PATHOLOGY

○ Sheet ✓ Slide ○ Handout

Number

6

Subject

Uterine Pathology

Doctor

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Date: **00/00/2016**

Price:

Pathology of the Female genital tract -2

Uterine Pathology

ENDOMETRITIS

- Inflammation of the endometrium.
- Causes:

1- pelvic inflammatory disease (PID)

2-miscarriage or delivery

3- intrauterine device (IUCD).

- acute or chronic
- fever, abdominal pain, menstrual abnormalities, infertility and ectopic pregnancy due to damage to the fallopian tubes.
- Rx: removal of cause, antibiotics, D&C.

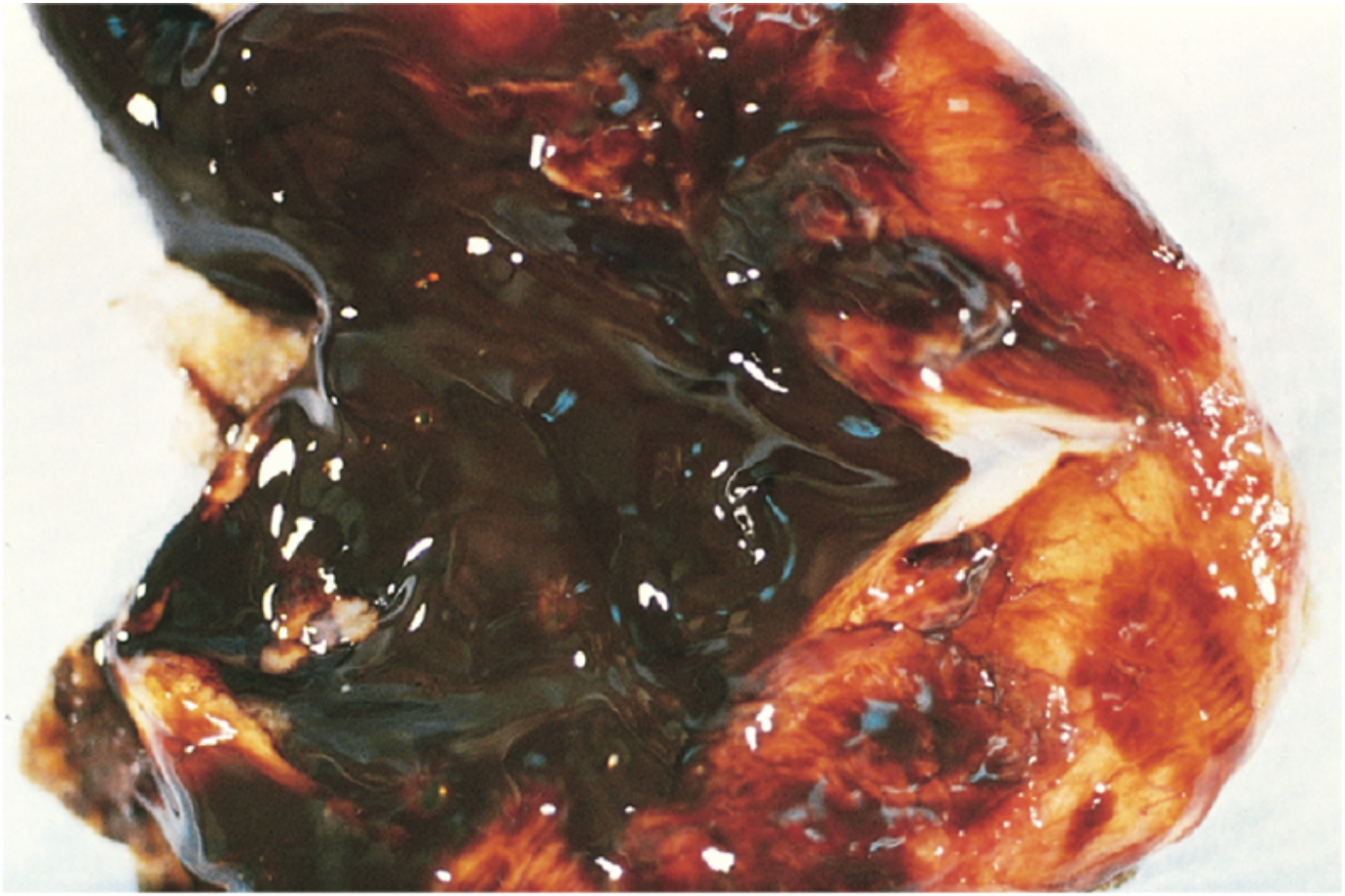
ADENOMYOSIS

- endometrial stroma, glands, or both embedded in **myometrium**.
- Thick uterine wall, enlarged uterus.
- Derived from **stratum basalis → no** cyclical bleeding.
- menorrhagia, dysmenorrhea

ENDOMETRIOSIS

- endometrial glands and stroma **outside the uterus**.
- 10% in reproductive yrs; ↑ infertility.
- dysmenorrhea, and pelvic pain, pelvic mass filled with blood (chocolate cyst).
- Multifocal, multiple tissues in pelvis (ovaries, pouch of Douglas, uterine ligaments, tubes, and rectovaginal septum).
- Sometimes distant sites e.g. umbilicus, lymph nodes, lungs, etc

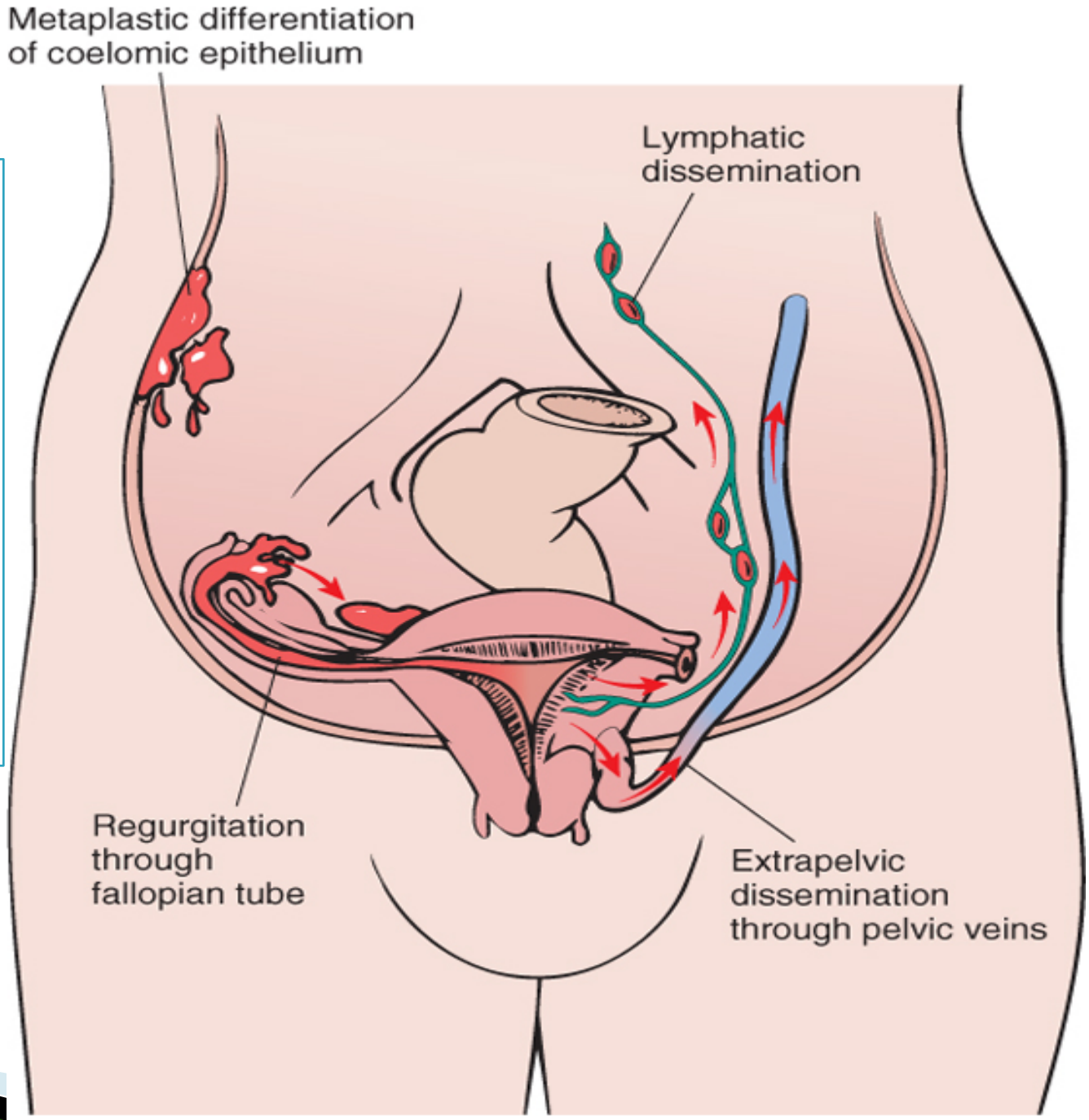
“Chocolate“ cyst in an ovary



ENDOMETRIOSIS- Pathogenesis

- Three theories:
  - ***regurgitation theory.*** ***(***most accepted). Menstrual backflow through tubes and implantation..
  - ***metaplastic theory*** . Endometrial differentiation of coelomic epithelium.
  - ***vascular* or *lymphatic dissemination theory.*** ***May*** explain extrapelvic or intranodal implants.

Conceivably, all pathways are valid in individual instances.



ENDOMETRIOSIS

- contains **functionalis endometrium**, so undergoes **cyclic bleeding**.
- Consequences: fibrosis, sealing of tubal fimbriated ends, and distortion of the ovaries.
- Diagnosis; 2 of 3 features: endometrial glands, endometrial stroma, or hemosiderin pigment.

DUB- Dysfunctional Uterine Bleeding

- causes:

1- Failure of ovulation. (most common).

- Usually hormonal dysfunction
- excess of estrogen
- Malnutrition, obesity, debilitating disease; severe physical or emotional stress.

- 2- **Endomyometrial disorders**: chronic endometritis, endometrial polyps, leiomyomas, endometrial hyperplasia and cancers.

Dysfunctional Uterine Bleeding

Age Group	Cause(s)
Prepuberty	Precocious puberty (hypothalamic, pituitary, or ovarian origin)
Adolescence	Anovulatory cycle
Reproductive age	Complications of pregnancy (abortion, trophoblastic disease, ectopic pregnancy) Organic lesions (leiomyoma, adenomyosis, polyps, endometrial hyperplasia, carcinoma)
	Anovulatory cycle Ovulatory dysfunctional bleeding
Perimenopause	Anovulatory cycle Irregular shedding Organic lesions (carcinoma, hyperplasia, polyps)
Postmenopause	Organic lesions (carcinoma, hyperplasia, polyps)
	Endometrial atrophy

Endometrial Hyperplasia

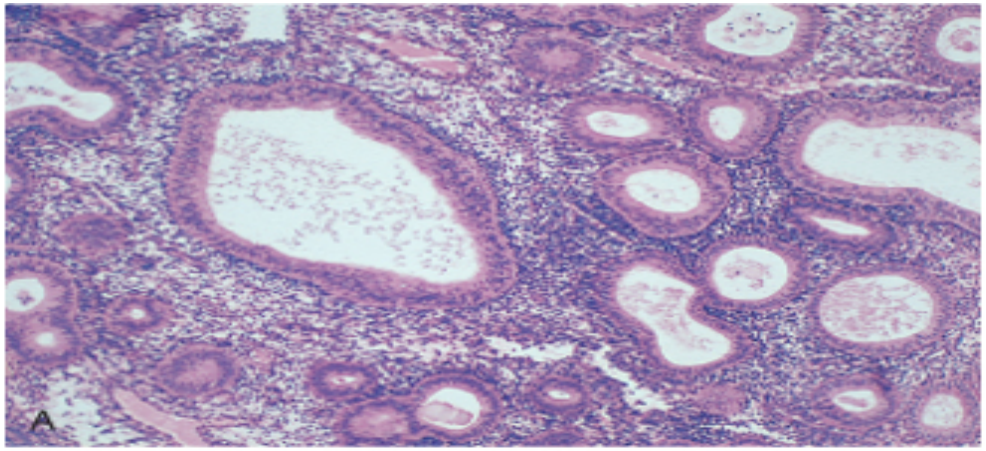
- prolonged or marked excess of **estrogen** relative to progestin →exaggerated proliferation → may progress to cancer
- severity is based on architectural crowding and cytologic atypia, ranging from:

1- Simple hyperplasia

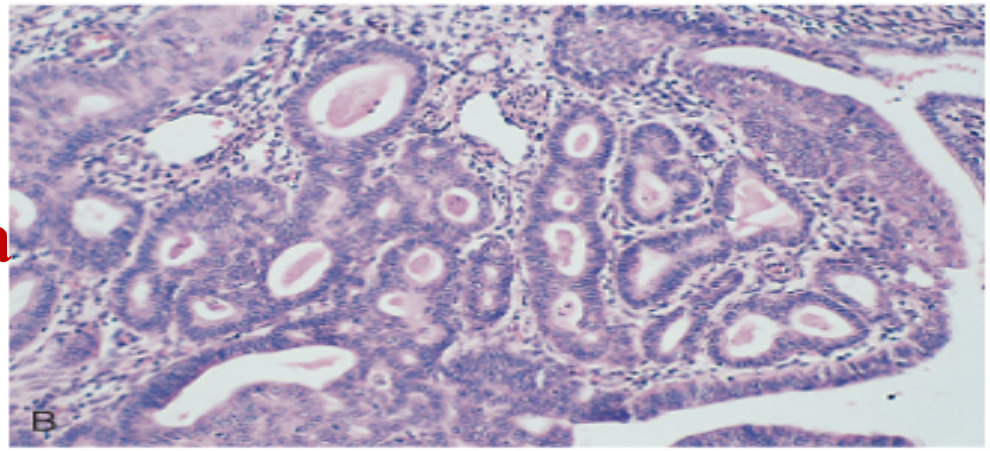
2- Complex hyperplasia

3- Atypical hyperplasia (20% risk of cancer).

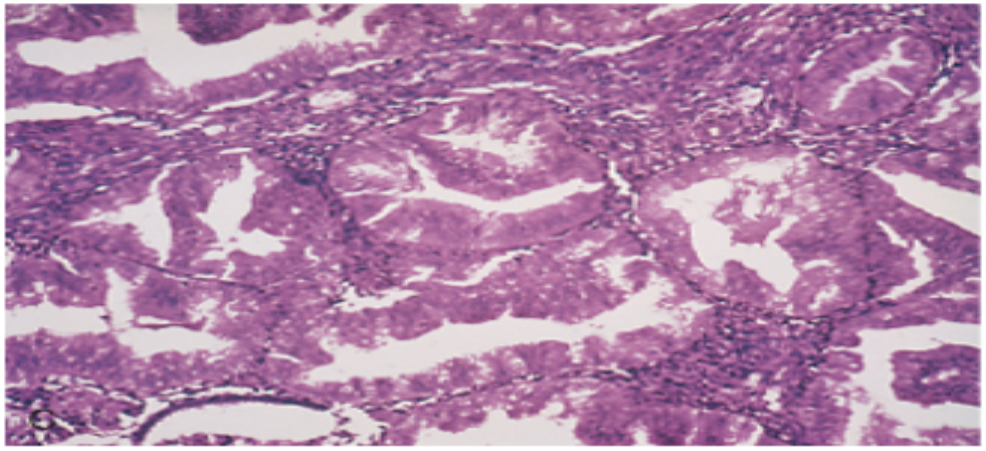
Simple hyperplasia



Complex Hyperplasia



Atypical Hyperplasia



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TUMORS OF THE ENDOMETRIUM

- **Benign Endometrial Polyps**
- sessile or pedunculated
- endometrial dilated glands, with small muscular arteries and fibrotic stroma.
- no risk of endometrial cancer.

Endometrial Carcinoma

- **the most common cancer in female genital tract.**
- 50s and 60s.
- two clinical settings:

1) perimenopausal women with estrogen excess
2) older women with endometrial atrophy.

- These scenarios are correlated with differences in histology:
- 1-***endometrioid***
- 2-***serous carcinoma*** , respectively.

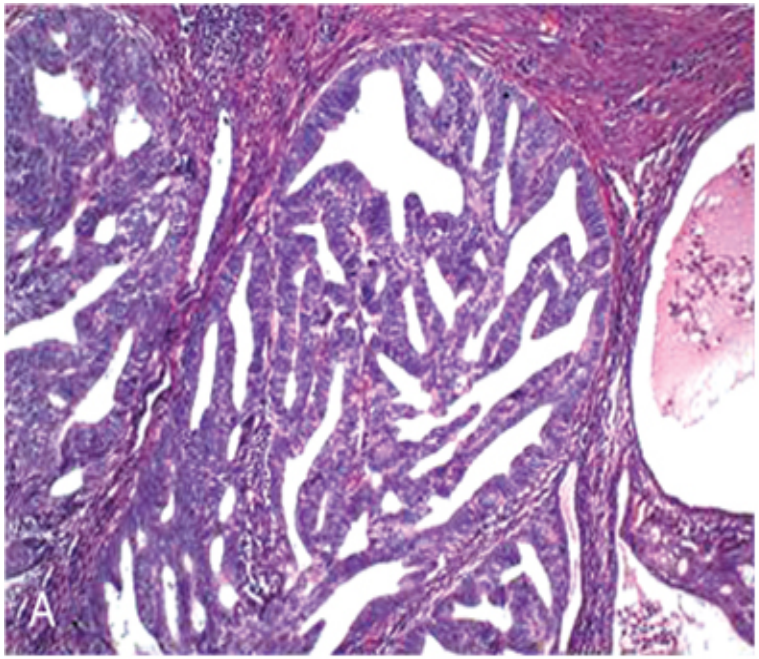
Endometrioid carcinoma:

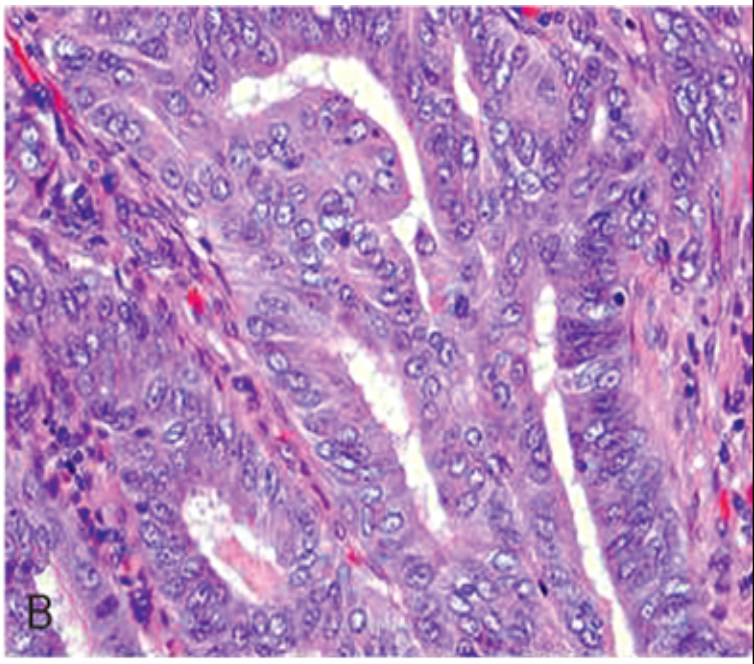
- termed because similar to normal endometrium.
- risk factors: **Obesity; Diabetes; Hypertension** (mostly an association and not a true risk factor); **Infertility; Prolonged estrogen replacement therapy; Estrogen-secreting ovarian tumors**.
- ***precancerous*** *lesion is atypical endometrial hyperplasia*
- Mutations in DNA **mismatch repair genes** and ***PTEN***
- ***Prognosis: depends on stage.*** 5-year survival in stage I= 90%; drops to 20% in stages III and IV.

Serous carcinoma

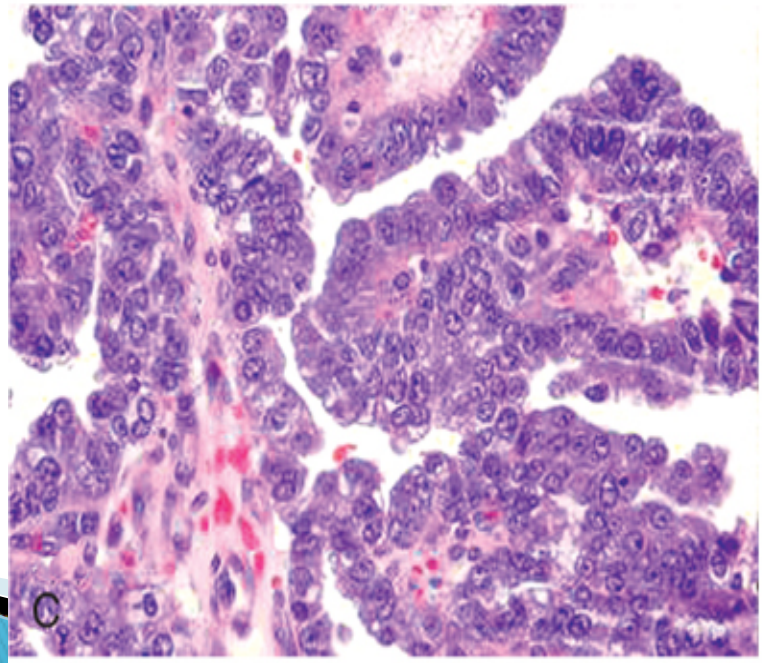
- **no relation with endometrial hyperplasia).**
- **mutations in *p53* tumor suppressor gene**.
- Prognosis: depends on operative staging with peritoneal cytology. Generally worse than endometrioid ca.

Endometrioid carcinoma

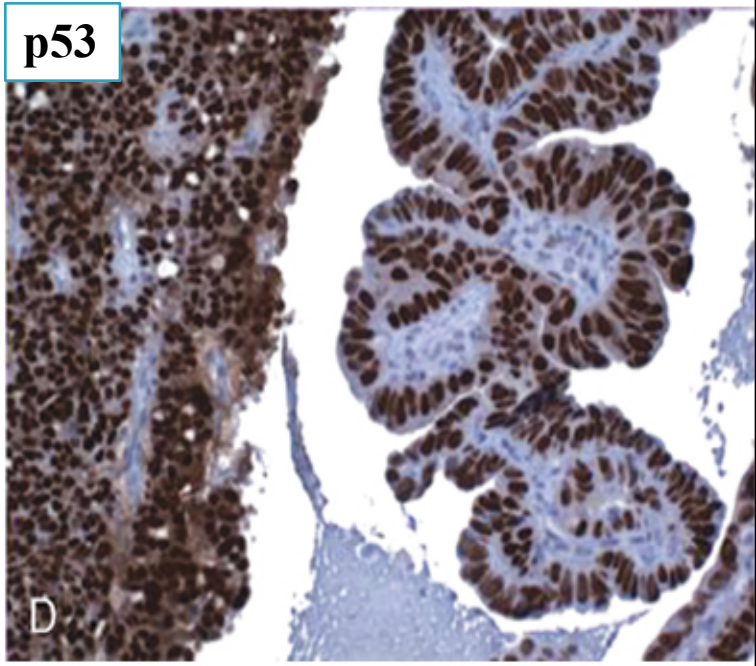




Serous carcinoma



p53

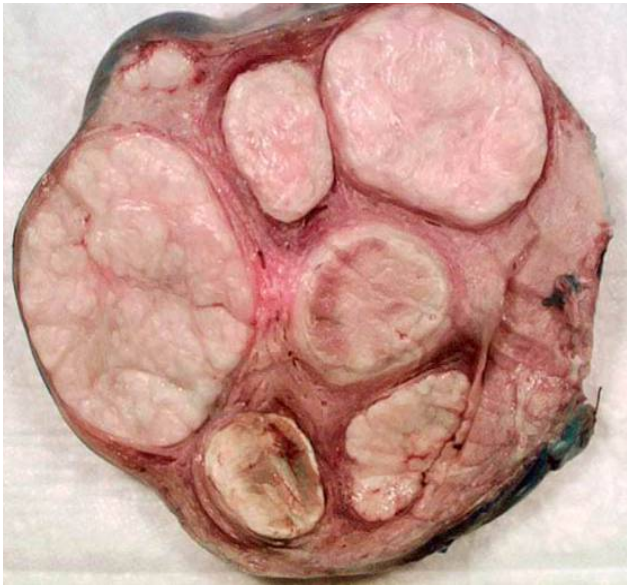


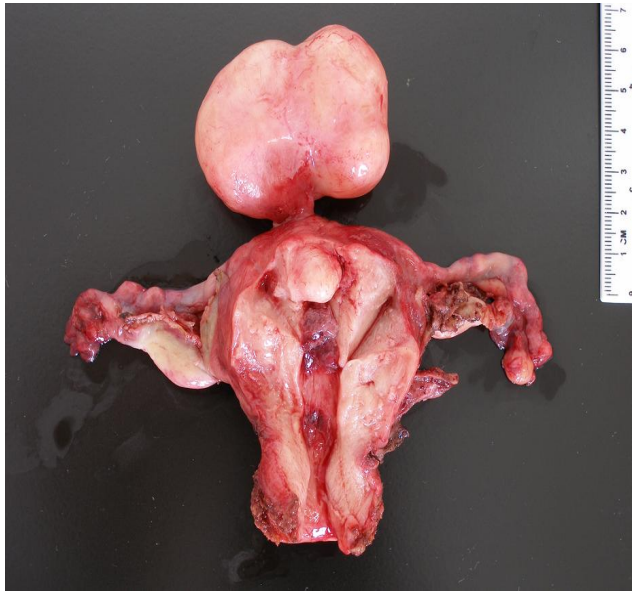
Tumors of the myometrium

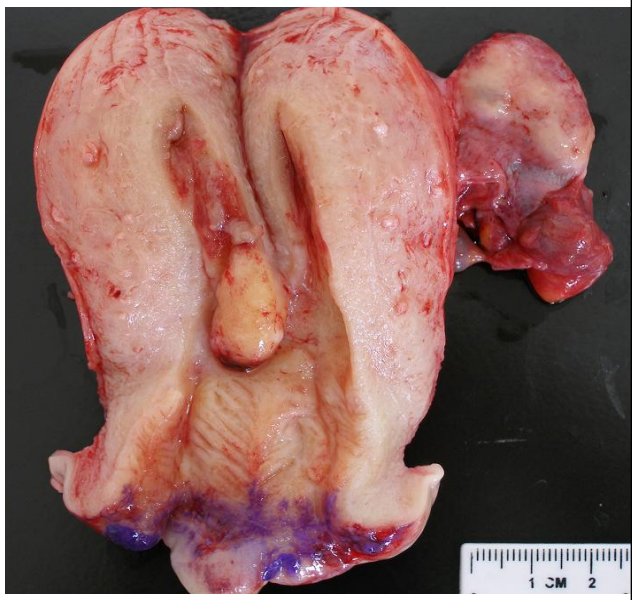
- Lieomyoma = *fibroids*
- Benign tumor of smooth muscle cells
- most common benign tumor in females (30% - 50% in reproductive life).
- Estrogen-dependent, shrink after menopause.
- circumscribed, firm gray-white masses with whorled cut surface.

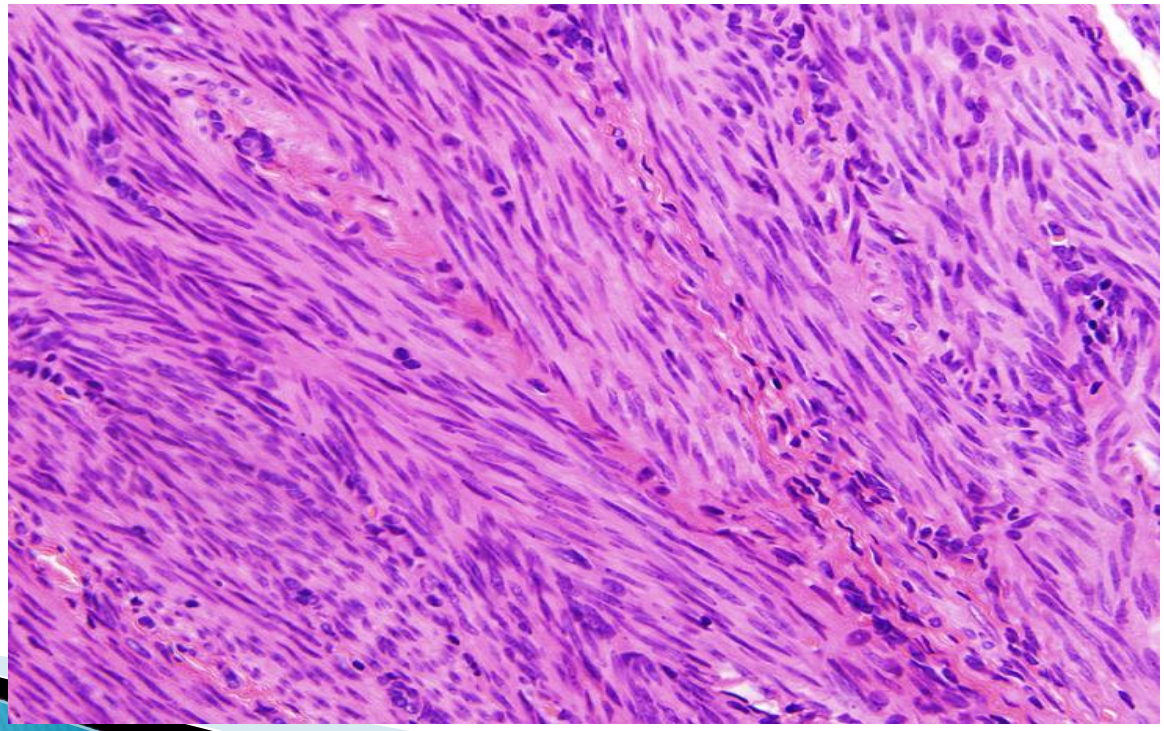
Lieomyomas

- Location: (intramural), (submucosal), or (subserosal).
- may develop hemorrhage, cystic change or calcification.
- Clinically: asymptomatic; menorrhagia; a dragging sensation.
- leiomyomas almost **never** transform into sarcomas, and the presence of multiple lesions *does not* increase the risk of malignancy.



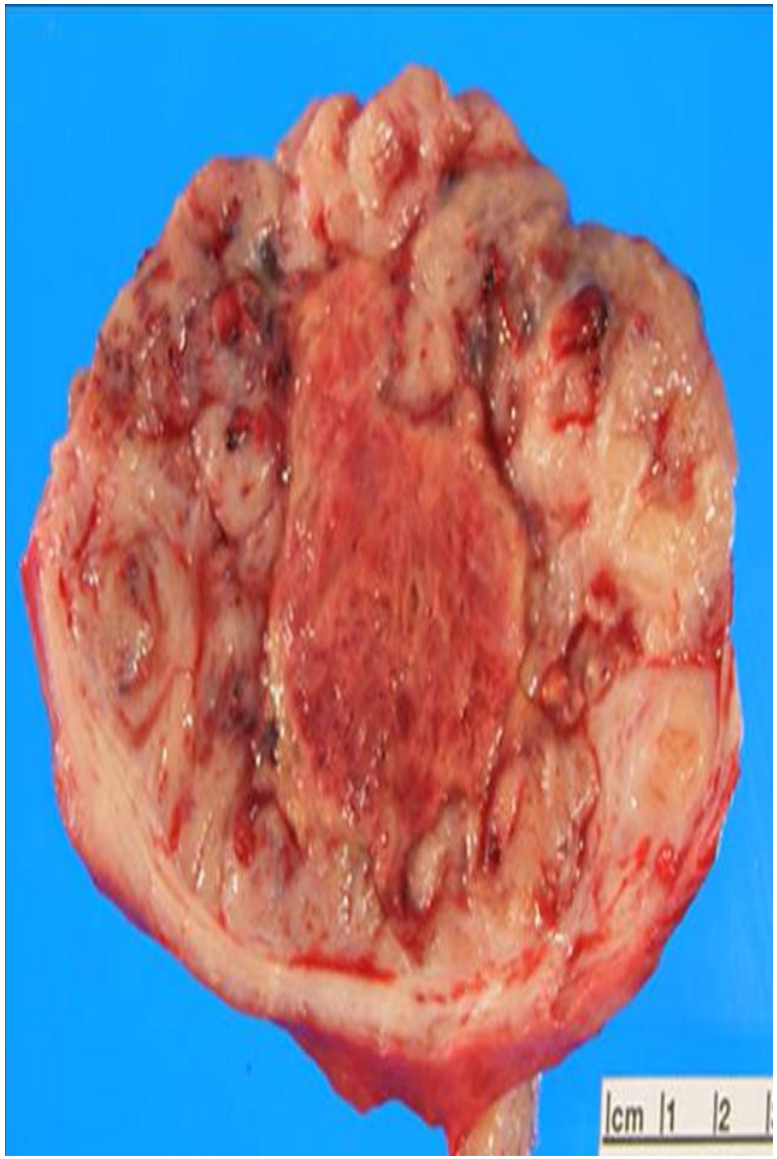






Lieomyosarcoma

- Malignant counterpart of leiomyoma.
- not from preexisting leiomyomas.
- soft, hemorrhagic, and necrotic. Have infiltrative borders.
- diagnosis: **coagulative necrosis, cytologic atypia, and mitotic activity**.
- **Recurrence** common, and **metastasize**, 5-year survival rate 40%.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