



- service
- education
- research

# Recommendations and Quality Standards in Breast Cancer Care

WONG E Y T, ANG S Y, LIM JFY  
SingHealth Centre for Health Services Research, Singapore Health Services Pte Ltd

**BACKGROUND & PURPOSE** Although the incidence of breast cancer, the most common female cancer in Singapore accounting for 28% of all female cancers, is rising, survival has improved over the last two decades, due to better medical facilities and management, increased awareness of patients with regards to diagnosis and treatment modalities, and improved treatment options. In order to ensure that quality care is provided, it is paramount that clinicians base their treatment plans on recommendations and guidelines, in consultation with the patient. This study aims to compare between breast cancer guidelines published in Singapore, United Kingdom, United States, Canada and Australia.

**METHODS** A literature search was conducted via the National Guideline Clearinghouse, websites of medical societies as well as websites of health authorities in the various countries.

**SUMMARY OF RESULTS** 7 (1-Singapore, 3-United Kingdom, 1-United States, 1-Canada, 1-Australia) published guidelines were included in the analysis.

	Singapore	United Kingdom	United States	Canada	Australia
		■ Similarities	■ Differences		
<b>Diagnosis, Referral and Investigation</b>	Evaluation using physical examination, biopsy, and radiological examinations.	(1)(2)(3): It is best practice to carry out triple assessment. *There should be histopathological confirmation of malignancy for any lesions considered malignant after clinical examination, imaging or cytology alone, before any definitive surgical procedure. (3): Best practice to carry out triple assessment at the same visit. (2): Operation for diagnostic purposes should be within 2 weeks of decision to operate.	Triple assessment with the starting point being physical assessment. Additional staging studies (bone scans, abdominal imaging) are optional for invasive cancers and not needed in patients with early-stage breast cancer.	Advocate for triple assessment. The process from initial detection of abnormality on the mammogram to the final management decision should be completed as fast as possible.	Triple assessment is necessary.
<b>Treatment-Surgery</b>	Patient's preference should be considered in the choice of treatment. Ductal Carcinoma in Situ: Mastectomy, breast conservation surgery and adjuvant radiotherapy are effective alternative treatments. Invasive Breast Cancer: breast conservation surgery and adjuvant radiotherapy and total mastectomy and axillary clearance are effective treatments.	(1): All women who are suitable for breast conserving surgery should be offered the choice. Axillary surgery should be performed in all patients with invasive breast surgery. Women who had breast conserving surgery should be offered post operative breast irradiation. (2): The NHS cancer plan states that patients should not wait more than 31 days from 'decision-to-treat' to first treatment. A pre-operative search for occult metastases does not yield useful information in patients with operable primary breast cancer. (3): For Ductal Carcinoma in Situ and invasive breast cancer, surgery is the mainstay of treatment and is usually the first treatment option.	Ductal Carcinoma in Situ: •Lumpectomy plus radiation •Total mastectomy, with or without reconstruction. •Lumpectomy alone followed by clinical observation Invasive Cancer: Mastectomy with axillary lymph node dissection.	For patients with stage I or II breast cancer, breast conservation surgery followed by radiotherapy is generally recommended.	Women should be offered the choice of either breast conserving surgery followed by radiotherapy or mastectomy, whenever appropriate. For most women with early breast cancer, a level 1 or 2 axillary node dissection should be standard.
<b>Treatment-Radiotherapy, Chemotherapy, Endocrine therapy</b>	All patients undergoing breast conservation surgery (for both invasive and non-invasive cancer) should be offered adjuvant radiotherapy. Routine use of tamoxifen in DCIS is not indicated.	(3) Start adjuvant chemotherapy or radiotherapy as soon as clinically possible within 31 days after surgery for patients with early breast cancer. (2): All patients below the age of 70, with early breast cancer should be considered for adjuvant chemotherapy. (3) Do not offer Tamoxifen to patients with DCIS after breast conserving surgery.	Preoperative chemotherapy should be considered for women with large clinical stage IIA, stage IIB, and T3N1M0 tumours. Patients with invasive breast cancers that are ER or PR positive should be considered for adjuvant endocrine therapy.	Irradiation to the whole breast for women who had breast conservation surgery is recommended. Irradiation should be started as soon as possible after surgery and not later than 12 weeks. Node Negative breast cancer: Chemotherapy recommended for all premenopausal women with ER negative tumours. Node Positive breast cancer: Chemotherapy recommended for all premenopausal women with stage II breast cancer. Adjuvant chemotherapy should begin as soon as possible after the surgical incision has healed.	Radiotherapy after complete local excision is recommended. Postmastectomy radiotherapy is recommended for women at high risk of local or regional relapse. For women, below the age of 70, multi-agent chemotherapy reduces the risk of recurrence and death for women with breast cancer. Tamoxifen is recommended for most women with oestrogen receptor positive tumours.
<b>Follow-up Treatment</b>	Ductal Carcinoma in Situ: Postoperatively, clinical review should be at 3-6 months intervals for 3 years, 6-12 monthly for the 2 <sup>nd</sup> to 5 <sup>th</sup> year and annually thereafter. After mammography of the affected breast at the end of the 1 <sup>st</sup> year post treatment, annual to 2 yearly mammography of both breasts is recommended. Invasive Breast Cancer:same as for DCIS.	(2) Patients should be followed up for 5 years. (3) Annual Mammography should be offered to all patients with early breast cancer, including DCIS, until they enter the NHS/SP/BTW/SP. Patients diagnosed with early breast cancer who are already eligible for screening should have annual mammography for 5 years.	Ductal Carcinoma in Situ: Physical examination every 6-12 monthly for 5 years and then annually, as well as yearly mammography. In patients who had breast conserving radiation therapy, the first follow-up mammogram should be performed 6-12 months after completion of radiation therapy. Routine bone scans, CT scans, PET scans, MRI scans or ultrasound not recommended.	All patients with breast cancer should have regular follow-up surveillance. Annual visits to include mammographic examination. Routine bone scans, CT scans, PET scans, MRI scans or ultrasound not recommended.	Minimal follow-up schedule is recommended, as there is no evidence that frequent intensive follow-up result in survival benefit or increase in quality of life.
<b>Reference</b>	Ministry of Health (2004) Clinical Practice Guidelines: breast cancer. Ministry of Health, Singapore	(1)Scottish Intercollegiate Guidelines Network (2005) Breast cancer: in women: a national clinical guideline. Edinburgh, Scotland: SIGN (2) Association of Breast Surgery (2009) Guidelines: Surgical guidelines for the management of breast cancer. European Journal of Surgical Oncology, S1-S22. (3) National Collaborating Centre for Cancer (2009) Early and locally advanced breast cancer: diagnosis and treatment. National Collaborating Centre for Cancer, Wales.	National Comprehensive Cancer Network (2004) Breast cancer screening and diagnosis guidelines. National Comprehensive Cancer Network.	The Steering Committee on Clinical Practice Guidelines for the Care and Treatment of Breast Cancer (1998-2001). Canadian Medical Association Journal.	National Health and Medical Research Council (2001) Clinical practice guidelines for the management of advanced breast cancer. Commonwealth of Australia.

**CONCLUSION** Guidelines on breast cancer care from the 5 developed countries are largely similar in terms of recommendations for assessment and treatment. However, only guidelines from UK provided recommendations on targets for timeliness of diagnosis and treatment. The guidelines also differ with regards to care processes such as recommendations for frequencies of follow-up and need for metastatic work-up prior to surgery. .

Members of the SingHealth Group

PATIENTS. AT THE HEART OF ALL WE DO.

