

# **GYNAECOMASTIA**

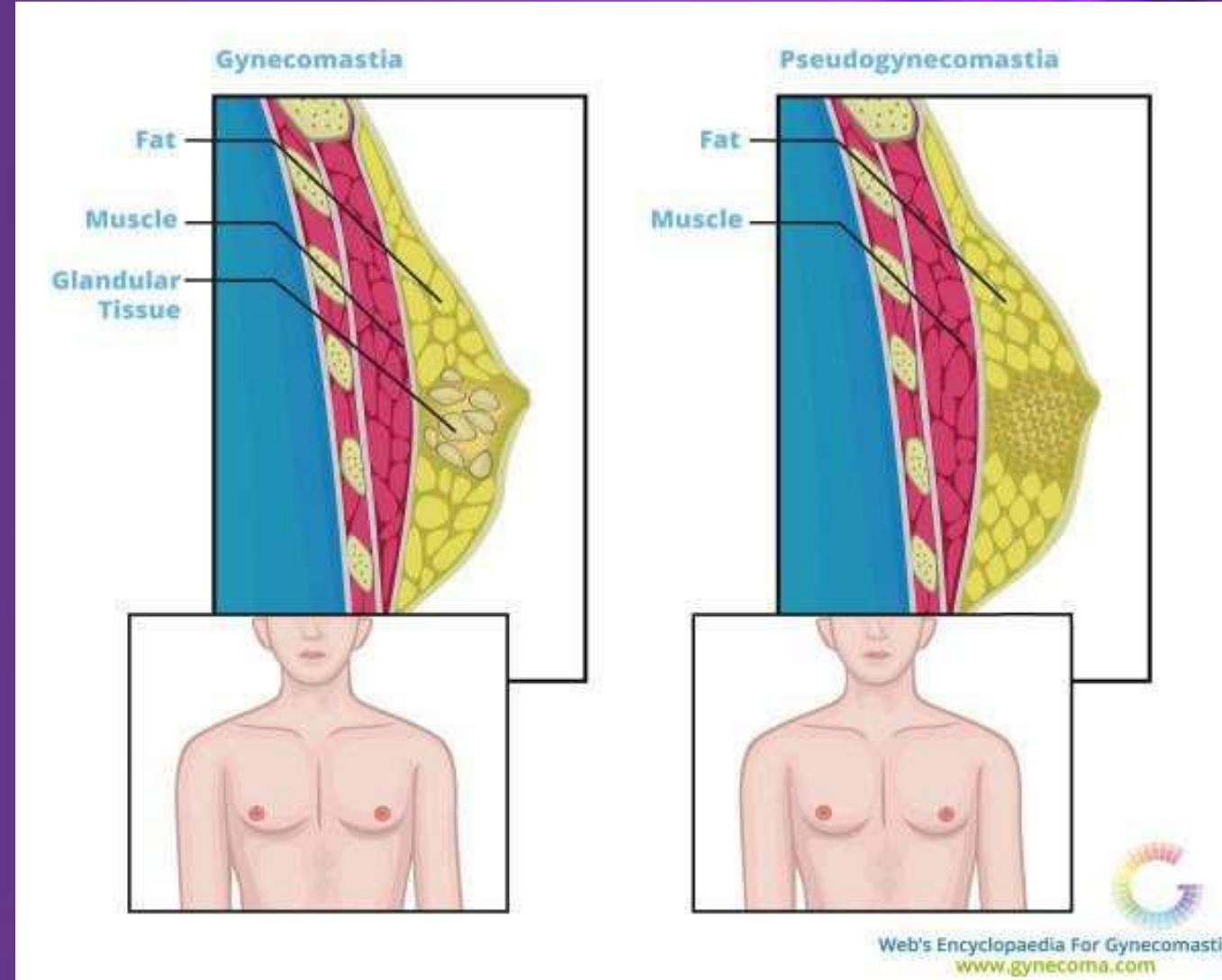
**Mrs. Preethi Ramesh  
Senior Nursing Lecturer  
BGI**



# DEFINITION

- ❖ **Gynecomastia:** It is a common endocrine disorder in which there is a benign enlargement of breast tissue in males.
- ❖ **Pseudogynecomastia:** Enlargement of the male breast, as a result of increased fat deposition is called Pseudogynecomastia. Synonymous terms are used like **Adipomastia**, or **lipomastia**.

# GYNECOMASTIA & PSEUDO GYNECOMASTIA

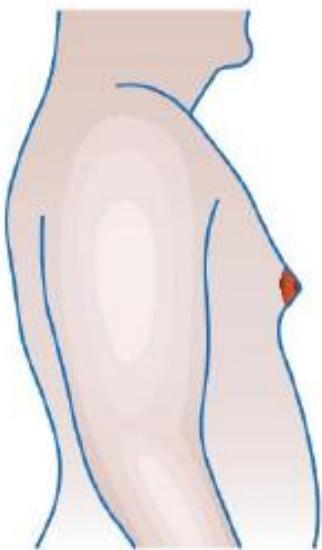


## PREVALENCE

- Asymptomatic palpable breast tissue is common in normal males, particularly in the neonate(60%–90%), at puberty (60%–70%), and with increasing age (20%–65%, >50 years).
- Because of this high prevalence, gynecomastia is considered a relatively normal finding during these periods of life. Gynecomastia is often called physiologic at these ages.

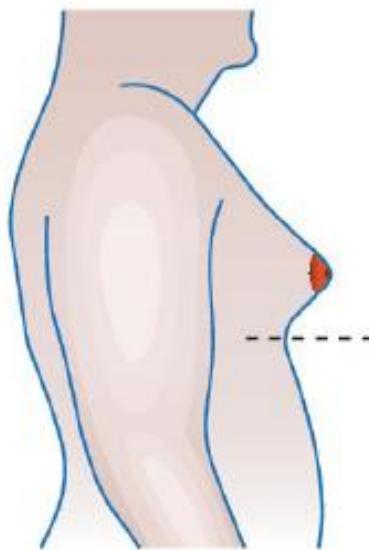
# CLASSIFICATION

**Simon classification for gynaecomastia**



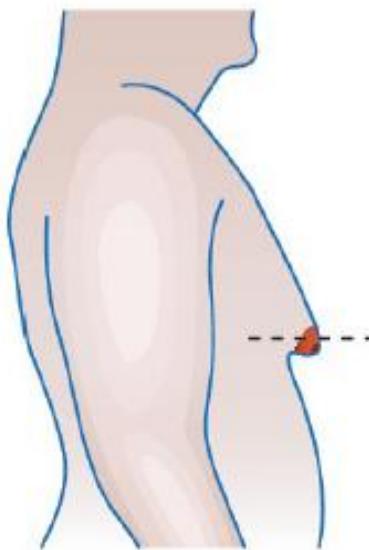
**Grade 1**

Small enlargement,  
no skin excess



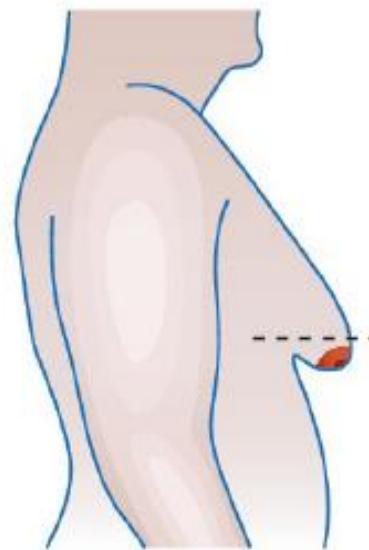
**Grade 2a**

Moderate enlargement,  
no excess skin



**Grade 2b**

Moderate enlargement,  
with extra skin



**Grade 3**

Marked enlargement,  
with extra skin



# SIGNS AND SYMPTOMS

- Male breast enlargement with rubbery or firm glandular subcutaneous chest tissue palpated under the areola of the nipple in contrast to softer fatty tissue.
- Milky discharge from the nipple is not a typical finding but may be seen in a gynecomastia individual with a prolactin secreting tumor.
- The enlargement may occur on one side or both.
- Males with gynecomastia may appear anxious or stressed due to concerns about the possibility of having breast cancer.
- An increase in the diameter of the areola and asymmetry of the chest tissue.

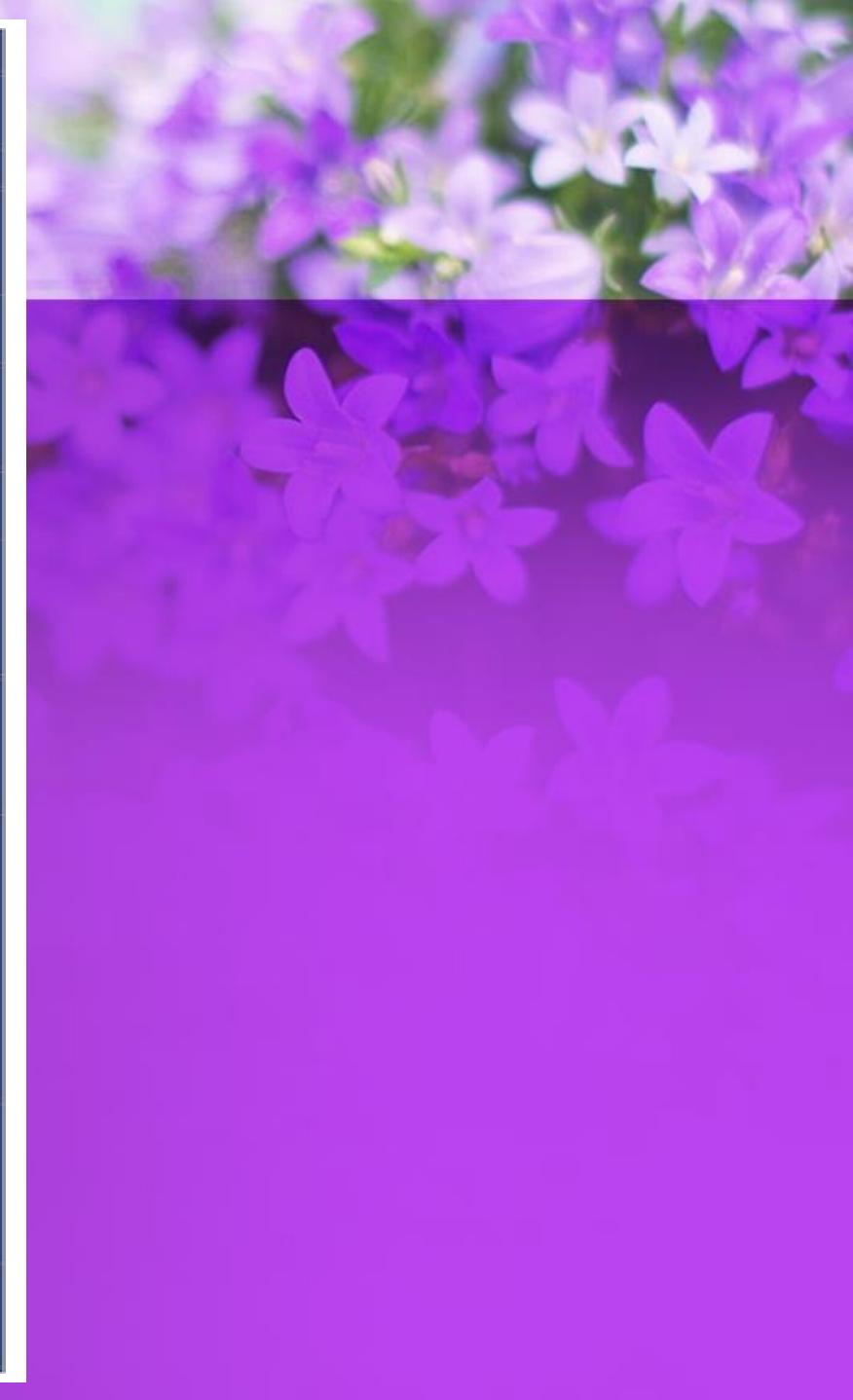
# PATHOPHYSIOLOGY

- An altered ratio of estrogens to androgens mediated by an increase in estrogen production.
- An altered ratio of estrogens to androgens mediated by a decrease in androgen production.
- An altered ratio of estrogens to androgens mediated by a combination of these two factors.
- Estrogen acts as a growth hormone to increase the size of male breast tissue.
- The cause of gynecomastia is unknown in around 25% of cases.

# E T I O L O G Y

**Table 1: Common causes of gynaecomastia.**

<b>Idiopathic</b>		
<b>Obesity</b>		
<b>Physiological</b>	Birth Puberty Old age	
<b>Endocrine</b>	Testicular	- Hypogonadism - Klinefelter syndrome
	Adrenal	- Cushing's syndrome - Congenital adrenal hyperplasia
	Thyroid	- Hypothyroid - Hyperthyroid
<b>Neoplastic</b>	Adrenal Testis Pituitary Bronchogenic	
<b>Systemic disease</b>	Renal failure Liver cirrhosis Adrenal Malnutrition	
<b>Iatrogenic</b>	Hormones	- Oestrogens - Androgens • Anti-androgens - Spironolactone - Cimetidine - Ketoconazole - Ranitidine - Flutamide - Finasteride
	Cardiovascular drugs	- Amiodarone - Digoxin - Nifedipine - Reserpine - Verapamil
	Abused drugs	- Alcohol - Heroin - Marijuana



# DIAGNOSTIC EVALUATION

## ❖ HISTORY

- Age
- Duration of the gynaecomastia
- Presence of pain.
- Use of drugs including recreation drugs e.g. Alcohol
- Presence of symptoms suggestive of pathological cause.
- Symptoms of hypogonadism - reduced libido, erectile dysfunction.
- Systemic disease: Hepatic, Renal, Endocrine disease.  
(Thyrotoxicosis, Cushing syndrome).

# DIAGNOSTIC EVALUATION

## ❖ Physical examination

### ▪ Breasts:

- Pinch breast tissue between thumb and forefinger distinguish from fat.
- Measure glandular tissue diameter. Look for galactorrhea.

### ▪ Testicular palpation:

- Exclude tumour.
- Assess testicular size—?atrophy.

### ▪ 2° sex characteristics.

- Look for evidence of **systemic disease** e.g. chronic liver or renal disease, thyrotoxicosis, Cushing's syndrome, chronic cardiac or pulmonary disease.

# **DIAGNOSTIC EVALUATION**

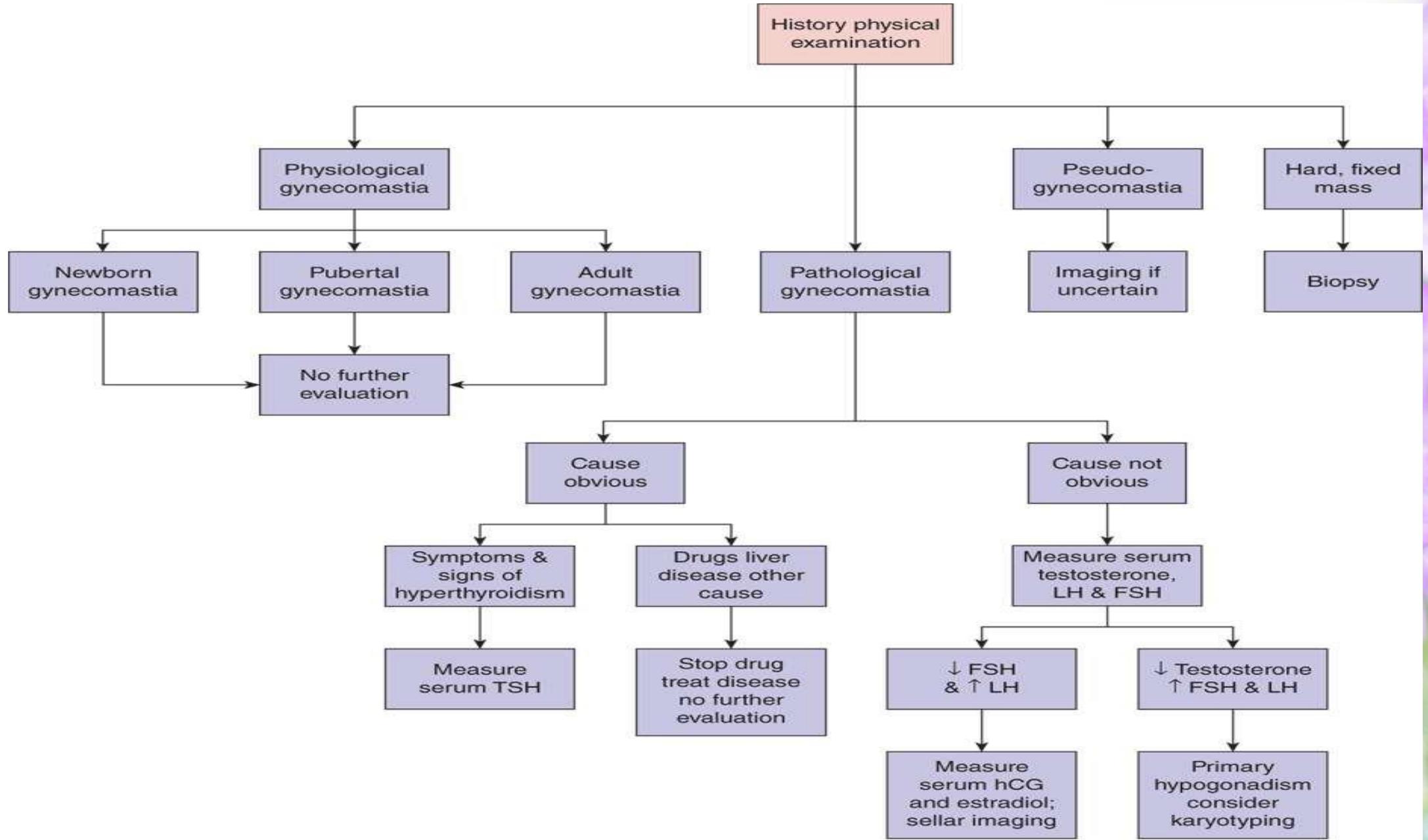
## **❖ Baseline investigation**

- Serum testosterone.
- Serum estradiol.
- LH and FSH.
- Prolactin.
- SHBG.
- hCG.
- Liver function tests.

# DIAGNOSTIC EVALUATION

## ❖ Additional investigation

- If **testicular tumour** is suspected, e.g. raised estradiol/hCG: testicular USG.
- If **adrenal tumour** is suspected, e.g. markedly raised estradiol: abdominal CT or MRI scan.
- If **breast malignancy** is suspected: mammography; FNAC/tissue biopsy.
- If **lung cancer** is suspected, e.g. raised hCG: chest radiograph.
- Other investigations, depending on clinical suspicion, e.g. renal or thyroid function .



# MEDICAL MANAGEMENT

- The underlying disease should be corrected if possible, and offending drugs should be discontinued.
- ER antagonists (tamoxifen, 10 to 20 mg daily, or raloxifene, 60 mg daily) are effective in treating pubertal and adult gynecomastia and preventing gynecomastia induced by androgen deprivation therapy.
- Other drugs can be used, such as Clomifene (50 - 100mg/day), Danazol (300 – 600mg/day), Testolactone (450mg/day), Anastrozole (1mg/day).
- Medical therapy is ineffective for chronic, fibrous gynecomastia.

## **SURGICAL MANAGEMENT**

With long standing gynecomastia (more than 1 year) **surgical reduction mammoplasty** (i.e. removal of breast tissue with or without periareolar adipose tissue) is necessary if breast enlargement is severe, painful, socially embarrassing or disfiguring.

## **RADIATION THERAPY**

Low-dosage external beam radiation therapy is effective, but less effective than tamoxifen, for prevention of **gynecomastia** due to anti-androgen monotherapy for prostate cancer.

# PROGNOSIS

- Pubertal **gynecomastia** usually regresses spontaneously within 1 or 2 years.
- Patients who develop drug-induced **gynecomastia** generally have complete or near-complete regression of the breast changes if the offending drug is discontinued during the early stage.
- Once **gynecomastia** from any cause has reached the fibrotic stage, little or no spontaneous regression occurs, and medical therapy is ineffective.

**THANK YOU**

