Government of **Western Australia**
South Metropolitan Health Service
Fiona Stanley Fremantle Hospitals Group

Work up of a breast lump in General Practice – Tips and Traps

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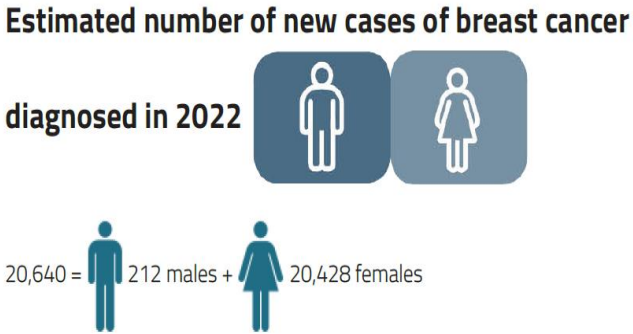
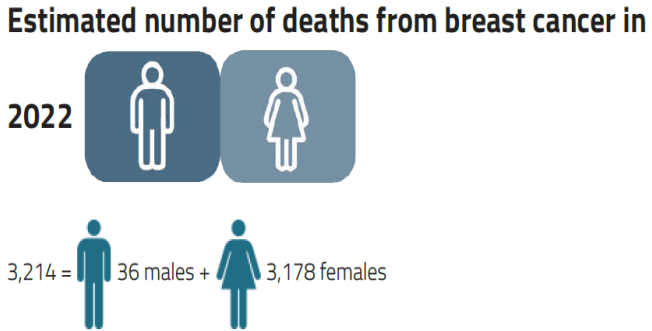
South Metropolitan Health Service respectfully acknowledges the past and present traditional owners of this land on which we are meeting, the Noongar people. It is a privilege to be standing on Noongar country.

We also acknowledge that the Aboriginal population in the South Metropolitan Health Service is diverse and includes Aboriginal people from many communities across Australia.

We also acknowledge the contributions of Aboriginal and non-Aboriginal Australians to the health and wellbeing of all people in this country we all live on and share together.

Incidence of Breast Cancer in Australia





Just over 2000 new cases / yr in WA

Mortality rate is 15.5%

Source: Cancer Austalia. Statistics on breast cancer in men. 2022.

Assessment of a New Breast Lump

Triple Assessment:

- History and Physical Examination
- Imaging: Mammography and Ultrasound (U/S)
- Biopsy: Fine Needle Aspiration (FNA) / Core Biopsy
- The triple test is positive if any component is indeterminate, suspicious or malignant.

Evidence relevant to Guidelines for the investigation of breast symptoms

Figure 1. The probability of breast cancer based on results of the triple test.

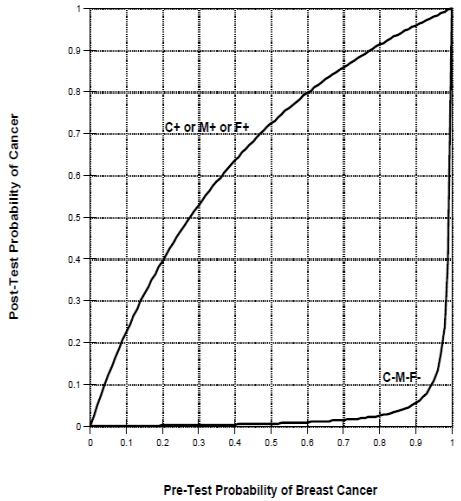
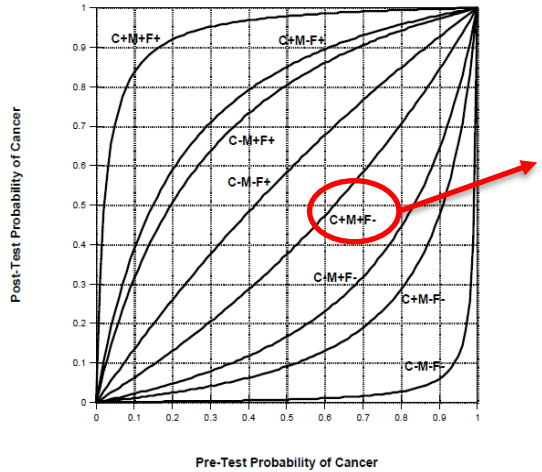


Figure 2. The probabilities of breast cancer based on results of individual components of the triple test.



Ask for the "corrected" post biopsy repory

Armes, Jane & National Breast and Ovarian Cancer Centre (Australia) & National Breast Cancer Centre (Australia). (2006). Evidence relevant to guidelines for the investigation of breast symptoms [electronic resource] / prepared by the National Breast Cancer Centre. Camperdown, N.S.W. : National Breast Cancer Centre

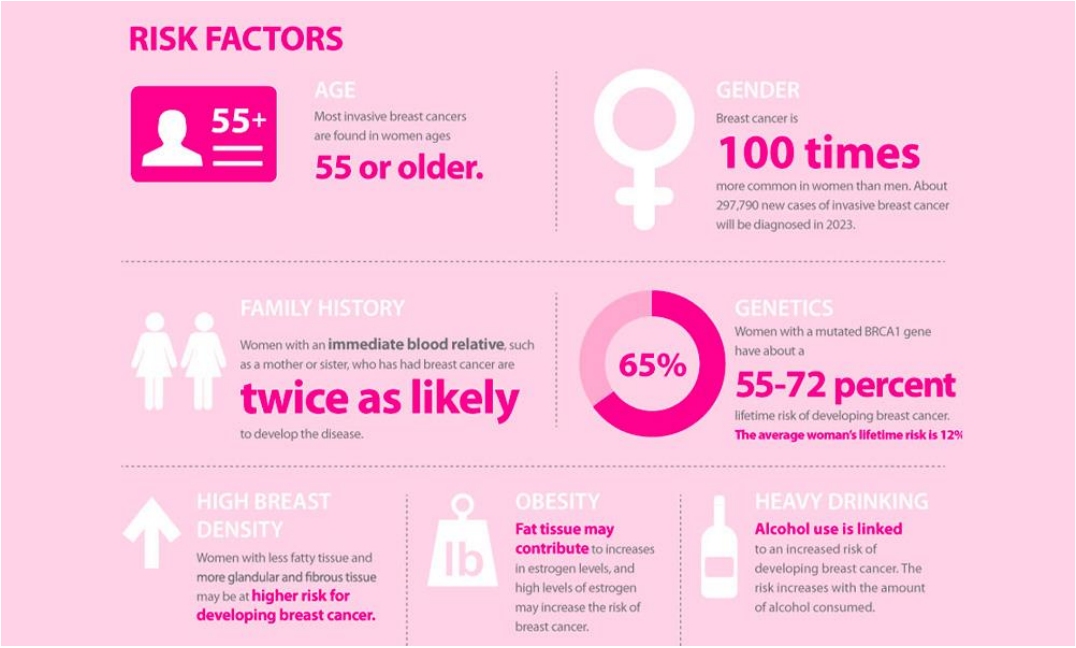
Patient's History

- Previous breast problems and previous breast investigations.
- Hormonal status, menstrual history, parity, recent pregnancies and breastfeeding.
- Current medications or recent changes in medication, especially exogenous hormones, complementary and alternative medicines.
- lifestyle factors, including obesity, alcohol, physical activity and smoking.
- Most recent imaging results – screening or diagnostic, breast density, previous radiation therapy or previous breast surgery, including cosmetic surgery.
- Recent breast trauma – symptoms still require investigation.

History of the presenting symptoms

- Site – Constant or changing, unilateral or bilateral.
- Duration – when and how first noted.
  - Any changes since first noted.
- Relationship to menstrual cycle or exogenous hormones.
- Associated symptoms – breast lump, breast pain, breast.
- Asymmetry or skin dimpling, nipple changes, nipple discharge.

Patient’s Risk Factors



Source: Breast Cancer Causes and Risk Factors

Clinical Breast Examination: Preparation

- Explain what you are going to do and ask for the patient's permission.
- Ensure the patient’s privacy.
- Undress only the necessary body parts.
- Sometimes, it’s ok to examine the patient over a T-Shirt or cloth. You need to document this in your notes.
- Please use hand sanitizers before and after the breast examination.
- Always remember to thank the patient at the end!

Clinical Breast Examination: Inspection

- Should take place in good light and with the patient seated or standing:
  - With arms by her side
  - With arms raised above her head
- Pressing on her hips and leaning forward (contracting pectoral muscles).
  - **Breast Contours** – skin changes such as erythema, dimpling or puckering, peau d'orange, visible lumps.
  - **Nipples** – height, inversion, erythema, eczema, nodules, ulcers.

Source: Symptoms — Know Your Lemons® for Early Detection

Clinical Breast Examination: Palpation

- Palpation with the flat of the fingers:
- Patient seated or standing:
  - Palpate supraclavicular and axillary fossae.
  - Palpate breasts, particularly upper quadrants and bimanual examination.
- Patient lying flat or at 45 degrees with ipsilateral arm behind her head:
  - Palpate all quadrants and axillary tail, and around and behind nipple.
  - The non-examining hand may be used to immobilise a large breast.
  - Pillow positioned under the shoulder may assist in examining the outer quadrants of a large breast.

Traps

- Young women with dense breasts.
- Large ptotic breasts.
- Pregnant breasts.
- Pagte’s Disease of the nipple.

Diagnostic Imaging

Most these guidelines provided recommendations to two groups **<30 and ≥30,** with ultrasound recommended as the initial imaging investigation for those aged <30 years.

IKNL and NABON. Breast cancer Dutch Guideline, version 2.0. NABON, The Netherlands, 2012.

NCCN. Breast Cancer Screening and Diagnosis. National Comprehensive Cancer Network, 2015.

Lavoue V, Fritel X, Antoine M, et al. Clinical practice guidelines from the French College of Gynecologists and Obstetricians (CNGOF): benign breast tumors – short text. Eur J Obstet Gynecol Reprod Biol. 2016;200:16-23

One guideline recommended **ultrasound** as the initial imaging modality for **women <35 years.**

Ministry of Health Malaysia and Academy of Medicine Malaysia. Clinical Practice Guidelines. Management of Breast Cancer. 2010.

One guideline recommended **ultrasound** for those aged **<40 years.**

Willett AM, Michell MJ and Lee MJR. Best practice diagnostic guidelines for patients presenting with breast symptoms. UK Department of Health, 2010.

INBS Guide 2017 (updated version)

- Mammography should be performed in all age groups if the clinical or ultrasound findings are suspicious or malignant.

Medical Radiology Imaging (MRI)

- European Society of Breast Cancer Specialists (EUSOMA) position statement in 2010 (including evidence to 2008) regarding the MRI of the breast (indications relevant for the INBS guide) included:
  - Patients with breast augmentation or reconstruction.
  - To characterise equivocal findings at conventional imaging especially when planning the oncoplastic surgery.
  - There is insufficient evidence of benefit to recommend the routine use.
- Remember there are item numbers for the breast MRI study.

Sardanelli F, Boetes C, Borisch B, et al. Magnetic resonance imaging of the breast: recommendations from the EUSOMA working group. Eur J Cancer. 2010;46(8):1296-316.

Other Imaging Modalities

A few of the guidelines discuss other imaging modalities, however none of these were recommended for routine diagnostic use.

- FDG-positron emission mammography.
- Whole Body Bone Scan.
- Positron emission tomography (PET).
- Computed tomography (CT).

KCE. Breast Cancer in Women: Diagnosis, Treatment and Follow-up. Belgian Health Care Knowledge Centre, 2013.

Tozaki M, Isomoto I, Kojima Y, et al. The Japanese Breast Cancer Society Clinical Practice Guideline for screening and imaging diagnosis of breast cancer. Breast Cancer. 2015;22(1):28-36.

American College of Radiology. ACR Appropriateness Criteria - Palpable Breast Masses. 2012.

American College of Radiology. ACR Appropriateness Criteria - Breast Pain. 2014.

Core biopsy v FNAC

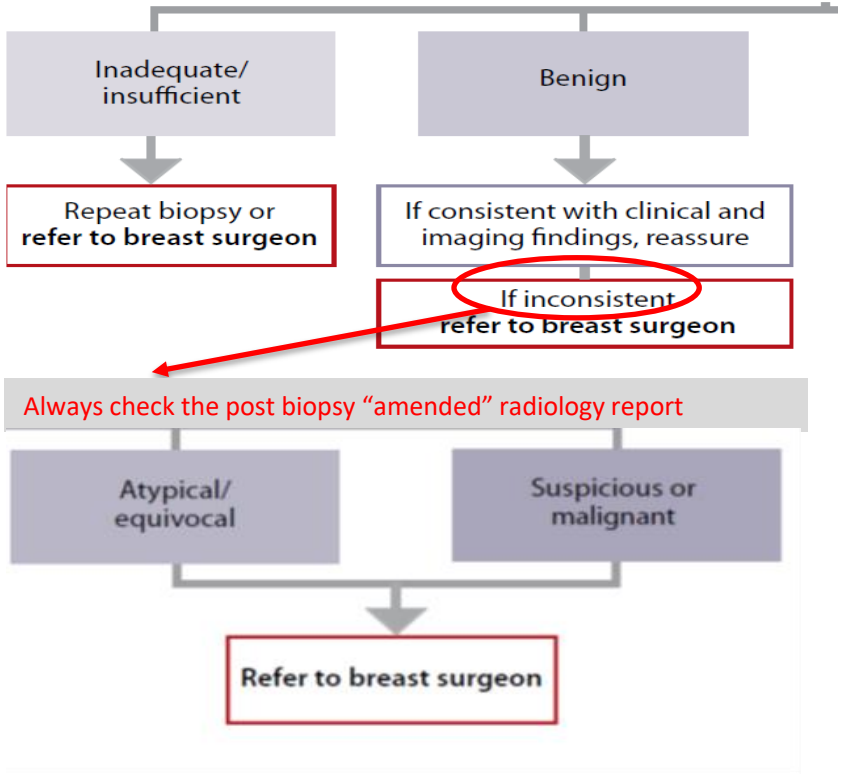
- Willett AM, Michell MJ and Lee MJR. Best practice diagnostic guidelines for patients presenting with breast symptoms. UK Department of Health, 2010:

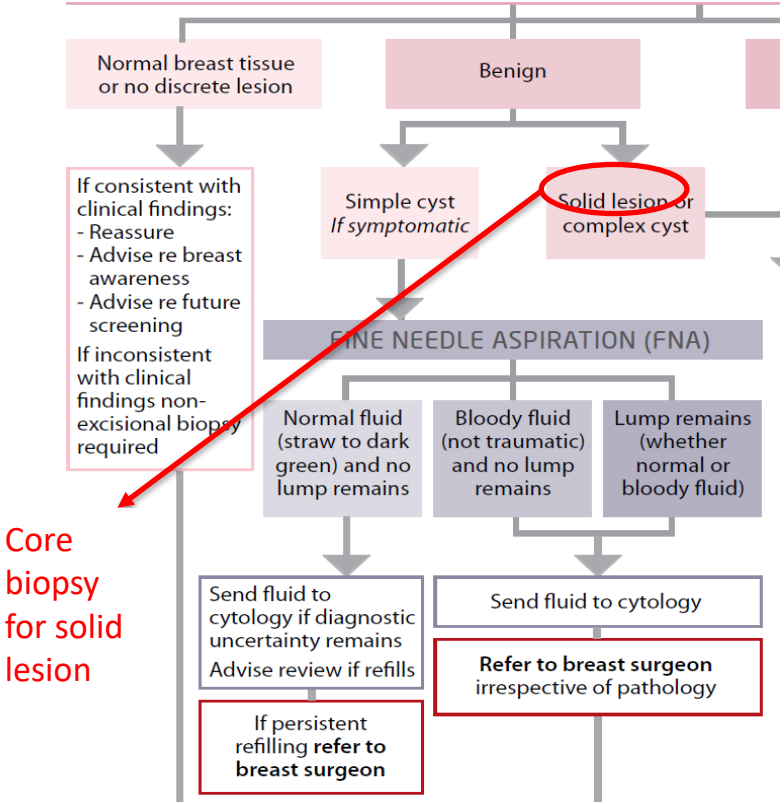
"Needle core biopsy is preferred rather than FNAC for most solid lesions and for lesions suspicious for cancer because of the higher sensitivity and specificity achieved in most centres and because of the importance of oncological information including tumour type, grade and receptor status obtained with histology"

- Senkus E, Kyriakides S, Ohno S, et al. Primary breast cancer: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. Ann Oncol. 2015;26 Suppl 5:v8-30.

"Pathological diagnosis should be based on a core needle biopsy, obtained preferably by ultrasound or stereotactic guidance"

Post Initial Imaging / Image guided biopsy plan





Traps

- A single imaging modality radiology providers.
- Image guided FNA / core biopsy before completing the standard image modality.
- Missing the post biopsy radiology amended report
- Unnecessary MRI.

Surgical Referrals

- Public and private referral options should be discussed with the patient.
- For Public Referrals
  - CRS: Central Referral Service.
  - Tertiary Hospital based Breast Unit: SCGH, RPH, FSH and Bunbury.
- Private referrals:
  - Should be to a specialist breast surgeon or specialist multidisciplinary breast clinic service. To find a private breast surgeon in your area, see
  - www.breastsurganz.org/find-a-surgeon
- Please avoid doing double referrals!

Take Home Messages

- Please allow enough history and physical examination time.
- Please chose a radiology practice which does offer Mammogram and U/S service.
- Please request core biopsy for solid lesions.
- FNA cytology may be used in centres with cytopathological expertise to confirm the diagnosis of certain lesions, including cystic lesions or axillary LNs.

Take Home Messages

- Please discuss with the radiologist or the surgeon about the most appropriate test for your patient.
- Providing a detailed history will assist the radiologist to perform appropriate targeted imaging.
- Mammography should be performed in all age groups if the clinical or ultrasound findings are suspicious or malignant.
- In pregnancy and lactation: Mammography should be used if the clinical or ultrasound findings are indeterminate, suspicious or malignant or there is inconsistency between test results.

Questions?

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