recently been approved for adjuvant treatment in patients with HER2-positive early breast cancer with residual invasive disease after receiving neoadjuvant chemotherapy plus HER2-targeted therapy. Many of these patients are likely to also undergo adjuvant radiotherapy treatment (RT) however there is little published data regarding the safety of these concurrent therapies.
Case presentation: We now report on 5 cases at our institution where enhanced radiotherapy toxicity was observed when adjuvant RT was delivered during treatment with T-DM1. Cases 1, 2 and 3 experienced varying degrees of enhanced pulmonary toxicity inclusive of early onset radiation pneumonitis, recurrent radiation pneumonitis despite appropriate treatment, and out of field radiation pneumonitis.
Cases 4 and 5 experienced unexpected skin toxicity. With one case of prolonged radiation dermatitis followed by telangiectasia formation and one case of breast cellulitis requiring hospital admission.
Discussion: This further supports the hypothesis that T-DM1 may actually be a radiation sensitiser due to its microtubule inhibitor emtansine component. Further studies are recommended to assess the potential toxicities when combining these treatments. We advise clinicians to remain vigilant of unexpected toxicities and consider the potential risks in patient management of adjuvant RT when combined with T-DM1.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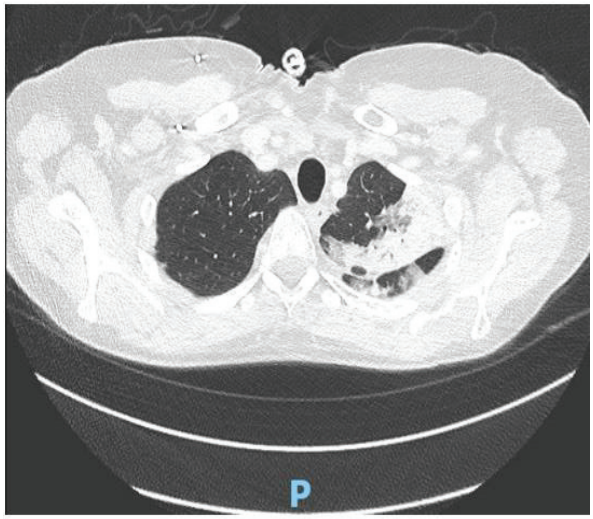
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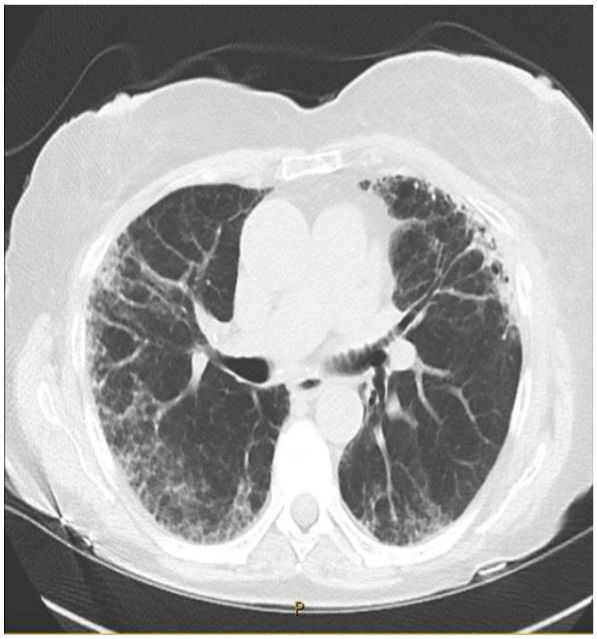
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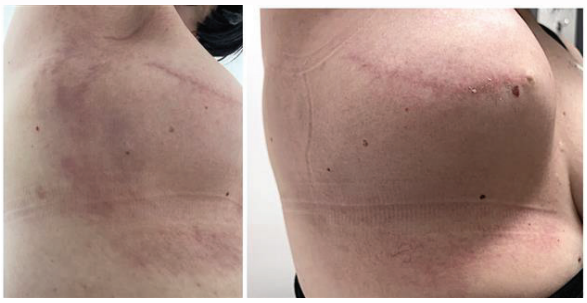

POSTER ABSTRACTS (ONSITE AND ONLINE)

BREAST IMAGING

P01

DEVELOPMENT OF A CELL-SENSITIVE ELASTOGRAPHY MODEL TO DETECT ULTRA-SMALL BREAST CANCERS

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Problem Statement: Elastography is a non-invasive medical imaging technique that uses low-frequency vibrations caused by ultrasound waves to measure tissue stiffness. Conventional elastography is based on models that describe basic stress and strain mechanical properties of bulk tissue. The technique can detect breast cancer, however it is not sufficiently accurate to be used routinely in the clinic. Recently, higher-order modified mechanical behaviour models have been developed to overcome the shortcomings of conventional modelling. Until now, these models have not been used to describe the mechanical properties of biological tissues. Here, we describe the first cell-sensitive elastography model, and apply it to breast cancer detection.

Methods: The cell-sensitive mathematical model was developed using an advanced scale-dependent theory of poroelasticity. Eringen's theory, conservation of mass principle, and Darcy's law were utilised to capture stress nonlocality, poroelastic and fluid effects on time-dependent mechanical behaviour at the cellular level. The numerical data were obtained by developing a Galerkin-based solution procedure in combination with the precise integration method using previously published data from healthy breast tissue, benign conditions, and breast cancers [1].

Results: The cell-sensitive model can distinguish between healthy breast tissue and malignant cancers in terms of radial displacement (Table 1) and fluid pressure (Table 2). Figure 1 shows the map of fluid pressure distribution within a breast tumour under external compression. The compressive load can be produced by propagating ultrasound waves inside the tissue or by applying an external compressive force. Different breast tumour sizes in the range of 2 mm to 0.1 mm are taken into account for both the conventional and cell-sensitive elastography imaging techniques. From Figure 1, it is observed that the proposed cell-sensitive elastography model can significantly improve the resolution of elastography imaging across all tumour sizes.

Conclusion: The proposed cell-sensitive elastography technique has promising potential for the detection of breast cancer lesions as small as 0.1 mm. Further development of this non-invasive technology could improve breast cancer detection and assessment of tumour margins during surgical excision.

Disclosure of Interest: *None to declare*

Important note for reviewers: *This research is confidential and under embargo until 19/09/2022.*

Reference:

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	N	Elasticity constant mean ± SD (kPa) [1]	Breast-tissue radial displacement (μm)		
			Conventional elastography	Cell-sensitive elastography	Average difference*(%)
Adipose tissue	71	3.25 ± 0.91	2.29 ± 0.07	9.52 ± 0.21	315.72
Fibro-glandular tissue	26	3.24 ± 0.61	2.29 ± 0.07	9.52 ± 0.21	315.72
Low-grade IDC	12	10.40 ± 2.60	1.57 ± 0.24	7.31 ± 0.78	365.61
Intermediate IDC	21	19.99 ± 4.2	0.89 ± 0.24	4.69 ± 0.98	426.97
High-grade IDC	9	42.52 ± 12.47	0.23 ± 0.27	1.60 ± 1.36	595.65
DCIS	4	16.38 ± 1.55	1.13 ± 0.11	5.67 ± 0.44	401.77
ILC	4	15.62 ± 2.64	1.18 ± 0.20	5.89 ± 0.83	399.15
Fat necrosis	1	4.45	2.14	9.09	324.77
IMC	1	20.21	0.89	4.69	426.97
Fibrocystic breast	4	17.11 ± 7.35	1.08 ± 0.57	5.46 ± 2.11	405.56
Fibroadenoma	16	6.41 ± 2.86	1.97 ± 0.32	8.60 ± 1.03	336.55

Table 1: Radial displacement of different types of breast tissue and cancer obtained by the conventional and cell-sensitive elastography imaging techniques. The average difference indicates the overestimation of the conventional elastography at cellular levels; *t*=5 sec, tumour diameter=0.5 mm; the radial displacement is estimated at the half distance from the centre of the breast lesion in all cases. Infiltrating ductal carcinoma (IDC); ductal carcinoma in situ (DCIS); infiltrating lobular carcinoma (ILC), invasive mucinous carcinoma (IMC). *Difference is given by 100×(Cell-sensitive elastography - Conventional elastography)/(Conventional elastography).

	N	Elasticity constant mean ± SD (kPa) [1]	Breast-tissue fluid pressure (kPa)		
			Conventional elastography	Cell-sensitive elastography	Average difference*(%)
Adipose tissue	71	3.25 ± 0.91	0.17 ± 0.06	0.48 ± 0.20	182.35
Fibro-glandular tissue	26	3.24 ± 0.61	0.17 ± 0.05	0.48 ± 0.13	182.35
Low-grade IDC	12	10.40 ± 2.60	0.54 ± 0.09	1.91 ± 0.39	253.70
Intermediate IDC	21	19.99 ± 4.2	0.67 ± 0.02	2.71 ± 0.18	304.48
High-grade IDC	9	42.52 ± 12.47	0.50 ± 0.14	2.48 ± 0.42	396.00
DCIS	4	16.38 ± 1.55	0.66 ± 0.02	2.55 ± 0.11	286.36
ILC	4	15.62 ± 2.64	0.63 ± 0.04	2.44 ± 0.22	287.30
Fat necrosis	1	4.45	0.25	0.74	196.00
IMC	1	20.21	0.67	2.74	308.96
Fibrocystic breast	4	17.11 ± 7.35	0.66 ± 0.08	2.58 ± 0.53	290.91
Fibroadenoma	16	6.41 ± 2.86	0.37 ± 0.15	1.18 ± 0.57	218.92

Table 2: Fluid pressure of different types of breast tissue and cancer obtained by the conventional and cell-sensitive elastography imaging techniques. The average difference indicates the overestimation of the conventional elastography at cellular levels; *t*=1 sec, tumour diameter=0.5 mm; the maximum fluid pressure is listed. Infiltrating ductal carcinoma (IDC); ductal carcinoma in situ (DCIS); infiltrating lobular carcinoma (ILC), invasive mucinous carcinoma (IMC). *Difference is given by 100×(Cell-sensitive elastography - Conventional elastography)/(Conventional elastography).

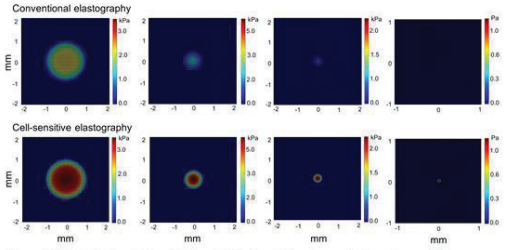

Figure 1: Mechanical characteristics of high-grade infiltrating ductal carcinoma. Elastogram images (fluid pressure map) of small-scale breast cancers with an average diameter of 2 mm–0.1 mm obtained by conventional elastography, and cell-sensitive elastography. Fluid pressure was calculated 1 sec after loading in all cases except for the case of an ultra-small tumour of diameter 0.1 mm where the calculation was performed at *t*=0.25 sec.

P02

PET SCANS FOR LOCALLY ADVANCED BREAST CANCER AND DIAGNOSTIC MRI TO DETERMINE THE EXTENT OF OPERATION AND RADIOTHERAPY (TROG 12.02 PET LABRADOR)

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Problem Statement: Patients with non-inflammatory clinical stage 2B (T2N0M0) or stage 3 breast cancer may be able to undergo Breast Conservation Surgery (BCS) rather than mastectomy following Primary Systemic Treatment (PST) (i.e., chemotherapy +/- targeted therapy, trastuzumab) with a low recurrence rate (≤20%), with breast MRIs and PET-CT scans providing the accuracy of detecting the extent of disease when compared with conventional imaging alone.
Methods: PET LABRADOR is a prospective, single arm Phase II feasibility study in women diagnosed with Locally Advanced Breast Cancer (LABC), who are fit to receive PST, surgery, and adjuvant radiotherapy. It is estimated that 220 women will need to be recruited to achieve a total of 70 women who will undergo BCS. Women will undergo breast MRIs and PET-CT scans at baseline, prior to Cycle 3 of PST and pre-surgery. PST will be prescribed as per institutional standard practices. All participants will receive radiation treatment, either post-operatively or pre-operatively (if breast cancer is still inoperable following PST). Radiation will be planned and delivered as per protocol, with Radiation Therapy Quality Assurance (RTQA) reviews for selected participants.
Results: Through the integration of breast MRI and PET-CT scan imaging during PST and surgical planning it is aimed to identify which women will become candidates for BCS without compromising local control or disease-free survival. Correlation and central review of biopsy and surgical pathology to the MRI and PET-CT scans will be performed to determine the accuracy, sensitivity, and specificity of the imaging assessments.
Conclusion: This study proposes a standard management pathway for LABC patients and aims to consolidate the Australian experience by integrating MRI and PET-CT scans in a uniform and strategic manner. If this imaging schedule proves to be an accurate predictor of disease response to PST for women with LABC, ineffective PST may be avoided, and individual patients offered a change to a potentially more effective PST regimen. It may also be possible to predict early in the treatment programme which patients will become BCS candidates.

P03

THE APPEARANCE OF FAT NECROSIS ON CONTRAST ENHANCED SPECTRAL MAMMOGRAPHY

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Problem statement: Contrast-enhanced spectral mammography (CESM) utilizes dual energy for mammographic acquisition with intravenous iodine contrast agent administration. It provides a higher sensitivity and specificity compared to 2D mammography in detecting breast cancer particularly in heterogeneously or dense breasts (1). A recent meta-analysis showed that CESM has a high diagnostic sensitivity for breast cancer, equal to that of Magnetic Resonance Imaging (MRI) (2). There have been multiple publications describing the appearances of FN on standard mammography, ultrasound (US), MRI and even PET (3-6). A review of medical databases has revealed no publications describing the appearance of FN on CESM. Surgical treatment of breast cancer has evolved significantly in the past decades with the increase in utilization of oncoplastic and reconstructive techniques. The incidence of fat necrosis (FN) is higher in patients who require complex breast conserving procedures and volume displacing techniques (7).
Method: This is a clinical description of two patients seen at Royal Perth Hospital with FN identified on CESM. Patient 1 is a 56yr old female post bilateral therapeutic reduction mammoplasty for left breast cancer. Patient 2 is a 73yr old female who presented for population screening.
Results: Figure 1. Patient 1 - On low energy (LE) images (a)(c), the palpable area corresponded to a circumscribed area of heterogenous fibro-glandular and fat density, which on the dual energy (DE) images (b),(d) showed enhancement of the thin rim and internal septa.
Figure 2. Patient 2 - The LE image (equivalent to a standard mammogram) shows the 7.5mm area of localised increased stroma (arrow) and there is homogenous internal enhancement on the DE image.
Conclusion: CESM utilises the same equipment used in digital mammography and so is accessible and convenient and can be provided at a low cost to the patient. It has been shown to be more cost effective in comparison to MRI and so is likely to be used more frequently in screening, surveillance and staging of breast cancer (8). It is important to catalogue the appearance of FN on CESM in order to reduce over-investigation of these lesions and reduce both patient and clinician anxiety when they arise.

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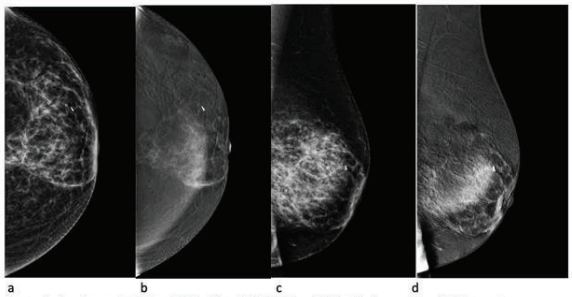

Figure 1: Cranio-caudal LE and DE (a,b) and MLO LE and DE (c,d) views of the right breast.

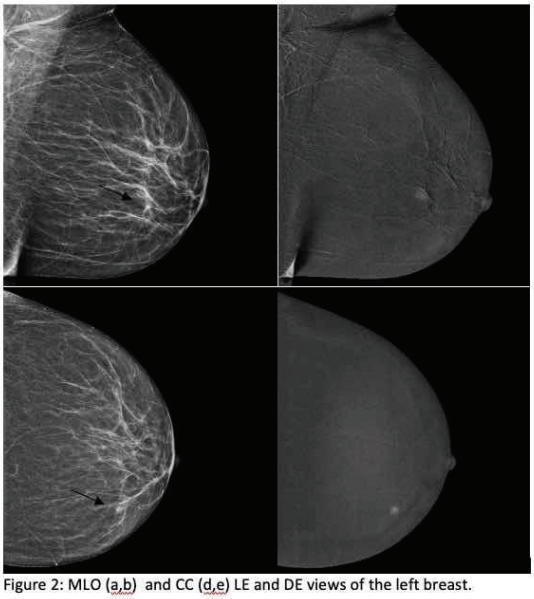
Figure 2: MLO (a,b) and CC (d,e) LE and DE views of the left breast.

P04

INJECTION MAMMOPLASTY: NORMAL IMAGING APPEARANCES AND IMPLICATIONS FOR MAMMOGRAPHIC SCREENING

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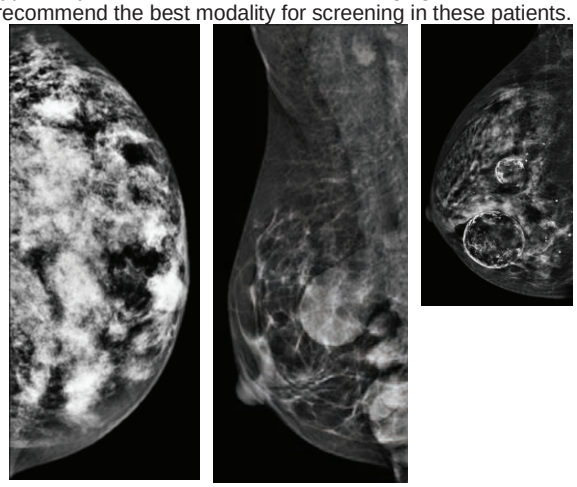
Problem statement: Injection mammoplasty has been utilized as an alternative to surgical breast implantation. However, the various injected materials can lead to difficulties in subsequent mammographic screening. The normal imaging appearances of the common agents used in injection mammoplasty and the challenges of mammography screening will be reviewed.

Methods: The local database from a tertiary hospital was accessed for imaging cases of injection mammoplasty using silicone, polyacrylamide gel, hyaluronic acid, and autologous fat.

Results: Free silicone is seen as multiple high-density opacities of varying sizes on mammograms. Silicone deposits can often be seen within axillary nodes due to lymphatic migration. Sonographically, a snowstorm appearance is seen when the silicone is diffusely distributed. On MRI, free silicone is hypointense on T1-weighted and hyperintense on T2 weighted images, with no contrast enhancement. Silicone-selective sequences with water and fat suppression can be acquired. Mammograms have a limited role in screening due to the high density of silicone which obscures assessment of the breast parenchyma. MRI is often required in these patients. Polyacrylamide gel and hyaluronic acid are seen as multiple collections on mammography. Polyacrylamide gel collections are of the same density as cysts, while hyaluronic acid collections are of higher density but less dense than silicone. On ultrasound, both can appear anechoic or show variable internal echoes. MRI demonstrates fluid signal with hypointense T1-weighted and hyperintense T2-weighted signal. Mammographic screening is possible if the injected material is located predominantly in the retro-glandular space without obscuring the breast parenchyma. On mammograms, autologous fat locules appear as lucent masses. Rim calcification can be seen if fat necrosis had developed. On ultrasound, focal fat collections can demonstrate varying levels of internal echogenicity, depending on the stage of fat necrosis. Mammographic screening is usually possible for patients after autologous fat injection as fat is hypodense compared to breast parenchyma. However, the dystrophic calcification associated with fat necrosis may mimic abnormal breast calcification. In such cases, MRI can be utilized as a problem-solving tool.

Conclusion: It is important for the radiologist to recognize the type of injected material on the various imaging modalities and recommend the best modality for screening in these patients.



P05

RELATIONSHIP BETWEEN PATIENT AGE, MAMMOGRAPHIC BREAST DENSITY AND BACKGROUND PARENCHYMAL ENHANCEMENT ON CONTRAST-ENHANCED MAMMOGRAPHY

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Problem statement: High mammographic density (MD) is important as a risk factor for the development of breast cancer and may also mask cancers leading to false negative screening. Breast magnetic resonance imaging (MRI) or contrast enhanced mammography (CEM) may be considered as adjunctive or alternative screening due to their higher sensitivity. Background parenchymal enhancement (BPE) can be a problem with MRI or CEM as small lesions may be masked by BPE. The relationship between age and MD and BPE has not been extensively reported, especially with CEM.

This study aimed to determine if patients would benefit from CEM or breast MRI as their first-line contrast-enhanced imaging modality, by evaluating the relationship between patient age, MD and BPE on CEM.
Method: Five hundred and thirty-two (532) CEM exams performed between 1 July 2019 and 30 June 2020 at a single institution in eligible patients were retrospectively analysed. Patient age, MD and BPE were recorded and the relationship between these three factors was analysed using Spearman's rank-order correlation and Fisher's exact test.
Results: There is a negative correlation between patient age and BPE (rho = -0.427, p <0.001) and positive correlation between MD and BPE (rho = 0.539, p < 0.001). Across all age groups, women with dense (BI-RADS C or D) breasts are more likely to have high BPE levels (37-67%) than those with non-dense (BI-RADS A or B) breasts (4%). There was a moderate to high (44–82%) proportion of high BPE in women younger than 50 with dense breasts, whereas none of the women with non-dense breasts younger than 50 years had high BPE.
Conclusion: Women with dense breasts younger than 50 are more likely to have high BPE on CEM and may benefit from an MRI as the first choice if they require a contrast-based investigation. Women 50 years and over, or women with non-dense breasts at any age, are more likely to have low BPE and are likely to be suitable for CEM.

P06
CASE DIFFICULTY AS EVALUATED BY BREAST PHYSICIANS AND RADIOLOGISTS: DATA FROM THE BREAST MAMMOGRAM TEST SETS
Phuong D (Yun) Trieu, Natacha Borecky, Melissa Barron, Sarah J Lewis

Aim: BREAST (Breastscreen REader Assessment STrategy) has been established since 2011 as a core-skills training platform for Australian radiologists and breast physicians to enhance the diagnostic efficacy in breast cancer detection on screening mammograms. This study evaluates the correlation in mammogram reporting between breast physicians and radiologists using BREAST test sets and explores the features of the most and least difficult cases.
Methods: There were 53 and 672 first-time readings by breast physicians and radiologists respectively across 9 mammogram test sets, each comprising of 60 digital mammograms. Participants read and marked the location of any abnormal lesions via the online BREAST platform using the Tabar RANZCR system. There were 361 normal and 179 cancer cases with 184 cancer lesions in test sets. A lesion was considered as localized correctly when the centre point of the lesion marked by a reader was within the radius of a true cancer location. The case difficulty (normal and cancer) was calculated based on the rate of readers with correct reporting in each reader group. The correlation in the case reporting between two groups were evaluated using the Pearson test. The features of the top 25% most and least difficult cases as read by breast physicians and radiologists are reported here.
Results: The median values in diagnostic performances of breast physicians and radiologists were 0.80 and 0.81 for specificity, and 0.75 and 0.69 for cancer sensitivity respectively. There was a moderate correlation in correct reporting of breast physicians and radiologists for normal cases (R=0.62; P<0.0001) and a strong correlation in cancer lesions (R=0.72; P<0.0001). Mammograms without prior images and a high level of breast density were the most challenging among normal cases for radiologists whilst cases with low breast density were more challenging to breast physicians. Mammograms with prior images and low breast density were the easiest normal cases for both groups. Cases without prior images having low breast density and containing small non-mass cancer lesions were the most difficult to both groups of readers, while cases without prior images having high breast density and containing small mass or asymmetric density lesions were the least challenging to readers.
Conclusion: There were similar patterns in the correct diagnostic rates among the normal and cancer mammograms between breast physicians and radiologists. Breast density, lesion features and the availability of prior mammograms were associated with the most challenging cases to both clinicians groups.

P07
BENEFITS OF BREAST TOMOSYNTHESIS IN BREASTSCREEN ASSESSMENT CLINICS
Daniel Liu, George Harisis, Shohreh Sadrahami, Miranda Miocevic, Jill Evans

Problem Statement: BreastScreen Australia, the national breast cancer screening program commenced in 1991. Due to a combination of the screening program and improved treatment, the mortality rate of breast cancer has reduced by approximately 32%. Traditionally, breast screening services have utilized bilateral screening mammograms with further mammographic work up views and ultrasound performed on the ipsilateral breast of women recalled to assessment. BreastScreen Victoria has recently transitioned to performing tomosynthesis in assessment rather than conventional mammographic work up. In June 2021, Monash BreastScreen introduced bilateral tomosynthesis on all clients recalled to assessment clinic. This study is aimed at assessing the benefits of performing tomosynthesis in the setting of BreastScreen assessment clinics.
Method: Bilateral breast tomosynthesis was performed on each client recalled to assessment clinic at Monash Breastscreen between 1st July 2021 to 30th May 2022 (*These data will be updated to the full 12 months prior to the presentation*). Lesions identified only on tomosynthesis were labelled as "T" lesions. These lesions were then followed up with particular attention to pathological diagnosis and impact on treatment planning.
Results: Over the 11 months, a total of 2843 clients were assessed with bilateral tomosynthesis and a total of 66 T lesions were identified (2.3% of cases). Of these 66 T lesions, 44 were cleared on further imaging work up and clinical assessment with a breast surgeon. 22 of these lesions (33%) underwent needle biopsy. Of the 22 biopsied lesions, 17 were malignant. The remaining benign lesions included a case of LCIS as well as a complex sclerosing lesion. Therefore, of the 22 biopsied T lesions, 91% ultimately altered patient management.
Use of bilateral tomosynthesis resulted in diagnosis of an additional 3 cancers in the contralateral breast.
Conclusion: Mammographic screening has been shown to reduce mortality of breast cancer in Australia, and the recent shift towards use of tomosynthesis in assessment has the potential to further increase cancer detection and contribute to improved client outcomes. This audit has shown the potential benefits of performing bilateral breast tomosynthesis with only minimal impact on the workload of assessment clinics.

P08
BREAST BIOPSY PRACTICE AND BREAST BIOPSY MARKER UTILISATION: AUSTRALIAN AND NEW ZEALAND PERSPECTIVE
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Introduction: Breast Screen Australia and Breast Screen Aotearoa guidelines recommend breast biopsy marker (BBM) use in indicated patients. This study aims to evaluate breast biopsy practice and BBM utilisation by modality.
Methods: An online survey was disseminated to radiologists who identified 'breast imaging' as their area of practice in the Royal Australian and New Zealand College of Radiologists (RANZCR) customer relationship management system. Survey questions addressed participant demographics and factors relating to BBM use.
Results: Most respondents (72%) place between 1 and 4 BBMs per week. Almost all (99%) respondents perform ultrasound-guided biopsy of the breast or axillary nodes, with 85% performing stereotactic or tomosynthesis-guided breast biopsy and 27% performing MRI-guided breast biopsy. BBM utilisation differs by modality, with 97% respondents always placing a BBM post MRI-guided breast biopsy, 50% always placing a BBM post stereotactic-guided biopsy, and 3% always placing a BBM post ultrasound-guided breast biopsy.
Conclusions: Almost all radiologists perform breast biopsy using either ultrasound, stereotactic / tomosynthesis or MRI guidance. BBM utilisation varies by modality, with 72% of respondents placing between 1 and 4 clips per week. Reasons for placing or not placing BBM aligned with prior studies. This is the first study to evaluate the number of breast biopsies performed by radiologists on a weekly or monthly basis, providing a useful platform for comparison in the local setting.

P09

BREAST BIOPSY MARKER COST AND AVAILABILITY INFLUENCES UTILISATION IN RADIOLOGY PRACTICE

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Introduction: Breast Screen Australia and Breast Screen Aotearoa guidelines recommend breast biopsy marker (BBM) use in indicated patients. This study aims to evaluate whether BBM cost and availability impacts BBM utilisation.
Methods: An online survey was disseminated to radiologists who identified 'breast imaging' as their area of practice in the Royal Australian and New Zealand College of Radiologists (RANZCR) customer relationship management system. Survey questions addressed participant demographics and factors relating to BBM use.
Results: Most (92%, 245/266) participants report that BBMs are routinely available at their place of practice. Those employed in private practice were more likely to report that BBMs are not routinely available. 22% (58/266) of radiologists report that BBM cost influences choice of biopsy type (core biopsy versus fine needle aspirate), this finding was more frequent in those employed in private practice. 47% of respondents report that the cost of BBMs is passed on to the patient, with all of these respondents employed in a private or mixed private / public setting. Half the respondents (133/266) reported that their decision to use BBMs would be influenced by the availability of insurance coverage to cover BBM costs.
Conclusions: Results suggest that BBM cost and availability influences both choice of biopsy type (core biopsy versus FNA) and choice to use a BBM. Radiologists working in private practice or mixed private / public practice report that BBMs are less likely to be available for use, and that BBM cost is more likely passed to the patient; possibly disadvantaging patients who present to private radiology providers with imaging findings or conditions that would indicate BBM insertion under current national guidelines.

P10

CLINICALLY AND RADIOLOGICALLY OCCULT PAGET'S DISEASE OF THE BREAST: A 14-YEAR RETROSPECTIVE CASE SERIES AT A SINGLE TERTIARY INSTITUTION

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Problem Statement: Paget's Disease of the Breast (PDB) accounts for a small percentage of breast cancer presentations. This study assesses the rates of incidental histological PDB at our institution and to identify associated clinical and imaging abnormalities which many indicate the need for further investigation or alter surgical planning.
Methods: A retrospective single tertiary centre study was conducted. Cases were identified through pathology records. Clinical data was retrieved from medical records and imaging from Radiology PACS. Images were reviewed by a radiologist trained in breast imaging.
Results: Twenty patients were identified as having PDB. Fourteen (70%) presented with clinical PDB and 6 (30%) were identified incidentally at mastectomy. In 17 patients (85%), synchronous foci of breast carcinoma were identified in the ipsilateral breast. Out of 20 patients, all had mammograms, 18 had ultrasounds and 4 had MRI. Suspicious imaging abnormalities were visible in 80% of cases, 70% of mammograms, 67% of ultrasounds and 100% of MRI. Of those suspicious imaging findings, 44% had changes involving both the Nipple Areolar Complex (NAC) and the remainder of the breast, 31% had changes confined to the NAC and 25% had suspicious breast findings without NAC changes. Amongst the 6 clinically unsuspected cases, 100% had suspicious findings on imaging, but only 50% involved the NAC. Therefore, only 3 of 20 cases were truly incidental.
Conclusion: In our cohort, only 15% of PDB was truly incidental at the time of surgery. Of those cases without clinical PDB, all had suspicious imaging findings but 50% had no imaging abnormality involving the NAC. Synchronous ipsilateral breast carcinoma was identified in 85% of cases. In this study, MRI was the most sensitive imaging modality in the detection of breast carcinoma, including PDB.

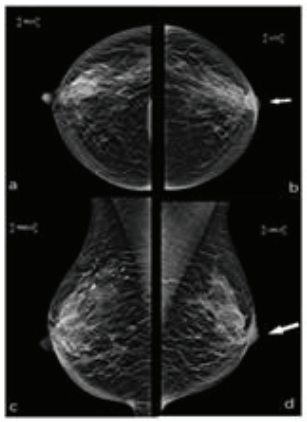
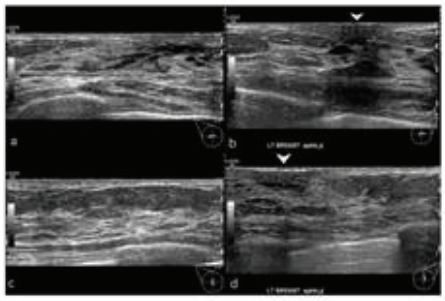
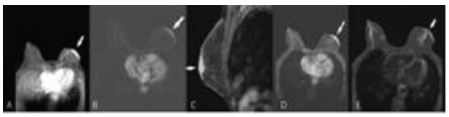


Figure 1: A 54-year-old lady presented with deformity and eczematous change of left nipple, imaging and histology revealed Paget's Disease of the Breast. Composite image of bilateral CC (a, right, b: left) and MLO (c: right, d: left) Tomosynthesis Synthetic 2D views showing asymmetric thickening of the left nipple areolar complex (white arrows). Surgical clips are present in the right 12 o'clock position from previous DCIS excision.





DCIS

P11
LOCAL RECURRENCE IN DCIS TREATED PREDOMINANTLY WITHOUT RADIATION
Christina Kozul[1], Allan Park[2], S. Sandun Silva[3], Madawa Jayawardana[4], Belinda Parker[5], Bruce Mann[6]
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Problem statement: Approximately 25% of breast cancer patients are now diagnosed with ductal carcinoma *in situ* (DCIS). Currently, predicting local recurrence in patients with DCIS is imprecise, leading to substantial variability in treatment. Utilising a large patient cohort, we aim to identify markers that predict DCIS patients who are most at risk of relapse.
Methods: A cohort study including patients from the Parkville Medical Precinct, Victoria diagnosed during 1994-2018. Demographic, treatment, pathology and outcome data were extracted from medical records.
Results: A total of 1126 DCIS cases were enrolled in the study with a median age at diagnosis of 58 years (range: 26–99 years), median follow-up period of 8 years (range: 6 months–27 years) and most patients were postmenopausal (n = 729, 65%). Of the cases, 537 (48%) were high-grade, 386 (34%) intermediate-grade and 182 (16%) low-grade DCIS, with median size being 12mm. Most patients had wide excision (WE) surgery (n= 1055, 94%), and were not treated with radiotherapy (n=726, 64%) or endocrine therapy (n=621, 55%). 471 (42%) had WE as their only treatment. Ipsilateral breast cancer events (BCE) occurred in 191 (17%) of patients, this was invasive cancer in 99 (9%) and DCIS in 92 (8%). Ipsilateral BCE were seen in 105 (20%) high-grade, 56 (15%) intermediate-grade and 29 (16%) low-grade DCIS. Patients who received radiotherapy were 62% less likely to develop any ipsilateral event (hazard ratio: 0.38, p-value: <0.0001). No association between grade and radiotherapy benefit was seen. Using multivariate analysis, patients with high-grade DCIS were more likely to have invasive IBE compared to those with low-grade when adjusted for age, radiation, estrogen (ER) and progesterone (PR) status (hazard ratio: 2.72, p-value: 0.04), with an increasing risk noted from low to high-grade patients. This relationship was not seen in DCIS recurrences. Patients with a PR positive status were 41% less likely to develop any ipsilateral event (hazard ratio: 0.59, p-value: 0.02) compared to a PR negative status.
Conclusion: Clinicopathological factors are failing to identify a low-risk group in DCIS. Further advancement in DCIS patient stratification is required to ensure treatment is personalised and overtreatment is reduced.

P12
BREAST SURGEONS' VIEWS ON ENDOCRINE THERAPY FOR TREATMENT OF DUCTAL CARCINOMA IN SITU
Ben Lancashire[1], Sanjay Warrier[1], Arna Lancashire[2]
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[2]*Metro South Health*

Problem statement: Australia and New Zealand has limited locally endorsed guidance regarding endocrine therapy (ET) for Ductal Carcinoma In Situ (DCIS). Studies investigating clinician views could inform development of local resources to assist evidence-based management of DCIS. This study aimed to explore breast surgeons' views and opinions regarding ET use in DCIS and explore factors influencing their use of ET.
Methods: A prospective survey (21-item online questionnaire) was distributed to practising breast surgeons in Australia and New Zealand (BreastSurgANZ membership database) in August 2021. Survey content was informed by a review of the literature and current international guidelines for ET use in DCIS.
Results: Fifty-six surgeons (Australia 89%, New Zealand 11%) completed the survey. Most responses were from Queensland (39%) and NSW (29%). Approximately two thirds (63%) of respondents were female, and roughly half (52%) had been practising for at least 10 years. All surgeons believed they had excellent working knowledge to inform their decision-making regarding both surgery and adjuvant radiotherapy in DCIS. This was not the case for their working knowledge of ET however, with only 73% feeling confident in this regard. Approximately one third of surgeons felt very confident in recognising a potential ET candidate, choosing an agent and dose, counselling patients on risks and benefits, and review or cessation of therapy. Lower confidence levels were reported regarding the decision to prescribe ET and managing side effects. Over 80% of respondents indicated interest in locally endorsed resources (such as prescribing guidelines and patient counselling aids) to guide ET treatment decisions for their DCIS patients. Several factors influenced surgeons' use of ET, including patient demographics (family history of breast cancer, age, menopausal status and comorbidities), tumour characteristics (histological grade, tumour size and hormone receptor status), and treatment factors (adjuvant radiotherapy and extent of surgery).
Conclusion: There is an appetite amongst breast surgeons for decision support tools to assist evidence-based use of ET in DCIS. Patient and disease factors that surgeons consider important in ET decisions are well-aligned with those underpinning existing international guidelines. This bodes well for acceptability and uptake of locally endorsed resources with minimal adaptation or re-work.

P13
ENDOCRINE THERAPY FOR TREATMENT OF DUCTAL CARCINOMA IN SITU – A CASE FOR RESEARCH IN THE AUSTRALIAN AND NEW ZEALAND SETTING
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Problem statement: Australia and New Zealand has limited locally endorsed guidance regarding the role of endocrine therapy (ET) in Ductal Carcinoma In Situ (DCIS). As a non-invasive condition with numerous treatment options, DCIS management can be controversial, and concerns exist regarding both overtreatment and undertreatment.
Methods: A narrative review of the literature was undertaken to summarise the current knowledge base regarding ET use in DCIS, with a focus on available evidence-based clinical guidelines, practice patterns, and clinician views and opinions.
Results: The evidence base for ET in DCIS has grown over the last three decades, and consolidated clinical trial data from the last 10 years has prompted updates to practice guidelines around the world. The United States of America (USA), United Kingdom (UK), Canada and Europe have all released updated guidance addressing the use of ET in DCIS in the last four years. Australia's practice guidelines and consumer guide were last updated in 2003 and 2009 respectively. New Zealand's practice guidelines were last updated in 2008. The literature describes highly variable patterns of ET use in DCIS worldwide, with reported prescribing rates overseas as low as 8% (UK) and 13% (Canada), to as high as 50% (USA). In the Australia and New Zealand setting, database audits have revealed prescribing rates of 19% (1998-2004) and 13.5% (2007-2016). In keeping with controversy surrounding DCIS management more broadly, there is indeed debate over the role of ET. Several studies evaluating ET prescribing patterns overseas called for evidence-based clinical guidelines to inform ET use in DCIS. The literature describes several studies exploring views of clinicians from the USA, UK, Canada, Australia and New Zealand on DCIS management. None of these studies explored views regarding the role of endocrine therapy.
Conclusion: Further research is warranted on the use of endocrine therapy for DCIS in the Australian and New Zealand setting. Studies investigating local practice patterns, clinician views, and barriers to the uptake of available guidelines could inform development of locally endorsed resources to assist the evidence-based management of DCIS in Australia and New Zealand.

P14

NOTORIOUS DCIS WITH LOBULAR CANCERIZATION, MULTIPLE RECURRENCES AND CONTRALATERAL AXILLARY METASTASES(CAM) - A CASE REPORT

Swathi Prakash, Anurag Srivastava, Anita Dhar, Haresh Kp, Kamal Kataria, Piyush Ranjan

Problem statement:

- DCIS of the breast represents a heterogeneous group of neoplastic lesions confined to the breast ducts and lobules that differ in histologic appearance and biological potential.
- Acceptable treatment for High Risk DCIS is Mastectomy or Breast Conservation Surgery with Radiotherapy.
- Recurrence rates in the NAC after NSM are acceptably low (0-3.7%) in invasive carcinoma and DCIS.
- With more recent researches being aimed towards conservation in DCIS, high grade DCIS shouldn't be underrated.

METHODS-CASE REPORT:

- 42/F presented with Lump in the Left Breast in April 2016
- 4x3 cm lesion with microcalcification. Biopsy:High grade DCIS with lobular cancerization. ER(3/8)PR(3/8)Her2(1+)
- Surgery: Nipple sparing Mastectomy with Lattismus dorsi(LD)flap reconstruction. SLNB had positive Lymph nodes. ALND was done.
- Histopathology: High Grade DCIS (papillary and comedo necrosis) with lobular cancerization. A focus of microinvasive cancer present. Margin:1.5cm. Underwent chemotherapy 6 cycles of CMF and 15 fractions of RT.

First Recurrence:

- In 2019, patient developed nipple discharge. Biopsy: Pagets disease with invasive carcinoma, ER(0/8)PR(0/8)Her2(3+)

- Surgery: Overlying skin, LD, Underlying pectoralis muscle excised.
- Histopathology: Pagets disease present. On repeated grossing no invasive component found
- Underwent chemotherapy (DCH) with 17 cycles of trastuzumab. No RT was given.

Second Recurrence:

- In 2022, patient developed nodules in skin flap

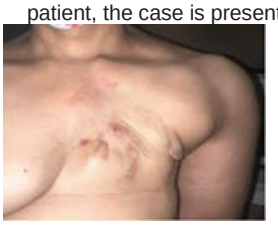
- Excision biopsy of one nodule: Invasive carcinoma NOS. ER(4/8) PR(3/8) Her2+(3+)
- Opposite Axillary Lymph node Biopsy- Invasive carcinoma NOS. ER(4/8) PR(6/8) Her2+(3+). Suggesting Contralateral Axillary Metastases(CAM).
- Patient is undergoing Interstitial Radiotherapy. She will undergo Chemotherapy + Surgery + Trastuzumab.

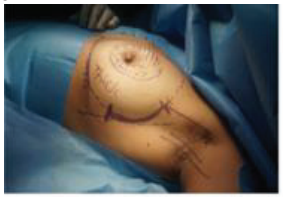
Results:

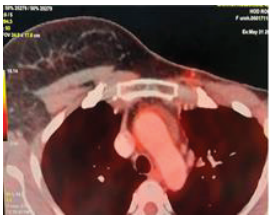
- All DCIS patients should be meticulously evaluated and the treatment should be individualized.
- High risk DCIS has high recurrence rates inspite of multidisciplinary treatment.
- This is a case report. Further case series or RCT must be done.

Conclusions:

- More Risk based treatment and followup protocols should be devised for DCIS patients.
- DCIS should be equally weighted and treated like malignancy due to the progression, recurrences, margins needed, patients' followup and counselling.
- High risk DCIS is notorious for recurrence inspite of mastectomy with chemotherapy, radiotherapy and hormonal therapy coverage.
- Because of the diagnostic dilemma, biological changes in the tumour and multidisciplinary management of the patient, the case is presented.







HER2 POSITIVE BREAST CANCER

P15

PIPPA: A PROSPECTIVE OBSERVATIONAL STUDY OF MOBILE APP-BASED PATIENT-REPORTED OUTCOMES IN PATIENTS TREATED WITH PALBOCICLIB FOR ADVANCED BREAST CANCER IN AUSTRALIA

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Problem statement: Palbociclib pivotal clinical studies included patient-reported outcomes (PROs) as endpoints using the EQ-5D and FACT-B instruments. In addition, real-world studies, such as MADELINE US and MADELINE ASIA, are collecting PROs (e.g., SF-12 and CESD-10 questionnaires) using novel smartphone-based mobile applications. Nonetheless, there still exists limited evidence on the feasibility of app-based direct-to-patient data collection approaches for patients with advanced breast cancer (ABC) in Australia. Additionally, limited data exist on the feasibility of virtual approaches to study recruitment.
Methods: This is a prospective, non-interventional and hybrid study. It leverages both virtual and site-based recruitment approaches to recruit patients who have recently initiated on Palbociclib as per label .Participating investigators will identify patients across three sites: Epworth Freemasons, Monash Health and Liverpool Hospital, in the site-based arm. In the virtual arm, participants will be identified and screened via social media advertisements (Google, Instagram and Facebook) and through assistance from relevant ABC patient support groups. Data collection will be primarily patient-driven through a study smartphone-based mobile application, with PRO data collected at baseline, one month, three months, six months, nine months, and 12 months. The Pippa study app also distributes relevant breast cancer educational materials to participants throughout the study.
Results: The present study seeks to provide complementary evidence on real-world PROs (FACT-B, SF-12 and ESAS), access to ABC support and treatment patterns in patients treated with Palbociclib (in combination with a hormonal agent) for ABC in Australia; whilst testing the feasibility of direct-to-patient approaches to data collection and decentralised virtual approaches for recruitment.
Conclusions: This study features a unique, innovative, patient-centric approach for data collection as well as hybrid recruitment. This framework could help increase the geographic equity and representativeness of the Australian ABC population in observational research and potentially improve health outcomes by enabling the collection of PROs in routine clinical practice.
Disclosure: *Binko, Justin and Alam, Mahmood: Shareholder/Stockholder/Stock options, Full/Part-time employment: Pfizer Australia. Stratton, Giles and Hitschfeld, Maureen Full/Part-time employment: IQVIA Australia. All other authors have declared no conflicts of interest*

LOCOREGIONAL THERAPY

P16

OUTCOMES OF AXILLARY CLEARANCE FOR POSITIVE MACROSCOPIC SENTINEL NODE BIOPSY IN BREAST CANCER, A REGIONAL CENTRE EXPERIENCE

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Problem Statement: The role of Axillary lymph node dissection (ALND) in the setting of early breast cancer is currently being re-examined, as it carries significantly worse morbidity and lower quality of life, yet it may not necessarily affect systemic adjuvant treatment. In our regional centre at Gosford Hospital, we aim to review the clinicopathologic factors of the patients undergoing ALND and to review the subsequent adjuvant treatments undertaken.
Methods: Clinicopathologic data was collected on all patients undergoing ALND for breast cancer from July 2018 to December 2021 at Gosford Public and Private Hospitals. The specific chemotherapy and radiotherapy regimens were also collected.
Results: From July 2018 to December 2021 there were 48 patients that underwent ALND for early breast cancer. Tumour size (p=0.041) and the number of positive sentinel lymph nodes had a significant correlation with the outcome of ALND. Lymphovascular invasion, tumour grade and type, multifocal tumours, ER and HER2 status did not show significant correlation with the ALND. The median Sloan Kettering Nomogram (SKN) probability was 24% (11-42 IQR). There was a significant correlation between the SKN and the outcome of ALND.
Chemotherapy was administered to 45 patients (94%). Doxorubacin and Cyclophosphamide (AC), administered over four cycles, was provided for 11 patients (23). 26 patients (54%) also received an additional 12 cycles of paclitaxel therapy. Four patients ceased chemotherapy, with three patients ceasing due to neurotoxicity and one ceasing early due to sepsis. Radiotherapy was administered to 46 patients (96%). The radiotherapy received was primarily 50 Gy in 25 fractions. Of these patients 15 also received an additional radiation boost and six patients received targeted radiation to the axilla. Four patients (8%) received a reduced dose and two patients (4%) did not receive radiotherapy.
Conclusion: In our regional centre, the Sloan Kattering Nomogram, tumour size and number of positive sentinel lymph nodes were significant predictors of the outcome of ALND. Further, ALND did not alter the decision about adjuvant chemotherapy and radiotherapy.
The authors have no conflicts of interest to declare that are relevant to the content of this article.

MEDICAL ONCOLOGY

P17

SYNCHRONOUS OPERABLE PANCREATIC AND BREAST CANCER WITHOUT GENETIC MUTATION: A LITERATURE REVIEW AND DISCUSSION

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Problem statement: Synchronous cancers are rarely detected when working-up a patient for a primary cancer. Neoadjuvant management of synchronous breast and pancreatic cancers, without a germline mutation, has yet to be discussed. Two patients were diagnosed with synchronous breast and pancreatic cancers at our institution over the last decade. A literature review was performed to evaluate the current evidence stance.
Methods: We present two cases and reviewed the current extent of literature for synchronous breast and pancreatic cancers.
Results: The first patient was 61-years old and diagnosed with a HER2+ breast cancer. The second patient was 77-years old and diagnosed with a Luminal B breast cancer. The inability to provide concurrent breast and pancreatic neoadjuvant therapy for the HER2+ patient, resulted in upfront surgery. The second patient was able to have both cancers treated simultaneously - neoadjuvant chemotherapy to the pancreas, and neoadjuvant endocrine therapy to the breast.
Conclusion: Synchronous breast and pancreatic breast cancers are rare, with literature limited to case reports only currently. Neoadjuvant therapy in both cancers, has resulted in significant improvements in the outcomes for patients in each individual cancer. However, there is no single neoadjuvant regimen that is shown to completely manage both. From our experience, we have noted that the typically less aggressive of the two cancers, the breast cancer, can direct our management due to the wider scope of treatment. However, given the paucity of the data, further research is required to determine whether the breast pathology, rather than pancreatic, should direct treatment.
Accepted: Frontiers in Surgery: Surgical Oncology https://www.frontiersin.org/articles/10.3389/fsurg.2022.858349/abstract

MOLECULAR ASSAYS

P18
OPTIMA, A PROSPECTIVE INTERNATIONAL RANDOMIZED TRIAL TO VALIDATE THE CLINICAL UTILITY AND COST-EFFECTIVENESS OF GENE EXPRESSION TEST-DIRECTED CHEMOTHERAPY IN HIGH CLINICAL RISK EARLY BREAST CANCER
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OPTIMA Trial Management Group

Problem statement: Evidence to support use of multi-parameter tumour gene expression assays (MPAs) in node positive, early breast cancer and for premenopausal breast cancer is not robust. The OPTIMA (Optimal Personalised Treatment of early breast cancer usIng Multi-parameter Analysis) (ISRCTN42400492) trial aims to validate test directed chemotherapy use in mostly node-positive breast cancer.
Methods: OPTIMA is a prospective, international, randomised controlled and partially blinded study that recruits people aged ≥40 years with resected oestrogen receptor-positive, HER2-negative tumours and up to 9 involved lymph nodes. Randomisation is to standard management (chemotherapy and endocrine therapy) or MPA-directed treatment using the Prosigna test. Those with Prosigna tumour Scores (ROR_PT) >60 receive standard management whilst those with lower score tumours receive endocrine therapy alone. Pre-menopausal participants receive ovarian suppression as part of their endocrine therapy. Adjuvant abemaciclib is permitted. The trial will be analysed for (1) non-inferiority of recurrence (IBCFS) Per Protocol according to randomisation and (2) cost-effectiveness. The key secondary outcome is non-inferiority of recurrence for patients with tumour ROR_PT scores ≤60. Recruitment of 4500 patients over 8 years will permit demonstration of up to 3% non-inferiority of test-directed treatment with at least 83% power, assuming 5-year IBCFS is 87% with standard management. Commencing in late 2022 OPTIMA will be activated in up to 50 sites throughout Australia and New Zealand.
Results: OPTIMA opened in January 2017. Overall recruitment as of 1 July 2022 was 2814. Currently 95% of randomised participants are eligible for inclusion in the PP analysis. 66% of the MPA-directed arm participants have been allocated to endocrine therapy only. The test failure rate is <1%.
Patient characteristics.

Characteristic		%
Median age in years (range)	56 (40-83)	
Menopause status	Pre	36
	Post	63
	Male	1
Tumour size	<30mm	55
	≥30mm	45
Node status	pN0	3
	pN1mi	4
	pN1	75
	pN2	18
Histologic grade	1	5
	2	63
	3	32

Conclusion: OPTIMA will provide robust unbiased evidence on test-directed chemotherapy safety for both postmenopausal and premenopausal women with 1-3 involved nodes as well as for patients with 4-9 involved nodes.
OPTIMA is funded by the UK NIHR HTA Programme.

NEOADJUVANT THERAPY

P19
NEOADJUVANT CHEMOTHERAPY UTILISATION AND OUTCOMES IN BREAST CANCER PATIENTS AT A TERTIARY HOSPITAL IN NORTH QUEENSLAND
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Townsville University Hospital Breast Unit

Problem Statement: A 2019 audit of the Breast Surgery Australia New Zealand Quality Audit Database (BQA) has suggested that in Australia neoadjuvant chemotherapy (NAC) is being underutilised.[1] It showed a trend for increasing usage (3.08% in 2011 to 6.65% in 2016), this compares poorly with

the United States of America (from 2003 to 2011 overall 17.4% utilisation), and falls short of the estimated 20% of patients with breast cancer who would gain benefit from neoadjuvant chemotherapy. Unfortunately, the BQA database did not include accurate pretreatment clinical and radiological sizing and there was significant missing data regarding final pathology so the rate of pathological complete response (pCR) was unable to be assessed. We sought to determine the rate of neoadjuvant chemotherapy use in our service, the factors influencing use, the response rates, disease progression and recurrence.

Methods: All patients in the Townsville and Hinterland Health Service who presented with early and locally advanced breast cancer from January 2015 to December 2020 were included. Response to chemotherapy was classified using the same criteria as the EORTC trial 10902.

Results: 473 patients were included over the 6 year period. The rate of NAC usage rose from 11.2% in 2015 to 16.2% in 2020. Young age, HER2 positive or triple negative receptor status, large tumours and locally advanced disease were associated with NAC use. The complete pathological response rate was 27.5%, the partial response rate 31% and disease progression 5.8% overall. Recurrence in the neoadjuvant group was 24.6% and mortality 17.4%. The mean pre-treatment tumour size was over 40mm.

Conclusions: Neoadjuvant chemotherapy utilisation in our service is in line with international standards. The rural and remote nature of the Townsville catchment, and the number of patients presenting with locally advanced malignancies and access to Medical oncology via Telehealth may be contributing to both neoadjuvant utilisation and the recurrence rates and associated mortality.

Disclosures: *Nil*

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Table:

Year	Overall Patients	NAC Use %	pCR %	Progressive Disease %	Recurrence %	Mortality%
2015	73	11.2	28.6	12.5	37.5	37.5
2016	71	15.4	0	0	36.4	18.2
2017	67	13.4	22.2	0	44.4	44.4
2018	95	11.6	36.3	0	27.2	27.2
2019	99	19.2	31.6	10.5	15.8	0
2020	68	16.2	36.4	9.1	0	0
Total / Average	473	14.6%	27.5%	5.8%	24.6%	17.4%

NAC – Neoadjuvant chemotherapy
pCR – Pathological complete response

PATHOLOGY

P20

PARANEOPLASTIC CHOREA SECONDARY TO INVASIVE CARCINOMA OF THE BREAST: A CASE REPORT

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Problem statement: It is estimated that paraneoplastic syndromes affect up to 8% of patients with malignancy [1]. Chorea is a rare paraneoplastic manifestation of malignancy which has most commonly been reported in small cell lung carcinoma [2]. There is only one previous documented case of paraneoplastic chorea secondary to breast cancer in the literature [3].

Case presentation: We present the case of an 82-year-old New Zealand European woman who was referred to medicine with new onset of choreiform movements affecting the right-hand side of her body. Her laboratory findings were unremarkable, including negative antineuronal antibodies, as well as Anti-streptolysin O and Anti-DNase B. CT and MRI of the brain was normal as seen in *figure 1*. A full-body CT was performed which revealed two small masses within the left breast as well as what appeared to be a thickened endometrium. The patient was discharged home on clonazepam which dampened but did not eliminate the choreiform movements. Ultrasound and mammography were performed and biopsies confirmed invasive carcinoma of the breast. A PET scan showed isotope uptake in the breast lesions as seen in *figure 2* and did not demonstrate any metastatic disease or other malignancies. The patient came forward for left mastectomy, sentinel node biopsy, axillary node dissection, hysteroscopy and endometrial biopsy.

Results: The patient was discharged without complication on her first postoperative day. Surgical histopathology confirms clear surgical margins with negative sentinel and dissected axillary nodes as well as a normal endometrium. The patient was followed up at the second and fourth postoperative week and was recovering well from surgery. She had discontinued her clonazepam and there was no recurrence of her chorea.

Conclusion: Paraneoplastic chorea is exceedingly rare and even more so in relation to breast cancer, with just one case documented in the literature. We present a second case of paraneoplastic chorea in the setting of invasive carcinoma of the breast. Our patient had favourable outcomes at short-term follow up with no recurrence of chorea following surgical excision of what was inferred to be the causative neoplasm.

Acknowledgements: *We would like to acknowledge our patient for her consent for this case report. The authors declare no conflict of interest.*

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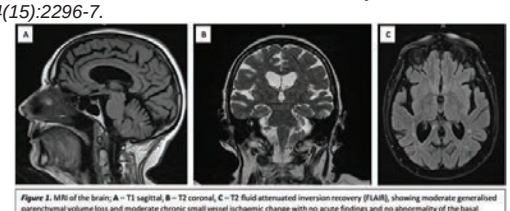

Figure 1. MRI of the brain; A – T1 sagittal, B – T2 coronal, C – T2 fluid attenuated inversion recovery (FLAIR), showing moderate generalised parenchymal volume loss and moderate chronic small vessel ischaemic change with no acute findings and no abnormality of the basal ganglia or brainstem.

2)

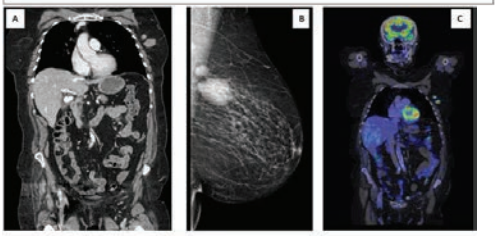

Figure 2. The breast lesions imaged in different modalities
A – Initial coronal CT revealing two lesions within the left breast
B – Mammography of the breast demonstrating the lesions and widespread microcalcification
C – FDG-PET showing isotope uptake with high signal in the left breast lesions with no metastatic disease.

P21

WARFARIN INDUCED BREAST NECROSIS: CASE REPORT

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Warfarin induced skin necrosis (WISN) is a rare complication of warfarin therapy, with a prevalence of 0.01- 0.1%[1]. It is characterised by full thickness necrosis of skin and subcutaneous fat, and commonly seen in the breasts, buttock and thighs[2]. Risk factors include female gender, obesity, and pre-existing coagulopathy[2].

Although the exact mechanism is unclear, WISN is believed to be driven by warfarin related inhibition of protein C and S, with paradoxical hypercoagulation. Whilst classically seen short days after warfarin initiation, cases of late onset WISN have been reported, attributed to acute inflammatory conditions, causing pro-thrombotic state in susceptible warfarinised patients[3-6].

We present a case of late onset WISN, causing unilateral breast mastitis and necrosis requiring operative debridement.

A 32-year-old Caucasian female presented to hospital with rapidly progressing right breast oedema and erythema. Her past medical history included Factor V Leiden on warfarin therapy, and ulcerative colitis, on Imuran. Examination noted an enlarged, erythematous right breast, with areas of purpura, and early necrosis (Fig 1.1, 1.2).

Bloods revealed a WCC 15.9, CRP 13, lactate 1.3, and INR of 1.1, with CT chest noting extensive mastitis (Fig 2). A working clinical diagnosis of WISN was made. Warfarin was ceased with transition to Enoxaparin anticoagulation, and breast necrosis demarcated over the following days. The patient required operative debridement and necrotic skin patch was sent from the breast, with histopathology revealing veno-occlusive disease consistent with WISN.

Further history revealed symptoms suggestive of concurrent ulcerative colitis flare, which may provide a proposed mechanism of inflammation, hypercoagulability, and thrombosis, in the setting of warfarin and Factor V Leiden.

This case highlights a rare and unusual cause of breast mastitis and necrosis. Clinical suspicion for WISN should exist for at risk individuals, such as those with obesity and known coagulopathy, to ensure early identification and warfarin cessation, and thus minimise breast necrosis and disease progression.

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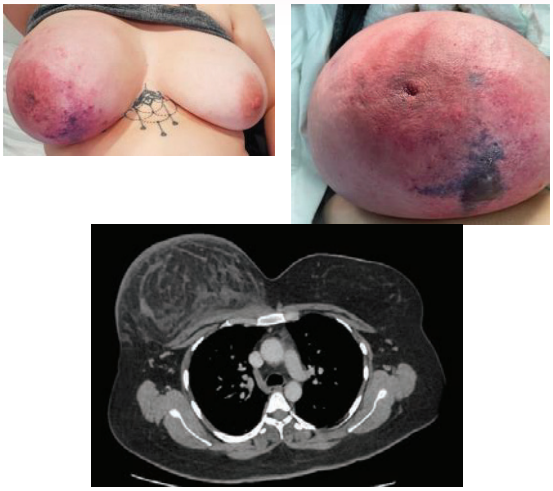

P22

COMPARISON OF BREAST CANCER HER2 STATUS TESTING WITH IMMUNOHISTOCHEMISTRY AND IN-SITU HYBRIDISATION

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Problem statement: Breast cancer human epidermal growth factor receptor–2 (HER2) can be tested by various assays including immunohistochemistry (IHC) and in-situ hybridisation (ISH). The 2018 American Society of Clinical Oncology/College of American Pathologists (ASCO/CAP) HER2 testing guidelines suggest initial HER2 testing using IHC and further testing IHC equivocal cases with ISH. However, many institutions perform both IHC and ISH on the same specimen. Repeat testing may be unnecessary and costly while potentially adding to delays in decision making and treatment. This study aims to demonstrate the concordance between HER2 IHC and ISH results tested on the same specimen.

Method: Patients diagnosed with breast cancer through BreastScreen NSW Sydney West program between January 2017 and December 2020 were identified and their HER2 IHC and HER2 ISH results on core needle biopsy (CNB) and surgical excisions (SE) were retrospectively collected. Specimens with both IHC and ISH results were then analysed for agreement and concordance using unweighted kappa values. Patients treated with neoadjuvant systemic therapy were not excluded. Equivocal IHC (2+) cases were excluded from concordance analysis.

Results: Overall, there were 240 invasive breast cancer specimens (CNB and SE) with both IHC and ISH recorded. Of these, two thirds (60.8%) were IHC equivocal (71 CNB and 75 SE). Concordance between HER2 IHC and ISH was 100% (95%CI:96.2–100%), kappa value 1.00 (P<0.0001). 94.5% of IHC equivocal cases were ISH negative. Concordance between IHC and ISH on CNB specimens (n=32) was 100% (95%CI:89.1–100%), kappa value 1.00 (P<0.0001). 91.5% of the CNB IHC equivocal cases were negative on ISH. Of the SE specimens (n=62) concordance was 100% (95%CI:93.9–

100.0%), kappa value of 1.00 (P<0.0001). 97.3% of the SE IHC equivocal cases were negative on ISH.
Conclusion: There was perfect positive concordance and agreement between non-equivocal IHC and ISH results. Of the equivocal IHC cases the vast majority were negative on ISH. This reinforces that IHC alone can be utilised reliably for HER2 status consistent with the ASCO/CAP guidelines.

PREVENTION

P23
DEVELOPING ALTERNATIVE PREVENTION STRATEGIES: CAN COLLEGE STUDENTS HAVE AN IMPACT ON BREAST CANCER SCREENING?
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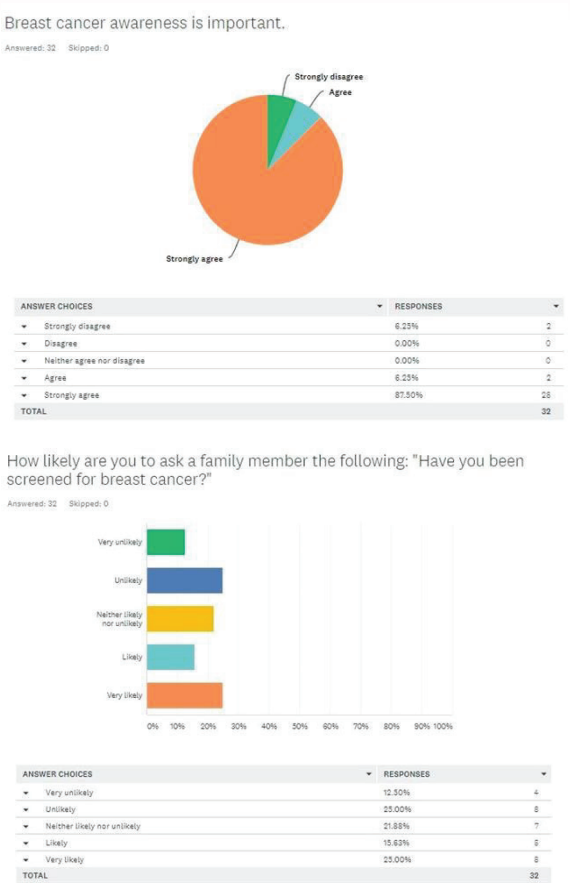
Problem Statement: Breast Cancer is the second leading cause of death in American women. Information from the American Cancer Society states that women who are at average risk for breast cancer should begin yearly screening around age 40 with emphasis beginning at age 45. Many strides have been made in promoting screening in these women, however, there is little data highlighting how their offspring can influence/promote breast cancer screening. Many of the children of the target population children are in the college age range averaging ages 18-24. Though college age women and men have an extremely low probability of being diagnosed with invasive breast cancer, there is potential for them to have a positive impact on breast cancer screening within their family. This study assesses college students' attitudes towards breast cancer awareness and screening.
Methods: The survey was distributed by members of the Minority Association of Pre-Medical Students (MAPS) and the Student National Medical Association (SNMA) across the United States. The survey consisted of objective data detailing level of education, ethnicity/race, age and gender as well as three questions that addressed attitudes toward breast cancer awareness and screening. A total of 32 college students responded from which the data was analyzed.
Results: Among the college respondents 78.13% identified as female, 18.75% identified as male and 3.13% identified as transgender male. 65.63% reported knowing someone with breast cancer or with a past history of breast cancer. 87.5% strongly agreed that breast cancer awareness was important while 6.25% strongly disagreed. Less than 41% of the respondents were likely or very likely to ask a family member if they have been screened for breast cancer.
Conclusion: College students could have a positive impact on breast cancer screening since a large majority agreed that breast cancer awareness is important. In addition to polling a larger number of students, future research goals include identifying barriers to screening conversations while strategizing ways to increase the college-age cohort's engagement in breast cancer prevention. Career long research goals include creating avenues to monitor and quantify screening behaviors of the targeted college cohort and their family members.



ANSWER CHOICES	RESPONSES	
Strongly disagree	6.25%	2
Disagree	0.00%	0
Neither agree nor disagree	0.00%	0
Agree	6.25%	2
Strongly agree	87.50%	28
TOTAL		32

ANSWER CHOICES	RESPONSES	
Very unlikely	12.50%	4
Unlikely	25.00%	8
Neither likely nor unlikely	21.88%	7
Likely	15.63%	5
Very likely	25.00%	8
TOTAL		32

RADIATION ONCOLOGY

P24
A RETROSPECTIVE AUDIT OF DOSE AND LOCAL CONTROL IN POST-MASTECTOMY BREAST CANCER PATIENTS. IS STANDARD BOLUS REQUIRED WITH CONTEMPORARY IMRT/VMAT TREATMENT PLANNING?
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Problem Statement: The aim of this study is to assess local control with post-mastectomy radiotherapy (PMRT) with respect to dose received in the dermis in patients who were treated in an era of standard bolus protocol using 3D-conformal radiotherapy. This study aims to guide contemporary dosing to a target volume and determine whether bolus is relevant in modern inverse-based radiotherapy planning.
Methods: All patients were managed with mastectomy followed by radiotherapy to the chest wall and draining nodes if indicated. Radiotherapy dose evaluation to 2mm below the skin surface was performed using the original 3D conformal treatment plans re-calculated both with and without bolus. A subset of patients were randomly selected and re-planned with ipsilateral VMAT using knowledge-based planning and skin flash techniques. The clinically optimised VMAT plans both with and without addition of 2mm virtual bolus were then

calculated and normalised to achieve dose constraints similar to the re-calculated 3D conformal plans to allow direct comparison.
Results: Between February 2005 and November 2015, 475 patients completed PMRT at The Northern Sydney Cancer Centre in Sydney, Australia and 444 patients available for analysis in this study. Median follow up was 65 months. All patients were Stage I-IIIC (AJCC 8th Ed) at time of diagnosis. Radiotherapy was delivered in 50-50.4Gy in 25-28 fractions daily and was well tolerated only 33 (7%) patients with grade 3 radiation dermatitis and no grade 4 or 5 toxicities. Of the 444 patients, 128 (29%) patients had disease recurrence with 17 (6%) local recurrences of which there appeared to be no pattern of histology, grade or treatment regime. Dose evaluation on the 3D-conformal plans showed D95% of skin dose was 43Gy and D50% was 47Gy with bolus which provide a reasonable minimum planning goal to be used when optimising with a VMAT technique.
Conclusion: For patients at risk of local recurrence post-mastectomy where bolus should be applied, a suitable technique is to treat via a VMAT technique with 2mm bolus to achieve optimal dose objectives. In patients where no bolus is needed clinically, a VMAT technique can still be applied while accepting a lower dose on skin in-line with dose achieved in historical controls.

P25
A REVIEW OF WOMEN WITH A SOLITARY EXTRACRANIAL METASTASIS FROM BREAST CANCER

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Problem Statement: Metastatic breast cancer (MBC) makes up approximately 6% of new breast cancer diagnoses, however a significant proportion of breast cancer patients eventually develop metastatic disease. This study aimed to assess outcomes including overall survival (OS), local progression free survival (LPFS) and distant progression free survival (DPFS) rates for patients with a solitary extracranial metastasis from breast cancer.
Methods: Medical records of 70 female breast cancer patients with a solitary extracranial metastasis managed at Peter MacCallum Cancer Centre between 2000 and 2019 were retrospectively reviewed. Breast cancer oestrogen receptor (ER), progesterone receptor (PR) and human epidermal growth factor receptor 2 (HER2) status was recorded: ER+ and/or PR+ and HER2- (HR+HER2-), ER+ and/or PR+ and HER2+ (HR+HER2+), ER-PR-HER2- (triple negative), ER-PR-HER2+ (HR-HER2+) or unclassified. Kaplan-Meier method was used to estimate OS, LPFS and DPFS. Cox proportional hazard regression was used to assess associations between potential prognostic factors (PFs) and OS, LPFS and DPFS. PFs included tumour receptor group, age at metastasis detection, loco-regional breast cancer in situ at metastasis detection, systemic treatment of MBC within 2 months of metastasis detection and local treatment of solitary extracranial metastasis with radiotherapy or surgery within 2 months of metastasis detection.
Results: Median age at MBC diagnosis was 50 years (range 28 to 77). There were 40 HR+HER2-, 14 HR+HER2+, 9 triple negative, 3 HR-HER2+ and 4 unclassified patients. Bone was the most common metastasis site (53/70 patients=76%). Five-year rate for all patients for OS was 46%, LPFS was 56% and DPFS was 20%. Median OS for all patients was 4.8 years and for triple negative breast cancer (TNBC) patients was 2.5 years. Median time to distant progression for all patients was 2 years and for TNBC patients was 0.9 years. None of the PFs assessed had a statistically significant association with OS, LPFS or DPFS.
Conclusion: Given the good OS for patients with a solitary extracranial metastasis and improved DPFS particularly in non-TNBC identified in this study, these patients may warrant aggressive local treatment such as surgery or stereotactic ablative body radiotherapy at identification of metastasis.
The authors declare no competing interests.

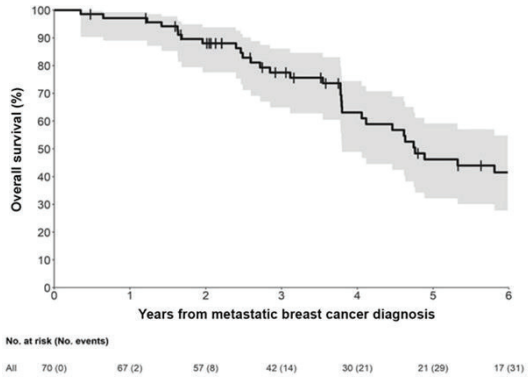

Figure 1. Overall survival for all 70 patients included in the study. Shaded area represents 95% confidence interval.

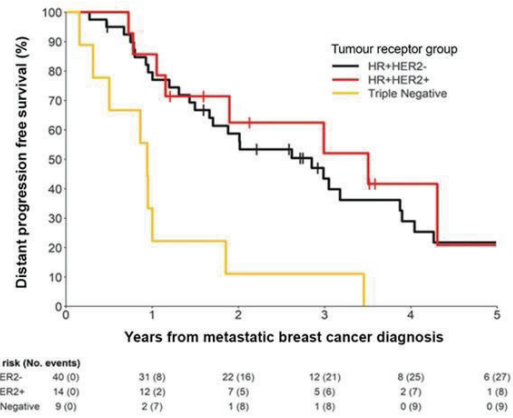

Figure 2. Distant progression free survival according to tumour receptor group.

P26
ACUTE TOXICITY IN ADJUVANT BREAST RADIOTHERAPY USING KNOWLEDGE-BASED VOLUMETRIC MODULATED ARC THERAPY PLANNING

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Problem Statement: To report the acute toxicity with implementation of the knowledge-based planning (KBP) system RapidPlan for a breast cancer patient cohort treated in the first 12-months since its clinical release and summarise the dosimetry of their treatment plans.
Methods: This retrospective review examined the acute toxicity in 146 consecutive breast cancer patients treated with RapidPlan volumetric modulated arch therapy (VMAT) at Northern Sydney Cancer Centre (NSCC) between 01/07/2020 and 30/06/2021. Patients received adjuvant radiation for either in situ or invasive early breast cancer. Treatment was

either standard (50.0Gy in 25 fractions), hypofractionated (40.05Gy in 15 fractions) or ultra-hypofractionated (26Gy in 5 fractions) regimes targeting the whole breast or post-mastectomy chest wall and, if indicated, integrated to the tumour bed and/or irradiation of the regional lymph nodes. Toxicity was graded using the Common Terminology Criteria for Adverse Events (CT CAE) v5.0 grading system for the variables of skin toxicity, fatigue and lung toxicity (pneumonitis). Quantitative analysis of the planned dose to each target structure and organ at risk (OAR) were performed by calculating the population dose volume histogram (DVH) median, along with reporting the clinical DVH goals.

Results: One hundred and forty-six consecutive breast patients were planned at our centre using a RapidPlan VMAT model. Across all three reported variables, no patients had any grade 3 or 4 toxicity. There was no reported lung toxicity. The most severe skin toxicity was of grade 2, reported in only 12 % (18 patients). The majority of patients (83%) reported no significant fatigue, and less than 1% (1 patient) reported grade 2 fatigue. The median plan dosimetric data is presented in table 1.

Conclusion: No significant acute toxicity was reported in a cohort of breast cancer patients treated using a KBP and VMAT model.

Disclosure of interest

The authors declare that they have no competing interests.

Table 1. Population median plan dosimetric data

Volume	DVH objective/goal	Prescription			
		Breast Nodal 50Gy/25# (n=42)	Breast Nodal 40.05Gy/15# (n=14)	Breast 40.05Gy/15# (n=82)	Breast 26Gy/5# (n=8)
Target					
PTVp_Br/CW	D95% ≥ 90%	93.2%	93.5%	92.8%	95.1%
	D2% ≤ 105%	104.4%	102.9%	104.1%	104.2%
PTVp_TB	D95% ≥ 95%	97.0%	96.1%	96.2%	96.8%
	D2% ≤ 107%	103.3%	103.1%	103.6%	104.9%
PTVn_Ax	D95% ≥ 95%	95.6%	94.8%		
	D2% ≤ 107%	104.9%	103.1%		
PTVn_SCF	D95% ≥ 95%	95.5%	96.1%		
	D2% ≤ 107%	103.5%	103.0%		
PTVn_IMN	D95% ≥ 90%	87.7%	92.5%		
	D2% ≤ 107%	102.7%	104.2%		
Organs at risk					
Heart (Left)	D_{mean} ≤ 5%	1.6Gy (3.2%)	1.4Gy (3.5%)	1.3Gy (3.3%)	0.8Gy (3.1%)
Heart (Right)	D_{mean} ≤ 5%	1.4Gy (3.5%)	1.0Gy (2.5%)	1.0Gy (2.5%)	0.6Gy (2.3%)
Ipsi-Lung	D_{mean} ≤ 20%	9.7Gy (19.4%)	6.2Gy (15.5%)	5.2Gy (13.0%)	3.4Gy (13.1%)
	V45% ≤ 20%	16.3%	11.6%	9.4%	8.1%
Contra-Lung	D_{mean} ≤ 5%	1.8Gy (3.6%)	0.9Gy (2.3%)	0.5Gy (1.3%)	0.3Gy (1.2%)
Contra-Breast	D_{mean} ≤ 5%	2.3Gy (4.6%)	1.1Gy (2.8%)	0.6Gy (1.5%)	0.4Gy (1.5%)
	D2% ≤ 20%	9.7Gy (19.4%)	5.8Gy (14.5%)	2.6Gy (6.5%)	2.0Gy (7.7%)
Oesophagus	V40% ≤ 5%	0.0Gy (0.0%)	0.0Gy (0.0%)	0.0Gy (0.0%)	0.0Gy (0.0%)

Abbreviations: DVH = dose volume histogram, Gy = gray, # = fractions, n = number, CTVp_Br/CW = clinical target volume primary breast/chest wall, PTVp_Br/CW = planning target volume primary breast/chest wall, CTVp_TB = clinical target volume primary tumour bed, PTVp_TB =- planning target volume primary tumour bed, Sub = subtract, CTVn_L1 = clinical target volume nodal level 1, CTVn_L2 = clinical target volume nodal level 2, PTVn_Ax = planning target volume nodal axilla, CTVn_L3 = clinical target volume nodal level 3, CTVn_L4 = clinical target volume nodal level 4, PTVn_SCF = planning target volume nodal supraclavicular, CTVn_IMN = clinical target volume nodal internal mammary node, PTVn_IMN = planning target volume nodal internal mammary node, LADCA = left anterior descending coronary artery, D = dose, SIB simultaneous integrated boost, V = volume, cc = cubic centimetres

P27
INTERIM ANALYSIS OF THE PREDICT REGISTRY AUSTRALIA: CHANGES IN TREATMENT RECOMMENDATION FOR A BIOLOGIC SIGNATURE PREDICTIVE OF RADIATION THERAPY (RT) BENEFIT IN PATIENTS WITH DCIS

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Background: The role of adjuvant RT for women with ductal carcinoma in situ (DCIS) remains controversial. Although there is level I evidence supporting the role of RT in reducing the risk of local recurrence, prognostic and predictive tools are needed to better stratify individual risks and benefits of RT. The DCISionRT® Test (PreludeDx, Laguna Hills, CA) is a biosignature that uses individual tumor biology in conjunction with clinical and pathologic risk factors. The test provides a validated score (DS) that assesses 10-year risk of ipsilateral breast recurrence and development of invasive breast cancer with and without adjuvant RT.

Methods: The PREDICT study is a prospective, multi-institutional registry for patients who received DCISionRT testing as part of their routine care. The registry includes females 26 and older who are diagnosed with DCIS and are candidates for BCS and eligible for RT or systemic therapy. Treatment recommendations were recorded before and after receiving test reports. The primary endpoint is to identify the proportion of patients where testing led to a change in RT recommendation.

Results: Analysis was performed in 230 patients treated at 50 sites who had definitive BCS and subsequent DCISionRT testing. The median age of patients was 63 years, 17% were 50 or younger, nuclear grade was high in 51% and tumor size was 2.5 cm or greater for 17%. Test results were DS Low risk (DS ≤ 3) for 65% of women and 35% were DS Elevated risk (DS > 3). RT recommendation (yes/no) was changed for 46% of women after DCISionRT testing and HT recommendation was changed for 6%.

There was a net decrease in RT recommendation from 74% pre-assay to 45% post-assay. RT recommendation decreased by 42% in DS Low risk patients but increased 22% in DS Elevated risk patients. When test results indicated DS Elevated risk, physicians were likely to recommended RT, but when the results were low risk, physicians were less likely to recommend omitting RT.

Conclusions: This planned interim analysis demonstrates a significant change in RT recommendations based on DCISionRT results in 230 patients. Compared to traditional clinicopathologic features, the factor most strongly associated with RT recommendation was the DCISionRT result with other factors of importance being patient preference, tumor size and grade. The integration of DCISionRT into clinical decision processes has substantial impact on recommendations aimed at optimal management to prevent over- or under-treatment.

P28
INTRAOPERATIVE RADIOTHERAPY FOR EARLY BREAST CANCER: EARLY EXPERIENCE AND QUALITY OF LIFE OUTCOMES FROM A WESTERN AUSTRALIAN REGISTRY

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Background: Intraoperative radiotherapy (IORT) is a relatively novel treatment approach for early-stage breast cancer. This is the first reported use in an Australian private hospital. This study presents early results and quality of life (QoL) outcomes of patients in the Intraoperative Radiotherapy

for Early Breast Cancer Outcomes Registry (IORT-BC Registry) at St John of God Subiaco Hospital.
Methods: Seventy-two patients from April 2020 to December 2021 were selected via eligibility criteria and enrolled in the IORT-BC Registry after informed consent. Patient demographics, staging, pathology, adverse effects, and additional treatments were collected via hospital records. Patients completed a satisfaction survey six-weeks after IORT. The European Organization for Research and Treatment of Cancer QLQC30 and QLQ-BR23 questionnaires were completed at baseline and six-months. A one-way ANOVA was performed to determine any statistically significant differences between means.
Results: 70.8% of patients received IORT only, 27.78% required additional whole breast external beam radiotherapy, and one patient underwent IORT followed by mastectomy. 8.22% required re-excision of margins. QoL analysis was completed in 33 patients. The analysis demonstrated no significant difference at 6-months compared to baseline except for decrease in physical functioning (P=0.028) and increase in breast symptoms (P=0.030). Patients with additional treatment had worse body image (p<0.001) and social functioning (P<0.001) at 6-months after IORT compared with IORT only patients. Satisfaction scores ranged from “good” to “excellent”.
Conclusion: IORT is well-tolerated with a high degree of satisfaction and low impact on QoL. Patients who received additional treatment experienced worse body image and social functioning at 6-months compared to IORT only

RECONSTRUCTION

P29
AUTOLOGOUS VERSUS IMPLANT-BASED BREAST RECONSTRUCTION: IMPACT OF SCAR QUALITY (SCAR-Q) IN BREAST AND ABDOMINAL SCARRING AND QUALITY OF LIFE (BREAST-Q) FOLLOWING BREAST RECONSTRUCTION
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Background: Breast reconstruction (BR) has been shown to improve a patient’s quality of life and restore body image in women undergoing mastectomy due to breast cancer. While the aim of BR is to recreate a breast mound, plastic and breast surgeons utilise techniques to minimise the visibility of breast and abdominal incisions, ensuring patients receive the most desirable aesthetic outcome. The aim of this study was to evaluate and compare autologous and implant-based breast reconstructions using BREAST-Q, SCAR-Q and BODY-Q.
Methods: Patients who underwent autologous or implant-based BRs performed by three surgeons at a single institute between December 2020 and January 2022 were invited to complete a postoperative survey. BREAST-Q (Psychosocial and Satisfaction modules) evaluated patient’s satisfaction of results and psychosocial wellbeing, SCAR-Q was used to determine scar quality and psychosocial impact of breast and abdominal scarring, and for BODY-Q (Body Image Module) was used as an additional measure of body image perception. All DIEP flap patients completed an additional SCAR-Q for abdominal scarring. Univariate and multivariate analysis of questionnaire scores and clinical characteristics were performed to identify trends between and within groups.
Results: 24 patients who underwent an autologous BR (48 DIEP flaps in 23 patients) and 29 patients who underwent implant-based BR responded (53/85 respondents). Overall, there was no statistical difference in perception of appearance and symptoms associated with breast scars between the two groups. Satisfaction of outcome and breast satisfaction was statistically higher among patients with autologous breast reconstructions. While patients with autologous BR with DIEP flaps had a lower SCAR-Q score for their abdominal scars, these patients had a high postoperative BREAST-Q satisfaction for their abdomen. There was no statistical difference in the perception of body image (BODY-Q) between autologous and implant-based reconstruction.
Conclusion: Differences in scar outcomes between implant-based and autologous reconstruction exist. However, these are not reflected in postoperative quality of life, body image or overall patient satisfaction levels. While it is important to consider scarring outcomes when discussing BR options to make an informed decision, it should not be the determining factor when selecting a suitable BR option.

P30
PROSPECTIVE EVALUATION OF ROBOTIC-ASSISTED DEEP INFERIOR ARTERY PERFORATOR (DIEP) FLAP HARVEST IN BREAST RECONSTRUCTION
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Background: The use of robotic-assisted surgery (RAS) in autologous breast reconstruction presents a further refinement to the gold standard DIEP flap technique. While the DIEP technique spares sacrificing the rectus abdominis, nerves innervating the muscle are at risk during the DIEP flap harvest contributing to abdominal donor-site morbidity. The robotic-assisted DIEP allows the pedicle dissection to be approached posteriorly, limiting the fascial incision length and injury to the rectus abdominis muscle. While the safety and feasibility of the robotic DIEP has been reviewed, it has not been prospectively validated for its use. Hence, we present our preliminary findings in evaluating the effectiveness of the robotic-assisted DIEP flap harvest.
Methods: Preoperative abdominal functional assessments and patient-reported outcome measures (BREAST-Q) were performed in all patients who underwent robotic DIEP flap reconstructions (group 1) and all non-robotic DIEP flap reconstructions (group 2). Patients who met the suitability for robotic-assisted DIEP based on preoperative computed tomographic angiography (CTA) but underwent a traditional open-DIEP harvest due to robotic availability (group 3) were also included. Demographic information, intraoperative details and postoperative complications were collected. Abdominal functional assessments and a postoperative BREAST-Q were completed 3 months post-operatively.
Results: Twenty consecutive patients undergoing immediate or delayed post-mastectomy autologous breast reconstructions with thirty-eight DIEP flaps were recruited prospectively. The median age at the time of surgery was 50 years (median BMI of 28) and 47 years (median BMI of 24.9) in the robotic and non-robotic groups, respectively. Patients who underwent a robotic-assisted DIEP harvest had less impact on their baseline abdominal function than an open-DIEP harvest with lower rates of postoperative complications. Average robotic time was 100mins, with the average robotic case longer by 45min, which decreased with each case. The average additional robotic cost per case was $2243.51 (AUD).
Conclusion: Early results demonstrate that robotic-assisted DIEP flap breast reconstruction is a safe and replicable technique that may result in less abdominal donor-site morbidity with a lower impact on baseline abdominal function and reduced risk of developing postoperative bulge. The learning curve to implementation is brief, and an increase in overall intra-operative time during early experience should be expected.

P31
TREATMENT OF COMPLEX BREAST WOUNDS WITH PLATELET RICH FIBRIN
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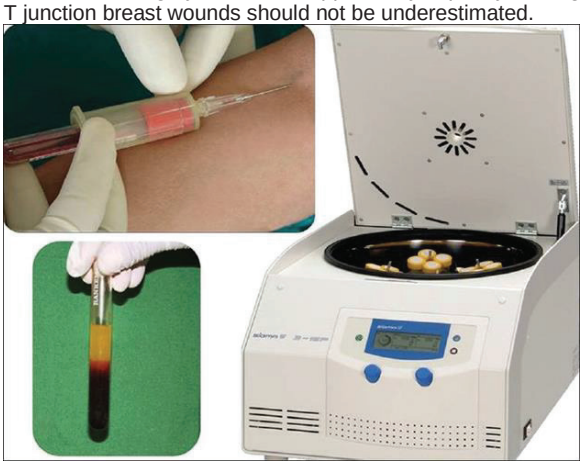
Inverted T junction wound dehiscence following breast surgery occurs in approximately 10% of patients. This long standing complication leads to patients requiring ongoing dressings, delays further treatment and longer periods of follow-up in clinic. The application of platelet rich fibrin (PRF) in patients who have complex breast wounds is explored and compared to current dressings. The duration in wound healing, duration of follow-up and scarring is compared between the different methods. PRF is a second generation platelet rich plasma (PRP) where autogenous platelets, growth factors, cytokines and leukocytes are present in a complex fibrin matrix to accelerate tissue healing. PRF promotes two biologic mechanisms, impregnation and induction, allowing the release of growth factors over the first 7 days to stimulate proliferation, neovascularisation, remodelling and induce epithelialization. This novel formulation is completely autologous, prepared without any anticoagulants (unlike PRP) and contains high concentrations of host immune cells. 10mL of venous blood is collected from the patient without anticoagulant and centrifuged at 3,000 rpm for approximately 10 minutes. The blood settles into three layers: upper 1/3 - straw coloured acellular plasma, lower 1/3 - red blood cells and the middle 1/3 - fibrin clot. The fibrin clot is collected and applied on the wound. There are many advantages and a few disadvantages of using PRF which are discussed and compared with PRP. We present a particular case, with photos, where a dark skinned patient has undergone a bilateral breast reduction and subsequently had T junction breakdown. One breast wound had PRF applied to it and the other breast wound had a silver dressing applied to it (control). Results showed that the breast wound that had PRF applied to it healed quicker and had better cosmetic outcomes in terms of scarring i.e. hypertrophic and keloid scars. PRF is an emerging area in regenerative medicine, even though it was initially designed specifically for oral and maxillofacial surgery in 2001, its applicability to poorly healing T junction breast wounds should not be underestimated.



P32
BREAST IMPLANT ASSOCIATED - ANAPLASTIC LARGE CELL LYMPHOMA DIAGNOSIS AND MANAGEMENT - CASE SERIES
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The first documented case of Breast Implant Associated - Anaplastic Large Cell Lymphoma (BIA-ALCL) came in 1997 as the popularity surrounding textured implants grew. BIA-ALCL is a rare and emerging T-cell non-Hodgkin lymphoma detected on average 7 to 10 years after implantation. The Therapeutic Goods Administration (TGA) reports the risk of BIA-ALCL anywhere between 1 in 2,500 to 1 in 25,000 people with breast implants. In Australia, the TGA was aware of 76 cases of BIA-ALCL as at March 2021. Recently within the span of one month there were two confirmed cases of patients with BIA-ALCL referred to the Breast Surgery team at Robina Hospital. Even though healthcare providers may be aware of this rare condition, while treating these two patients it became quite apparent that throughout the literature there was a lack of standardised Australia based national guidelines regarding the diagnosis, ongoing treatment and follow-up of patients with confirmed BIA-ALCL. The first case was a 50-year-old female who presented 7 years post breast augmentation with Silimed Polurethane Textured 390XH silicone implants and the second case was a 56-year-old female who presented 4 years post breast augmentation with Nagor Enhance Textured 420cc silicone implants. Both patients underwent the same surgical procedure with histology confirming CD30 positive and ALK1 negative BIA-ALCL. After diagnosis of the disease there was no clear standardised Australian guidelines hence the USA guidelines were adopted in order to further manage these patients.

P33
CARBON DIOXIDE VS. SALINE TISSUE EXPANDERS FOR BREAST RECONSTRUCTION - LITERATURE REVIEW AND CURRENT PRACTICE
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Tissue expanders are intended for temporary subcutaneous or submuscular implantation for soft tissue expansion in breast reconstruction following mastectomy. Breast reconstruction post-mastectomy helps improve the affected women's psychological well-being and quality of life. Tissue expanders allow the development of tissue coverage by stretching the skin and chest muscles for the definitive placement of a silicone or saline breast implant. The Australian Breast Device Registry reported in 2020 that 90% of tissue expanders used in Australia were saline filled and 8% filled with carbon dioxide (CO_2).
Tissue expansion using saline based tissue expanders is achieved by multiple saline injections under aseptic technique into the tissue expander at an outpatient clinic weekly or fortnightly visit until expansion is complete. Once the expansion is complete, the expander device is exchanged with a permanent breast implant. The CO_2 based wireless tissue expander system is a needle-free, remote control canister device that releases a predetermined amount of CO_2 gas (10cc each time, maximum 3 times/day).
The CO_2 tissue expanders provide convenience for patients - ease of use, patient-controlled expander, reduced clinic visits and reduced time to breast implant exchange surgery. The CO_2 based tissue expanders cost about three times the price of saline expanders initially, approximately $2400 vs $800 respectively, however this cost is somewhat off-set by reduced clinic visits, staffing time and reduced patient costs for transport. According to the Australian Institute of Health and Welfare, 28% of the Australian population live in rural and remote areas. Hence considering these statistics patients in

Australia who are from rural and remote locations are to gain the most amount of benefit from these. Considering the minimal use of CO_2 based tissue expanders compared to saline tissue expanders in Australia it is important to understand the current literature and trials comparing the two different types of devices i.e. success rates, costs, number of clinic visits, median duration to second stage reconstruction, contraindications and complications. The current practice surrounding tissue expanders in Australia is evaluated and compared to the the rest of the world for example in America and Canada.

P34

PATTERNS OF BREAST RECONSTRUCTION AND THE INFLUENCE OF A SURGICAL MULTIDISCIPLINARY CLINIC

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Problem statement: Of the 40% of women with breast cancer who have a mastectomy as part of their surgical treatment, the proportion of those having breast reconstruction varies widely, with a national average of 18.3%. In 2016, Alfred Health established a multidisciplinary surgical clinic with breast and plastic surgeons, aiming to reduce wait time and pre-operative outpatient visits. This study aimed to assess the rate of breast reconstruction at an Australian tertiary public hospital, identify factors associated with breast reconstruction and examine whether the multidisciplinary surgical clinic have improved patient's access to and uptake of the breast reconstruction service.

Methods: A cohort study of women who underwent mastectomy at Alfred Health between October 2011 to September 2021 was conducted. Patients were divided into early and late groups, treated during the 5-year period before and after establishing the multidisciplinary surgical clinic respectively. Demographic data, operative details, histology, operation and adjuvant treatments were compared.

Results: 351 patients underwent mastectomy over the 10 year period, with 279 patients undergoing unilateral mastectomy and 72 bilateral mastectomies. Of those, 153 patients underwent breast reconstruction, providing an overall reconstruction rate of 43.6%, which is higher than the national average. In the overall cohort, factors associated with breast reconstruction included younger age ($p<0.001$), bilateral mastectomy ($p<0.001$) and negative lymph node status ($p=0.04$), consistent with findings from existing literature. Comparisons between the early and late groups did not demonstrate any significant differences with demographic factors such as patient's age, tumour receptor status or adjuvant treatments received. There was a statistically significant increase in the breast reconstruction rate from 36.5% in the early group to 46.6% in the late group ($p=0.002$).

Conclusion: Alfred Health has a high rate of breast reconstruction compared to the national average. The establishment of a multidisciplinary surgical clinic has led to a statistically significant increase in the rate of breast reconstruction, leading to improved healthcare provision for our patients.

Disclosure of interest: none

P35

3D BREAST SCAFFOLD RECONSTRUCTION: A PRECLINICAL ANIMAL MODEL

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Problem Statement: Implant breast reconstruction is considered as a valid option for women with breast cancer after mastectomy. However, this approach may be associated with long term problems such as capsular contracture, rupture and in rare circumstances Anaplastic Large Cell Lymphoma (ALCL). In this study, we investigate a novel approach using Scaffold-Guided Breast Tissue Engineering (SGBTE) to regenerate the "new" breast.

Methods: 60 bioresorbable breast-shaped scaffolds (n=55 100cc, n=5 150cc) were implanted in 12 pigs. The scaffolds were made of medical grade polycaprolactone with an 8mm pore size and 90-degree layer rotation on every alternative layer. Fat was harvested and injected (50 cc) into each scaffold during initial scaffold implantation or a delayed procedure +/- mixed with Platelet rich Plasma (PRP). The scaffold was explanted after 12 months with radiological (USS, CT and MRI) and histological analysis.

Results: There are no wound complications such as implant migrations or extrusion. In the immediate fat grafting group, there is a mean 57.5 +/- 2.9 cc (95% CI) of soft tissue filling the scaffold. That represents a 14% increase in tissue volume. Radiological imaging confirmed significant amount of tissue integration around scaffold. Histology analysis conformed a high proportion of this tissue is adipocytes surrounding scaffold tissue.

Conclusion: This preclinical large animal model has validated an SGBTE approach is safe and can generate significant soft tissue volume. It appears to be suitable to replace volume deficiencies including post mastectomy reconstruction and provides proof in principle for progression to Phase 1 human clinical trials.

SCREENING

P36

BENEFITS VERSUS HARMS OF BREAST CANCER SCREENING REVISITED: A LARGE, RETROSPECTIVE COHORT STUDY QUANTIFYING ADDITIONAL TREATMENT ASSOCIATED WITH LATER DIAGNOSIS IN AUSTRALIA AND NEW ZEALAND

Kathy Dempsey, Daniel Costa, G Bruce Mann, Meagan E Brennan, Kylie L Snook, Eletha Taylor Taylor, Andrew Spillane

Problem statement: Early detection of breast cancer through population screening programs has been estimated to reduce mortality from breast cancer by 20%, while estimations of the level of overdiagnosis associated with screening vary widely. Few studies have focused on the reduced treatment intensity associated with earlier detection, a neglected benefit of screening. Using an innovative approach, this study used a priori criteria to differentiate between cases of screen-detected breast cancer that may be possibly over-diagnosed (POD) and those that, based on medical consensus, are not likely to be over-diagnosed (NOD).

Methods: Observational study using secondary analysis of 2018 data on diagnosis and treatment of 15,000 women with Stage 0–3 breast cancer. Data was extracted from the BreastSurgANZQuality Audit database. The primary outcome was treatment intensity including definitive type of breast and axillary surgery, chemotherapy, radiotherapy, endocrine

therapy and immunotherapy (Herceptin). Results reported risk ratios (RRs) with 95% confidence intervals.
Results: When comparing NOD screened women with women who were not screened, the latter are more likely to be recommended for chemotherapy (RR=1.46) and immunotherapy (RR=1.44) and much more likely to be recommended for combined chemotherapy and radiotherapy (RR=1.70), mastectomy (RR=1.61) and axillary lymph node dissection (ALND) (RR=1.82). In contrast, they have a similar risk of undergoing endocrine therapy (RR=0.98) and a lower risk of radiotherapy (RR=0.88) and wide local excision (WLE) (RR=0.74).
Non-screened women were nearly 60 times more likely than screened women to be recommended for chemotherapy alone (RR=58.8), and more likely to require endocrine therapy (RR=1.59). No women in the POD group had combined chemotherapy and radiotherapy (compared to 8% in the non-screened group). Recommendations for radiotherapy alone were similar between these two groups (RR=1.05). Surgical treatments were also more intensive: non-screened women were less likely to be recommended for WLE (RR=0.67), three times more likely to require mastectomy (RR=3.07) and six times more likely to need ALND (RR=6.17).
Conclusion: This ground-breaking research is the first to quantify the impact of diagnostic pathway on cancer stage, treatment and possible overdiagnosis in a large cohort, challenging contemporary views on the relative benefits and harms of breast cancer screening.

TRIPLE NEGATIVE BREAST CANCER

P37
INVESTIGATING THE ROLE OF BANF1 IN TNBC
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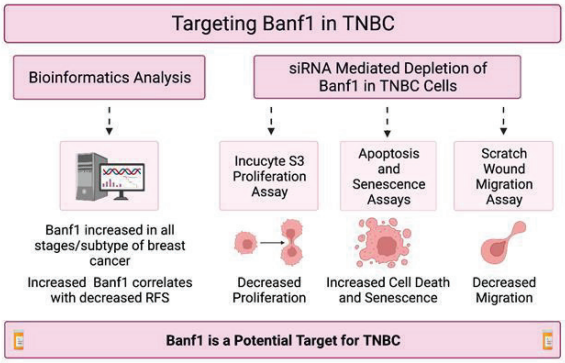
Problem Statement: Triple Negative Breast Cancer (TNBC) is an aggressive, highly metastatic subtype of breast cancer, which has significantly poorer survival times in comparison to other breast cancers. To date, chemotherapy remains the standard of care for TNBC patients. The nuclear envelope has been implicated in several cellular processes known to be dysregulated in tumourigenesis. However, a nuclear envelope targeting cancer therapy is yet to emerge. Our study investigates how a key nuclear envelope protein, Banf1, contributes to TNBC tumourigenesis, and if downregulating Banf1 in TNBC inhibits tumour cell growth.
Methods: Bioinformatic analysis and cellular assays were utilised to assess Banf1's role in TNBC (Figure 1). The TCGA database was used to analyse Banf1 transcript levels across breast cancer stages and histologies. KM Plotter breast cancer data was used to analyse patient regression free survival (RFS) based on Banf1 levels. A panel of TNBC cell lines and non-cancerous MCF10A breast cells were used to establish the role of Banf1 in tumour progression.
Immunofluorescence, immunoblotting, and RT-qPCR were utilised to determine Banf1 expression in cells. To investigate Banf1's role in tumourigenesis, expression was depleted by siRNA and cellular viability was measured by several assays, including an Annexin V/PI apoptosis assay, cell cycle analysis, β-Galactosidase senescence assay and Incucyte proliferation and migration assays.
Results: Banf1 transcripts were shown to be significantly overexpressed in all histologies and stages of breast cancer compared to non-malignant tissue, and high Banf1 expression negatively correlates with breast cancer patient RFS. Banf1 is overexpressed in the TNBC cell lines at the mRNA and protein level, and siRNA-mediated Banf1 depletion specifically inhibits TNBC cell proliferation and migration due to a dysfunctional nuclear envelope ultimately leading to cellular death and senescence.
Conclusion: Banf1 has an evident role in tumourigenesis and targeting Banf1 may improve treatments for TNBC by providing a novel mechanism to specifically inhibit tumour cell growth. Elucidating the role of Banf1 in tumourigenesis may offer insight into the role of other nuclear envelope proteins in tumourigenesis, further enhancing our capacity to produce therapeutics.



SURGERY

P38
REGIONAL BLOCK VS WOUND INFILTRATION OF LOCAL ANAESTHETIC IN ONCOLOGICAL BREAST SURGERY –
A SYSTEMATIC REVIEW AND META-ANALYSIS
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Problem statement: Patients undergoing breast surgery experience significant pain, both acute and chronic. Multiple analgesic options exist and new approaches involving regional nerve blocks are more widespread. However, studies comparing regional nerve blocks to local anaesthetic infiltration are few with results that are difficult to determine the significance of. The authors sought to answer the question whether in patients undergoing mastectomy or breast-conserving surgery for breast cancer, are regional nerve blocks superior to local wound infiltration of local anaesthetic with regards to post-operative pain relief in the first 24-48 hours postoperatively?
Methods: A systematic review was undertaken to identify randomised controlled trials in the last ten years directly comparing regional anaesthetic options to local wound infiltration of anaesthetic in patients undergoing oncological breast surgery. Seven RCTs (representing 448 patients) were identified meeting criteria and included in this study. A random-effects meta-analysis was then performed where sufficient data was available to compare pain scores, opioid consumption and adverse events.
Results: There was no difference in pain scores at 0-1hours (-0.36 SMD, 95% CI -0.78 to 0.06, P=0.09), 6hours (-0.50 SMD, 95% CI -2.22 to 1.21, P=0.56) or at 24hours (-0.32 SMD, 95% CI -0.71 to 0.08, P=0.11) between wound

infiltration of local anaesthetic or regional nerve blocks. There were however reduced pain scores at 12 hours post-operatively which was significant (-1.75 SMD, 95% CI -3.20 to -0.30, P=0.02). The opioid consumption was significantly less for regional nerve blocks (-2.91 SMD, 95% CI -5.806 to -0.0224, P=0.048), however this became insignificant when outlier data was removed. There were no differences in incidence of nausea and vomiting or adverse events such as haematoma.
Conclusion: Regional anaesthetic techniques do not appear to provide superior analgesia to wound infiltration with local anaesthetic. Nor do they appear to have a significant opioid sparing effect or reduce the incidence of post-operative nausea and vomiting. Whether there is a benefit in major breast surgery (i.e. mastectomy) over breast-conserving surgery remains to be seen.

P39
OUTCOMES FOLLOWING RE-EXCISION OF MARGINS FOR LOBULAR BREAST CANCERS AFTER BREAST CONSERVING SURGERY- REFLECTIONS FROM THE BREASTSURGANZ QUALITY AUDIT
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Problem Statement: Lobular breast cancer is the second most common subtype of breast cancer in Australia and is associated with the highest rate of positive margins post breast conserving surgery (BCS). Previous studies have reported positive margin rates as high as 63%[1] for lobular cancers. Mastectomy rates are higher for lobular than for other subtypes, however BCS remains a commonly accepted technique, with favourable cosmetic outcomes. There is limited data reviewing the success rate for re-excisions of margins for lobular breast cancers, this gap in the evidence possibly contributing to higher mastectomy rates in Australia. One recent study from California was limited to only 62 cases who each underwent a re-excision of margins, and reported a success rate of 74.2%[2].
Method/Results: We propose to review retrospective data collected as part of the BreastsurgANZ Quality Audit (BQA) 6 years before and after the introduction of the American Society of Clinical Oncology (ASCO)/American Society for Radiation Oncology (ASTRO)/Society of Surgical Oncology (SSO) guidelines on excision margins in breast cancer in 2014 (2008-2020). This will include all patients with early invasive lobular cancers undergoing re-excision of margins post-BCS. Analysis will include the choice of surgical intervention (further re-excision of margins versus mastectomy) and the possible predictive factors for further surgery (either BCS or mastectomy) including socio-demographic, tumour characteristics and treatment factors.
Conclusion: This study will provide insight into Australian surgical practices in a large volume of lobular breast cancer cases during the period before and after implementation of the resection of margins guidelines in 2014. This analysis may provide additional insights into factors that influence patient selection for further re-excision of margins versus mastectomy when faced with a patient with positive margins following re-excision of margins after breast conserving surgery.
Nothing to disclose

P40
DIFFERENCES IN BREAST CANCER SURGERY IN INDIGENOUS AND NON-INDIGENOUS WOMEN IN AUSTRALIA
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Chris O'Brien Lifehouse/University of Sydney, Australia

Purpose: Poorer breast cancer survival for Indigenous women is associated with advanced disease at diagnosis and diagnostic and treatment delays. There is however lack of data on variations in uptake of surgery, including rates of breast-conserving surgery (BCS), mastectomy and breast reconstruction (BR). This study aimed to compare rates of breast cancer surgery among Indigenous and non-Indigenous women.
Methodology: Data from the Breast Surgeons of Australia and New Zealand Incorporated (BreastSurgANZ) Quality Audit (BQA) database from 2010 - to 2019 was used to compare breast cancer in Indigenous and non-indigenous women. Differences between means and categorical variables were analysed using t-tests and chi-square tests. Factors associated with surgery type were assessed through logistic regression.
Results: Of the 40,604 women included, 578 were Indigenous. There were significant differences between Indigenous and non-Indigenous women in terms of mean age at diagnosis (57.19 v 59.88 years), mean tumour size (27.47mm v 23.18mm), and percentages of invasive tumours (92.26% v. 88.86%). After adjusting for age, remoteness, and hospital setting, Indigenous women were less likely to undergo BCS than mastectomy alone and less likely to undergo a BR. BR uptake was significantly less for Indigenous than non-Indigenous women (13.71% v 26.46 %).
Conclusion: While Indigenous women received similar rates of BCS and mastectomies over the past ten years, significant variation exists in BR uptake. Variations in surgery type exist between Indigenous and non-Indigenous women. Addressing barriers and developing national strategies are essential to improve the delivery of breast cancer care for Indigenous women.

P41
PERCEPTION OF UPPER CHEST CHEMOTHERAPY PORT (PORT-A-CATH) SCARRING IN BREAST RECONSTRUCTION AND MASTECTOMY PATIENTS
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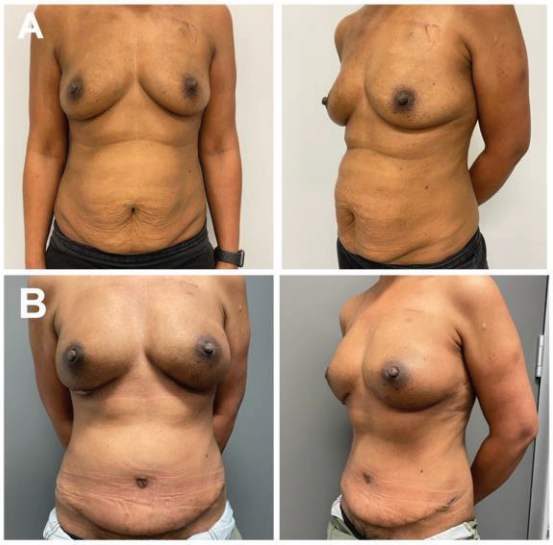
Background: With advances in surgical care of breast cancer patients, breast surgeons and plastic surgeons have shifted focus to the patient's quality of life and achieving optimal aesthetic outcomes in post-mastectomy breast reconstruction. Significant effort is placed to achieve desirable aesthetic results wherein incisions are made in areas that can be hidden and minimised within the range of oncologic safety. However, patients who require a traditional upper chest chemotherapy port for treatment are often left with a visible scar following treatment. We evaluated the psychosocial impact and scar quality of port scars compared to breast cancer surgery scarring in women following breast reconstruction (implant-based and autologous) and mastectomy-only surgery.
Methods: Female breast cancer patients who underwent either post-mastectomy breast reconstruction (implant-based or autologous) or mastectomy-only by three consultant surgeons between December 2020 - January 2022 at our institute were invited to complete a questionnaire delivered by REDCap. Baseline demographic, patient characteristics and intraoperative surgical data was retrospectively reviewed. A BREAST-Q (Psychosocial/Satisfaction modules)

questionnaire and an individual SCAR-Q questionnaire for breast, abdominal and port scars. Univariate and multivariate analysis of questionnaire scores and clinical characteristics were performed to identify trends between and within groups.
Results: A total of 70 patients were identified with a response rate of 60% (70/115). 22 (31%) had an upper chest chemotherapy port, and 48 (69%) did not require a chemotherapy port. 24 (34%) had an autologous reconstruction with DIEP flap, 29 (41%) had an implant-based reconstruction, and 17 (24%) had a mastectomy only. Patients with ports-scars reported statistically lower SCAR-Q outcomes in all three modules (Appearance, Symptoms, Psychosocial) for their port scars compared to breast, abdominal and mastectomy scars. While patients reported similar BREAST-Q satisfaction results in both chemotherapy port and no-chemotherapy port groups, patients with chemotherapy ports had lower BREAST-Q psychosocial well-being scores.
Conclusions: Patients with visible upper chest port scars have a greater negative perception of their port scars compared to scarring associated with breast surgery and lower psychosocial wellbeing following their BR. Discrete port placement should be explored as an alternate option to upper chest port positioning to improve psychosocial and appearance outcomes.

Image 1: Pre-operative image of patient with upper chest chemotherapy port scar (A) and following autologous breast reconstruction with DIEP flap (B).



P42
ATNEC: A RANDOMIZED TRIAL INVESTIGATING WHETHER AXILLARY TREATMENT CAN BE AVOIDED IN T1-3N1M0 BREAST CANCER PATIENTS WITH NO RESIDUAL CANCER IN THE AXILLARY NODES AFTER NEOADJUVANT CHEMOTHERAPY
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Background: Neoadjuvant chemotherapy (NACT) results in eradication of cancer in the axillary nodes in 40-70% of patients. This raises questions about the benefit of further axillary treatment in patients with no evidence of residual nodal disease (ypN0) post-NACT.
Design: ATNEC is a phase III, randomized, multi-centre trial, with embedded economic evaluation. Patients with proven axillary node metastases on needle biopsy receive NACT followed by sentinel node biopsy (SNB). If the sentinel nodes have converted to ypN0, ATNEC randomizes patients to axillary treatment (ART or ANC) versus no further axillary treatment.
Aims: To assess whether omitting further axillary treatment for patients with early-stage breast cancer and axillary nodal metastases on needle biopsy - who post-NACT have no residual nodal disease on SNB (ypN0) - is non-inferior to axillary treatment in terms of disease-free survival, and whether associated comorbidities are reduced at 5 years.
Methods: All analyses will be carried out on an intention-to-treat basis to preserve randomization, avoid bias from exclusions and preserve statistical power. Recruitment target is 1900 patients.
ATNEC has in-built radiotherapy QA coordinated by the RTTQA group to monitor trial protocol compliance. ATNEC is the only trial in the UK that offers QA for IMC radiotherapy.
ATNEC encourages node marking through education and collaboration agreements with several industry partners to provide node markers for free to participating sites.
Progress (as of 30-Jun-2022):
Recruitment: 158 patients enrolled, 54 randomised.
Screening Data:
Screening data from sites demonstrates clinical equipoise and high patient acceptance rates. 69% of eligible patients were approached (244/354) and, of those, 45% were consented. For the 81 patients who declined, the most common reasons were; preference for axillary treatment (31%), preference for no axillary treatment (10%), no reason documented (23%) and ineligibility (21%).
For registered patients, reasons for ineligibility for randomisation were: 22/34 - residual nodal disease, 4/34 – node not marked and no evidence of nodal downstaging, 4/34 – <3 nodes removed on SNB, 2/34 - patients chose ANC, 1/34 - ANC due to poor NACT response and 1/34 - no departmental capacity.
Sites: 55 open sites. ATNEC is looking for new sites and international collaborations.
Disclosure:
This study/project is funded by the NIHR [NIHR HTA project number 128311]. The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

P43
WHAT'S THE ATTRACTION - MAGTRACE AS AN ALTERNATIVE TO LYMPHOSPHINGRAPHY IN SENTINAL NODE BIOPSY IN BREAST CANCER
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Problem Statement: 'Magtrace' is a non-radioactive alternative to Technetium and Blue dye, used to identified Sentinel lymph nodes to stage breast cancer. It uses the same probe used to localise primary lesions with Magseed. Current gold standard is "technetium and blue dye'. However, technetium is often painful to inject, patients need to have lymphoscintigraphy within the 24 hours prior surgery which

leads to delays to theatre and in regional patients may require additional travel or accommodation overnight. As well as additional resources and coordination by the health services.
Methods: We performed a single- surgeon case series of the first 40 cases using 'Magtrace' in a regional Victoria. Magtrace was initially used in addition to technetium and blue dye and then with blue dye alone. Data were recorded regarding the demographics of the patients, timings of surgery and admission to hospital, number of nodes and correlation with other modalities, as well type of surgery, characteristics of the primary tumour and histopathology. These results were interpreted in the context of patients in the regional setting where nuclear imaging is only available in one regional centre.
Results: The average age of patients was 60.8 (27-84). Only 10% of patients resided in major cities, 64% in inner regional centres and 25% in outer regional areas. Seventy-one percent of patients underwent wide local excision and twenty-nine percent underwent mastectomy. The average number of nodes taken was 3.9 (1-10). In all cases where Magtrace was used at least one node was identified using the sentimag probe. In all instances where nodes were found to have micro or macro metastatic disease the sentimag registered a count and the nodes had an associated brown or purple discoloration. No adverse outcomes were recorded.
Conclusion: Magtrace is a safe and reliable alternative to lymphoscintigraphy, which is well tolerated. It does not have a significant learning curve. It avoids the additional appointment and resources required for nuclear medicine and can be injected safely at time of pre-operative review. For many regional patients where, long distances are travelled to access health care this offers significant advantage especially in the aging population.

P44

LOCAL BREAST CANCER RECURRENCE FOLLOWING AUTOLOGOUS RECONSTRUCTION: CLINICAL AND RADIOLOGICAL CHALLENGES RELATING TO SURVEILLANCE

Cheng Feng, Yang Yang Huang, Kenny Elder, Dean Trotter, Allison Rose, Bruce Mann

Problem statement: Breast reconstruction following mastectomy for breast cancer has increased over the past twenty years, with deep inferior epigastric perforator (DIEP) reconstruction being the preferred technique for free-flap reconstruction[1]. The indication for autologous reconstruction has broadened to include higher staged, and locally advanced cancers with higher risks of local recurrence (LR). Surveillance following DIEP reconstruction is based on clinical examination to detect skin flap LR; however, ipsilateral breast cancer recurrences may occur in the flaps or close to chest wall which may not be detected by clinical examination alone[2-4]. We aim to identify the incidence of LR, presenting symptoms, and imaging modality used to detect these cases, and analyse risk factors associated with LR, which may help identify a high-risk group where routine imaging could be considered.
Methods: We conducted a retrospective analysis from Royal Melbourne Hospital and Peter McCallum Cancer Centre from the established RUTH database and electronic medical records from years 2000 to 2020.
Results: Seven out of four hundred and sixty-one mastectomies (1.72%) with autologous DIEP flap developed ipsilateral LR within five years. Number of mastectomies and LR in each TNM stage include: stage 0=73 (1LR, 1.4%), stage 1=129 (2LRs, 1.6%), stage 2=145 (2LRs, 1.4%), stage 3=83 (2LRs, 2.4%). Three LR patients (43%) were asymptomatic, and recurrences were detected incidentally; one patient investigated pacemaker-related issues with incidental CT breast finding and subsequently confirmed LR using contrast-enhanced mammography (CEM). Two patients had CEM during cancer surveillance and indeterminate findings led to further MRI imaging identifying ipsilateral LR in the reconstructed breast. In the symptomatic LR group, three patients developed lumps in the reconstructed breast and one patient had nipple changes. Multivariate hazard regression shows germline genetic mutation carrier was associated with increased LR (HR 8.30, 1.40-39.33 95%CI, p=0.02). Pathological DCIS margin >2mm was associated with lower LR (HR 0.03, 0.001-0.25 95%CI, p=0.002). All seven patients with LR are alive.
Conclusion: Within our cohort, LR following mastectomy and autologous breast reconstruction is low. Clinical surveillance following treatment remains essential for early detection of recurrence and contrast-based imaging may have a role in surveillance.

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P45

SYSTEMATIC REVIEW OF LONG THORACIC NERVE INJURY IN BREAST CANCER AXILLARY SURGERY

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Problem statement: The long thoracic (LT, nerve of Bell) originates mainly from the C5, C6 and C7 nerve roots and innervates the serratus anterior (SA) muscle (1). The LT nerve travels through the supraclavicular fossa and enters the medial wall of the axilla where it is at risk during axillary surgery(2). An injury of this nerve classically produces 'winging of the scapula' when a patient is required to push against a wall and protract the shoulder girdle. The SA also stabilises the scapula when the arm is abducted at 90 degrees(3). Clinically, it causes pain and limitation of arm flexion and abduction above the level of the head. Axillary surgery in the form of a sentinel node biopsy or level I-II dissection is current best practice for staging in breast cancer management.
Methods: Using MEDLINE, nine electronic databases were systematically searched, from 1946 to July 2021. Keywords used were "long thoracic nerve", "peripheral nerve injury", "axillary surgery", "winged/winging scapula" and "breast neoplasm". A review of reference lists was also performed. Inclusion of articles was established through application of a predetermined protocol, independent assessment by two reviewers and a final consensus decision.
Results: Of the 164 articles, 12 provided published quantitative data that described impairment of SA muscle in patients who underwent axillary surgery for breast cancer staging. Purely retrospective and case studies were excluded. In a total of 1420 patients who underwent an axillary procedure, 209 (14.7%) developed clinically significant winging of the scapula or a EMG result indicative of nerve injury at the initial time point of each study (day 1 to 66 months) (Table 1). This rate decreased as patients were

subsequently examined at different time points, inferring a neuropraxia rather than permanent injury.

Discussion: The consequence of an injury to the LT nerve can cause significant survivorship issues and occurs with surprisingly high frequency. Despite functional improvement with physiotherapy it can cause significant distress particularly in young active fit patients who enjoy sports such as tennis or golf.

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Table 1.

Author	Year	Study design	Number of patients	Follow up (months)	Patients with SA dysfunction (n (%))
Pereira et al	2009	prospective cohort	74	12	43 (64)
Duncan et al	1983	prospective cohort	19	6	6 (31.5)
Mastealla et al	2013	prospective cohort	57	6	16 (28)
Belmonte et al	2014	prospective longitudinal observational	264	12	30 (11.4)
Teixeira et al	2014	prospective cohort	187	6	51 (27.3)
Rizzi et al	2016	prospective cohort	112	6	9 (8)
Kozak et al	2018	prospective cohort	104	6	4 (3.8)
Głowacka-Mrotek et al	2018	retrospective cohort	128	6	9 (7)
Ortí-Asencio et al	2021	prospective cohort	214	36	7 (3.3)
Adriaenssens et al	2012	retrospective cohort	119	1	13 (10.9)
Paim et al	2008	retrospective cohort	96	23	8 (8.3)
Godoy et al	2017	retrospective cohort	46	19	13 (28.3)
De Oliveira et al	2009	prospective cohort	90	12	66 (73.3)
Total			1510		275 (18)

P46

DE-ESCALATING AXILLARY SURGERY IN BREAST CANCER: TARGETED AXILLARY DISSECTION. OUR EXPERIENCE AT THE ROYAL PERTH AND FIONA STANLEY HOSPITALS, WESTERN AUSTRALIA

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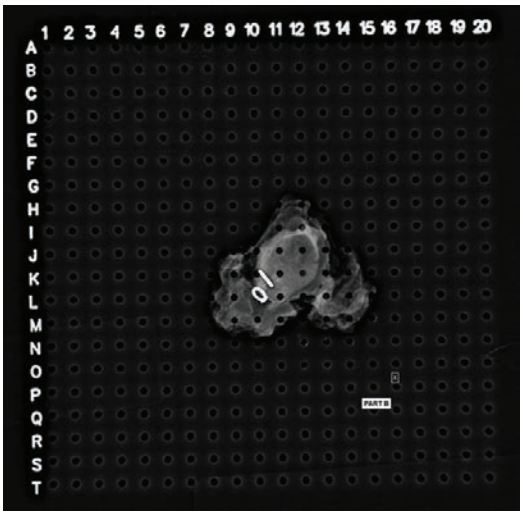
Royal Perth Hospital, Fiona Stanley Hospital

Problem statement: Targeted axillary dissection (TAD) is a technique where the marked pre-neoadjuvant systemic therapy (NAST) positive node (CN) is excised along with the sentinel nodes (SN). It has been found to be a feasible and accurate technique in determining nodal status post NAST, avoiding the morbidity of axillary clearance (AC) for many patients. However, there is hesitancy in its uptake as standard clinical practice given the limited data on long-term recurrence and survival outcomes.

Methods: We reviewed current literature on TAD, from its evolution to current best evidence of efficacy and safety. We performed a retrospective review of our cases of TAD at the Royal Perth and Fiona Stanley Hospitals since initial implementation of the technique in 2019. Our institution technique for TAD will be described, along with our experiences in its benefits and pitfalls. We also present results from an online survey of breast cancer surgeons assessing current opinions and trends in TAD across Australia.

Results: Between September 2019 and May 2022, 30 patients were deemed suitable for TAD based on strict pre-treatment criteria at the multidisciplinary meeting (MDT) prior to NAST. Five patients did not undergo TAD, mainly due to concern for residual nodal disease (RND), and underwent AC. Of these patients, histology confirms that two patients had no residual nodal disease (nodal pCR), and the remaining three patients had RND confined to the CN/SN. 24 out of 25 patients did undergo TAD successfully. Of these, 16 patients had nodal pCR, and eight patients had RND. All nodal pCR patients were recommended for axillary radiotherapy (ART). Those with RND underwent either completion AC +/- ART (four patients) or ART alone (three patients). Our survey results show 64% of respondents perform TAD currently. The main reasons for not performing TAD were lack of long-term oncological safety data (40%) and lack of available equipment (33%).

Conclusion: Preliminary experience at our institutions show that TAD is acceptable, feasible and safe for appropriately selected patients with breast cancer following NAST. Long-term safety and efficacy outcomes are pending, but will likely cement its practice in the future as standard of care.



P47

CHYLE LEAK POST MASTECTOMY AND AXILLARY CLEARANCE: A RARE BUT CHALLENGING COMPLICATION

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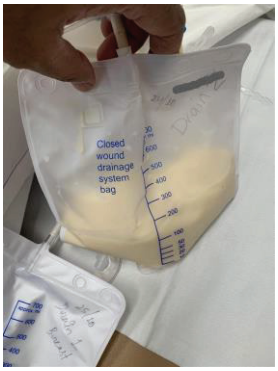
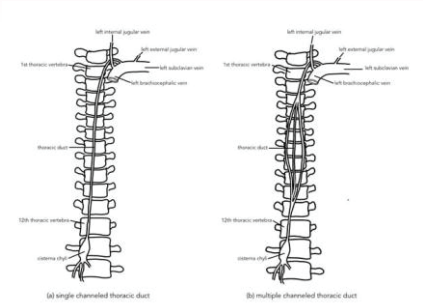
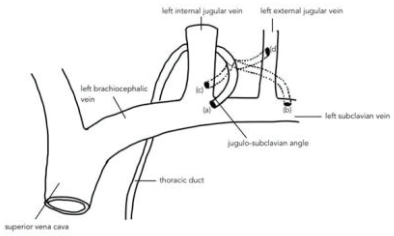
Problem statement: Chyle leak is a rare complication of axillary or neck surgery, occurring in 0.2 to 0.4% of patients who undergo axillary clearance. Prolonged chyle leak can lead to potentially life-threatening complications and extended hospitalisation.
Methods: We present a rare case of chyle leak following left mastectomy and axillary clearance for breast cancer. We discuss the anatomical variants that may lead to this occurrence, and its pathophysiology, which has implications on its management paradigm. We review diagnostic and management strategies for this unusual complication.
Results: A 41-year-old female patient underwent elective left simple mastectomy and level II axillary clearance after neoadjuvant chemotherapy for a grade 3 multifocal invasive ductal carcinoma which was triple negative, with left axillary lymph nodal metastasis confirmed on fine needle aspiration. Postoperatively on day 3, over 500ml of chylous fluid was noted in the drains, confirmed on biochemistry. Ongoing chyle leak occurred for two weeks, with gradual reduction in output with conservative management and careful dietary adjustment. The thoracic duct (TA) conventionally drains into the left jugulo-subclavian angle. However, anatomical studies have shown significant variations in the lymphatic system anatomy across the population, with up to two thirds of studied TAs terminating at the subclavian veins, and a minority ending at the internal jugular veins or transverse cervical veins. Injury to the TA or its tributaries can occur during axillary surgery particularly during a level III dissection. Diagnosis of chyle leak is both clinical and biochemical. Complications of prolonged chyle leak include hypovolaemia, hypoalbuminaemia, electrolyte imbalance and metabolic acidosis, leading to consequences of poor wound healing & immune suppression.
Conclusion: Chyle leak following axillary surgery in breast cancer is a rare complication, which needs to be recognised early and managed appropriately with multidisciplinary input. Anatomical variation may predispose to its occurrence. Although generally low output cases are effectively managed by conservative measures, refractory cases may require surgical intervention.







P48

PATIENT REPORTED OUTCOME MEASURES AFTER BREAST AUGMENTATION – USING THE BREAST-Q IS

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KEY WORDS:
Patient Reported Outcome Measures
Breast Reconstruction
Breast-Q Implant Surveillance
Breast Device Surgery
Australian Breast Device Registry

PROBLEM STATEMENT: Patient Reported Outcome Measures (PROMs) are increasingly used in clinical quality registries to help improve their quality of care (1, 2). The Australian Breast Device Registry (ABDR) administers a five-question PROM, BREAST-Q Implant Surveillance (BREAST-Q IS), to patients after 1, 2 and 5 years of breast device surgery. The measure includes an open-ended question to add any comments (3). The primary aim of this study was to use participants' responses to the open-ended question and to understand their experiences after 1 and 2 years following a breast augmentation procedure. The secondary objective was to identify emerging and important issues relating to breast augmentation and breast devices among those who had breast device surgeries.
METHODS: This qualitative descriptive study was conducted using a randomly selected sample of 268 responses to the open-ended question in the BREAST-Q IS, from the ABDR database. These responses were from patients who underwent breast augmentation between 2015-2018. Comments were analysed using conventional content analysis in NVivo 12.
RESULTS: Four major themes were identified: *Satisfaction following breast augmentation, Dissatisfaction following breast augmentation, Complications and breast symptoms following breast augmentation and Other comments.* Two dominant themes were regarding satisfaction (n=112) and dissatisfaction (n=159) with overall surgical outcome, medical

team, and post-operative appearance. Emerging issues identified were rippling of breast implants and breast implant illness (BII).
CONCLUSION: PROMs can be used to identify patients' viewpoints on various aspects of their surgical experiences. Majority of patients' responses in the study reflected areas of breast augmentation they are dissatisfied with. Further, rippling of the breast implant and BII were indicated as emerging issues. These responses encourage the registry to potentially track device performance in the long term and investigate rising issues such as BII. The study also adds to the growing literature of using PROMs in the breast device surgery field.

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INTRAOPERATIVE SENTINEL NODE ANALYSIS USING TOUCH IMPRINT CYTOLOGY – A WESTERN AUSTRALIAN EXPERIENCE OF DIAGNOSTIC ACCURACY IN 779 PATIENTS WITH BREAST CANCER

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Introduction: Touch Imprint Cytology (TIC) as a method of intraoperative assessment of sentinel lymph node biopsies for patients with clinically node negative breast cancer is used in many institutions. Its accuracy varies significantly within the literature and the potential for false positives raises concerns for unnecessary morbidities. Additionally, the ability to distinguish micrometastases from macrometastases varies between institutions, which may limit its utility for the modern management of the axilla. We report the outcomes from a high-volume tertiary centre in Western Australia that has utilised TIC for intraoperative assessment of sentinel lymph nodes.
Methods: Retrospective analysis of cases from a single tertiary centre were collected from hospital electronic records from January 2017 to May 2021 from all patients undergoing SLNB as part of their breast cancer surgery. A total of 1479 SLNB were harvested from 779 patients. Fresh SLNB specimens were sent to the anatomical pathology laboratory with imprint cytology results conveyed to surgeons intra-operatively. Intraoperative assessment, including TIC aided in determining if patients proceeded to immediate completion axillary clearance. TIC was compared with formal histopathological analysis. Sensitivity, specificity, accuracy, positive predictive value (PPV), and negative predictive value (NPV) were calculated, with the total number of patients used as the denominator in our calculation of sensitivity, specificity and accuracy. Subgroup analysis was performed for tumour subtype and grade.
Results: The sensitivity of detecting macrometastases from SLNB was 72%, the specificity was 99.7% and the accuracy was 95.3% on a per patient basis. The positive predictive value was 97.8% and the negative predictive value was 95.0%. A total of two false positives were reported in our study. There were no significant differences in sensitivity of specificity between histological type or grade.
Conclusion: Our study is the largest review of TIC from an Australian institution and demonstrates that TIC is a reliable intraoperative method with good sensitivity and high specificity for macrometastases. However, in the management of the modern axilla the utility of intraoperative SLNB assessment altogether is uncertain. We conclude that TIC for intraoperative assessment of SLNB should be used selectively rather than routinely to avoid false positives and unnecessary morbidity.

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BORDER REOPENING AND COVID-19 PREPARATION: IMPACT ON BREAST CANCER HEALTHCARE PROVISION FROM A WEST AUSTRALIAN PERSPECTIVE

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Problem statement: COVID-19 disrupted healthcare provision globally with delays in delivering surgery. In Australia, the second edition of the optimal care pathway for patients with breast cancer was published in June 2021. This pathway recommends that following decision to treat (DTT), surgery should occur within 5 weeks and neoadjuvant chemotherapy should commence within 4 weeks. COVID-19 numbers spiked in Australia when this pathway was released. However, numbers remained low in Western Australia until February 2022 when its borders were fully opened. We explore time to treatment for breast cancer patients in a major public breast unit in Western Australia 12 months pre and post publication of the updated optimal care pathway. This is in the context of the state's unique experience and approach with COVID-19 during this period.
Methods: A retrospective review was performed of all new breast cancer patients at a single tertiary breast unit managed under the public sector during a two-year period between June 2020 and May 2022. This included referrals by general practitioners and diagnosed cases from the unit's breast screen service. Patients that were referred on privately or did not undergo curative intent treatment were excluded. The primary outcomes were the mean time from DTT to surgery or commencement of neoadjuvant chemotherapy (NAC). Further sub-analysis was performed comparing the period prior to and after the introduction of the pathway.
Results: After exclusion, a total of 483 patients were included for analysis (231 and 252 in the first and second years respectively). The mean time from DTT to surgery was 2.3 weeks in the first year and 2.2 in the second. The mean time from DTT to commencement of NAC was 4.1 weeks in the first year and 3.3 in the second.
Conclusion: Despite a rise in COVID-19 cases in Western Australia during the second half of the study, time to surgery remained well within the recommended timeframe during the entire period. Surprisingly, time to NAC improved during the second half of the study and met pathway guidelines. This highlights the effect of the state government's policies and preparation undertaken prior to border opening.

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LEARNING CURVE AND SURGICAL OUTCOMES FOLLOWING INTRODUCTION OF RADIO-GUIDED OCCULT LESION LOCALISATION USING IODINE-125 SEEDS (ROLLIS) AT A TERTIARY BREAST UNIT

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Problem statement: Radio-guided occult lesion localisation using iodine 125 seeds (ROLLIS) has emerged as a safe and effective alternative to the traditional method of hook-wire localisation in the treatment of impalpable lesions. We examined the re-excision and positive margin rates during a 2-year period in a Western Australian tertiary hospital since the formal implementation of this technique. Our aim is to demonstrate the learning curve of ROLLIS, as well as evaluate our positive margins and re-excision rates for in-situ and invasive breast disease.
Methods: A retrospective analysis was performed of prospectively collected data on all patients that underwent breast conserving surgery in the treatment of invasive or in situ breast cancer using ROLLIS during the period between of October 2019 and December 2021. End points calculated were positive margins (defined as <2mm for DCIS and involved margins for invasive/mixed) and re-excision rates. Sub-analysis was performed depending on pathology – either pure DCIS, pure invasive cancer, or mixed.
Results: A total of 262 excisions with ROLLIS were performed on 256 patients during this period. Overall, the positive margin rate was 13.4% and the re-excision rate was 17.3%. Sixteen percent of cases were pure DCIS, with a statistically higher rate of positive margin and re-excision rates of 33.3% ($P < 0.05$). The mixed and pure invasive carcinoma groups had lower positive margin rates (14.2% and 4.9%) and lower re-excision rates (19.5% and 8.8%, respectively). When comparing the first and second half of the study, a non-statistical trend was towards reduction in positive margin (15.3% vs 10.7%; p=0.27) and re-excision rates (19.1% vs 14.5%; p=0.32).
Conclusion: Following implementation at a major public breast unit, the involved margin and re-excision rates with ROLLIS is comparable to reported rates in the literature, with pure DCIS having a higher rate of involved margins. The non statistical trend in lower positive and re-excision rates during the second half of the study suggest a quick learning curve with this technique.

P52
COMPLICATIONS OF INJECTABLE BREAST AUGMENTATION 21 YEARS LATER
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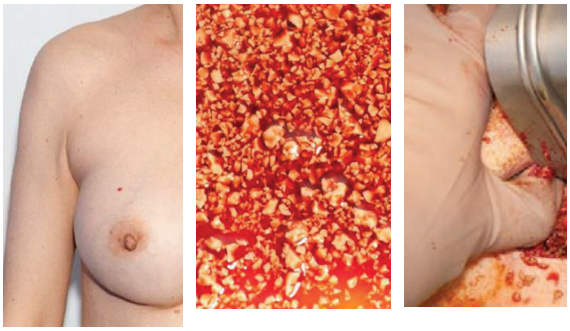
Problem statement: Injectable breast augmentation is associated with late complications published internationally. In contrast, there are relatively limited cases reported in Australia, and to our knowledge none in Western Australia. We present a case of delayed complications 21 years after an injectable breast augmentation with an unknown material (likely polyacrylamide hydrogel). This case aims to raise local awareness and propose a treatment algorithm.
Methods: Written consent was obtained from the patient and a case report was conducted.
Results: A 59-year-old female presented with one month of pain and swelling of the right breast, on a background of an injectable breast augmentation with an unknown material in China in 1999. On examination the right breast was swollen, tense and tender with a nodular texture (Figure 1).An ultrasound guided aspiration yielded 350ml of haemoserous fluid with exogenous particulate ranging from 1 mm to 7 mm in size, with a soft rubber-like texture (Figure 2). After initial relief, the breast re-accumulated. On tomosynthesis, breast parenchyma was obscured by the foreign material with relative sparing of the subcutaneous tissue. USS demonstrated complex collections of mixed echogenecity bounded by a thick capsule. MRI demonstrated complex breasts with multiple fluid filled septations. The patient then underwent a bilateral breast washout of foreign material via infra-mammary fold incisions. Intraoperatively, both breasts contained fluid similar to that initially aspirated (Figure 3). The breasts were washed out extensively and the capsule was removed en-bloc except for areas of deep pectoral/intercostal invasion. She underwent an aspiration under ultrasound guidance two months later for re-accumulation in the right upper outer quadrant and she recovered uneventfully thereafter. Histopathology revealed benign fibrous capsule with foreign body material and histiocytic reactions. Interestingly, the chemistry laboratory report revealed no substantial foreign material suggesting that the material had been completely replaced by biological products.
Conclusion: Despite the lack of chemical studies to confirm, this case likely represents complications following injection of polyacrylamide hydrogel which was widely used in China prior to its ban in 2006. We present a proposed treatment algorithm for late complications after this procedure.



P53
OUTCOMES AFTER RADIOACTIVE 125-IODINE SEED LOCALISATION FOR IMPALPABLE IN SITU AND INVASIVE BREAST CANCER: THE EARLY EXPERIENCE
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Problem Statement: Approximately one third of breast cancers are impalpable and therefore require preoperative localization.[1] Hookwire localization (HWL) has been widely used since the 1970s and has proven to be an effective technique. However, positive margin and re-excision rates are significant and technical difficulties such as wire transection and wire migration also occur. HWL also creates inherent hospital inefficiencies since localization in medical imaging is required on the day of surgery, thus creating difficulties in operative scheduling, and inevitable delays in the operating theatre.
The most widely used non HWL method is radioactive 125-iodine (125-I) seed localization (ROLLIS).[2] This involves placement of a 4.5 x 0.8mm titanium seed containing 125-iodine under either ultrasound of stereotactic guidance.

Proposed advantages are:

1. Reduced positive margin and re-excision rates
2. Improved efficiency by decoupling radiology from theatre
3. Cost savings
4. Improved ease of use and preferred by patients and surgeons
5. Improved cosmesis

Evidence to support the above is mixed.[2,3,4] We report the first 12 month experience using ROLLIS in our centres.

Methods: This is a retrospective review of patients over a 12 month period from the inception of the ROLLIS service at the Royal Brisbane and Women's Hospital (RBWH) and Surgical, Treatment and Rehabilitation Service (STARS) hospitals, commencing March 2021. Re-excision rates were compared to the previous 12 month period prior to the ROLLIS service being introduced.

Results:167 patients were included, 62 received ROLLIS guided wide local excision and 105 HWL. Re-excision was performed in 15 of the ROLLIS patients (re-excision rate 24.2%) and 22 of the HWL patients (re-excision rate 21.0%). There was one instance of ROLLIS seed loss.

Conclusions: ROLLIS guided wide local excision is a new technology which allows decoupling of radiological localisation from theatre lists. It was the preferred technique amongst clinicians, however our early data do not support a reduced re-excision rate. It may be that re-excision rates fall as clinicians gain more experience with this new technique.

Disclosures: *Nil*

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A DISSECTION STUDY OF THE GROSS ANATOMY OF THE ATTACHMENTS OF THE FEMALE BREAST TO THE CHEST WALL

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Problem statement: Anatomical descriptions of the attachments of the female breast to the chest wall in the published literature vary in their structure, location and terminology.

Methods: Dissection study of the attachments of the female breast to the chest wall, conducted on 18 female embalmed breasts in the coronal (n=15) and sagittal (n=3) planes.

Results: Anatomical descriptions and illustrations of the dissections in two planes were supported by photographic evidence. The breast was attached to anterolateral chest wall along its entire perimeter and posterior wall. The perimeter attachment formed a continuous, circumferential structure and was proposed to be the primary anchor of the breast to the chest wall. This was because of its strong fascial attachments, that required sharp dissection to remove from the chest wall. Periosteal attachments to the chest wall were identified along the medial and inferior/medial aspects of the perimeter and fascial attachments were identified along its superior and lateral aspects. Regional variation was found in its structure and anatomical variation in the location of the perimeter on the chest wall. In contrast, the posterior wall attachments to the superficial fascia of muscles of the anterior/lateral chest wall required blunt dissection only. A horizontal septum was observed (in the coronal plane dissections, not the sagittal), as a mesentery-like sheet of fascia with glandular tissue, blood vessels and nerves on its superior and inferior surfaces. It was proposed to function as a structural support for blood vessels and nerves to the gland and nipple region rather than as a structural attachment of the breast to the chest wall. Clinical and anatomical terminology were linked and clinical implications for medical anatomy education, breast modelling and breast surgery described.

Conclusion: The primary attachment of the breast to the chest wall is via its perimeter, with a secondary attachment via the posterior wall of the breast. The structure of the perimeter attachment to the chest wall is both periosteal and fascial and requires sharp dissection to remove it from the chest wall. It has regional variation its structure and anatomical variation in its location on the chest wall.

Disclosure of Interest: *Nil*

P55

ALTERNATIVE LOCALISATION METHOD FOR NON-PALPABLE BREAST CANCER: AUDIT OF RE-EXCISION RATES MAGSEED® LOCALIZATION OF NON-PALPABLE BREAST CANCERS IN AN AUSTRALIAN REGIONAL NON-TERTIARY HOSPITAL

Su Su Naing, Emilia Dauway, Guat Shi Ng

Introduction: Traditionally, wire guided localization has been used for localising excision of non-palpable breast cancer; however, this method has several disadvantages including wire migration and scheduling conflicts between radiology and surgery. These disadvantages are heightened for patients who must travel significant distances in rural and remote areas. The use of a small, nonionizing, magnetic seed for localization is an innovative method which can be placed by the radiologist prior to surgical excision and is the standard method used in our regional centre. This technique utilizes a handheld sterile probe to identify the magnetic seed during surgery.

Aim: The primary objective is to determine re-excision rates using MSL for excision of non-palpable breast cancers.

Methods: A single institution retrospective evaluation was carried out for 101 women between 01/08/2022-30/04/202201. A single surgeon and radiologist adopted the technique in a regional centre in Queensland, which allowed standardization of the technique. Descriptive data analysis was undertaken.

Results: A total of 110 Magseeds® were inserted in 101 patients during the study period, including one marker in 94 subjects, two markers in five (multifocal cancer) and three markers in two (oncoplastic mammoplasty for multifocal disease). The mean age was 64, with the youngest patient aged 43 and the oldest 85 years. An average of 15 days was evidenced between placement of the Magseed® and surgery. The majority of Magseeds® were inserted under ultrasound guidance (84%) and the remainder by stereotactic guidance. In six cases, the seed dislodged during insertion, one of which was 2 cm from the lesion resulting in a missed excision requiring re-excision. Malignancy was identified in 62% of specimens and of these 68% were invasive ductal carcinoma (IDC), 15% ductal carcinoma in-situ (DCIS), 6% invasive lobular carcinoma (ILC), 5% IDC + ILC, 6% others. Re-

excision rates were 14% and 4% (n = 4) had residual tumour on re-excision–three had non-invasive and one with invasive tumours.
Conclusion: In our regional centre, re-excision rates for MSL excisions were lower than the re-excision rates of 20-30% which have been reported in the literature and the previous 35% in our regional hospital.

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OCCULT BREAST CANCER: WHERE ARE WE AT?
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Problem statement: Occult breast cancer (OBC) is described as an axillary metastatic carcinoma without detection of a primary breast lesion and is uncommon. Significant advances in breast imaging have occurred since its description, decreasing its incidence. However current management is based upon old studies, with variable clinical, radiological, and pathological definitions of OBC.
Methods: We performed a literature review to discuss best-practice for reporting and managing OBCs.
Results: We suggest standardised definitions of OBC to facilitate more homogenous data to enable better interpretation and to improve current management guidelines. We discuss whether the current surgical recommendations are appropriate and suggest whether they could be safely substituted with less invasive management.
Conclusion: This paper reviews the current status of OBC management and suggests improvements in current practice guidelines
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DIAGNOSIS AND MANAGEMENT OF PHYLLODES TUMOURS FOR THE SURGEON: AN ALGORITHM
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Problem statement: A Phyllodes Tumour (PT) is an uncommon fibroepithelial lesion, with three histological grades – benign, borderline and malignant. PTs cause significant challenges in diagnosis, management and prognostication. Recent publications have clarified the definitions and prognostication of PTs. Contemporary data currently challenges international guidelines on PT management.
Methods: We performed an in-depth literature review to develop a best-practice management algorithm for PTs.
Results: Diagnostic recommendations are that neither current imaging techniques, nor fine-needle biopsies, can reliably diagnose a PT. Core needle biopsy is the optimal diagnostic technique. Indeterminate or suspicious lesions are recommended to undergo an excisional biopsy due to the inherently heterogeneous nature of PTs. Management guidelines are that benign PTs should be completely excised; although an involved margin is acceptable in select situations. Borderline PTs should have a clear margin on excision due to their higher risk of recurrence, as well as the potential for a recurrence to progress to a malignant PT. In malignant PTs, a margin of 3mm is acceptable as there is no reduction in recurrence risk if margins are > 3 mm. Routine axillary surgery is not indicated in PTs, with axillary surgery only indicated in a histologically-confirmed positive axilla. Adjuvant treatment recommendations are that borderline and malignant PTs should be discussed at MDT, with radiotherapy considered in both. Chemotherapy should be discussed in malignant PT patients.
Conclusion: In summary we have developed an up-to-date simple algorithm to guide the surgeon's management of patients diagnosed with PTs and reduce excessive surgery.
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P58
THE LIMBERG FLAP IN MASTECTOMY T-JUNCTION NECROSIS: AN UNDERUTILISED TECHNIQUE
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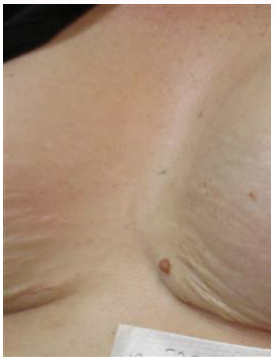
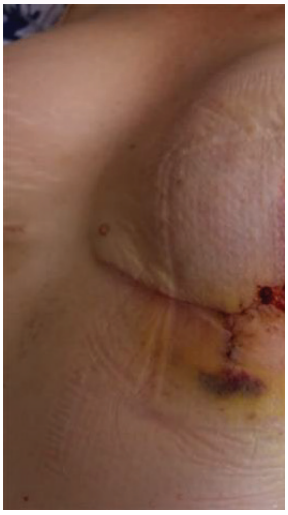
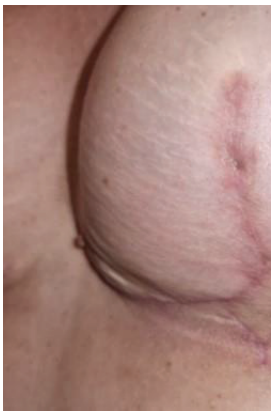
Problem statement: The Wise-pattern skin-sparing mastectomy is well-known for its efficacy in large ptotic breasts, and its safety in facilitating immediate breast reconstruction. An unfortunate sequalae for all skin-sparing mastectomy techniques is skin flap necrosis. For the Wise-pattern, the common location of necrosis is at the T-junction. We discuss the usage of the well-known and versatile rhomboid (Limberg) flap to repair T-junction necrosis without tension, while allowing preservation of an underlying prosthesis.
Methods: We discuss a case in which the Limberg flap is used to salvage T-junction necrosis without loss of pre-pectoral implant
Results: We have shown an excellent outcome using a Limberg flap to salvage T-junction necrosis with an underlying pre-pectoral implant. The patient recovered well and did not require explant.
Conclusion: This paper highlights the applicability of the simple Limberg Flap in salvaging the commonly occurring T-junction necrosis associated with Wise-pattern skin-sparing mastectomies.







P59

OLDER BREAST CANCER: A DEDICATED SENTINEL LYMPH NODE METASTASIS NOMOGRAM

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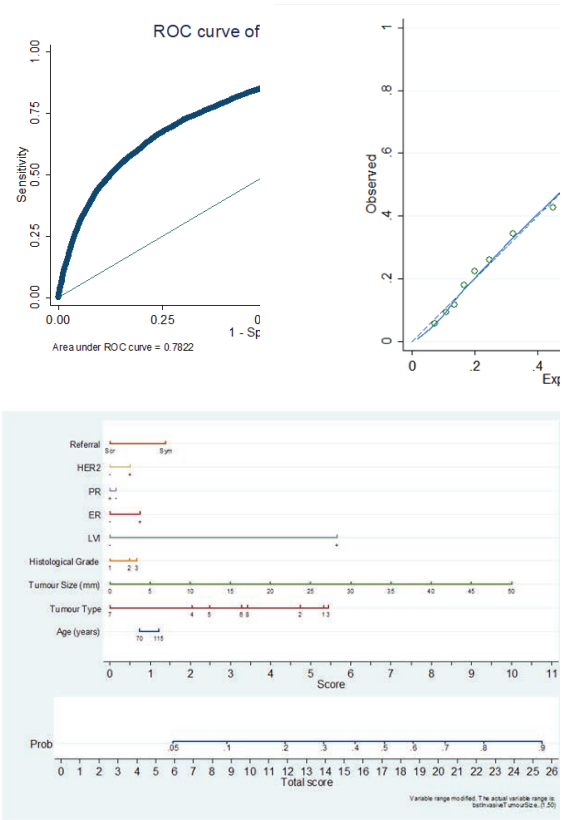
Problem statement: Regional nodal status is one of the most powerful prognosticators in breast cancer. The sentinel lymph node biopsy (SLNB) evaluates the first node in the axillary lymphatic basin theorised to drain the anatomical region of breast cancer. Recent literature has appropriately raised the query of the need for SLNB in select older breast cancer (OBC) patients. Though some early-stage OBC patients may safely have SLNB omitted, we are potentially missing the under-represented aggressive cancers. No sentinel lymph node metastases nomogram has been developed solely from OBC data to date. This study aimed to identify elderly patients with breast cancer at risk for nodal involvement using a nomogram developed from older patient data alone.

Methods: A retrospective analysis of prospectively collected data on older breast cancer patients (aged ≥ 70 years) was performed using the Breast Surgery Quality Audit (BQA). Inclusion criteria were T1-2 invasive breast cancer patients that underwent a SLNB from 1st January 2001 to 31st December 2019. The primary outcome was nodal involvement. Data obtained from the dataset included: age, tumour type, tumour size in millimeters, histological grade, lymphovascular invasion, oestrogen receptor status, progesterone receptor status, HER2 status and referral source. Binary logistic regression was used to develop a nomogram. The model was internally validated by splitting the data set (80% for training and 20% for testing). A receiver operating characteristic curve was developed, with the area under the curve (AUC) and a calibration plot.

Results: There were 22,313 patients of which 14,856 (66.6%) were symptomatic presentations and 7,457 (33.4%) were screen-detected. Invasive tumour type, tumour size, tumour grade, lymphovascular invasion, oestrogen receptors, and referral source indicated a statistically significant effect on predicting a nodal positivity event (Table 1). The AUC was 0.782 (95% CI 0.82-0.91) (Figure 1a) and demonstrated good calibration (Figure 1b). The negative predictive value established was 85%.

Conclusion: We have developed an Australian sentinel lymph node metastasis nomogram for OBC using routine histopathological data obtained pre-operatively (Figure 2). This is the first Australian nomogram developed solely for older breast cancer patients and has a slightly superior AUC compared to other well-established nomograms.



P60

BREAST SURGERY IN A TEACHING PUBLIC HOSPITAL: DOES TRAINING INCREASE COMPLICATION RATES

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Problem statement: Breast surgery is a rapidly changing sub-speciality, with significant improvements in patient treatment and surgical techniques. The desire to provide the patient with the best oncological and cosmetic outcomes has led to the development of new techniques, particularly with volume displacement and replacement. We aim to investigate in this evolving era, whether surgical training has any negative effect on the rate of complications.
Methods: We performed a retrospective analysis of prospectively collected data pertaining to all breast surgeries at our institution, from January 2016 to December 2021. Cases were divided into two groups, depending on whether the primary surgeon was a consultant (Group A) or trainee, with or without a consultant present, (Group B). Surgeries were divided into benign, malignant, or re-excisions. Further sub-division was performed for malignant surgeries depending on the primary surgery (wide local excision, mastectomy, bilateral mastectomy) and axillary surgery (no axillary surgery, SLNB, AC, SLNB and AC). The key endpoint was statistical analysis of the relative rates of complications.
Results: Data analysis identified 3045 cases; of which 1824 (59.9%) were performed by consultants (Group A) and 1221 (40.1%) were performed by trainees (Group B). The overall complication rate was 3.02% (n=92); 2.74% for Group A and 3.44% for Group B. There was a higher rate of complications for re-excisions in Group B – 5.62% versus 0% in Group A (P = 0.029). When comparing complications for benign surgeries, and malignant operations with their sub-divisions, there were no statistically significant differences in complication rates. Haematomas were the most frequent complication requiring a return to theatre at 1.87% (57 of 92 complications, 69.51%).
Conclusion: We have shown that trainees, when appropriately mentored, are able to perform breast surgery cases with minimal variation to rates of complications. We acknowledge the potential bias of our data that Group A cases may be more complex, however.

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OLDER BREAST CANCER: NOT ALL T1 HR+ BREAST CANCERS ARE EQUAL

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Problem statement: Current international opinion is tending towards omitting sentinel lymph node biopsy (SLNB) in cT1N0 HR+ older breast cancer patients. Symptomatic breast cancers are customarily more aggressive than screen-detected in the younger population; however, this has not been proven in the older cohort. We reviewed whether symptomatic cT1N0 HR+ breast cancers in older patients have a more aggressive biology and greater nodal involvement, compared to screen-detected cancers.
Methods: A retrospective study of data from the BreastSurgANZ Quality Audit (BQA) between 1 January 2001 and 31 December 2019 was performed. Female patients aged ≥ 70 at diagnosis with cT1N0 HR+ (ER/PR+, HER2-) breast cancers who underwent SLNB were included only. Patients were divided based on mode of detection - screen detected (Group A) or symptomatic (Group B)
Results: In total, 11,746 patients were appropriately reported. There were 4,481 in Group A and 6,905 in Group B. Histological Grade was higher in symptomatic patients ($p < 0.001$). Lymphovascular invasion presence was also greater ($p < .001$). The average nodal count, as well as N stage were both higher for symptomatic patients compared to screen-detected ($p < 0.001$).
Conclusion: Symptomatic breast cancers have a statistically higher grade and higher rate of lymphovascular invasion and nodal involvement. The method of cancer detection should be considered when discussing the risks and benefits of performing a SLNB, in early hormone receptor positive older breast cancer patients.
https://doi.org/10.29011/2574-710X.10127

P62

OLDER BREAST CANCER IN AUSTRALIA: TUMOUR CHARACTERISTICS OF SCREENED VERSUS SYMPTOMATIC BREAST CANCERS

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Problem statement: Breast cancer is the most common non-skin cancer in Australia, affecting 1 in 7 women by the age of 85. The Australian 2020 projected incidence of breast cancer in the older population, 70 years or greater, is over 6500. This is almost a third of the entire projected incidence of over 20,000. BreastScreen Australia invites women aged 50-74 years of age for biennial screening; however, a significant proportion of Australian women continue screening well beyond this. We have evaluated the tumour characteristics of older breast cancer patients - comparing symptomatic to screen detected patients.
Methods: This was a retrospective study of data from the BreastSurgANZ Quality Audit (BQA) between 1 January 2001 and 31 December 2019. Female patients aged ≥ 70 at diagnosis were included only. Exclusion occurred for incompletely recorded cases. Patients were then divided based on means of detection - either screen detected (Group A) or symptomatic (Group B).
Results: From 1 January 2001 to 31 December 2019, 34,258 patients were appropriately reported in the BQA. There were 11,021 in Group A and 23,237 in Group B. DCIS was more prevalent in Group A (16.83% versus 6.49%, p = <.001). T stage distribution was statistically different, with higher T stages for Group B, p = <.001. IDC sub-type distribution varied between the two groups, p = <.001. IDC Grade 3 and lymphovascular invasion were more common in Group B (p = <.001). Hormonal status was statistically different, with Group B having greater rates of TNBC and HER2+ cancers compared to Group A (12.99% versus 7.10%, p = <.001 and 4.45% versus 2.55%; respectively, p = <.001).
Conclusion: This is the first BQA review of older breast cancer tumour characteristics, comparing screen to symptomatic patients. As hypothesized, screen detected cancers were smaller and earlier stage, compared to symptomatic patients. Tumour biology was statistically less favourable in Group B being higher grade, and greater rates of lymphovascular invasion, TNBC and HER2+ cancers.
https://doi.org/10.29011/2574-710X.10126v

P63

BREAST SURGERY IN A TEACHING PUBLIC HOSPITAL: DOES ONCOPLASTIC TRAINING SIGNIFICANTLY IMPACT SURGICAL DURATION

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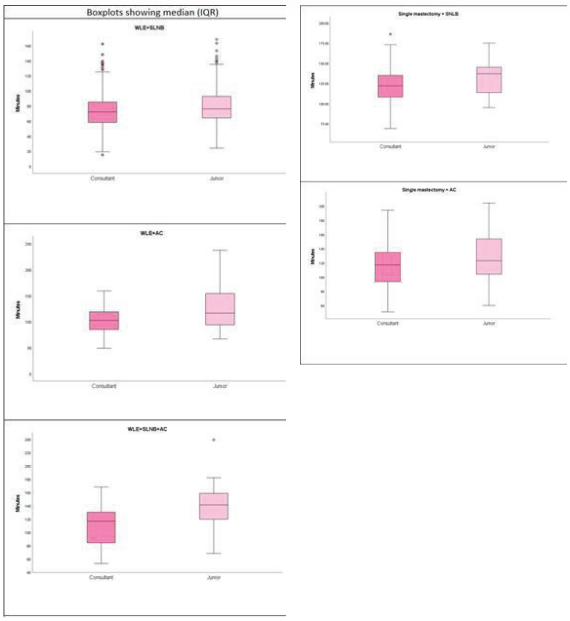
Problem statement: Breast surgery is a rapidly changing sub-speciality, with new oncoplastic surgical techniques. Breast units that adopt these techniques may have a longer operative time. However, the time impact of trainees being the primary surgeons for such breast cancer operations is unclear. We aim to investigate in this evolving era, whether surgical training has any negative effect on the duration of surgery.

Methods: We performed a retrospective analysis of prospectively collected data pertaining to all malignant breast surgeries at our institution, from January 2016 to December 2021. Bilateral and prosthetic cases were excluded. Cases were divided depending on whether the primary surgeon was a consultant (Group A), or trainee with or without a consultant present (Group B). Operative sub-division was performed depending on the primary surgery - wide local excision (WLE) or mastectomy (MAST), and axillary surgery - no axillary surgery, sentinel lymph node biopsy (SLNB), axillary clearance (AC), SLNB progressing to AC. The key endpoint was duration of operations, comparing Group A to Group B.

Results: Data analysis identified 1697 cases; 1019 (60.05%) by consultants (Group A) and 678 (39.95%) by trainees (Group B)(Table 1). When comparing WLE or MAST alone (no axillary surgery), there was no statistically significant differences in operative time for Group A vs Group B (p=0.313, p=0.678; respectively). When comparing MAST+SLNB+AC, there was also no statistically significant duration difference (p=0.185). However, when comparing all other case combination durations, Group B was statistically longer – WLE+SLNB, WLE+AC, WLE+SLNB+AC, MAST+SLNB, MAST+AC (Figures 1 and 2). When comparing median times between the two groups, only WLE+AC and WLE+SLNB+AC had median time differences greater than 5-minutes.

Conclusion: We have shown statistical differences in duration of operating depending on primary surgeon, as expected. However, when evaluating the real-time median durations, only WLE+AC and WLE+SLNB+AC, had significantly longer operative durations when performed primarily by surgical trainees – with differences of 15 and 25 minutes, respectively. We conclude that in a unit that employs oncoplastic techniques, operative time difference in trainees performing breast cancer surgery, when compared to consultants, are far less than expected.



P64

SKIN SPARING MASTECTOMY(SSM) WITH TOTAL AUTOLOGOUS FAT GRAFTING WITH PLATELET-RICH-PLASMA(PrP) VERSUS BREAST CONSERVATION THERAPY(BCS) IN EARLY BREAST CANCER(EBC) PATIENTS: RANDOMISED CONTROLLED TRIAL(RCT) WITH FOLLOW-UP OF 34 MONTHS

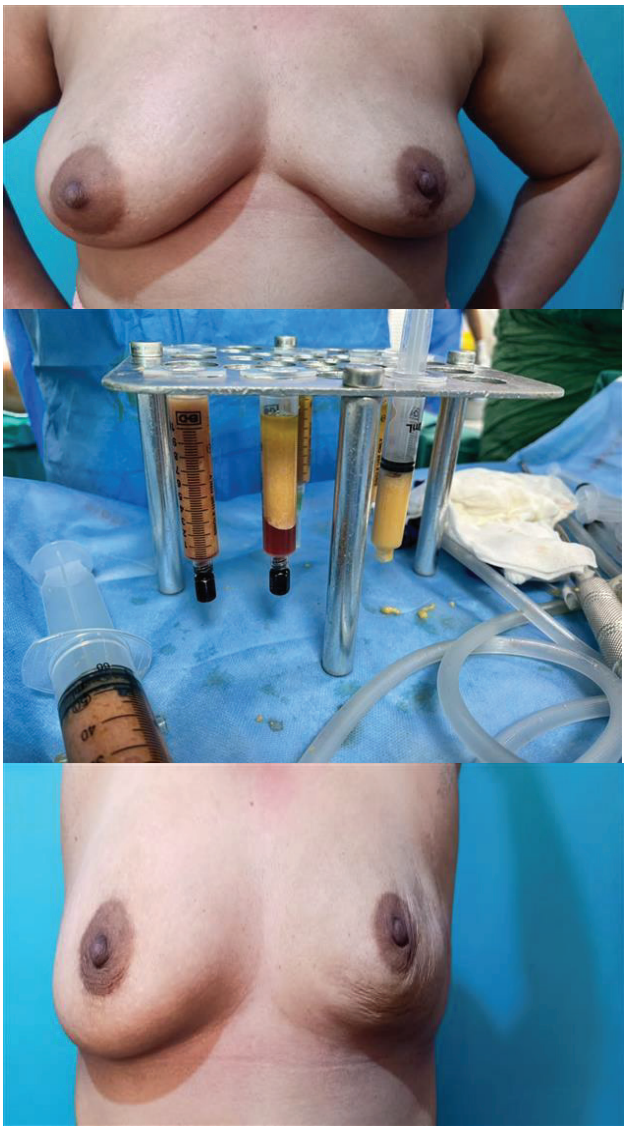
Swathi Prakash, Neha Gupta, Anurag Srivastava, Anita Dhar, Maneesh Singhal, Kamal Kataria, Piyush Ranjan

PROBLEM STATEMENT: Fat grafting was not widely accepted as large volume reconstruction after Skin sparing mastectomy(SSM), initially due to concerns of Oncologic safety, Tumor surveillance, and Technique efficacy. Recently, well performed large volume fat grafting is generally accepted to be both safe and effective in case series. Still no RCT for total autologous fat grafting has been done. This study will attribute to fill that lacunae.

METHODS: The study was conducted in the Department of Surgical Disciplines, AIIMS, New Delhi, India. 30 women were recruited with early breast cancer presenting with tumour size of less than or equal to 4 cm without any skin or chest wall involvement. Patients were randomized to SSM and BCS. All cases were followed thereafter, following surgery for quality of life(QoL) score, oncological outcome and cosmetic outcome. EORTC QLQ BR 23 and QLQ-C30 were used for assessing QoL in this study.

RESULTS: In this study, the item Sexual Pleasure obtained the lowest response rate. Both, SSM and BCS patients reported similar high mean QoL scores with no significant difference on any scale. On a median follow up 34 months, 2(13.3%) BCS group developed ipsilateral breast recurrence but no distant metastasis. 2 patients (13.3) had distant metastasis(pleural) in SSM groups with no local recurrences. Complications related to SSM only, 40% patients have flap sensation and 25% retained NAC sensation. NAC removed in 2 patients(necrosis, margin postive). Related to fat grafting, 14.3% patients had 2 cup size reduction, 57.1% had 1 cup size reduction while 21.4% had no reduction. Complications were fat necrosis(3), infection(1), oil cyst(1) in SSM group and infection(1) in BCS group during follow-up. On a cosmetic scale of 4, 65.5% had excellent score while 10.7% had poor score.

CONSLUSION: Total autologous fat grafting in EBC patients for a median follow-up of 34 months had no local recurrence. The QoL is comparable with BCS. Other implication of this study would be avoidance of radiation therapy unlike in BCS, total extirpation of all the TDLUs-eliminate the possibility of new breast tumour and using patient's own fat.
***DISCLOSURE OF INTEREST**: There is no disclosure of interest.*



P65
SENTINEL LYMPH NODE BIOPSY UNDER LOCAL ANAESTHESIA EFFECTIVE AND FEASIBLE - A 5-YEAR EXPERIENCE IN A TERTIARY CARE CENTER IN INDIA
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Problem Statement: Sentinel lymph node biopsy (SLNB) has evolved as the standard of care for patients with early breast cancer who do not have clinico-radiological metastasis to the axilla. SLNB is an excellent method for staging the axilla without the need for full axillary dissection. This procedure is usually done under general anaesthesia (GA), along with resection of the primary tumour. The frozen section required for SLNB during surgery prolongs the operating time. Sometimes the frozen section may miss small (false negative) metsastases, leading to axillary recurrence in future. SLNB done under local anaesthesia (LA) saves valuable operating time, helps avoid false negative results and offers the option of preoperative chemotherapy without the danger of a subsequent under-staging of the illness in the anticipation of tumour dissemination. Our aim was to evaluate the outcomes of performing SLNB under LA in terms of pain and accurate identification of the sentinel lymph nodes.
Methods: A retrospective study was conducted, including patients who underwent SLNB under LA from 2016 to 2020. Variables including operative time, time to reach the first node, and final histopathology report were documented. Intraoperative pain scores and 2-hour post-operative scores were recorded. Patients were followed up for 24 months and patient-related outcomes were measured on a Likert scale.
Results: Outcomes of 103 women were analysed; the identification rate was 89.8%. Mean time to identification of the first lymph node was 11.32 minutes. In 10 patients, where the SLN was not identified, an axillary sampling was done. The mean pain score intraoperatively was 2.01 /10, and the mean post-operative pain score was 2.91/10. The majority (56.12%) of patients experienced mild pain (on a scale of mild, moderate and severe pain). When asked to rate their anxiety, the majority (52.02%) of patients experienced moderate anxiety. 99 out of 103 patients said that they would recommend this procedure to others.
Conclusion: In patients with early-stage breast cancer, sentinel lymph node biopsy under local anaesthesia could be an acceptable and effective technique to stage the axilla.

P66
THE EVOLUTION OF MAGSEED™ LOCALIZATION IN THE MANAGEMENT OF IMPALPABLE BREAST CANCERS
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Problem Statement: Hook wire Localisation (HWL) has been used for 50 years to localise impalpable screen-detected breast lesions. Although widely accepted, its use may increase patient anxiety, allow wire migration and cause difficulty with operative scheduling.
Carbon tracking (CT) and radioactive localization techniques using seeds and tracers have been used as an alternative to HWL. Although CT can be placed many weeks ahead of surgery it is not visible on imaging and is associated with granuloma formation if not excised completely. Radioactive seed localisation overcomes most of these issues but is not widely used due to its onerous radiation safety requirements. The use of Magseed™ potentially solves all these issues. This prospective case series demonstrates our detailed clinical experience using Magseed™ to allow evaluation of its efficacy, safety, pathological outcomes, complications, and surgical satisfaction.
Method: A prospective single centre study conducted at St Vincent Hospital. Lesion characteristics, radiological accuracy of Magseed placement, the time interval from Magseed placement till surgery, the role of Magseed in more than one impalpable breast lesion and targeted axillary dissection were evaluated. The surgical time taken to retrieve the Magseed, site of incision, complications, surgeons' satisfaction along with pathological outcomes including margins, re-excisions rates, and sample weight were also reviewed.
Results: Between February 2019 and June 2022, 125 patients were enrolled in the study. Their operative indications were recorded. A total of 90% of Magseeds™ were radiologically placed within 5 mm of targeted lesion or node. With an average time from incision to removal of the lesion of

20 minutes, all Magseeds™ were successfully identified and retrieved, except one which was noted in the resection cavity associated with post-insertion hematoma. A total of 10% of cases required re-excision.
Conclusions: Magseed™ localization technique for impalpable breast lesions is easy to learn, time effective and can be used safely. Magseed™ simplifies treatment, improves overall patient and surgical experience, allows flexibility regarding the timing of the procedure, and is associated with low re-excision rates and complications. Its role in multiple lesion and bracketed excision still needs further evaluation.

P67
SENTINEL NODE RE-MAPPING IN PATIENTS WITH A SECOND PRIMARY BREAST CANCER AND PREVIOUS AXILLARY LYMPH NODE DISSECTION (ALND)
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Problem statement: The status of the axillary lymph nodes is the most important prognostic factor in patients with breast cancer. However, the axillary staging in patients with a history of previous axillary procedure and mainly axillary lymph node dissection (ALND) remains a diagnostic challenge. The aim of this study is to present the clinical characteristics of two of our patients with a history of breast cancer treated with breast conservation and ALND who developed a second ipsilateral primary breast cancer. A review of the relevant literature was also conducted.
Methods: Two patients aged 74 and 60 years old developed second ipsilateral primary breast cancer, 12 and 17 years respectively after their first primary cancer. Both patients had been initially treated with breast-conserving surgery and ALND. The patient's clinical and imaging characteristics are presented in detail.
Results: Both patients underwent preoperative lymphoscintigraphy three hours before surgery. The sentinel axillary node was successfully identified in both patients and was negative for metastatic disease. Aberrant drainage outside the ipsilateral axilla was observed in one patient. The identification of the nodes, however, was laborious due to the presence of extensive postoperative changes from the previous ALND. Both patients underwent mastectomy whereas immediate reconstruction was performed only in the 74 year-old patient. Both patients were further treated with adjuvant chemotherapy.
Conclusions: Although there is limited data reported in the literature, re-mapping of a sentinel node is a technically laborious but feasible procedure for staging and treatment of regional lymph nodes in patients with a new primary ipsilateral breast cancer and previous ALND. Preoperative lymphoscintigraphy is very important as altered lymphatic drainage may be observed.

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MICROPOROUS POLYSACCHARIDE HEMOSPHERES (MPH) AND SEROMA FORMATION AFTER MASTECTOMY AND SENTINEL NODE BIOPSY - A PROSPECTIVE RANDOMISED CLINICAL TRIAL
Gagandip Sanghera, Rafid Alzubaidy

Seroma formation is a common complication (10-50%) following breast cancer surgery. They can lead to a number of complications including wound infection, lymphedema, prolonged hospital stay, sepsis, flap necrosis and initiation of adjuvant therapy. To date, no method has been described to reliably and consistently prevent seroma formation. Microporous Polysaccharide Hemospheres (MPH) are used to achieve haemostasis and has shown to reduce seroma post mastectomy in animal studies. It is thought to aid in preventing inflammatory exudate accumulation and capillary and lymphatic leakage, ultimately reducing the risk of seroma formation. The purpose of this study was to evaluate the efficacy of topical MPH in reducing seromas in breast cancer patients post mastectomy and sentinel node biopsy/axillary dissection. One hundred breast cancer patients were enrolled in this study at Robina Hospital who underwent bilateral mastectomies +/- sentinel lymph node biopsy where one side was randomly assigned to receiving topical MPH in addition to closed suction drainage. The total drain output, total drain days, number of clinic visits and complication rates were compared between the MPH and non-MPH side. Various patient factors are also looked into including age, breast size, comorbidities, BMI and presence of malignancy in both breast tissue and nodes. This is the largest human clinical study to date evaluating topical MPH and the risk of seroma formation in patients undergoing bilateral mastectomy for the treatment of breast cancer.

P69
HISTORY AND EVOLUTION OF SENTINEL LYMPH NODE MAPPING
Gagandip Sanghera

Sentinel lymph node biopsy plays an imperative role in surgical oncology and since its introduction has resulted in more accurate staging, better regional disease control and improved survival of patients with cancers like melanoma, breast cancer and many others. Morton and Cochran first published about the details of a sentinel lymph node biopsy procedure in 1992. German pathologist Virchow in 1863 was the first to understand the lymphatic system and in particular define the "sentinel node" as the first lymphatic an area of the body/tumour drains to. Virchows findings inspired Halstead (1894) to develop mastectomy with en bloc axillary clearance and Snow (1892) to advocate for elective lymph node dissection in patients with melanoma. This is when the lymphatic system became a major element of surgical oncology. After Morton and Cochran introduced the sentinel node biopsy technique, radical lymph node dissections were reserved for patients who actually had lymph node metastases. Morton and Cochran in 1989 used the technique of blue dye intraoperatively for sentinel node mapping in melanoma patients leading to the widespread acceptance of this approach. Later on in 1993, Alex and Krag described lymphoscintigraphy, the technique of using radiocolloid to label the sentinel node that can be detected with a gamma probe.
Nowadays, lymphoscintigraphy is combined with blue dye injection before surgery and gamma detection probe intraoperatively ultimately leading to more superior results for patients.

P70
REVIEW OF MANAGEMENT AND OUTCOMES OF BORDERLINE AND MALIGNANT PHYLLODES TUMOURS OF THE BREAST AT A UK TERTIARY CENTRE
Gausihi Sivarajah, Gargi Kothari, Rachna Goburdhun, Charlotte Benson, Robin Jones, Shane Zaidi, Gerald Gui, Nicola Roche, Peter Barry, Fiona MacNeill, Dirk Strauss, Andrew Hayes, Myles Smith, Aisha Miah
The Royal Marsden NHS Foundation Trust, UK

Problem statement: Phyllodes tumours (PT) are a rare fibroepithelial breast neoplasm, with borderline and malignant

subtypes more aggressive in nature. NCCN Guidelines recommend local surgical resection with a > 1cm tumour-free margin as the mainstay of treatment for primary disease. We present a large series of PT referred to a sarcoma tertiary centre to assess patterns of practice and oncological outcomes.
Methods: A retrospective review identified 207 patients with a borderline or malignant PT diagnosis between 1999 and 2020. Demographics, histopathological features, and surgical and radiotherapy treatment were collected. Survival data, including local (LR) and distant recurrence (DR), were assessed using the Kaplan-Meier method and Cox regression analysis. Patients referred for second opinion only, were excluded from survival analysis.
Results: Patients had a median age of 50 years (17-86) at diagnosis. Median tumour size was 5.5 cm (0.9-42), with 15.9% having a T3/T4 tumour, reflecting late presentation. 71.5% of patients underwent their primary excision at a non-sarcoma specialist unit. 71.0% underwent breast conserving surgery with 53.1% requiring further re-excision of cavity margins/therapeutic mammaplasty (61.5%), or a mastectomy (34.6%). 19.3% had axillary staging, all negative for disease. 18.7% of patients received adjuvant radiotherapy.
The median follow-up was 58 months (3-250) for the 134 patients, who underwent survival analysis. 20.1% had LR, occurring at a median time of 12 months (2-80). On univariate analysis, adjuvant radiotherapy was associated with reduced risk of LR, HR 0.15 (95% CI 0.02-1.13) p<0.05. Older age (>65 years, p<0.05) and positive margins (p<0.005) were associated with higher LR, but not the measure of margin clearance. All patients who developed LR, except one who died, underwent surgical excision, with 37.0% receiving radiotherapy. DR was reported in 20.1% of patients. 10-year disease-specific (DSS) and overall survival (OS) was 82.4% and 73.6%, respectively.
Conclusion: Surgery (breast resection with no axillary staging) remains the standard of care for primary breast borderline and malignant PT. Clearance of 5mm versus 10mm, may be considered an adequate margin, especially in large tumours where achieving > 1cm margin is challenging. Adjuvant radiotherapy is not routinely recommended but can potentially reduce LR risk in select cases.
No conflicts of interest to disclose.

P71
BREAST FIBROMATOSIS: 2000 TO THE PRESENT
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Problem statement: Breast fibromatosis is a rare spindle-cell lesion that makes up approximately 0.2% of all breast neoplasms. It lacks the potential to metastasise but can be locally aggressive. The standard of care for treatment of this disease is complete surgical resection, with wide local excision being recommended. When the disease is extensive, it requires resection of some of the chest wall, leading to functional and aesthetic defects. There is also a high rate of recurrence, even when complete resection is achieved. In the last century, more consideration has been given to the feasibility of the wait and watch approach, and exploring the efficacy of other medical therapies.
Methods: A systematic search of the Medline and Embase databases was conducted using subject headings for breast and fibromatosis, inclusive of similar phrases. After excluding non-English texts and limiting the year range to 2000-present, 90 articles were retrieved, of which 24 were excluded due to lack of sufficient detail, or relevance to the topic. 66 articles remained, which presented 74 patients with breast fibromatosis, of whom 45 had follow-up information.
Results: The average follow-up duration was 22.9 months. The median age of the patients was 38. There were 4 males and 41 females. 18 of the 45 had known risk factors for fibromatosis. The non-surgical approaches had mixed results. One patient was managed with active surveillance, with disease progression seen at 3 months. One patient received tamoxifen 10mg BD as neoadjuvant and showed a reduction of disease at 14 months' follow-up. In one patient, surgery missed the disease, and rescue therapy with tamoxifen and indomethacin was unsuccessful. One patient was treated with 2 months of methotrexate and vinblastine, followed by 6 months of tamoxifen, but needed surgery afterwards due to progression of disease. One patient had tamoxifen and celecoxib as rescue therapy after recurrence after surgery, with successful disease reduction. Of the 41 patients for whom surgery was the primary treatment modality, 7 displayed recurrence, with an average time to recurrence of 15.1 months. There is an association between limited surgical excision and recurrence, compared with wide local excision and radical resection.
Conclusion: Complete surgical resection does not prevent breast fibromatosis recurrence, but wider and safer margins seems to be protective. Medical therapies can be effective at disease control, and more research is needed in this area.

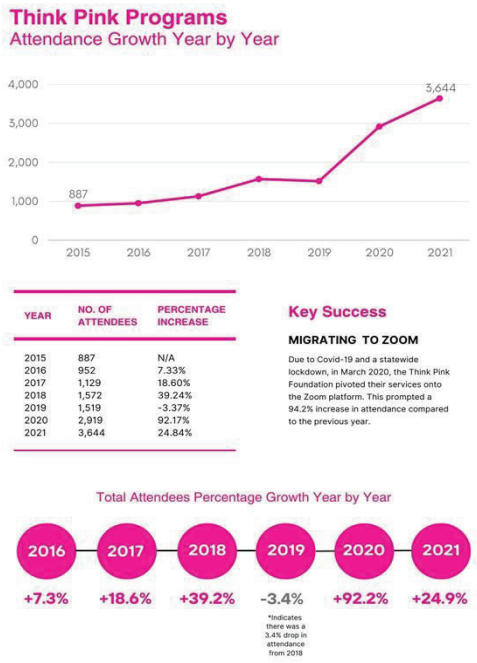
SURVIVORSHIP

P72
HOW THINK PINK FOUNDATION OVERCAME COVID-19 LOCKDOWNS AND FLOURISHED DURING THE PANDEMIC
Andrea Cannon, Debbie Carter, Jesynta Katili, Ros McAuley
Think Pink Foundation is a Not-for-Profit organisation providing professional and caring holistic support completely free of charge to patients, families and carers at any stage of breast cancer. Its mission is to enable a better journey through breast cancer by providing emotional, practical and physical support through a comprehensive range of programs. It does not limit the number of visits by clients and all services are available to breast cancer patients from any treatment centre and at any stage of their journey.
Think Pink has a small, dedicated team of Breast Care Nurses, Office Manager, Database & Administration Coordinator along with a committed group of volunteer professional therapists and facilitators who provide a range of services and programs to assist Think Pink clients.

Problem statement: Covid-19 forced The Think Pink Foundation to re-assess how it delivered its programs and services.
Methods: Think Pink overcame the impact of Covid-19 lockdowns by moving its programs and services online. Prior to Covid-19, Think Pink only delivered face-to-face services.
By migrating to an online platform, Think Pink was able to increase the frequency and range of services, reaching clients both regionally and interstate. A broad range of programs are offered encompassing exercise, wellness, education and support groups.
Think Pink's specialist and highly qualified facilitators, many of whom are volunteers, conduct sessions supervised by a Breast Care Nurse. Think Pink strongly believes in evidence-based practice and education; therefore, support groups often feature guest speakers presenting on a range of subjects including:
- Genetics
- Nutrition

- Exercise
- Menopause
- Palliative Care
- Estate Planning
- Sex & Cancer
- Lymphoedema

Results: The successful transition to online delivery demonstrated the value of an organisation such as Think Pink to exist during the Covid pandemic. Program attendances increased by 92.2% compared to 2019 and continue to rise through 2021/2022.
Conclusion: Client testimonials and ongoing referral rates prove there is a need in the Breast Cancer community for services offered by Think Pink to combat the psychological impact of isolation and improve mental wellbeing. Evidence gathered demonstrates that clients gain a better understanding of the challenges they face through educational programs and peer support.
www.thinkpink.org.au



P73
MALE BREAST CANCER: A SINGAPORE PERSPECTIVE
Joshua Sheng Hao Lim[1], Y Sim [2,3,4], J Ngeow[5,6,7], Jeanette Yuen[5], VKM Tan [2,3,4], BKT Tan[2,3,4,8], Wei-Sean Yong[2,3,4], CY Wong[3,4], Sue Zann Lim[2,3,4], JLB Hamzah[2,3,4], SY Tan[2,3,4], Wong FY[9], Preetha Madhukumar[2,3,4]
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Abstract: Problem statement: Male breast cancer (MBC) is rare, representing <1% of all breast cancers. Treatment

recommendations have been extrapolated from trial data of female breast cancer patients. This study aims to report our institutional experience of male breast cancer across a 20-year period, analyse the survival outcome and prognosis of this group against female breast cancer patients treated at the same centre

Methods: Clinical, histopathological, treatment and survival data of male and female breast cancer patients treated between Jan 1999-July 2019 at Singapore General Hospital and National Cancer Centre Singapore were identified and analysed.

Results: 57 male patients were identified. The median age at diagnosis was 63 years. Majority had invasive ductal carcinoma (86%) and presented at an early disease stage: 70.2% presented as Tis/T1/T2 and 49.1% had no axillary nodal involvement. 84.2% had a simple mastectomy with either a sentinel lymph node biopsy or axillary clearance. The median follow up was 5.69 years for males and 5.83 years for females. The median survival was 11.86 years for males and 16.3 years for females. At 5 years, overall survival (OS) was 69.9% (52.3-82.1%) and disease free survival (DFS) was 62.9% (44.9-76.5%) for males compared to OS 83.8% (83.21-84.39%) and DFS 74.5% (73.91-75.09%) for females.

Conclusion: Male breast cancer remains understudied. Our institutional data indicates that good long term survival in South-East Asian patients can be achieved with treatment protocols that are similar to female breast cancer. More prospective studies are required.

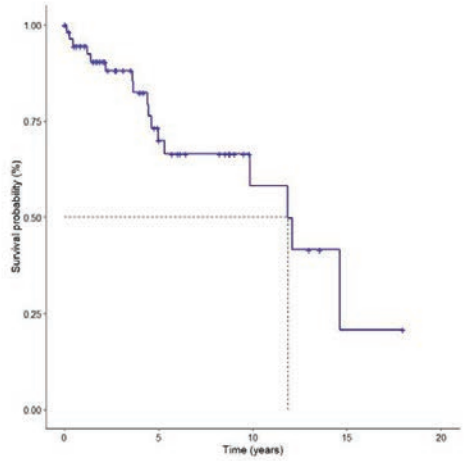

Fig 1. Overall Survival of MBC Patients

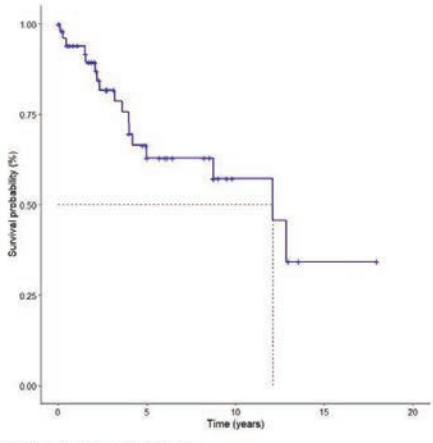

Fig 2. Disease-free Survival of MBC Patients

P74

BREAST CANCER SURVIVORSHIP CLINIC: A PILOT STUDY

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Problem Statement: Current management of operable breast cancer has a relatively good prognosis and overall survival. These patients should have close surveillance to monitor recurrence and ensure acceptable quality of life.
Increasing numbers of breast cancer survivors stretch available clinic resources, particularly in the public sector.
The aim of the pilot study is to identify if a streamlined survivorship clinic with a structured questionnaire (study group) was effective in picking up more side effects and thus appropriate referrals as opposed to the current follow-up clinics (control group).

Methods: A prospective single tertiary centre study was conducted on all consecutive patients requiring yearly surveillance appointments between May and July 2021. A Breast Cancer Survivorship template was provided to clinicians, ranging in seniority from residents to consultants. Parameters evaluated were duration of consultation, examination and imaging findings, and quality of life measurements (study group). These were compared to the existing surveillance protocol (control). Statistical significance was analysed using T-test and Chi-Square test.

Results: 80 patients were recruited in the study group and 76 in the control group. The mean duration of consultation time with all clinicians was 25 minutes and 20 minutes respectively, with statistical difference. There was no difference in the duration of consultation between residents and senior clinicians within the study group. In the study group, out of 62 patients receiving endocrine therapy, 51 (82%) reported ≥ 1 side-effects secondary to cancer treatment versus 22/57 (39%) patients in the control group, which was significant among both resident and senior clinician groups. There was significant additional lymphedema post axillary surgery detected in the study group.

Conclusion: Breast cancer surveillance benefits from a structured follow-up and discharge protocol. The study arm identified significant concerns that prompted further management. Family history, revisional surgery, and lifestyle modification discussions were provided within an acceptable consultation time. Our results suggest that a questionnaire can serve as a useful adjunct to survivorships clinic consultations as it ensures that a thorough and standardised care is provided independent of the seniority of the clinician.

SYMPTOM MANAGEMENT

P75

COVID-19: A RISK FACTOR FOR RECURRENT BREAST IMPLANT-RELATED SEROMA?

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Whilst breast implants have revolutionized breast reconstructive surgical approaches, they are exogenous foreign bodies and may trigger immunological responses. The COVID-19 pandemic has shed light on novel extrapulmonary complications that may include implant complications. A recent study described two patients with breast implant-related seroma closely following COVID-19 infection [1]. We report a patient in her late 30s who developed a recurrent peri-implant seroma shortly following COVID-19 infection, who

was refractory to first line management with antibiotics and aspiration, eventually requiring removal of her breast implant. She initially presented to the Emergency Department with a persistent cough and progressively increasing right breast pain, swelling, and erythema (Figure 1) after testing positive for COVID-19 one week earlier. This photo was taken 3 months post risk-reducing bilateral skin sparing mastectomy with immediate tissue expander reconstruction. Examination was unremarkable other than a right breast that is tense, swollen and erythematous, with palpable fluid around the tissue expander. She was systemically well. She was treated with first line management of intravenous antibiotics and ultrasound (US) aspiration, which drained 383mL of turbid yellow fluid (Figure 2). She was discharged home on day five with oral antibiotics. She represented five days later to the hospital with recurrent symptoms, had an ultrasound drainage and was started on a broader spectrum intravenous antibiotic and was discharged home with oral antibiotics. She unfortunately represented for the third time with recurrent symptoms, eventually requiring removal of her breast implant. The recurrent nature of her implant seroma with its close proximity to COVID-19 infection makes us consider its significance particularly in light of Núñez et al's reports of similar findings [1]. COVID-19 infection may precipitate implant complications by directly or indirectly altering inflammatory and autoimmune responses, or via causing mechanical disruption due to its symptomatology of a prolonged cough [2 3]. Ongoing research on the association of COVID-19 and implant complications is required for informed clinical decision making.

Reference

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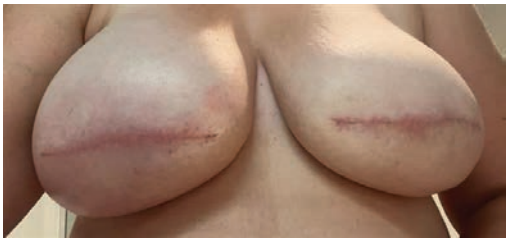

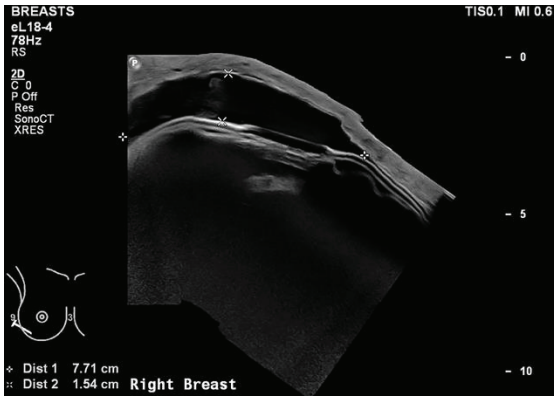

P76

REACH, ACCEPTABILITY, USEFULNESS AND ENGAGEMENT WITH A HEALTH SUPPORT PROGRAM FOR BREAST CANCER SURVIVORS DELIVERED VIA TEXT MESSAGES: A MIXED-METHODS EVALUATION OF THE EMPOWER-SMS RANDOMISED CONTROLLED TRIAL

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Problem statement: Text message programs offer a low-cost way to provide health support for people living with chronic diseases. However, there is limited evidence for the acceptability and utility of these programs among breast cancer survivors. The study aimed to evaluate the reach, usefulness, acceptability, and factors influencing engagement with a lifestyle-focused text message intervention to support women's mental and physical health after breast cancer treatment.

Methods: Mixed-methods analysis nested in the EMPOWER-SMS randomised controlled trial (n=160; intervention n=80, wait-list control n=80). Data sources included screening logs, text message delivery software analytics, intervention feedback survey and focus groups (n=16), which were summarised thematically based on the Framework approach.

Results: A total of 387 women met the inclusion criteria ($mean_{age}$±SD=59±12 years). Participants who declined (n=227) were significantly older than those who enrolled (n=160; 62±11 vs 55±11 years, respectively, p<0.001). Most intervention participants (64/80; 80%) completed the end-of-study survey, reporting the messages were easy-to-understand (64/64; 100%), useful (58/64; 91%) and motivating (43/64; 67%). The focus groups (n=16) revealed five factors influencing engagement: i) feelings of support/continued care ii) convenience/flexibility of messages delivery iii) weblinks iv) information from a credible source and v) options to save or share messages.

Conclusion: A lifestyle-focused text message program was acceptable and useful for women after breast cancer treatment. However, text messaging may be a barrier for a small number of older women. Suggestions for program improvements included delivering the program to patients with other cancers, during all types of treatment and including more weblinks in text messages.

Disclosures: *None*

POSTER ABSTRACTS (ONLINE ONLY)

BONE HEALTH

V01

USE OF BONE MODIFYING AGENTS IN ADJUVANT SETTING FOR EARLY BREAST CANCER PATIENTS: A REAL WORLD EXPERIENCE AT A REGIONAL CANCER CENTRE IN AUSTRALIA

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Problem statement: Adjuvant bisphosphonates are recommended by American Society of clinical Oncology (ASCO) for post-menopausal women with non-metastatic, early breast cancer who are candidates for adjuvant systemic therapy. EBCTCG meta-analysis, found that adjuvant bisphosphonates for 2 to 5 years in post-menopausal patients with early breast cancer, provide significant improvement in bone recurrence, bone fractures and to a lesser extent, in distant recurrence and breast cancer mortality. The aim of our study was to ascertain compliance with prescribing adjuvant bisphosphonates in women with early breast cancer, who were treated with systemic therapy at an Australian tertiary referral hospital.
Methods: We retrospectively collected data about early breast cancer patients from 1st July 2017 to 7th September 2021, from 'Mosaiq' software that is used for documentation and facilitation of chemotherapy for cancer patients at our hospital. We analysed the demographics, tumor characteristics, the proportion of patients who received adjuvant bisphosphonates among those who received adjuvant systemic therapy and predict score benefit for use of bisphosphonates. We collected information about compliance with dental check, calcium and vitamin D supplementation and availability of baseline renal function, bone mineral density (BMD) scan among the patients who had received adjuvant bisphosphonates.
Results: Adjuvant bisphosphonates were received by 98 out of 167 (59%) patients who received systemic adjuvant chemotherapy for early breast cancer during the study period. Out of the 98 patients who received bisphosphonates, 93 patients were post-menopausal (74 were natural menopause, 19 were on ovarian suppression therapy). Out of the 98 patients who received bisphosphonates, we had baseline BMD for 84 patients out of which 14 patients had the T score in the osteoporosis range (-2.5). We had serum calcium in 84% (82/98) and creatinine in 90% (88/98) assessed at baseline among those who received bisphosphonates. The mean PREDICT score benefit with bone modifying agents in percentage of 10-year overall survival was 3.2% in those patients who received bisphosphonates.
Conclusion: In our retrospective analysis over more than 4 years in a large regional cancer centre in Australia we found that 59% of patients who were on adjuvant systemic therapy for early, non-metastatic breast cancer received adjuvant bisphosphonates.
***Disclosure of interest**: None*

BREAST IMAGING

V02

NON-INVASIVE PREDICTORS OF AXILLARY LYMPH NODE BURDEN IN BREAST CANCER: A SINGLE INSTITUTION RETROSPECTIVE ANALYSIS

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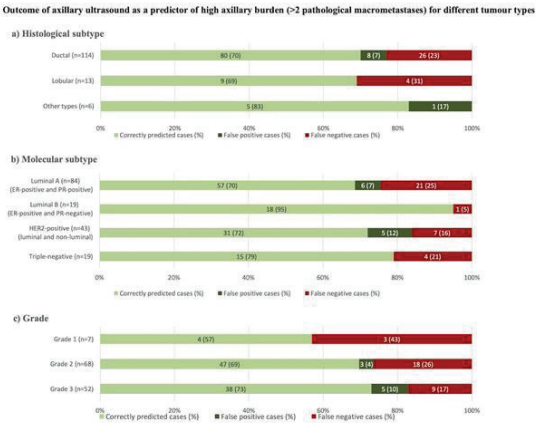
Problem statement: Axillary staging is an important prognostic factor in breast cancer. Sentinel lymph node biopsy (SNB) is currently used to stage patients who are clinically and radiologically node-negative. Since the establishment that axillary node clearance (ANC) does not improve overall survival in breast-conserving surgery for patients with low-risk biological cancers, axillary management has become increasingly conservative. This study aims to identify and assess the clinical predictive value of variables that could play a role in the quantification of axillary burden, including the accuracy of quantifying abnormal axillary nodes on ultrasound.
Methods: A retrospective analysis was conducted of hospital data for female breast cancer patients receiving an ANC at our centre between January 2018 and January 2020. The reference standard for axillary burden was surgical histology following SNB and ANC, allowing categorisation of the patients under 'low axillary burden' (2 or fewer pathological macrometastases) or 'high axillary burden' (> 2). After exploratory univariate analysis, multivariate logistic regression was conducted to determine relationships between the outcome category and candidate predictor variables: patient age at diagnosis, tumour focality, tumour size on ultrasound and number of abnormal lymph nodes on axillary ultrasound.
Results: One hundred and thirty-five patients were included in the analysis. Logistic regression showed that the number of abnormal lymph nodes on axillary ultrasound was the strongest predictor of axillary burden and statistically significant (P = 0.044), with a sensitivity of 66.7% and specificity of 86.8% (P = 0.011).
Conclusion: Identifying the number of abnormal lymph nodes on preoperative ultrasound can help to quantify axillary nodal burden and identify patients with high axillary burden, and should be documented as standard in axillary ultrasound reports of patients with breast cancer.
***Disclosure of Interest:** The authors have no relevant financial or non-financial interests to disclose.*

Results of multivariate logistic regression

	Odds Ratio	95% Confidence Interval		*P* value
		Lower	Upper	
Age at diagnosis (years)	1.02	0.99	1.05	0.177
Tumour focality (unifocal versus multifocal)	2.38	0.78	7.27	0.128
Tumour size on ultrasound (mm)	1.01	0.99	1.04	0.382
Number of abnormal LNs on ultrasound (2 or fewer versus >2 abnormal LNs)	2.82	1.03	7.72	0.044

Clinical performance metrics of axillary burden on ultrasound as a predictor of true high axillary burden (>2 pathological macrometasases)

		True axillary burden			
		2 or fewer pathological macrometastases	>2 pathological macrometastases	Total	
Axillary burden on ultrasound	2 or fewer abnormal nodes	59	30	89	Negative predictive value = 66%
	>2 abnormal nodes	9	15	24	Positive predictive value = 63%
	Total	68	45		Accuracy = 65%
		Specificity = 87%	Sensitivity = 33%		



V03

THE CLINICAL UTILITY OF THREE-DIMENSIONAL SURFACE IMAGING IN BREAST CANCER SURGERY: A SYSTEMATIC REVIEW

Justina Cheh Juan Tai[1], Muneer Ahmed[2]
[1]*University College London Medical School, London, UK*
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Background: Three-dimensional surface imaging (3D-SI) is an imaging modality that utilises images of pre-operative breast anatomy to estimate landmark-to-landmark distances, breast volume, and breast symmetry. It is also able to predict post-surgical breast anatomy through image manipulation. Currently, it is mostly used in aesthetic breast surgery, and the merit of using 3D-SI in breast cancer surgery has yet to be explored. The aim of this systematic review is therefore to identify instances in which 3D-SI has been used in breast oncoplastic surgery and to delineate potential benefits and challenges.
Methods: A systematic search was performed using PubMed (including MEDLINE), Web of Science, and Cochrane Central Register of Controlled Trials (CENTRAL) in December 2021. Studies included if they were human studies evaluating the use of any 3D-SI software in breast cancer surgery. Studies were excluded if they did not contain any primary data, purely described technique, investigated purely aesthetic surgery (e.g. augmentation or reduction surgery), or if the full text was not available.
Results: Our search yielded 324 results, of which 24 papers fulfilled our inclusion and exclusion criteria. The 24 studies had been conducted in 11 different countries, with most studies conducted in the United Kingdom, Germany, and the United States. A total of 15 types of 3D-SI software programmes were described, with the most popular being the VECTRA XT and Minolta 3-D Scanner. 3D-SI was able to estimate of distance between landmarks, breast volume, and breast symmetry with an acceptable level of clinical accuracy and inter-rater reliability. A wide range of 3D-SI applications were also reported: (1) objective assessment of post-surgical cosmetic outcome, (2) estimation of tissue expander implant endpoints, (3) intraoperative tumour localisation when used in conjunction with pre-operative MRI scans, (4) creation of 3D moulds to aid flap reconstruction. However, some studies reported measurement inaccuracies in ptotic breasts.
Conclusion: There are many potential applications for 3D-SI in oncoplastic breast surgery. Further research and formal cost-benefit analysis calculations will be useful in formally assessing the value of 3D-SI in this setting.

V04

UNDERSTANDING COMMON ARTEFACTS ON CONTRAST-ENHANCED SPECTRAL MAMMOGRAPHY: A NATIONAL CANCER CENTRE SINGAPORE (NCCS) EXPERIENCE

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Introduction: Contrast-enhanced spectral mammography (CESM) leverages on tumour angiogenesis and dual-energy mammography to assist in breast cancer detection. This pictorial review aims to provide an understanding of commonly encountered CESM artefacts and how to prevent possible diagnostic errors.
Methodology: Retrospective analysis of 411 CESM images accounting for 100 patients, were acquired at a tertiary cancer center from October 2020 to November 2021. The CESM procedures were performed using Hologic 3Dimension Full Field Digital Mammography unit. The images were evaluated by two trained radiographers with more than 7 years of experiences in mammography.
Result: 331 out of 411 images (81%) demonstrated minor artefacts. Air gap artefact, a dark band caused by incomplete contact with the detector was seen in 181 subtracted images (54%). Ripple artefact, reflected as black and white alternating lines, was found in121 (36%) images. Rim artefact, a curvilinear enhancement resulting from scattered radiation on different breast thickness, was recognized in 15 (5%) of the images. Skin-line enhancement, a thin rim of enhancement on edge of skin, was noted in 8 (2%) images but unrelated to underlying pathology. Motion artefact, axillary line and high retention of contrast media in vessels each constituted to 2 images (total 3%).
Conclusion: All artefacts did not interfere with image interpretation. Skin-line enhancement required correlation with clinical examination to avoid misinterpretation. The largest share of artefact resulting from air gap was more prominent in the superior and inferior aspect of Medio-Lateral Oblique projection. Ripple artefact, the second most occurring artefact from skin folds were commonly noted in medial aspect of CC projection and superior and inferior aspect of the Media-Lateral Oblique projection. Small study population at current stage limited the experience of readers. However, familiarity with this new imaging tool may allow radiographers to focus on patient positioning which could help minimize imaging artefacts.

MOLECULAR ASSAYS

V05

DEVELOPMENT OF APTAMER BASED ASSAY FOR DIAGNOSIS OF BREAST TUBERCULOSIS

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Problem Statement: Multiple approaches such as Mycobacterium culture, Ziehl-Neelsen stain, Fine needle aspiration cytology (FNAC) and GeneXpert are currently utilized for the diagnosis of Breast Tuberculosis, but each test suffers from one or the other limitation. Thus, an early and accurate diagnostic test for Tubercular mastitis (TBM) remains an unmet challenge to this day. In this study we have evaluated the role of aptamers in the diagnostic evaluation of Tubercular mastitis.
Methods: This study is an observational, prospective cohort study. Patients with signs and symptoms suggesting a possibility of Breast Tuberculosis were included (n=24). A composite reference standard (CRS), defined by GeneXpert or AFB smear or histology was used to classify patients (n=24) into Definite Tuberculosis (n=17) and Clinical Tuberculosis suspects (n=7). With CRS as a reference standard, the performance of 4 aptamers (2 aptamers against HspX antigen and 1 aptamer against MPT-51 and MPT-64) was assessed.
Results: Patients categorised into Definite TB by CRS defined in this study showed a strong association between the BIRADS score ≥3 on ultrasound and having a previous history of intervention (Fisher's exact test; *p*-value <0.05) for married women. The positivity of GeneXpert and AFB, when compared to CRS, was 5.8% (1/17) and 17.6% (3/17) respectively. HspX H38 aptamer demonstrated highest sensitivity of 80% with a specificity of 25%, whereas MPT-51 showed a sensitivity of 70% with a specificity of 25%. The sensitivity and specificity of HspX M6 was 47.1% and 57.1% respectively. MPT-64 aptamer demonstrated the highest specificity of 100% with a sensitivity of 40%.
Conclusion: The present study has provided evidence for the utility of aptamer-based antigen detection assay in Breast Tuberculosis. The validation of HspX H38 and MPT-51 ALISA in a larger number of serum samples can pave a way for a rapid, accurate and less invasive diagnostic test for Breast Tuberculosis.
Disclosure of interest: *None declared*

Table 1: Basic patient profiles

Sl No	Patient characteristics	N (%)
1	Age(mean)	33
2	Married status	
	Married	20 (83.33)
	Unmarried	4 (16.67)
3	Menopausal status	
	Premenopausal	22 (91.66)
	Perimenopausal	1 (4.17)
	Postmenopausal	1 (4.17)
4	Pregnancy at the time of diagnosis	1 (4.16)
5	Active breastfeeding	0 (0)
6	Multiparity	19 (79.16)
7	Coexisting pulmonary tuberculosis	0 (0)
8	Contact history of tuberculosis	3 (12.5)
9	History of ATT intake in past	5 (20.83)
10	BCG vaccination	24 (100)

Table 2: Aptamers utilized in the present study

Aptamers	Number of patients	Positive (%)	Negative (%)
HspX M6	24	11(45.84)	13(54.16)
HspX H38	14	11(78.57)	3(21.43)
MPT 51	14	10(71.43)	4(28.57)
MPT 64	14	4(28.57)	10(71.43)

Table 3: Performance of Aptamers in the present study

Test	Sensitivity[a] %	Specificity[a] %	PPV[a] %	NPV[a] %
HspX M6 (n=24)	47.1 (23-72.2)	57.1 (18.4-90.1)	72.7 (39-94)	30.8 (9.09-61.4)
HspX H38 (n=14)	80 (44.4-97.5)	25 (0.631-80.6)	72.7 (39-94)	33.3 (0.84-90.6)
MPT 51 (n=14)	70 (34.8-93.3)	25 (0.63-80.6)	70 (34.8-93.3)	25 (0.63-80.6)
MPT 64 (n=14)	40 (12.2-73.8)	100 (39.8-100)	100 (39.8-100)	40 (12.2-73.8)

n: number of samples tested

a: values in bracket represents 95% confidence interval

NEOADJUVANT THERAPY

V06
AXILLARY RECURRENCE IN BREAST CANCER AFTER NEOADJUVANT CHEMOTHERAPY, AND SENTINEL NODE BIOPSY WITH MICROMETASTASIS
Xavier Field, Karishma Jassal, Ian Campbell

Problem statement: There is no clear approach or robust evidence on the best surgical management of the axilla in patients who have micrometastasis at sentinel lymph node biopsy (SLNB) after neoadjuvant chemotherapy (NACT). The aim of this study was to investigate the outcomes of these women who have MM after sentinel lymph node biopsy (SLNB) in the setting of neoadjuvant chemotherapy (NACT) with attention to the rate of axillary recurrence (AR).
Method: Data was collected prospectively in the NZ regional breast cancer registries, now part of the Breast Cancer Foundation National Register (NZ) over a 20 year period 2001-2020. All patients who had SLNB for breast cancer were included. Data was analysed using Microsoft Excel and Prism 9 software.
Results: There were a total of 21,258 SLNB performed and 164 axillary recurrences. 250 patients had micrometastasis detected in their SLNB. Nine of the 250 patients had Neoadjuvant Chemotherapy, and 6 proceeded to Axillary Lymph Node Dissection (ALND). All of the six patients who received ALND had additional positive nonsentinel nodes at surgery. None had an AR. Of the three patients that had MM in the setting of SLNB after NACT without further axillary surgery, 1 patient developed axillary recurrence (33%). The median length of follow up for the patients who received NACT was 735 days.
Conclusion: There are no good quality studies demonstrating that omission of axillary dissection is a safe approach for MM in sentinel nodes after NACT. Women with residual nodal disease after NACT have disease that is resistant to chemotherapy. This is a very different baseline population to those women included in RCTs of lesser axillary surgery prior

to adjuvant systemic therapy. In this study, all women with MM who proceeded to ALND had further disease found, and the only axillary recurrence was in 1 of the 3 women where ALND was omitted. Women with MM on SLNB after NACT, should have ALND until high quality studies prove safe alternatives.

PATHOLOGY

V07

FIBROADENOMA VS PHYLLODES - IS CORE BIOPSY ADEQUATE OR IS EXCISION BIOPSY NECESSARY?

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Problem Statement: Fibroadenomas (FA) are benign breast lesions. Phyllodes tumours can be benign, borderline, or malignant. Core needle biopsy (CNB) and excisional biopsy are used as diagnostic tests but concordance rates vary in the current literature. Excision biopsy is supported for those ⩾ 30mm, symptomatic, or enlarging. We aim to investigate the concordance rate of CNB with excision biopsy, and the influence of size criteria at our institution. If CNB is sufficient to distinguish between a FA and phyllodes, it would allow consideration for de-escalation of therapy.
Methods: All patients at a health network who underwent a CNB and excision breast biopsy between January 2015 to January 2020 were retrospectively identified and included. Patient's age, date of biopsy and surgery, and excision size were recorded. Lesions that were investigated with only a CNB or excision biopsy were excluded. Histopathology reports from the CNB were compared against the excision biopsy.
Results: There were 219 patients with 232 excision biopsies performed, with a median age 32 years (range:14-76). Overall concordance rates for all excision biopsies were 69%. There were 108 lesions greater ⩾ 30mm in size, with 72% concordance. For the 168 FAs concordance regardless of size was 93%, with non-concordant results for 5 benign, 5 phyllodes, and 1 borderline phyllodes. FA <30mm, and ⩾ 30mm in size had 93% and 94% concordance respectively. The 3 benign phyllodes had 2 concordant, and 1 non concordant (1 borderline phyllodes + DCIS) result, all 3 lesions were ⩾30mm in size. One borderline phyllodes CNB returned as malignant on excision, and was ⩾30mm in size. The upgrade rate of a FA on CNB to a phyllodes, or borderline phyllodes was 3%, and 0.6% respectively. Only one lesion was <30mm in size (benign phyllodes).
Conclusion: CNB is adequate for diagnosis of FA <30mm and ⩾30mm size given concordance rates of 93% vs 94% respectively, with low upgrade rates on excision biopsy. For confirmed FA on CNB, surveillance may be safe for those ⩾30mm. This result would support further prospective studies to further confirm this finding and the safety of surveillance for lesions ⩾30mm with CNB confirming FA.

PREVENTION

V08

IMPORTANCE OF EARLY BREAST CANCER DIAGNOSIS

Jonathan Wiener, David Goltsman, Cindy Mac, Andrew Spillane and Sanjay Warrier

Background and purpose: A variety of risk factors have been established for breast cancer, and prevention remains an area which requires attention and significant improvement. At a regional level, the success of preventive interventions have been challenged by their ability to successfully adapt to the risk profile of the area [1]. Socioeconomic factors, especially disadvantage, is a key contributor in the differential distribution of the disease [2]. This study examined the geospatial relationship of late-stage breast cancer (LSBC) among women in the Greater Sydney Area of New South Wales (NSW), Australia. More specifically, it identified sub-groups that have increased risk of presenting with LSBC and investigates the spatial patterning of risk factors.
Methods: Data were obtained from the Cancer Institute New South Wales (CINSW) registry for all breast cancer diagnoses from 2000 to 2015. The Registry records demographic descriptors, including: age at diagnosis, country of birth, Indigenous status, and residential address by Local Government Area (LGA). Relative risk of LSBC was determined at LGA level and geospatial analyses examined associations with area-level socioeconomic characteristics captured by the SEIFA (socioeconomic indexes for areas) index. The relationship between relative risk of late-stage breast cancer and three socio-economic indices (relative socio-economic disadvantage; economic resources and; education and occupation) was plotted using scatterplot matrices in ArcGIS 10.2.
Results: More than 73,500 patients presented with breast cancer over the study period. The majority were Australian-born. LBSC was associated with area-level socioeconomic disadvantage, and lower education and occupation status. These patients were located within LGAs situated mostly in the southern and western regions of the Greater Sydney area.
Conclusions: In the Greater Sydney area, patients residing in socioeconomically-deprived areas, were more likely to present with LSBC. Focused interventions targeting this cohort are required.

RADIATION ONCOLOGY

V09

COMMONPLAN - ADJUVANT HYPOFRACTIONATED SIMULTANEOUS INTEGRATED BOOST RADIOTHERAPY: RETROSPECTIVE STUDY OF DOSIMETRY FEATURES

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Purpose: Hypofractionated with simultaneous integrated boost radiotherapy (HFSIB) improvements in dosimetry features are refining radiotherapy treatment for patients (pts) with early breast cancer (EBC) receiving whole breast adjuvant radiotherapy after breast-conserving surgery (WBRT-BCS). Non-inferior local control; toxicity; boost dose/schedule and tumour subtype outcomes are emerging in literature.
Methods: A retrospective descriptive dosimetry study with pts who underwent adjuvant HFSIB WBRT-BCS, for DCIS or invasive carcinoma. Bilateral and Nodal RT were excluded. Systemic treatment was administered according to international guidelines with neoadjuvant or adjuvant CT, anti-HER2+, hormonal therapy and bone targeted agent. HFSIB dose/schedule was whole breast 40.5Gy with 48Gy to tumour bed/15F, daily fractions of 2.7 Gy [EQD2/BED α/β3 46.2/77.0Gy – α/β10 42.9/51.4Gy] and 3.2 Gy [EQD2/BED α/β3 59.5/99.2Gy – α/β10 52.8/63.4Gy], respectively. Treatment techniques were intensity-modulated radiotherapy and volumetric modulated arc therapy (IMRT/VMAT), with

Monaco®TPS multicriteria optimization. Dosimetry assessment to coverage parameters for target volumes (PTVbreast; CTVboost+3mm= PTVboost) and OAR constrains heart Dmean; lung Dmean; ipsilateral lung V20 and contralateral breast V5 and Dmax. Survival curves were estimate by Kaplan-Meier survival analysis (IBM.SPSS.Statistics v21).

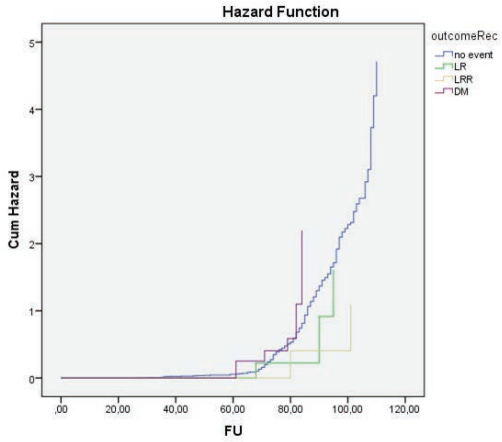
Results: Between March 2013 and December 2016, 390 pts received HFSIB. Thirty-nine pts were lost to follow-up for survival analysis. Median pts age was 54 years old. 92% of pts were treated with IMRT and 8% with VMAT. 210 pts with left breast and 180 pts right breast. Coverage parameters guaranteed to 95% of the prescribed dose in the V95% (PTVbreast and PTVboost). The OAR constrains are described in table.1. 35 pts had DCIS and from invasive carcinoma (Luminal A-like n=165; Luminal B-like n=92; HER2+ n=34 and TN n=25). The median follow-up was 6.9 years. Five-year estimated local recurrence-free survival was 98,6% (95%CI: 77,86-99,74; *p*=0,762); loco-regional recurrence free-survival was 99,1% (95%CI: 79,9- 112,0; *p*=0,393) non-statistically significant for IHC classification. The distant recurrence free- survival was most common for TN pts 78,3% (95%CI: 70,1-86,5; p=0,038).

Conclusion: HFSIB plan showed optimized conformance to target volumes with low doses to OAR, upright for 5-year survival analysis for EBC pts after BCS. All HFSIB studies included lower-risk pts with boost discrepancies. Prospective subtype, dose/schedule radiobiology boost study with techniques (prone or deep-breath hold) can make clear other outcomes.

Table1

IMRT	Right Breast				Left Breast			
N Patients	168				191			
	Mean	STD	Min	Max	Mean	STD	Min	Max
Dmean Heart	4,48	0,92	1,8	8,3	6,45	1,24	3,2	10,3
V10 Heart(%)	4,31	5,52	0	37	15,11	6,50	1,9	37
V20 Lung Ipsi(%)	17,20	2,82	6,2	24,1	17,39	2,93	8,4	29,7
DMean Lung Ipsi(Gy)	9,49	0,92	5,1	13,6	9,46	0,83	6,6	13,1
V5 CL Breast(%)	0,61	0,83	0	4,1	0,62	0,85	0	4
DMax CL Breast (Gy)	7,62	4,37	0,9	22,4	7,79	4,54	0,7	27,9

VMAT	Right Breast				Left Breast			
N Patients	12				19			
	Mean	STD	Min	Max	Mean	STD	Min	Max
Dmean Heart	5,05	0,69	3,7	6,4	6,64	1,11	4,6	8,5
V10 Heart(%)	8,31	4,69	0	16	17,84	5,76	8,6	26,5
V20 Lung Ipsi(%)	19,03	2,97	15,8	24,4	17,22	2,21	11,8	21
DMean Lung Ipsi(Gy)	9,71	0,58	9	10,9	9,34	0,51	8,4	10,4
V5 CL Breast(%)	1,07	0,94	0	2,4	1,08	1,36	0	4,4
DMax CL Breast (Gy)	8,81	3,84	3,4	15	7,56	3,68	3,4	17,7



		Tumour Biology				Total
		CDIS	Luminal A	Luminal B	RH-/HER2+	RH +/HER2+	TN	
Relapses		0	6	6	0	3	2	17
	Local		3	2				5
	Loco-regional		1	2			1	4
	Distant		2	2		3	1	9
Second Primary			2					2
Deaths								3
	Breast cause							0
	Other cause		2 (ovary cancer)	1 (Covid-19)				3

RECONSTRUCTION

V10
FEASIBILITY OF CHEST WALL PERFORATOR FLAPS FOR WHOLE BREAST RECONSTRUCTION

Peter Barry, Samantha Chen, Rachel O'Connell

Problem Statement: Chest wall perforator flaps (CWPFs) can replace resected volume during breast-conserving surgery. Their use can also be extended to whole breast reconstruction (WBR) after mastectomy with a recovery and hospital stay similar to implant-based techniques and shorter than free-flap autologous or extended latissimus dorsi reconstruction. We introduced and audited this procedure for feasibility.

Methods: Cases were extracted and collated from a prospective database of patients who underwent CWPFs between 23/12/2019-1/7/2022. Patient demographics, indication for surgery, surgical technique and complications were analysed.

Results: Local audit approval was obtained. Of 111 females who underwent CWPF, 12 had WBR, bilateral in 1 (performed metachronously). Median age was 53 years, mean BMI 30.2 kg/m^2 and 3 were ex-smokers. Seven were BRCA1 or BRCA2 germline mutation carriers (including the bilateral patient). Six had neoadjuvant chemotherapy. Three had had prior ipsilateral breast radiotherapy.

The most common perforator vessels used were Lateral intercostal artery perforator (LICAP, n=4) or combination LICAP and lateral thoracic artery perforator (n=6), TDAPs (n=2) and 8 patients had skin reduction. Mean operative time was 3.6 hours and mean specimen weight was 595g. Length of hospital stay was n=1 day surgery, n=10 one night, n=2 two or three nights. Three patients had post-operative radiotherapy and 1 had unplanned surgery for lateral mastectomy skin flap necrosis debridement. Median follow-up was 8.4 months.

Conclusion: The highly selective use of chest wall perforator flaps for whole breast reconstruction is a safe and feasible approach which may provide another option for patients who prefer reconstruction but are less suited to alternative methods and provides a short length of hospital stay. Avoidance of harvest of the latissimus dorsi muscle may reduce functional morbidity. Longer term outcomes need assessment and reporting.

No conflicts of interest to declare.

V11
OUTCOMES OF SUBMUSCULAR RECONSTRUCTION WITH POST-MASTECTOMY RADIOTHERAPY: A GOLD COAST EXPERIENCE

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Problem Statement: Post-mastectomy radiotherapy (PMRT) rates have increased since the 2014 EBCTCG meta-analysis demonstrating improved diseases-free and overall survival in women with one to three involved nodes.[1] Subsequently, post-mastectomy reconstructions are exposed to PMRT with increasing frequency.[2] Total submuscular reconstruction has the advantage of an additional layer of muscular coverage when compared to the pre-pectoral approach, and with modern implants provides a reconstruction that both obviates the need for expensive synthetic or biologic coverings and proves durability after radiotherapy. We provide results of a contemporary Australian case series from a high-volume centre employing expander-based reconstruction using a completely submuscular pocket. This provides both a comparison for the increasing volume of data from submuscular case series and helps quantify the added morbidity of PMRT.
Methods: A retrospective case series was compiled of patients undergoing breast cancer treatment with mastectomy, and immediate two-stage submuscular implant-based reconstruction. All patients were treated at the same public breast cancer unit by one of three surgeons employing the same technique over a 5-year period (2016 to 2021). Outcomes in those reconstructions undergoing PMRT were compared to the remainder of the cohort.
Results: 202 patients were identified undergoing mastectomy and immediate reconstruction at Robina Hospital in Queensland. This represented 365 reconstructions. 35 patients underwent PMRT, median follow up was 28 months and baseline demographics were similar between the irradiated and un-irradiated groups (Table 1). Overall complications demonstrate similar rates of clinically significant wound infection and wound breakdown across the two groups (Figure 1). Rate of unexpected expander loss was greater in the post-radiotherapy group (8.6%) than in the unirradiated group (4.6%). Of these reconstructions, 4 were not salvageable (1.1%).
Conclusion: Total submuscular expander-based reconstruction is a durable technique with comparable or lower rates of major complications post-radiotherapy when compared to pre-pectoral reconstruction cohorts.[3]

Table 1. Patient Demographics

All Patients	*n* = 202 (%)
Age (years)	
• Median	48
• Range	23 – 83
BMI (Mean)	25.5
ASA (Median)	2
Menopausal status	
• Pre-menopausal	101 (51)
• Peri-menopausal	36 (18)
• Post-menopausal	62 (31)
Smoking status	
• Non-smoker	111 (55)
• Ex-smoker	56 (28)
• Current smoker	35 (17)
Diabetes status	
• Diabetic	3 (1)
• Non-diabetic	199 (99)
Post-Operative Radiotherapy	35 (17)

Abbreviations
ASA American Society of Anaesthesiologists
BMI Body Mass Index
EBCTCG Early Breast Cancer Triallists' Collaborative Group
PMRT Post Mastectomy Radiotherapy

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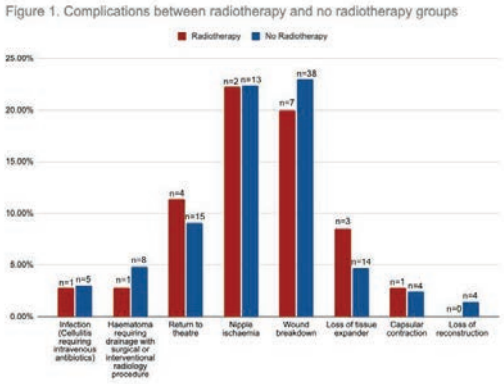
Disclosure of Interest: *Nil disclosures to declare.*

Figure 1. Complications between radiotherapy and no radiotherapy groups



V12
INDOCYANINE GREEN ANGIOGRAPHY FOR CONSERVATIVE MASTECTOMY AND RECONSTRUCTION IN NORTH QUEENSLAND

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Problem statement: Breast cancer affects 1 in 8 women. For resection volumes >40%, conservative mastectomy with implant-based reconstruction (L3OPBS[1]) results in improved QOL for sufferers, however is associated with significant wound complication rates.[3–4,8–9] Indocyanine green angiography (IGA) is an imaging modality used to assess microvascular patency and perfusion. Its intraoperative use to assess nipple and flap perfusion is increasing.[5,6–7,10] North Queensland HHSs provide care to regional and remote communities. Traditionally, L3OPBS was only available in metropolitan centres. With increasing availability of IGA and oncoplastic surgeons, L3OPBS is becoming available to

regional-based patients. We present our experience of a regional L3OPBS service incorporating IGA into routine practice.

Methods: Retrospective review of L3OPBS cases in 2 centres between March 2019 and February 2022. Demographic, intra- and post-operative data were collected. Complications were classified according to Clavien-Dindo (CD).[2] Primary outcome was flap necrosis in cases utilising IGA. Secondary outcomes were wound complications, operative interventions, wound healing time and risk-factor analysis. Analyses was performed using LibreOffice Calc and Jamovi. Institutional ethics approval was obtained.

Results: Forty-eight operations were identified, with one excluded. Median age was 51 years (36–73). Average BMI was 26.7 (19.0–43.8). Eighteen patients (38.3%) had smoking history (2 active and 16 ex-smokers). IGA was available for 34 cases (72.3%). There were no significant demographic differences between IGA and non-IGA subgroups. Ten patients (21.3%) suffered wound complications; eight (17.0%) developed wound infection, with one (2.1%) suffering flap necrosis. Three patients (6.4%) required implant removal; 2 had prior radiotherapy and one had co-morbidities predisposing to wound complications. In the complication group, median wound healing time was 2.7 months (1.3–11.7, SD 3.6). Obesity (BMI ≥30) was associated with a higher risk of CD3 complications (27.3% vs. 5.6%, odds ratio 6.37, p = 0.041).

Conclusion: Extending L3OPBS to regional settings offers patients improved QOL, with complication rates comparable to those of high-volume metropolitan centres. Specifically, as previously reported, utilisation of IGA contributes to objective assessment of flap perfusion thereby minimising major complication rates in keeping with expected standards.

Abbreviations

L3OPBS, level 3 oncoplastic breast surgery; QOL, quality of life; IGA, indocyanine green angiography; HHS, hospital and health service; CD, Clavien-Dindo; BMI, body mass index.

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SCREENING

V13

REFLECTIONS FROM WOMEN WITH AN INTERVAL BREAST CANCER DIAGNOSIS: A QUALITATIVE ANALYSIS OF OPEN DISCLOSURE IN THE BREASTSCREEN WESTERN AUSTRALIA PROGRAM

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Problem statement: 'Interval breast cancer' describes a malignancy that is diagnosed after a negative screening mammogram. Open disclosure is a process of addressing a negative health outcome that includes an apology and an opportunity for the client to discuss concerns. BreastScreen Western Australia has implemented a policy of open disclosure, and to date this is the only BreastScreen service in Australia to practise open disclosure in response to interval cancers. The purpose of this study was to gain an understanding of clients' experience with interval cancer and their attitude towards the screening programme by conducting a thematic analysis of written responses from women participating in the open disclosure process.

Methods: Women experiencing an interval cancer diagnosis between 2011 and 2020 were sent a questionnaire by mail as part of the open disclosure process. It included two broad questions with free-text responses: 'what could we have done better?' and 'what did we do well?' A qualitative analysis of the responses was conducted using an inductive approach. Responses were de-identified and data were thematically analysed into themes to reflect key concepts communicated by women and were presented using verbatim quotations. Coding was an iterative process and consensus on themes was reached by the study team.

Results: Five themes emerged in response to "what could we have done better?": 'nothing,' 'broaden scope,' 'service delivery,' 'breast density education' and 'more education' generally. Six themes emerged in response to "what did we do well?": 'staffing,' 'overall satisfaction,' 'reminders,' 'follow-up after interval cancer,' 'efficiency' and 'information and education provision.' An additional theme of 'storytelling' emerged from both questions: an opportunity for the woman to share her experience of cancer.

Conclusion: This research provides information describing the experience of Australia's only BreastScreen service to offer an integrated open disclosure process related to interval cancer. Most women expressed positive attitudes towards the service and appreciated giving feedback in the open disclosure process despite the devastating experience of an interval cancer. Several themes supporting the role of BreastScreen in education were identified, including providing information about breast density, breast health, and limitations of screening.

Disclosure: *NH is supported by a National Breast Cancer Foundation (NBCF Australia) Chair in Breast Cancer Prevention (EC-21-001), and a NHMRC Investigator (Leader) Fellowship (1194410).*

V14

ADDED VALUE OF MAMMOGRAPHY IN ABUS AND HHUS FOR IMPROVING DIAGNOSTIC ACCURACY OF BI-RADS

ULTRASOUND CATEGORIES 4A ASSESSMENTS: A MULTICENTER HOSPITAL-BASED STUDY IN CHINA

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Problem statement: The application of BI-RADS ultrasound (US) category 4 subdivisions offers a challenge to the management of BI-RADS-US 4a for tending to result in unnecessary biopsies. Few studies have investigated the added value of Mammography (MAM) for BI-RADS-US 4a lesions. Therefore, we aimed to assess the role of second-look MAM adjunct to handheld ultrasound (HHUS) and automated breast ultrasound (ABUS).
Methods: In this cross-sectional study, 1973 women aged 30 to 69 were enrolled in five tertiary-care hospitals in China from 2016 to 2017. All women underwent HHUS and ABUS and those aged 40 to 69 also underwent MAM. Logistic regression analysis was performed to identify the influencing factors associated with the false-positive lesions in BI-RADS-US 4a. The biopsy rate and the cancer detection rate among different biopsy thresholds were compared using the Chi-squared test.
Results: 1947 women (mean [SD] age, 44.9[9.8] years) were eligible for analysis. Compared to 4b and 4c, the benign biopsy rate was significantly higher while the detection rate for malignancy was lower for both HHUS and ABUS 4a (all $P<0.001$). Orientation (odds ratio [OR], 5.2; 95% confidence interval [CI], 1.9 to 14.1; $P<0.01$), architectural distortion (2.9; 1.3 to 6.4; $P<0.01$), and duct change (9.0; 3.4 to 23.5; $P<0.01$) were independent factors associated with the false-positive lesions in the BI-RADS-US 4A in HHUS, while premenopausal (0.4; 0.2 to 0.8; $P<0.01$), lesions size (2.3; 1.2 to 4.6; $P<0.05$), and architectural distortion (4.1; 1.5 to 11.2; $P<0.01$) were significant features of ABUS. The new biopsy threshold (BI-RADS-US 4a and 4/5 in MAM) reduced false-positive biopsies and did not affect the cancer detection rate when compared to the current scenario.
Conclusions: The second-look MAM adjunct to US can reduce the false positive biopsies and provide more meaningful imaging evidence to differentiate benign and malignant lesions in breast ultrasound 4a. Meanwhile, sonographic factors influencing the false positive lesions showed the difference between HHUS and ABUS which might be attributed to the experiences of radiologists. Integrated training is needed to improve the learning curve in sonographers.
Declaration of interests *We declare no competing interests.*

SURGERY

V15

WIRE-FREE BRACKETING OF EXTENSIVE OR MULTI-FOCAL/CENTRIC CANCER TO ACHIEVE BREAST CONSERVATION

Samantha Chen, Lorenza Caggiati, Katherine Krupa, Rachel O'Connell, Qurutal Ain, Aikaterina Micha, Peter Barry

Problem Statement: Breast conservation has become increasingly prevalent given the oncoplastic options now available to even resect extensive disease. The challenge to accurately localise and excise all disease foci or bracket large areas of invasive and in-situ cancer has created greater need for radiological and surgical planning, well ahead of surgery. This study reports on a consecutive series of breast cancer patients undergoing non-wire localisation using 2 or more para-magnetic markers to bracket malignancy or mark multi-focal or -centric disease. We examine the effectiveness of these markers, the re-excision rate as well as the oncoplastic procedures used to achieve breast conservation.
Methods: Patients undergoing insertion of 2 or more ipsilateral non-wire breast lesion markers at the Royal Marsden Hospital were enrolled. The primary outcome was the rate of breast conservation achieved. Secondary endpoints include re-excision rate, rate of oncoplastic procedures -both volume displacement and replacement.
Results: Between August 2018 and June 2022, 94 patients underwent multiple marker placement in an ipsilateral breast for bracketing or multifocal cancer. Thirty-five patients had bracketing for their cancer footprint and 59 patients had markers for multifocal / centric disease. Ninety-two of 94 patients (98%) achieved breast conservation. The median age was 59 years, mean imaging extent 40mm (range 17-110mm). Localisation was by stereotaxis in 29%; ultrasound in 57% and both in the remainder. Ninety-two percent of patients had 2 seeds only. The range of surgery included WLE in 31%; mammoplasty in 51%; chest wall perforator flap in 18%. 77% had concomitant axillary surgery. Re-excision was needed in 20.5% but only 5% had residual disease found. Median specimen weight was 86g (mean 120g; maximum 618g). Mastectomy resulted in 2 patients.
Conclusion: Localisation using para-magnetic markers allows de-coupling of localisation from the surgical procedure and results in acceptable re-excision rates. Wire-free localisation is feasible and percutaneous detection of para-magnetic markers facilitates accurate resection of multifocal or extensive breast malignancy achieving high rates of breast conservation.
No disclosures for any authors.

V16

CHEST WALL PERFORATOR AS PARTIAL VOLUME REPLACEMENT TO AVOID MASTECTOMY

Samantha Chen, Rachel O'Connell, Jennifer Rusby, Peter Barry

Problem Statement: Chest wall pedicled-perforator flaps (CWPFs) can replace resected volume during breast-conserving surgery (BCS). The aim of this study was to evaluate the use of CWPFs for partial volume replacement (PVR)in a single centre to assess safety and feasibility for those patients in whom the only alternative was mastectomy.
Methods: A prospective database of all patients who underwent CWPFs as part of their surgical treatment between 17/05/2017-1/7/2022 was analysed. Only those who underwent PVR as part of BCS - having mastectomy (not mammoplasty) as the only surgical alternative - were included. Patient demographics, indication for surgery, surgical technique and complications were analysed.
Results: Local audit approval was gained for prospective database interrogation. Of 111 females who underwent CWPF, 95 fulfilled the inclusion criteria. Median age was 55 years (IQR=49-63), median BMI was 26.4kg/m^2 (IQR=22.3-29.8), 12 (12.6%) patients were current or recent (< 6 weeks) smokers. Indications for CWPF were volume replacement as part of breast conserving surgery for a primary cancer (n=86, 90.5%), breast conserving surgery for a local recurrence (n=6, 6.3%), locally-recurrent phyllodes tumour (n=2), correction of post-BCS deformity (n=1). Fourteen women had undergone neoadjuvant chemotherapy (14.7%), 24 women underwent neoadjuvant endocrine therapy (25.3%). Localisation was undertaken in 49, (52%) +/- bracketing of the tumour pre-operatively. The most common perforator vessels used were Lateral intercostal artery perforator (LICAP) (n=29, 30.5%),

followed by LICAP and LTAP (long thoracic artery perforator) combination (n=26, 27.4%), and anterior/medial intercostal artery perforator (AICAP/MICAP) (n=29,30.5%). Median resection specimen weight was 70g (IQR=41-123, maximum=492g). Median histological tumour extent was 47mm (IQR=35-67, maximum=129mm). re-excision of margins in 21 patients had further surgery for (22%) of whom 12 had residual disease (12.6% of total). During a median follow-up of 11.3 months (range 1-53), there was 1 death from metastatic relapse (at 9 months) and no local-regional recurrences.

Conclusion: The use of local perforator flaps for partial volume replacement during BCS as the only surgically feasible alternative to mastectomy is an oncologically safe approach to avoid the latter. Longer term assessment of outcomes, including oncological, patient-related outcome measures as well as 3D photography is in progress.

None of the authors have any relevant conflicts of interest.

V17

THE CLINICAL UTILITY OF MARKERS IN THE DE-ESCALATION OF AXILLARY SURGERY

Peter Barry, Samantha Chen, Rachel O'Connell, Kathryn Harborough, Victoria Sinnett, Aikaterina Micha, Jennifer Rusby, Katherine Krupa

Problem Statement: De-escalation of axillary surgery in the treatment of lymph node (LN) positive breast cancer is facilitated by marking of involved nodes, which removed together with sentinel nodes constitute a targeted axillary dissection (TAD).

In the setting of primary surgery, patients with impalpable biopsy-proven nodal involvement of 1-2 nodes may be eligible for axillary conservation. To facilitate accurate surgical removal of these nodes, we report our experience using the paramagnetic MAGSEED (Endomag®, UK).

Methods: Local audit approval was obtained. A prospectively maintained database of axillary markers inserted was interrogated in 2 settings: cN1/2 patients undergoing NACT followed by TAD. and patients who met ACOSOG-Z0011 criteria who had 1-2 suspicious/proven nodes undergoing primary surgery with removal of the clipped node and SLNB, we termed 'primary TAD'.

The primary endpoint was the successful removal of the marked LN.

Results: 243 markers (in 224 patients) were inserted between October 2018-June 2022. Mean age was 55 years. The receptor subtypes and age significantly differed between the primary surgery and NACT groups. All inserted markers were retrieved. In the NACT setting, the first 74 patients who had 78 Magseeds inserted after completion of NACT (involved nodes were initially marked using an O-Twist marker), 21/78 (26.9%) of Magseeds in 18 (24.3%) patients were found outside of the node in neighbouring axillary tissue. A change in practice ensued with the Magseed placed at commencement of NACT. In the following 52 patients who had 57 Magseeds, only 1/57 (1.8%) in 52 (2%) patients were found outside of the node – significantly lower than previously; (Chi^2 11.9678 p= 0.001343). In the primary TAD group, 70 patients had 77 Magseeds inserted pre-operatively. 1/77 (1.3%) of the Magseeds were found outside a node in a patient who had 2 seeds inserted. 59/76 of the marked nodes were found to be the sentinel lymph node (78%, 95% CI: 68-87%).

Conclusion: Axillary nodal marking in this single centre audit was safe and accurate, facilitating a high conservation rate with minimal morbidity to the axilla. In the setting of TAD following NACT, placement at the start of treatment led to a higher localisation rate.

No conflicts of interest for any authors

V18

RETROSPECTIVE REVIEW OF NON-SENTINEL LYMPH NODE POSITIVITY IN BREAST CANCER PATIENTS WITH SENTINEL LYMPH NODE MICROMETASTASIS USING ONE-STEP NUCLEIC ACID AMPLIFICATION

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Problem Statement: Sentinel lymph node biopsy (SLNB) remains the gold standard for axillary staging in clinically node negative breast cancer. One-step nucleic Acid Amplification (OSNA) reliably assesses the SLNB intraoperatively. The International Breast Cancer Study Group (IBCSG) 23-01 trial suggested that axillary lymph node dissection (ALND) may not be necessary for patients with early breast cancer who only have micrometastasis detected in the sentinel node. However, controversy still exists for micro or macro deposits in sentinel nodes of patients with high risk primary tumours or persistent disease after neoadjuvant therapy. The aim of this study was to determine the frequency of non-sentinel axillary lymph node involvement in breast cancer patients with micrometastasis on SLNB using OSNA.

Methods: A retrospective review was performed of all patients who underwent intraoperative OSNA evaluation (based on the CK19 mRNA copy numbers) of their SLNB. OSNA results were classified as negative (<250/µl), micrometastasis (250-5000/µl) and macrometastasis (>5000/µl).

Results: 451 breast cancer patients underwent SLNB with OSNA between September 2014 and April 2020. Excluding those with incomplete data, 319 (75%), 57 (13%) and 52 (12%) patients had negative, micrometastasis and macrometastasis results respectively. Of the patients who had micrometastasis, 42 had further axillary surgery with 14 (33%) having positive non-sentinel lymph nodes. Of those who had macrometastasis, 49 patients underwent axillary dissection and 22 (42%) had positive non-sentinel lymph nodes.

Conclusion: Our early experience suggests that OSNA macrometastasis may correlate to further axillary disease in early breast cancer. Although IBCSG 23-01 only identified 13% of patients with micrometastasis on SLNB to have further positive non-sentinel lymph nodes, 33% of our patients had further positive non-sentinel lymph nodes. This may suggest that inferences made by IBCSG 23-01 may not be generalisable to all patients with micrometastasis and other factors should be considered in selecting patients for more extensive axillary surgery. OSNA provides information for critical decision making at the time of first surgery.

V19

PRIMARY ANGIOSARCOMA OF THE BREAST IN A 17-YEAR-OLD FEMALE

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Introduction: Primary angiosarcoma of the breast is a rare and aggressive malignancy which arises from endothelial cells lining blood vessels. It represents less than 0.05% of all breast cancers[1,2], and more commonly affects relatively younger individuals at a median age of 40 years[3]. Reaching

the correct diagnosis may be delayed, because imaging is not typical of other breast malignancies and can mimic benign processes. Clinical presentation is variable, ranging from diffuse breast oedema to a palpable discrete mass[4]. The prognosis of primary breast angiosarcoma is poor, with a 5-year survival rate of 46%[5].

Case Presentation: A 17-year-old Caucasian female presented to her general practitioner with a palpable left breast mass on self-examination. She is normally fit and well, with no past medical or surgical history. Specifically, she had no history of therapeutic radiation. The only family history of malignancy was that of lung cancer in her paternal grandfather who was a heavy smoker. Core biopsy of this lesion confirmed primary breast angiosarcoma. She underwent a wide local excision of this lesion followed by mastectomy of the same side with delayed reconstruction. Following completion of adjuvant chemotherapy, she remains in remission three years after her initial diagnosis.

Conclusion: Primary breast angiosarcoma is an aggressive malignancy that affects younger females, and this case is, to our knowledge, one of the youngest documented case in literature. Imaging appearances are not typical of other aggressive breast malignancies and may mimic benign processes. Given the rarity of this condition, there are no established therapeutic protocols; however, the principles of therapy include complete surgical resection and adjuvant chemotherapy. Recurrence and distant metastasis are relatively common, and thus the overall prognosis is poor. Early detection, aggressive treatment and ongoing surveillance provide the best chances of prolonged disease-free survival.

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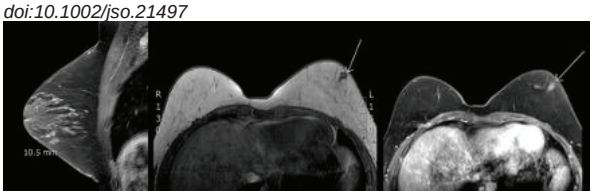

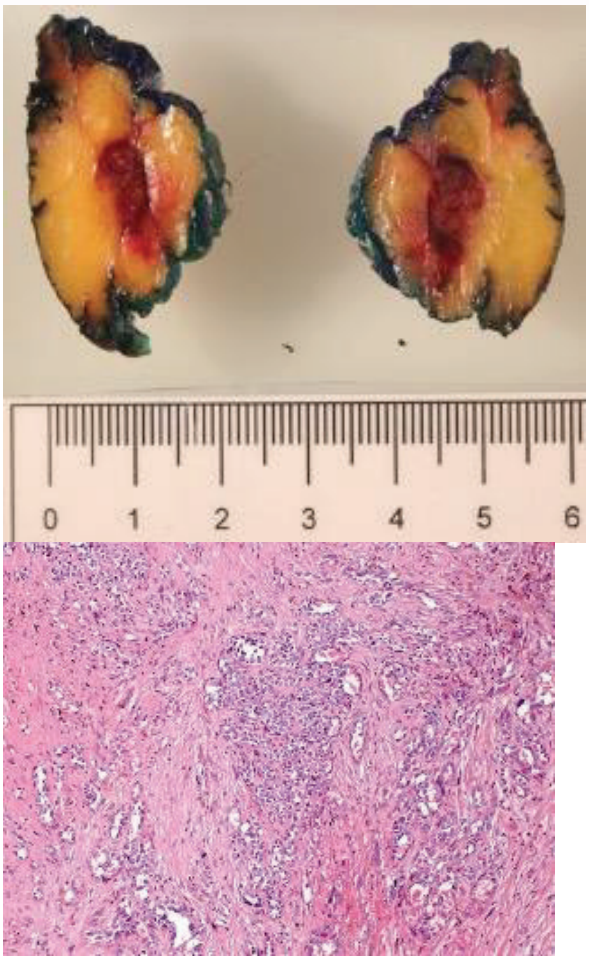

V20

XANTHOGRANULOMATOUS INFLAMMATION AND SPINDLE CELL PROLIFERATION AS RESPONSE TO SILICONE BREAST IMPLANT LEAKAGE: A CASE REPORT

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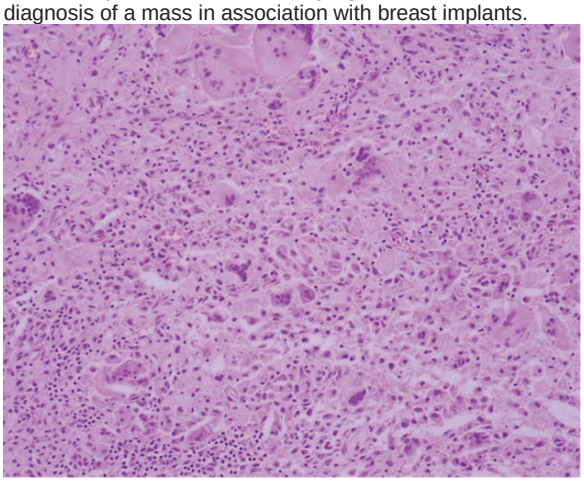
PROBLEM STATEMENT: A 58-year-old female presented with leakage of bilateral breast implants as discovered by a PET-CT performed as a part of a workup for small bowel Langerhans cell sarcoma metastases. The imaging results of the PET-CT scan revealed increased activity bilaterally behind her subpectoral implants and an additional finding of an enhancing, irregular, heterogeneously enhancing mass in the 10 o'clock position of the right breast of 1.9cm diameter. The patient was worked up for concerns for breast implant-associated anaplastic large cell lymphoma (BIA-ALCL).

METHODS: Case Study

RESULTS: A broad immunohistochemistry panel was performed on the surgically excised breast implants with key results detailed as follows: keratin stains (AE1/AE3, CK7, CK5/6) were all negative while histiocytic markers (CD68 and CD163) highlighted the foamy and giant cells with CD3 and CD20 showing a mixed T and B cell population. CD30 was negative. Zn and Fite organism stains were negative for mycobacteria. In this patient's case, the abnormal imaging

findings were not due to a malignant process, but rather a rare and benign but strikingly exuberant xanthogranulomatous inflammatory response to breast implant leakage. The surgical management of this patient was curative with no subsequent adjuvant treatment required.

CONCLUSION: This case study highlights the rare complications of silicone breast implants, as well as the diagnostic limitations of imaging. This patient's presentation was unusual as this is a rare complication seen in ruptured breast implants which clinically was suspicious for malignancy. Given the association between masses associated with breast implants and anaplastic large cell lymphoma, further investigation including surgical excision was undertaken. What initially was a concern for a serious complication of long-standing breast implants, fortuitously turned out to be a benign but exuberant inflammatory reactive process. We hope that our report will add to the literature of this rare phenomenon and highlight it as a differential diagnosis of a mass in association with breast implants.



V21
DOES ONCOPLASTIC BREAST SURGERY DELAY ADJUVANT CHEMOTHERAPY? A RETROSPECTIVE CASE SERIES

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Problem Statement: Oncoplastic breast surgery (OPBS) is an expanding field, referring to procedures in breast oncology involving plastic surgery techniques. The benefits include positive psychological and cosmetic outcomes as well as improved surgical outcomes[1]. International studies demonstrate that outcomes are affected when there is a > 12 week delay to commencing chemotherapy[2,3]. There is an assumption that more extensive surgery can result in delays to adjuvant treatment. There have been several reviews demonstrating no significant difference in oncological outcomes for patients undergoing OPBS compared to simple procedures such as a mastectomy however, there are currently no Australian studies to support this[4,5,6].

Methods: A retrospective review was performed of 205 patients having upfront surgery for breast cancer followed by adjuvant chemotherapy in our institution from 2018 – 2021. OPBS procedures included local flaps, therapeutic mammaplasty and implant-based reconstruction. Patients having autologous reconstruction were excluded. The time to starting chemotherapy (TTC) was calculated from the date of the first procedure (for patients having multiple procedures). Data analysis was performed using Mann-Whitney U tests via SPSS.

Results: 123 patients (60.0%) underwent simple procedures and 82 (40.0%) underwent OPBS. Overall mean TTC was 44.0□16.4 days, median of 41.0 days. Thirty-one patients (15.1%) experienced a delay of more than 8 weeks. Of those, 18 (58.1%) had simple surgery while 13 (41.9%) had OPBS. Five patients (2.4%) experienced a delay of more than 12 weeks. Of those, 1 (0.5%) was simple, 4 (2.0%) were OPBS. Overall, there was a significant increase in TTC in OPBS patients compared to simple, with means of 47.0□18.9 and 41.9□14.2 days respectively ($p = 0.031$). There were no significant differences in mean TTC between groups for > 8 or > 12 weeks delay to first dose chemotherapy (Table 1).

Conclusion: Patients undergoing OPBS in our unit did have a statistically significant delay to starting first dose chemotherapy compared to simple procedures ($p=0.031$) but reassuringly, in keeping with international guidelines, there were no significant delays beyond the internationally accepted 12 weeks TTC. Nevertheless consideration should be given to the complexity of surgery undertaken for patients who are likely to receive adjuvant chemotherapy.

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Table 1 Comparison of mean days to first dose chemotherapy by procedure type

Variable	Simple	OPBS	p-value
Days to first dose chemotherapy	41.9 (14.2)	47.0 (18.9)	0.031*
>8 weeks delay to first dose chemotherapy	67.7 (8.9)	80.0 (23.9)	0.170
>12 weeks delay to first dose chemotherapy	88.0	109.3 (22.3)	0.400

All values displayed as mean (SD).
*p<0.05

V22

FIVE YEARS OF BREAST CANCER SURGERY THROUGH CALVARY PUBLIC HOSPITAL SPECIALIST CLINIC, CANBERRA, ACT

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Problem Statement: The rates of breast conservation surgery (BCS) and mastectomy, with or without, immediate breast reconstruction (IBR) vary between units in Australia and internationally. Surgery in public hospitals has been associated with lower rates of breast reconstruction. The aim of this study was to identify the rates of BCS and IBR in the main public breast cancer referral centre in the Australian Capital Territory (ACT) and to assess the data with a view to service improvement.
Methods: A retrospective cohort study of women treated for invasive breast cancer (IBC) or ductal carcinoma in situ (DCIS) by three surgeons between January 2016 and February 2021 was performed. The data collected included: demographics, histopathology, type of surgery and neoadjuvant of adjuvant therapy.
Results: A total of 677 women were treated for IBC (582 women) or DCIS (95 women) in the study period. In those who had invasive breast cancer the tumour pathology was ER/PR+/Her2- in 78.5 %, Her2+ in 8.8% and triple negative breast cancer in 12.7%.
Breast conservation surgery was performed in 421 women and was successful during the first surgery in 326 (77.4%) while 95 (22.6%) required margin re-excision and 25 (26.3%) of those who required re-excision ultimately underwent mastectomy. Oncoplastic procedures, either mammoplasty, therapeutic breast reductions or local flaps, were performed in 95 (22.6%). Overall, 396 women (58.5%) underwent successful breast conserving surgery.
Mastectomy was performed in 281 patients with 184 (65.4%) undergoing simple mastectomy and 97 (34.5%) undergoing mastectomy with IBR (all implant based). In the IBR cohort, 45 women (46.4%) also had post mastectomy radiotherapy (PMRT), the median BMI was 29 (range 18-60) and 10 were current smokers (10.3%).
Conclusion: There is a high rate of both BCS and IBR in our service reflecting the use oncoplastic techniques to facilitate BCS and the availability of IBR. Expanding indications for, and frequent use of, PMRT continue to impact choices around IBR.
Drs He, Majeed and Read work in Calvary Specialists Outpatient Clinic. The authors have no other conflict of interest.

V23

CROSS-DISCIPLINARY WORKFLOW IMPROVEMENTS WITH MAGSEED LOCALISATION FOR NON-PALPABLE BREAST LESIONS IN NON-TERTIARY HOSPITALS IN QUEENSLAND

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Problem Statement: Precise localisation is essential for the excision of non-palpable breast lesions. Hook wire-guided localisation is the standard technique used, but it is associated with workflow inefficiencies. Wires must be placed by the radiologist and excised by the surgeon on the same day, thereby creating interdepartmental scheduling inflexibility, decreased productivity and delays in definitive patient care. This study examined cross-disciplinary workflow efficiencies associated with using an alternative localisation method - a small, non-radioactive magnetic seed (Magseed®) which can be placed days prior to surgery.
Methods: This study conducted a retrospective review of Magseed® and hook wire-guided breast localisation and outsourced radiology service in two regional non-tertiary hospitals from May 2018 to July 2021. Data from radiology and surgery services, including scheduling details, procedure times, and volume of cases was compared between Magseeds® and wire localisation.
Results: Sixty-eight Magseeds® were placed in fifty-nine patients and sixty-three hook wires were placed in sixty-three patients. There was an average of nine days between Magseed® placement and surgery, whereas wires had been placed on the same day of the surgery. The average radiology procedure time for Magseed® insertion was seven minutes, whereas an average of twenty minutes was required for wire insertion. A maximum of five cases of Magseed® were booked a day, while only two cases of wire-guided excision were able to be booked due to scheduling inflexibility. Immediate intraoperative confirmation of Magseed® using Endomag® probe resulted in an average of 46 minutes perioperative time reduction compared with standard pathological postoperative specimen confirmation following hook wire-guided excision.
Conclusion: Magseed® localisation in a non-tertiary hospital improves cross-disciplinary efficiencies by reducing scheduling delays and procedure times. Increased surgical volume with the use of Magseeds® has the potential for more patients to receive timely definitive care. Further research is necessary to determine if these workflow improvements impact clinical outcomes.

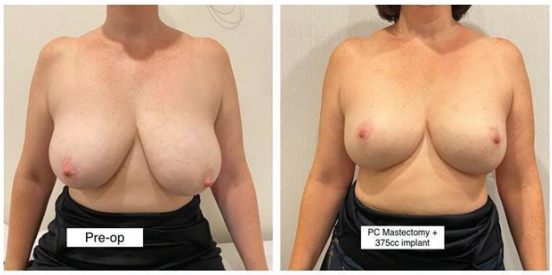
V24

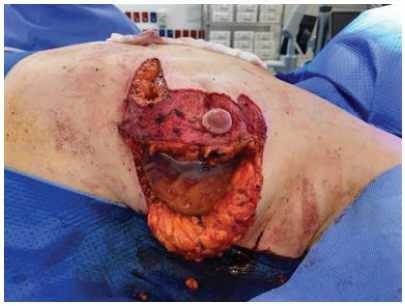
PC (PEDICLE CONSERVING) NIPPLE SPARING MASTECTOMY FOR THE LARGE PTOTIC BREAST: OVERCOMING THE CHALLENGING BREAST FOR A BETTER AESTHETIC OUTCOME

Sara Wu, Sarah Huang, Ferhat Arabaci, Ping En Chen
Gosford Hospital & Chris O'Brien Lifehouse

Problem Statement: Nipple sparing mastectomy (NSM) with implant based reconstruction (IBR) has become the gold standard surgical approach in many patients with breast cancer that require a mastectomy because of its superior cosmetic outcome and patient satisfaction. Patients with large, ptotic breasts in this cohort are technically challenging due to their excessive skin envelope with high risk of nipple ischemia. These patients usually require mammaplasty with some degree of skin reduction in order to achieve an optimal cosmetic outcome with preservation of nipple vascularity. Traditionally, this would require sacrificing the nipple areolar complex (NAC) or as a 2 stage procedure due to concerns of NAC ischemia and necrosis. We propose a novel approach of

performing a nipple sparing mastectomy using a Wise pattern incision and preserving the maximum number of dermal pedicles in order to maintain blood supply to the NAC as well as achieving good oncological resection and allowing prompt adjuvant treatment.
Methods: We performed Pedicle Conserving Nipple Sparing Mastectomies in 4 women with large, ptotic breasts. Patient demographics, tumour size, pathology, margin status, adjuvant treatment received, quality of life, complications and independent assessment of aesthetic result were recorded. The technique involved NSM via a Wise pattern incision whilst preserving all dermal pedicles supplying the NAC, including the superior, medial, lateral and inferior pedicles. Immediate implant based reconstruction was performed with a tissue expander and the vascularity of the dermal pedicles confirmed intraoperatively with utilisation of the SPY system and indocyanine green. Second stage reconstruction involve exchanging tissue expanders to permanent implants after completion of adjuvant cancer treatment.
Results: All of our patients recovered well post operatively and achieved an aesthetically pleasing result with correction of ptosis and immediate reconstruction with an expander. There were no ischemia or necrosis to the NAC in any of the patients.
Conclusion: PC (Pedicle-conserving) mastectomy is a novel approach in challenging patients with large ptotic breasts to preserve nipple vascularity while performing a skin reduction at the same time.





SYMPTOM MANAGEMENT

V25
EFFECTIVE CLINICIAN STRATEGIES TO ENCOURAGE CANCER PATIENTS TO SEEK PSYCHOSOCIAL SUPPORT: A NARRATIVE LITERATURE REVIEW
Kyra Lee, Robyn Saw, Frances Boyle, Iris Bartula
The University of Sydney
Melanoma Institute Australia

PROBLEM STATEMENT: Despite the detrimental psychological effects of a cancer diagnosis, many patients do not seek psychosocial support. There is a need to bridge the discrepancy between distress experienced by a patient following cancer diagnosis, and accessing appropriate support. Healthcare providers (HCPs) may play an important role in supporting patients engage with psychosocial supports. This narrative review has two primary aims: to examine and summarize the current body of literature on the benefits of psychosocial intervention for cancer patients and secondly, to examine evidence-based communication strategies to encourage patient acceptance of psychosocial support. Overall, this review may serve as a practical resource for HCPs to utilise in clinical practice.
METHODS: An extensive literature search was conducted in Medline, CINAHL, PsycINFO and Scopus with different combinations of relevant search terms for each aim of the review. A total of 7 and 14 papers were included for each study aim, respectively.
RESULTS: Available systematic reviews found psychosocial therapy to be overall beneficial for cancer patients by improving quality of life, emotional distress levels and physical pain. The ways HCPs communicate about emotional distress and psychological support can influence the level of patient disclosure of psychosocial concerns and willingness to engage in psychosocial support. Recommended strategies range from ones that are relatively simple to implement such as explicitly asking the patient about psychosocial concerns or asking open-ended questions, to strategies requiring implementation at a systemic level with specific communications training and psycho-oncological care models.
CONCLUSION: In clinical oncology, patients should be encouraged to accept individualized psychosocial support to address any emotional distress resulting from their diagnosis and treatment. A patient's disclosure of psychosocial needs and acceptance of referrals can be influenced by HCPs and their communication behaviors. Therefore, HCPs are encouraged to utilize effective, evidence-based communication strategies when discussing and recommending psychosocial support.

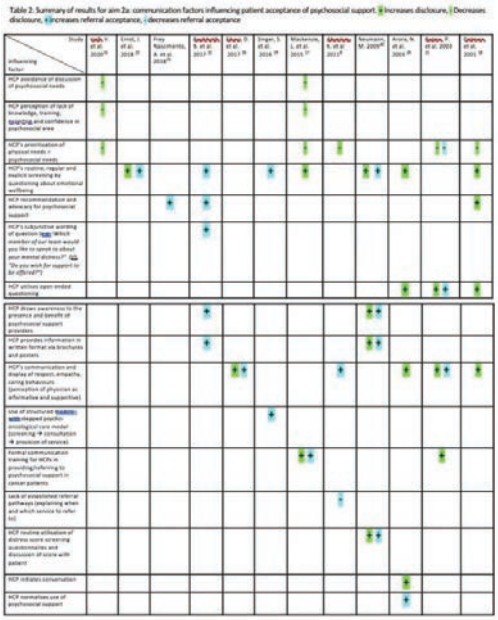


Table 3: Summary of Evidence-Based Recommendations for Oncological HCPs to Implement into Clinical Practice

Recommendations for HCPs		Primary Outcome
Recommendations for immediate incorporation into practice	Normalization of psychosocial support [12,13,14] and emotional/psychological distress associated with cancer [11,17] • Reframing asking for help as a strength[15] • Expressing interest in the patient's adjustment and coping with diagnosis and treatment[16] • Asking and exploring what is culturally appropriate for the patient[18]	↑ patient disclosure ↑ patient trust in HCP ↓ patient anxiety and psychological morbidity ↓ fear of stigmatization
	Compassionate behaviour • Providing reassuring words, holding patient's hand, expressing support[11] • Appropriate response to facial cues[19] • Aiming to be respectful, informative, and express support to patients[18]	
	Initiation of conversations and explicitly asking about psychosocial concerns [9,10,17,18]	↑ patient disclosure
	Balanced discussion and prioritization between physical, psychosocial and psychological aspects of cancer [11,16,17] • Explore "allowed" issues like pain, and then move to emotional issues[18] • Pointing out "cracks" in patient's denial (e.g. Unwise you said you are fine, but you are not sleeping at night. That is an important problem. Perhaps we could help you with that.)[19] • Use of analogies (e.g. 'people wouldn't hide a broken leg, or use a band aid to fix it up – why should we respect emotional needs less?')[19]	
	Adjust attitude towards sharing responsibility of managing patient's emotional and psychosocial health and accepting individual accountability as a part of the team[9,17,18] • HCP should adopt their own positive attitude towards psychosocial aspects of patient care[18] • Introduce psychological professionals early in cancer journey [9] • Conscious awareness of current communication manner[18]	
	Attention to demographic of patients and associated likelihood to express more/less emotional cues [16,17]	
	Active listening, free of interruption [11] • Focusing and clarifying psychosocial aspects[18] • Summarizing and relaying educated guesses[15] • Turn off cell phones and pagers to avoid interruption [11]	↑ patient disclosure and satisfaction ↑ appropriate referral ↑ acceptance of utilization of psychosocial support
	Allow family member or friend to be present[11]	
	Open ended but direct questioning about any psychosocial concerns [16,17] • When offering referral to psychosocial services, pay attention to phrasing and consider utilizing subjunctive wording of questions ("which member of our team would you like to speak to about your mental distress?" Vs. "do you wish for support to be offered?")[18] • Paying attention to word choice (e.g. Avoid utilizing term "tumour") and understand profound impact word choice can have on a patient's mental and emotional state[17] • Avoid medical terms and attempt to communicate information in non-medical terms to empower patient[18]	
	Incorporating regular use of standardized distress score screening questionnaires and discussing scores with patient (as a part of patient work-up and ongoing consultations)[16,17] • Consider asking about psychosocial concerns and offering services at each appointment[16] • Attention to timing and appropriate follow-up throughout and post- treatment[16,17] • Implement skills training/education on utilization of screening questionnaires for optimal use[9]	
	Information sharing: share and emphasize evidence of benefits of psychosocial services with patients[18] • Utilize written and verbal material[18]	
	HCP should express their own advocacy / recommendation for psychosocial support[17]	↑ referral uptake
	Consider adopting a form of "stepped-psycho-oncological-care model" [9] • A clear, established model detailing when, how and where to elevate care and continual feedback to all members of the caring team[9]	
	Communication skills training and education for HCPs in dealing with patient emotional distress [9,11,16,20,21] • Use of question based prompts[17]	↑ HCP's ability to elicit emotional and information needs
Recommendations for consideration of implementation with additional resources and organizational support	HCPs and clinics encouraged to seek and establish referral network to local available psycho-oncology services (with regular revision and updates) [9,15,16] • These networks should be made clear and accessible to all hcps and patients in the form of a service directory [15,17] Identify and consider patients' current resources[18]	↑ HCP confidence in referral practices ↑ referral and referral uptake

Industry

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Industry Symposia

Friday, October 14, 2022

07:30-08:30 **Morning Industry Symposium:**
The role of Enhertu (trastuzumab-deruxtecan) in changing the treatment paradigm for HER2-positive Metastatic Breast Cancer
Supported by AstraZeneca

Hall A (Great Hall 1)

Breakfast will be served prior to the session

Chairperson: **Belinda Yeo,** *Melbourne, Australia*

07:30-07:35 Welcome and Introduction
Belinda Yeo, *Melbourne, Australia*

07:35-08:05 The role of Enhertu (trastuzumab-deruxtecan) in changing the treatment paradigm for HER2-positive Metastatic Breast Cancer
- *Enhertu DESTINY Breast-03*
- *HER2+ mBC International Guideline updates*
- *Treatment of CNS disease*
- *Monitoring, Diagnoses and Managing of AE's*

Javier Cortes, *Madrid, Spain*

08:05-08:25 **Panel discussion:** Australian real-world considerations and the place of Enhertu (T-DXd) in treatment of HER2-positive Metastatic Breast Cancer
Richard de Boer, *Melbourne, Australia*
Nicole McCarthy, *Brisbane, Australia*

08:25-08:30 Questions

07:30-08:30 **Morning Industry Symposium:**
DCISionRT: Personalising treatment for women with DCIS
Supported by GenesisCare/PreludeDX

Hall B (Great Hall 2)

Breakfast will be served prior to the session

Chairperson: **Marcus Dreosti,** *Adelaide, Australia*

07:30-07:45 Delivering precision medicine to women with DCIS in Australia: Clinical application and how it has changed the management of women with DCIS
Bruce Mann, *Melbourne, Australia*

07:45-08:00 Science and clinical evidence: Consistent predictor of radiation therapy benefit
Troy Bremer, *Laguna Hills, CA, USA*

08:00-08:15 Future advances in DCISionRT testing
Frank A. Vicini, *Royal Oak, MI, USA*

08:15-08:30 Interim analysis of the PREDICT Registry Australia: Impact on treatment recommendations
Yvonne Zissiadis, *Perth, Australia*

07:30-08:30 **Morning Industry Symposium:**
Risk adjusted screening
Supported by Hologic

Hall C (Room M1)

Breakfast will be served prior to the session

Speaker: **Allison Rose,** *Melbourne, Australia*

08:30-09:30 **Morning Industry Symposium:**
Evolution of treatment sequencing in patients with mTNBC
Supported by Gilead

Hall C (Room M1)

Chairperson: **Richard de Boer,** *Melbourne, Australia*

Opening and introduction
Richard de Boer, *Melbourne, Australia*

Evolution of treatment sequencing in patients with mTNBC
Alistair Ring, *London, UK*

Case study presentations
Richard de Boer, *Melbourne, Australia*

Discussion and questions with panelists
Catherine Shannon, *Brisbane, Australia*
Marisa Stevens, *Melbourne, Australia*

11:30-12:30 **Industry Symposium:**
Improving outcomes in high-risk HER2-positive patients post-KATHERINE
Supported by an educational/research sponsorship by Roche

Hall B (Great Hall 2)

Chairperson: **Richard de Boer,** *Melbourne, Australia*

Speaker: **Javier Cortes,** *Madrid, Spain*

Panelists: **Elgene Lim,** *Sydney, Australia*
Nicole McCarthy, *Brisbane, Australia*

11:30-12:30 **Industry Symposium:**
Touch and go: Removing the guesswork in detecting residual cancer
Supported by OncoRes

Hall C (Room M1)

Chairperson: **Christobel Saunders,** *Melbourne, Australia*

Speakers: **Christobel Saunders,** *Melbourne, Australia*
Helen Ballal, *Perth, Australia*

OncoRes Medical is developing an intraoperative imaging technology to provide surgeons with real-time assessment of tissue microstructure in the surgical cavity. Hosted by Professor Christobel Saunders AO, Dr Helen Ballal, and OncoRes Medical, this symposium presents the latest developments and an interactive demonstration of the technology.

Saturday, October 15, 2022

07:30-08:30 **Morning Industry Symposium:**
Future-proofing breast surgical guidance with Sentimag®
A total magnetic conversion
Supported by Endomag/GRC Surgical

Hall A (Great Hall 1)

Breakfast will be served prior to the session

Chairpersons: **Bruce Mann,** *Melbourne, Australia*
Emilia Dauway, *Urraween, QLD, Australia*

07:30-07:40 1,000 Magseed® vs 1,000 Wires: Findings from iBRA-NET, the world's largest non-radioactive localization seed comparative study
Rajiv Dave, *Manchester, UK*

07:40-07:50 The SLNB evolution: Advantages of switching to a non-radioactive approach with Magtrace®
Jill Dietz, *Pittsburgh, PA, USA*

07:50-08:00 Sentimag®**:** A complete magnetic approach for Targeted Axillary Dissection (TAD) and other advanced techniques
Michael Alvarado, *San Francisco, CA, USA*

08:00-08:05 A sneak preview of the new Sentimag® platform

08:05-08:30 Discussion

07:30-08:30 **Morning Industry Symposium:**
Time to start CDK4&6 inhibition in EBC: Verzenio in HR+ HER2- node positive EBC at high risk of recurrence
Supported by Lilly

Hall B (Great Hall 2)

Breakfast will be served prior to the session

Chairperson: **Richard de Boer,** *Melbourne, Australia*

07:30-07:50 Verzenio's efficacy in node positive early breast cancer at high risk of recurrence
Alistair Ring, *London, UK*

07:50-08:10 Verzenio safety and tolerability: Learnings from MonarchE and food tolerability study
Fran Boyle, *Sydney, Australia*

08:10-08:15 A Verzenio EBC case study to open panel discussion
Catherine Shannon, *Brisbane, Australia*

08:15-08:30 Panel discussion + Q&A from audience

07:30-08:30 **Morning Industry Symposium:**
The role of the nurse in assessing, triaging and managing metastatic TNBC
Supported by Gilead

Hall C (Room M1)

Breakfast will be served prior to the session

Chairperson: **Jenny Gilchrist,** *Sydney, Australia*

Group 1: What is the role of the nurse managing breast cancer patients?
Marisa Stevens, *Melbourne, Australia*

1. What to communicate with the oncologist
2. Boundaries
3. What and when to delegate
4. Empower nurses to contribute and take the lead in areas of expertise

Group 2: Diagnosis of TNBC disease
Gill Kruss, *Melbourne, Australia*

1. Provide better understanding of the whole process for patients
2. What investigations are done to diagnose TNBC disease
3. What is progression, how is it determined
4. What are the differences for de novo metastatic patients

Group 3: Assessment skills – Phone vs F2F
Sam Moules, *Sydney, Australia*

1. Key things to look out for re Trodelvy
2. Emotional wellbeing
3. Physical activity

Case study
Marisa Stevens, *Melbourne, Australia*

10:00-11:00 **Industry Symposium:**
A CDK4/6i is a 'once in a lifetime treatment' for patients with HR +ve HER2 -ve breast cancer
Supported by Novartis

Hall B (Great Hall 2)

Chairperson: **Nicholas Wilcken,** *Sydney, Australia*

Introduction
Richard de Boer, *Melbourne, Australia*

Debaters: **Affirmative: Catherine Shannon,** *Brisbane, Australia*
Against: Andrew Redfern, *Perth, Australia*

13:10-13:55 **Industry Lunch Symposium:**
Innovative approaches to help improve patient outcomes:
Case-based discussion
Supported by 3M

Hall B (Great Hall 2)

Lunch boxes will be served to session participants

Chairperson: **Elisabeth Elder,** *Sydney, Australia*

13:10-13:30 Prophylactic strategies in reducing surgical site complications
Matthew M. Cooper, *St. Paul, Minnesota, USA*

13:30-13:50 Pre-pectoral and direct-to-implant breast reconstruction, managing the incision and surrounding soft tissue with negative pressure
Tripp Holton, Annapolis, *MD, USA (virtual)*

13:50-13:55 Q&A

Company Profiles

www.3M.com.au/medical

3M focuses on providing better care through patient-centered science. Helping transform outcomes by restoring patients' lives through innovation. From our leading negative pressure and surgical incision management technologies to our comprehensive line of skin and advanced wound care solutions, we are focused on helping you provide the best care for your patients, resulting in the best possible outcomes.

www.amgen.com.au

Amgen is committed to unlocking the potential of biology for patients suffering from serious illnesses by discovering, developing, manufacturing and delivering innovative human therapeutics. This approach begins by using tools like advanced human genetics to unravel the complexities of disease and understand the fundamentals of human biology. Our belief — and the core of our strategy — is that innovative, highly differentiated medicines that provide large clinical benefits in addressing serious diseases are medicines that will not only help patients, but also will help reduce the social and economic burden of disease.

www.amoena.com/au

For more than 45 years, **Amoena** has been synonymous with innovation, passion and competence in the field of breast care. Our high-quality recovery care products, breast forms and breast care apparel give breast-operated women a visually perfect result with the highest wearing comfort.
At Amoena, we know no detail is too small when it comes to helping breast-operated women live confidently. Patents for materials and manufacturing methods are proof of our progress but we'll never stop endeavouring to meet every need with the highest quality products. Since developing the first breast form, we've sold more than 17 million, as well as 30 million pieces of breast care apparel. Today, we are proud to support women throughout their journey – from the moment they are diagnosed, to living life to the fullest once more. We call it The Amoena Solution.

www.astrazeneca.com.au

AstraZeneca is the ninth largest pharmaceutical company operating in Australia. It is one of the country's largest manufacturers of medicines and is a key exporter to 20 international markets.
AstraZeneca produces medicines in a range of therapeutic areas including Oncology, Cardiovascular & Metabolic Diseases and Respiratory.
AstraZeneca contributes significantly to clinical trials in Australia with over 55 concurrent trials. AstraZeneca's innovative medicines are used by millions of patients worldwide.

www.hengrui.com/en/pipeline.html

Atridia Pty Ltd (Atridia) is a Sydney based company, acting as the local clinical trial sponsor and representative for Jiangsu Hengrui Pharmaceutical Co., Ltd (Hengrui) innovative pipeline. Atridia's core business is to conduct phase 1-3 clinical trials for Hengrui.
Hengrui is a pharmaceutical company that was founded in 1970 and currently ranks in the top 50 of global pharmaceutical companies. Hengrui insists on innovation as the driving force to build its business and has established R&D centres in the United States, Europe, Japan, China and continues to grow in Australia.

www.aurorabioscience.com.au.

Aurora BioScience is a leading medical device distribution company. Our network extends across metropolitan and regional areas throughout Australia, New Zealand and the Pacific Islands.
Our growing product range includes some of the world's most innovative medical products and solutions in cancer care and other specialty areas. These products such as the DigniCap® Delta scalp cooling system, enterade® Advanced Oncology Formula, the First and Only Sterile, Disposable and Feminine Post-Surgical Bra called EZbra, Ice cold gloves and socks, Follact Restore Healthy Hair and Chemo mouthpiece are products we will showcase on our stand and all these specialty products assist Clinicians with improving the experience and outcomes of cancer treatment.

www.health.gov.au/medical-costs-finder

The Department of Health and Aged Care works towards achieving better health and wellbeing for all Australians, now and for future generations. It does this by developing and delivering policies and programs and advising the Government on health, aged care and sport.
The Medical Costs Finder, launched in 2019, is one such program. It is a website designed to educate consumers about costs of common medical services, how to avoid bill-shock from unexpected out of-pocket medical expenses, and the impact of private health insurance and Medicare contributions on what they end up paying for these services.
Over the last 18 months, the Department has developed additional functionality which will allow individual medical specialists to publish their indicative estimate fees and private health insurer gap arrangements for a selected number of high-volume services they provide. Importantly, this cost information is not a quote, rather indicative fees to provide consumers with a better understanding of what contributes to out of-pocket costs and the value the right private health insurance cover for their needs can provide.

www.bd.com

BD is one of the largest global medical technology companies in the world and is advancing the world of health by improving medical discovery, diagnostics and the delivery of care. The company supports the heroes on the frontlines of health care by developing innovative technology, services and solutions that help advance both clinical therapy for patients and clinical process for health care providers. BD and its 65,000 employees have a passion and commitment to help improve patient outcomes, improve the safety and efficiency of clinicians' care delivery process, enable laboratory scientists to better diagnose disease and advance researchers' capabilities to develop the next generation of diagnostics and therapeutics. BD has a presence in virtually every country and partners with organizations around the world to address some of the most challenging global health issues. By working in close collaboration with customers, BD can help enhance outcomes, lower costs, increase efficiencies, improve safety and expand access to health care. In 2017, BD welcomed C. R. Bard and its products into the BD family.

www.prosigna.com or www.sonicgenetics.com.au/prosigna

Sonic Healthcare, provider of the TGA registered Prosigna® Breast Cancer Prognostic Gene Signature Assay, in partnership with Veracyte, and Australian distributor, Bio-Strategy, are proud to support the 2022 Australasian International Breast Congress.
Sonic is one of the world's largest global healthcare companies and Australia's largest lab services provider. Sonic have been supporting Australian oncologists in offering the Prosigna prognostic test since its introduction in 2015. Bio-Strategy is an established locally-owned, ISO 9001:2015 accredited distributor, delivering technology to the Scientific Community throughout Australasia, and the exclusive distributor of Veracyte throughout Australia and New Zealand.
Prosigna® is the PAM50-based gene signature providing test results profiling a patient's risk of distant recurrence and classifying tumours into 1 of 4 intrinsic subtypes to best inform clinical treatment decisions.

www.bcna.org.au

Breast Cancer Network Australia (BCNA) is the peak national organisation for Australians affected by breast cancer with more than 120,000 members.
Representing the people behind the statistics, BCNA works to ensure the voices of everyday Australians affected by breast cancer are heard and that they receive the very best support, information, treatment and care appropriate to their individual needs.

www.daiichi-sankyo.eu

Daiichi Sankyo is dedicated to the creation and supply of innovative pharmaceutical therapies to improve standards of care and address unmet medical needs. With more than 100 years of scientific expertise and a presence in more than 20 countries, Daiichi Sankyo and its 15,000 employees draw upon a rich legacy of innovation and a robust pipeline of promising new medicines.
Our 2025 Vision is to become a "Global Pharma Innovator with Competitive Advantage in Oncology". Anchored by our DXd antibody drug conjugate (ADC) technology, our powerful research engines include biologics, medicinal chemistry, modality and other research laboratories.

hdefries.com.au

Defries Industries is an Australian owned company that develops and supplies medical and surgical products throughout Australia and New Zealand. As a world-class manufacturer, we are committed to supplying high-quality products that excel in design, ease of use and price.
We supply a wide range of single use products including the innovative Advazorb Areola breast dressing. This has been designed to deliver excellent patient comfort, effective exudate management, secure fixation and atraumatic removal.
The OneTrac single-use cordless lighted retractor product is also popular in breast reconstruction surgery. It's ready-to-use with an integrated LED light source and smoke evacuation channel.

www.eisai.com.au

Eisai (pronounced 'ā-zī') is derived from the Japanese word for 'health product' and, here at Eisai, we discover, develop and market innovative, high quality medicines throughout the world.
We place primary emphasis on patients and their families, and observe the highest legal and ethical standards in our business activities.
Eisai is one of the world's leading research-based pharmaceutical companies.
We define our corporate mission as "giving first thought to patients and their families, and to increasing the benefits health care provides," which we call human health care (hhc). With operations in the U.S., Asia, Europe and its domestic home market of Japan, Eisai employs more than 11,000 people worldwide.
Eisai focuses its efforts in several therapeutic areas and in Australia, Neurology and Oncology are our primary specialty areas.

www.endomag.com

Endomag is a medical technology company devoted to improving the global standard of cancer care. The Sentimag® localization platform works with the Magseed® marker and Magtrace® lymphatic tracer to enable physicians to carry out tumor localizations and breast cancer staging using just one platform. With the Sentimag® platform, physicians can now replace wires and radioactivity with more flexible and precise options to revolutionize their breast cancer care.

www.genesiscare.com

As leading cancer and cardiology treatment specialists, we are changing the face of care. At **GenesisCare**, we're delivering a truly personalised care experience with the best possible treatments available, close to home. We pride ourselves on always being at the forefront of the latest advancements in treatment techniques, technology, and innovations to ensure you get the highest quality, evidence-based care available globally. Our global network of over 5,000 highly-trained healthcare professionals and support staff across Australia, the U.K., Spain and the United States, all support the delivery of care for people with cancer and heart disease.

www.gilead.com

Gilead has a history of creating possibilities for people with some of the most devastating diseases. We are now turning our focus to oncology.
While our immediate focus is on prolonging survival of those with locally advanced or metastatic triple negative breast cancer (mTNBC) and working with the breast cancer community to achieve better patient outcomes, we also recognise the continued unmet need in other solid tumours such as lung and genitourinary cancers. Our portfolio today is spearheaded by our breast cancer drug Trodelvy® (sacituzumab govitecan), and cell therapies through Kite, such as Yescarta® (axicabtagene ciloleucel) and Tecartus® (brexucabtagene autoleucel). Our work includes 30 clinical trials underway with six products in single agent and combinations both in Australia and globally.

grcsurgical.com

GRC has traditionally identified improved, new technologies for the breast cancer market. Magseed, Neoprobe and Hydromark offer clinical benefits to surgeons, resulting in better results for patients and hospitals. As GRC continues to implement technologies through specialists means the change to a better way is both welcomed and embraced.

www.hartmann.info

Founded in 1818, the **HARTMANN GROUP** is a leading international medical and healthcare company. Over the years, HARTMANN has cultivated a reputation for offering outstanding medical competence and delivering high quality, innovative and dependable products and services.
PAUL HARTMANN Pty Ltd (HARTMANN) was established in 2003 and is the Australian wholly owned subsidiary of the HARTMANN GROUP. HARTMANN supplies three core product ranges to hospitals, aged care, primary care, pharmacy and community. These core ranges cover continence, skin care and wound management products.

www.hologic.com/breast-health

Hologic's purpose is to empower people to live healthier lives everywhere, every day.
This is achieved by bringing The Science of Sure® to life. As a leading innovator and champion for women's health, Hologic helps healthcare professionals around the world diagnose and treat their patients with precision, certainty, and confidence. With ground-breaking technology at the core, Hologic innovations across Breast and Skeletal Health, Diagnostic Solutions and GYN surgical solutions are designed to achieve exceptional clinical results, making it possible to detect, diagnose and treat illnesses and other health conditions earlier and more effectively.

www.icongroup.global

Icon Cancer Centre is part of Icon Group - Australia's largest dedicated cancer care provider. The Group has expanded globally into Singapore, Mainland China, Hong Kong and New Zealand and has a strong history of cancer research, now operating the largest private cancer clinical trials program in Australia. Icon Group has 35 cancer centres in Australia with several centres in development, including day oncology hospitals, radiation oncology facilities and comprehensive centres that bring both oncology disciplines together.

The Group also encompasses Slade Health: one of Australia's largest chemotherapy compounders with three TGA-approved manufacturing sites across the eastern seaboard; and supports Epic and Slade Pharmacy: providers of medication management and pharmacy services to the hospital and oncology sectors. Follow us on social media @ IconGroup.

www.lifehealthcare.com.au

Lifehealthcare is focused on providing access to world-leading medical devices for Australian and New Zealand patients, whilst ensuring long-term economic sustainability for our healthcare system.
LifeHealthcare has a broad portfolio of products in various channels that include Spine, Orthopaedics, Robotics, Plastics & Reconstructive Surgery and Interventional Neuro-Vascular surgery.
Our passion is health
Our purpose is making life better for others.

www.lilly.com.au

Lilly is a global healthcare leader that unites caring with discovery to create medicines that make life better for people around the world. For more than a century, we have stayed true to a core set of values—excellence, integrity, and respect for people—that guide us in all we do: discovering medicines that meet real needs, improving the understanding and management of disease, and giving back to communities through philanthropy and volunteerism. We have also been committed to investing in our employees—through competitive salaries, training and development, health, and the opportunity to give back.

Current Oncology
an Open Access Journal by MDPI

www.mdpi.com/journal/curroncol

Current Oncology (ISSN 1718-7729; IF 2.257) is an international, scientific, peer-reviewed, open access journal published bi-monthly online by MDPI (from Volume 28 Issue 1-2021). Established in 1994, the journal represents a multidisciplinary medium for clinical oncologists to report and review progress in the management of this disease. The Canadian Association of Medical Oncologists (CAMO) and the Canadian Association of Psychosocial Oncology (CAPO) are affiliated with the journal and their members receive a discount on the article processing charges.

MSA MEDICAL SPECIALTIES AUSTRALASIA

www.msa.com.au

Medical Specialties Australasia (MSA) is a privately and wholly owned Australian medical device distribution company and is a leader in providing innovative, minimally invasive medical devices for vascular access, surgery, peripheral vascular disease and diabetes.

MSA was founded in 1982 on the introduction of next generation medical technology and has pioneered the establishment of many new medical and surgical technologies in the Australasia region over the last 40 years.
Our customers receive comprehensive support through our highly trained field representatives, clinical educators, technical services specialists and customer service team and are committed to the continuous improvement of the services we provide.

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www.medilinkaustralia.com

Medilink is based in Sydney and distributes the Kubtec Xray cabinets for specimen imaging for interoperative radiology, providing a new standard of care.
The Kubtec MOZART® Xray cabinet system utilizes 3D tomosynthesis technology to provide surgeons with the clearest view of their surgical margins. The technology reduces re-excision rates by 50%[2], preserves healthy breast tissue[3], and ultimately improves patient outcomes.
Reduces re-excisions by 50%[2]
Preserves healthy tissue for better cosmesis[3]
Improves surgical efficiency
Lowers costs[2]

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Why Mediplast Australia?
We believe essential care deserves our special attention.
We combine global scale and local expertise to provide you with cost-effective customised essential care solutions.
We use our passion, experience and knowledge of essential care practices to create bespoke product, training and aftercare solutions that allows you to save time, money and, most importantly, lives.
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www.jnjmedicaldevices.com/en-AU/companies/mentor.

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Headquartered in Santa Barbara, California. Mentor has manufacturing and research operations in the United States and the Netherlands.
Mentor has over 30 years of experience in the manufacture of breast implants and tissue expanders. Our experience and expertise results in quality products you can rely on.
Mentor and our 1,200 worldwide employees strive to provide high-quality products and services to healthcare professionals and patients.
In January 2009, Mentor was acquired by Johnson & Johnson. Together we aim to enhance and restore self-esteem and quality of life. Simply said, our mission is to Make Life More Beautiful.

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Merit Medical Systems, Inc. is a leading manufacturer and marketer of disposable medical devices used in interventional, diagnostic and therapeutic procedures, particularly in cardiology, radiology, oncology, critical care and endoscopy.
Merit Medial manufacture the SCOUT breast tumor localization solution. SCOUT has been clinically demonstrated to drive value and improve patient outcomes as well as improve radiology workflow and significantly reduce OR delays.
Using SCOUT, surgeons can precisely target the affected tissue to pinpoint its location within 1mm, which can mean more successful surgeries, optimized breast conservation strategies, and enhanced outcomes for women.

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Mindray offers innovative, leading-edge, accessible ultrasound machines for breast imaging, that empower our customers to provide the highest quality of care, now and in the future.
Mindray holds a comprehensive portfolio of Point of Care and General Imaging ultrasound solutions that are easy to use, elevate your practice, and empower you to provide an even higher standard of care in a timely manner.
From entry-level, touch-enabled systems to sophisticated, laptop or cart-based designs, we invite you to experience peace of mind and see something better with Mindray ultrasound."

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For more than a century, **MSD** has been inventing for life, bringing forward medicines and vaccines for many of the world's most challenging diseases. Today, MSD continues to be at the forefront of research to deliver innovative health solutions and advance the prevention and treatment of diseases that threaten people and animals around the world.

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Myriad Genetics is a leading personalised medicine company dedicated to being a trusted advisor transforming patient lives worldwide with pioneering molecular diagnostics. Myriad discovers and commercialises molecular diagnostic tests that: determine the risk of developing disease, accurately diagnose disease, assess the risk of disease progression, and guide treatment decisions across six major medical specialties where molecular diagnostics can significantly improve patient care and lower healthcare costs.
EndoPredict® provides accurate results for patients diagnosed with ER+, HER2-, early-stage breast cancer with either node-negative or node-positive disease (1-3 nodes). The test integrates a 12-gene molecular score with pathology to provide results for early and late recurrence, and accurately predicts an individualised absolute chemotherapy benefit to help make the right treatment decisions for a patient's breast cancer.

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Novartis is the largest Australian medicines company, improving the lives of more than 2.8 million patients across Australia and New Zealand. From generics to gene therapy, we are committed to accelerating patient access to life saving treatments.
We are reimagining medicine by using innovative science and technology to address challenging healthcare issues and our rich pipeline has 200+ projects in development and an industry leading clinical trial footprint in Australia.
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OncoRes Medical is developing a real-time, in-cavity, diagnostic imaging system to guide the surgical clearance of cancer in breast conserving surgery. OncoRes Medical's novel imagining technology – Quantitative Micro-Elastography – rapidly evaluates the microarchitecture of tissue at a scale and resolution approaching histology, facilitating the differentiation of breast cancer subtypes from normal breast tissue in the surgical cavity. The team at OncoRes Medical are committed to partnering with Surgeons to eliminate re-excisions after breast conserving surgery and give patients confidence that the foundation of their curative treatment was a success, the first time.

Pfizer Oncology

Pfizer Oncology
One way or another, cancer touches all our lives. Which is why nothing is more personal, or more urgent, than our goal to find cures for cancer and to deliver on our purpose: breakthroughs that change patients' lives.

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PreludeDx provides a patented molecular test (DCISionRT®) for women diagnosed with DCIS (Ductal Carcinoma in Situ) that predicts a woman's personal likelihood or risk of developing DCIS recurrence in 10 years and invasive breast cancer in 10 years with or without adjuvant radiation therapy after breast conserving surgery. Visit PreludeDx.com

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Roche is a global pioneer in pharmaceuticals and diagnostics focused on advancing science to improve people's lives. The combined strengths of pharmaceuticals and diagnostics have made Roche the leader in personalised healthcare – aims to boldly transform and personalise healthcare to prevent, diagnose and treat each and every patient more effectively, while creating a more sustainable healthcare ecosystem.
Roche is the world's largest biotech company, with truly differentiated medicines in oncology, immunology, infectious diseases, ophthalmology and diseases of the central nervous system. Roche is also the world leader in in-vitro diagnostics and tissue-based cancer diagnostics, and a frontrunner in diabetes management.

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Sonic Healthcare, provider of the TGA registered Prosigna® Breast Cancer Prognostic Gene Signature Assay, in partnership with Veracyte, and Australian distributor, Bio-Strategy, are proud to support the 2021 Australasian International Breast Congress.
Sonic is one of the world's largest global healthcare companies and Australia's largest lab services provider. Sonic have been supporting Australian oncologists in offering the Prosigna prognostic test since its introduction in 2015. Bio-Strategy is an established locally-owned, ISO 9001:2015 accredited distributor, delivering technology to the Scientific Community throughout Australasia, and the exclusive distributor of Veracyte throughout Australia and New Zealand.
Prosigna® is the PAM50-based gene signature providing test results profiling a patient's risk of distant recurrence and classifying tumours into 1 of 4 intrinsic subtypes to best inform clinical treatment decisions.

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Surgeons Choice continues to exclusively provide sales, support and service for the Navigator range of Sentinel Node Probe systems in Australia.
We are also showcasing two next generation innovative products:

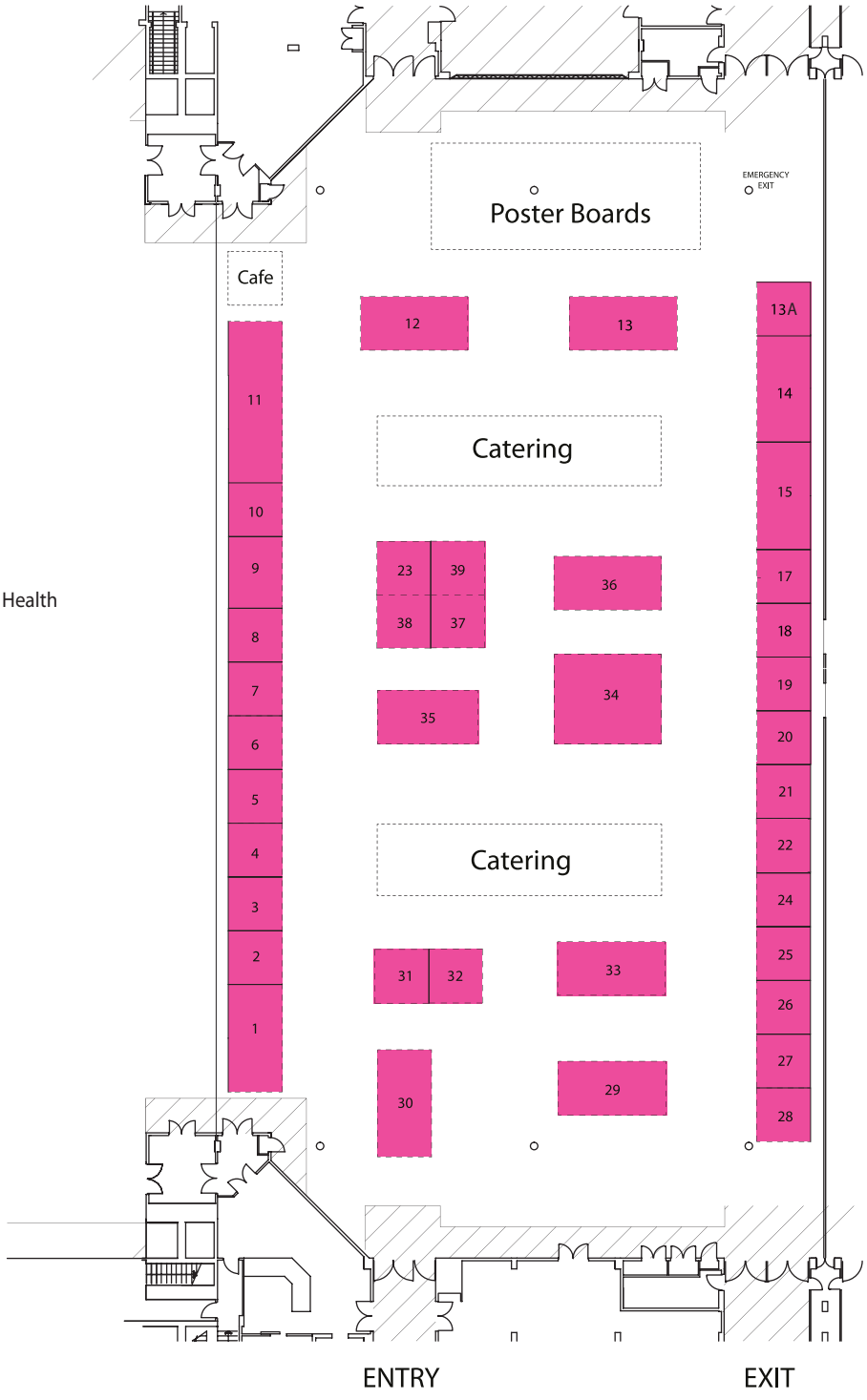
- ProSense by IceCure: A liquid nitrogen Cryoablation System providing the coldest, fastest most stable Cryoablation Technology in the market, for treatment of benign and some malignant breast tumors.
- Margin Probe by Dilon Technologies: A Margin assessment tool which surgeons can identify positive margins in real-time on the lumpectomy specimen enabling them to take additional tissue during the first surgery.

www.zeiss.com.au/corporate/home.html

Headquartered in Oberkochen, Germany, **Carl Zeiss** is represented in more than 30 countries, with around 30 production sites and 50 sales/service sites around the world.
ZEISS is a leader in ophthalmic and surgical microscopes from dental to the latest technology neurosurgical systems. Since 1997, ZEISS has also been a leader in Intraoperative Radiotherapy (IORT) with the introduction of INTRABEAM®. Radical surgical methods in the treatment of breast cancer are being replaced by less-invasive, breast-conserving therapy and this trend is appearing in radiotherapy where oncologists are moving from the largely standardised treatment plan to risk-adapted and targeted individualised therapy. Visit the ZEISS stand at AIBC 2022 to learn about the recently published long-term results from the international TARGIT-A breast cancer study.

Exhibition Floorplan

1 - Regional Health Care Group
2 - OncoRes
3 - Mindray Medical
4 - Amoena
5 - Zeiss
6 - Atridia
7 - Paul Hartmann
8 - ASBD/BreastSurgANZ
9 - GenesisCare
10 - BCNA
11 - Hologic
12 - Myriad
13 - 3M
13A - Medilink
14 - Pfizer
15 - MSD
17 - Defries Industries
18 - AstraZeneca
19 - Eisai
20 - Aurora Bioscience
21 - Australian Government Department of Health
22 - Icon Cancer Centre
23 - Surgeons Choice
24 - Medical Specialties Australasia
25 - Siemens Healthineers
26 - LifeHealthcare
27 - Mediplast
28 - Gilead
29 - Merit Medical
30 - Novartis
31 - J&J - Mentor
32 - Roche
33 - Gilead
34 - AstraZeneca
35 - Endomag
36 - Lilly
37 - BD
38 - Sonic Genetics/BioStrategy
39 - GRC Surgical



NOW INDICATED FOR
2L HER2+ mBC[1†]

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trastuzumab deruxtecan

In the DESTINY-Breast03 trial in HER2+ metastatic breast cancer:

UNPARALLELED PFS*

*PFS ENHERTU vs trastuzumab emtansine: HR 0.28, 95% CI: 0.22-0.37; p<0.000001 (primary endpoint)[1,2]

72% LOWER RISK OF PROGRESSION
vs previous 2nd line standard of care[1,2]*

The safety and tolerability profile of ENHERTU in DESTINY-Breast03 was consistent with previously reported trials.
No Grade 4 or 5 adjudicated drug-related ILD/pneumonitis events observed with ENHERTU in DESTINY-Breast03[1,2‡]

Patient access program now open for 2nd line HER2+ mBC patients. Visit www.AccessAZ.com.au for details

†ENHERTU is indicated for the treatment of adult patients with unresectable or metastatic HER2-positive breast cancer who previously received: trastuzumab and a taxane for metastatic disease, or one prior anti-HER2-based regimen and developed disease recurrence during or within six months of completing neo-adjuvant or adjuvant therapy[1]

‡ILD/pneumonitis have been reported with ENHERTU; the majority of cases in DESTINY-Breast03 were Grade 1 or 2 (All Grades: 10.5%; Grade 3: 0.8%). ENHERTU treatment should be permanently discontinued for Grade ≥2 ILD[1]

PLEASE CLICK HERE TO REVIEW FULL PRODUCT INFORMATION BEFORE PRESCRIBING.
FURTHER INFORMATION AVAILABLE ON REQUEST FROM ASTRAZENECA.

PBS Information: ENHERTU is not listed on the PBS.

▼ This medicinal product is subject to additional monitoring in Australia. This will allow quick identification of new safety information. Healthcare professionals are asked to report any suspected adverse events at www.tga.gov.au/reporting-problems.

2L: second line; CI: confidence interval; HER2+: human epidermal growth factor receptor 2-positive; HR: hazard ratio; ILD: interstitial lung disease; mBC: metastatic breast cancer; PFS: progression-free survival. **References: 1.** ENHERTU (trastuzumab deruxtecan) Product Information. **2.** Cortes J *et al. N Engl J Med* 2022;386:1143-54. ENHERTU® is a trademark of the Daiichi Sankyo Company Ltd, used under license by AstraZeneca. AstraZeneca Pty. Ltd. ABN 54 009 682 311. 66 Talavera Road, Macquarie Park, NSW 2113. www.astrazeneca.com.au. For Medical Information enquiries or to report an adverse event or product quality complaint: Telephone 1800 805 342 or via https://contactazmedical.astrazeneca.com or email Medical Information enquiries to medinfo.australia@astrazeneca.com.

AU-14712. ENHR0146/EMBC. Date of preparation: September 2022.

Daiichi-Sankyo | AstraZeneca

The first targeted therapy approved to treat mTNBC[1]

TRODELVY®
sacituzumab govitecan

As early as 2L for unresectable locally advanced or metastatic triple-negative breast cancer[1]

Survival Elevated

The ASCENT trial demonstrates TRODELVY significantly improves survival in unresectable locally advanced and mTNBC[1,2]

OS almost **5 months** longer than TPC[1,2]

11.8 months with TRODELVY (95% CI, 10.5–13.8) vs 6.9 months with single-agent chemotherapy (95% CI, 5.9–7.7); HR: 0.51 (95% CI, 0.41–0.62) P<.0001[†1,2]

PFS more than **double** TPC[1,2]

4.8 months with TRODELVY (95% CI, 4.1–5.8) vs 1.7 months with single agent chemotherapy (95% CI, 1.5–2.5); HR: 0.43 (95% CI, 0.35–0.54) P<.0001[†1,2]

QOL Significant **improvements** versus TPC[3]

Neutropenia, diarrhoea, hypersensitivity, nausea and vomiting can occur and may require active management[1]

PBS information: Authority required (STREAMLINED)
Unresectable locally advanced or metastatic triple-negative breast cancer. Refer to the PBS schedule for full authority information.

Please review the Approved Product Information before prescribing.
Full Product Information is available on request by calling 1800 806 112.

▼ This medicinal product is subject to additional monitoring in Australia.

Minimum Product Information TRODELVY® (sacituzumab govitecan) powder for injection.

Indications: Treatment of adult patients with unresectable locally advanced or metastatic triple-negative breast cancer (mTNBC) who have received at least two prior systemic therapies, including at least one prior therapy for locally advanced or metastatic disease. **Dosage and administration:** IV Infusion. 10 mg/kg (maximum dose) once weekly on Days 1 and 8 of 21-day treatment cycles. Pre-medication for prevention of infusion reactions and prevention of chemotherapy-induced nausea and vomiting is recommended. Please carefully follow the specified reconstitution, dilution and administration instructions, and dose adjustments for adverse events, in the full PI. For use in one patient on one occasion only. Discard any unused portion. **Contraindications:** Hypersensitivity. **Precautions:** Neutropenia. Diarrhoea. Hypersensitivity. Nausea and vomiting. Use in patients with reduced UGT1A1 activity. Embryo-fetal toxicity. Use in hepatic impairment. Pregnancy (Cat D). **Interactions with other medicines:** UGT1A1 inhibitors and inducers - avoid administering UGT1A1 inhibitors or inducers with TRODELVY. **Adverse effects:** Potentially severe hypersensitivity. Neutropenia. Diarrhoea. Nausea. Alopecia. Fatigue. Anaemia. Vomiting. **This is not the full Product Information. Please review the full Product Information before prescribing. Product Information is available on request from Gilead Sciences Pty Ltd Medical Information (1800 806 112).** Date of preparation 6 September 2021.

*ASCENT was an international, Phase 3, multicentre, open-label, randomised trial of patients with unresectable locally advanced or metastatic TNBC (N=529). Patients were randomised 1:1 to receive TRODELVY 10 mg/kg IV on days 1 and 8 every 21 days, or single-agent chemotherapy of the physician's choice (eribulin, vinorelbine, gemcitabine, or capecitabine). The primary endpoint was PFS in patients without brain metastases at baseline (88% of the overall study population), as measured by BICR based on RECIST v1.1 criteria.[1]

[†]The improvements in PFS and OS in the primary analysis population were consistent with the overall population (median PFS: 5.6 months vs 1.7 months; HR: 0.41; P<.0001; median OS: 12.1 months vs 6.7 months; P<.0001).[1]

2L, second-line; **BICR**, blinded independent central review; **CI**, confidence interval; **HR**, hazard ratio; **IV**, intravenous; **mTNBC**, metastatic triple-negative breast cancer; **OS**, overall survival; **PFS**, progression-free survival; **RECIST**, Response Evaluation Criteria in Solid Tumours; **TNBC**, triple-negative breast cancer; **TPC**, Treatment of physicians choice (single agent chemotherapy).

Refs: 1. TRODELVY Product Information February 2022. **2.** Bardia A, et al. *N Engl J Med.* 2021;384(16):1529-1541. **3.** Loibl S, et al. Poster 257P. ESMO Virtual Congress; September 16-21 2021.

GILEAD Oncology

Gilead Sciences Pty Ltd. Level 6, 417 St Kilda Road, Melbourne 3004, Australia.
ABN 71 072 611 708. Call Toll Free: 1800 806 112.
Date of preparation July 2022. AU-TRO-0187. WED1759.

KISQALI®

ribociclib

+AI OR FUL

THE LONGEST SUPERIOR MEDIAN OVERALL SURVIVAL IN POSTMENOPAUSAL HR+HER2- mBC PATIENTS [1†]

†vs placebo + AI: 63.9m (52.4-71.0) vs 51.4m (47.2-59.7) P=0.004[1]
vs placebo + FUL: 67.6m vs 51.8m, HR 0.673 (CI:0.504-0.899)[2,3]

MONALEESA-2 results demonstrated that KISQALI+AI compared to letrozole alone provides:

- **Extra 1 year of life[1]**
- **Time to chemotherapy delayed by 1.5 years[1]**
- **24% risk reduction in death[1]**

KISQALI demonstrated a consistent and manageable safety profile in three pivotal Phase III HR+/HER2- mBC trials in combination with an AI or fulvestrant[1-4]

KISQALI PBS information: Authority Required. Refer to the PBS Schedule for full Authority information.

For healthcare professionnals only.
Please review full product information before prescribing.
Scan QR code for full KISQALI product information.

Alternatively, please contact medical information at 1800 671 203 or visit https://www.novartis.com.au/products/healthcare-professionals/products to access the full product information.

PKIS0422

References: 1. Hortobagyi GN et al. N Engl J Med. 2022; 386:942–50 **2.** European Society for Medical Oncology (ESMO) Breast Cancer Congress. Updated overall survival (OS) results from the first-line (1L) population in the Phase III MONALEESA-3 trial of postmenopausal patients with HR+/HER2- advanced breast cancer (ABC) treated with ribociclib (RIB) + fulvestrant (FUL) (Abstract #LBA4, May 4, 2022) **3.** Slamon DJ et al. N Eng J Med 2020; 382; 514–24 **4.** Im S-A et al. N Engl J Med 2019;381:307-16.

Abbreviations: AI, aromatase inhibitor; FUL, fulvestrant; HER2-, human epidermal growth factor receptor 2-negative; HR+, hormone-receptor positive; mBC, metastatic breast cancer.

KISQALI® ribociclib

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Ph (02) 9805 3555. Kisqali® is a registered trademarks of Novartis AG.
Item No: AU-21444. Date of preparation: September 2022.

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- Angio PL.U.S. Imaging
- TriVu™ Imaging Mode

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 References 1. Data from public sources/websites, 2021. 2. FDA submissions P080003, P080003/S001, P080003/S004, P080003/S005, P080003/S006. 3. Data on file: DHM-05051_002 MAN-02290. 4.FDA Submission: P080003/S008; Smith, A. Improving Patient Comfort in Mammography. Hologic WP-00119 Rev 003 (2017)
Hologic (Australia and New Zealand) Pty Ltd, Suite 302, Level 3, 2 Lyon Park Road, Macquarie Park NSW 2113. Tel. +61 2 9888 8000. ABN 95 079 821 275.

A new hope

FOR HIGH-RISK* EBC PATIENTS

The first and only CDK4 & 6 inhibitor approved for the treatment of patients with HR+ HER2- node-positive EBC at high risk* of recurrence in combination with ET.[1]

Time to start CDK4 & 6 inhibition in EBC: VERZENIO™ in HR+ HER2- node-positive, early breast cancer at high risk of recurrence

Please join us and an esteemed panel of experts to discuss and share the data and their experience with the clinical trial and in their clinic at our exciting symposium at AIBC 2022.

Symposium speakers

Prof Fran Boyle
Mater Hospital, Sydney

Dr Alistair Ring
The Royal Marsden Hospital, London, UK

Dr Catherine Shannon
Mater Cancer Centre, Brisbane

Dr Richard de Boer (Chair),
Peter MacCullum Cancer Centre & St. Vincent's Private, Melbourne

Saturday 15th October 2022

07:30–08:30
Breakfast served 07:00

Hall B
Great Hall 2

*In the monarchE study, high risk HR+ HER2- EBC was defined as patients who had 4 or more positive nodes, or 1–3 positive nodes and grade 3 disease or tumour ≥5 cm, or a Ki 67 index ≥20%.[1,2]

AIBC: Australasian International Breast Congress **EBC:** early breast cancer, **HER2-:** human epidermal growth factor receptor 2 negative, **HR+:** hormone receptor positive

References: 1. VERZENIO Approved Product Information.
2. Johnston S *et al. J Clin Oncol* 2020; 38(34):3 987–98.

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PBS Information: Authority Required. For the treatment of hormone receptor (HR) positive, human epidermal growth factor receptor 2 (HER2) negative locally advanced or metastatic breast cancer in combination with an aromatase inhibitor or fulvestrant as initial endocrine-based therapy, or with fulvestrant where the patient has demonstrated progression of disease during or after treatment with an endocrine therapy. Refer to PBS Schedule for full Authority information.

Please review full Product Information before prescribing.
Full Product Information is available on request from Eli Lilly or at www.lilly.com.au/en/products/.
Eli Lilly Australia Pty Ltd, 112 Wharf Road, West Ryde NSW 2114. Phone 1800 454 559.

▼ This medicinal product is subject to additional monitoring in Australia. This will allow quick identification of new safety information. Healthcare professionals are asked to report any suspected adverse events at https://www.tga.gov.au/reporting-problems

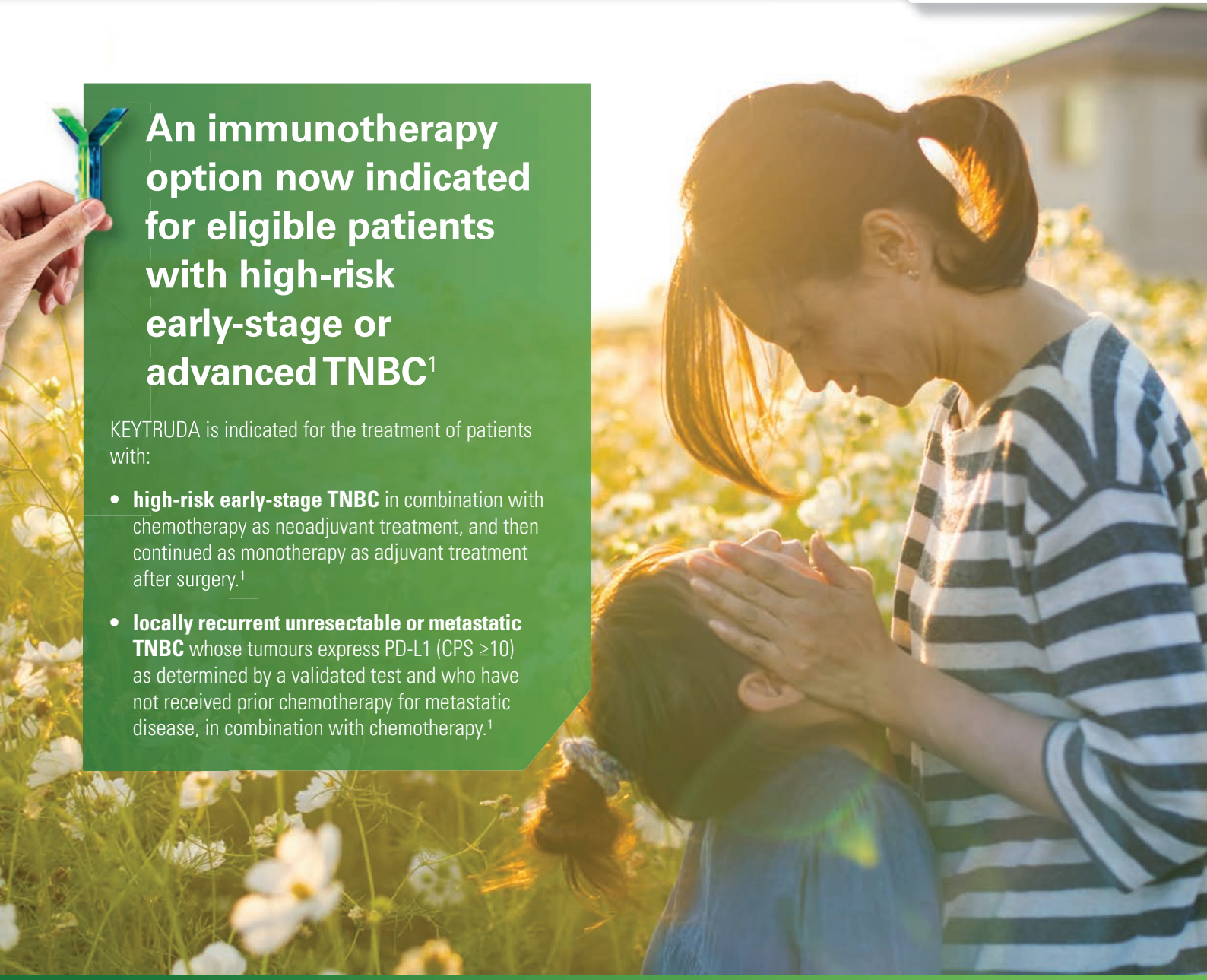
Eli Lilly Australia Pty Ltd, 112 Wharf Road, West Ryde NSW 2114.
PP-AL-AU-0461. Date of preparation September 2022. 2002704.

Lilly | Verzenio™ abemaciclib

An immunotherapy option now indicated for eligible patients with high-risk early-stage or advanced TNBC[1]

KEYTRUDA is indicated for the treatment of patients with:

- **high-risk early-stage TNBC** in combination with chemotherapy as neoadjuvant treatment, and then continued as monotherapy as adjuvant treatment after surgery.[1]
- **locally recurrent unresectable or metastatic TNBC** whose tumours express PD-L1 (CPS ≥10) as determined by a validated test and who have not received prior chemotherapy for metastatic disease, in combination with chemotherapy.[1]



KEYTRUDA is not listed on the PBS for these indications.
Please review the Product Information before prescribing, available at www.msdinfo.com.au/keytrudapi

SELECTED SAFETY INFORMATION

Precautions:

Immune-mediated adverse reactions (ImARs), incl. severe and fatal cases, have occurred in patients receiving KEYTRUDA. These have included, but not limited to: pneumonitis, colitis, hepatitis, nephritis, endocrinopathies, severe skin reactions (Stevens-Johnson syndrome, toxic epidermal necrolysis and bullous pemphigoid), uveitis, myositis, Guillain-Barre syndrome, pancreatitis, encephalitis, sarcoidosis, myasthenic syndrome/myasthenia gravis (incl. exacerbation), myelitis, vasculitis, hypoparathyroidism, myocarditis, pericarditis and pericardial effusion, peripheral neuropathy, sclerosing cholangitis, solid organ transplant rejection, and severe infusion reactions (hypersensitivity, anaphylaxis).[1]

ImARs have occurred after discontinuation of treatment with KEYTRUDA. ImARs can affect more than one body system simultaneously.[1]

Contraindications: None.[1]

Adverse events: In patients with high-risk early-stage TNBC receiving KEYTRUDA in combination with chemotherapy (carboplatin and paclitaxel followed by doxorubicin or epirubicin and cyclophosphamide), given as a neoadjuvant treatment and continued as monotherapy adjuvant treatment, adverse events occurring in ≥20% of patients were fatigue (70%), nausea (67%), alopecia (61%), rash (52%), constipation (42%), diarrhoea (41%), peripheral neuropathy (41%), stomatitis (34%), vomiting (31%), headache (30%), arthralgia (29%), pyrexia (28%), cough (26%), abdominal pain (24%), decreased appetite (23%), insomnia (21%), and myalgia (20%).[1]

In patients with locally recurrent unresectable or metastatic TNBC receiving KEYTRUDA in combination with chemotherapy (paclitaxel, nab-paclitaxel, or gemcitabine and carboplatin), adverse events and laboratory abnormalities occurring in ≥20% of patients were fatigue (48%), nausea (44%), alopecia (34%), diarrhoea (28%), constipation (28%), vomiting (26%), rash (26%), cough (23%), decreased appetite (21%), and headache (20%).[1]

CPS: combined positive score. **TNBC:** triple negative breast cancer.

References: 1. KEYTRUDA Product Information, http://msdinfo.com.au/keytrudapi.

Merck Sharp & Dohme (Australia) Pty Limited. Level 1 – Building A, 26 Talavera Road, Macquarie Park NSW 2113.
AU-OBR-00031. First issued September 2022. 200290.

MSD

Kadcyla®
trastuzumab emtansine

Roche

Adjuvant treatment of HER2-positive eBC

FEAR. LESS[1,2*]

*50% REDUCTION IN RISK OF RECURRENCE OF INVASIVE BREAST CANCER

or death vs trastuzumab (HR=0.50, 95% CI: 0.39–0.64; p<0.001) in patients with HER2-positive early breast cancer who have residual invasive disease after neoadjuvant taxane and trastuzumab-based treatment.[1]

Please review the Product Information before prescribing, **including the boxed warning**, available here. Kadcyla is listed on the PBS for certain indications. Refer to the PBS Schedule for further details.

CI: confidence interval; eBC: early breast cancer; HER2: human epidermal growth factor receptor 2; HR: hazard ratio.

References: 1. von Minckwitz G *et al. N Engl J Med* 2019;380:617–628. 2. Ahmad A. *ISRN Oncol* 2013;2013:290568. Further information is available on request from Roche Products Pty Limited, ABN 70 000 132 865, Level 8, 30–34 Hickson Road, Sydney NSW 2000. Medical Information: www.medinfo.roche.com/australia or 1800 233 950. ®Registered Trademark EMVKAD0298 M-AU-00001016 PreparedSep21

Halaven®
(eribulin mesilate) Injection

IS IT TIME TO PRIORITISE HALAVEN FOR YOUR METASTATIC BREAST CANCER PATIENTS?

HALAVEN significantly increased survival compared to treatment of physician's choice*[1,2]

*Significant OS improvement with HALAVEN versus real-world monotherapy in MBC patients who received ≥ 2 prior lines of therapy, including an anthracycline and a taxane unless contraindicated (13.2 months vs 10.6 months, p = 0.014)

References: 1. Cortes J *et al. Lancet* 2011;377(9769):914–23. **2.** Approved Halaven Product Information.
OS = overall survival; MBC = metastatic breast cancer

Safety information: In the EMBRACE study, HALAVEN had a manageable safety profile, with a low discontinuation rate of 13% due to adverse events.[2] The most common adverse events (>30%) were neutropenia, anaemia, asthenia/fatigue, alopecia, peripheral neuropathy and nausea.[1]

Please review full Product Information before prescribing, available at eisai.com.au/PI

Alternatively, please **SCAN QR CODE** to see full HALAVEN Product Information.

PBS Information: Authority Required (STREAMLINED). Locally advanced or metastatic breast cancer. Refer to PBS Schedule for full authority.

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