

Life after breast cancer

This thirteenth article in our series on breast disease explores the many concerns that patients face after completion of their breast cancer treatment. The diagnosis and treatment of breast cancer is an ordeal for women on a number of levels. Similarly, there are often a multitude of issues and concerns raised after the completion of treatment. Having an awareness of these medical and survivorship issues allows the general practitioner to provide important support to both the patient and her family.

Medical management following breast cancer treatment includes regular reviews to explain and manage the side effects from treatment, and to offer early detection of potentially curable new disease. These follow up visits are an important opportunity for the general practitioner to provide support and reassurance, and also provide a forum for the patient to ask questions and discuss new information.

Risk of recurrence

Women will frequently request information about rates of local recurrence and survival. It is difficult to be precise about a woman's prognosis as this can depend on the stage of disease and other prognostic factors. *Table 1* shows recurrence and survival figures by stage of breast cancer when treated optimally. The risk of local recurrence (in breast, chest wall or regional nodes) is spread over the patient's lifetime, but is most likely to occur within the first 5 years of diagnosis (75% of cases). Recurrences after 10 years are uncommon. Similar statistics apply to the risk of metastatic disease, which peaks during years 2–5 of follow up.^{1,2}

Regular surveillance

Regular surveillance is used to detect loco-regional recurrence, contralateral breast cancer or distant relapse, and to check for post-treatment side effects. In general, follow up with a breast specialist would occur several times in the first year, with the frequency of visits decreasing over time. Typically visits will become annual and timed to coincide with routine mammography. The follow up schedule may need to be tailored to the individual risk of recurrence and the woman's personal needs.

A follow up consultation begins with a discussion about any symptoms or concerns the woman may have. It is important to distinguish expected treatment related

symptoms from the symptoms that may represent new or recurrent disease. Common side effects from surgery, radiotherapy and chemotherapy are listed in *Table 2*.

Symptoms of metastatic disease include systemic symptoms such as weight loss, or local symptoms related to a mass. As the bones are a common site of metastatic disease, any new musculoskeletal symptoms should be explored in detail. Bone metastases typically cause pain that is worse on initial movement, and tends to fluctuate in severity but has a constant background component. The pain may be severe enough to influence sleep patterns.

Physical examination is focused on the:

- ipsilateral breast: looking for evidence of cancer recurrence. It is often difficult to distinguish between normal surgical scar tissue, postradiotherapy breast change (a general firmness or may have discrete areas of pronounced thickening) and cancer recurrence. If there is concern, the suspicious area should be investigated with triple testing (clinical examination, breast imaging and percutaneous biopsy) as should any abnormal finding in the breast^{3,4}
- contralateral breast: looking for a second primary tumour. This occurs at the rate of 0.5% per annum in a person who has had a previous breast cancer⁵
- regional lymph nodes: looking for lymphadenopathy (in the axilla, supra- and infra-clavicular fossae). Although rare, an internal mammary chain nodal recurrence should be considered if there is tenderness or fullness in the parasternal region.

Distant disease is most common in the bone, lung, liver and brain. Any symptoms or signs in these areas warrant early investigation by cross sectional imaging such as computerised tomography (CT) or ultrasound scanning, and/or a bone scan.

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Routine investigations

Breast imaging

Annual bilateral (if breast conservation) or contralateral (if mastectomy) mammography is the only routine form of surveillance (*Figure 1*). An ultrasound may be performed if the breast tissue density is very high, and should only be decided after mammograms have been reviewed. All new symptoms should be investigated with both mammography and directed ultrasound.

CT/bone scans and blood tests

These are not performed routinely during surveillance after breast cancer. Routine testing for metastatic disease does not improve survival and may increase patient anxiety. Should symptoms or signs arise, it is appropriate to investigate these appropriately.

Lymphoedema

Lymphoedema of the upper limb may occur following surgery or radiotherapy to the axilla. It may present with heaviness or aching of the arm, swelling of fingers, or sometimes with difficulty putting on long sleeves. The risk of severe lymphoedema is around 6% with one treatment modality, but up to 30% with the combination of surgery (axillary clearance) and radiotherapy.⁶ Lymphoedema may occur at any time after treatment (even 20–30 years after axillary treatment). It is recommended that all patients who have had

axillary treatment take special precautions to minimise the risk of lymphoedema. Many of these recommendations are historical and have no evidence supporting their efficacy. They include:

- protecting the arm to avoid cuts, burns, bites, and cannulae
- treating minor wounds promptly to avoid infection
- avoiding pressure around the arm from blood pressure tourniquets and tight clothing
- avoiding carrying very heavy loads and performing repetitive arm movements
- wearing an arm stocking properly fitted by an occupational therapist during long haul flights.

While established lymphoedema cannot be cured, the impact it has on a woman's life can be minimised. Treatment by a lymphoedema therapist can reduce the symptoms; the earlier treatment is started, the better the results.⁷ Interventions include massage, compression garments, and prompt treatment of infections with antibiotics (with a low threshold for intravenous therapy).

Endocrine therapy

Tamoxifen or aromatase inhibitors may be prescribed as adjuvant treatment for women with oestrogen receptor (ER) positive breast cancer. These medications are generally taken for 5 years, although current trials are investigating whether this period should be

extended. These drugs generally halve the risk of opposite breast cancer and improve absolute survival at 10 years by an average of 8% in ER positive tumours.^{8,9}

Side effects of tamoxifen may include hot flushes, tender breasts, vaginal dryness or discharge, decreased libido and gastrointestinal upset. More serious but rare side effects include endometrial carcinoma (dilatation and curettage is recommended for any evidence of vaginal bleeding) and deep venous thrombosis (DVT). The increased risk of endometrial cancer from tamoxifen is 1 per 1000 women per year¹⁰ and represents a relative risk of 2.4–2.6.^{9,11} Aromatase inhibitors have similar rates of hot flushes, have less likelihood of endometrial carcinoma and DVT, but have a higher prevalence of musculoskeletal pains and osteoporosis.¹²

Breast reconstruction

Women who undergo mastectomy may consider the option of breast reconstruction. Reconstruction obviates the need to wear a breast prosthesis and may result in the woman feeling more feminine. Breast reconstruction may be immediate (at the time of mastectomy) or delayed. While some women have breast reconstruction performed immediately, many women feel overwhelmed at the time of cancer diagnosis and are unable to consider reconstruction at this time.

There are a number of options available for breast reconstruction. These include a

Table 1. Disease free and breast cancer specific survival* by stage of breast cancer at 5 years following optimal management, and suggested frequency of follow up

Stage	Disease free survival (%)	Breast cancer specific survival (%)	Frequency of follow up (monthly)		
			Year 1	Years 2–3	Years 4–5
DCIS†	90–95	98–100	3–4	6	6–12
I†	80–95	80–98	3–4	6	6–12
II†	50–75	50–70	3	4–6	6–12
III	50–66 (15–35‡)	30–60 (15–40‡)	3	3–6	3–6
IV – metastatic	0–5	5–20	3	3	3–6

* Data from references 2, 22–28

† Treated with breast conserving technique

‡ Inflammatory breast cancer

tissue expander followed by a breast implant (Figure 2a, b) or by autologous tissue (flap) reconstruction such as latissimus dorsi, transverse rectus abdominus muscle (TRAM) or deep inferior epigastric perforator (DIEP) flaps. Nipple and areolar reconstruction may be done at a later stage and is optional.

It is important that the woman has realistic expectations of reconstruction. The appearance and shape of the reconstructed breast will never be the same as the breast pre-mastectomy. Breast reconstruction aims to provide a breast mound rather than a new breast. Often women will be satisfied to feel that they appear 'balanced'. Pre-existing psychological and personal problems may not be helped by a breast reconstruction.

Breast reconstruction is an involved process that can generate its own set of complications. Perhaps the most common is contraction around an implant reconstruction. This may be worsened by radiotherapy, making the overlying skin feel tighter and less mobile over the implant.

Having breast reconstruction does not limit later treatments, nor interfere with radiotherapy, chemotherapy or hormone therapy (HT) unless there are wound healing problems. Follow up after reconstruction is no more difficult and recurrence of cancer in the area can still be detected.

Menopause and HT

Chemotherapy and drugs such as tamoxifen often induce an early menopause (more common over 40 years of age). It is dependent on the type of agents and total doses used. Contraception should be continued until it is certain that menopause has occurred. Hormone therapy is generally avoided after breast cancer unless symptoms such as hot flushes are debilitating and do not respond to other treatments.

The problem for women developing menopausal symptoms in this scenario is that HT could potentially increase the chance of breast cancer relapse.¹³ Some methods of managing severe flushing include avoiding aggravating factors such as stress, hot drinks and alcohol, overheating the body, hot weather and spicy foods. While there is no

Table 2. Common side effects after breast cancer treatment has been completed

Surgery

- 'Pulling' sensation over the scar
- Scar contracture
- Paraesthesia in the axilla and medial upper arm from the necessary dissection of the intercostal brachial nerve at the time of an axillary clearance
- Lymphoedema
- Physical imbalance and difficulties with muscular neck pain due to breast tissue loss (usually only a problem for women with larger breasts)
- Intermittent fleeting, jabbing neurological pains in the breast
- Intermittent pain in the upper arm on the side of an axillary clearance (typically settles over 3–6 months)

Radiotherapy

- Breast oedema and tenderness
- Hyperpigmentation in the first year
- Later there may be an increased density of the breast tissue
- In-field telangiectasia (particularly in the inframammary region and the tumour bed RT 'boost' area)
- Small decrease in the size of the residual breast tissue may occur

Chemotherapy

- Tiredness/fatigue
- Hair loss
- Bitter taste in mouth is unlikely to linger for more than a few weeks after chemotherapy
- Peripheral neuropathy may persist

Hormonal therapy

- Tamoxifen
 - hot flushes
 - tender breasts
 - gastrointestinal upset
 - vaginal dryness and discharge
 - decreased libido
 - abnormal vaginal bleeding
 - endometrial carcinoma and DVTs are rare
- Aromatase inhibitors (AI)
 - hot flushes
 - musculoskeletal pain (can be severe, requiring AI treatment to cease)
 - vaginal dryness
 - osteoporosis

evidence on the safety of phyto-oestrogens, many women try these products to relieve hot flushes. Remifemin, an extract of black cohosh, has been shown to be more effective than a placebo for treatment of hot flushes in menopausal women, but takes at least 8 weeks to be effective.¹⁴ Hot flushes may also be managed with the antidepressant venlafaxine (Efexor), progesterin, or tibolone (Livial).

Vaginal dryness and pruritis can often be soothed with simple gels or a topical and minimally absorptive oestrogen such as Vagifem or Ovestin. Avoidance of strong soaps and the use of sorbolene may also be helpful.

After menopause, bone density typically falls around 1–3% per annum. Osteoporosis may be slowed with 3–4 hours a week of weight bearing exercise, at least 1000 mg of



Figure 1. Annual mammography is recommended for women who have had breast cancer

calcium per day, and vitamin D supplements. The aromatase inhibitors will hasten osteoporosis, whereas tamoxifen slows this process. The bisphosphonates strengthen bone and increase bone density, and are sometimes given in conjunction with aromatase inhibitors.

Psycho-social survivorship issues

'Why did it happen to me?'

The lifetime risk of primary breast cancer in Australian women is one in 11.¹⁵ The incidence of breast cancer increases with age. Other risk factors include previous breast cancer or breast biopsy showing atypical cells, over 30 years of age at the birth of first child, a

long menstrual cycle, postmenopausal obesity, prolonged hormone use, and high alcohol intake. It may also increase in families with a strong history of cancers or known genetic mutations, and individuals exposed to carcinogenic agents such as unopposed oestrogens or radiotherapy to the upper chest (particularly pre-pubescent girls treated for lymphoma). Moderate amounts of exercise reduce the risk of breast cancer as does breastfeeding. A woman may therefore ask questions such as: 'I have no breast cancer in my family so how could I get breast cancer?' or 'I breastfed all my children so how could I get breast cancer?' Alternatively: 'I know I got breast cancer because I didn't have children'.

While information on epidemiological trends may explain the different incidence of breast cancer in populations, it is of little help in understanding why an individual woman develops breast cancer. Women need to be reassured that their breast cancer is not a result of anything they did or did not do, and that breast cancer can affect anybody, even women who 'did all the right things'. It is often helpful to reinforce the fact that breast cancer is very common, and that every day in Australia over 35 women are diagnosed with breast cancer.

Nutrition and exercise

There is no evidence that any particular food or diet during or after treatment will influence breast cancer relapse. There is also no

evidence to suggest that vitamin supplements reduce the risk of return of breast cancer. Soy products with phyto-oestrogens have not been shown to increase or decrease the risk. Many women find that they lose weight during breast cancer treatment but gain weight when treatment is complete. There is prospective randomised evidence that postmenopausal women who eat a low fat diet have fewer breast recurrences than those who eat a standard diet.¹⁶ It is therefore recommended that women have a balanced diet and maintain a healthy body weight. Regular physical activity, such as 30 minutes of moderate exercise on most days, is also recommended. These lifestyle measures have general physical and psychological advantages and reduce the risk of many other medical problems.

Intimacy and sexuality

Surgery for breast cancer, whether it is loss of a breast after a mastectomy or a slight change in breast shape after breast conservation, can change a woman's body image. This can impact on her self esteem and confidence, causing her to have doubts about her appearance and attractiveness. Support from a partner is extremely important, and evidence has shown that the adjustment to the 'altered sexual self' may be more successful in women who are married or partnered and had a strong intimate relationship before diagnosis.¹⁷ Open communication is very important, and many couples find to their surprise that the patient is more concerned about the loss of her breast

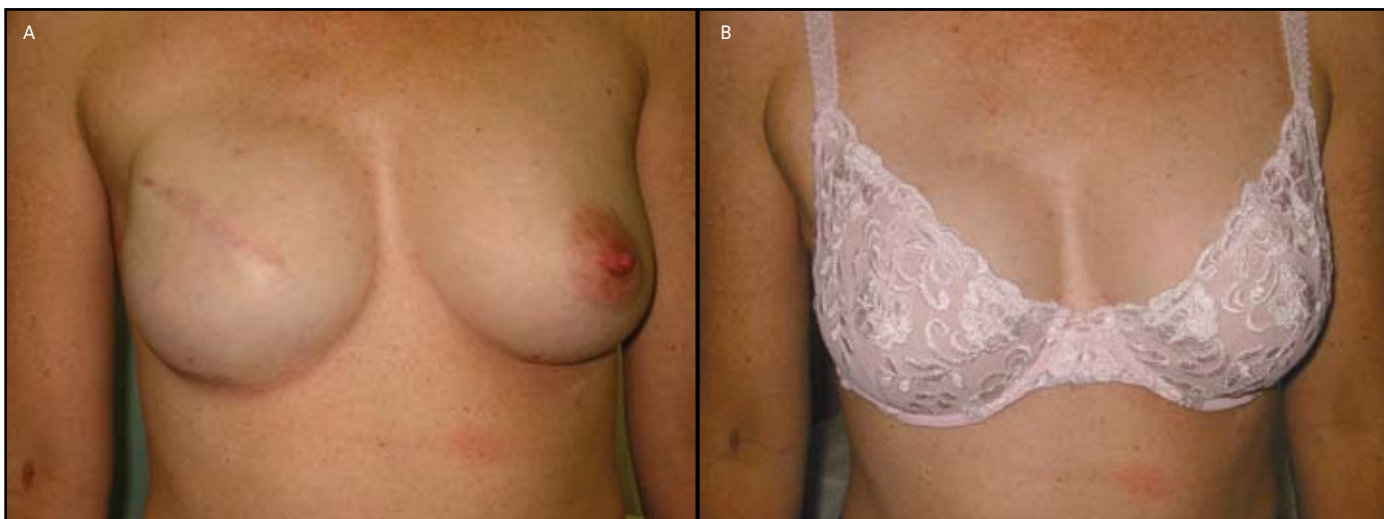


Figure 2a, b. Breast reconstruction with a tissue expander followed by a permanent implant. Symmetry has been achieved giving good shape, especially in clothing

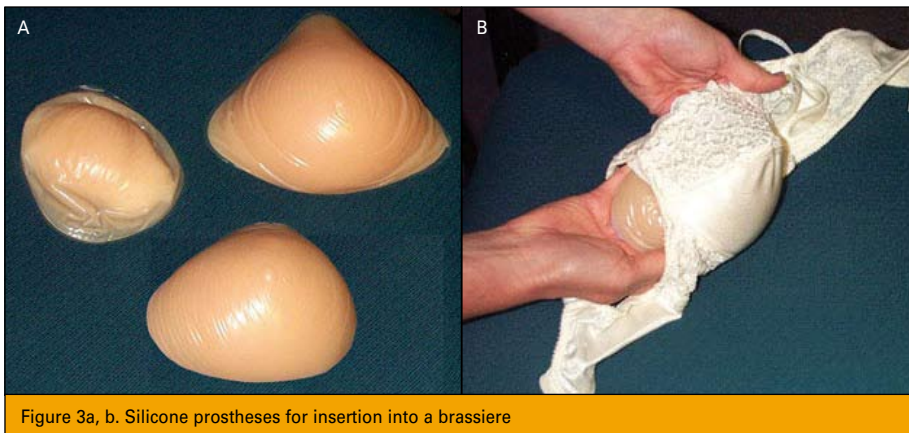


Figure 3a, b. Silicone prostheses for insertion into a brassiere

than her partner.

Libido and intercourse can be affected during and after cancer treatment by the stress of the illness, physical scars, and other effects of treatment such as hair loss and hot flushes from premature menopause. It is important for the woman to recognise that she is loved for her personal qualities, the way she interacts with those around her, her ability to love and to share with loved ones, rather than only for her physical attributes. It is important that she talk with her partner about how they are both feeling. To gain a sense of control over life again, a woman may need time to reflect upon recent changes.

Pregnancy after breast cancer

If a woman in her childbearing years wishes to conceive, it is imperative to discuss this with the medical oncologist before chemotherapy commences. Amenorrhoea may result from chemotherapy and endocrine therapies for breast cancer. The chance of amenorrhoea with these treatments increases with increasing age.¹⁸ For women wishing to conceive after treatment, the option of ovarian harvest and embryo storage can be discussed and arranged before treatment.

Pregnancy after breast cancer does not increase the risk of the cancer returning.¹⁹ Some women choose to wait 2–3 years before falling pregnant to ensure they get through the high risk surveillance period. In general, patients are advised to wait a minimum of 3–6 months after stopping all treatment before they conceive. There is not a higher incidence of congenital malformations after chemotherapy or radiation therapy.

Nonhormonal contraception should be used in premenopausal women as tamoxifen enhances fertility. Pregnancy is not advised while on endocrine therapy, as it has been shown in animals to be teratogenic.²⁰ Oral contraceptives should be avoided after a diagnosis of breast cancer. When considering contraceptive choices, it is important to note that most women over 45 years of age have an early menopause after chemotherapy. Serial measurements of follicle stimulating hormone, luteinising hormone, and oestradiol may be helpful. Other methods of contraception include tubal ligation, or vasectomy for the male partner.

Issues a woman will need to consider are: her personal risk of cancer recurrence, her ability to care for the child if the cancer recurred, and what would happen to the family should she not survive her cancer.

Living with the fear of recurrence

One of the hardest things a cancer survivor must do is live with the fear of recurrence. It is normal to swing through a range of emotions such as anger, confusion and despair. It is also normal to feel 'down' and anxious, especially in the first few years after treatment. Should this progress to depression, appropriate therapy including counselling and medication may be necessary. Even a simple shoulder ache from sport or overactivity is often perceived as a sign of metastases. Reassuring patients that it is normal to get aches and pains that come and go is important. Frequently a bone scan is required to exclude metastases and reassure the patient. Many women find their annual mammogram a distressing experience as it

raises the fear they experienced when the cancer was first diagnosed.

Gaining self confidence

If treatment has altered a woman's physical appearance, it may take time for her to adjust to these changes. It may become a problem if she tries to hide parts of her body from a partner because of fear of rejection. Learning to like and accept her new self is of vital importance, and helps with relationship communication.

Brassieres can be purchased with room for a prosthesis (*Figures 3a, b*), and waterproof prostheses can be worn when swimming. Wig libraries are accessible while waiting for hair to regrow after chemotherapy. Hair may be dyed during and following treatment.

Implications for the family

The partner of a patient will frequently have mixed emotions ranging from fear of loss to overwhelming love. Resentment of being 'left behind' and having to be a father and mother can be difficult. Counselling or access to support groups for the partner should be made available.

Women often worry about their daughter having an increased risk of breast cancer. The majority of patients can be reassured that their daughter's risk is no higher than average. If there is concern, the family may be referred to a family cancer service to help define the individual risk of breast or other cancers.

How to tell children about a cancer diagnosis

Explaining a cancer diagnosis to children can be an onerous task for a parent, particularly when the condition cannot be cured. A booklet is available from the Cancer Council of NSW with many helpful age appropriate suggestions (see *Resources*).²¹

Not only is it difficult for a woman and her partner to cope with the diagnosis and prognostic implications of her breast cancer, it is also difficult to then have to communicate this to their children. Children may interpret information in many ways, including causal and survivor guilt, fear for their own safety and that of their family unit disintegrating, and concern for their own health when they become an

adult. They may be unsure who will be 'there' for them, and who they should or should not tell. It is good to talk with children before they begin to worry, using language that is age appropriate, showing love and emotion. It is best to continue normal routines as much as possible, preserving family time, and making time to listen to children's questions.

Conclusion

There are many issues for women to deal with following treatment for breast cancer. Adjusting to life after breast cancer means dealing with issues such as an altered body image, changes in relationships with partner and children, living with any ongoing side effects, and the fear of tumour recurrence. Being aware of these issues allows the GP to provide important support for both the patient and her family.

Resources

- Breast Cancer Support Service
1300 131 533
- Cancer Helpline (Cancer Council NSW)
www.cancercouncil.com.au or 13 11 20
- Encore (gentle exercise program)
www.encore.net.au or 1800 305 150
- NSW Breast Cancer Institute
www.bci.org.au
- National Breast Cancer Centre
www.nbcc.org.au

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