



Breast Cancer 1

Diagnosis

Presentation

- Abnormal screening mammogram (>25% of cases)
- Breast lump or thickening
- Axillary tumour
- Breast skin changes
- Nipple change - inversion, discharge
- Persistet breast tenderness / pain
- Symptoms of metastatic disease: bone pain, pathological fracture, spinal cord compression

Lump

- New discrete lump
- Abscess / inflammation unresolved after one course of antibiotics
- Persistent / recurrent cyst
- Associated with a lump

Pain

- Intractable pain failing to respond to simple measures (change of bra, simple analgesics)
- Unilateral persistent pain in post menopausal women

Indication for referral

- Women > 50 years
- Younger women if blood stained
- Nipple discharge
- Nipple retraction / inversion
- Axillary lump + strong family history

Triple assessment

- History & examination
- Mammography +/- ultrasound
- FNA cytology
- Score each area 1 to 5: 1 = normal, 2 = benign, 3 = atypical, 4 = suspicious of cancer, 5 = cancer
- If discordant score perform biopsy for gold standard diagnosis

FNA

- Better tolerated
- Allows "hot reporting" very useful in one stop breast clinics
- Poorer sensitivity 80%, and specificity 60%
- Cannot differentiate between insitu or invasive cancer
- False positive rate 1 in 1000

Core biopsy

- Lower rate of inadequate sampling compared with FNA
- Improved sensitivity and specificity (95%)
- Allows staging and identification of receptor status
- Longer processing and reporting time, needs revisit by patient

Pathology

Pathology

- 85% of breast cancers arise in the ducts of the breasts
- 45% occur in the upper outer quadrant, 25% are retro areolar
- Ductal carcinoma in situ (DCIS) remains in the confines of the ductal basement membrane

Spread

- Lymphatic regional nodes (commonly the axillary, less commonly internal mammary)
- Systemic spread: bone, lung, pleura, liver, skin, CNS

Epidemiology

- Most common female cancer in UK
- 42,000+ cases a year in UK
- 1 in 8 life time risk

- Falling mortality rate
- Rising incidence: screening, ageing population, obesity

- Male breast cancer rare but increasing
- Increased oestrogen exposure
- Age (incidence doubles every 10 years until menopause)
- Early menarche, late menopause
- No children or older age at first pregnancy
- Genetic predisposition (10% F and 20% M cancers)
- HRT
- Diet (obesity and alcohol consumption)

- Hereditary breast cancer
- 10% F breast cancers due to inheritance of mutated BRCA1 or BRCA2 gene
- Increased risk of early breast cancer and elevated lifetime risk (85%)
- Also increased risk of ovarian cancer (greatest with BCRA2)
- BRCA1 & 2 highly penetrant and autosomal dominant
- Male carriers of BRCA2 are at increased risk of breast cancer; male carriers of BRCA1 or 2 are at increased risk of prostate cancer
- BRCA1 cancers may become more aggressive

Breast feeding is protective

Prognosis

- Prognostic factors
- Tumour size
- Number of histological positive axillary lymph nodes
- Tumour grade
- Other factors
- + Hormone receptor status
- + Well differentiated tumour
- HER2 over expression
- Histological sub type
- Lymphovascular invasion
- Proliferative index (rate of cell division)

- Nottingham Prognostic index
- 0.2 x tumour size in cm + grade (1 to 3) + axillary node score
- Axillary ndpe status: no lymph nodes = 1, 1 to 3 lymph nodes = 2, > 3 lymph nodes = 3
- NPI < 2.5 = excellent prognosis
- NPI < 4 = moderate prognosis
- NPI 4 - 5 = poor prognosis
- NPI > 5 = very poor prognosis