



Cancer survivorship information for professionals



Follow-up of breast cancer survivors

Breast cancer five-year survival rates are high for people whose cancer is detected early. They are among the highest five-year survival rates.

Advances in treatment over recent years have reduced psychological and physical morbidity (e.g. through the use of sentinel lymph node biopsy, and breast-conserving surgery versus radical mastectomy) and reduced the risk of

recurrence and mortality (e.g. through the use of adjuvant chemotherapy, aromatase inhibitors, tamoxifen and surgical removal of ovaries). Genetic profiling advances may help to further increase the effectiveness of treatment and reduce late effects from treatment.

Follow-up includes scheduling regular reviews and ensuring cancer survivors are aware of the risks of late effects associated with their breast cancer treatment.

Five- and 10-year survival (Australia)

In 2004, five-year survival for women with breast cancer was 87.7% and 10-year survival was 79.4%.

Potential issues for survivors

Survivors may experience many different issues after completing treatment: physical, emotional, psychosocial and practical.

Survivorship care ideally addresses all of these issues. The four main aims of care during the survivorship phase, as detailed by the Institute of Medicine's report (see Hewitt et al. 2006) 'From cancer patient to cancer survivor: lost in transition', are:

- surveillance for cancer spread, recurrence or second primary cancers
- coordination between specialists and primary care providers to ensure that all of the survivor's health needs are met (incl. health promotion, immunisation, screening for cancer and non-cancerous conditions, and the care of concurrent conditions)
- intervention for consequences of cancer and its treatment (e.g. problems such as lymphoedema and sexual





Follow-up of breast cancer survivors



dysfunction, symptoms including pain and fatigue, psychological distress experienced by cancer survivors and their caregivers, and concerns related to employment and insurance)

- prevention and detection of new cancers and recurrent cancer.

Surveillance for cancer spread, recurrence or second primary cancers

Most recurrences are detected in the five years after diagnosis, although recurrence can occur more than 20 years after the initial diagnosis.

For women who have had mastectomy, the majority of recurrences will be detected by clinical examination alone. For women who have had breast-conserving surgery, a significant proportion will be detected by regular mammography.

Which patients?

All patients who have been treated for breast cancer should be followed up.

There is no evidence that follow-up more frequent than the minimal review schedule confers any survival benefit or increase in quality of life.

New symptoms: advice for survivors

Cancer survivors may wait to discuss some symptoms if they know a surveillance/ follow-up appointment is scheduled. Advise the cancer survivor to contact their doctor if they notice a breast change or any other symptom that concerns them between follow-up appointments.

Advise the cancer survivor you are treating to contact you if they experience:

- unexplained persistent changes in general condition (loss of weight, loss of appetite, loss of energy)
- persistent unexplained pain or discomfort.

Coordination between specialists and primary care providers

Follow-up may be performed by the specialist or GP. Follow-up by GPs has not

been shown to be associated with increase in time to diagnosis, increase in anxiety or deterioration in health-related quality of life.

It is important that follow-up is coordinated and that survivors are not required to attend excessive appointments.

Guidelines included in the Victorian Government's patient management framework (breast tumour stream) recommend that follow-up should be by a multidisciplinary team, although not all disciplines need to be involved in the longer term follow-up.

The guidelines recommend that the team, in consultation with the GP, decides on who will coordinate follow-up. Responsibility needs to be agreed between the designated lead clinician, GP and cancer survivor, and an agreed survivorship care plan documented.

The plan should identify who should be notified if the patient does not attend for follow-up.

The GP has a key role in follow-up.

Follow-up of women with early breast cancer

Method	Years 1 and 2	Years 3–5	After 5 years
History and examination	Every 3–6 months	Every 6–12 months	Every 12 months
Mammography of the ipsilateral breast (if breast conserving therapy) and contralateral breast [^]	Every 12 months*	Every 12 months	Every 12 months
Chest X-ray Bone scan, CT, PET or MRI** scans, blood count, biochemistry and tumour markers	Only if clinically indicated on suspicion of recurrence		

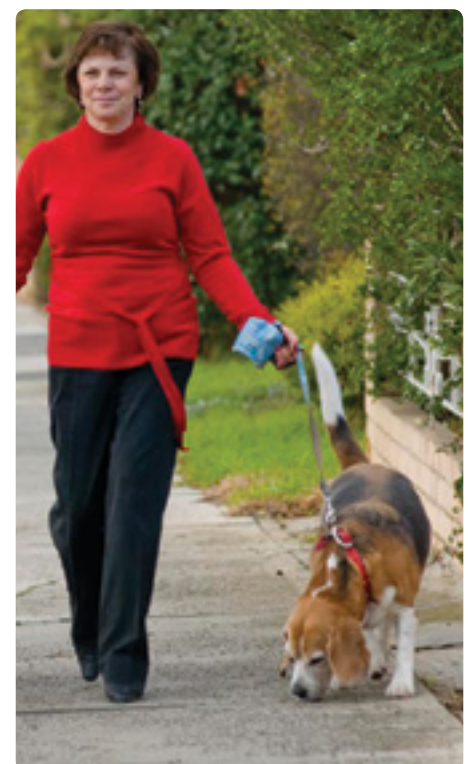
[^] Consider ultrasound in addition to mammography for younger women, women with dense breasts and those whose initial breast cancer could not be detected by mammography

* First mammogram 12 months post diagnosis

** Use of MRI may be considered in specific high-risk groups

Source: Adapted from National Breast and Ovarian Cancer Centre (NBOCC) 2010. Follow-up care for women with early breast cancer. A guide for general practitioners. NSW: NBOCC.

Note: this schedule may change, due for example to the detection of recurrence or the development of other illnesses. The schedule needs to be tailored to individual situations. Symptoms should be fully investigated if they arise.





Follow-up of breast cancer survivors



Intervention for consequences of cancer and its treatment

Late effects of breast cancer treatment

Note to cancer survivors: late effects from cancer treatment are generally uncommon and often rare. Do not assume that you will get a late effect if you had a treatment described here. Please speak to your doctor if you have any concerns about late effects from your cancer treatment

Late effects can occur as a consequence of surgery, chemotherapy, hormone therapy and radiotherapy.

Late effects of breast cancer treatment

Late effect	Cause/association
Fatigue	Association with cancer treatment is not clear; may occur in association with depression and anxiety
Cardiac toxicity <ul style="list-style-type: none"> • Appears to be dose-dependent • May appear during or shortly after treatment or months to years after treatment ends 	Anthracycline-containing regimens, trastuzumab (esp. in combination with doxorubicin or epirubicin plus cyclophosphamide), paclitaxel, taxane
Lymphoedema	Surgical axillary dissection or radiotherapy or both
Premature menopause	Chemotherapy, ovarian ablation, tamoxifen, aromatase inhibitors
Endometrial cancer, stroke, blood clots	Tamoxifen
Depression and anxiety	Association with treatment is not well understood
Pain	Surgery, chemotherapy and radiotherapy
Impaired sexual functioning or sexual discomfort <ul style="list-style-type: none"> • May also be associated with ageing • May especially affect younger survivors 	Related to impaired body image due to surgery Systemic therapy (esp. chemotherapy) leading to premature menopause/vaginal dryness
Impaired fertility	Chemotherapy Ovarian ablation
Accelerated loss of bone density, fracture risk	Ovarian failure following chemotherapy (esp. high-dose corticosteroids, aromatase inhibitors)
Impaired cognitive functioning	Association with treatment is not well understood May be associated with adjuvant chemotherapy
Dissatisfaction with cosmetic result and change in appearance	Mastectomy (with or without reconstruction) Breast-conserving surgery (smaller effect)
Second primary cancer <ul style="list-style-type: none"> • May be associated with the individual's underlying predisposition (e.g. BRCA mutation) and therefore not a late effect of treatment 	Treatment for original cancer, including increased risk of cancer in areas exposed to radiation, increased risk of leukaemia due to use of some adjuvant chemotherapy

For survivors and their partners, there may be relationship effects from cancer and its treatment, including difficulties over changed roles, fear of recurrence and the survivor's fear of being a burden.

Survivors who go through and beyond cancer treatment without partners or close family and friends may experience great loneliness.

Further information related to late effects

- Women who have received treatment known to increase the risk of cardiac toxicity should receive long-term periodic

evaluation of cardiac function as well as advice about other cardiovascular risk factors (e.g. smoking, alcohol, lack of exercise, poor diet).

- Remind survivors of the need to avoid injury to the upper limb and to be alert for any arm changes, to help to reduce the risk of lymphoedema. Lymphoedema may occur years after treatment.
- Women and their families with BRCA mutations may be referred to a familial cancer clinic for advice about prevention and screening.
- Younger women have particular needs if affected by menopause, if they require contraception, and in coping with changes to sexual function. Refer to fertility and menopause specialists and sex therapists who understand cancer care among younger patients if appropriate.
- Depression, anaemia, pain and hypothyroidism can all contribute to fatigue and can be treated. It should be noted that some SSRIs (e.g. paroxetine, fluoxetine) can decrease the efficacy of tamoxifen so other antidepressants should be considered. Venlafaxine has no or minimal effect on tamoxifen metabolism and has also been shown to be an effective intervention for hot flushes.
- Women at risk of accelerated reduction of bone mineral density due to chemotherapy should have their BMD checked every two to four years. Advise about bone density loss prevention such as weight-bearing exercise and smoking cessation. Consider preventive treatment with calcium and vitamin D supplementation, and bisphosphonates for women with osteoporosis, fractures or high rates of bone loss.
- Enquire about mood and whether the survivor feels they are coping. Assess survivor's level of distress/depression. Psychological distress generally declines over time. Psychosocial interventions (e.g. support group, cancer education) may be effective for women. Support groups and/or contact with a fellow survivor through a service such as Cancer Connect (contact via the Cancer Council Helpline on 13 11 20) may be helpful.



Follow-up of breast cancer survivors



Prevention and detection of new cancers and recurrent cancer

Follow-up care should include counselling about improved diet, maintaining a healthy weight, smoking cessation and increasing physical activity as these may help to prevent secondary, recurrent or a new primary breast cancer. They may also reduce many of the psychosocial consequences of cancer treatment.

Advise survivors (unless there are health reasons that indicate otherwise) to do at least 30 minutes of moderate-intensity physical activity on most, preferably all, days. The NHMRC has produced dietary

guidelines for Australian adults, on which advice to survivors can be based.

Survivors need appropriate screening for other cancers at recommended time intervals. All women who have ever been sexually active should commence having Pap tests between the ages of 18 and 20 years, or 1 to 2 years after commencing sexual activity, whichever is later. In some cases screening for cervical cancer may be appropriate before 18 years of age. Women over 70 years of age who have had two normal Pap tests in the past five years do not require further Pap tests. If a woman over 70 years has never had a Pap test, or requests a Pap test, they should be screened. Patients over 50 years should be counselled

regarding screening for bowel cancer. There is insufficient evidence for population-based screening for ovarian cancer; however, women who are at potentially high risk should be referred to a familial cancer clinic for assessment and management. Survivors have mammography as part of their follow-up and do not need to respond to invitations from the Australian Government's breast cancer screening program (BreastScreen).





Don't neglect other aspects of primary health care. Where indicated, monitor survivors' cholesterol, blood pressure and blood glucose. Survivors should have regular dental examinations and be counselled on routine sun protection.

Further information


This overview was prepared with reference to:

-  Australian Government Department of Health and Ageing 2005. National physical activity guidelines for Australians. Canberra: Australian Government.
-  Australasian Menopause Society (AMS) 2008. Early menopause due to chemotherapy. Available from AMS website.
-  Australian Institute of Health and Welfare, Cancer Australia & Australasian Association of Cancer Registries 2008. Cancer survival and prevalence in Australia: cancers diagnosed from 1982 to 2004. Cancer Series No. 42. Cat. No. CAN 38. Canberra: AIHW.
-  Cousins M 2007. Persistent pain after breast cancer surgery. Available from Australian Centre for Health Research website.
-  Grunfeld E et al. 1996. Routine follow up of breast cancer in primary care: randomised trial. *British Medical Journal*, 313:665–9 (14 September).
-  Hewitt M, Greenfield S, Stovall E (eds) 2006. From cancer patient to cancer survivor: lost in transition. Committee on Cancer Survivorship: Improving Care and Quality of Life. National Cancer Policy

-  Board. Institute of Medicine (IOM) and National Research Council of the National Academies.
-  Kroenke C et al. 2005. Weight, weight gain, and survival after breast cancer diagnosis. *Journal of Clinical Oncology* 23(7) (March 1): 1370–8.
-  Lemieux J et al. 2007. Medical, psychosocial, and health-related quality of life issues in breast cancer survivors. In Ganz P (ed) 2007. *Cancer survivorship today and tomorrow*. New York: Springer Science+Business Media.
-  Loprinzi C et al. 2000. Venlafaxine in management of hot flashes in survivors of breast cancer: a randomised control trial. *Lancet* 356: 2059–63.
-  Metropolitan Health and Aged Care Services Division (MHACSD) 2006. Patient management framework. Breast tumour stream: breast cancer. Victorian Government Department of Human Services.
-  National Breast Cancer Centre 2001. Clinical practice guidelines for the management of early breast cancer (2nd edn). Canberra: NHMRC.
-  National Health and Medical Research Council 2003. Dietary guidelines for Australian adults. Canberra: NHMRC.

-  NBOCC survivorship website.
-  Rosenbaum E et al. 2007. *Everyone's guide to cancer survivorship*. Missouri: Andrews McMeel Publishing.
-  Stull V et al. 2007. Lifestyle interventions in cancer survivors: designing programs that meet the needs of this vulnerable and growing population. *Journal of Nutrition* 137: 243S–8S.
-  Thewes B et al. 2004. The psychosocial needs of breast cancer survivors: a qualitative study of the shared and unique needs of younger versus older survivors. *Psycho-Oncology* 13: 177–89.

Also see:

-  National Comprehensive Cancer Network. This US site provides consensus-based guidelines developed by expert groups, and other clinical resources.