

Babylon University  
College of Medicine  
Department of Pathology

الفصل الدراسي الثاني

Lab No.2 for 3<sup>rd</sup> Stage

**Benign tumor**

## **Fibroadenoma of breast**

This is the most common benign tumor of the female breast. Occurring at any age within the reproductive period of life, fibroadenomas are somewhat more common before age 30. They are frequently multiple and bilateral.

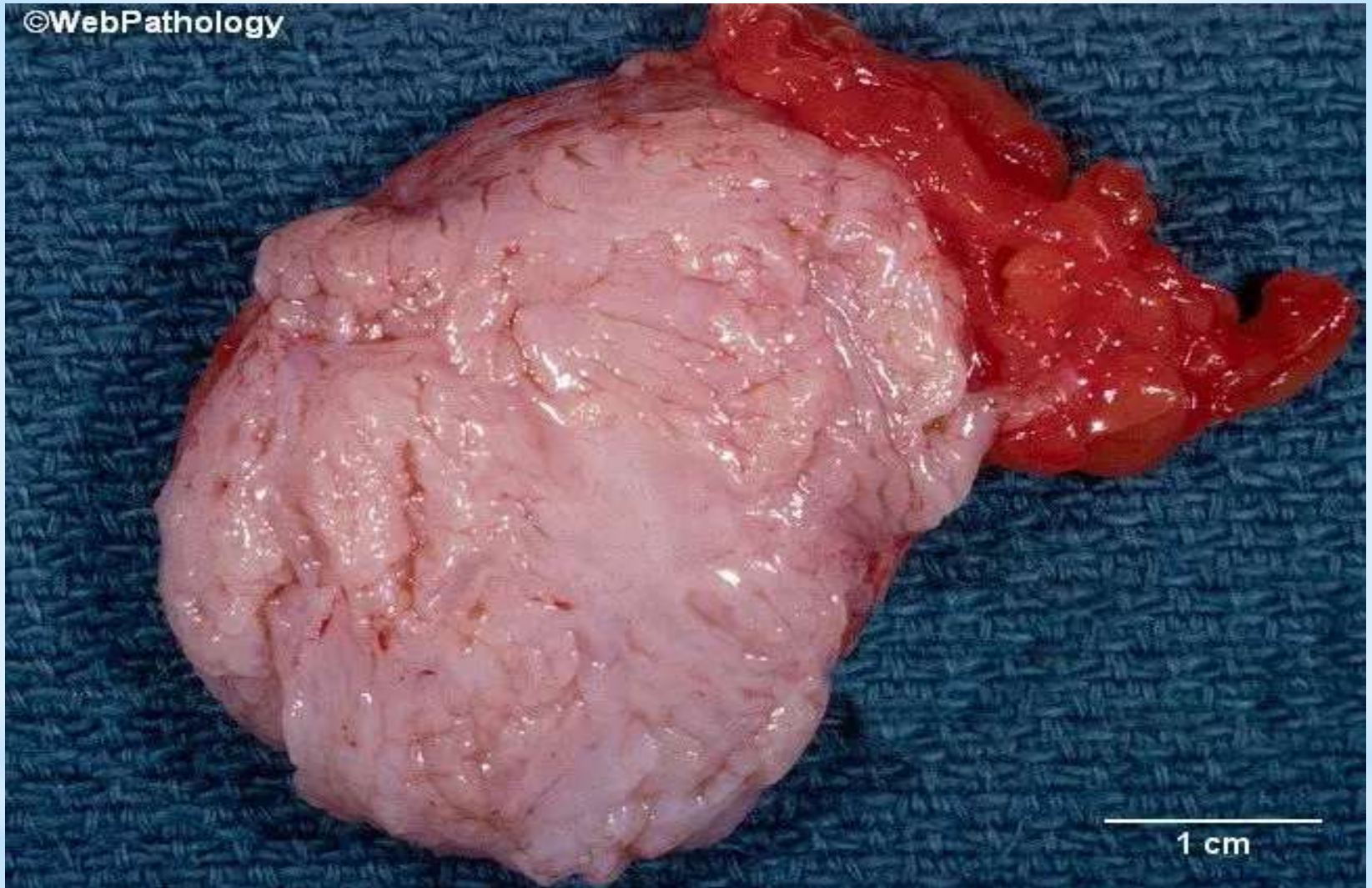
The epithelium of the fibroadenoma is hormonally responsive, and a slight increase in size may occur during the late phase of each menstrual cycle and regression usually occurs after menopause.

## **Clinically:**

Fibroadenomas grow as spherical nodules that are usually sharply circumscribed and freely movable in the surrounding breast substance.

## **Macroscopically:**

The tumors are well-circumscribed, rubbery, grayish white nodules. They vary in size from less than 1 cm in diameter to large tumors that can replace most of the breast.



This is a fibroadenoma (macroscopically)



## Microscopically:

There is proliferation of both epithelial and stromal components.

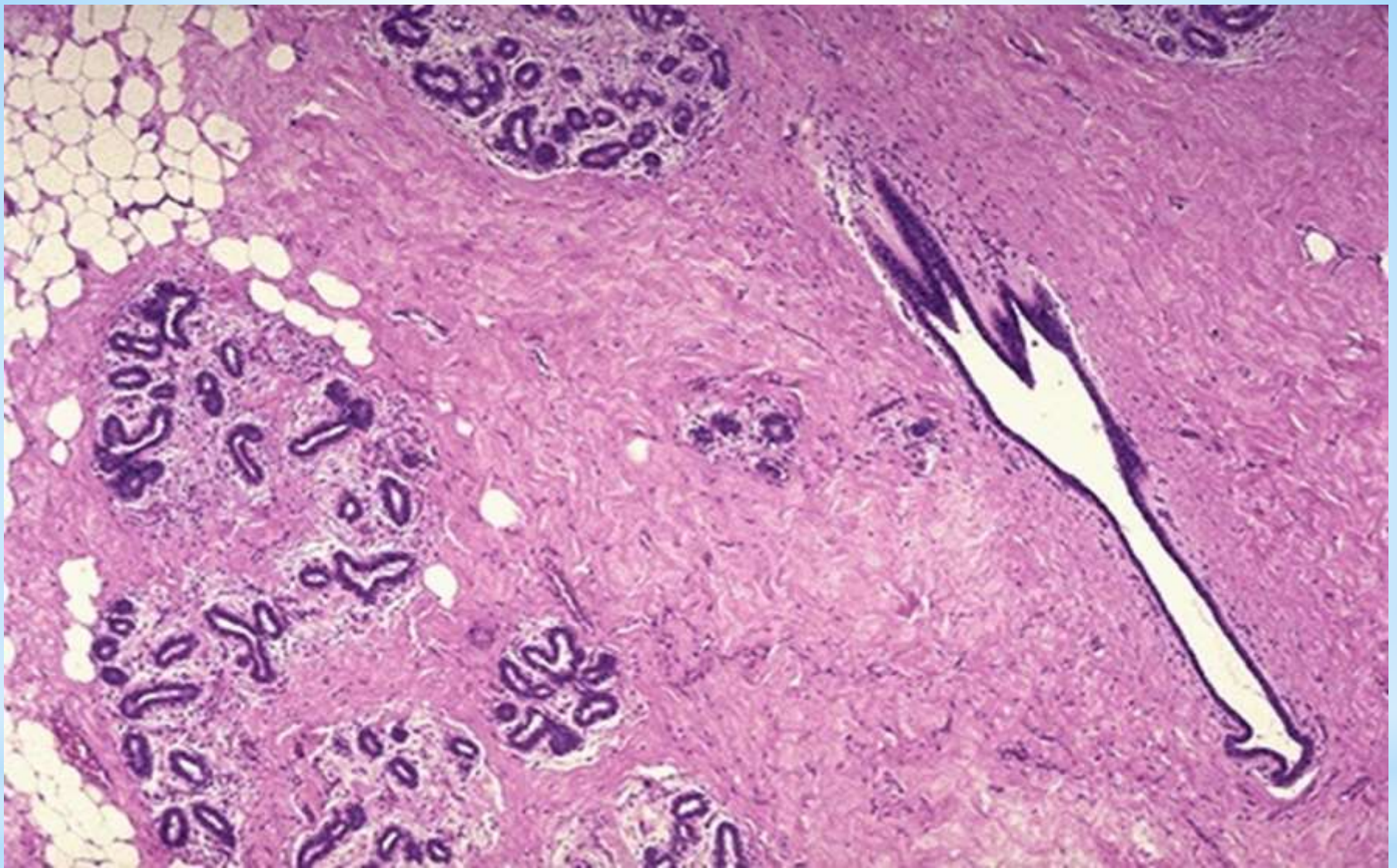
Epithelial proliferation form glandular structure lined by single layer or multiple layers of cuboidal or low columnar epithelium that are regular and intact basement membrane and having uniform nuclei.

The stroma is usually delicate, cellular, and often myxoid, resembling intralobular stroma.

The border is sharply delimited from the surrounding tissue by capsule.

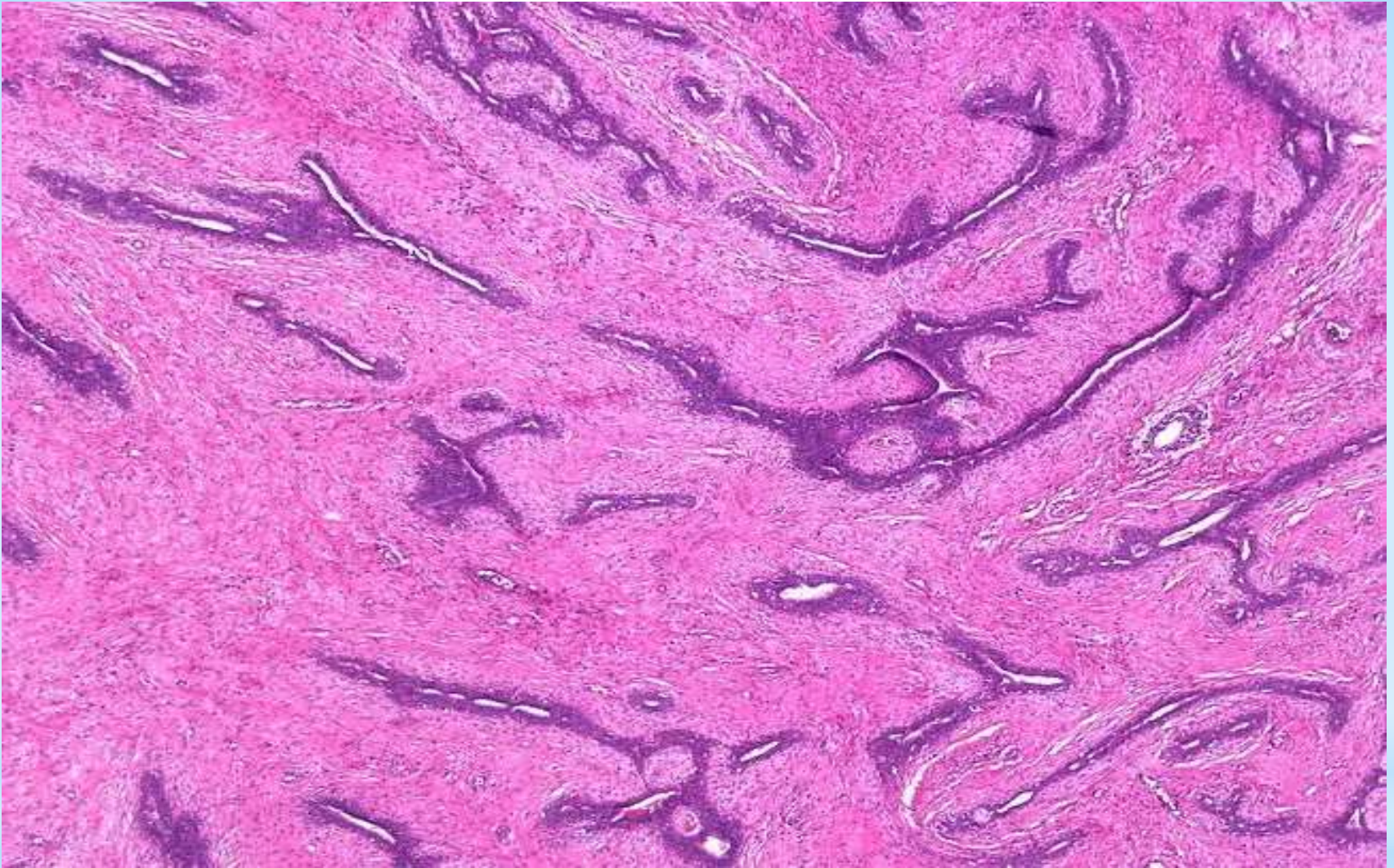
The histologic appearance of fibroadenoma depends upon the relative proportions and the arrangement of glandular and stromal components.

- When the stromal connective tissue invaginates into the glandular component, it is labeled **intracanalicular pattern**. The compressed ducts show linear branching pattern with slit-like lumens (very well seen here).
- In **pericanalicular histologic pattern**, the glands maintain their round or oval profiles.. Both may be seen within the same lesion.



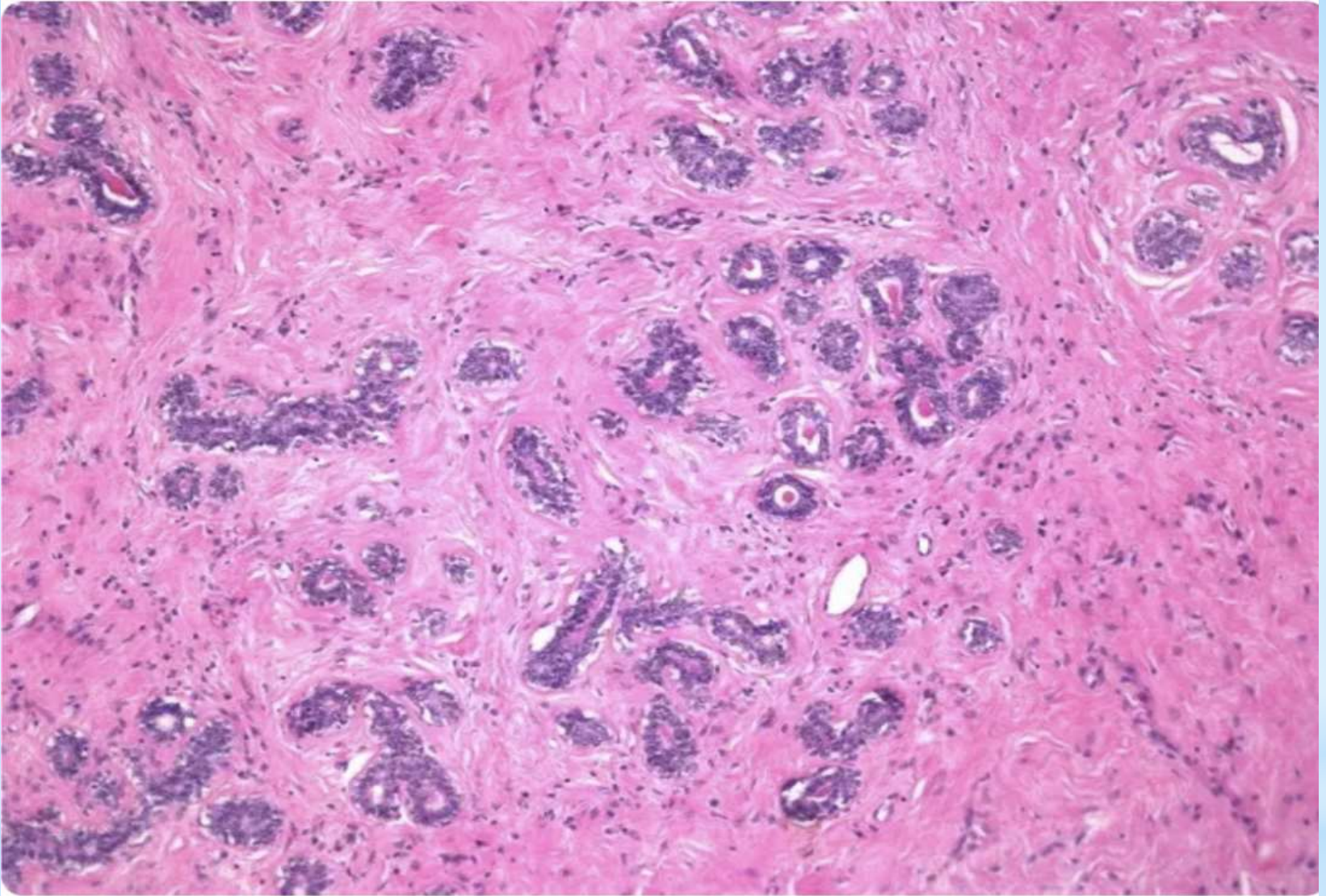
The normal microscopic appearance of female breast tissue is shown here. There is a larger duct to the right and lobules to the left. A collagenous stroma extends between the structures. A variable amount of adipose tissue can be admixed with these elements.





**Intracanalicular fibroadenoma**





**Pericanalicular fibroadenoma**

# Thyroid Adenoma

Adenomas of the thyroid are typically discrete, solitary masses, they are derived from follicular epithelium and so might all be called follicular adenomas. A variety of terms have been proposed for classifying adenomas on the basis of degree of follicle formation and the colloid content of the follicles.

Simple colloid adenomas (macrofollicular adenomas), a common form, resemble normal thyroid tissue; others recapitulate stages in the embryogenesis of the normal thyroid (fetal or microfollicular, embryonal or trabecular).

There is limited utility in these classifications because mixed patterns are common



## **Clinically:**

It affect women more than male, many thyroid adenomas present as either unilateral painless mass. often discovered during a routine physical examination. Larger masses may produce local symptoms, such as difficulty in swallowing. hormonal secretion (toxic adenoma).

## **Macroscopically:**

Solitary, spherical encapsulated lesion, some are smaller and others are much larger (up to 10 cm in diameter). The color ranges from gray-white to red-brown, depending on the cellularity of the adenoma and its colloid content. The neoplastic tissues are demarcated from the adjacent parenchyma by a well-defined, intact capsule. Areas of hemorrhage, fibrosis, calcification, and cystic change are common in follicular adenomas.





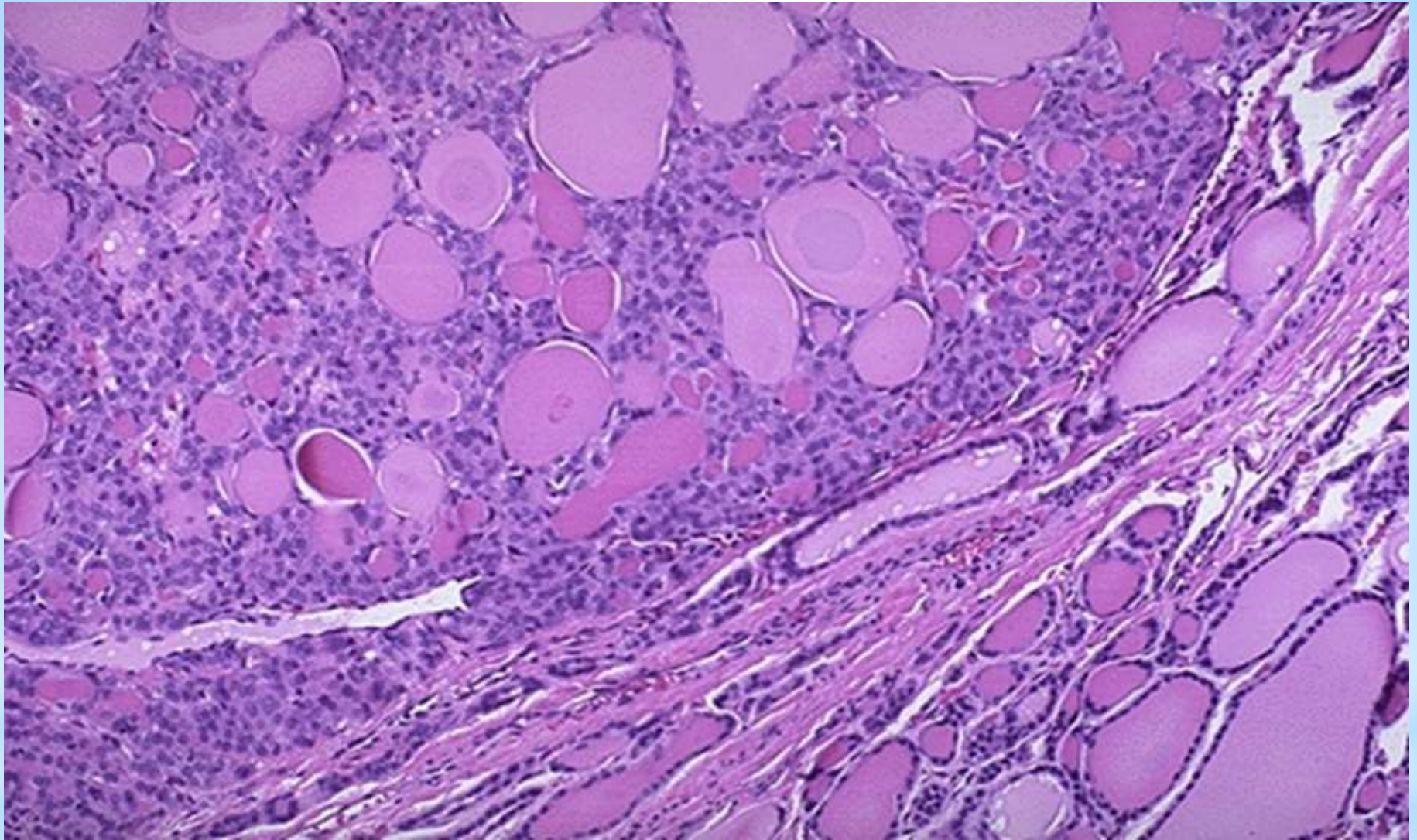
Here is a follicular adenoma (grossly) that is surrounded by a thin white capsule

## Microscopically:

We will see:

- 1- compressed normal thyroid follicles.
- 2- fibrous capsule.
- 3- the constituent cells of adenoma often form uniform-appearing follicles that contain colloid, these follicles either macro follicle (large thyroid follicle , huge amount of colloid), or micro follicle (small thyroid follicle, little or no colloid) or mixed pattern. The epithelial cells composing the follicular adenoma reveal little variation in cell and nuclear morphology.





Normal thyroid follicles appear at the lower right. The follicular adenoma is at the center to upper left. The follicles of the adenoma contain colloid, but there is greater variability in size than normal.