

PRINCIPLES OF BREAST SURGERY & COMPLICATIONS

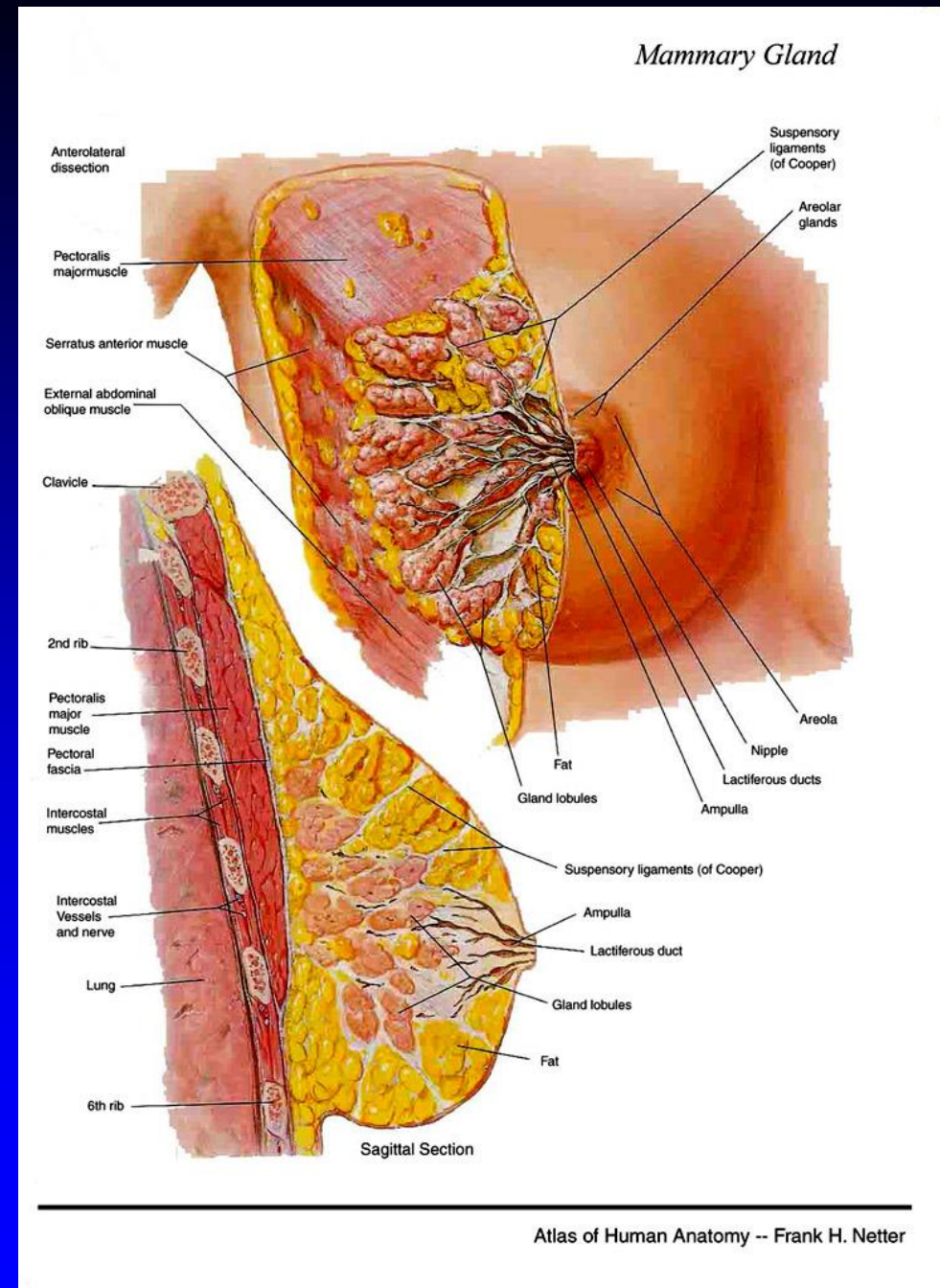
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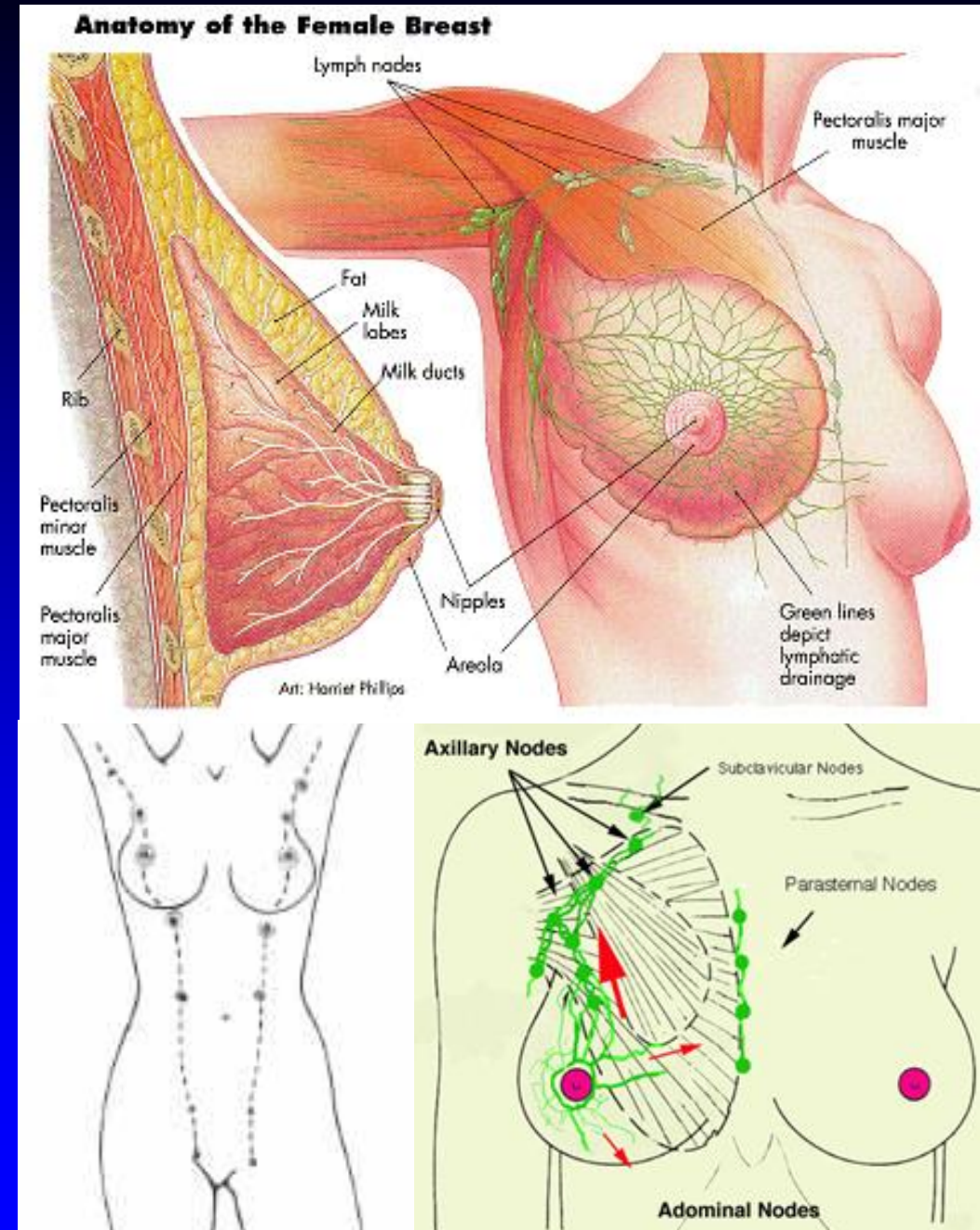
ANATOMY

- Lies in subcutaneous tissue
- Base: midline to midaxillary line, 2nd to 6th rib
- Overlies pec major, serratus ant, rectus sheath, ext oblique
- Axillary tail
- 15-20 lactiferous ducts
- Nipple surrounded by areola
- Fibrous septa (Cooper's ligs) connect dermis to post capsule



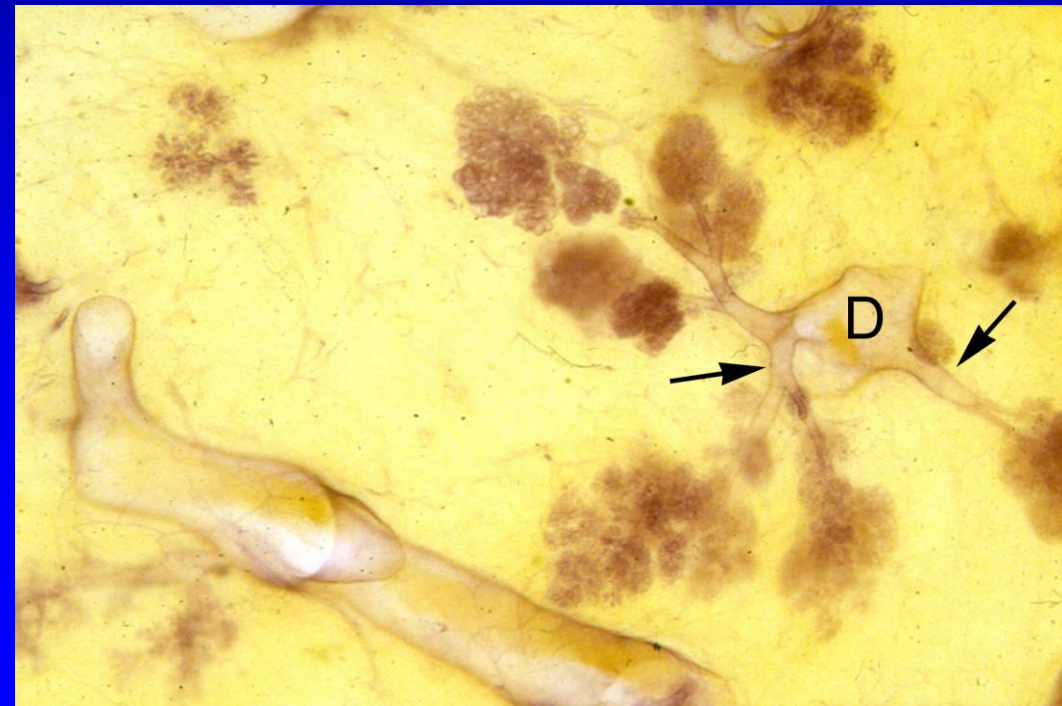
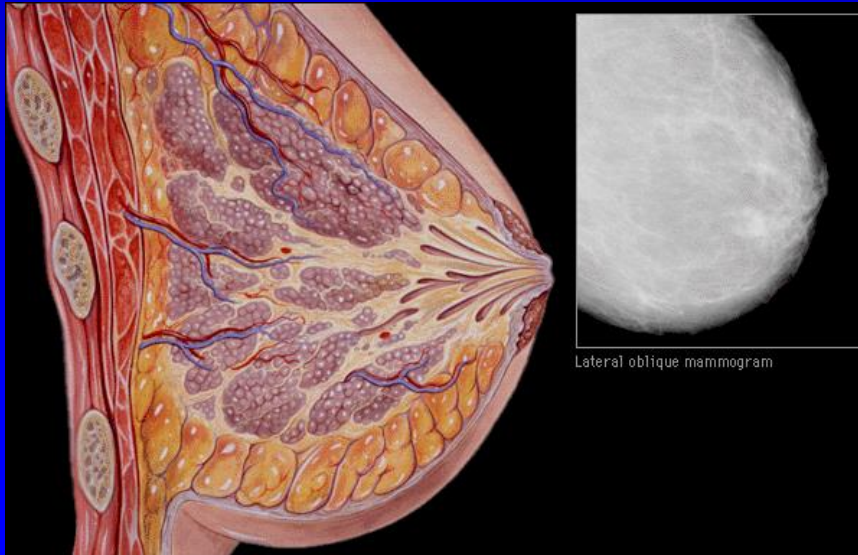
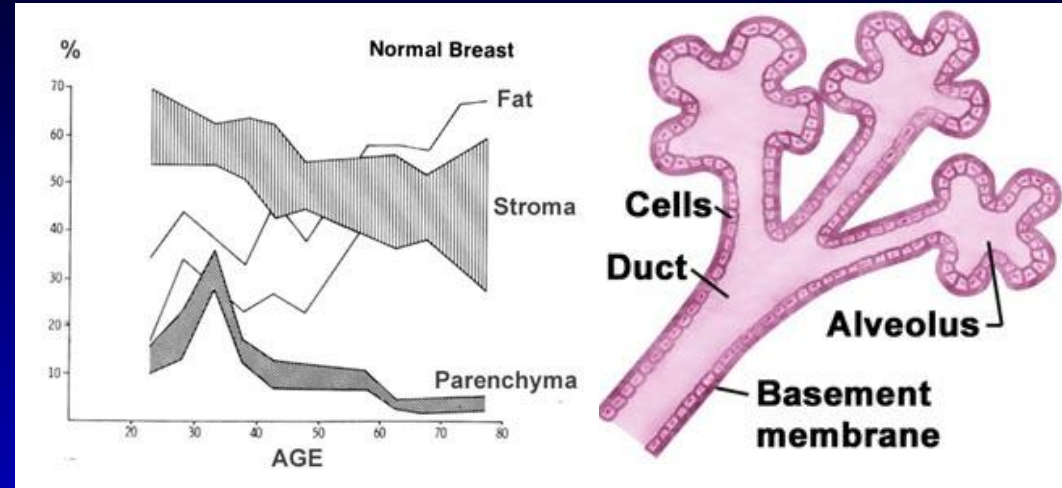
ANATOMY

- Modified sweat gland
- Accessory nipples on milk line
- Blood supply: lat thoracic, int thoracic, thoracoacromial, intercostal arterial
- Lymph drainage: axillary, int thoracic, infraclavicular, (mediastinal, cervical, inguinal, peritoneal) nodes
- Nerve supply: T4 to T6 (cutaneous branches)



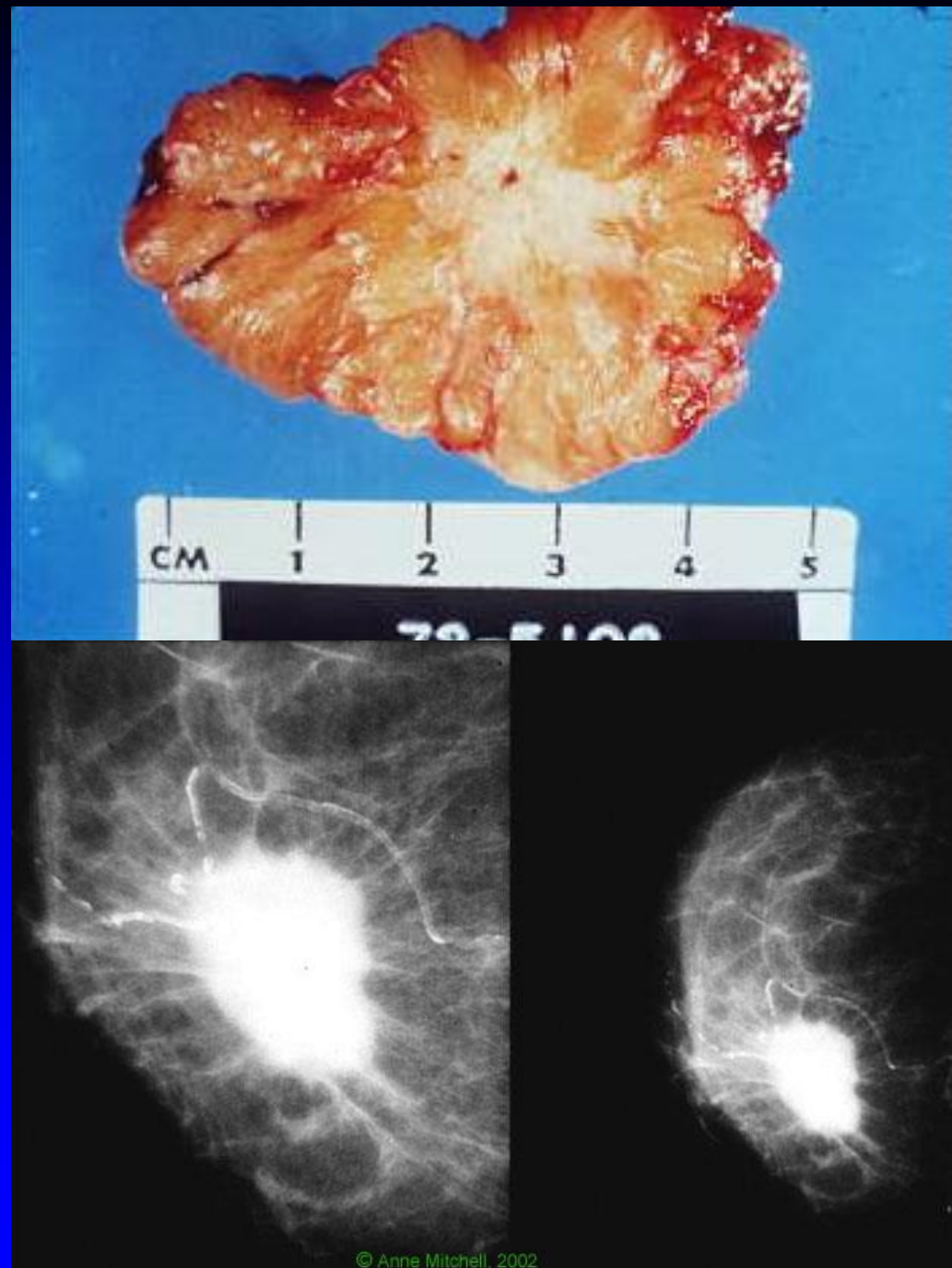
ANATOMY

- Irregular lobules
- Increased fat content with age
- Decreased density with age
- <35 yrs US +/- mammography
- >35 yrs mammography +/- US



NIPPLE DISCHARGE

- Physiological
 - pregnancy
 - lactation
- Duct ectasia
- Galactorrhoea
- Duct papillomas
- Fibrocystic disease
- Carcinoma
- Idiopathic



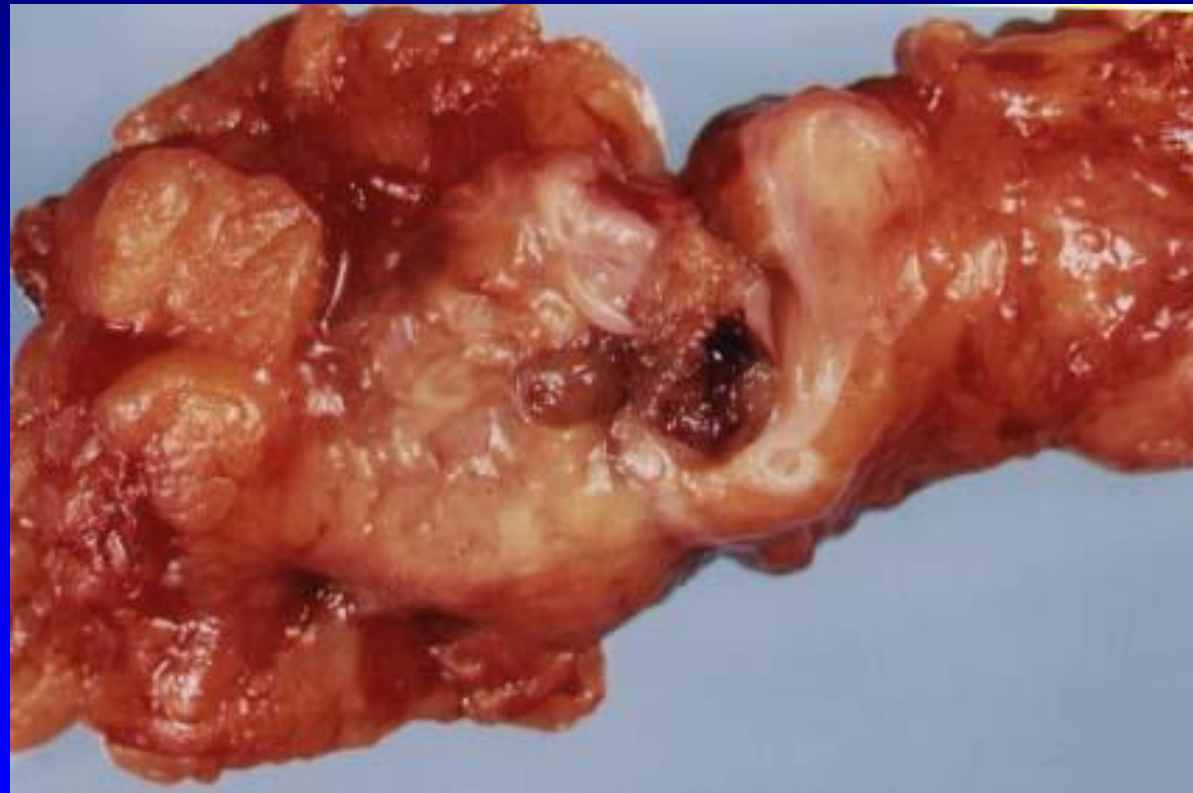
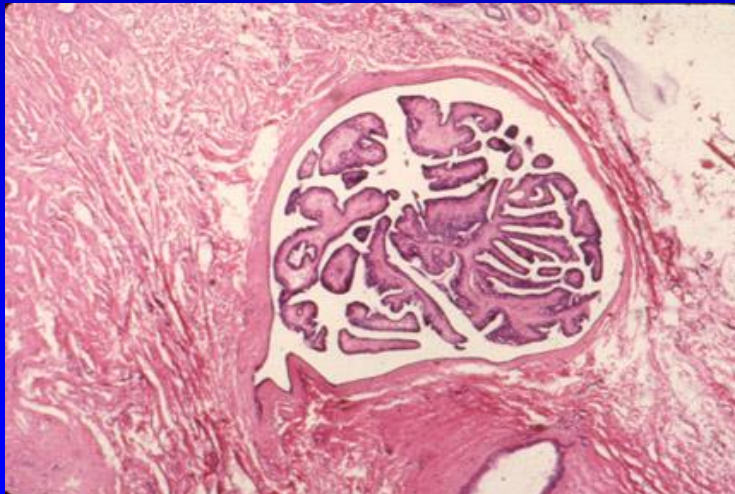
NIPPLE DISCHARGE

- Common
- Nature of discharge does not correlate with cause
- Blood-stained discharge => ? duct papilloma ? carcinoma
- Mammography may reveal dilated ducts (duct ectasia) or intraductal microcalcifications (carcinoma)



NIPPLE DISCHARGE

- Cytology of discharge often disappointing or confusing
- Duct papilloma
 - serous or blood-stained d/c
 - single duct
 - Rx: microdochectomy

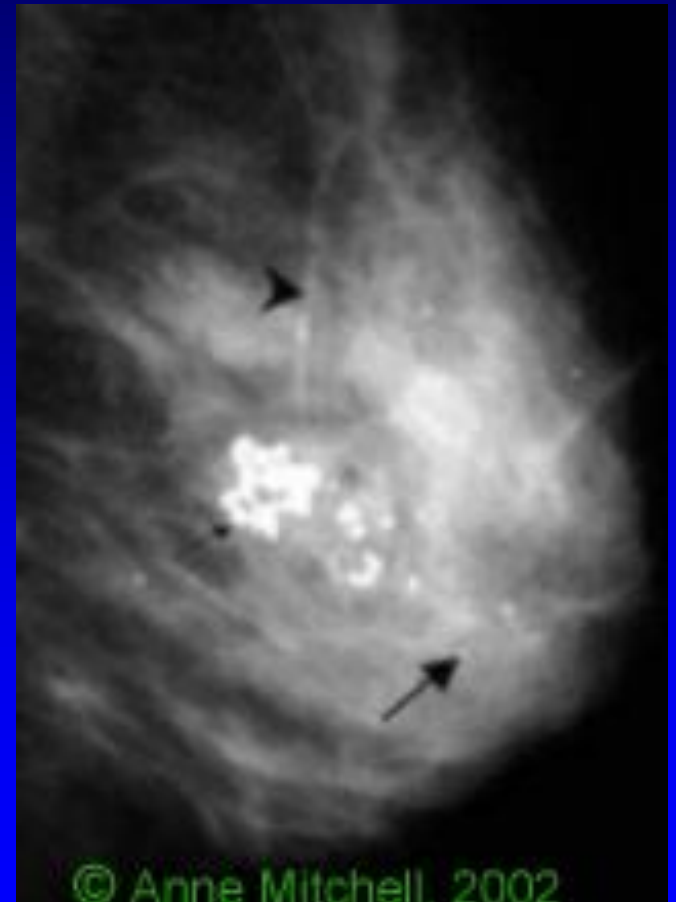


NIPPLE DISCHARGE

- Galactorrhoea
 - physiological (e.g. menarche, menopause, stress, mechanical stimulation)
 - hyperprolactinaemia (e.g. pituitary adenoma)
 - drugs (e.g. haloperidol, metoclopramide)
- History, examination (? lump - unilocal vs multifocal)
- Mammography for women >35 yrs
- Management
 - exclude precipitating factors (e.g. drugs)
 - reassurance if serous discharge
 - microdoectomy for non-blood-stained discharge in one duct
 - major duct excision if d/c blood-stained, multifocal & socially unacceptable

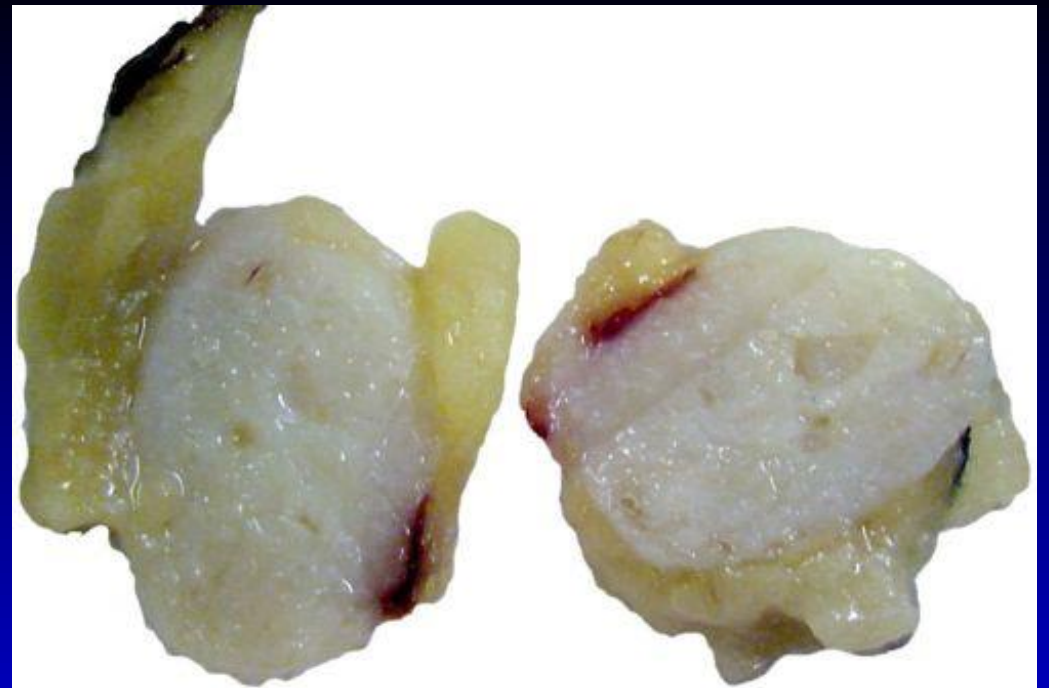
FIBROADENOMA

- Benign tumour
- Connective tissue & epithelial proliferation
- Most common in young women (15-25 yrs)
- Coarse calcification
- Smooth & very mobile ('breast mouse')
- Usually 2-3cm diameter
- Occasionally multiple
- Clinical diagnosis in women <25 yrs
- Excisional bx or FNAC in older women
- +/- US or mammography



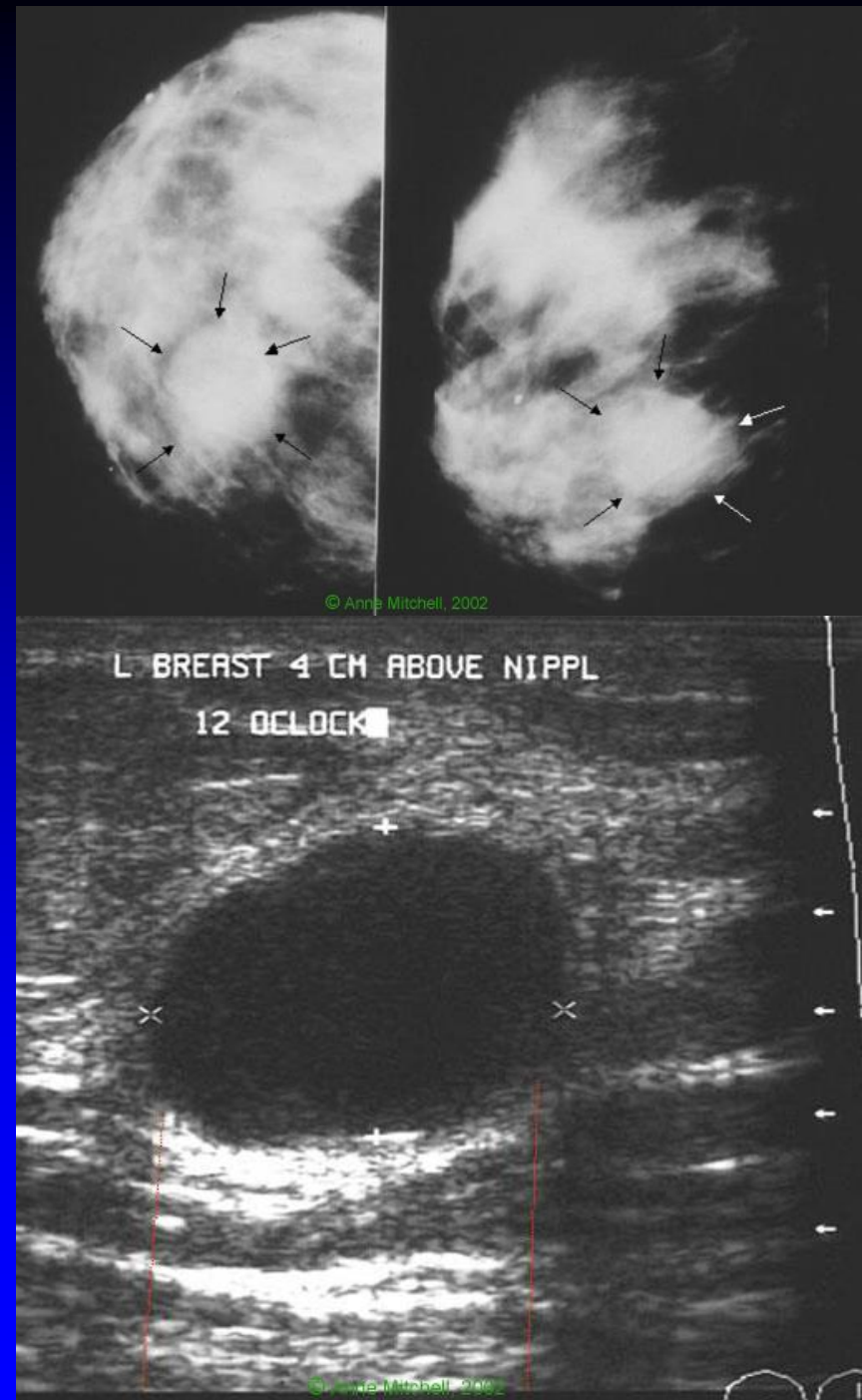
FIBROADENOMA

- Tendency to slowly increase in size
- Most of growth phase within first 12 months
- May remain same size or gradually regress
- Lump may be left in women <25 yrs
- Removal of lump recommended in older women >35 yrs



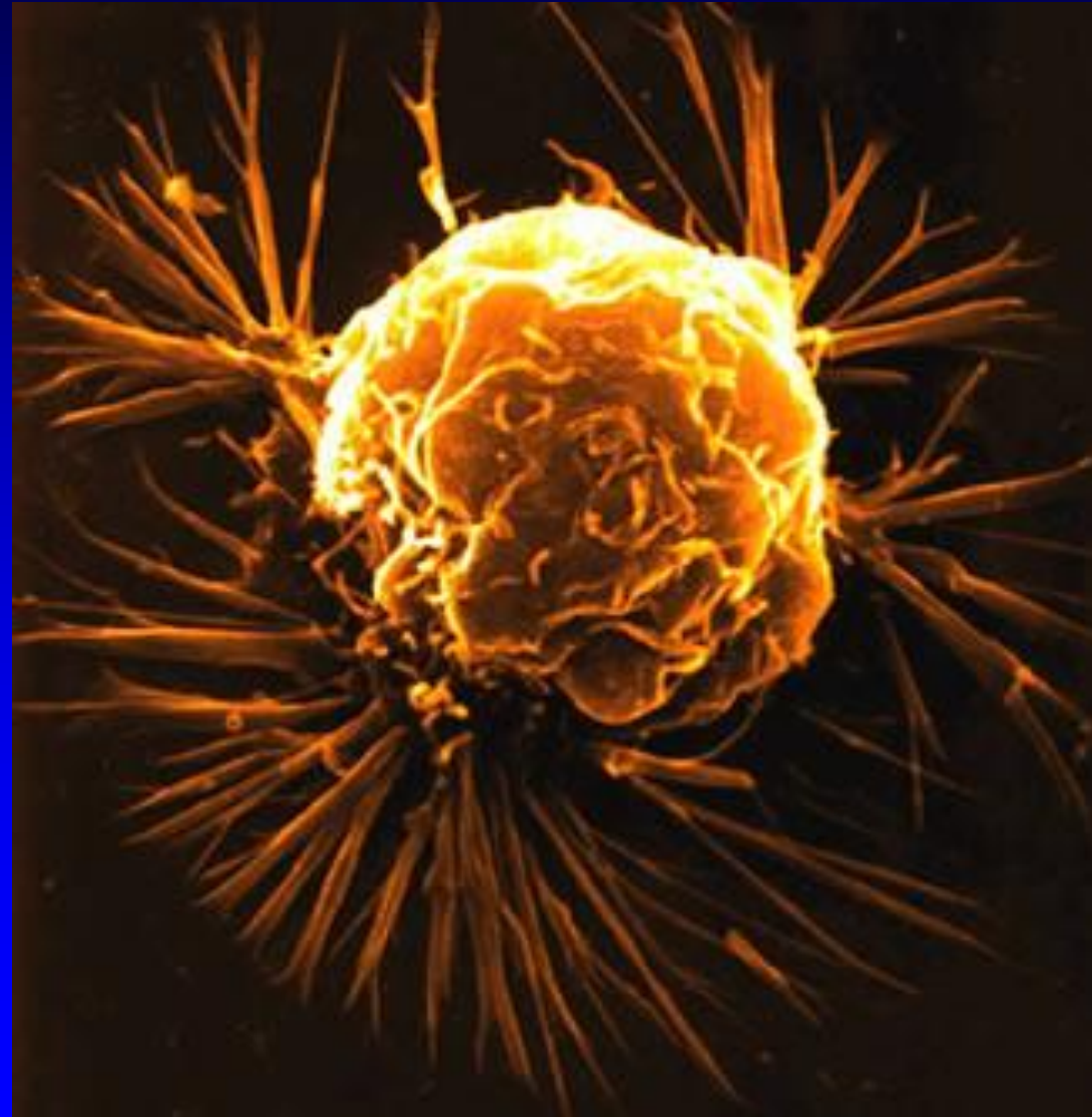
OTHER DISORDERS

- Breast cysts
 - 10% of women during lifetime
 - most perimenopausal
 - often appears suddenly
 - mammography + US +/- biopsy
 - Rx: aspiration +/- excision
 - cytology unhelpful unless blood-stained
- Phyllodes tumour
 - wide spectrum of behaviour
 - median age 40 yrs
 - Rx: wide local excision
 - 25% local recurrence at 10 yrs



OTHER DISORDERS

- Mammary duct ectasia
 - dilatation of periareolar ducts
 - periductal mastitis
 - +/- 2° anaerobic infection
 - +/- mammary fistula
 - Rx: metronidazole or excision of major ducts +/- fistulectomy
- Breast carcinoma
 - mastectomy
 - wide local excision + radioRx
 - chemotherapy
 - hormonal therapy



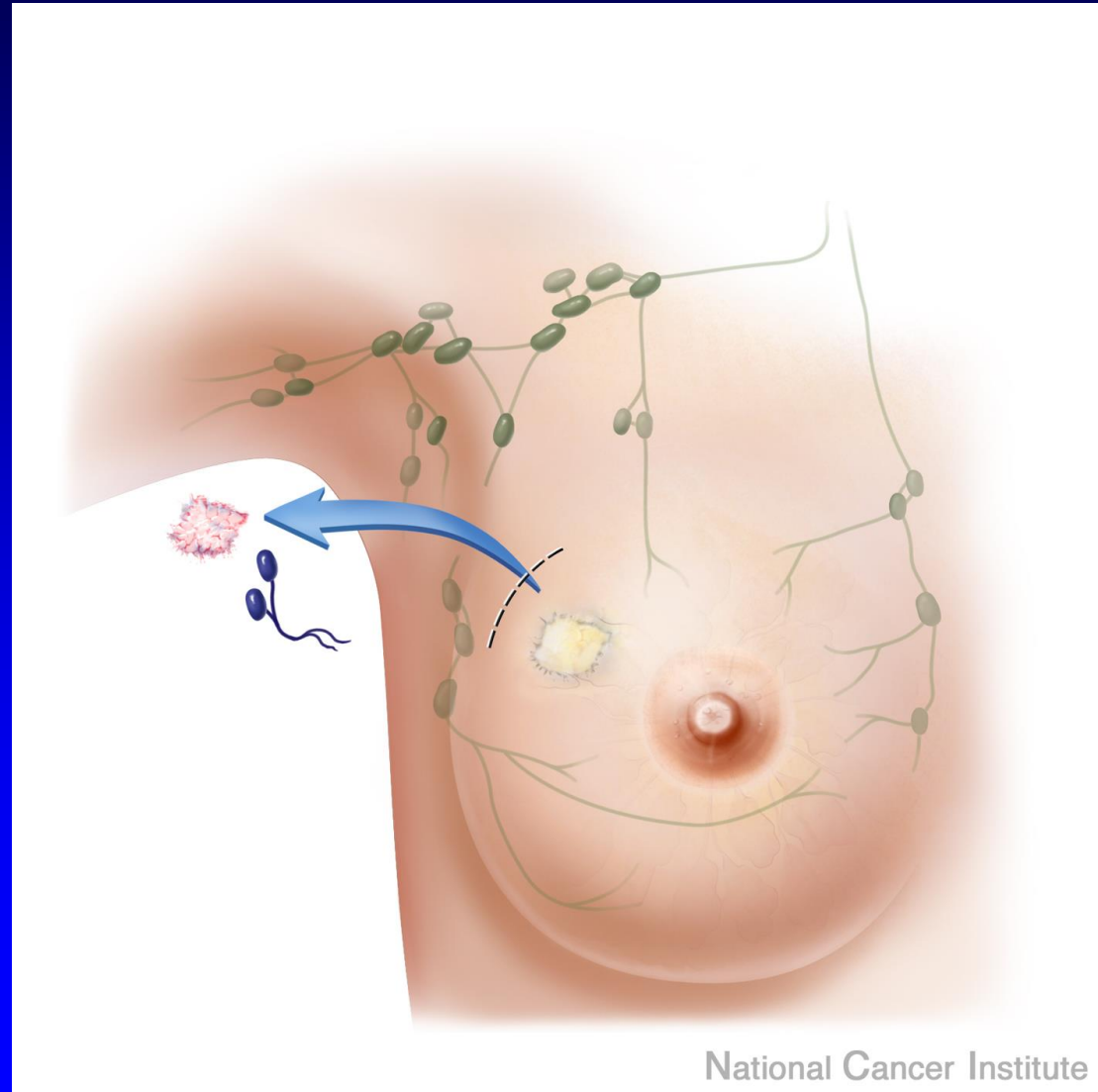
MASTECTOMY

- RM vs modified RM vs simple
- Removal of all breast tissue, skin, nipple, leaving viable skin flaps
- RM incl pectoralis muscles, axillary nodes (level I, II, III)
- modified RM incl pec fascia, some axillary nodes, part of pec minor
- skin-sparing mastectomy
- +/- SLNB
- +/- immediate or delayed breast reconstruction



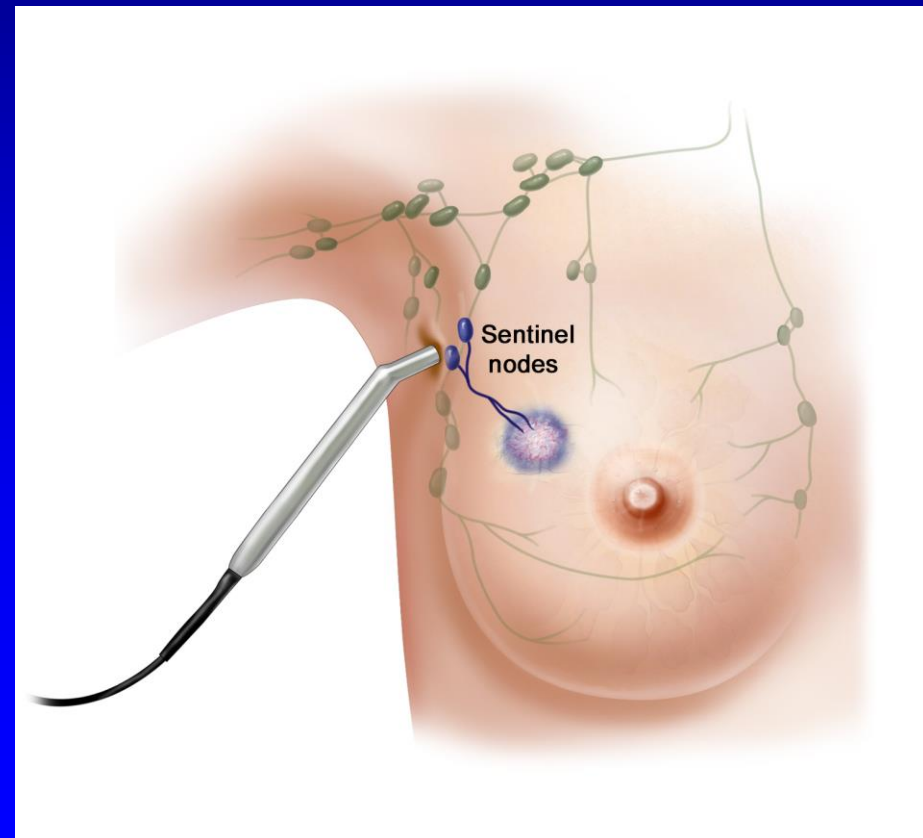
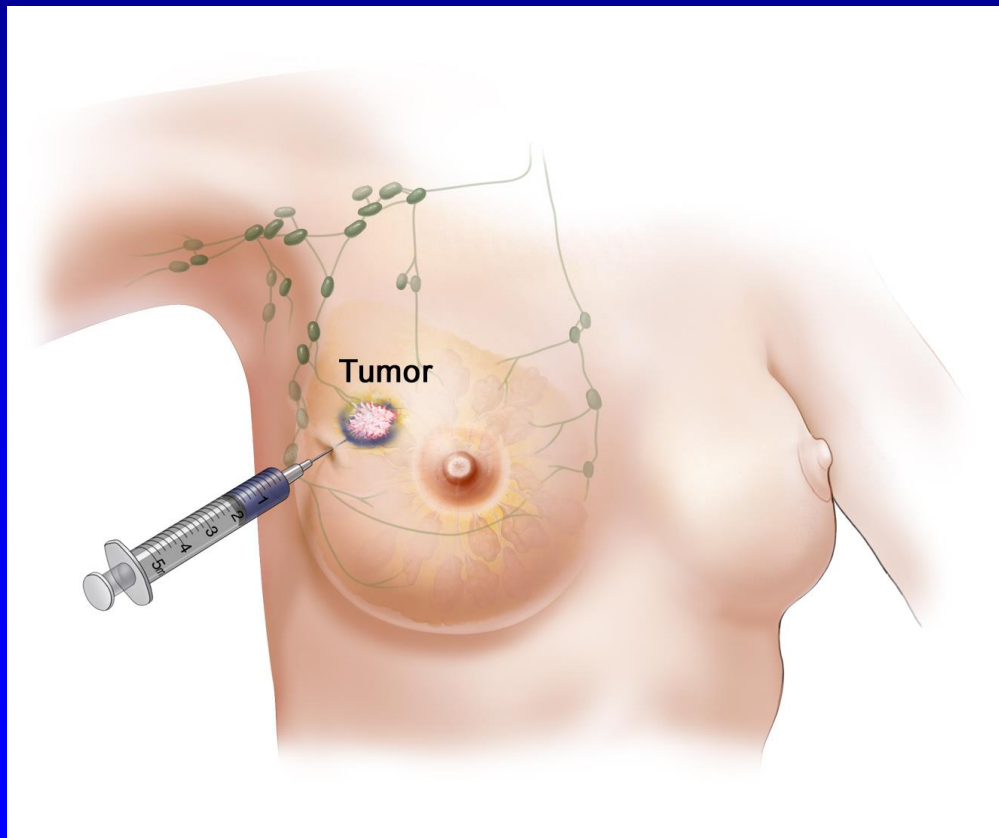
WIDE LOCAL EXCISION

- Complete local excision with rim of normal tissue
- Careful specimen orientation
- Complete excision essential
- Size of tumour vs breast
- Combined with radiotherapy
- Outcomes similar to mastectomy
- Excellent cosmesis
- +/- SLNB



SENTINEL LYMPH NODE BIOPSY

- Standard of care => ↓ morbidity but ~3-4% false negative rate
- ↓ lymphoedema, ↓ neuralgia, ↓ frozen shoulder



COMPLICATIONS

- Mastectomy
 - wound infection/abscess
 - breast haematoma
 - seroma of skin flap
 - necrosis of skin flap
 - paraesthesia of chest wall
 - phantom breast syndrome
 - postsurgical pain syndrome
 - lymphoedema
 - psychological effects
- Axillary dissection
 - seroma of axilla
 - injury/thrombosis of axillary vein
 - lymphoedema (~10%)
 - ↓ shoulder movement (~10%)
 - division of intercostobrachial nerve
- Radiotherapy
 - necrosis of breast tissue
 - lymphoedema
 - symptomatic pneumonitis (3-6%)
 - ↓ shoulder movement (1-3%)
 - brachial plexopathy (1-3%)