

Breast Cancer Survivorship Tool

Patient Identification

STEP 1 Know Your Patient

Patient Profile

Age at diagnosis: _____
Date of diagnosis: _____
Breast cancer site: L R BL
Type: _____
Grade: _____ Margins: _____
Lymph nodes involved: _____
 ER+/ER- PR+/PR- HER2+/HER2-
TNM: _____ Stage: _____
Genetic testing: _____
Menopausal status: _____
Date of last mammogram: _____

Health Care Team

Family physician: _____
Medical oncologist: _____
Radiation oncologist: _____
General surgeon: _____
Plastic surgeon: _____



The first step of survivorship care is understanding what breast cancer treatments an individual has received.

Print this form and complete it by hand or fill in the blanks online.

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Treatment History

Surgery Lumpectomy Mastectomy
 Sentinel node biopsy Axillary dissection

Reconstruction Implant Tissue flap Other

Chemotherapy Drug Regimen: _____

♥ Anthracycline (doxorubicin/epirubicin) given:
 Yes No

Radiation therapy Total dose: _____ Location: _____

Herceptin ♥ Yes No

Bisphosphonate Yes No

Ovarian suppression Medical Surgical

Endocrine therapy Drug: _____ Start date: _____

Intended treatment duration: _____

Drug: _____ Start date: _____

Intended treatment duration: _____

Date treatment completed: _____

♥ Potential for cardiotoxicity

STEP 2

Cancer Surveillance^{1,2,3,4,5,6,7,8}

At all visits:

- Patients should be made aware of possible symptoms of recurrence
- Consider adjusting follow-up recommendations based on comorbidities and life expectancy
- Consider genetics referral for familial breast cancer syndromes if:
 - Breast cancer diagnosis at age < 50 (especially < 35)
 - Triple-negative breast cancer age < 60
 - Ovarian cancer at any age
 - Bilateral breast cancer
 - Breast and ovarian cancer in the same woman or family
 - Multiple breast cancers on same side of family (paternal or maternal)
 - Male breast cancer
 - Ashkenazi Jewish ethnicity

These investigations are not routinely recommended:

- **Breast MRI (I)**
- **Blood work: complete blood count, LFTs,* tumour markers**
- **Imaging: chest X-ray, CT, bone scan (I)**
- **Cardiac markers, ECHO (III)**



Year 1

Medical history and physical exam every six months (III)

Diagnostic mammogram one year from pre-treatment mammogram and not less than six months after radiation treatment (II)

Breast self-exam monthly (III)

Screen for distress, depression, and anxiety (I)

Baseline BMD[†] if:

- Post-menopausal
- Patient taking AI[‡] or GnRH agonist
- Chemotherapy-induced premature menopause

Year 2

Medical history and physical exam every six months (III)

Diagnostic mammogram (II)

Breast self-exam monthly (III)

Screen for distress, depression, and anxiety (I)

If on AI or GnRH agonist:
• Lipid levels yearly (III)

Year 3

Medical history and physical exam every six months (III)

Diagnostic mammogram (II)

Breast self-exam monthly (III)

Screen for distress, depression, and anxiety (I)

If on AI or GnRH agonist:
• BMD (III)
• Lipid levels yearly (III)

Year 4

Medical history and physical exam every six months (III)

Diagnostic mammogram (II)

Breast self-exam monthly (III)

Screen for distress, depression, and anxiety (I)

If on AI or GnRH agonist:
• Lipid levels yearly (III)

Year 5

Medical history and physical exam every six months (III)

Diagnostic mammogram (II)

Breast self-exam monthly (III)

Screen for distress, depression, and anxiety (I)

If on AI or GnRH agonist:
• BMD (III)
• Lipid levels yearly (III)

And beyond

Breast self-exam monthly (III)

Diagnostic mammogram yearly (II)

Screen for distress, depression, and anxiety (I)

If on AI or GnRH agonist:
• BMD every two years (III)
• Lipid levels yearly (III)

* LFTs = liver function tests

† BMD = bone mineral density

‡ AI = aromatase inhibitor

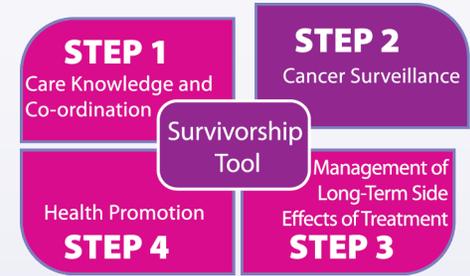
Levels of evidence are indicated in parentheses where applicable.

For an explanation of evidence levels please see:

<https://tinyurl.com/LevelsofEvidence5>.

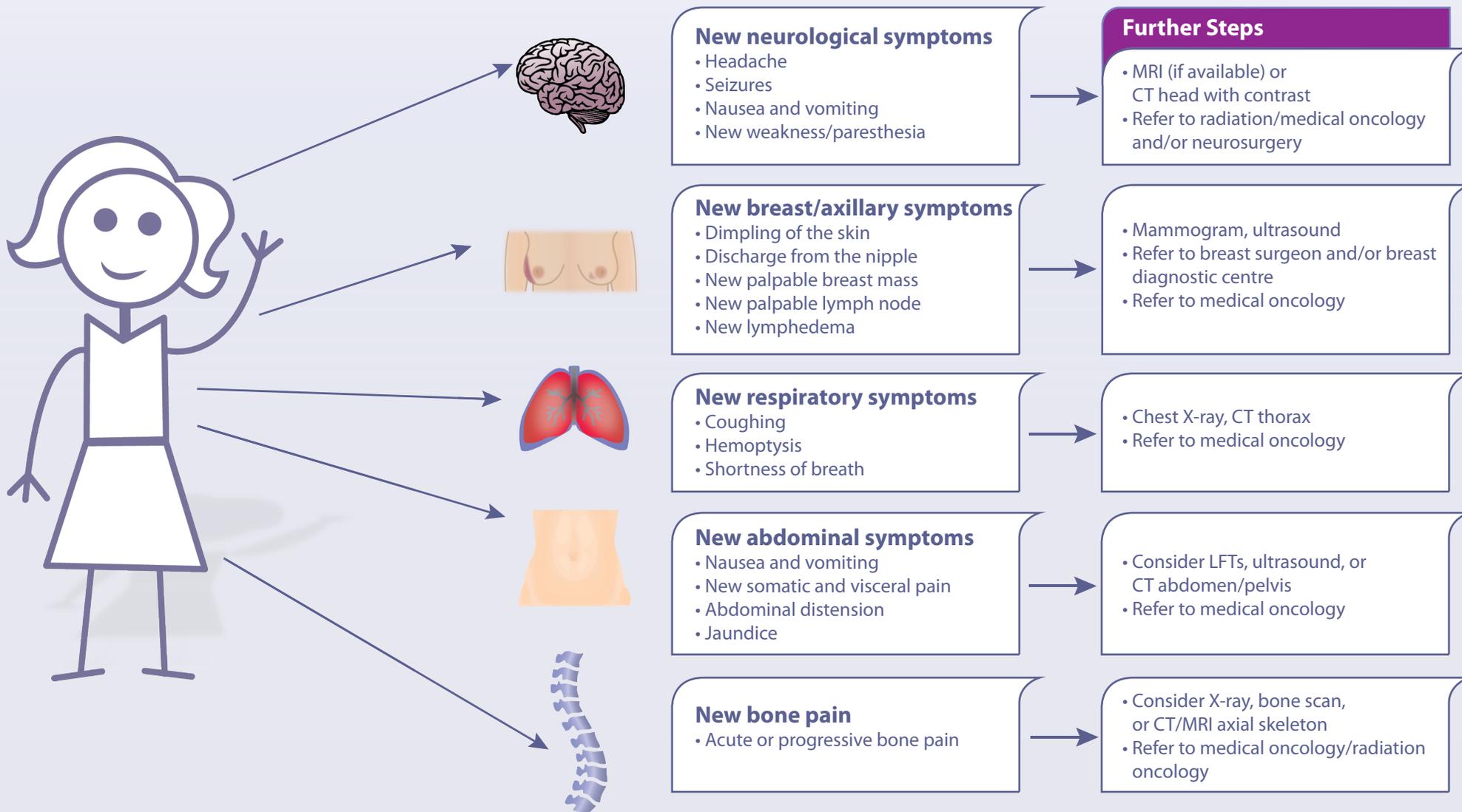
STEP 2

Cancer Surveillance: Cancer Recurrence ^{3,9,10,11}



Common Sites of Disease Recurrence: local, lung, liver, bone, brain

Always consider the possibility of a new primary cancer and the need for biopsy in addition to referral.



STEP 3

Long-Term Side Effects of Treatment

Long-term side effects will depend on which therapies your patient has had. Surgery, radiation, chemotherapy, and endocrine therapies all have different possible long-term effects.



Cognitive dysfunction^{5,12,13,14}

Chemotherapy

- Mild cognitive impairment or “chemo brain”

Psychological distress^{3,5,15}

All therapies

Pulmonary fibrosis^{16,17,18}

Radiation

- Increased shortness of breath

Fatty liver disease^{8,19}

Endocrine (tamoxifen)

- May develop in up to 33% of patients

Venous thromboembolism^{8,20}

Endocrine (tamoxifen)

- Relative risk of VTE is two to three times higher
- Pulmonary embolism risk of 0.2% over five years

Arthralgia, musculoskeletal symptoms^{8,21,22,23,24}

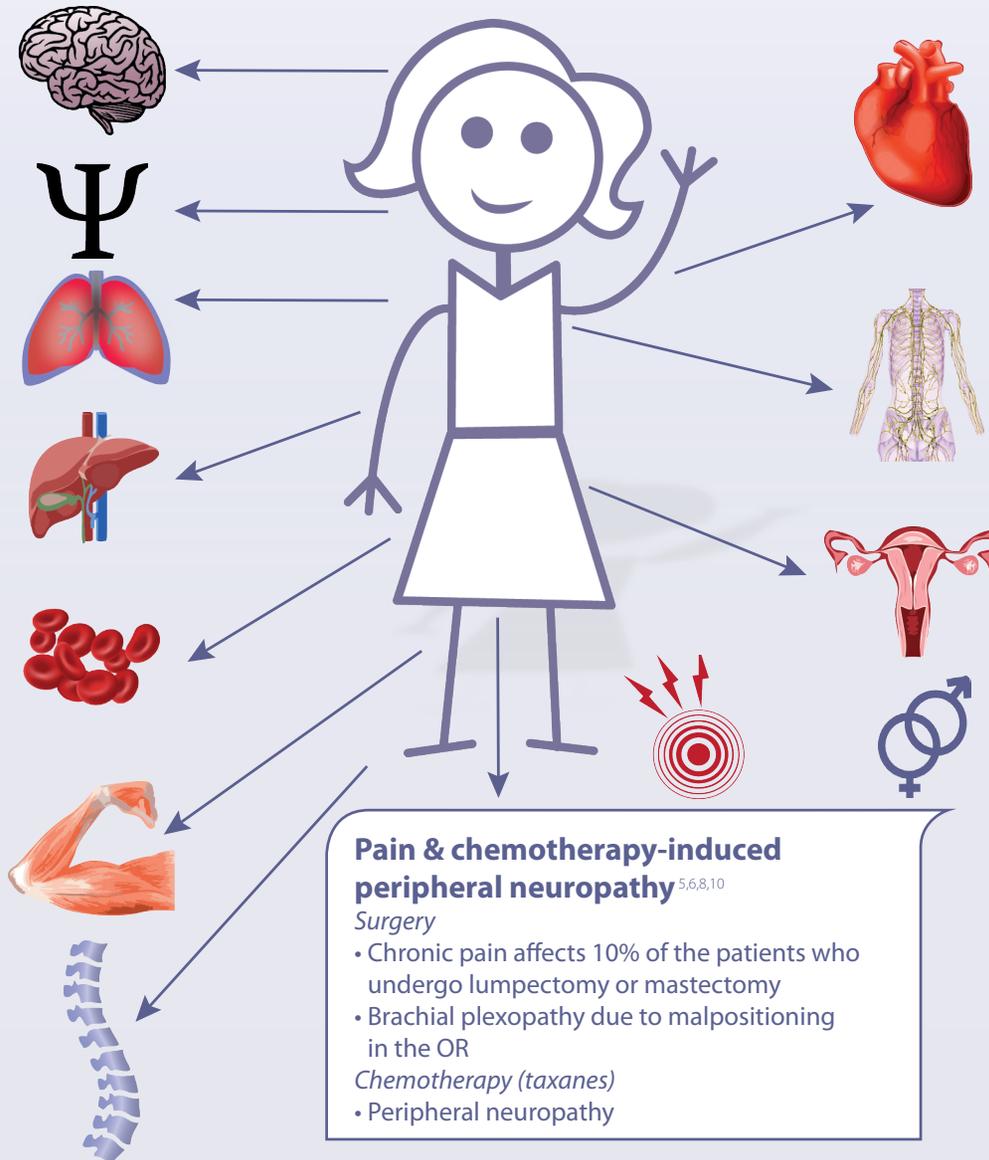
Endocrine (AI)

- Affects 45% to 50% of patients on AI

Osteoporosis^{3,5,8,25}

Chemotherapy, Endocrine (AI, GnRH agonist)

- Relative risk of fractures increases by 47% +/- 13%; absolute increase of 2%



Cardiovascular health^{3,5,8,26}

Chemotherapy (anthracyclines; trastuzumab)

- Heart failure, MI, arrhythmias
- Endocrine (AI)*
- Hypertension, hyperlipidemia
- Radiation*
- Fibrosis

Lymphedema

Surgery^{3,5,27}

- Lymphedema can develop post sentinel node dissection (9%) and axillary dissection (40%)

Gynecological, sexual health^{3,8,25,28}

Chemotherapy, Endocrine

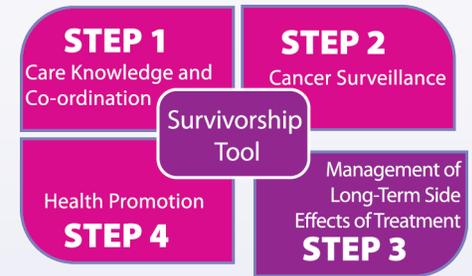
- Anxiety with intimacy due to psychological and physical changes
- Chemotherapy*
- Premature ovarian failure: Affects 30% of women younger than 25 and 90% of women older than 35
- Endocrine-AI*
- Vaginal dryness/dyspareunia
- Endocrine-Tamoxifen*
- Hot flashes affect 40% to 80% of women
- Endometrial cancer relative risk of 2.7

Elevated risk of secondary malignancy^{5,8,29}

Chemotherapy, Radiation

STEP 3

Management of Long-Term Side Effects of Treatment



Cognitive dysfunction^{3, 5, 13, 14, 15}

- Ask about cognitive difficulties (III)
- Assess for reversible factors and treat when possible (I)
- Refer for neurocognitive assessment and rehab if there are signs of impairment (I)
- Suggest coping strategies (relaxation, stress management, routine exercise) (III)

Psychological distress^{3, 5, 9, 15}

- Assess frequently for distress, depression, anxiety (I)
- Refer to counselling and/or start pharmacotherapy (II)
- Avoid paroxetine, fluoxetine where possible due to potential interaction with tamoxifen

Pulmonary fibrosis^{16, 17, 18}

- Assess for shortness of breath
- Order chest X-ray, pulmonary function test, consider CT chest
- Refer to respiratory

Fatty liver disease^{8, 19}

- If LFTs increase to more than double the upper limit of normal, stop tamoxifen, recheck LFTs, and re-evaluate. If restarted, repeat LFTs every three to six months. Refer to liver specialist if LFTs persistently elevated.

Venous thromboembolism^{8, 20}

- Treat VTE as per guidelines

Osteoporosis^{3, 5, 8, 25}

- Send for BMD scan every two years if patient on AI or GnRH agonist (III)
- Manage as per osteoporosis guidelines



Cardiovascular^{3, 5, 8, 26}

- Encourage lifestyle modifications (diet, exercise, smoking cessation)
- Monitor lipid levels (III)
- Manage cardiac risk factors appropriately
- Initiate cardiac workup if patient is symptomatic, including stress test and echocardiogram
- Refer to cardiology if any signs of cardiotoxicity



Lymphedema^{3, 5, 27}

- Consider weight loss (III)
- Educate about lymphedema signs and symptoms (III)
- If no lymphedema can give injection and measure BP; if patient has lymphedema, avoid injection and BP measurement in the affected arm
- Keep the skin clean and avoid injury
- Try a compression sleeve
- Prescribe massage therapy
- Refer to lymphedema specialist if available (III)



Pain and chemotherapy-induced peripheral neuropathy^{5, 6, 8, 10, 27}

- Assess for pain and contributing factors with pain scale and history (III)
- Prescribe non-pharmacologic treatment: physical activity (I), acupuncture (III), TENS (III)
- Prescribe pharmacologic treatment: acetaminophen, NSAIDs, duloxetine, pregabalin (I)
- Provide education about phantom breast syndrome
- Consider referral to pain specialist (III)



Premature menopause^{3, 8, 25}

- Recommend cognitive behavioural therapy (II)
- Prescribe routine exercise (II)
- Provide education, counselling (II)
- Offer SNRI, SSRI, gabapentin, lifestyle modification to help vasomotor symptoms (III)
- Avoid paroxetine, fluoxetine due to potential interaction with tamoxifen



Infertility^{3, 8, 25}

- Refer to fertility specialist, consider fertility preservation upon diagnosis (III)

Sexual health^{3, 8, 25}

- Assess for signs and symptoms of sexual or intimacy problems (III)
- Consider reversible contributing factors (III)
- Ask about vaginal dryness; offer non-hormonal lubricants/moisturizers and lidocaine preparations (I)



Endometrial cancer^{3, 8, 29}

- Consider pelvic ultrasound and/or endometrial biopsy in post-menopausal women on tamoxifen with irregular bleeding

Arthralgia, musculoskeletal symptoms^{8, 21, 22, 23, 24}

- Consider switching to a different AI
- Consider exercise, massage, acupuncture, NSAIDs



STEP 4

Health Promotion



Weight management^{3,25,30,31}

Breast cancer survivors who have BMIs higher than 30 are at an increased risk of disease recurrence and the development of new primary malignancies. Primary care physicians should encourage:

- Healthy dietary habits (III)
- Physical activity (III)
- Weight loss (III)

Physical activity^{5,10,31}

Physical activity is recommended for all breast cancer survivors. Evidence shows that survivors who participate in daily physical activity have a decreased risk of death, less fatigue, less pain, lower rates of depression, and a better quality of life. Primary care physicians should:

- Recommend returning to daily activities as soon as possible after the initial diagnosis (II)
- Recommend 150 minutes of moderate exercise per week or 75 minutes of high-intensity exercise weekly (I)
- Recommend twice-a-week strength training (I)

Smoking cessation^{3,8}

Breast cancer survivors who stop smoking have significantly lower all-cause mortality. (II)

Primary care physicians should therefore:

- Encourage smoking cessation (I)
- Offer smoking cessation resources and support (I)

Concerning marijuana, there is no evidence addressing its use and health implications in breast cancer survivors.



Alcohol^{3,8,25,30,32}

Cancer survivors who have a greater alcohol intake have an increased rate of cancer recurrence. Breast cancer survivors should limit their consumption to no more than three or four standard drinks (14 g of alcohol/drink) a week.

Nutrition⁵

Although there is no scientific evidence demonstrating that nutrition alone can prevent cancer recurrence, primary care providers should emphasize the importance of a diet that has a positive impact on cardiovascular health. This includes:

- A diet rich in fruit, legumes, and whole grains and low in saturated fat (I)
- Limited amounts of processed meat and red meat (I)
- Vitamin and iron supplementation only if deficiencies are demonstrated (III)
- Daily intakes of calcium (1,200 mg/day) and vitamin D (800 IU/day)

Preventative health^{3,33}

A Canadian study demonstrated that 65% of eligible breast cancer survivors were not screened for colorectal cancer and 40% were not screened for cervical cancer over a four-year follow-up period. Primary care physicians should continue recommended routine screening during and after cancer treatment.

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