The Breast Centre

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Newsletter Summer 2019/2020

2019 has been a busy and productive year at The Breast Centre. We genuinely strive to continually improve the level of care we provide to our patients with breast cancer, with the ongoing goal of providing our patients with the best breast care possible. We aim to support and empower our patients to navigate the breast cancer journey and we see as a vital component of our role, to educate and inform ourselves, and update our patients and their general practitioners on an ongoing basis.

Wishing you a happy and healthy 2020.

Miss Jane O'Brien MBBS FRACS
Specialist Oncoplastic Breast Cancer Surgeon

Should Genetic Testing be considered for all Breast Cancer Patients ?

Genetic testing should be made available to all interested patients with a personal history of breast cancer according to new consensus guidelines released by the American Society of Breast Surgeons earlier this year, a policy which I have implemented in my own practice following the publication of the new guidelines, which also recommend re-evaluation and consideration of updated testing for patients tested prior to 2014.

Approximately 10% of breast cancers are associated with a pathogenic germline variant in one of several different genes, with more than 50% of the pathogenic germline variants being mutations in the BRCA1 and BRCA2 genes. National and international guidelines for genetic testing were originally established to help identify patients who had a high likelihood of benefiting from genetic testing that looked only for BRCA 1/2 mutations. The initial threshold for testing was set high because at that time genetic testing was very expensive and was just beginning to be used for medical care. Improvements in technology, such as next-generation sequencing, has made testing for more than one gene at a time a reality, which has improved the cost-effectiveness and efficiency of testing.

While BRCA1 and BRCA2 remain the most likely genes to be mutated in a family with high breast and ovarian cancer risk, panel testing can allow for more comprehensive coverage of less common syndromes that can also confer hereditary cancer risk. Numerous recent studies have shown that panel testing can significantly increase the rate of detection of pathogenic variants, with the most frequently identified pathogenic variants (outside of BRCA1 and BRCA2) being in PALB2, CHEK2, and ATM. There is a comparatively limited understanding of individual breast cancer risk associated with mutations in genes other than BRCA1 and BRCA2, however, the presence of mutations in PALB2, ATM, truncating mutations in CHEK2, and possibly other genes are likely to be associated with lifetime breast cancer risks of greater than 20%, especially in those with a family history.

Adopting a policy of considering genetic testing in all of my new breast cancer patients was something I had been deliberating for some time, particularly since the publication of a study in the Journal of Clinical Oncology (JCO) in December 2018, which found that the rate of pathogenic mutations in breast cancer patients was similar among patients who "did" and "did not" meet the 2017 American NCCN guidelines for genetic testing. The results of the study suggested that a strategy that simply tests ALL patients with a personal history of breast cancer would almost double the number of patients identified as having a clinically actionable genetic test result.

The majority of patients with a breast cancer diagnosis do not fulfil the current eligibility criteria for Medicare funded genetic testing, which was introduced in late 2017, and is restricted to those in whom there is a predicted 10% or greater chance of a genetic mutation being present, as calculated using one of the validated risk prediction models such as the Manchester Score, BOADICEA or BRCAPRO. Most women with a breast cancer diagnosis are therefore NOT currently eligible for Medicare funded tested. Self-funded genetic panel testing is now readily available, at a current cost of around $450-$600 AUD, and involves a simple blood test.

Although the additional cost of germ line testing for all patients with breast cancer is not negligible, it is approximately 10 times less than it was at the time that genetic testing guidelines were originally established, and the cost will continue to decrease. The cost also needs to be considered in the context of current practices considered standard of care eg 3D mammography/tomosynthesis. By contrast, hereditary testing is a one-time cost, with information that may be valuable over the lifetime of a patient. For patients with newly diagnosed breast cancer, identification of a mutation may impact local treatment recommendations (surgery and potentially radiation) and also systemic therapy. Additionally, family members may subsequently be offered testing and tailored risk reduction strategies.

Interestingly, on reviewing the genetic test results on my own patients in 2019 to date, 60% of the patients found to have a pathogenic mutation, did NOT fulfill eligibility criteria for Medicare funded genetic testing.

The guidelines may be accessed at:
https://www.breastsurgeons.org/docs/statements/Consensus-Guideline-on-Genetic-Testing-for-Hereditary-Breast-Cancer.pdf

Textured Breast Implants and Breast Implant Associated Anaplastic Large Cell Lymphoma (BIA-ALCL)

Breast implant associated anaplastic large cell lymphoma (BIA-ALCL), is a rare cancer of the immune system. It is not breast cancer, which forms from cells in the breast, but is a cancer of the body's lymphatic system, and usually grows in the fluid and internal scar tissue that develops around the breast implant. Although fatalities have been recorded, the vast majority of BIA-ALCL are cured by removal of the implant and the capsule surrounding the implant. In about 80% of cases, the disease is detected in the early stage, with cancer cells found only in the fluid around the implant. Most of these cases are cured by removal of the implant and the surrounding capsule. Over the last 10 years four Australian women have died from BIA-ALCL.

BIA-ALCL usually presents with a swelling of the breast, on average occurring 8 years (3 to 14 years) after the operation to insert the breast implant. The swelling is due to an accumulation of fluid. It is a rare condition, with expert opinions estimating the published risk of BIA-ALCL at between 1-in-1,000 and 1-in-10,000. BIA-ALCL is more likely to occur in rougher surfaced implants, with the risk increasing with increasing texturing of the implant, with a risk of 1-in-1,000 and 1-in-3,000 for macrotextured implants. BIA-ALCL can occur after either reconstruction or augmentation surgery.

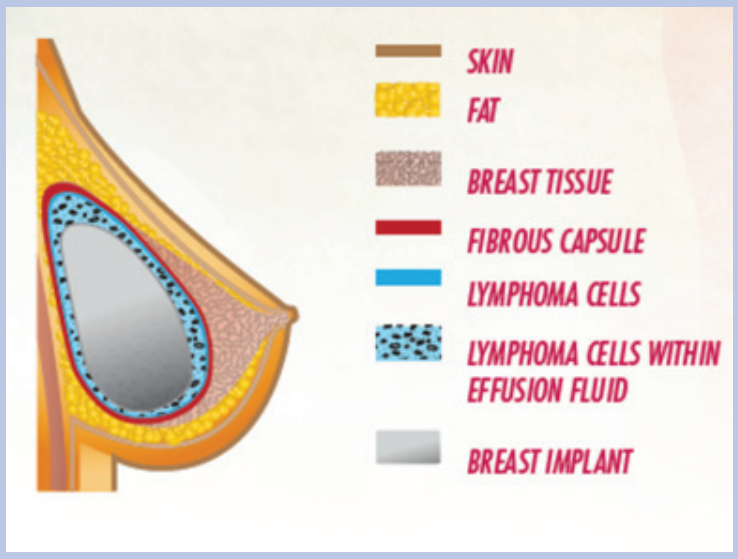
The number of BIA-ALCL cases in Australia (about 1 in 7 of all cases reported globally) is much higher than would be expected on a relative population basis, and this may be related to the fact that a higher proportion (about 75-85%) of implants used in Australia have been textured, in comparison to other countries such as the United States. To date in Australia there have been no cases of BIA-ALCL in patients who have a history of implantation with only smooth implants, and all Australian cases have occurred in women with textured or polyurethane implants.

BIA-ALCL seems to develop exclusively in women who currently have or used to have textured breast implants, rather than smooth implants. There have not been any reported cases of BIA-ALCL in women who have had only smooth-walled implants. Researchers are not sure why the type of breast implant plays such a key role in developing BIA-ALCL, but there are several theories under investigation regarding the risk associated with textured implants, including:

- Greater surface area of the implants
- Inflammation of the surrounding tissue
- Possible genetic links

Facts associated with BIA-ALCL

- It is a T cell lymphoma and is a form of Non-Hodgkin's Lymphoma
- It is not a breast cancer
- It occurs in association with breast implants and to date exclusively with exposure to textured implants (ie. no case has been reported with exposure to smooth implants alone)
- It occurs in women who have had implants for both cosmetic and reconstructive indications
- It takes an average of 7-10 years after implant insertion before it develops
- The commonest presentation is a fluid swelling around the breast implant and in the space between the implant and breast implant capsule. The diagnosis of the tumour is made by examination of the seroma fluid
- Early stage disease is curative with surgery alone
- Disease which has spread through the capsule, forming a mass or which has spread to local lymph glands carries a worse prognosis



As all the breast reconstructions with which I am involved are performed in association with a plastic surgeon, I do not personally insert any breast implants, however following the significant national and international media publicity regarding breast implants this year, I have understandably received many queries from breast cancer patients who have previously undergone implant based reconstruction. The Australasian oncological breast surgical society (BreastSurgANZ) in August 2019 made a recommendation to its members that we communicate with and inform our patients of the proposed regulatory action regarding textured breast implants, and I wrote to all of my patients who had undergone implant-based reconstruction over the last 10 - 15 years, informing them of the recent developments, and encouraging them if they were unaware of the type of implant(s) they have, to contact their plastic surgeon to clarify. Patients who have smooth implants, can be reassured that there have been no cases of BIA-ALCL in Australia in patients who have a history of only smooth implants.

On July 24th 2019, the US Food and Drug Administration (FDA) requested that the manufacturer Allergan recall its BIOCELL textured breast implants and tissue expanders, which they have since done. Of the reported total of 573 BIA-ALCL cases worldwide, including 33 patient deaths, 481 are reported to have had Allergan breast implants at the time of diagnosis, and 12 of 13 deaths occurring in patients with BIA-ALCL where the manufacturer was known, occurred in patients implanted with an Allergan breast implant at the time of their BIA-ALCL diagnosis. On 25 September 2019, the Australian Therapeutic Goods Administration (TGA) announced a 6 month suspension of 8 textured devices from four manufacturers, commencing on 25 October 2019.

Because BIA-ALCL is rare, authorities both here and overseas do not currently recommend the need to remove or replace macrotextured breast implants or tissue expanders in asymptomatic patients where there are no problems with the device. Patients who notice any sudden changes around their implant, such as a new swelling, should be investigated promptly.

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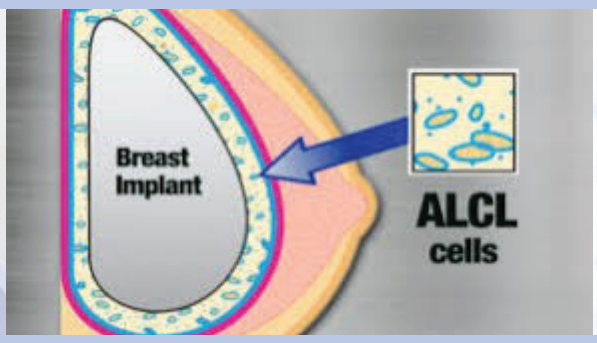
Further information can be obtained from the TGA and FDA websites.

- **https://www.tga.gov.au/breast-implant-associated-cancer-or-bia-alcl**
- **https://www.fda.gov/medical-devices/breast-implants/questions-and-answers-about-breast-implant-associated-anaplastic-large-cell-lymphoma-bia-alcl**



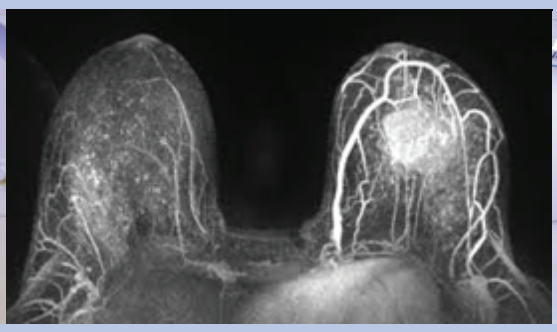
New Medicare Rebates from November 1st 2019 for Breast MRI and PET Scans

Breast MRI scans have up until very recently only attracted a Medicare rebate in Australia when performed for the screening of women at high risk of developing breast cancer, and not when performed in women with an actual breast cancer diagnosis.
As of Nov 1st 2019, women with proven or suspected breast cancer, who fulfil certain eligibility criteria, are able to claim a Medicare rebate on their breast MRI scan.
Medicare rebates are available for breast MRI scans for:

- Diagnosis of breast cancer in women where other imaging was inconclusive and a biopsy has not been possible; and
- Pre-surgical planning for women diagnosed with invasive breast cancer, where there is discrepancy between clinical assessment and conventional imaging assessment.

The new PET services added are:
- Whole body PET performed for the staging of locally advanced (Stage III) breast cancer; and
- Whole body PET performed for the evaluation of suspected metastatic, or suspected locally or regionally recurrent, breast carcinoma.

These new items may be requested by specialists or consultant physicians



Prepectoral Implant Based Breast Reconstruction

Breast reconstruction with a "prepectoral" prosthesis wrapped in ADM (acellular dermal matrix) is the newest type of implant-based breast reconstruction (IBBR), in which the breast prosthesis (either a tissue expander or a permanent implant) is placed in front of the pectoral (chest wall) muscle, rather than behind it. The prepectoral approach can be used in conjunction with either single stage direct-to-implant (DTI) reconstruction or two stage tissue expander reconstruction. Prepectoral reconstruction is an alternative to the more common "subpectoral" and "dual-plane" approaches. (Autologous tissue flap reconstructions such as DIEP flaps are routinely placed prepectorally)

One problem with "subpectoral" and "dual plane" implant-based breast reconstruction is that many women experience pain and chest tightness. The pectoralis muscle is designed to be flat against the chest wall. When a breast implant is placed under the pectoralis muscle, it can be uncomfortable and many women never escape the discomfort as long as the implants remain. Furthermore, when the woman flexes her chest muscle, there can be an animation deformity, in which the pectoralis muscle pushes down on and deforms the implant, causing it to move up and down in an odd way. Finally, the constant action of the pectoralis muscle pushes the breast implants into the armpits so that over time the breasts migrate wider apart.

In recent years, with the advent of ADMS, it has become possible to place breast implants, wrapped in an ADM, over the muscle for breast reconstruction to give women a more comfortable and natural result. The pectoral muscle doesn't have to be lifted which lessens pain. When the implant is on top instead of under the muscle, there is no "animation" deformity and this makes exercising and wearing form-fitting clothes much easier.

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Benefits of Prepectoral Reconstruction

1. **The patient experiences less pain compared to implants placement under the chest muscle.**
2. **Movement and contraction of the chest muscle will not affect the implant and therefore limits animation deformity.**
3. **A more natural-appearing, shaped breast can be achieved with this method.**

When a breast implant is placed over the muscle in the prepectoral position, the implant is anatomically positioned in the same spot where the breast tissue used to be. The result is much more natural and comfortable, and since the implant is over the muscle the action of the pectoralis muscle does not force the implant into the armpits.

Prepectoral reconstruction is not yet widely available in Australia, and Jane O'Brien and her plastic surgical colleague Ed Ek are one of less than half a dozen teams in Victoria currently offering the option of "prepectoral" implant based reconstruction to our patients.

Jane O'Brien with plastic surgical colleague Edmund Ek

The Breast Centre offers:

- Patients with a confirmed or strongly suspected diagnosis of breast cancer usually seen within 24-48 hours.
- Private inpatient rooms, with ensuites for all breast patients
- Spacious, modern purpose-built consulting suites on the top floor of the St Francis building with impressive views over East Melbourne
- Dedicated Breast Care Nurse based in the consulting suite
- On-site breast medical oncology/chemotherapy with scalp cooling treatment
- Oncology liaison nurse
- Oncology Day Therapy Rehab/Prehab Programme
- On-site radiology
- On-site weekly Breast Multidisciplinary Team meetings
- Ample street parking

Miss Jane O'Brien MBBS FRACS

Specialist Oncoplastic Breast Cancer Surgeon

Jane O'Brien is a specialist oncoplastic breast cancer surgeon who specialises in surgery for breast cancer and prophylactic/preventive surgery for high risk individuals.

Jane has a special interest in "oncoplastic" breast surgery, aimed at maximising the cosmetic result following breast conservation surgery for breast cancer using advanced surgical techniques, and nipple-sparing mastectomy in conjunction with immediate breast reconstruction, both in the preventive setting and as treatment for cancer. Her team is one of the few in Australia with experience in a new technique of "prepectoral" implant based reconstruction. She also has a particular interest in the treatment of genetic breast cancers, breast cancer in younger women and in the use of neoadjuvant (preoperative) chemotherapy.

Jane is on the medical advisory board of Pink Hope, a preventative health organisation working to ensure that every Australian is empowered to assess and understand their risk of breast and ovarian cancer.

PLEASE NOTE:

- **As Jane O'Brien's surgical practice has evolved over the years, her focus has increasingly been on surgery for breast cancer, and prophylactic / preventive surgery for high risk individuals, and there is currently extremely limited capacity to take on new patients with benign breast conditions.**
- **Urgent appointments are set aside in all consulting sessions to accommodate patients with a confirmed or strongly suspected diagnosis of breast cancer in a timely fashion, however unfortunately the capacity to routinely offer appointments to new patients who have symptoms and imaging which is not suspicious of breast cancer is very limited.**

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