



Newsletter Winter 2020

2020 has been a pretty bizarre year so far by any standard.

Although our health system has not been overwhelmed, and we have avoided the catastrophic loss of life experienced in other parts of the world, we will nonetheless continue to feel the impact of the pandemic on non-COVID related health conditions for a long time to come. While each death is sad, the number of COVID deaths in Australia has been gratifyingly small, and the death of 100 or more Australians due directly to the coronavirus may ultimately be eclipsed by secondary casualties of the virus.

Delays in diagnosing and treating people with cancer could potentially lead to more years of lost life than with Covid-19, and modellers in the UK estimate the excess of cancer deaths is going to be way greater than with Covid-19. With cancer patients generally younger than COVID associated fatalities, the predicted 'years of lost life may be quite dramatic' on top of 'a huge amount of avoidable mortality'.

Cancer does not wait for the pandemic, and it is very important that the public receive the consistent message that anyone who is experiencing any concerning breast symptoms reach out to their GP for immediate evaluation.

Miss Jane O'Brien MBBS FRACS

Specialist Oncoplastic Breast Cancer Surgeon

Cancer Care in the time of COVID-19



Cancer: "The Forgotten C" of the Pandemic

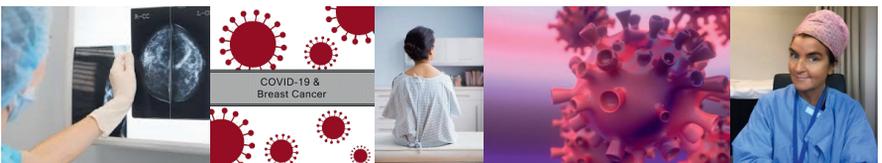
The Impact of COVID 19 on Breast Cancer Diagnosis and Treatment

At the outset of the pandemic, multiple surgical and oncological authorities worldwide published guidelines on suggested potential modifications to the treatment of breast cancer during COVID, which outlined strategies to be considered, such as the commencement of anti-hormonal/endocrine therapy in hormone receptor positive breast cancers, in order to allow surgery to be postponed for a number of months. Although these treatment compromises became a grim reality in Europe and the United States, they were fortunately not widely required in Australia.

As breast cancer surgery is classified as "essential/category one" surgery, even during the peak of the government restrictions, I was able to continue breast cancer surgery as normal. In addition, as my surgical practice is based at St Vincent's Private Hospital East Melbourne, which is a private, elective surgical hospital without non-surgical inpatients or an emergency department, the risk to my patients of exposure to the virus whilst in hospital was remote, which allowed me to safely continue providing my patients the option of immediate reconstruction at the time of mastectomy throughout. Unfortunately, many patients treated elsewhere, including locally, particularly within the public sector, were through circumstances, denied the option of immediate reconstruction during the pandemic, and will therefore be placed on what may prove to be a long waiting list for delayed breast reconstruction.

A significant reduction in the number of new breast cancer diagnoses has been reported both nationally and internationally during the pandemic. This is likely to be related to both the reluctance of patients to attend medical facilities for the investigation of breast symptoms, and also the temporary suspension of population breast screening programmes. The first thing that's become clear is that people aren't coming forward with signs or symptoms that could be cancer. It's not particularly surprising, as many of us are giving health services a wide berth at this time. But cancer doesn't stop just because we're in a coronavirus pandemic, and early diagnosis is as important as it's ever been.

Breast cancer screening attempts to find a cancer when it's small and more likely to be curable. When reports out of Wuhan showed that patients with cancer were at higher risk of contracting and dying from COVID-19, cancer societies worldwide quickly came to a consensus that routine cancer screenings should be delayed, to avoid exposing patients to coronavirus. The thought was: keep healthy people at home and don't use healthcare resources for cancer screenings, and the advice was that "healthy women of average risk delay routine breast cancer screening until later this year". Recommendations such as these were widely adopted, so it's not surprising that a recent study found that cancer screenings across the U.S. dropped between 86%-94% in March 2020, as compared to March 2019. BreastScreen Victoria recommenced screening last month and women are strongly advised to attend for their routine screen when invited.



Delaying routine cancer screenings during the early stages of the pandemic made sense for many patients who are considered normal risk for cancer. It has however created a lot of anxiety, however, for people who are at increased risk, such as patients with a hereditary cancer risk. Individuals with mutations that confer a high cancer risk, such as BRCA1 and BRCA2 (and others) should have scans at routine intervals to look for early cancers, and coronavirus should not get in the way for too much longer.

The fact that fewer people are going to their GP with symptoms is impacting the whole diagnostic pathway. The magnitude of the fall in new breast cancer diagnoses is variously estimated as being in the range of 30–70%. An analysis of weekly hospital data (reported until April 2020) from eight hospitals in England and Northern Ireland showed a decrease of 76% from pre-COVID-19 levels in urgent referrals from general practitioners (GPs) of people with suspected cancers. Changed behaviour—including reduced cancer screening, reduced presentations to the GP, reduced referrals to specialist cancer services and treatment delays—are likely to impact these projections, the stage of cancer at diagnosis, and ultimately cancer outcomes in Australia. As delays of 90 days or more in initiating treatment for early breast cancer are felt to be associated with a potentially poorer outcome/prognosis, with the gradual relaxation of COVID restrictions, it is strongly recommended that any patients who may have been sitting on a breast symptom throughout the lockdown, now seek prompt GP attention for immediate evaluation.

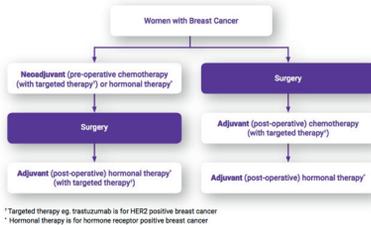
Medical facilities have policies and procedures in place to protect patients and staff including temperature checks upon arrival, social distancing in waiting rooms and immediate cleaning of all surfaces as a patient leaves the waiting room, the examination room, and the check-out area so every possible precaution is being taken to protect our patients. For the protection of other patients, particularly those undergoing neoadjuvant chemotherapy prior to surgery who are potentially immunosuppressed, we suspended routine face-to-face, in office breast cancer reviews between March and June, although these have now resumed.

With the additional time available over the last three months, I have taken the opportunity to update and expand on some of our website topics, as listed below. The website www.thebreastcentre.com.au is suitable for both patients and clinicians, containing information on all aspects of breast cancer, and includes electronic/PDF files on most subjects available to download.

- Initial Breast Cancer Treatment Decisions
- Lumpectomy vs Mastectomy: How to Choose
- Neoadjuvant Therapy: Overview
- Neoadjuvant Therapy: Personal Approach and Practical Aspects
- Breast Cancer Treatment Algorithms
- Ductal Carcinoma in Situ (DCIS)
- Ductal Carcinoma in Situ (DCIS) Treatment Algorithm

Making Initial Breast Cancer Treatment Decisions

Patients who receive a new breast cancer diagnosis are understandably anxious to find out as soon as possible what their treatment will entail. While it is rarely possible at the time of the initial diagnosis to accurately predict exactly what treatment will be required in their particular situation, often with the information obtained from the clinical breast examination, initial breast imaging and the needle core biopsy pathology, it is possible for some preliminary predictions to be made.



Treatment Sequencing Options

The modern management of early breast cancer is based on both "tumour burden", as assessed by the size of the tumour and nodal status and increasingly, "molecular subtype".

THE FIRST STEP:

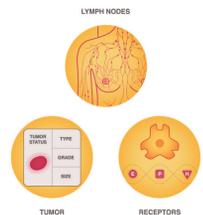
When I see a patient with a new, operable, invasive breast cancer diagnosis, there are several important pieces of information in which I am interested, because they are crucial in informing the nature and sequencing of the initial breast cancer treatment.

These factors are:

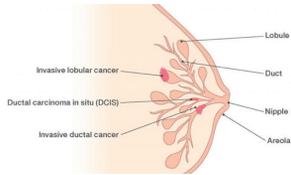
1. Molecular Subtype

In days gone by, the only information usually provided by the diagnostic needle biopsy was the confirmation of the breast cancer diagnosis. Pathology has advanced significantly in recent years, and the level of information about the biological nature of the breast cancer that we currently obtain from the core biopsy pathology report was previously only available (if it all) on the surgical excision specimen. This information not only potentially influences the sequencing of treatment, but also enables the breast surgeon to counsel the patient at the time of diagnosis about the likelihood that chemotherapy, targeted agents and/or hormonal blockade will form part of their treatment, either prior to or after surgical removal of the cancer. The pathological information that may be obtained from the diagnostic breast core biopsy includes:

As the breast surgeon is usually the first specialist with whom the patient meets, part of my role is to explain the overall treatment process, not just the surgical component, and to explain the rationale for considering other forms of treatment, such as drug therapy and radiotherapy, in addition to surgery. Increasingly this discussion also involves the potential "sequencing" of treatment modalities, as it is no longer automatic that surgery is the initial treatment of choice in all women with operable breast cancer.



- **Histological Type:** The two most frequent histological types of breast cancer are invasive ductal cancer—often described as being of “no special type” (NST)—(70–75%) and invasive lobular cancer (ILC)—(10–15%). The other 18 subtypes are uncommon (0.5–5%).

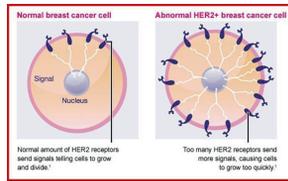
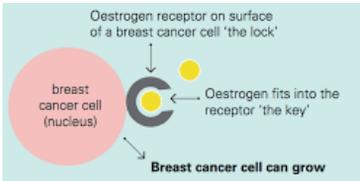


Histological Subtypes

Grade 1	Low grade	usually slow growing cancer cells and structures look more like normal breast cells
Grade 2	Intermediate grade	intermediate growth rate the cancer has fewer features of normal breast tissue
Grade 3	High grade	fast growing cancer cells look very different from normal breast cells

Grades of Breast Cancer

- **Grade:** The grade of a breast cancer indicates the pattern of the cancer cell growth and how fast the cancer cells are growing. The grade is numbered from 1 to 3: grade 1 being the least aggressive. A provisional or estimated tumour grade is often reported on the core biopsy, but the final grade of the tumour can only be determined on the operative specimen.
- **Receptor Status:** Oestrogen receptor (ER), progesterone receptor (PR), human epidermal growth factor receptor 2 (HER2). Tumours expressing ER and/or PR are termed ‘hormone receptor-positive’ (HR+) breast cancers. Those expressing human epidermal growth factor receptor 2 are described as HER2 positive (HER2+) and can be hormone receptor positive or negative. On occasions, the core biopsy HER2 result immunohistochemistry is equivocal, and the final HER2 status of the tumour may not be established until a definitive (ISH) test is performed. This is usually undertaken on the operative specimen, but if preoperative/neoadjuvant drug therapy is being considered, it can be performed on the core biopsy specimen. Tumours not expressing ER, PR or HER2, are called ‘triple-negative’ breast cancers (TNBC).



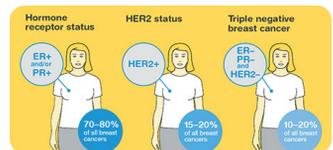
- +/- **Ki 67:** Ki-67 is a protein in cells that increases when cells are dividing, and is a marker of proliferation. It is reported as the percentage of cancer cells that contain Ki-67. The more positive cells there are, the more quickly the cancer is dividing and growing.

Breast cancer core biopsies which report receptor status allow tumours to be divided into four main receptor subtypes, as tabled below, which I find helpful in enabling me to immediately develop in my own mind and also discuss with the patient, a preliminary treatment ‘template’.

4 Major Breast Cancer Receptor Subtypes	
Subtype 1 Hormone Receptor HR +ve HER2 -ve (65%)	Subtype 3 Hormone Receptor HR +ve HER2 +ve (10%)
Subtype 2 Hormone Receptor -ve HER2 -ve (15%) Triple Negative	Subtype 4 Hormone Receptor -ve HER2 +ve (10%)

- HR+/HER2- tumours form the most common receptor subtype, and endocrine therapy to block ER activity is recommended all patients with ER+ and/or PR + breast cancers. Cancers which are subtype 1 do not automatically prompt a recommendation for chemotherapy, and as often there may not even be a need for chemotherapy in these cancers, preoperative chemo is therefore not commonly considered, and the majority of subtype 1 tumours (HR+/HER2-) are treated with initial surgery. Decisions regarding postoperative (adjuvant) systemic (drug) therapy are then made after surgery, based on the operative pathology results, sometimes with the additional assistance of a genomic test such as Oncotype DX.
- Cancers which are either HER2+ or triple negative, fall into receptor subtypes 2, 3 and 4 in the table above, and there will almost always be a recommendation for chemotherapy +/- HER2 targeted therapy at some point in the treatment trajectory. What sort of chemotherapy, for how long and whether it is administered before or after surgery is influenced by the ‘tumour burden’, which is determined by the ‘size’ and ‘nodal status’ of the cancer, not the biological ‘molecular subtype’.

The tumour biological subtype therefore determines what class of drug therapy is appropriate, and the size and nodal status allow that decision making to be further refined. In general terms, as chemotherapy attacks rapidly dividing cells, it tends to be most effective in faster growing cancers, which are typically high grade and HR-, as these cancers are usually the most ‘chemosensitive’. As the receptor status of the tumour is so important in determining treatment, in patients in whom a breast cancer diagnosis has been confirmed on core biopsy, it is helpful if the receptor status results are available prior to the initial appointment with the breast surgeon, as the consultation is then more informative.



2. Tumour Burden: Tumour Size and Axillary Nodal Status

With access to accurate state of the art modern breast imaging, including 3d mammography with tomosynthesis, breast MRI and the routine targeted preoperative sonographic assessment of the axilla, together with image guided needle biopsy of any abnormal axillary nodes, we now have more information available to us preoperatively than in the past regarding the estimated "tumour burden".

Tumor Size

As assessed by:

- Clinical examination (if there is a palpable "lump" present)
- Mammography- bilateral, preferably 3D digital mammography with tomosynthesis
- Ultrasound- formal ultrasound performed by the radiologist, sometimes supplemented by bedside ultrasound performed by the breast surgeon to correlate clinical and imaging findings.
- +/- MRI

The estimated size of the tumour, as assessed by some or all of the modalities above, is important in helping to determine the most appropriate form of surgery to the breast.

The two major pillars of breast cancer treatment are "locoregional" and "systemic" treatment. Armed with information on the tumour molecular subtype and tumour burden, it is possible to commence treatment decision making, in particular the potential treatment sequencing, as while surgery remains the first treatment recommended for the majority of patients with early breast cancer, preoperative or neoadjuvant chemotherapy is being used with increasing frequency in the multidisciplinary treatment of patients with operable breast cancer.



In the past, the recommendation for chemotherapy was based largely on tumour burden, and as such patients still tend to associate chemotherapy with poorer prognosis, larger and heavily node positive cancers. As tumour molecular subtype now so heavily influences the recommendation for chemotherapy, when it appears inevitable that chemotherapy will be recommended based on the tumour biology/molecular subtype of the diagnostic core biopsy, I think it is appropriate to advise patients of this early on. This serves to reinforce to the patient, the concept that the recommendation for chemotherapy is based on the likelihood that the tumour will be "chemosensitive", and that the requirement for chemotherapy does not necessarily reflect a more advanced cancer or a worse prognosis, but reflects the fact that chemotherapy is the most appropriate and effective drug therapy for that molecular subtype of breast cancer.

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 preventative 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.