

Practical pathology reproductive

• Reproductive photos

- 1- benign prostatic hyperplasia
- 2- seminoma
- 3- leiomyoma (submucous , subserous, intramural)
- 4- mucinous cystadenoma
- 5- serous cystadenoma
- 6- papillary serous cyst adenoma
- 7- dermoid cyst
- 8- fibroctstic disease of the breast
- 9- fibroadenoma
- 10- breast carcinoma
- 11- Cervical intraepithelial neoplasia
- 12- vesicular mole

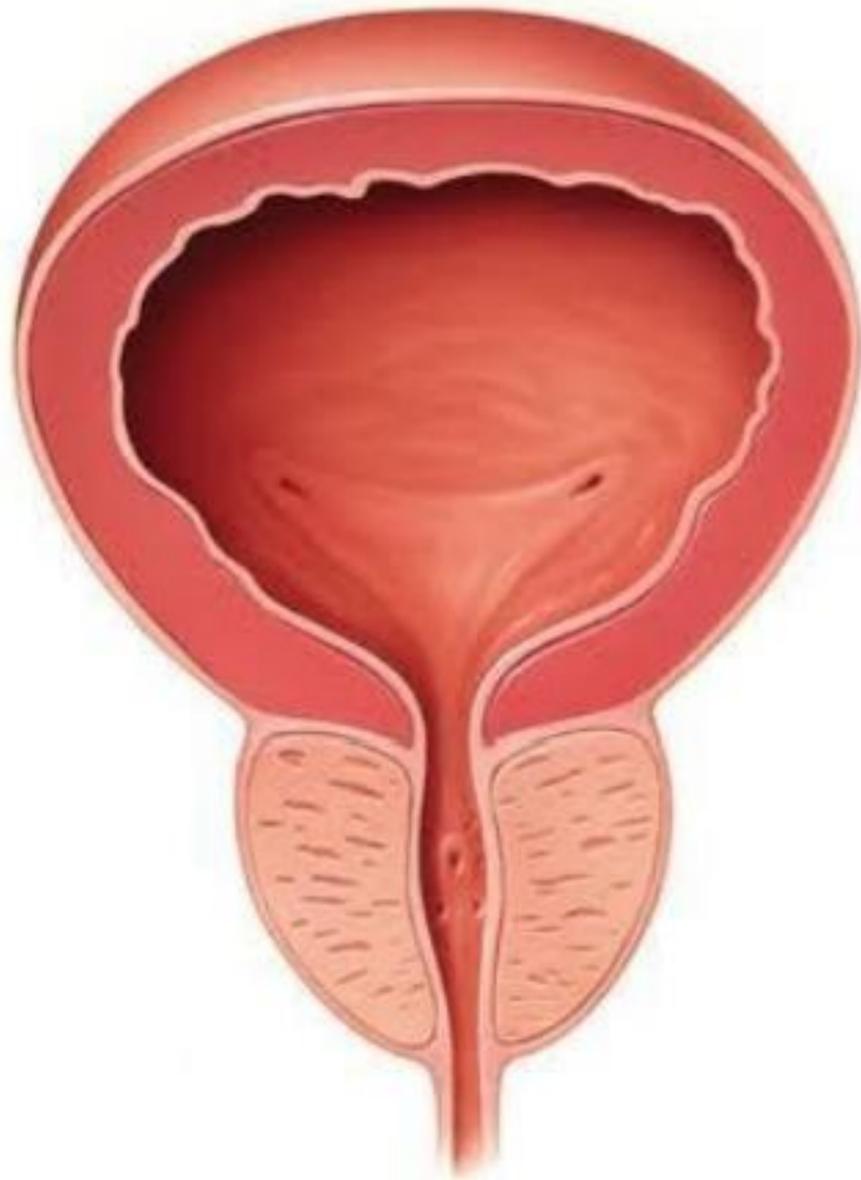
• Reproductive slides

- 1- benign prostatic hyperplasia
- 2- seminoma
- 3- leiomyoma
- 4-adenomyosis
- 5- fibroadenoma
- 6- invasive breast carcinoma

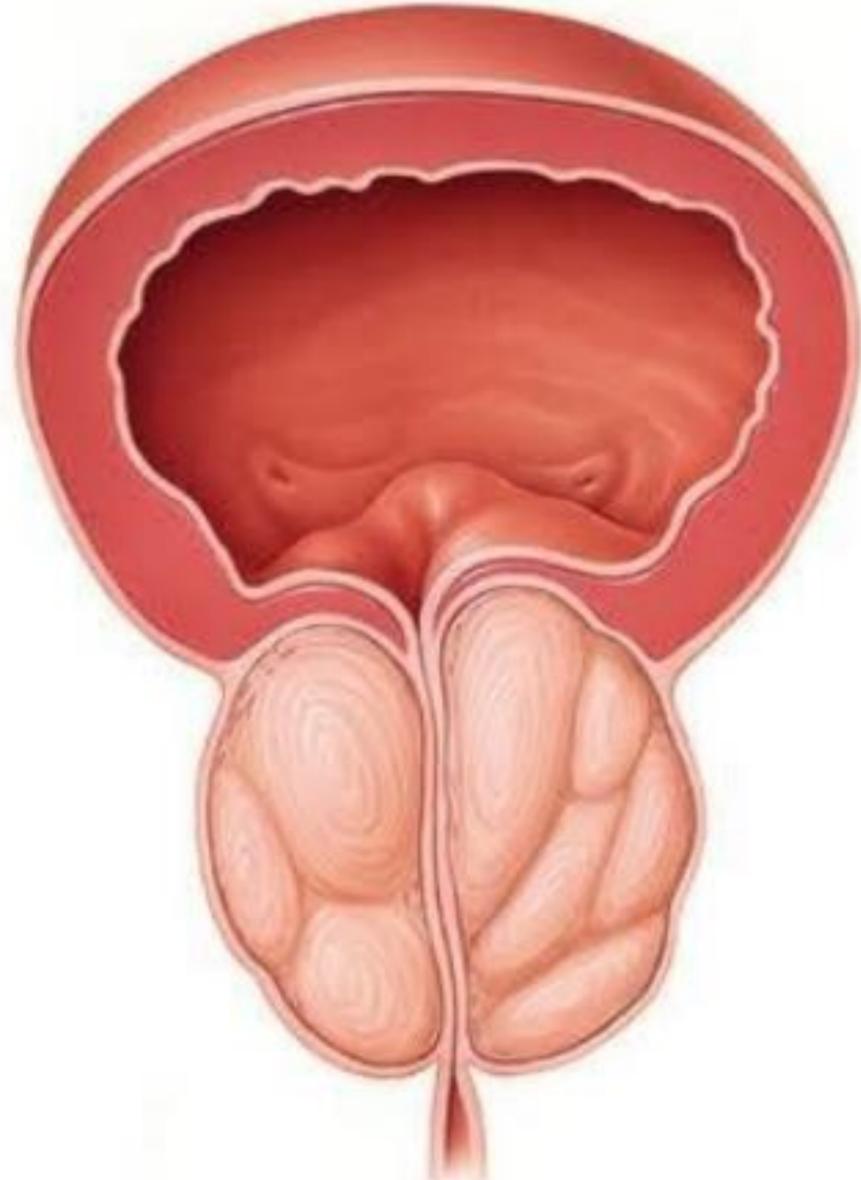
Benign prostatic hyperplasia

Definition:

- Hyperplastic enlargement of prostate.
- Senile prostatic hyperplasia.
- Common in fifth decade of life and increase with age.



Normal Prostate



Enlarged Prostate

Benign prostatic hyperplasia

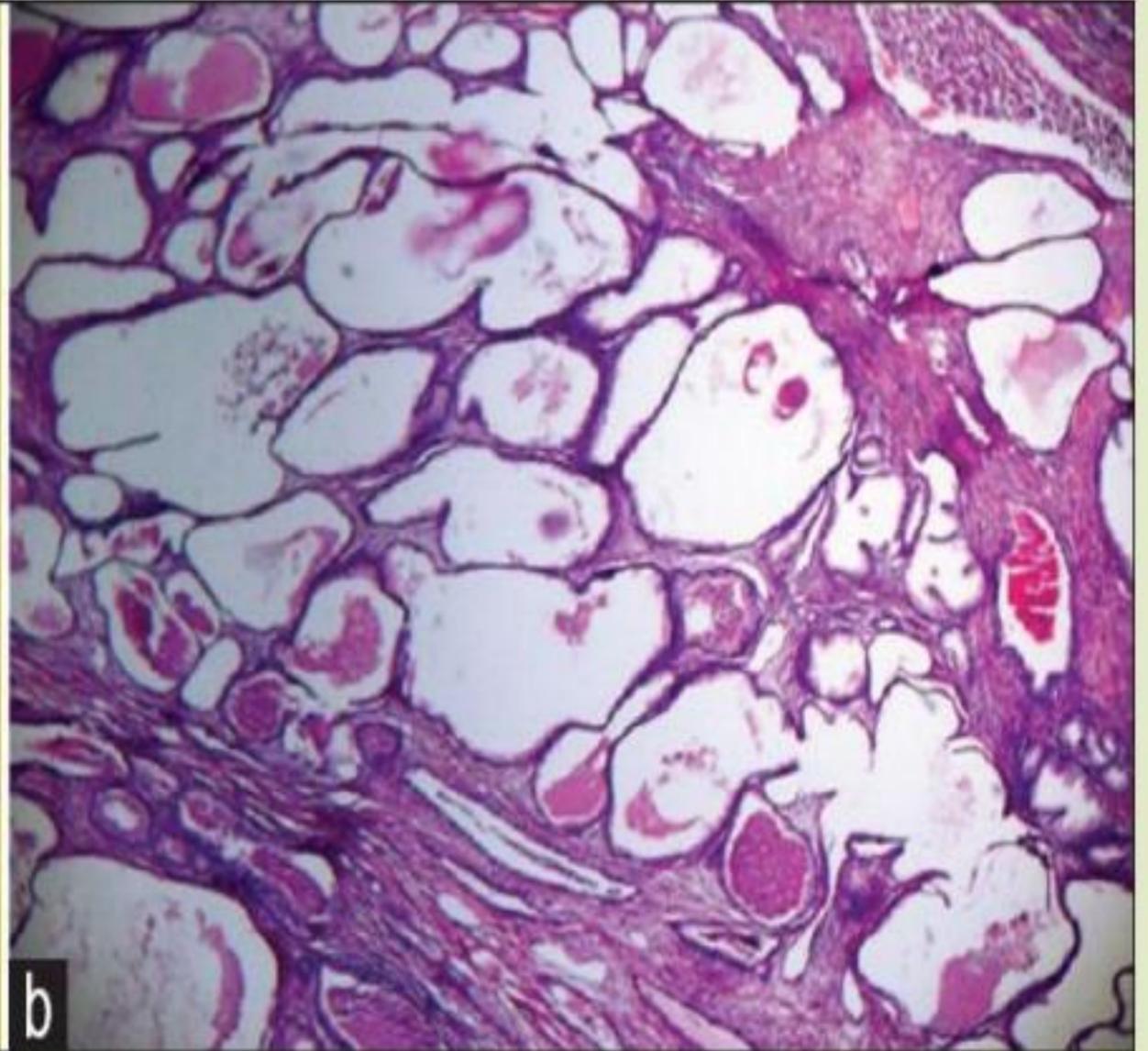
Grossly:

- Specimen: Enlarged prostate.
- Size: about 7.5x5 cm.
- Shape: Oval.
- Outer surface: Nodular.
- Color: Grayish white.
- Consistency: Firm











Seminoma

Origin:

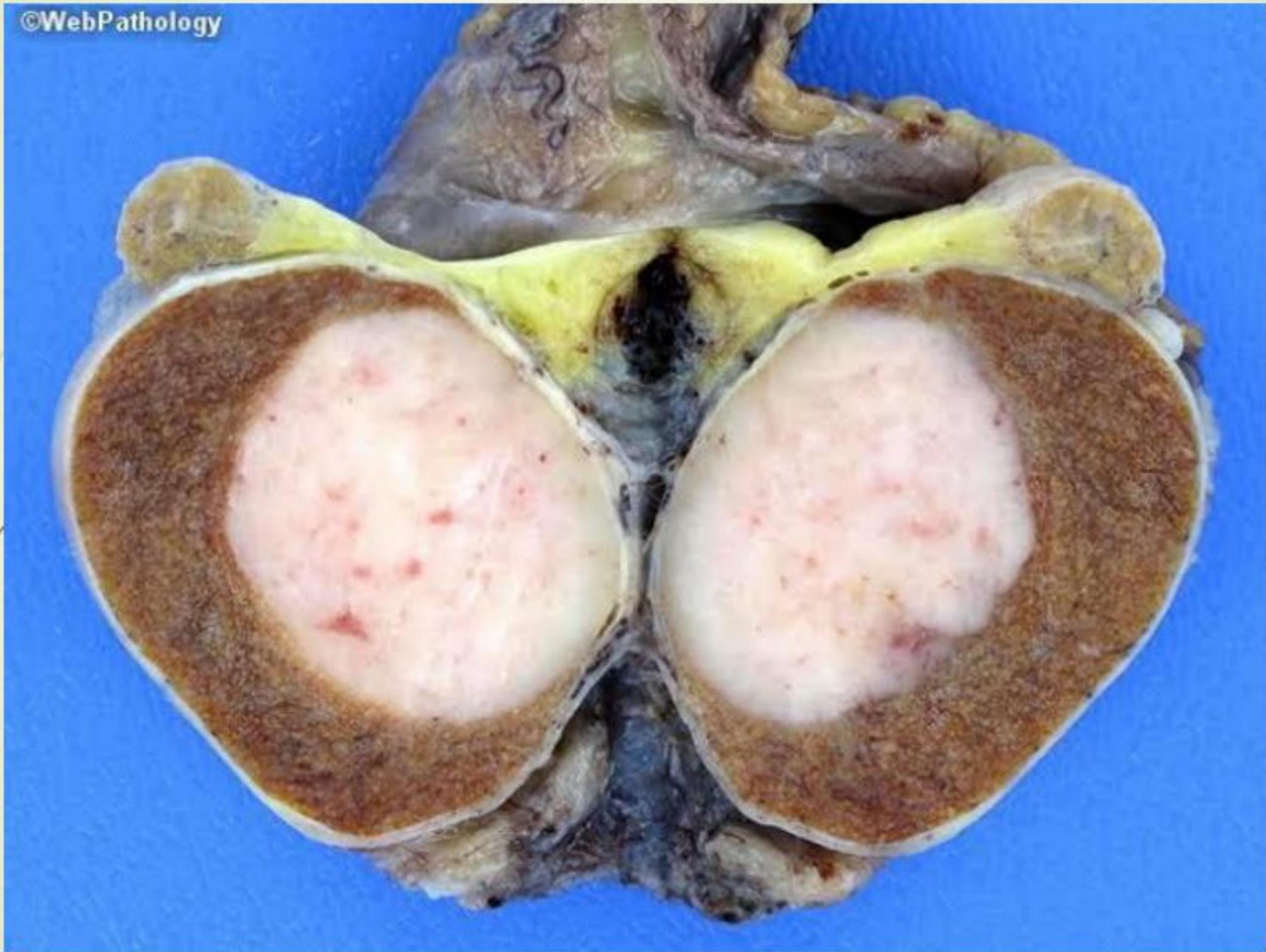
germ cells with gonadal differentiation.



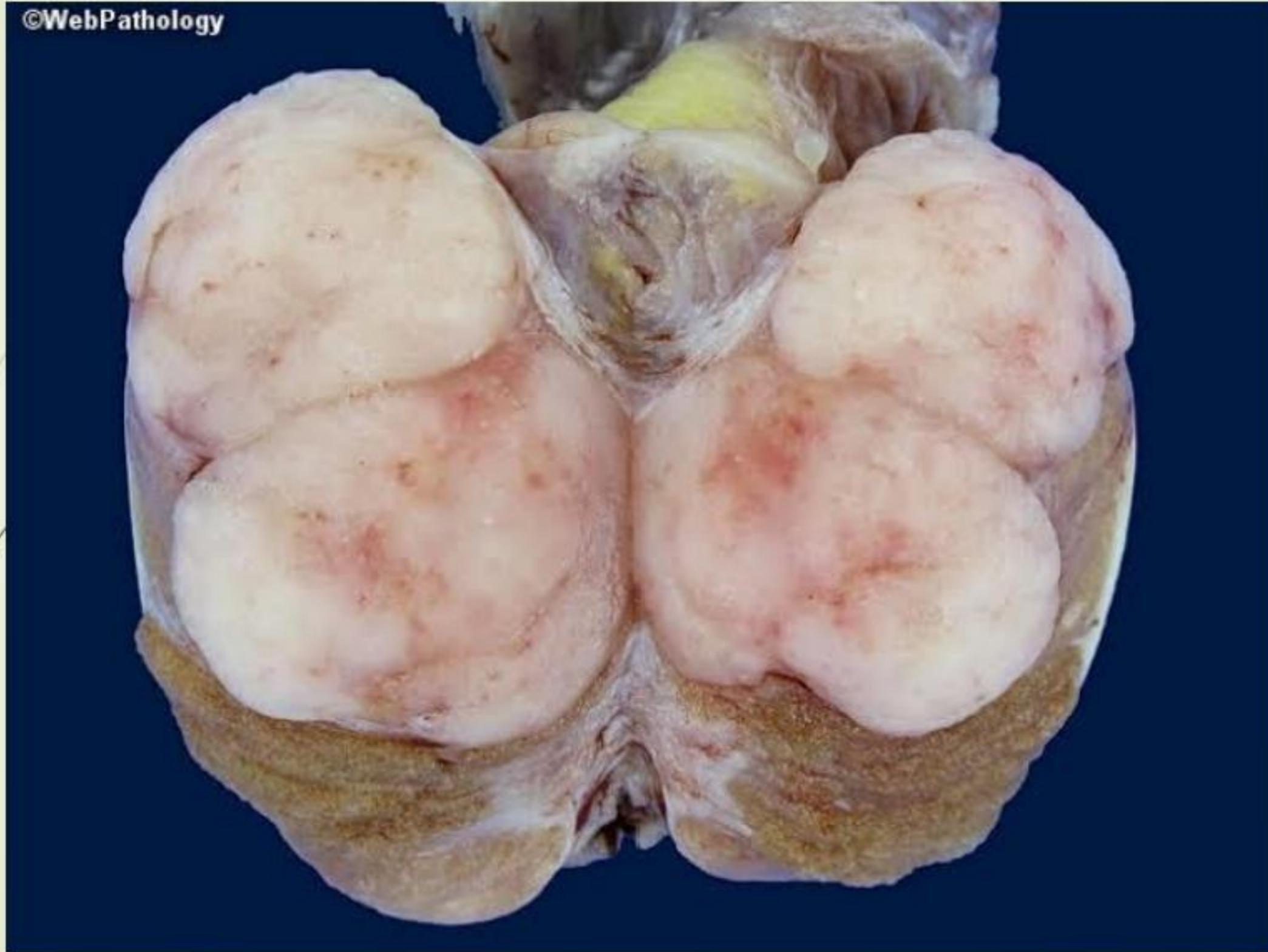
Seminoma

Grossly:

- Well defined
- Fleshy in consistency
- homogenous cut section (potato like).









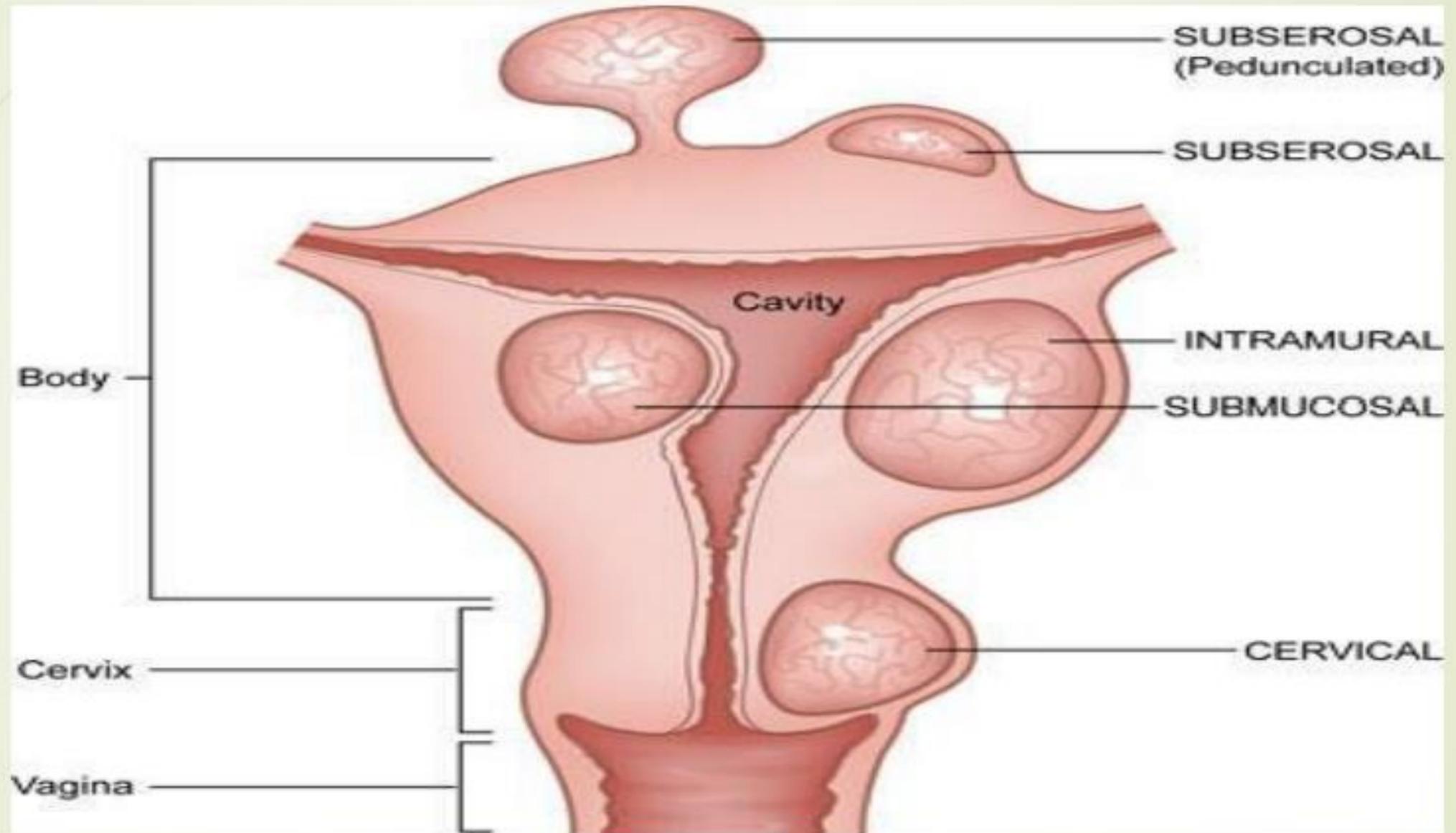
1 cm



Leiomyoma

N/E:

- Rounded masses
- It is surrounded by pseudo-capsule of compressed uterine muscle and interstitial tissue.
- Cut surface: whorly appearance.
- Firm in consistency.
- According to site : - Subserous
 - Intramural
 - Submucous



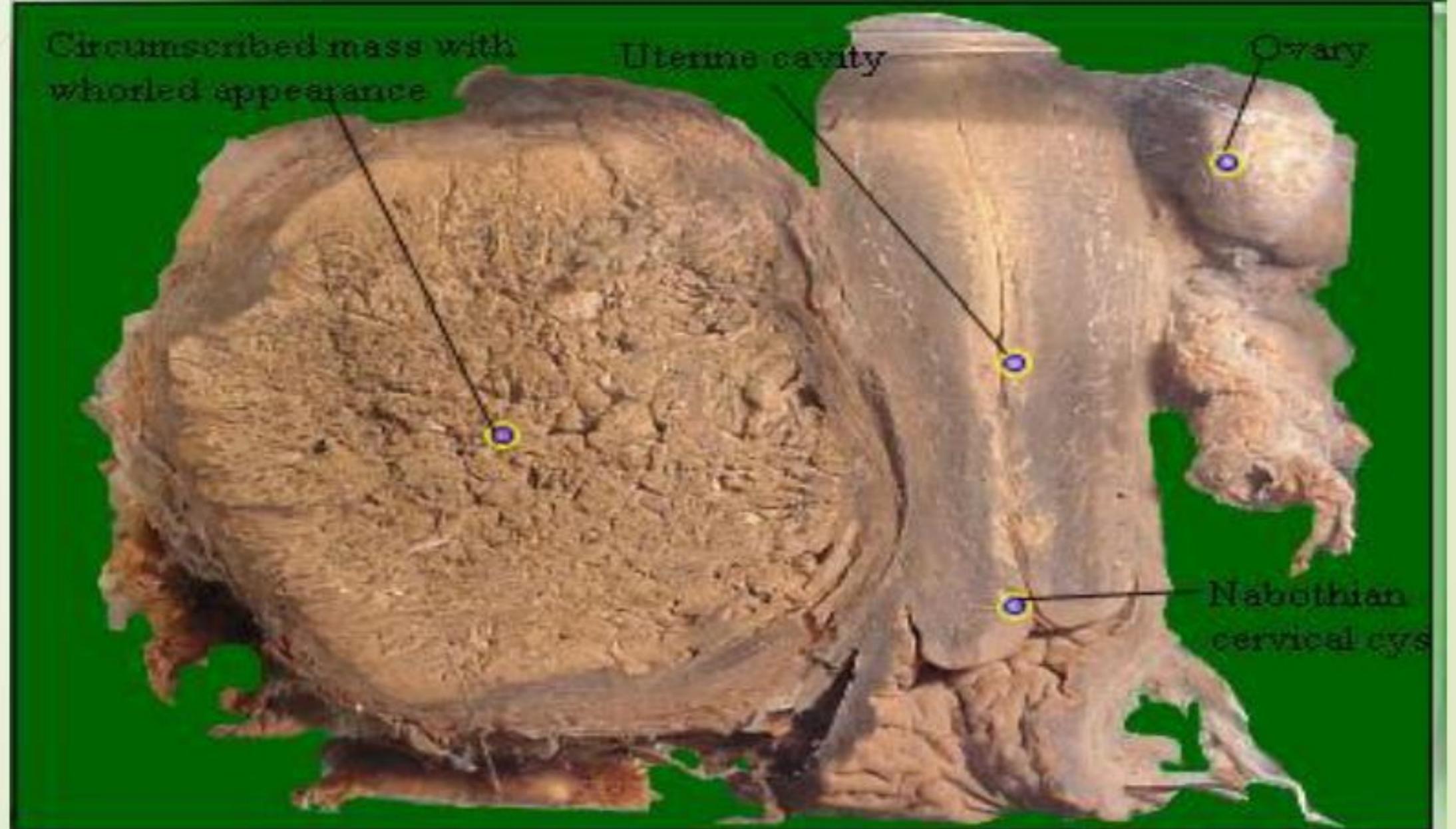


Subserous leiomyoma

- ▶ **Specimen:** One Half of Uterus and Cervix
- ▶ **Size of the uterus:** Normal size.
- ▶ **A mass is seen** on the outer side of the uterus:
- ▶ **•Size:** about 6x8 cm.
- ▶ **•Shape:** oval.
- ▶ **•Outer surface:** Smooth.
- ▶ **•Consistency:** Firm.
- ▶ **•Cut section:** Whorly appearance (combination of brown color "muscle bundles" and grayish white color "fibrous tissue")
- ▶ **The cervix:** shows the presence of a small cyst (Nabothian cyst),
- ▶ **•Size:** about 6x3 mm.
- ▶ **•Shape:** Oval



Subserous Leiomyoma (Fibromyoma = Fibroid)





Multiple intramural leiomyomas





Submucous leiomyoma

- ▶ This mass is protruding towards the uterine cavity **without pedicle**
- ▶ Same cut section and covered by uterine mucosa





Vesicular (Hydatiform) mole

NE:

Specimen: pathological placenta.

- Grape like vesicles (like bunch of grapes).
 - Shape : rounded or oval
 - Size : few mms to 1 cm in diameter .
 - Wall : thin, transparent & grayish white.
- * Such vesicles are connected to each other by thin fibrous tissue strands.

Hydatidiform Mole (Vesicular Mole = Molar pregnancy)..





Serous cystadenoma

Gross picture

* Specimen :

Ovary containing cyst.

* Description :

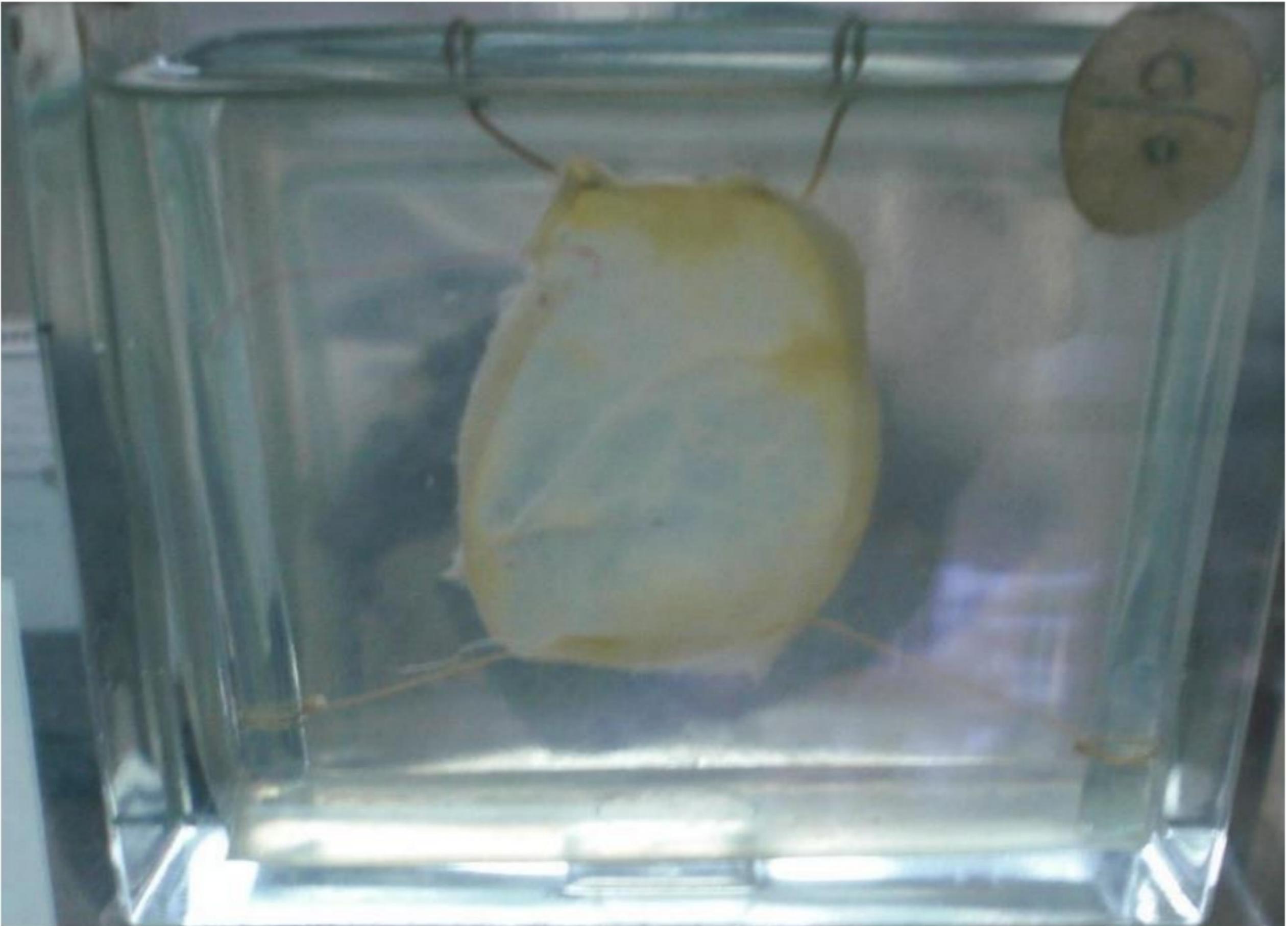
- Unilocular ovarian cyst:

1- Shape : oval.

3- Outer surface : smooth.

4- Wall : very thin, grayish white & transparent.

5- content : serous watery fluid.



A Unilocular Non-Papillary Serous Cystadenoma of Ovary (Simple Serous Ovarian Cyst)

Thin transparent cyst wall



A Unilocular Non-Papillary Serous Cystadenoma of Ovary (Simple Serous Ovarian Cyst)



Papillary serous cystadenoma of Ovary

Gross picture

* Specimen :

Ovary containing cyst.

* Description :

- A half of a unilocular ovarian cyst:

1- Shape : oval.

2- Size : 13x10 cm in diameter.

3- Wall : 2 mms in thickness with no evidence of infiltration.

4- Outer surface : not lobulated, grayish white, slightly transparent.

5- The lower part shows papillomatous structure:

- Size : 5x4 cm.**
- Color: grayish white, crowded with short pedicle.**
- Other dispersed ones of few mms project from the rest of the wall.**
- The lining in between these papillomata are smooth.**



Serous papillary cystadenoma of the ovary.

Many papillary projections in
the lining of the cyst

Area of papillary
formations



Serous Papillary cystadenoma of Ovary.

Smooth outer surface of the cyst



Mucinous cyst adenoma

Gross picture

* Specimen :

Ovary containing cyst .

* Description :

- A part of ovary is mounted with cystic structure 15x10x19 cm with a smooth, lobulated outer surface and thin fibrous wall 2mm in thickness .

The C/S shows multiple loculi :

1- Shape : variable rounded, oval or irregular.

2- Size : variable.

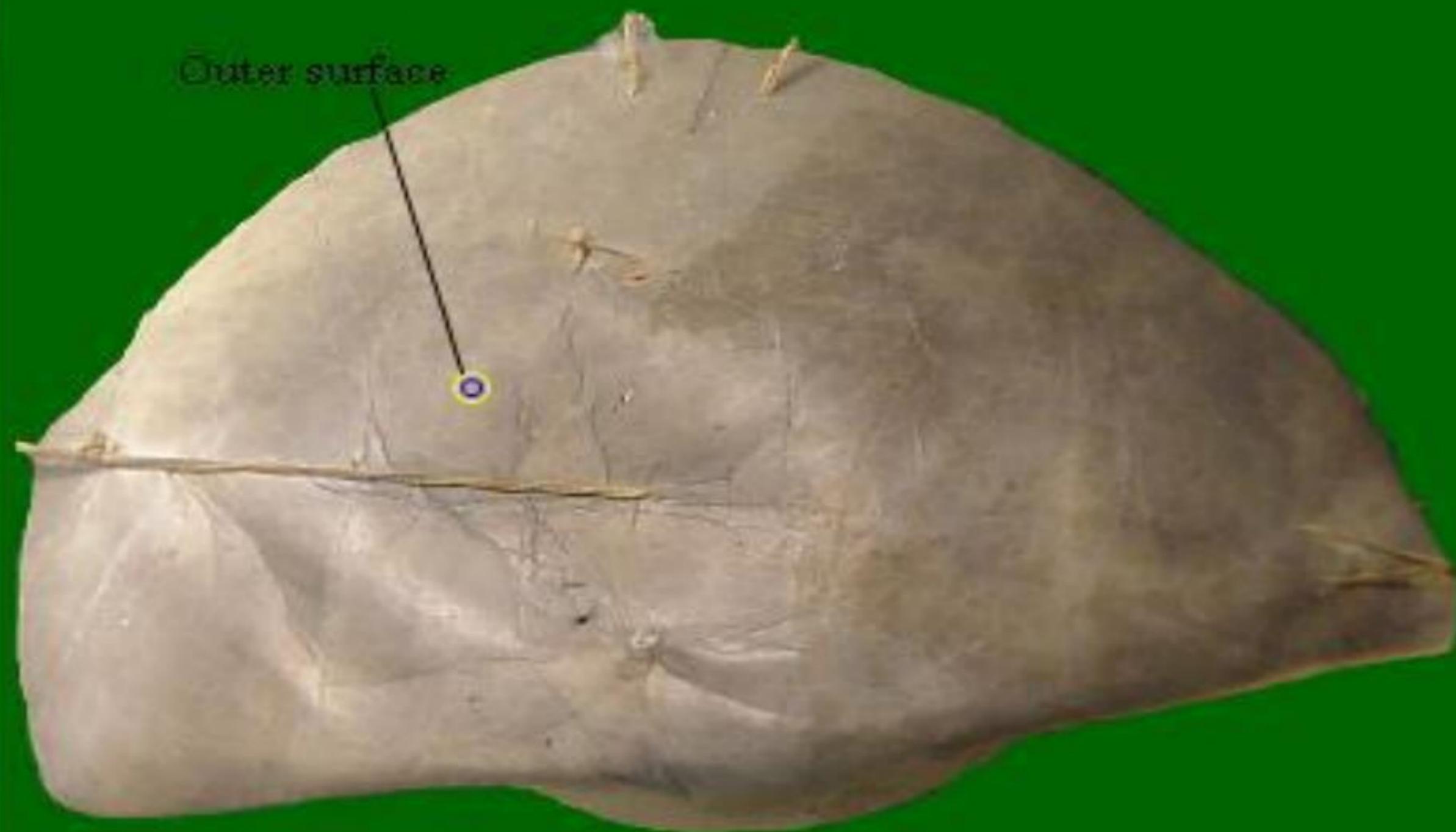
3- Lining : smooth.

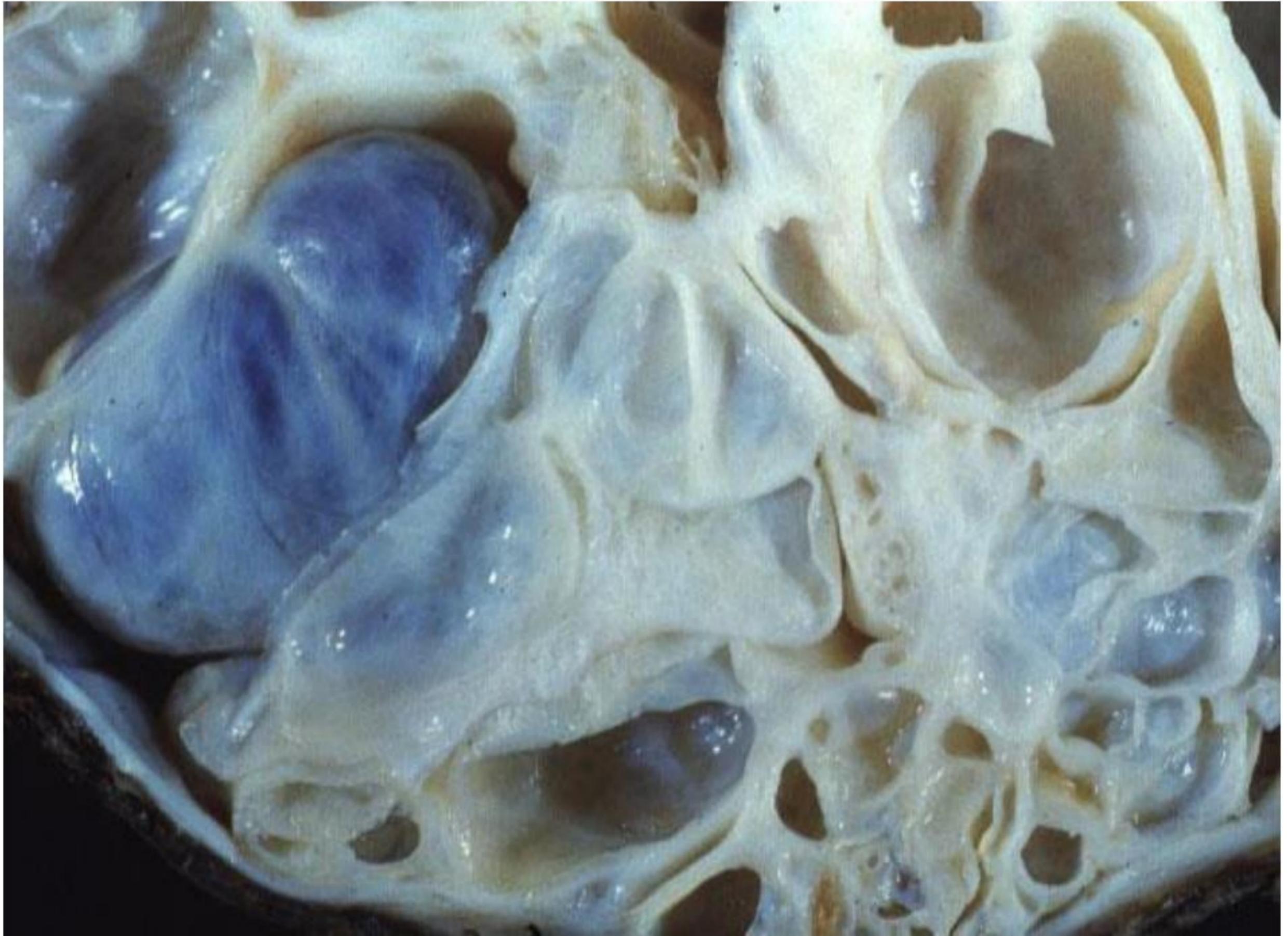
4- Contents : Coagulated pale blue gelatinous material.

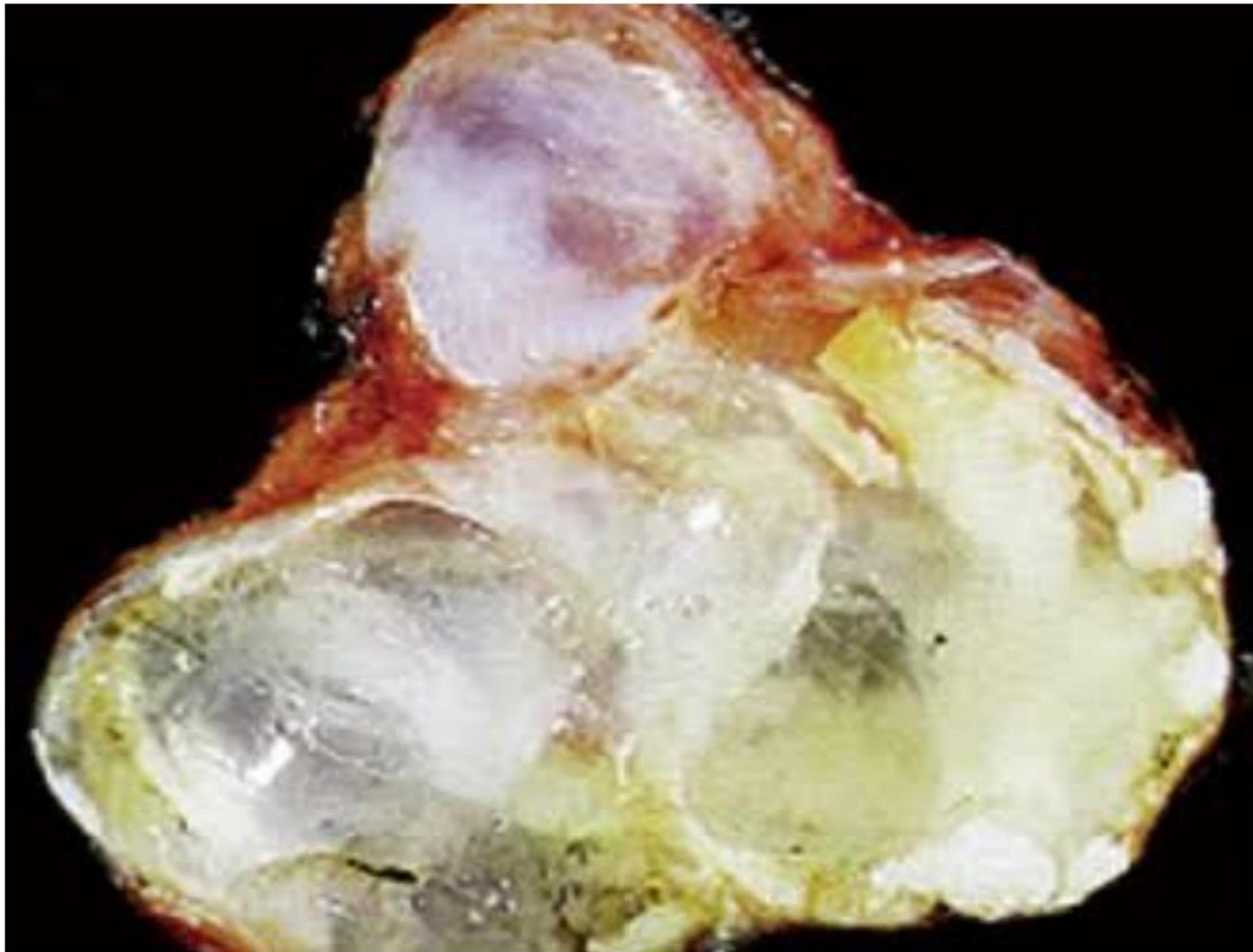


Multilocular cyst with
pale blue gelatinous content

Outer surface







Dermoid cyst of the ovary

Gross picture

* Specimen :

Ovary containing cyst .

* Description :

1-Size: 15 cm.

2-Shape: Spherical.

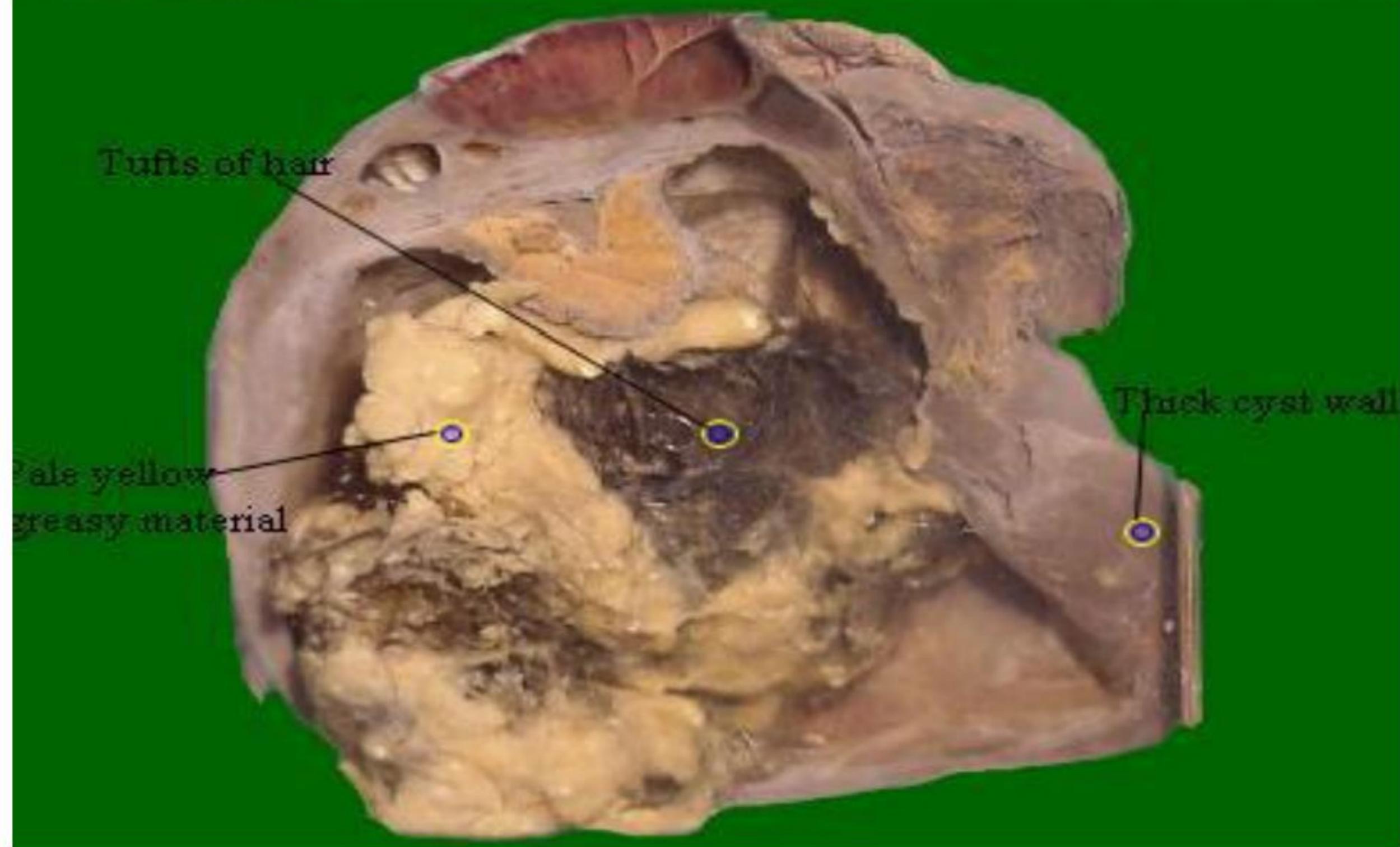
3-Outer surface: Smooth and shows remnants of ovarian tissue.

4-The lining: Smooth.

5-Content: Pale yellow greasy material with tufts of hair.



Dermoid cyst of the ovary





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Fibrocystic disease of breast

Gross:

***Specimen:** dome shaped part of the breast with irregular outline with yellowish color.

***Lesion cysts:**

- . Size: variable from few mms to 2 cms.
- . Lining: smooth

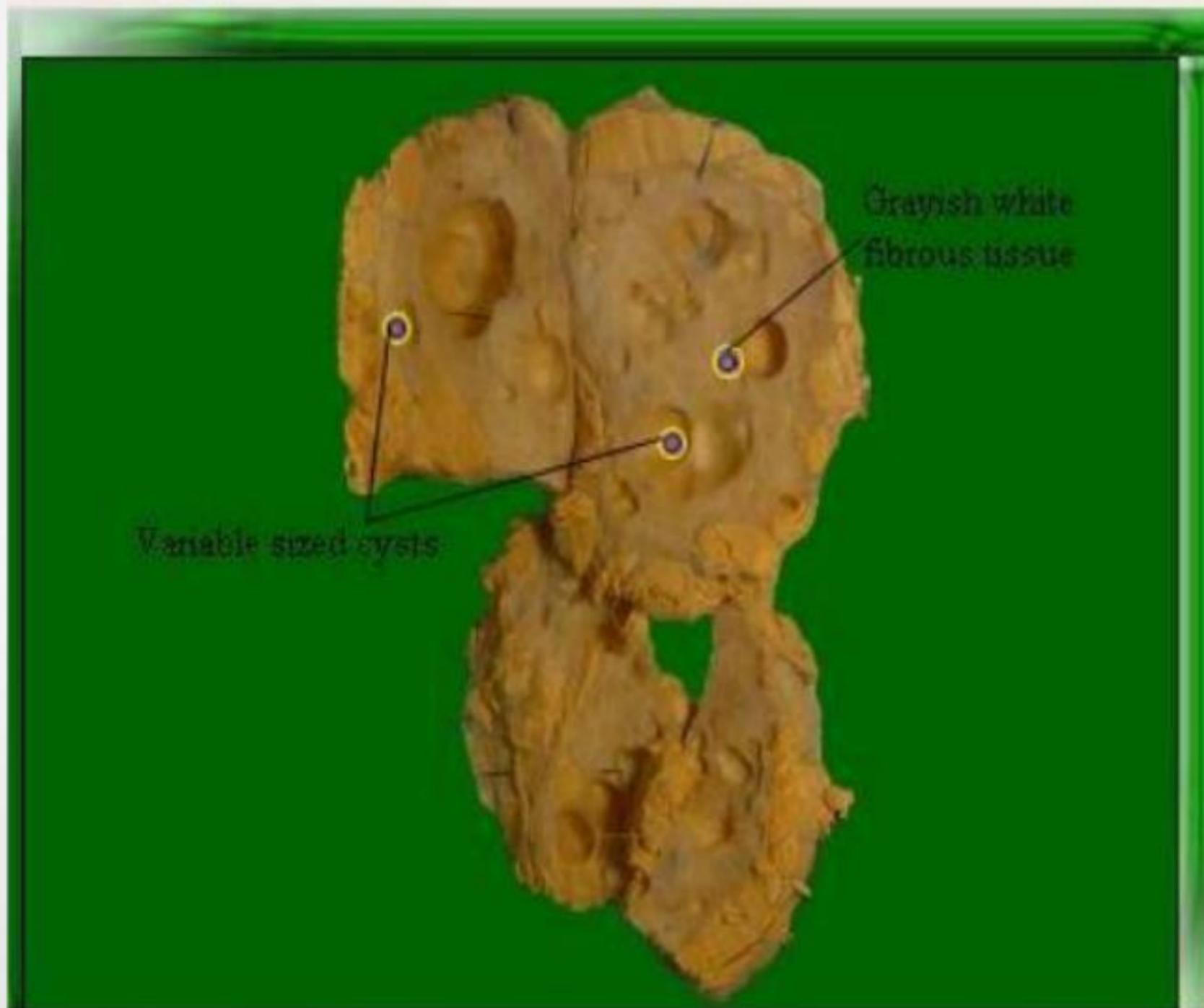
***In between the cysts:**

- . The mass is firm & solid.
- . Mixed with gray white fibrous tissue.





Fibrocystic Changes (Disease) of breast (Cystic Mammary Hyperplasia = Cystic Mastopathy = Fibroadenosis)





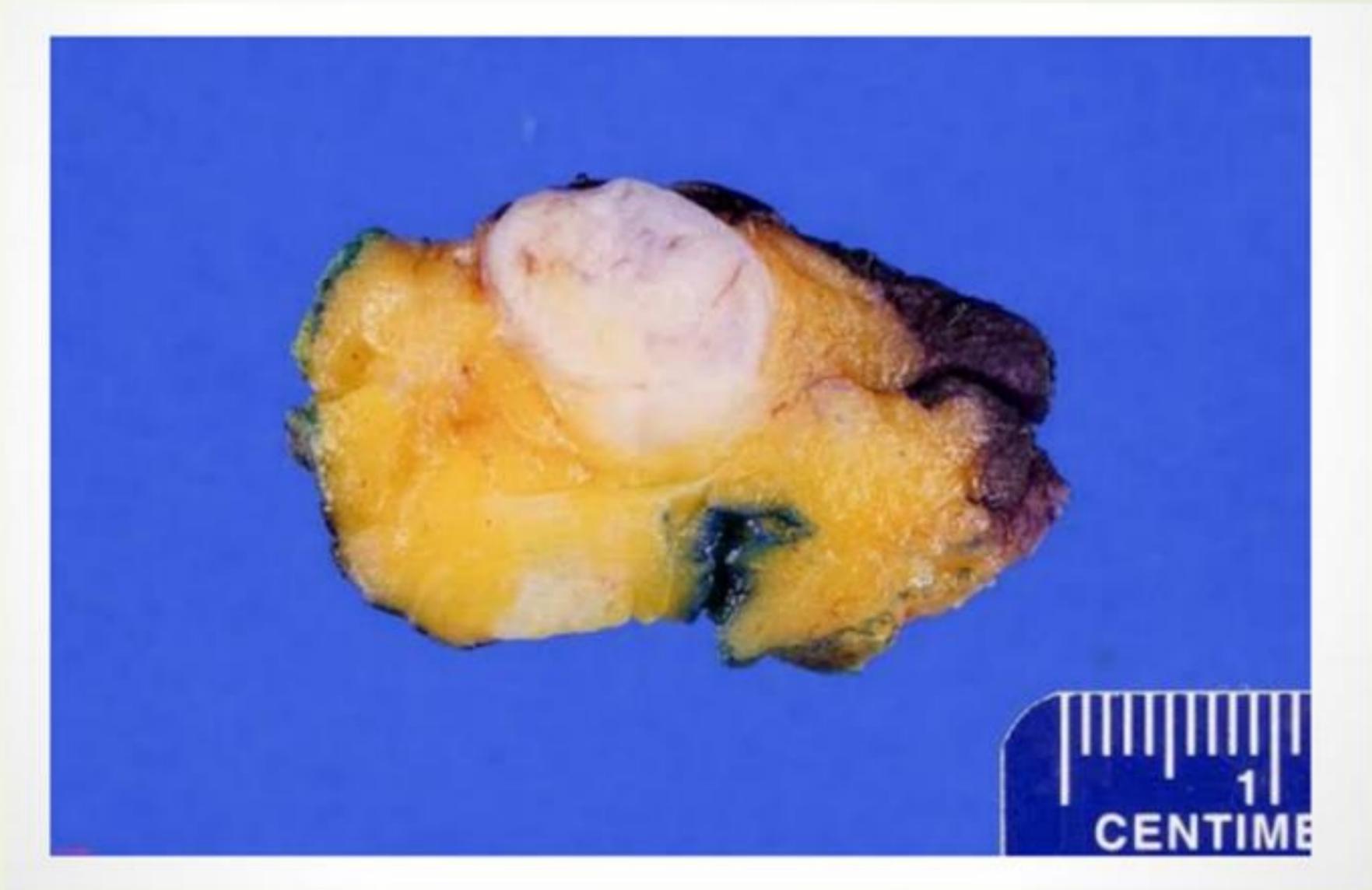
Fibroadenoma

Grossly

- . Usually single, round or oval.
- . Encapsulated, well defined.
- . Firm, freely mobile.
- . CIS:

Well circumscribed, encapsulated, greyish white.







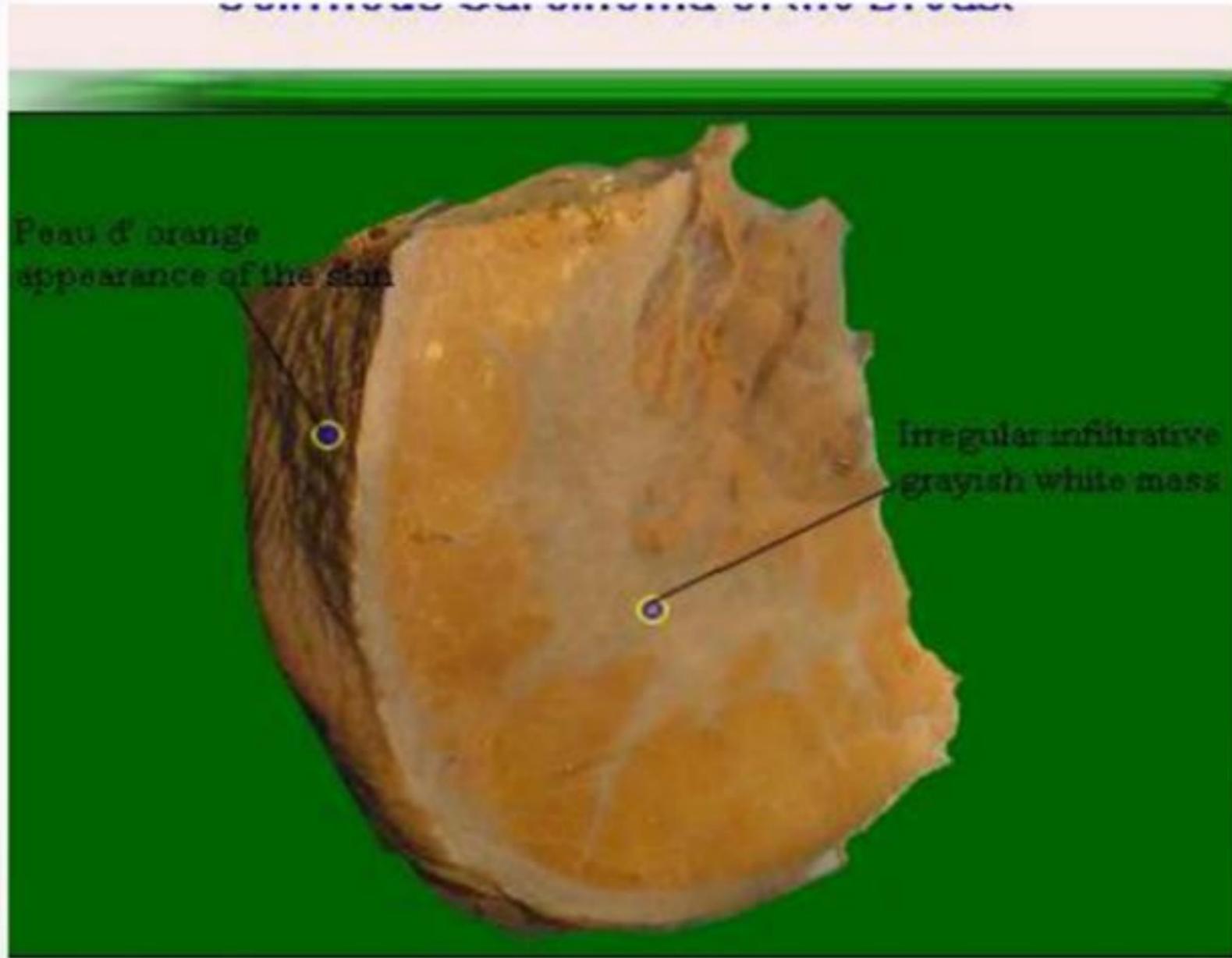
Breast carcinoma

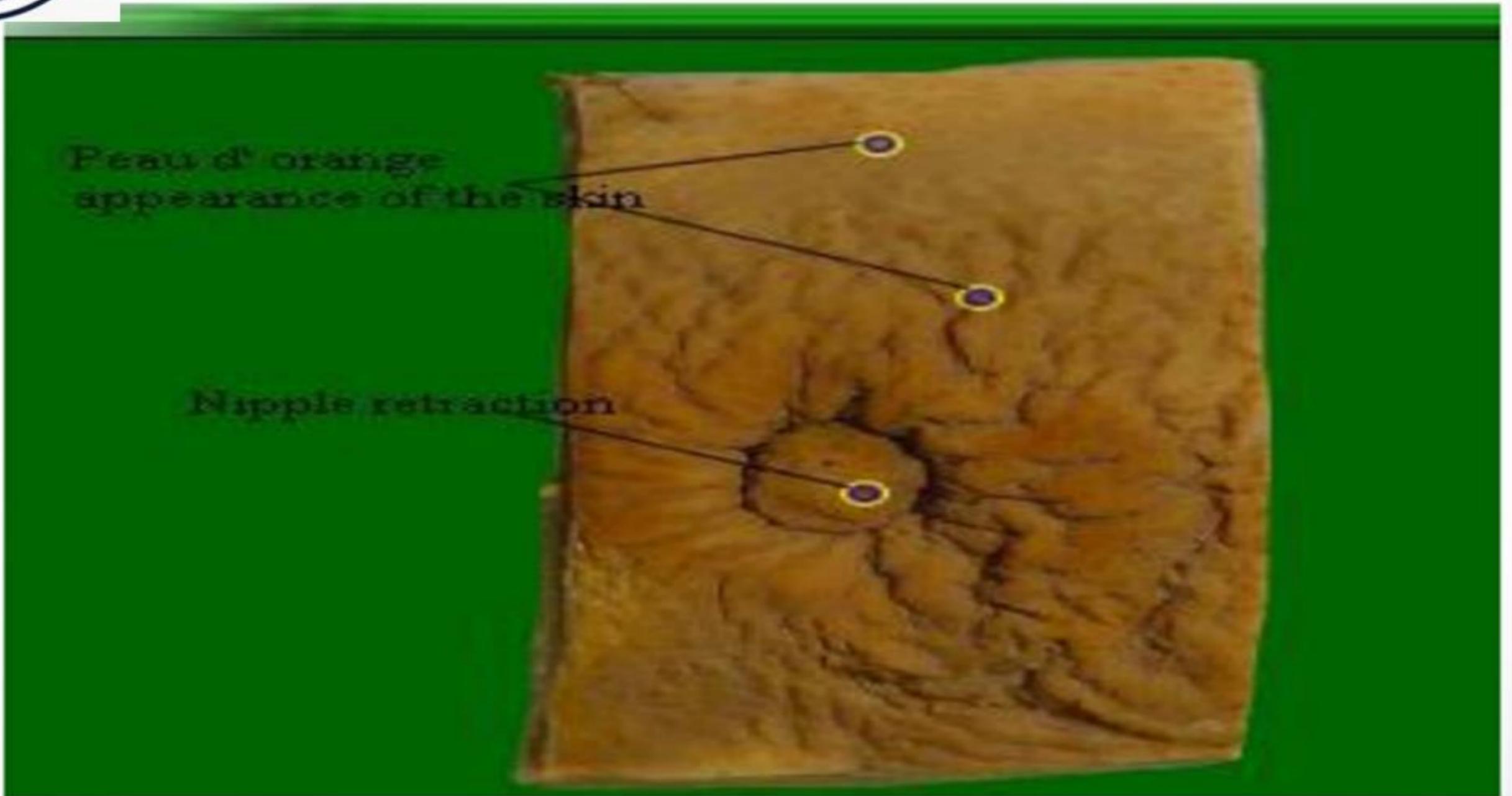
Grossly:

- Ill defined mass greyish white.
- Stony hard in consistency.
- Fixed.
- C/S: Retracted hard with gritty sensation, with hemorrhage and necrosis.
- Skin covering shows peau d'orange
- The nipple is retracted









Skin covering breast cancer that shows peau d'orange appearance.



Benign prostatic hyperplasia

Microscopically:

Hyperplasia of both stroma and glands.

1- Glands:

Increase in number.

Variable in size and shape.

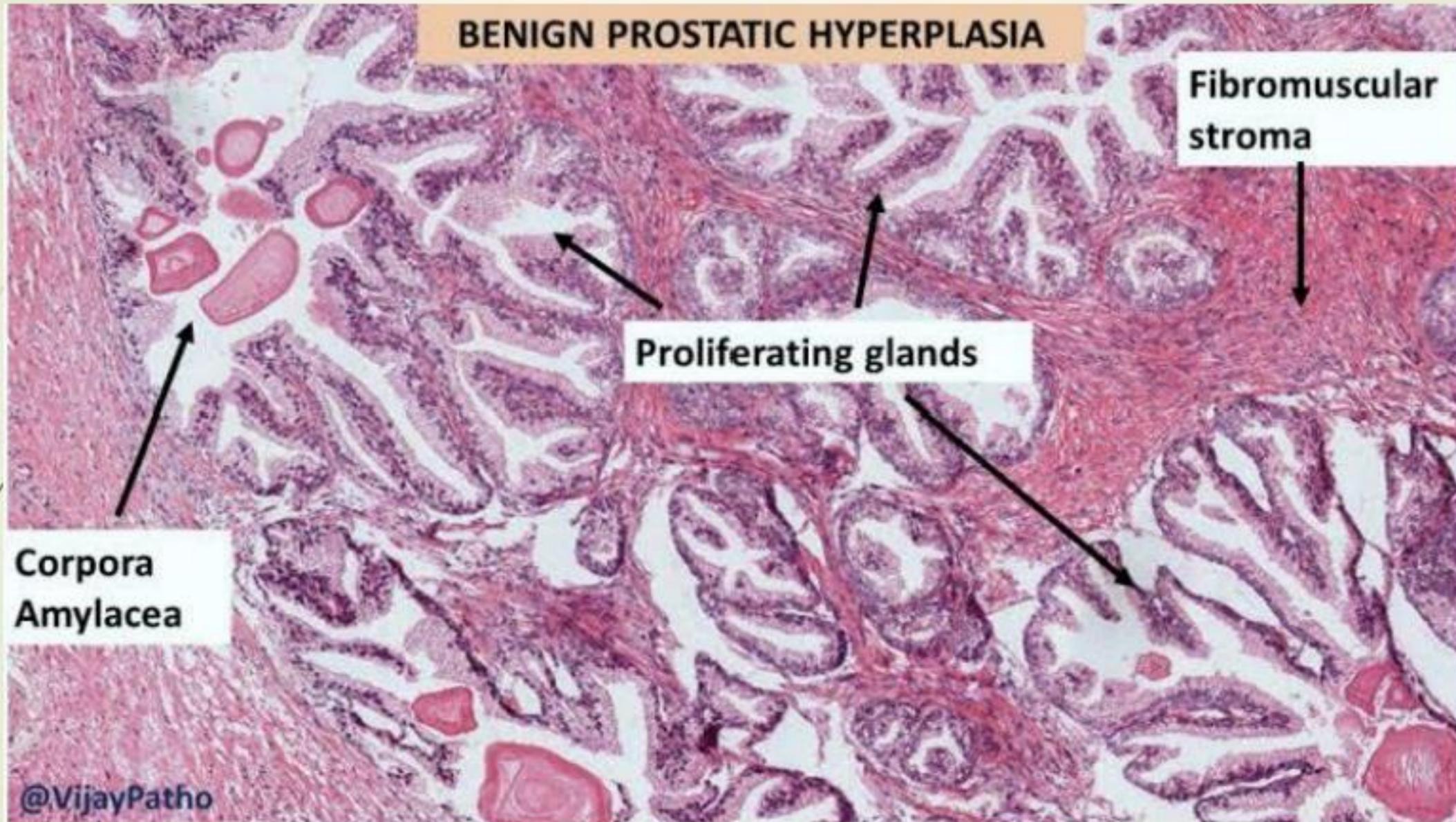
Papillomatosis.

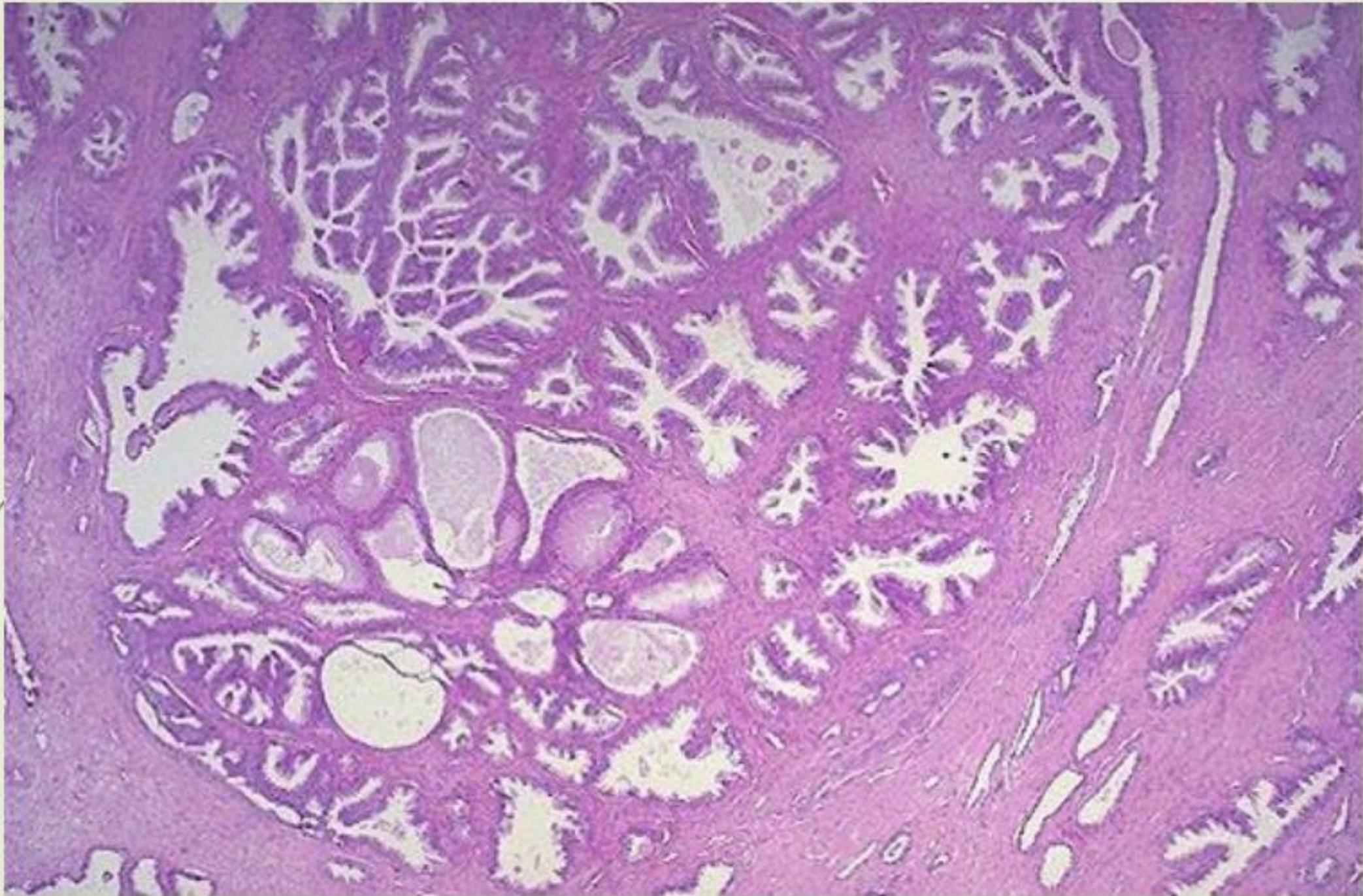
Cysts contain corpora amylacea.

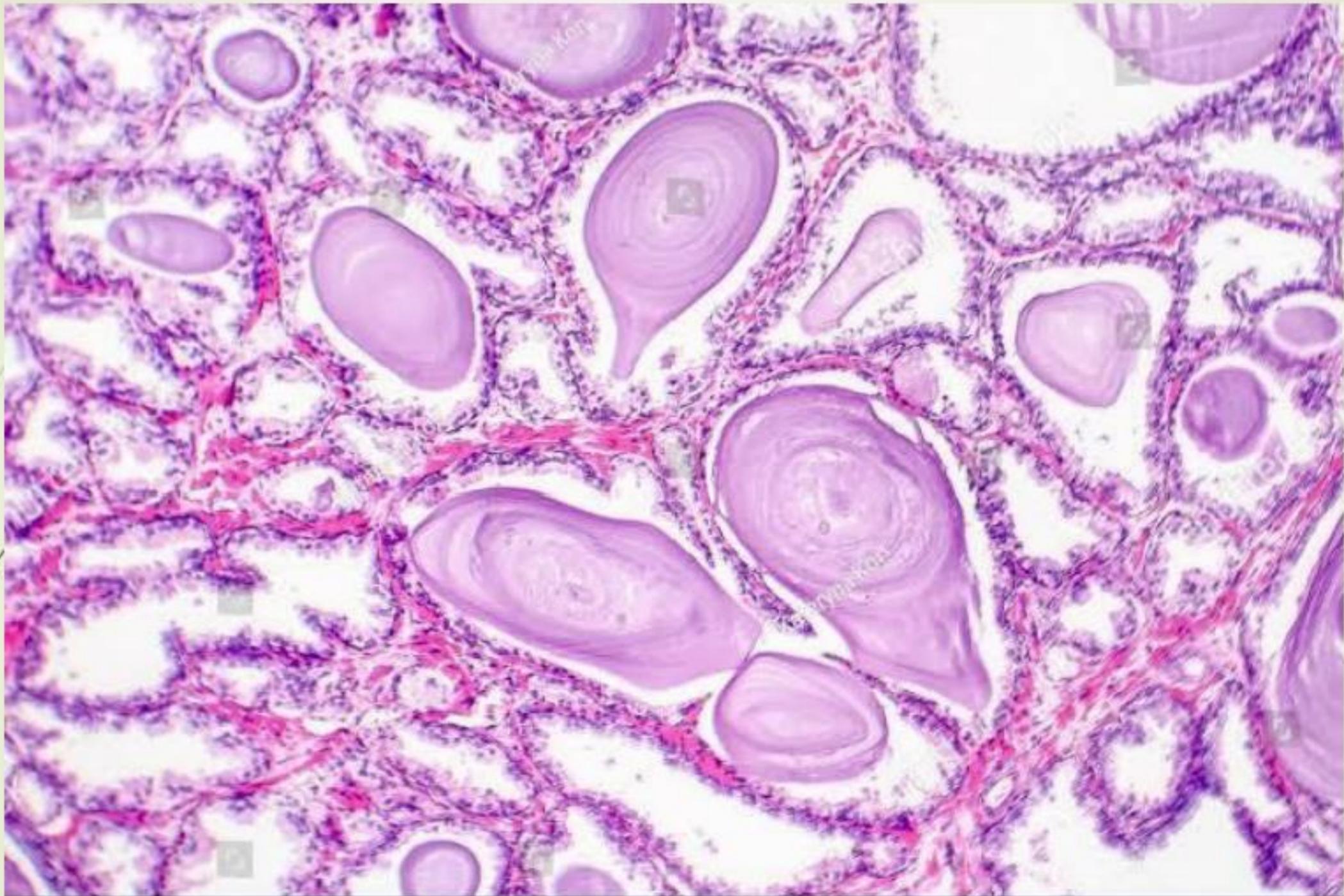
2- Stroma:

Hyperplasia of smooth muscles and fibroblasts (fibromuscular stroma).

BENIGN PROSTATIC HYPERPLASIA







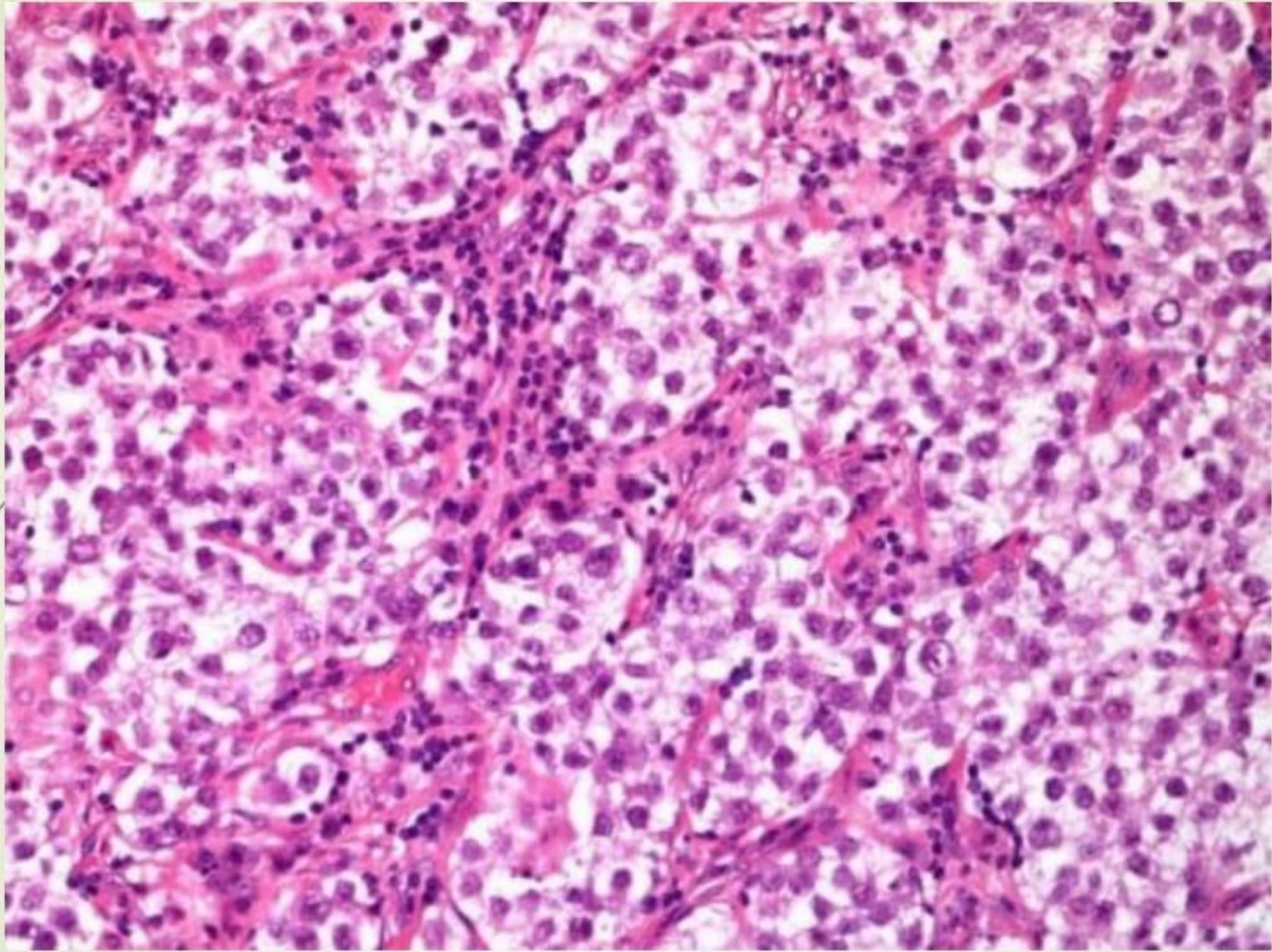
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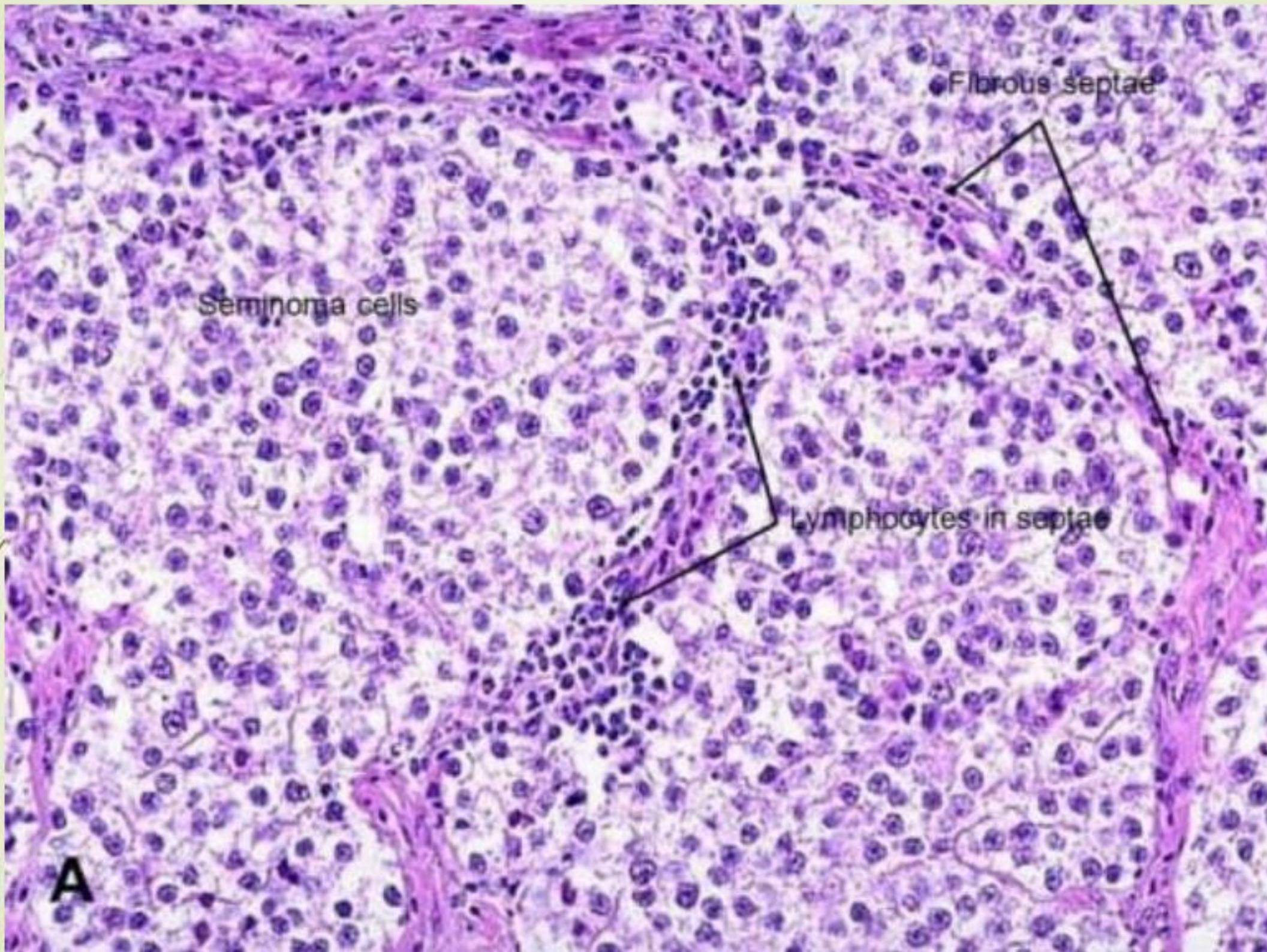
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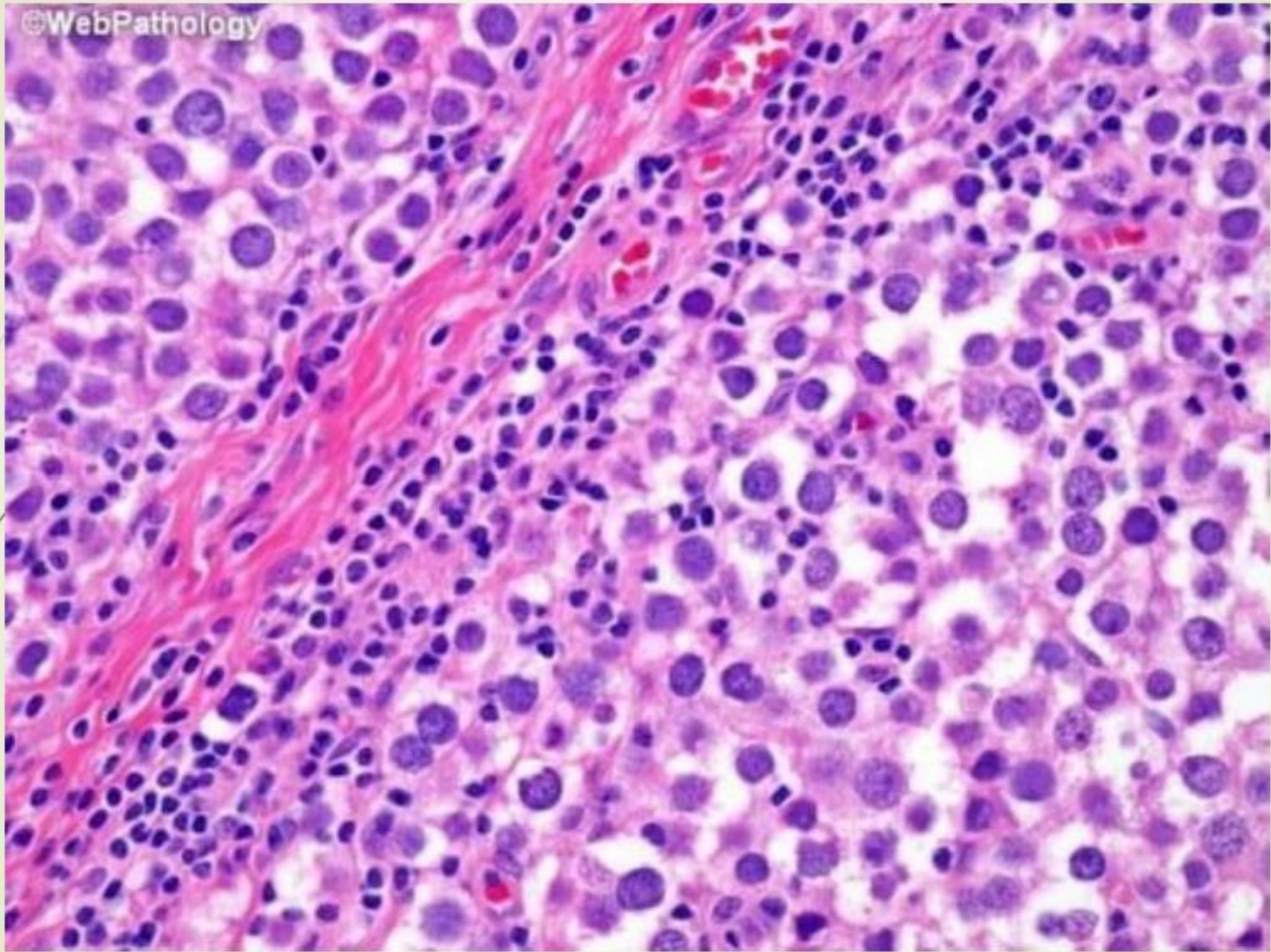
Seminoma

Microscopically:

- Sheets, cords of spermatogenic cells separated by fibrous septae.
- The malignant cells show large central nuclei and pale to clear cytoplasm.
- The Fibrous septae is richly infiltrated by lymphocytes.







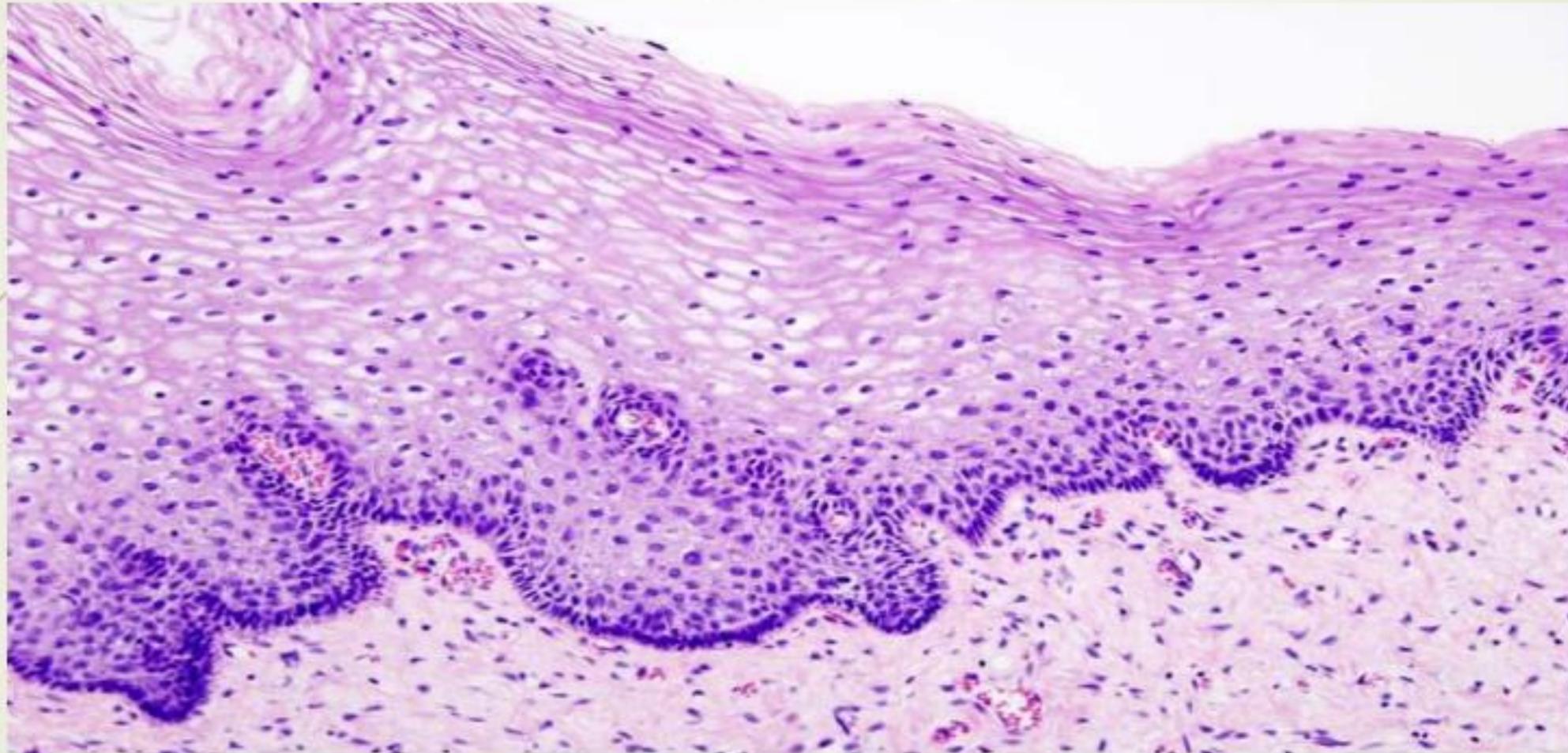


Cervical Intraepithelial Neoplasia (CIN)

- It is the precancerous lesion of cervical squamous cell carcinoma.
- It is classified as CIN1, CIN2 or CIN3 according to the upward extension of the abnormal cells in the epithelium.



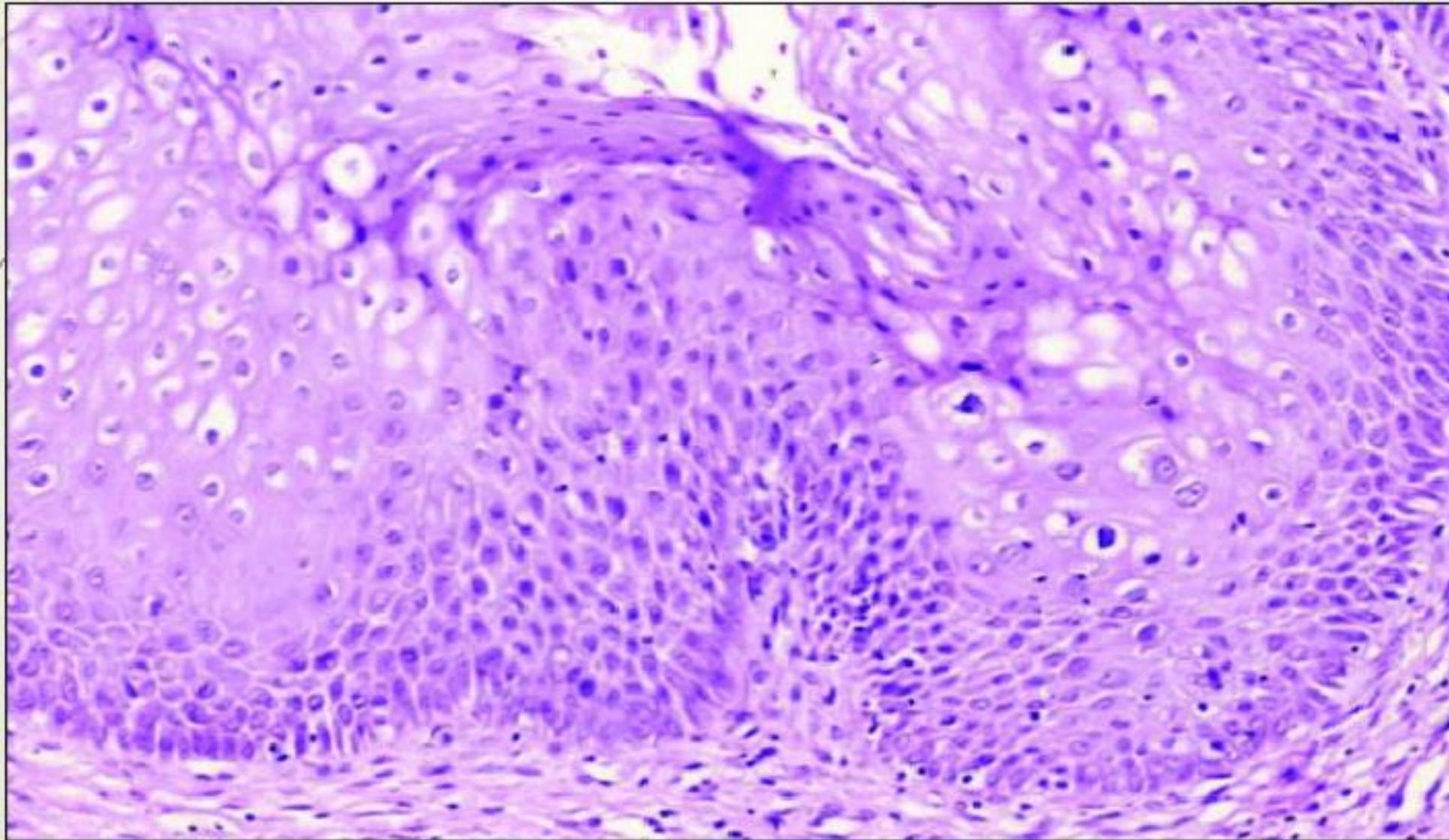
Normal squamous epithelium



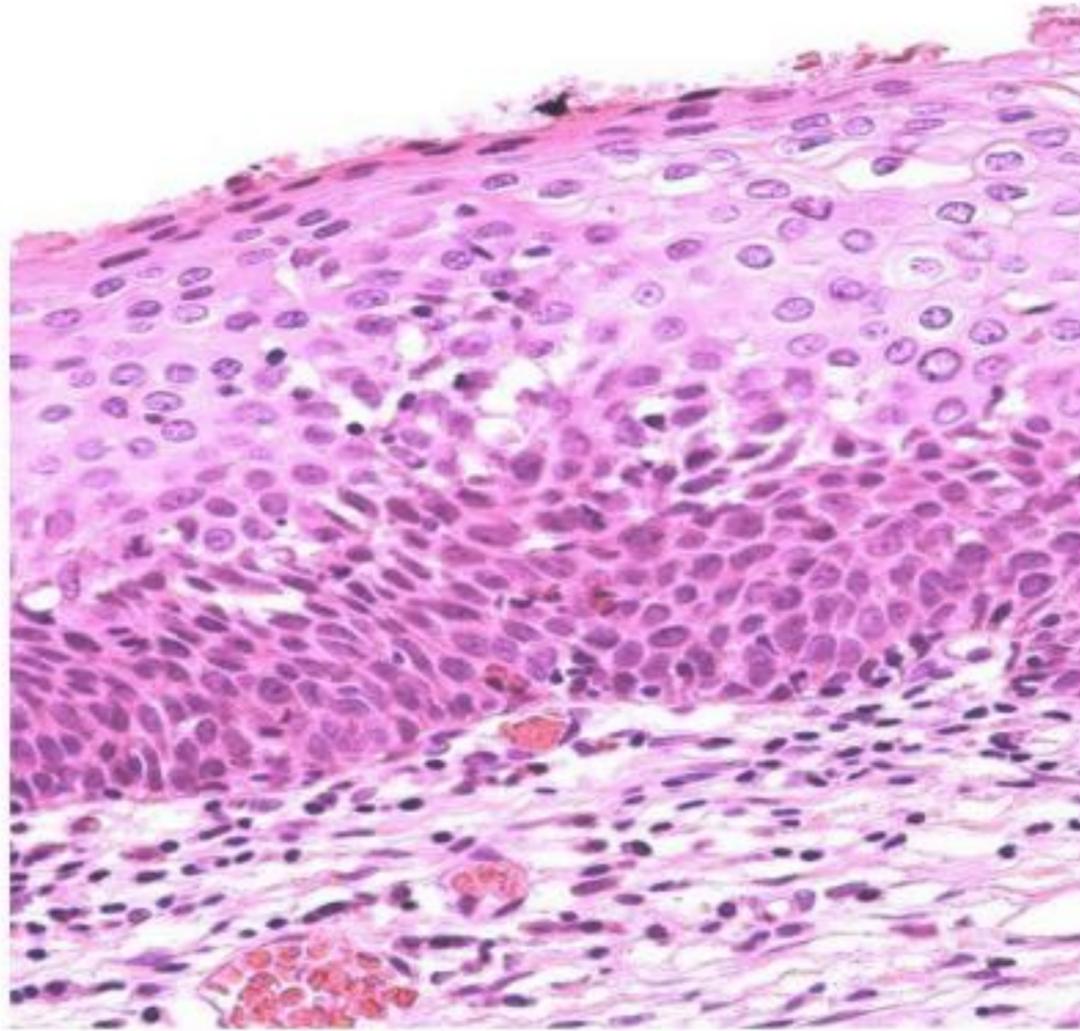


CIN 1

: < 1/3 of the epithelial thickness shows dysplasia.



CIN 1 (LSIL)

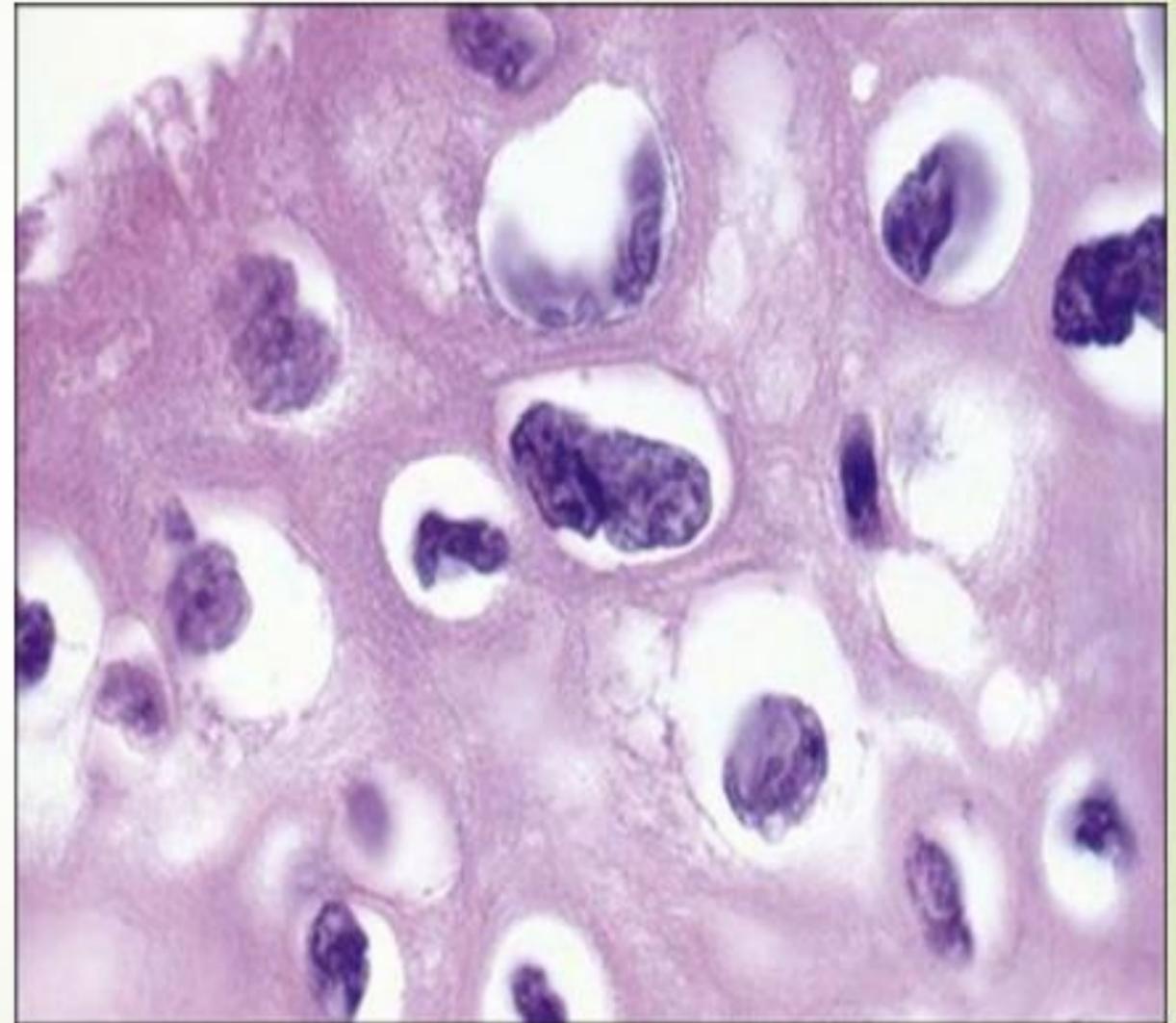


- Nuclear atypia with mitoses and a high N:C ratio confined to the lower 1/3
- Koilocytosis most obvious in the upper levels of epithelium



Koilocytes

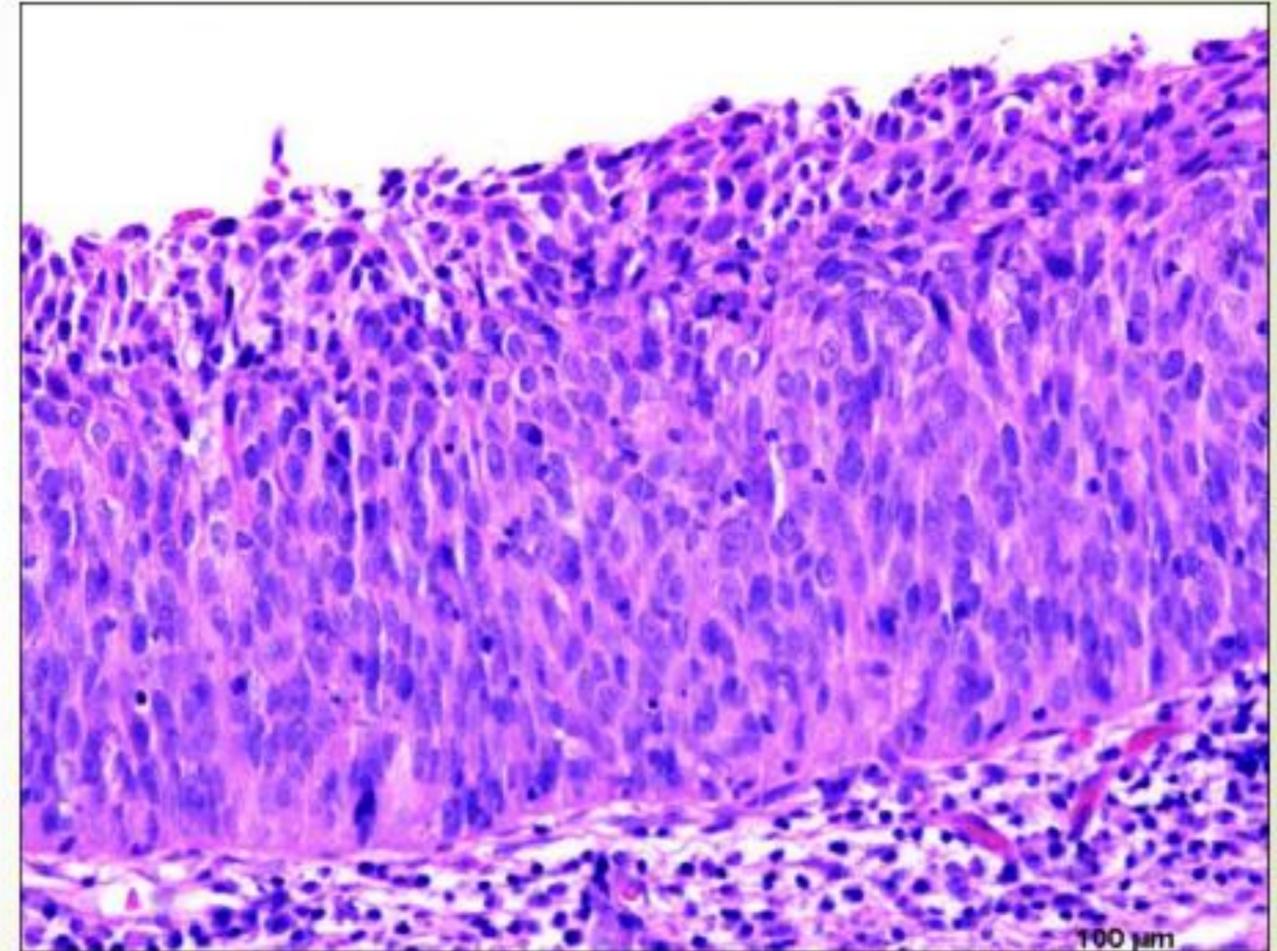
- Koilocytes are squamous cells with large and irregular, well defined perinuclear halos; nuclei are enlarged (two to three times normal size) with irregular nuclear membrane.
- Related to infection by HPV





CIN3

- Full thickness dysplasia.
- Dysplastic cells show:
 - Loss of normal orientation (polarity).
 - Hyperchromasia.
 - Pleomorphism.
 - Increased mitotic activity, in abnormal site.
 - Disordered maturation.



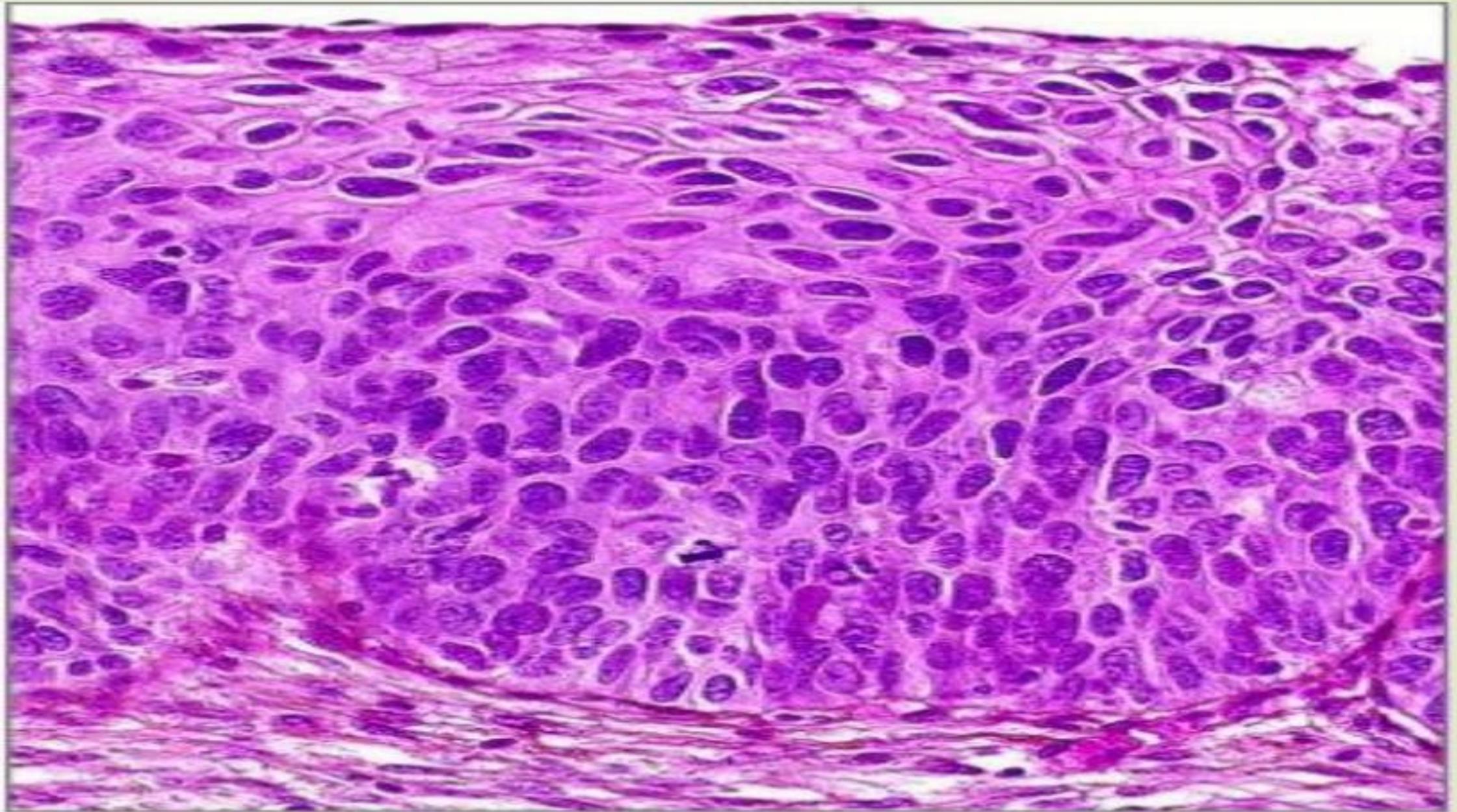


FIGURE 2.4:

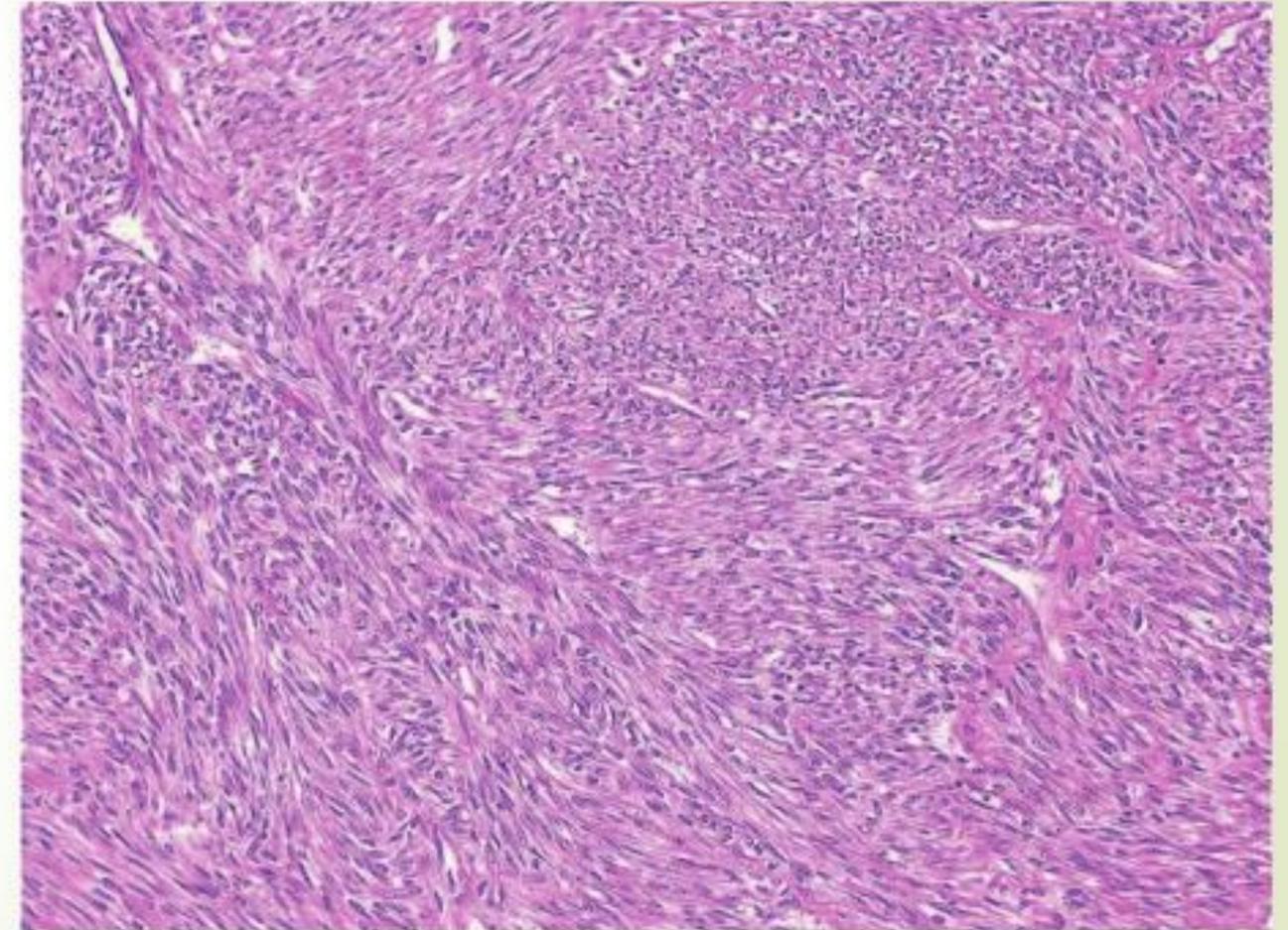
Histology of CIN 3: Dysplastic cells are distributed in the upper third of the epithelium in addition to the lower two-thirds. Note the loss of polarity of cells ($\times 40$).

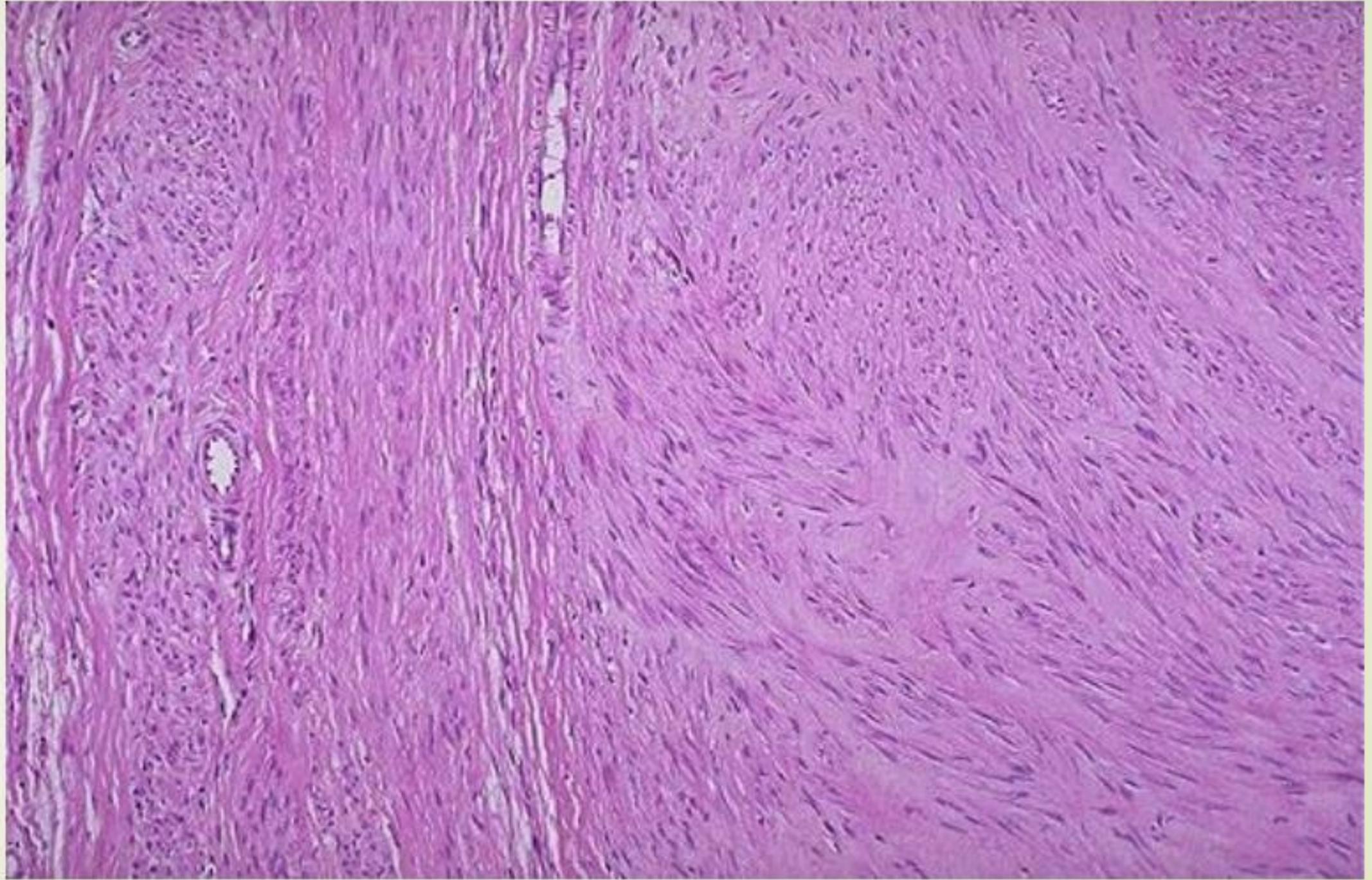


Leiomyoma

M/E:

- Interlacing bundles of smooth muscle cells running alternating with fibroblasts.
- The muscle cells are long spindled with rounded ends, abundant cytoplasm and short rod-shaped nuclei.
- The fibroblasts are spindled with tapering ends, scanty cytoplasm and long flat nuclei.





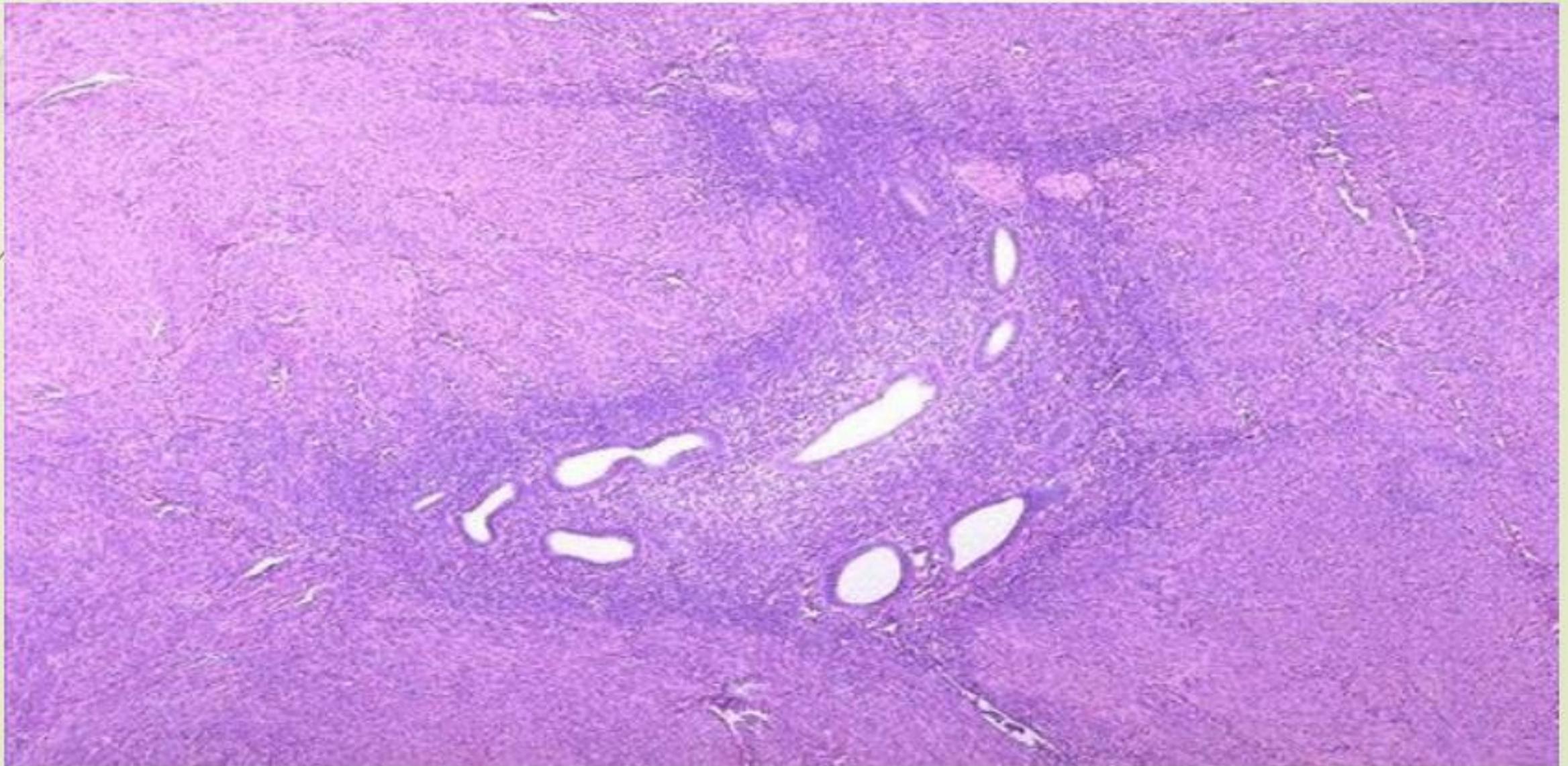


Adenomyosis (Internal endometriosis)

Presence of endometrial tissue (glands and stroma)
in the myometrium of uterine wall.

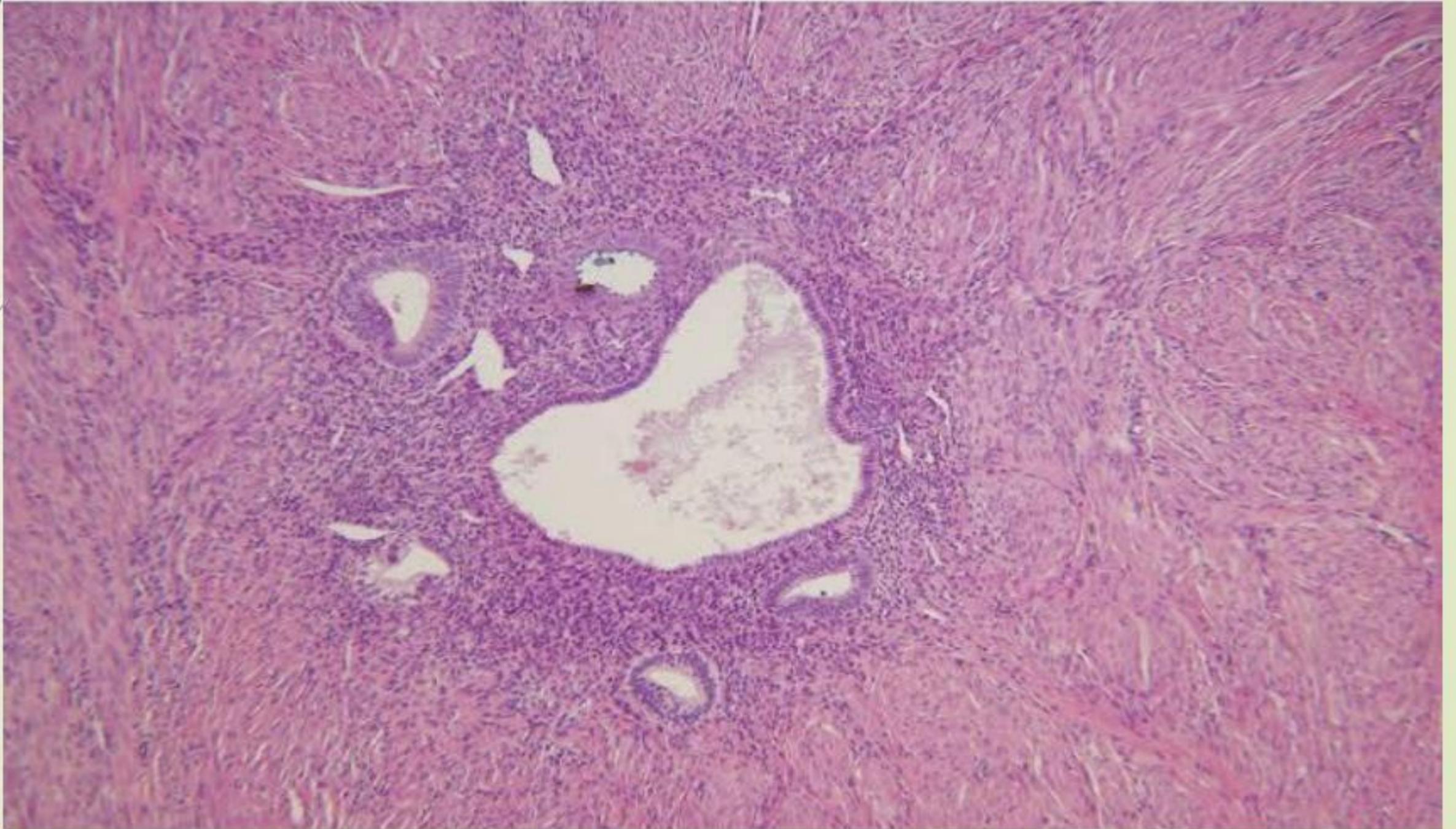


Nests of endometrial glands and stroma in myometrium between muscle bundles.





A

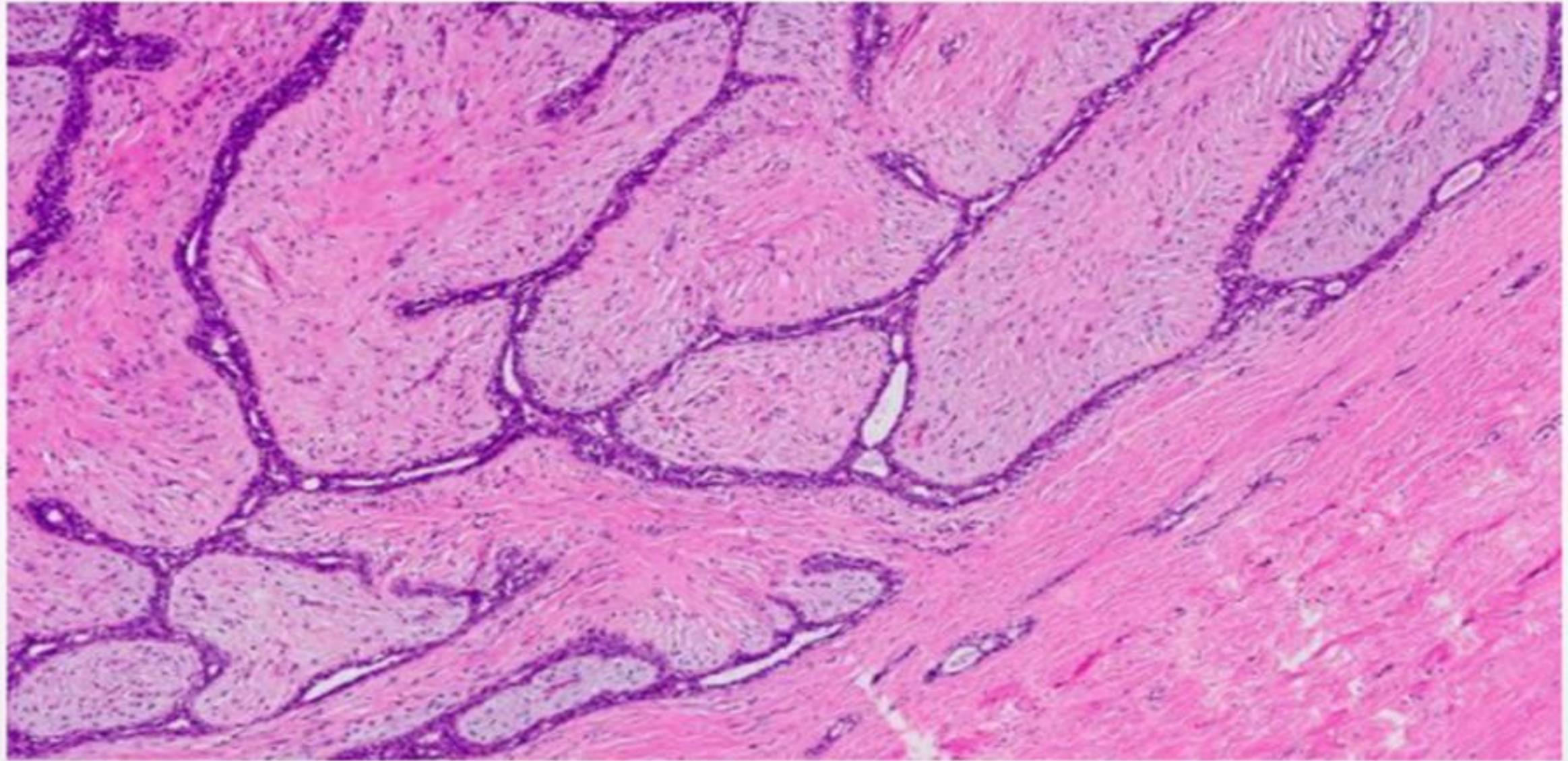


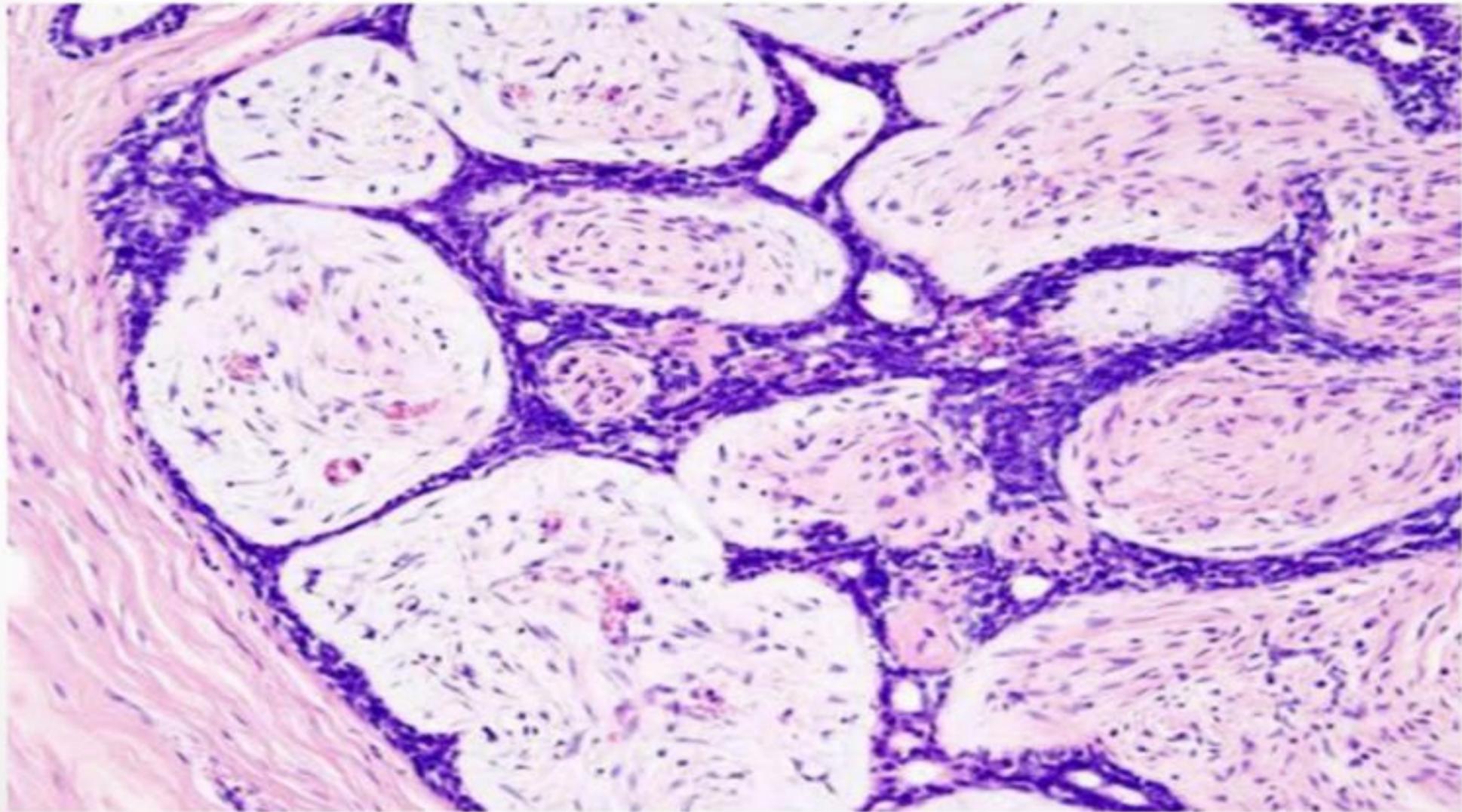


Fibroadenoma

ME:

- . Neoplastic acini and ducts separated by fibrous stroma.
- . Ducts are lined by inner epithelial and outer myoepithelial.
- . Surrounded by true capsule.
- . It may be:
 1. Peri canalicular.
 2. Intracanalicular.
 3. Mixed







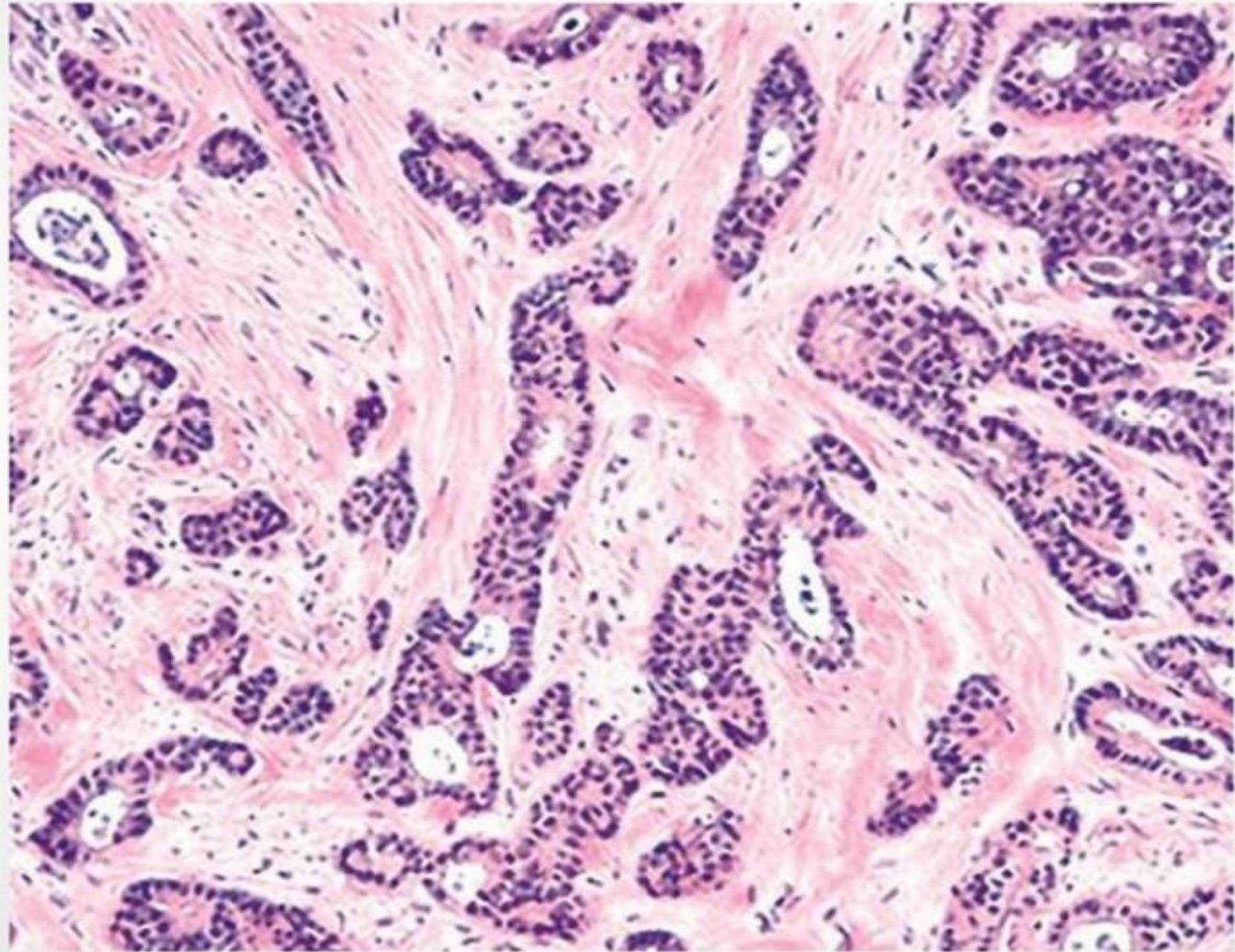
Here is the microscopic appearance of a fibroadenoma. To the right is compressed breast connective tissue forming a "capsule" to this mass. The neoplasm itself is composed of a fibroblastic stroma in which are located elongated compressed ducts lined by benign appearing epithelium.

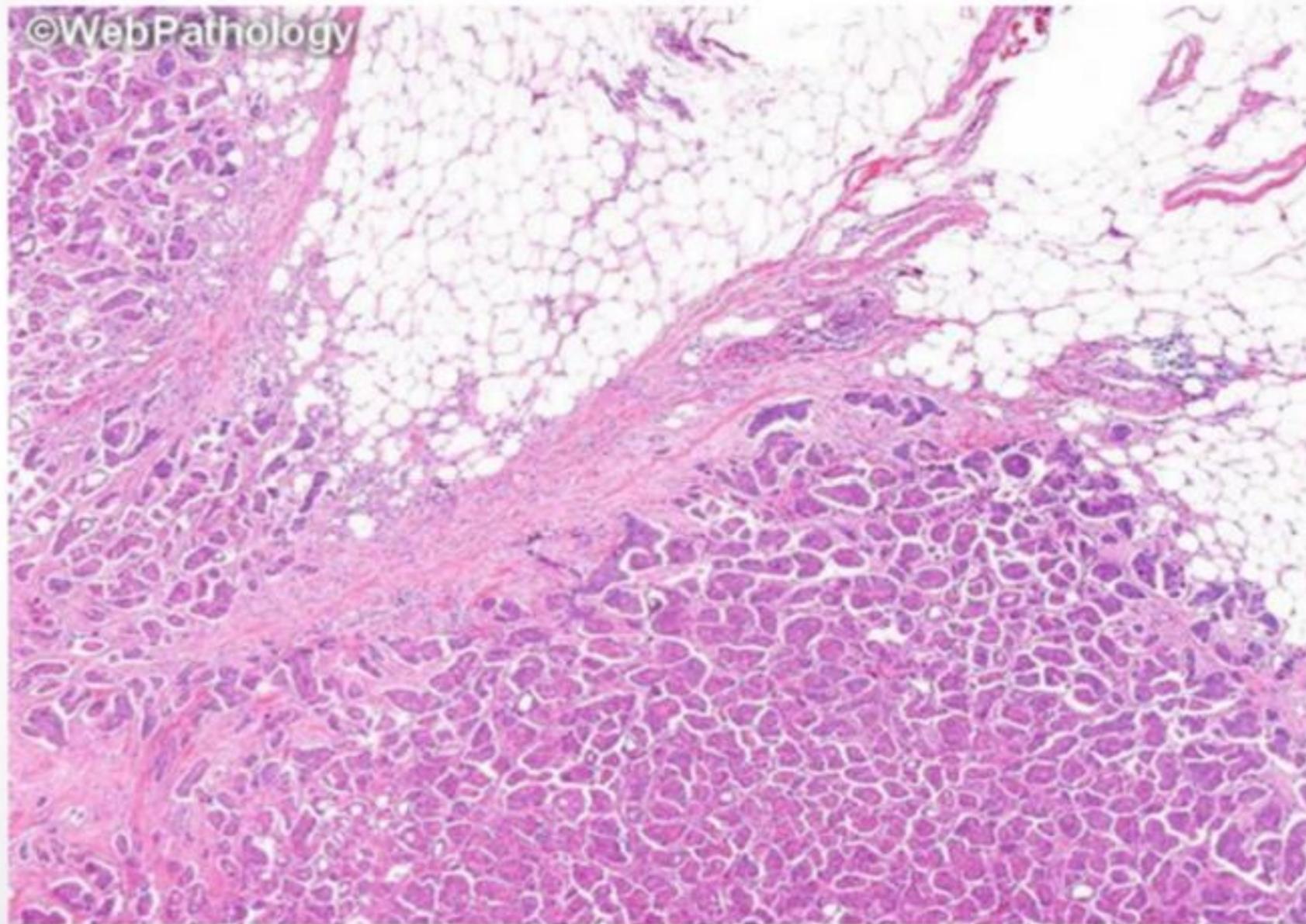


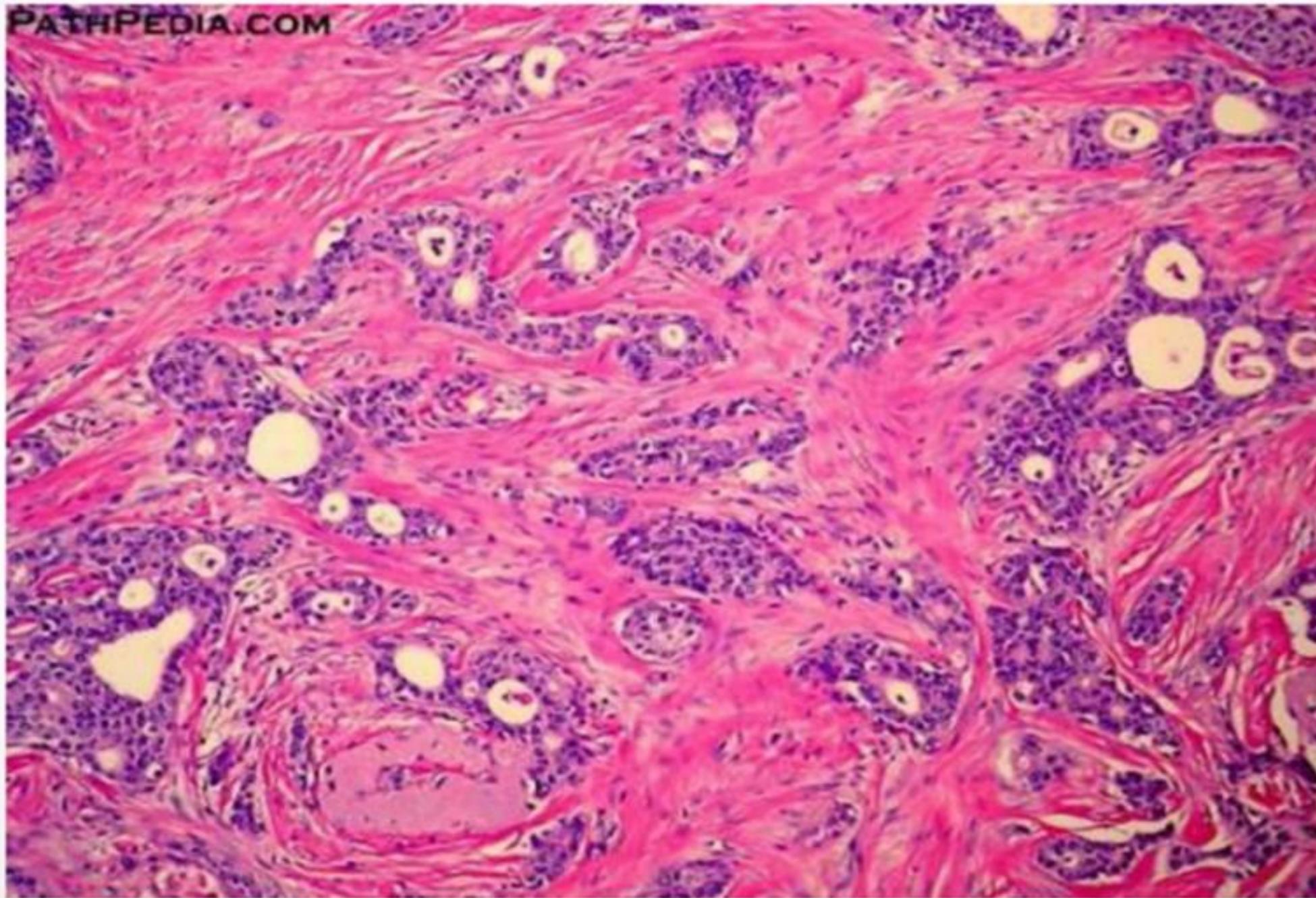
Breast carcinoma

Microscopic picture of invasive duct carcinoma(NOS):

- Infiltration of the breast tissue by malignant tumoral proliferation that is formed of acini and sheets of malignant epithelial cells that show atypical features in the form of nuclear pleomorphism, hyperchromatism, increased nucleo-cytoplasmic ratio and atypical mitotic figures.
- The stroma is desmoplastic.









A high-grade ductal carcinoma with mitosis (arrow)

