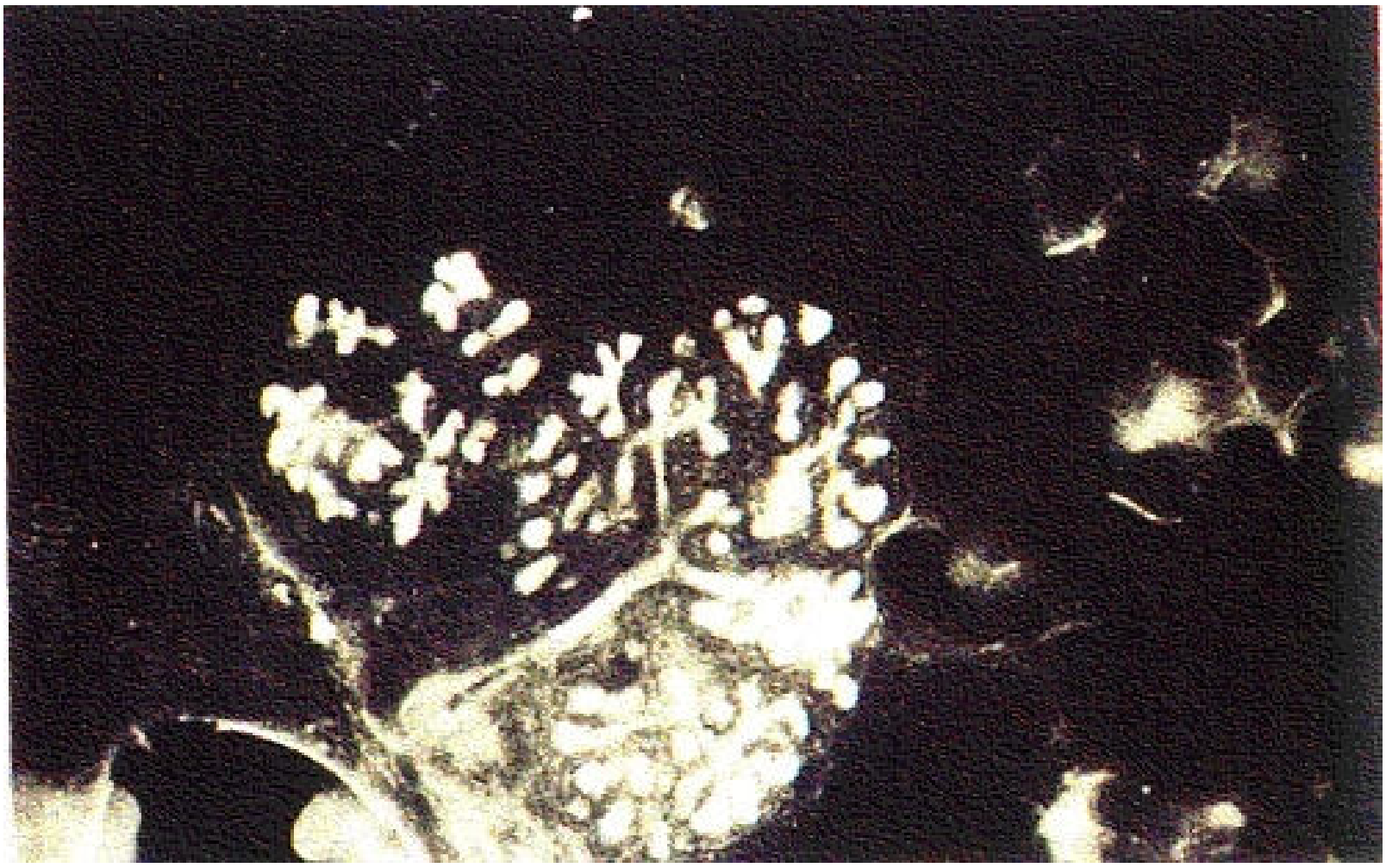
BENIGN BREAST DISEASE



Mammary ductogram demonstrating lobules

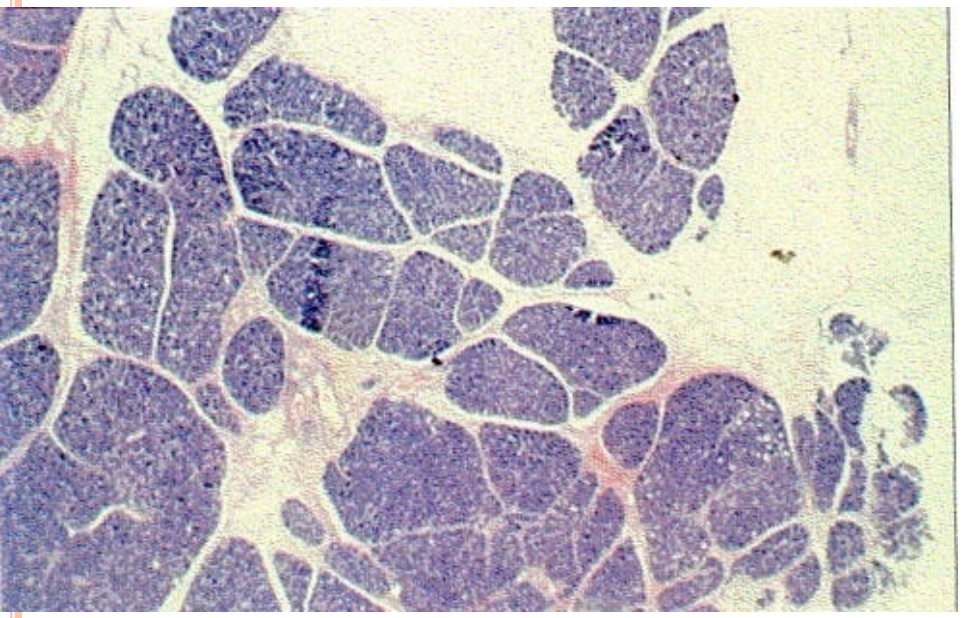
Pre-menarchal ductule

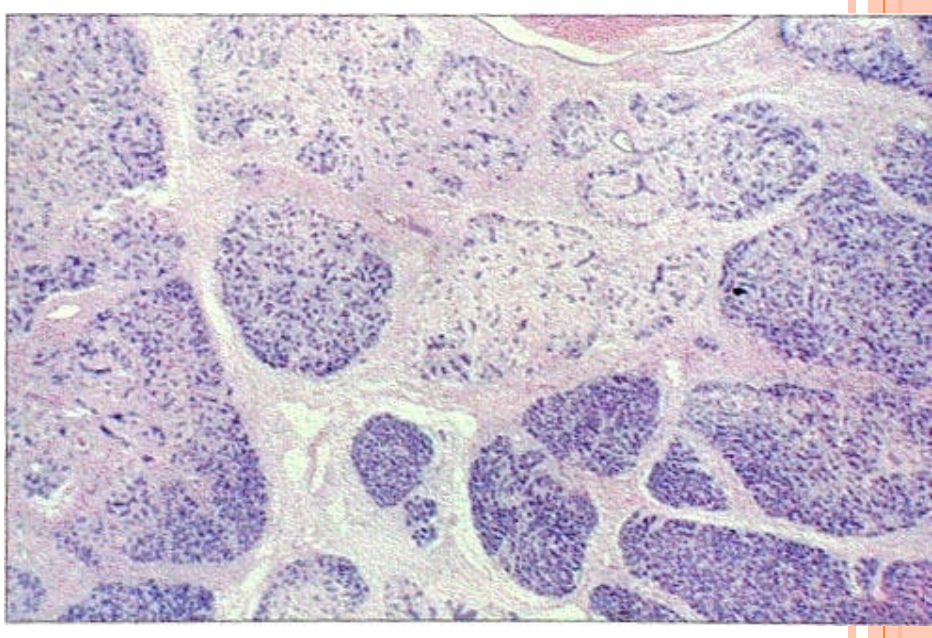
Terminal ductal-lobular unit

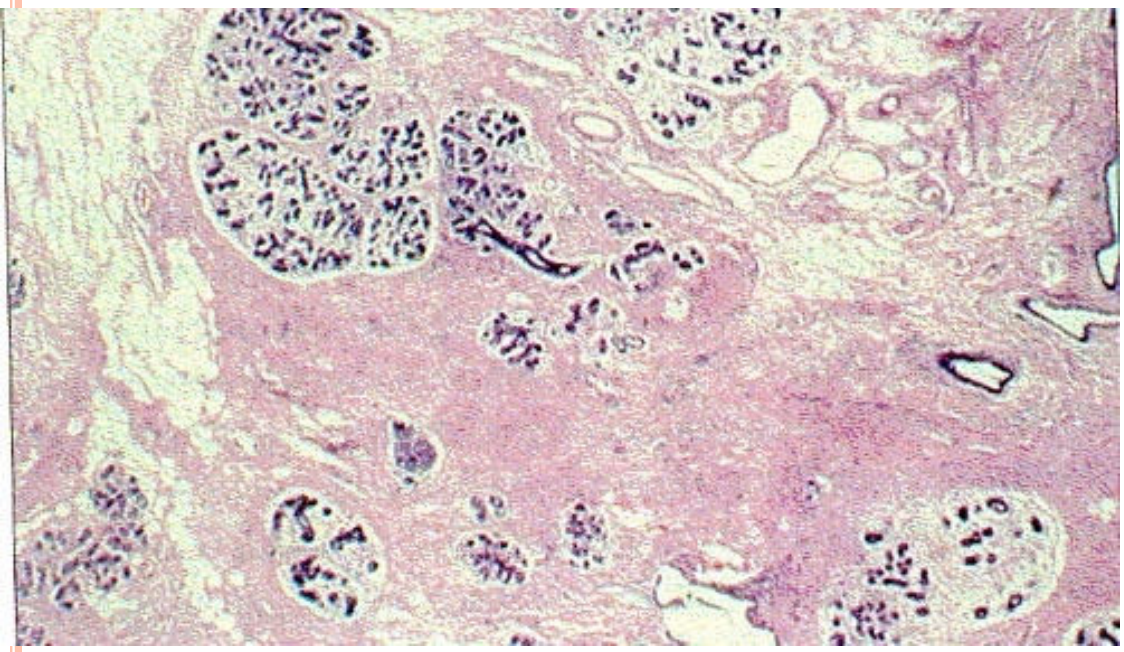
BREAST DEVELOPMENT

Menarche and Reproductive Cycles:

- Pulsed estrogen exposure causes rapid growth, elongation and branching
- Term pregnancy leads to terminal differentiation and stops growth
- End bud epithelial tissue undergoes cyclic proliferation
- **Breast feeding is associated with a lower risk of breast cancer**



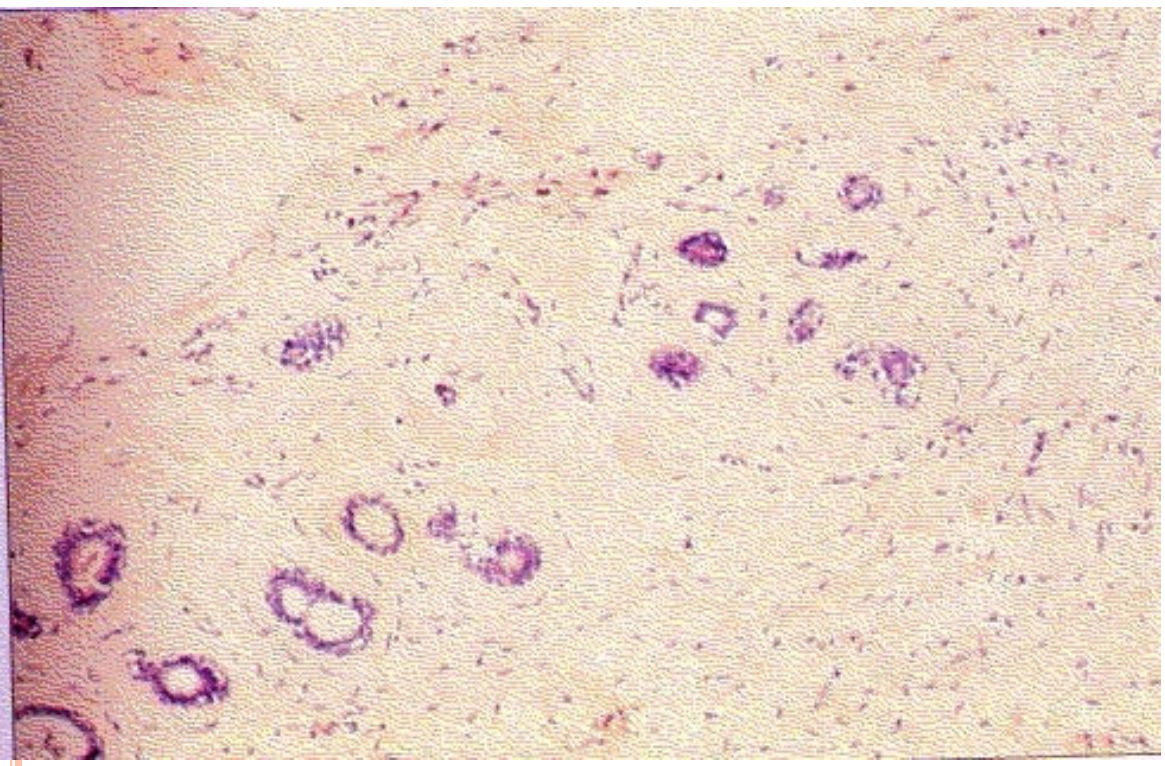




Normal breast in pregnancy and after

Breast Development

- Involution: Changes of involution begin after cessation of lactation and continue through menopause
- Competing involution and proliferative processes are patchy and increased in peri-menopause and with HRT
- Hyperplasia with atypia and DCIS peak in this period



Involutional and cystic change

DEFINITION

- It is spectrum of diseases that are histologically variation of normal breast anatomy with no evidence of malignancy on histopathological examinations.

Benign Breast Disease

It includes:

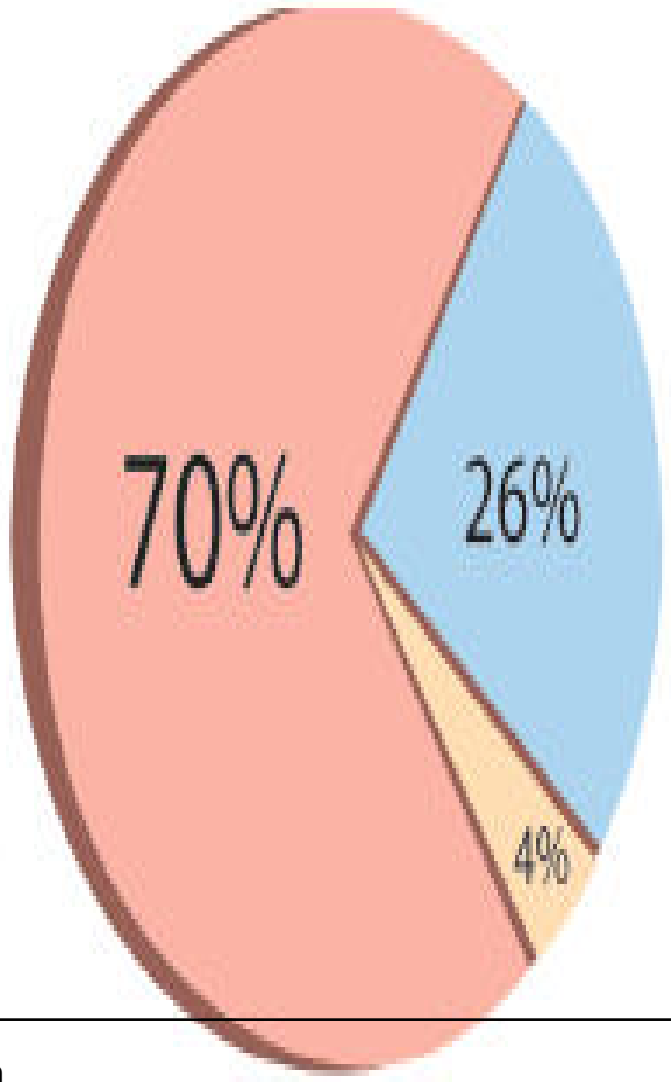
- Congenital anomalies
- Inflammatory lesion
- ANDI
- Non breast diseases

Benign Breast Disease: Importance

70% of BBD diagnoses are **not** associated with an increased risk of breast cancer

26% of BBD diagnoses are associated with a **mildly** increased risk of breast cancer

4% of BBD diagnoses are associated with a **high** increased risk of breast cancer



CONGENITAL ANOMALIES

- Polymastia,
- Polythelia
- Amastia
- Poland syndrome
- Symmastia.

INFECTIOUS AND INFLAMMATORY BREAST DISEASE

- Cellulitis, mastitis
- Abscess
  - Surgical drainage
- Chronic subareolar abscess
  - Complete excision of sinus tract
  - Recurrence is common
- Mondor's disease
  - Phlebitis of the thoracoepigastric vein.

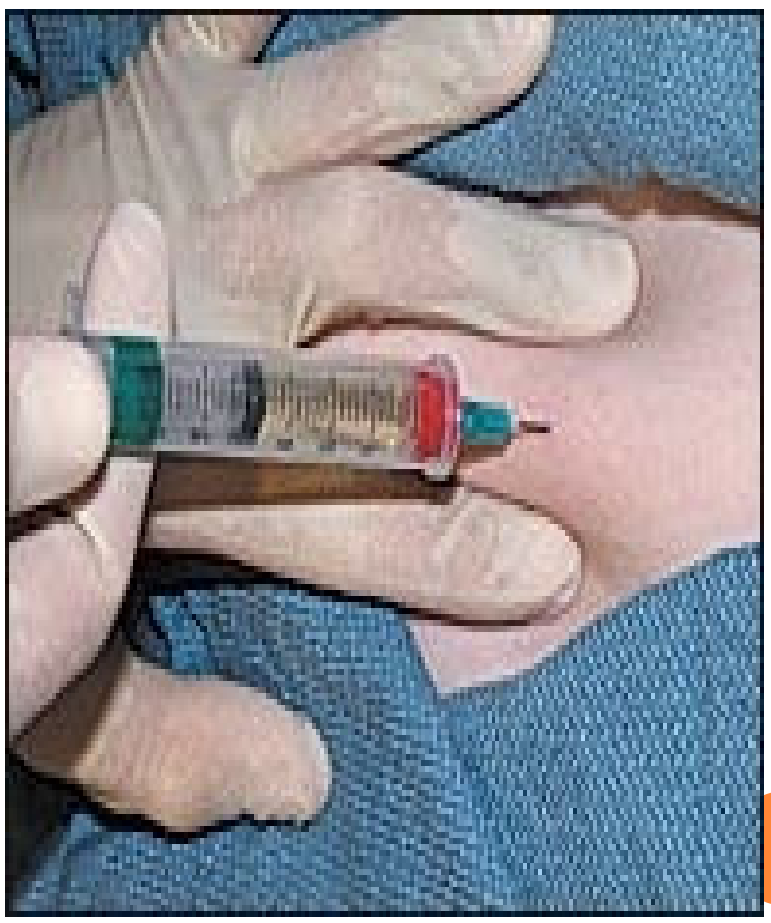
ANDI

Table 16-3 ANDI Classification of Benign Breast Disorders			
	Normal →	Disorder →	Disease
Early reproductive years (age 15–25)	Lobular development	Fibroadenoma	Giant fibroadenoma
	Stromal development	Adolescent hypertrophy	Gigantomastia
	Nipple eversion	Nipple inversion	Subareolar abscess
			Mammary duct fistula
Later reproductive years (age 25–40)	Cyclical changes of menstruation	Cyclical mastalgia	Incapacitating mastalgia
	Nodularity		
	Epithelial hyperplasia of pregnancy	Bloody nipple discharge	
Involution (age 35–55)	Lobular involution	Macrocysts	
		Sclerosing lesions	
	Duct involution		
	-Dilatation	Duct ectasia	Periductal mastitis
	-Sclerosis	Nipple retraction	
	Epithelial turnover	Epithelial hyperplasia	Epithelial hyperplasia with atypia

CLASSIFICATION : HISTOLOGICAL

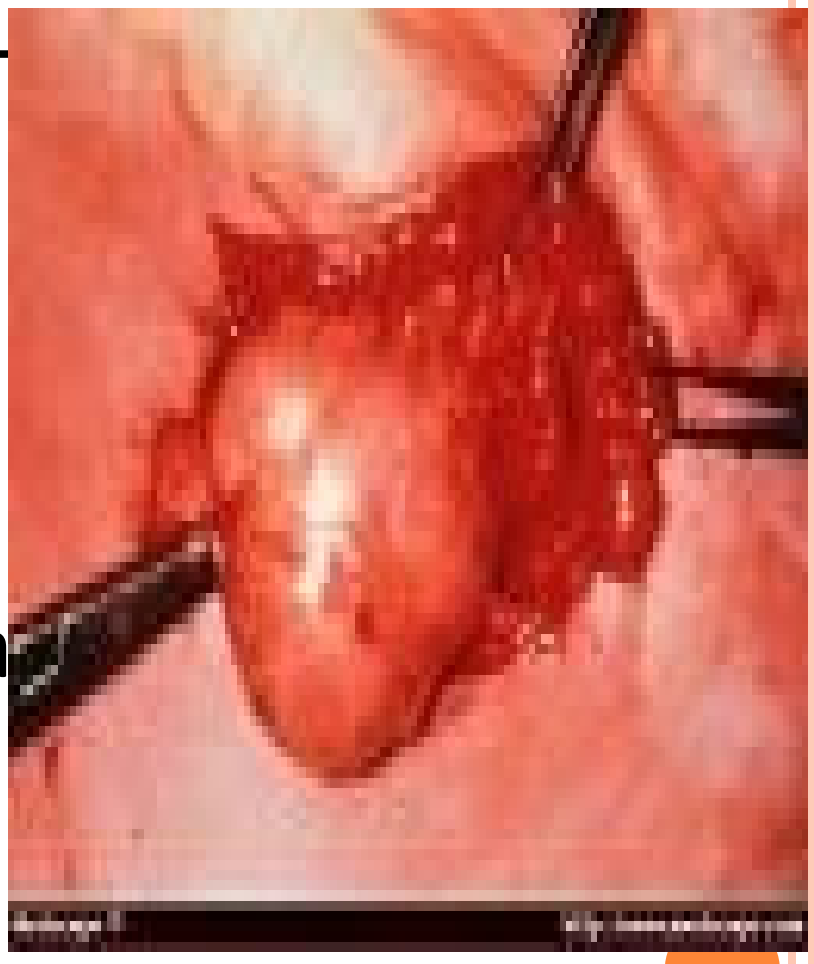
- Non Proliferative Lesion
  - Simple Cyst
  - Complex cyst

SIMPLE CYST



CLASSIFICATION : HISTOLOGICAL

- Proliferative Lesions– Atypia
  - Ductal hyperplasia
  - Fibroadenoma
  - Intraductal papilloma
  - Sclerosing Adenoma
  - Radial Scars



CLASSIFICATION : HISTOLOGICAL

- Proliferative Lesions With Atypia-
  - Atypical ductal hyperplasia
  - Atypical lobular hyperplasia

CLASSIFICATION: MALIGNANT POTENTIAL

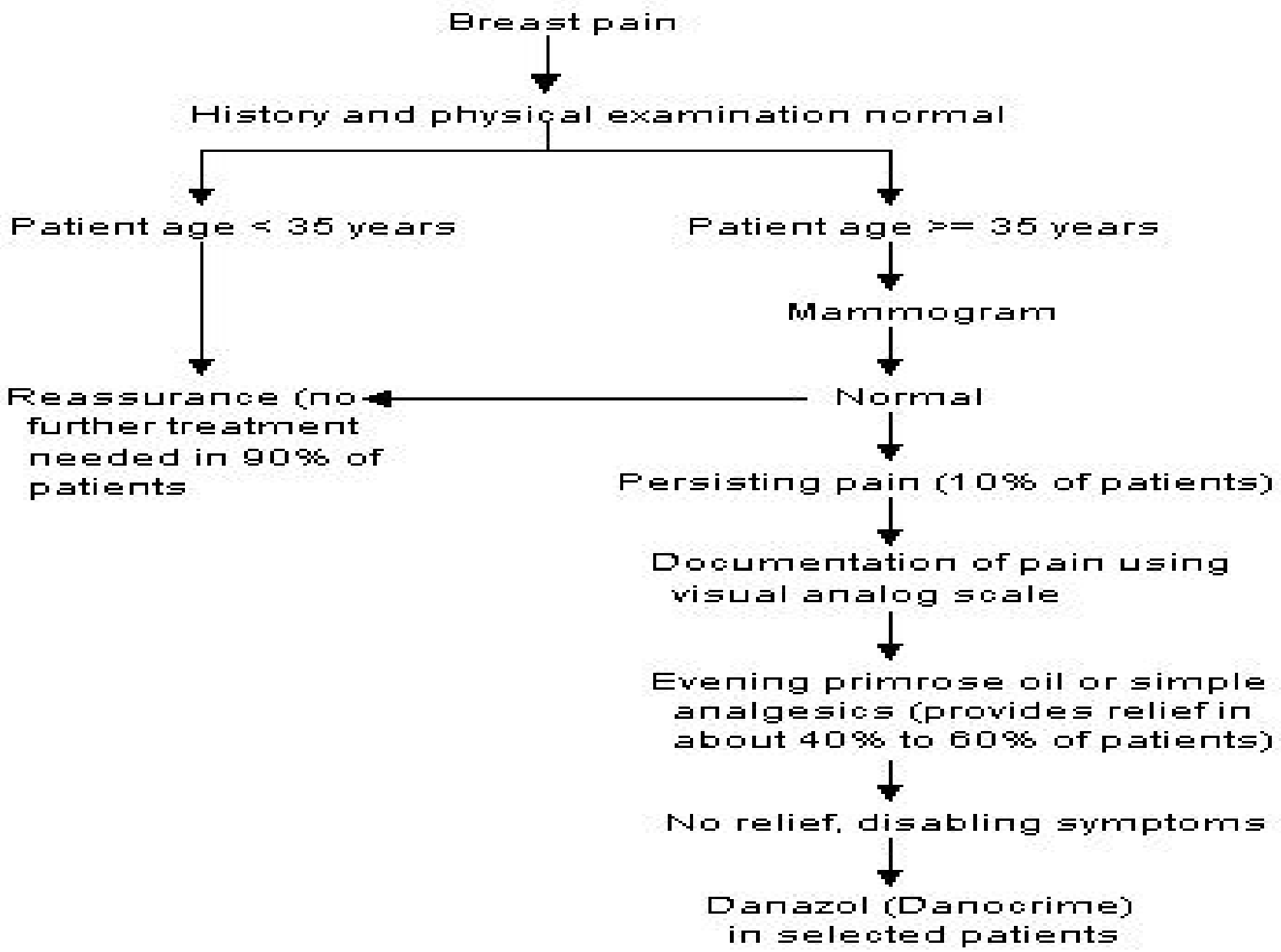
- **Lesions with Increased Risk of Ca**
  - Ductal hyperplasia
  - Sclerosing adenosis
  - Atypical hyperplasia
  - Radial scars

CLASSIFICATION: MALIGNANT POTENTIAL

- **Lesions with no Increased risk of Ca**
  - Fibrocystic disease
  - Duct ectasia
  - Solitary papillomas
  - Simple fibroadenomas
  - Mastitis or breast abscess
  - Galactocele
  - Fat necrosis
  - Lipoma

SYNDROMIC APPROACH:

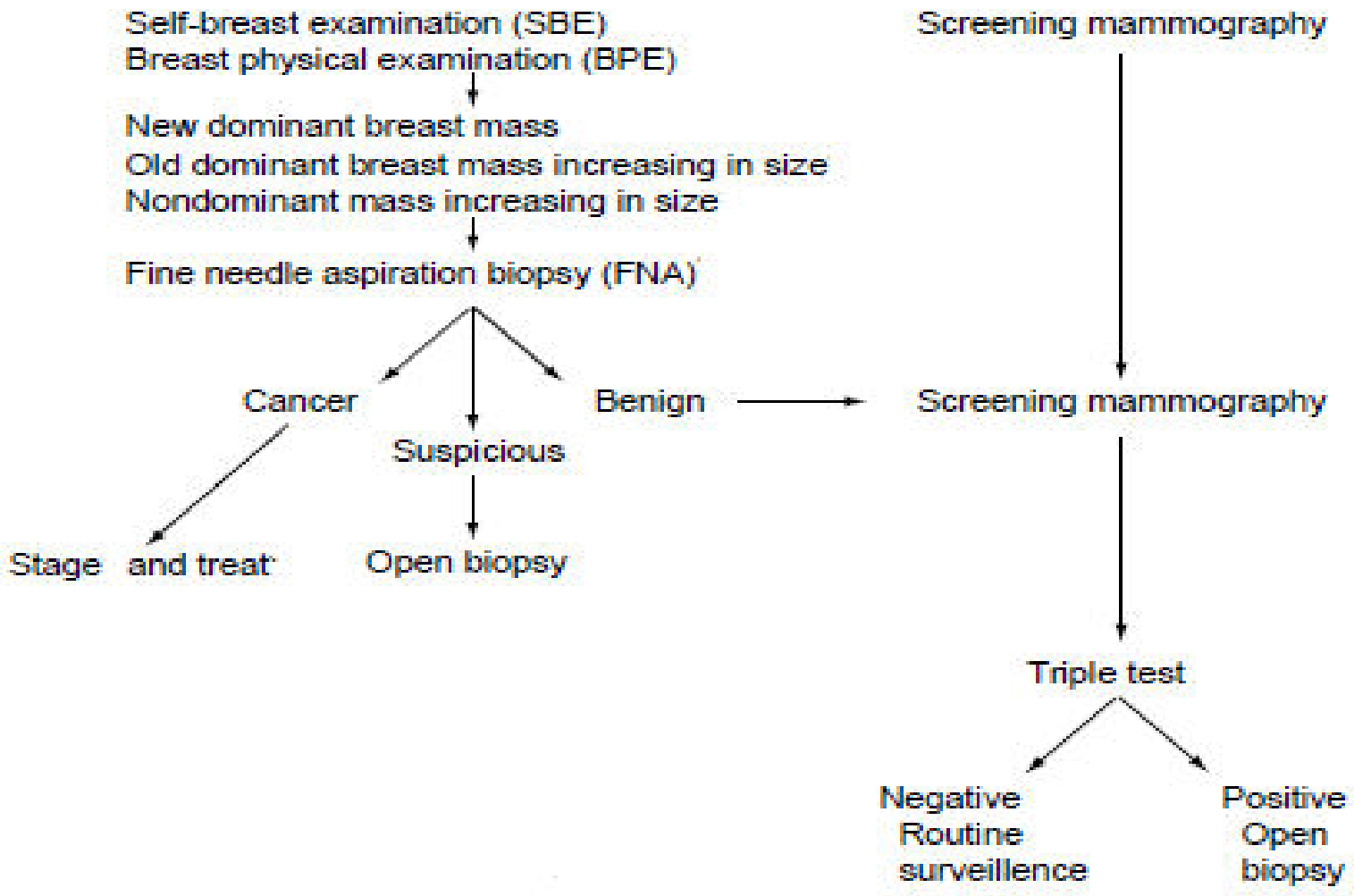
- **Mastalgia**
  - Cyclic
  - Non Cyclic



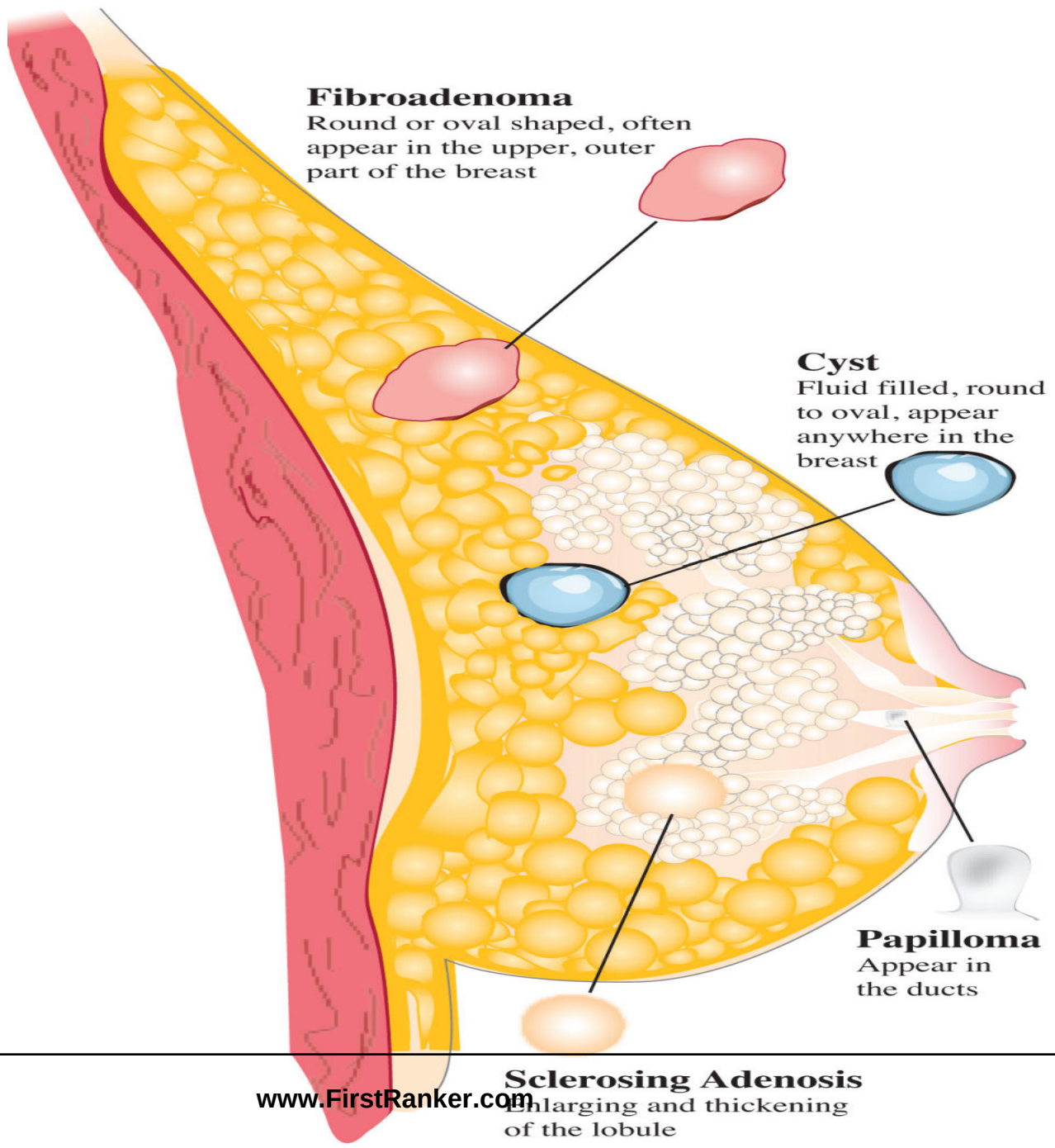
SYNDROMIC APPROACH:

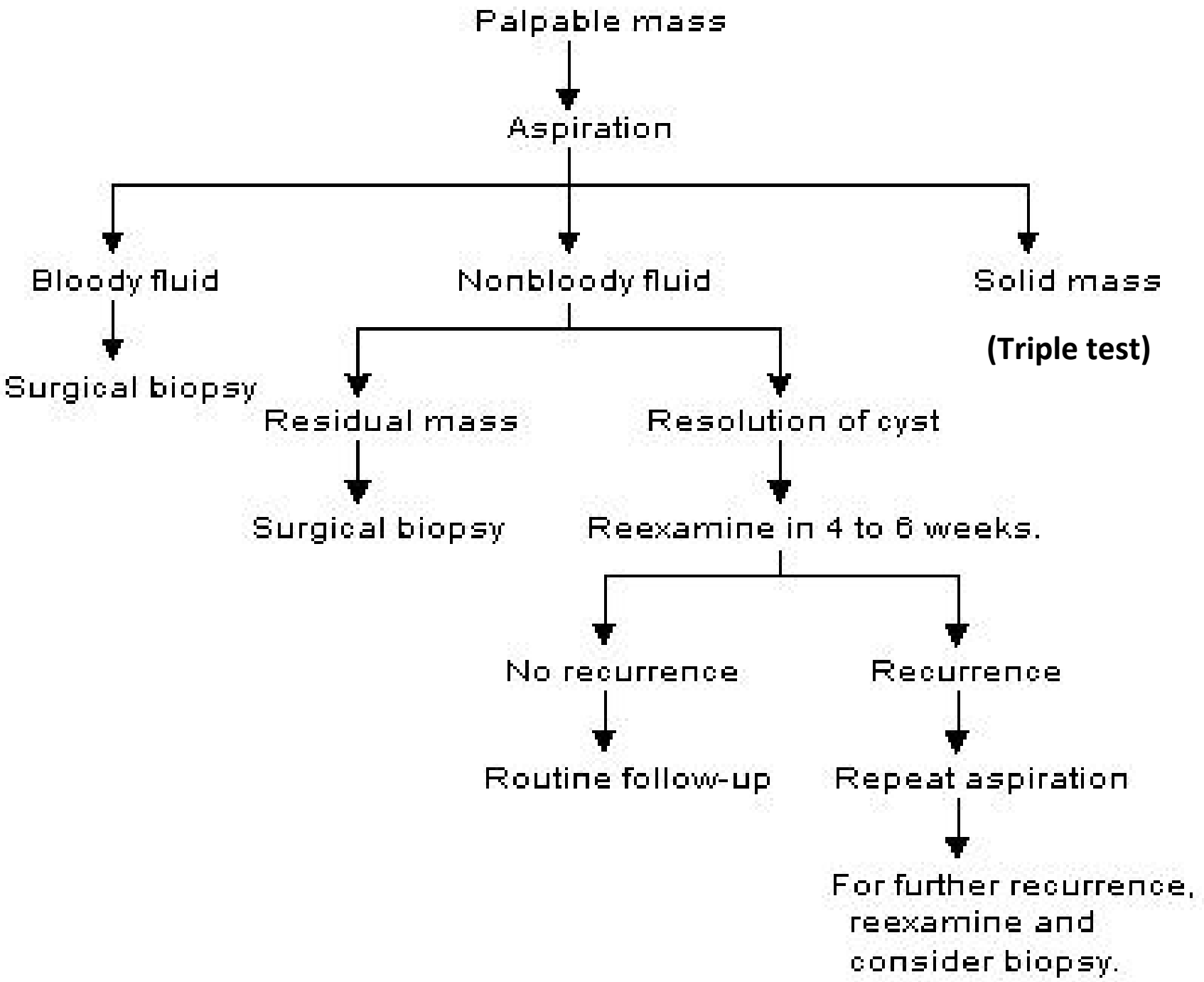
- **Tumors and Masses**
  - Nodularity or glandular
  - Cysts
  - Galactoceles
  - Fibroadenoma
  - Sclerosing Adenosis
  - Lipoma
  - Harmatoma
  - Cystosarcoma Phylloides

SYNDROMIC APPROACH:



BBD





SYNDROMIC APPROACH

- **Nipple discharge**
  - Galactorrhea
  - Abnormal nipple discharge