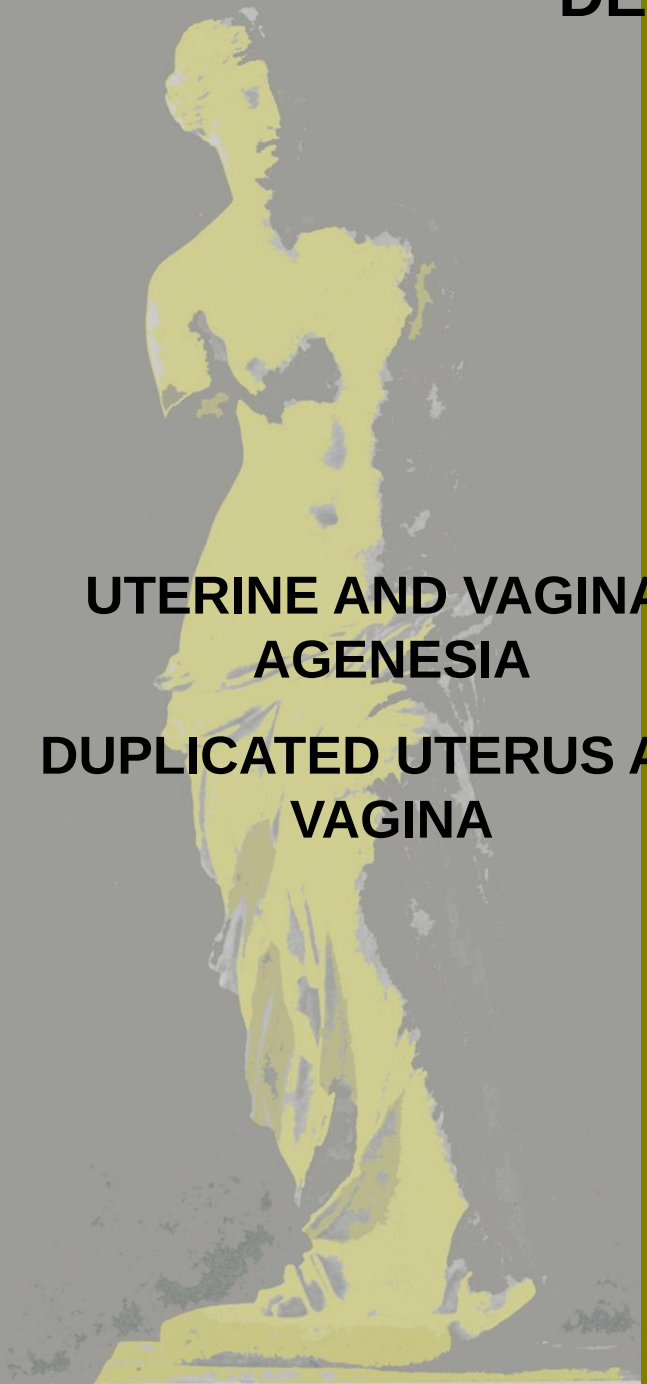
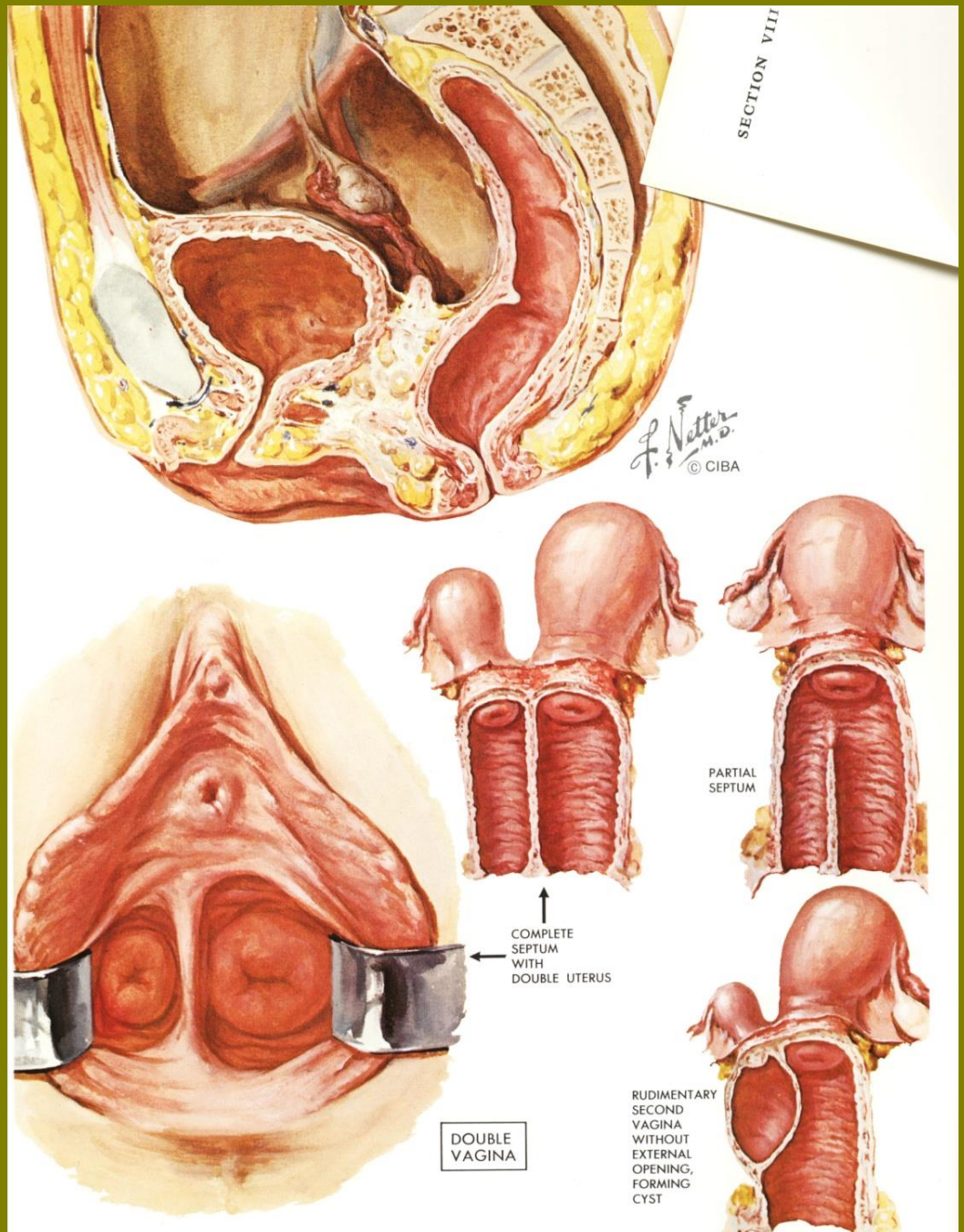
LECTURE 20-21

DEVELOPMENTAL DISTURBANCES

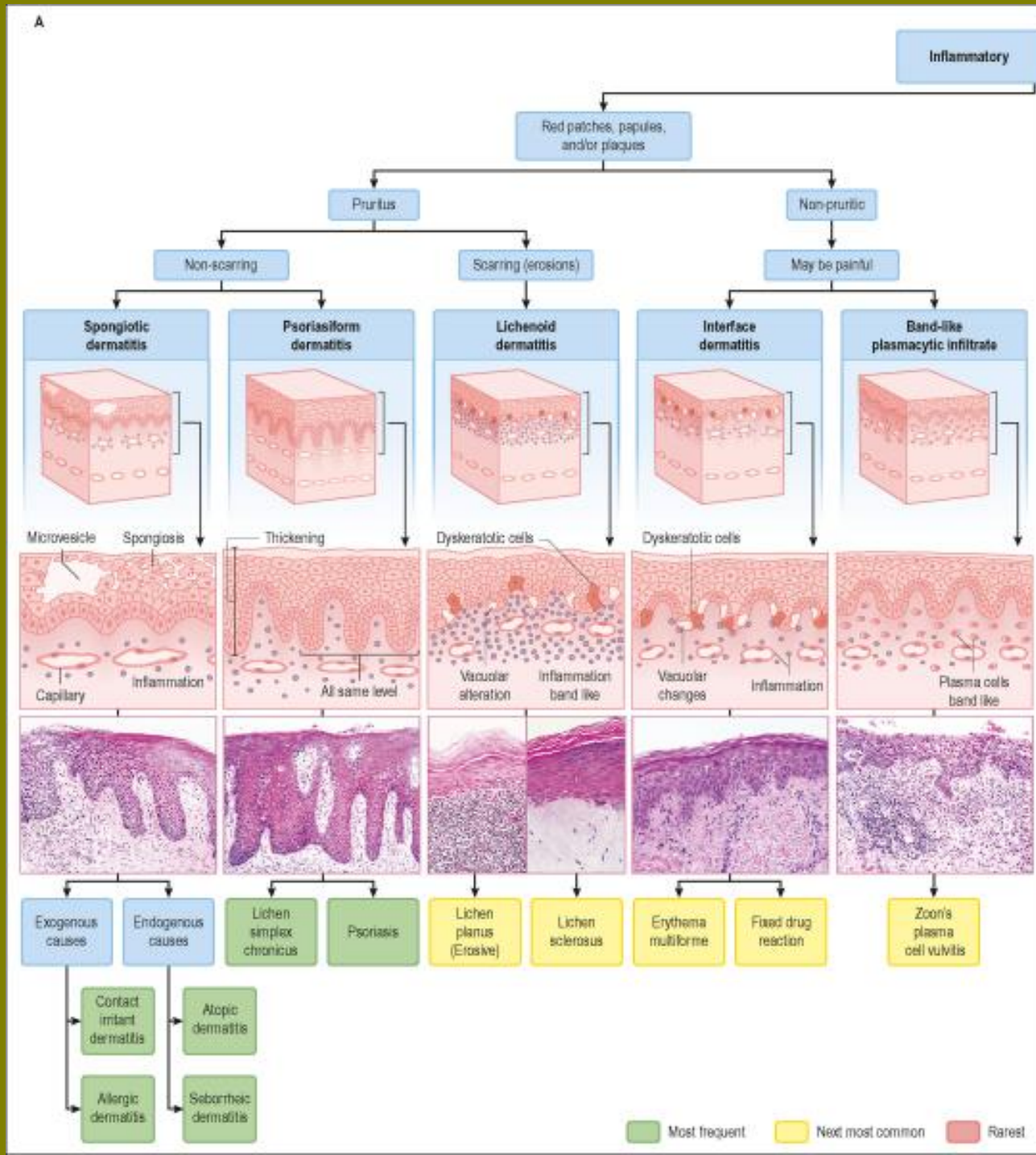


UTERINE AND VAGINAL AGENESIA

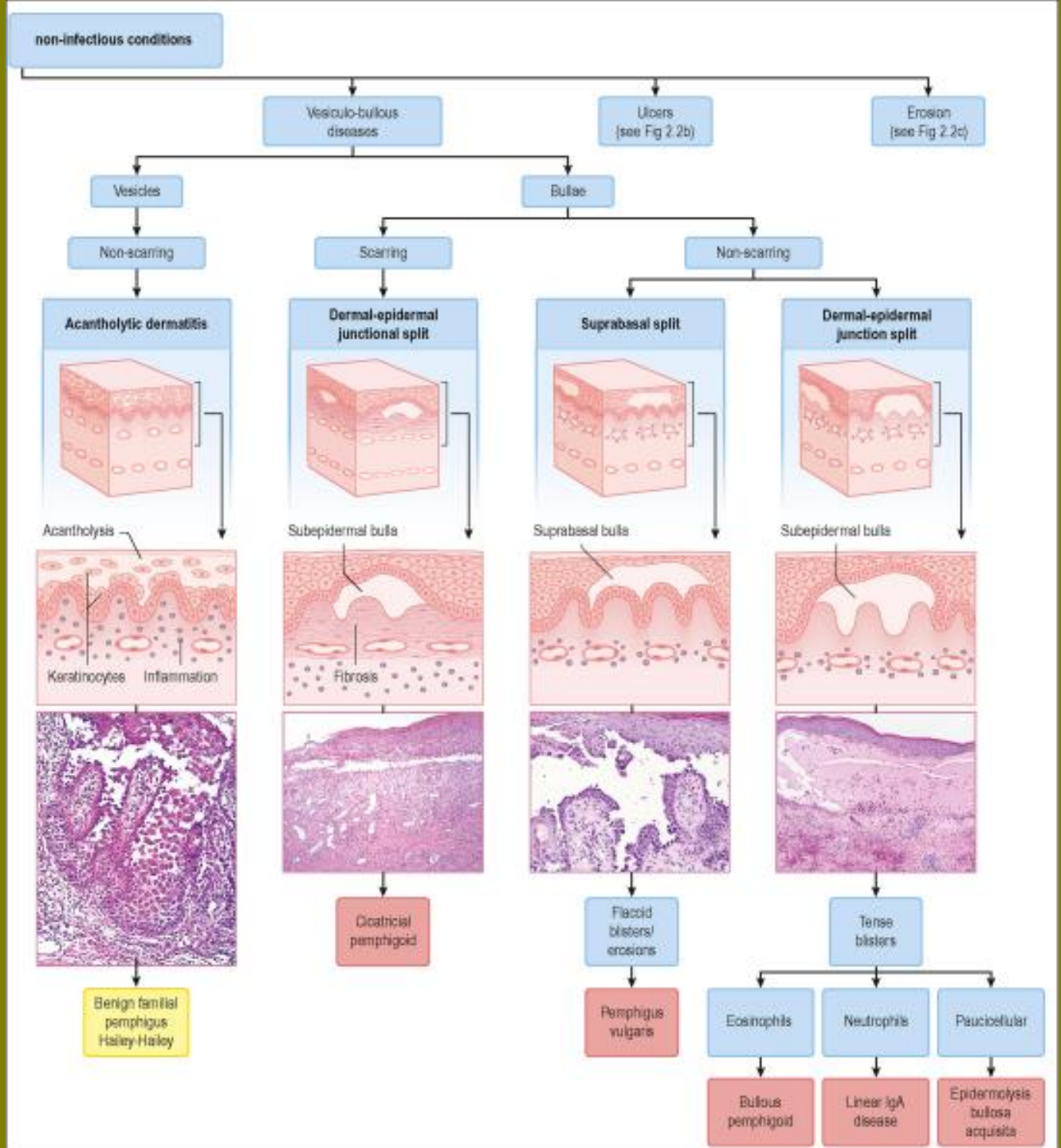
DUPLICATED UTERUS AND VAGINA



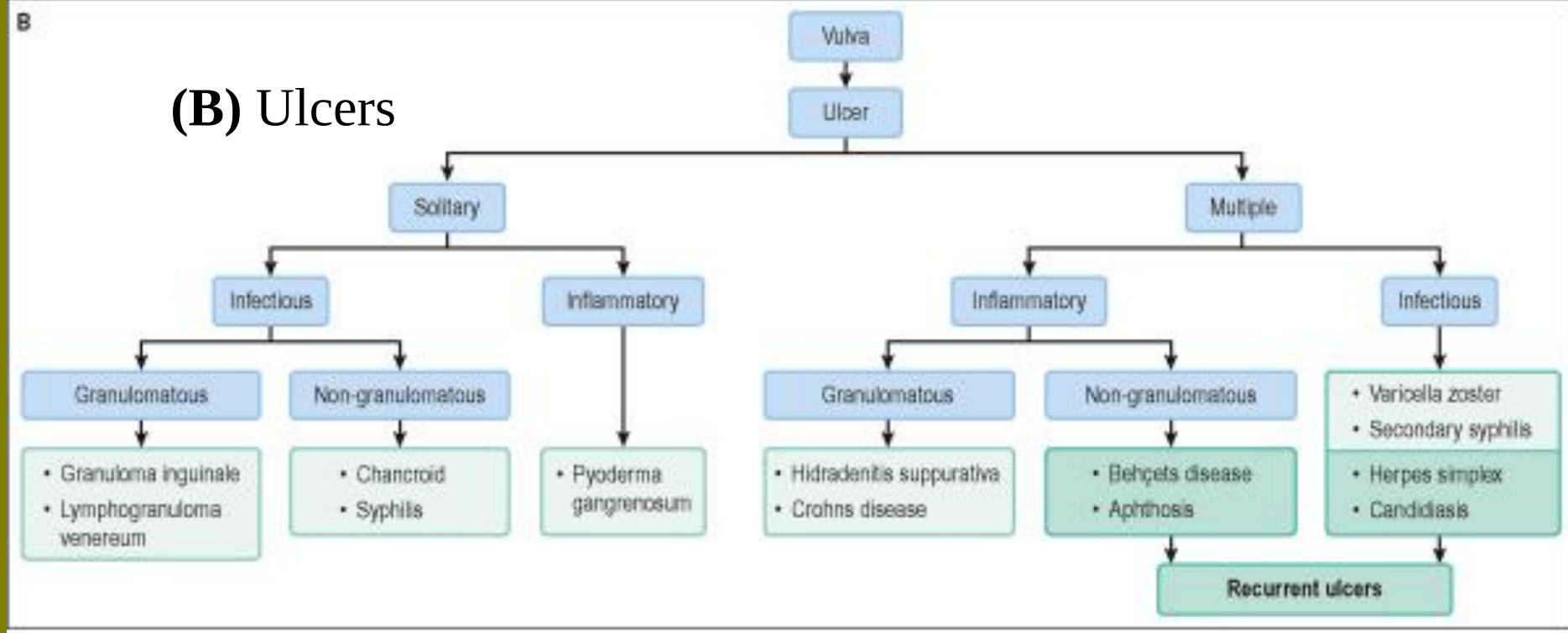
Differential diagnoses of vulvar dermatoses. (A) Non-infectious Inflammatory conditions.



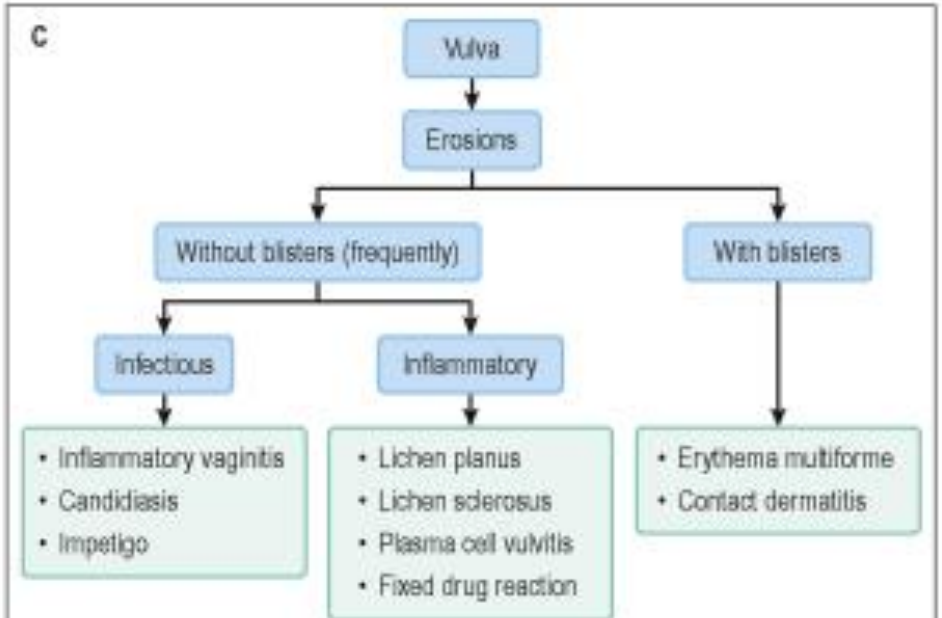
Non-infectious inflammatory conditions



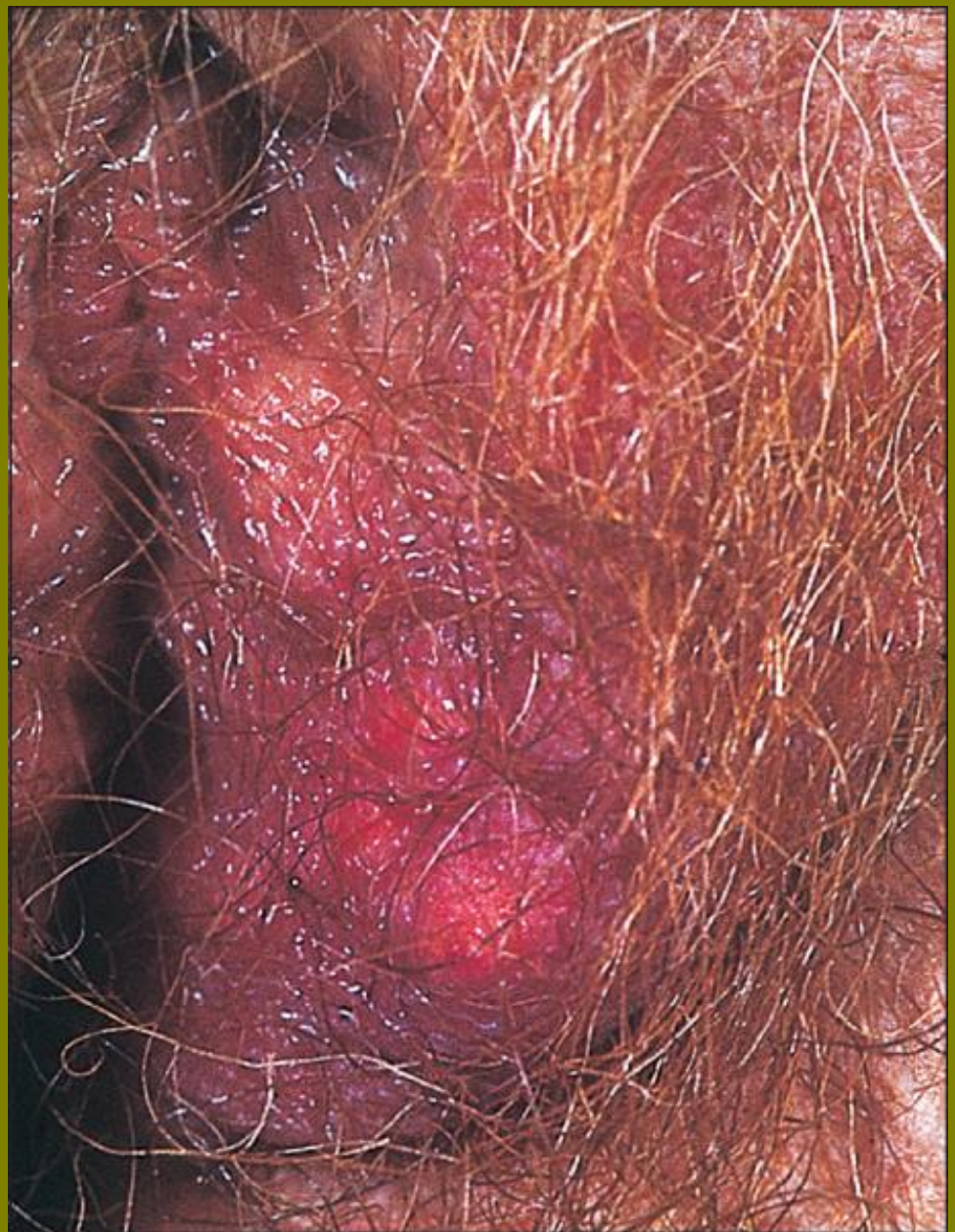
(B) Ulcers



(C) Erosions



Follicular cysts (‘epidermal inclusion cysts').
Ruptured cysts become inflamed as a result of foreign body giant cell reaction to keratin leakage.

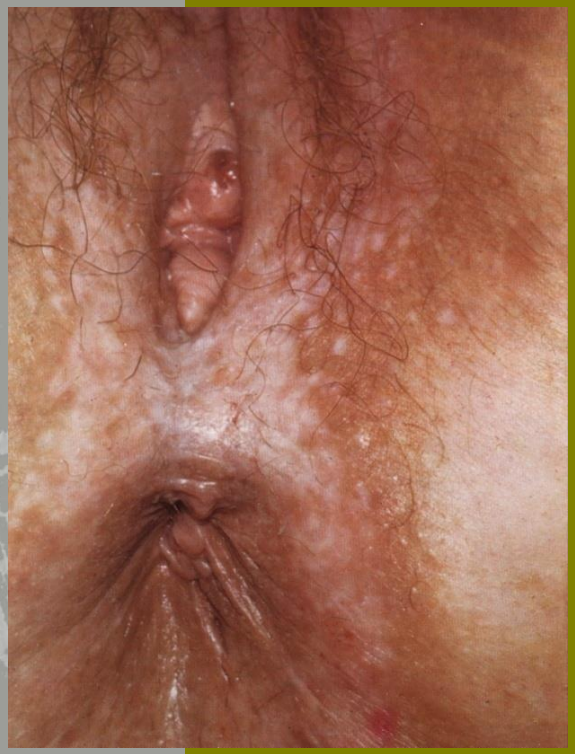


PATHOLOGY OF VULVA

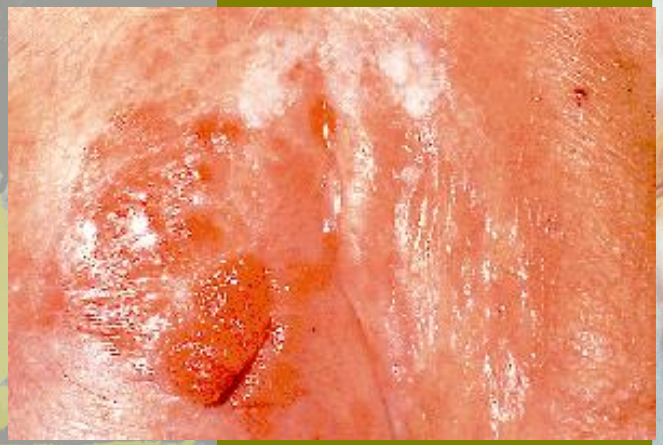
LICHEN SCLEROSUS ET ATROPHICUS

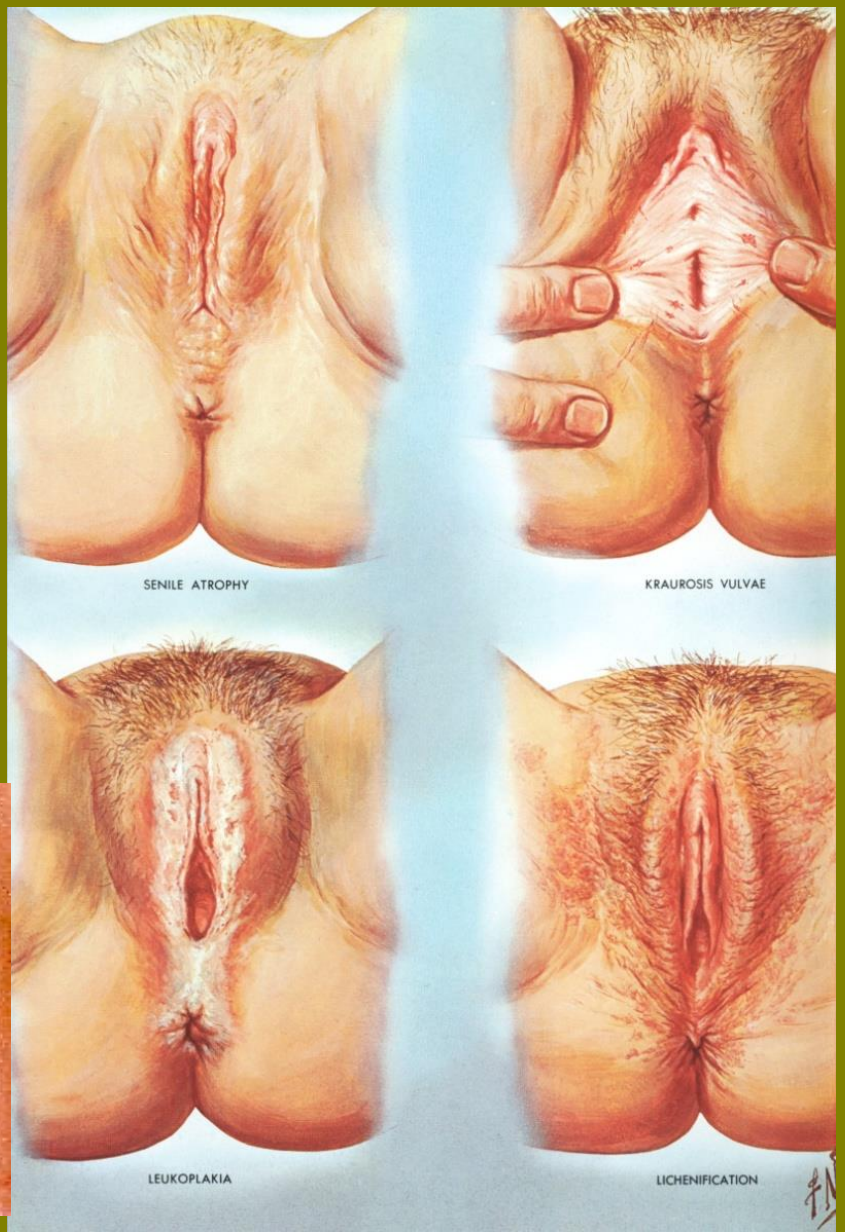
LEUKOPLAKIA

LICHEN SCLEROSUS ET ATROPHICUS



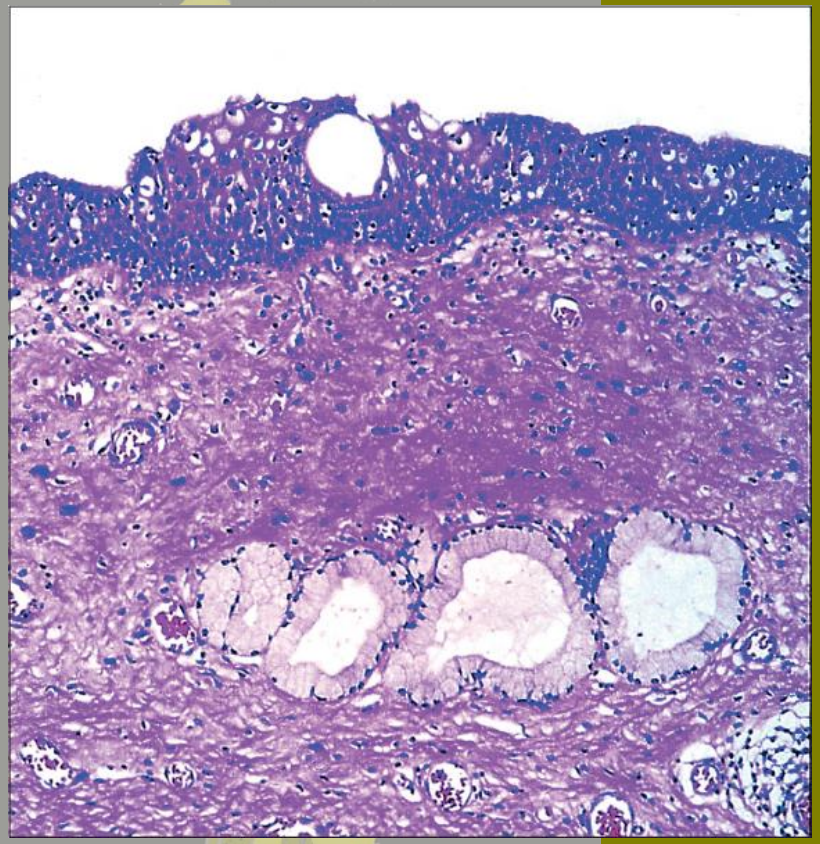
CANCER DEVELOPING FROM ATROPHIC LESION

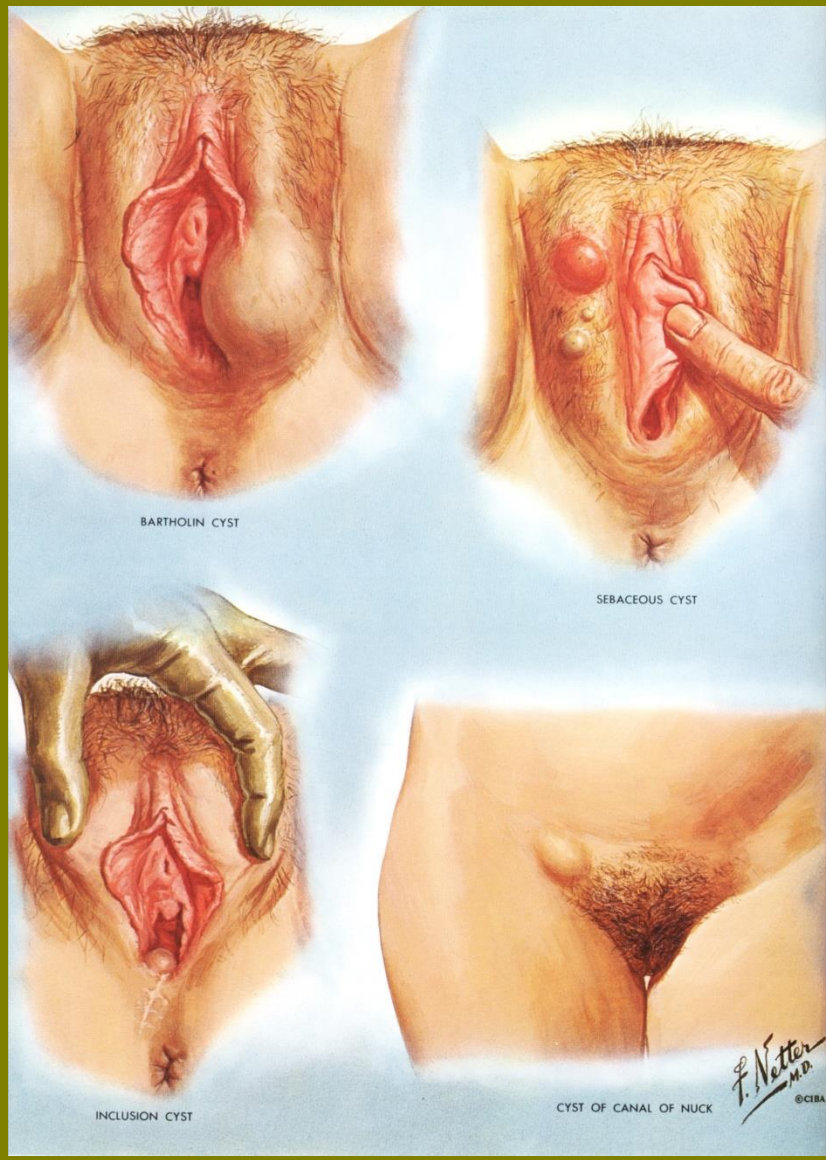




PATHOLOGY OF VULVA

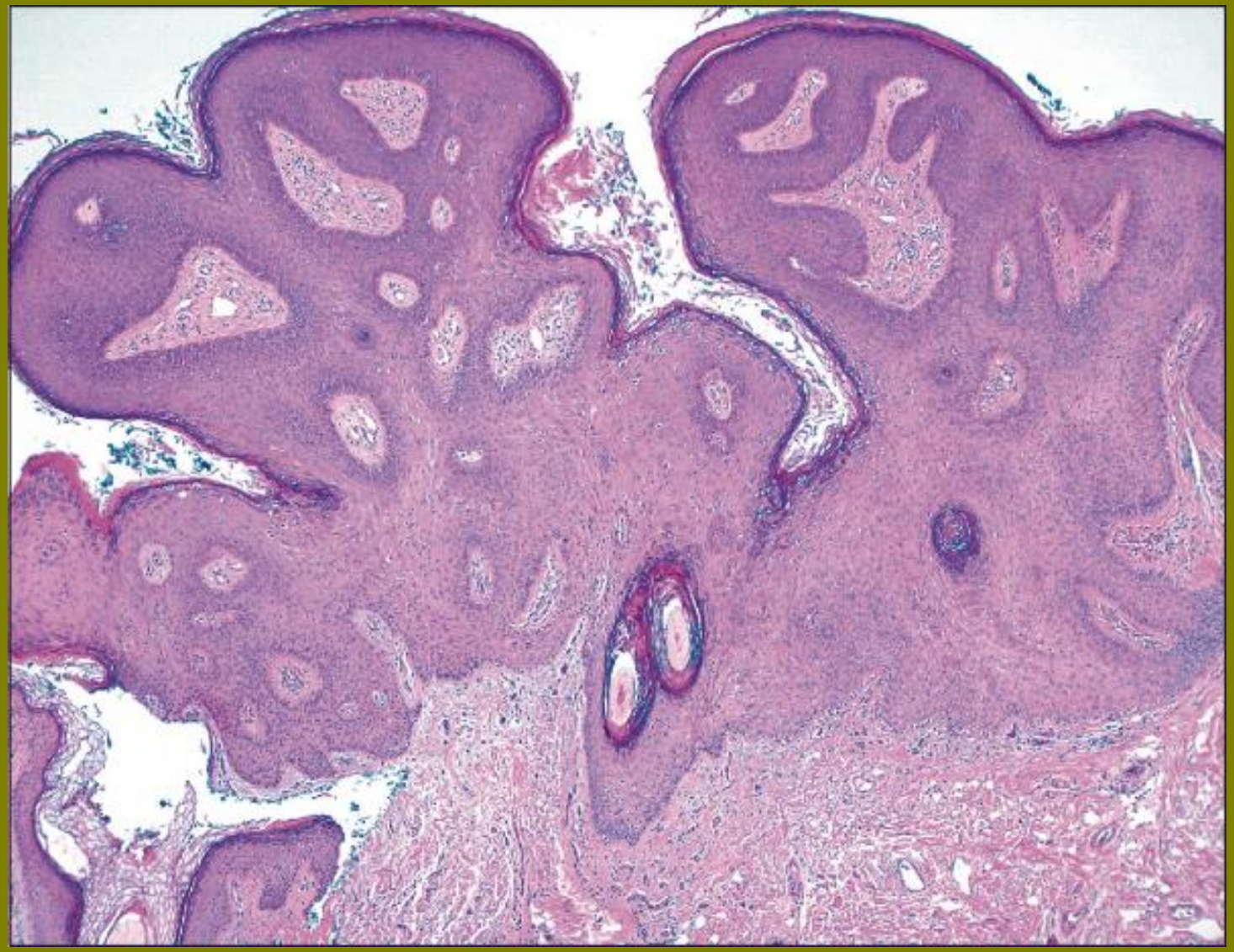
NON-CANCEROUS CYSTS OF VULVA



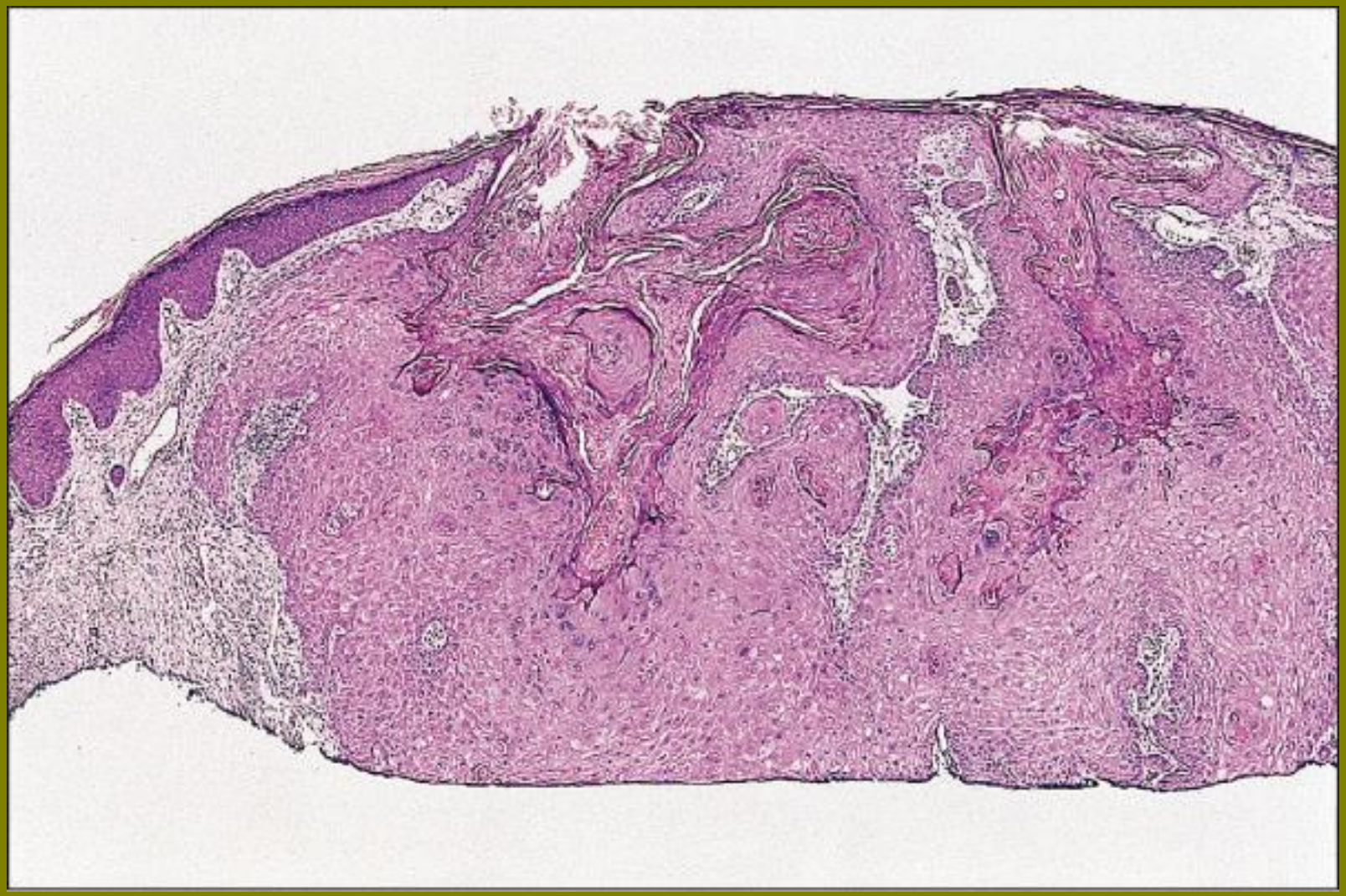


Bartholin cyst. A thick transitional epithelium with focal squamous metaplasia lines the cyst wall (top). Normal mucus glands are frequently seen in the wall.

Seborrheic keratosis. Invaginations lead to keratin-filled cysts.

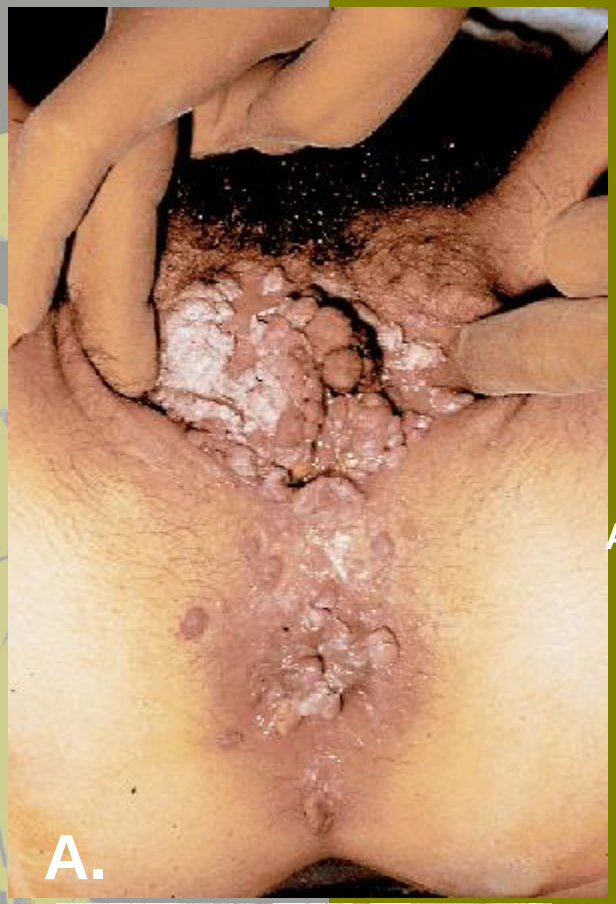


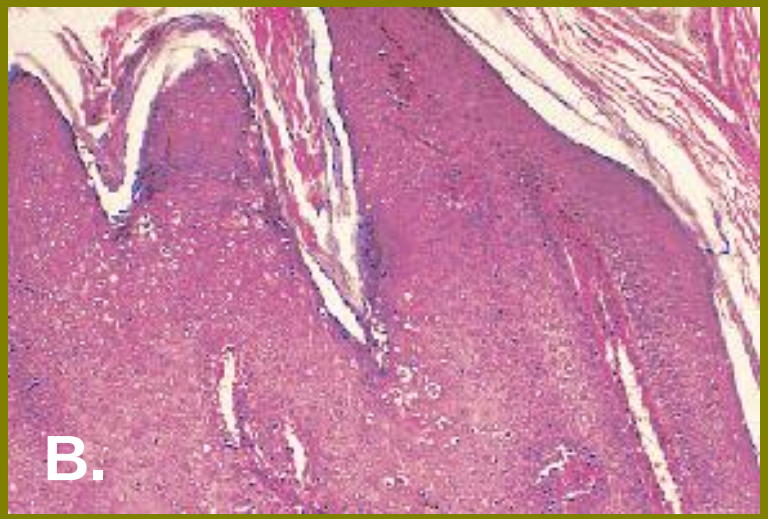
Keratoacanthoma.



PATHOLOGY OF VULVA

CONDYLOMA ACUMINATUM



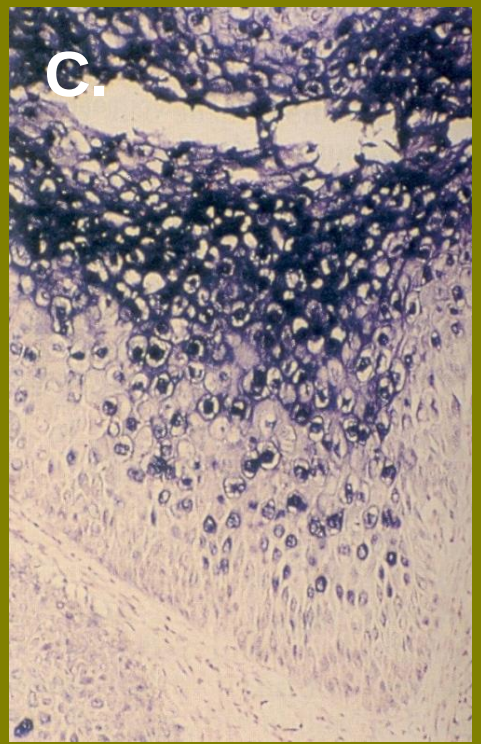


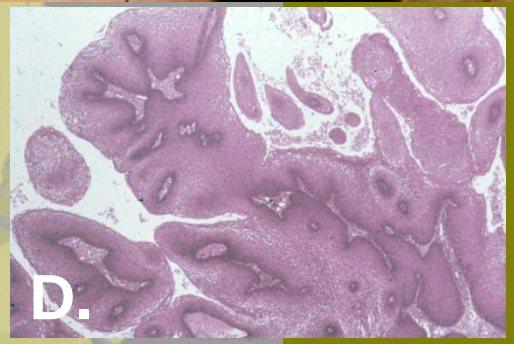
A. GROSS PATHOLOGY OF CONDYLOMA ACUMINATUM

B. MICROSCOPIC PICTURE

C. VIRAL INCLUSIONS IN EPITHELIUM

D. MICROSCOPIC PICTURE OF CONDYLOMA ACUMINATUM

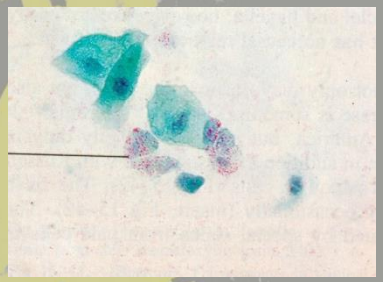




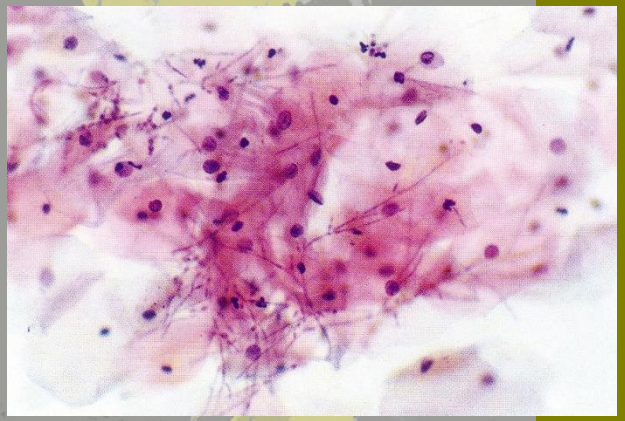
PATHOLOGY OF VAGINA AND UTERINE CERVIX

COLPITIS AND CERVICITIS

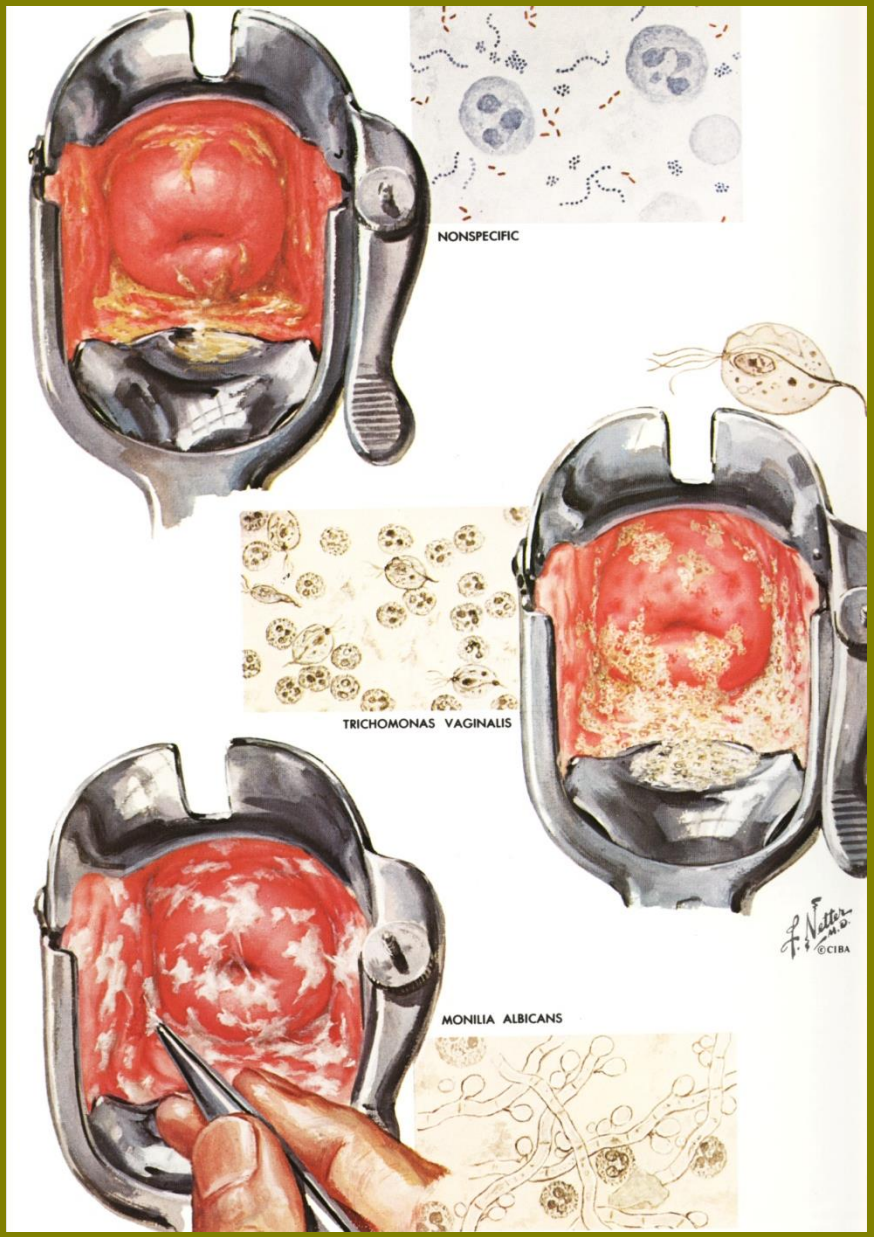
NON-SPECIFIC



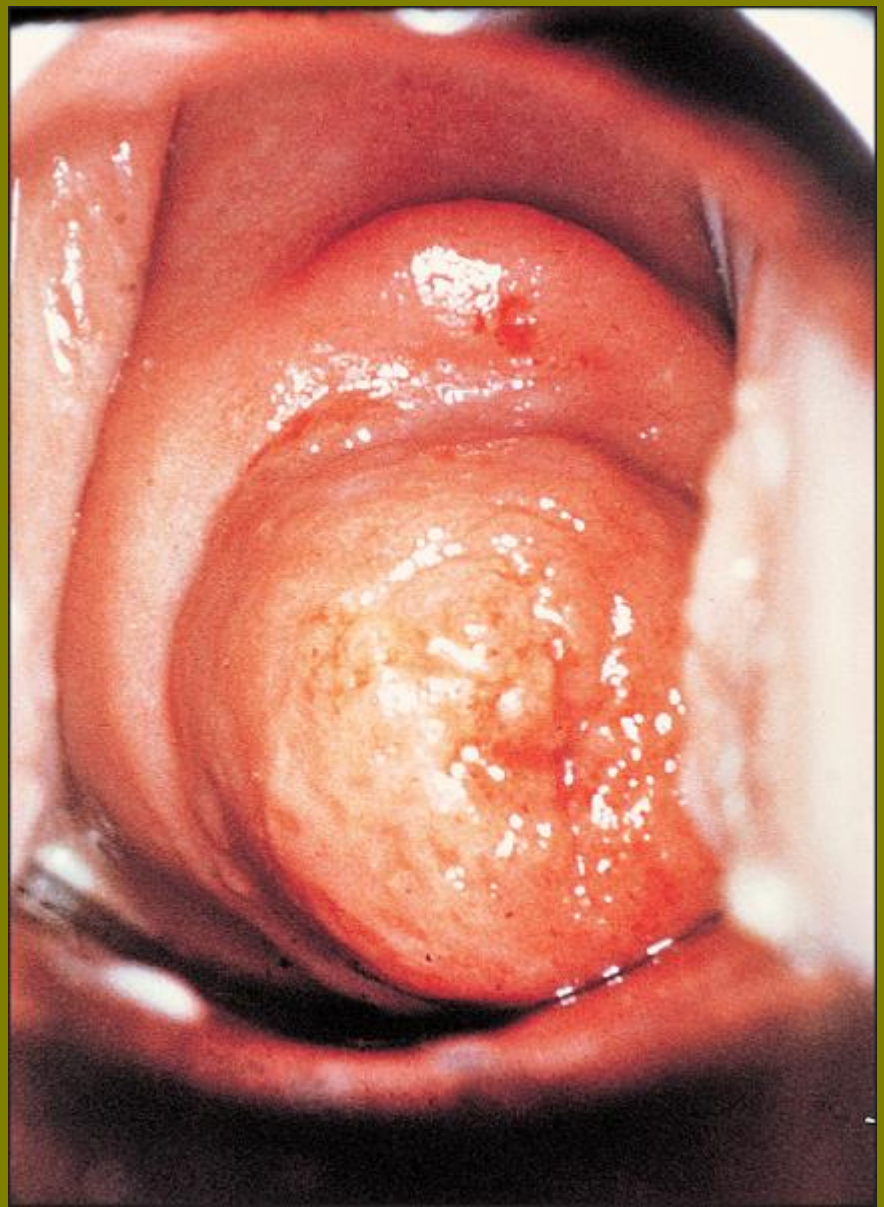
TRICHOMONIASIS



MONILIASIS



DES-associated cervical abnormalities. A coxcomb (upper) and pseudopolyp (middle) are present.



DEVELOPMENTAL DISTURBANCES

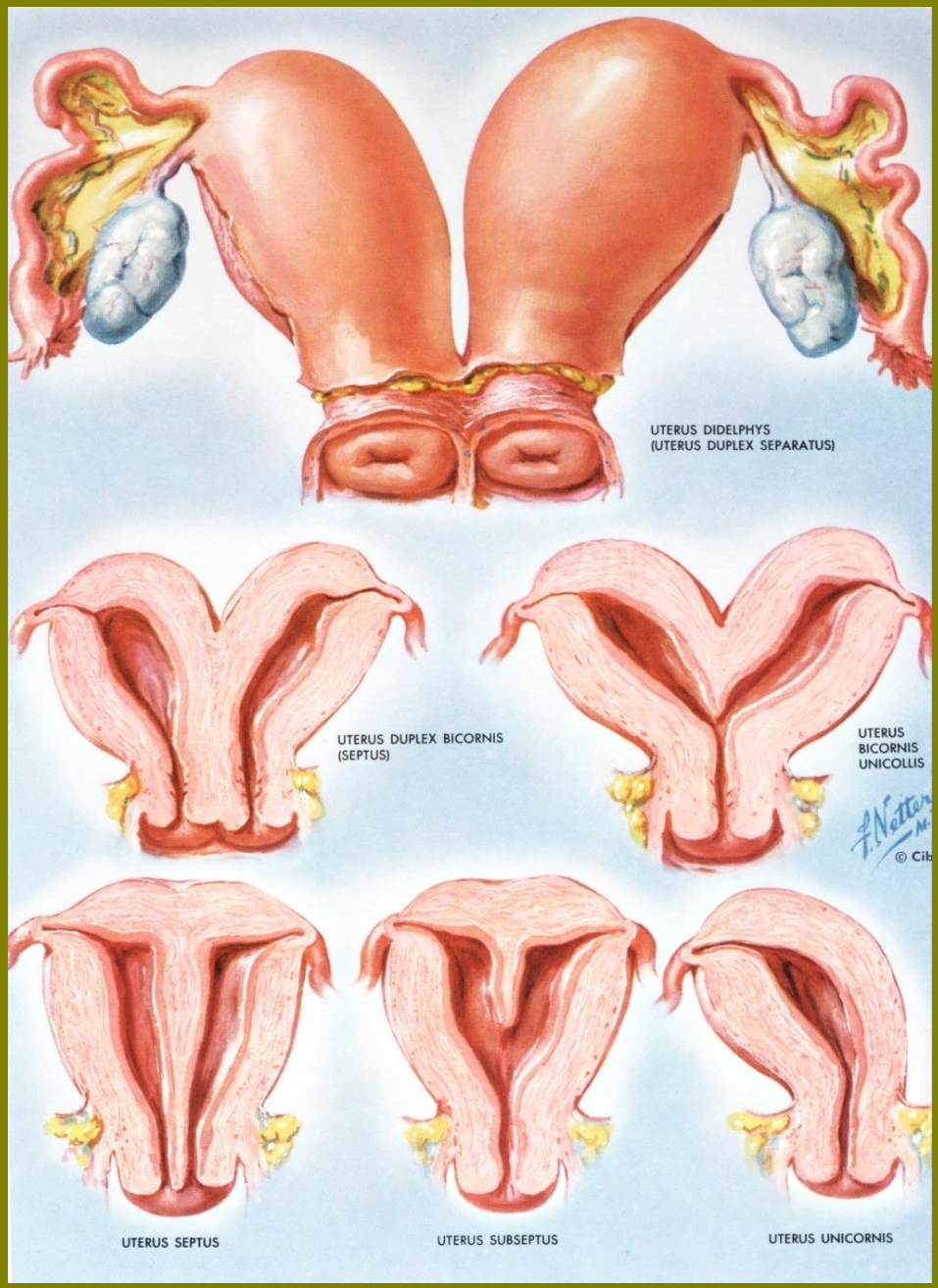
UTERUS DUPLEX

UTERUS ARCUATUS

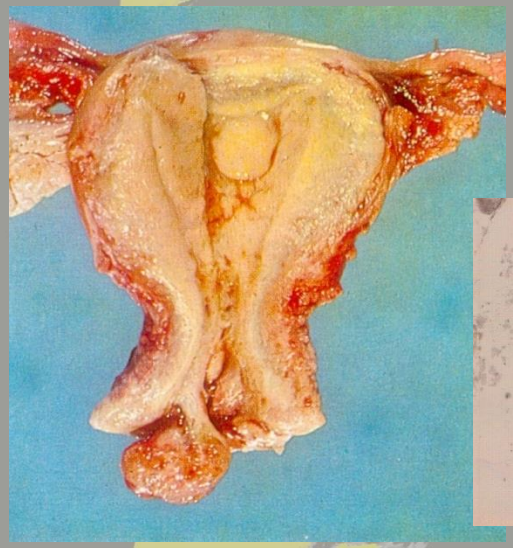
UTERUS BICORNIS

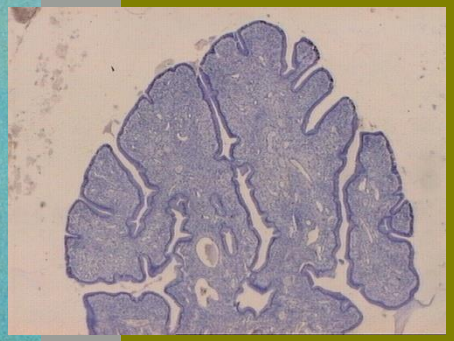
UTERUS UNICORNIS

UTERUS SUBSEPTUS



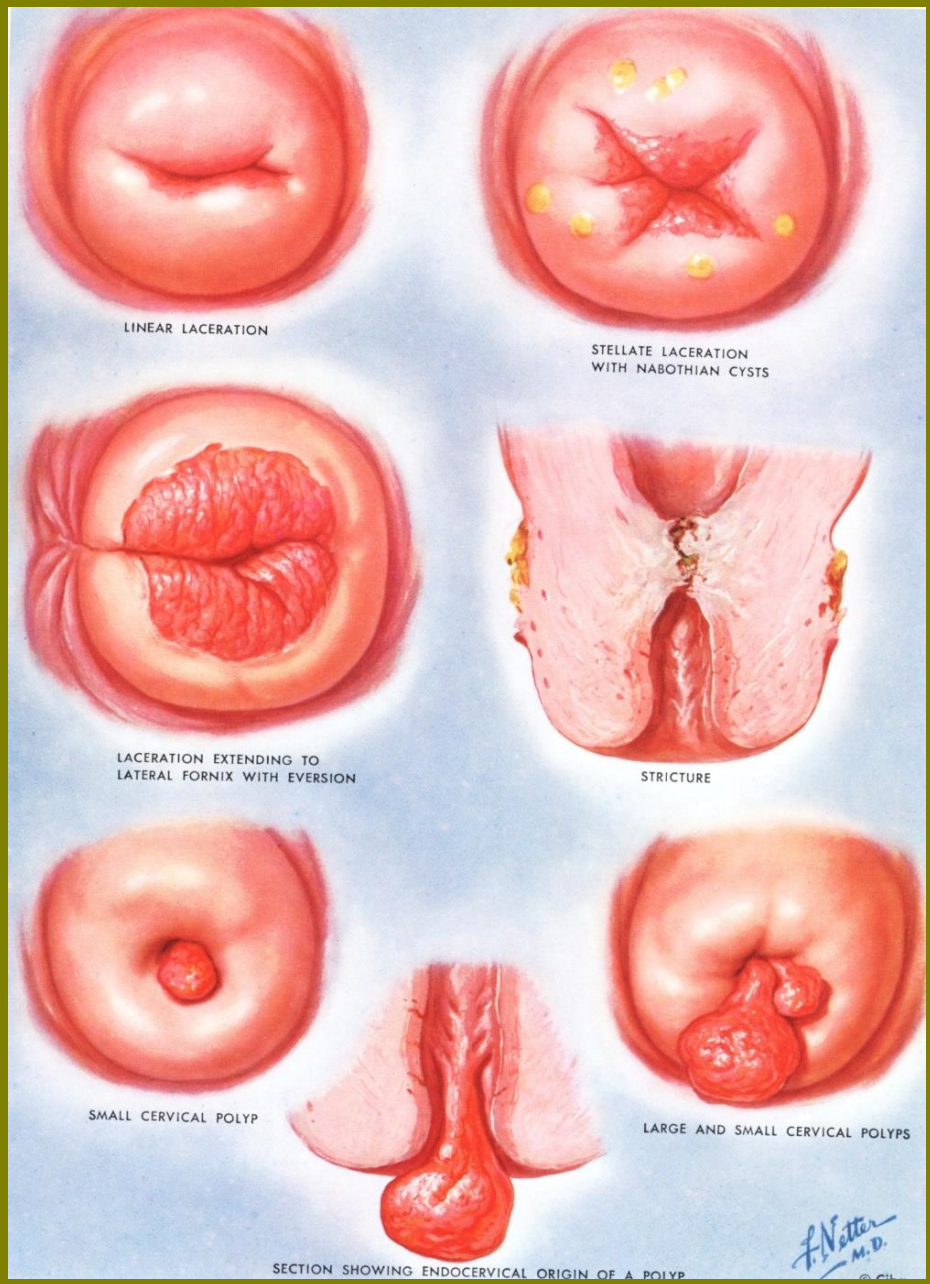
POLYPS AND LACERATION



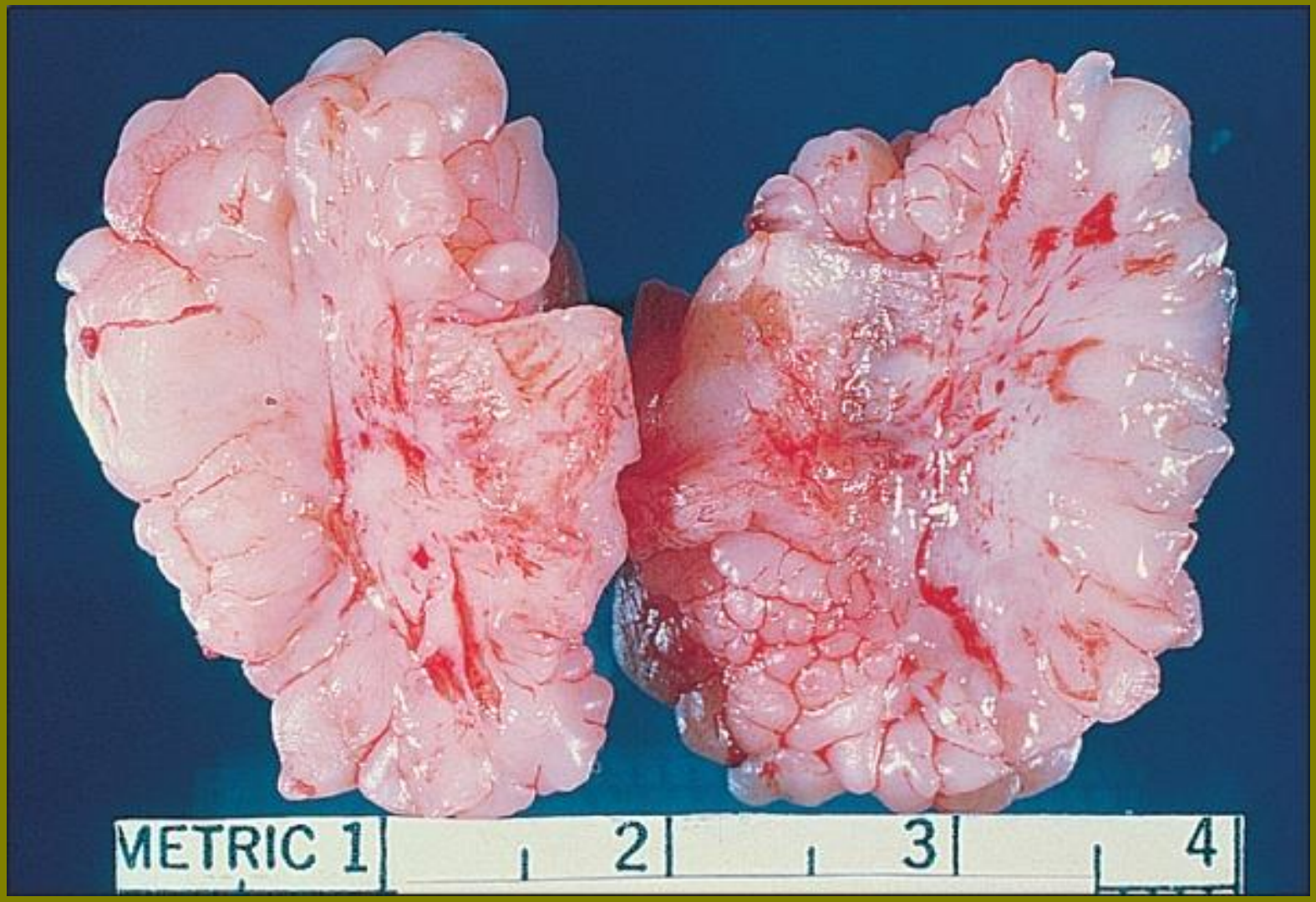


POLYP OF UTERINE CERVIX

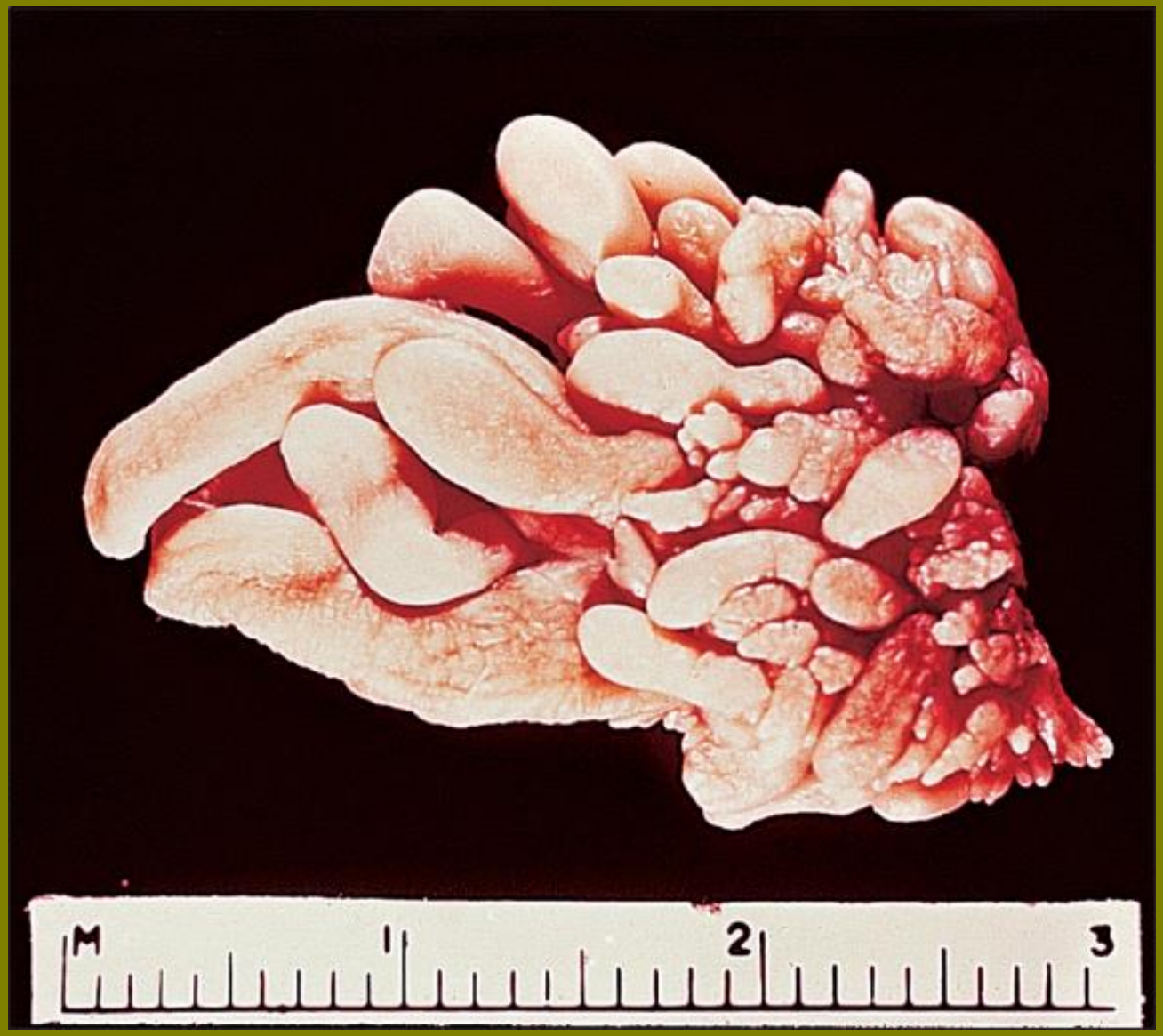
POLYPS OF CERVIX ARE COMMON, OF DIFFERENT SIZES, BUILT FROM DIFFERENT PROPORTIONS OF FIBROUS STROMA, GLANDS AND SQUAMOUS EPITHELIUM



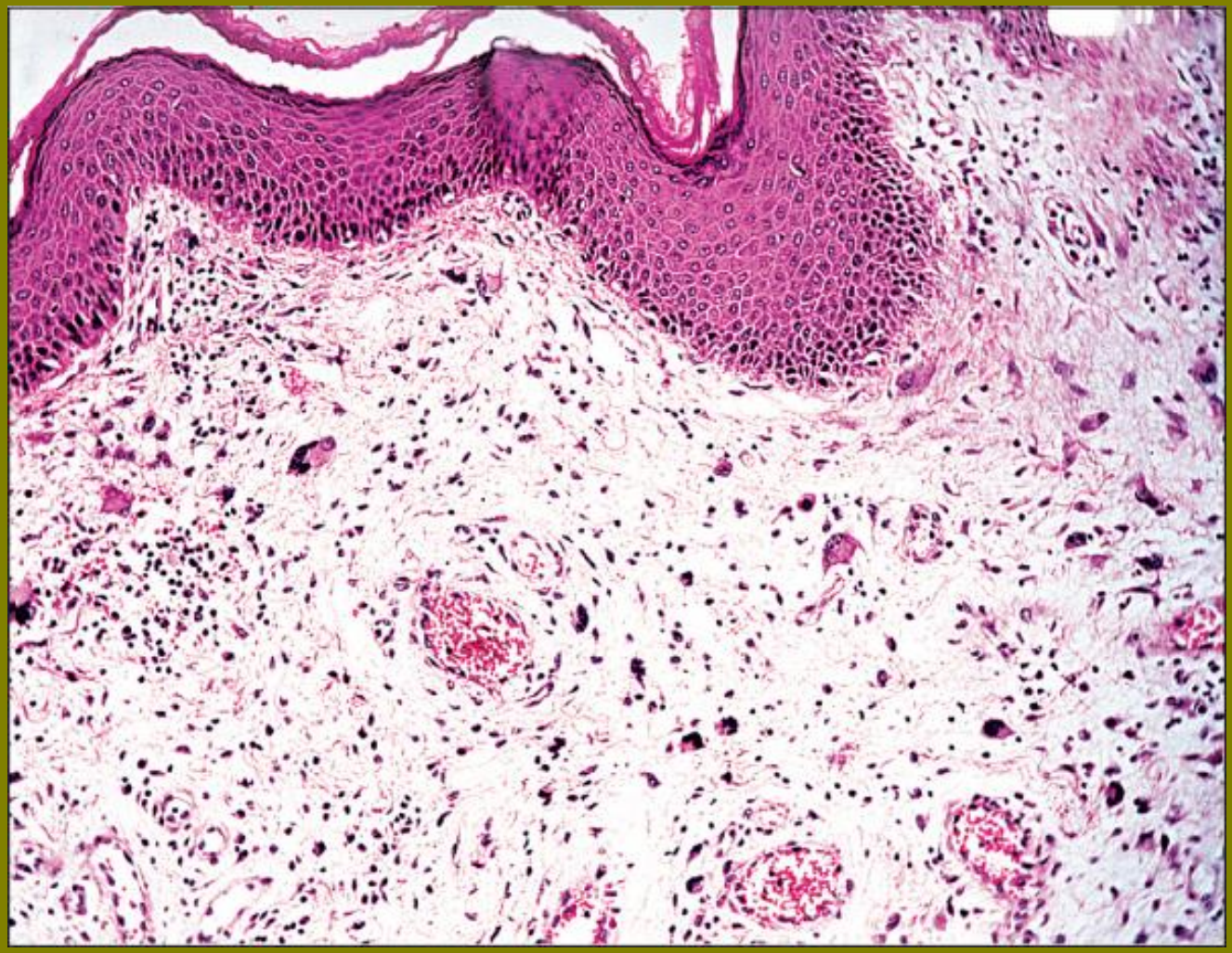
Fibroepithelial polyp, solid.



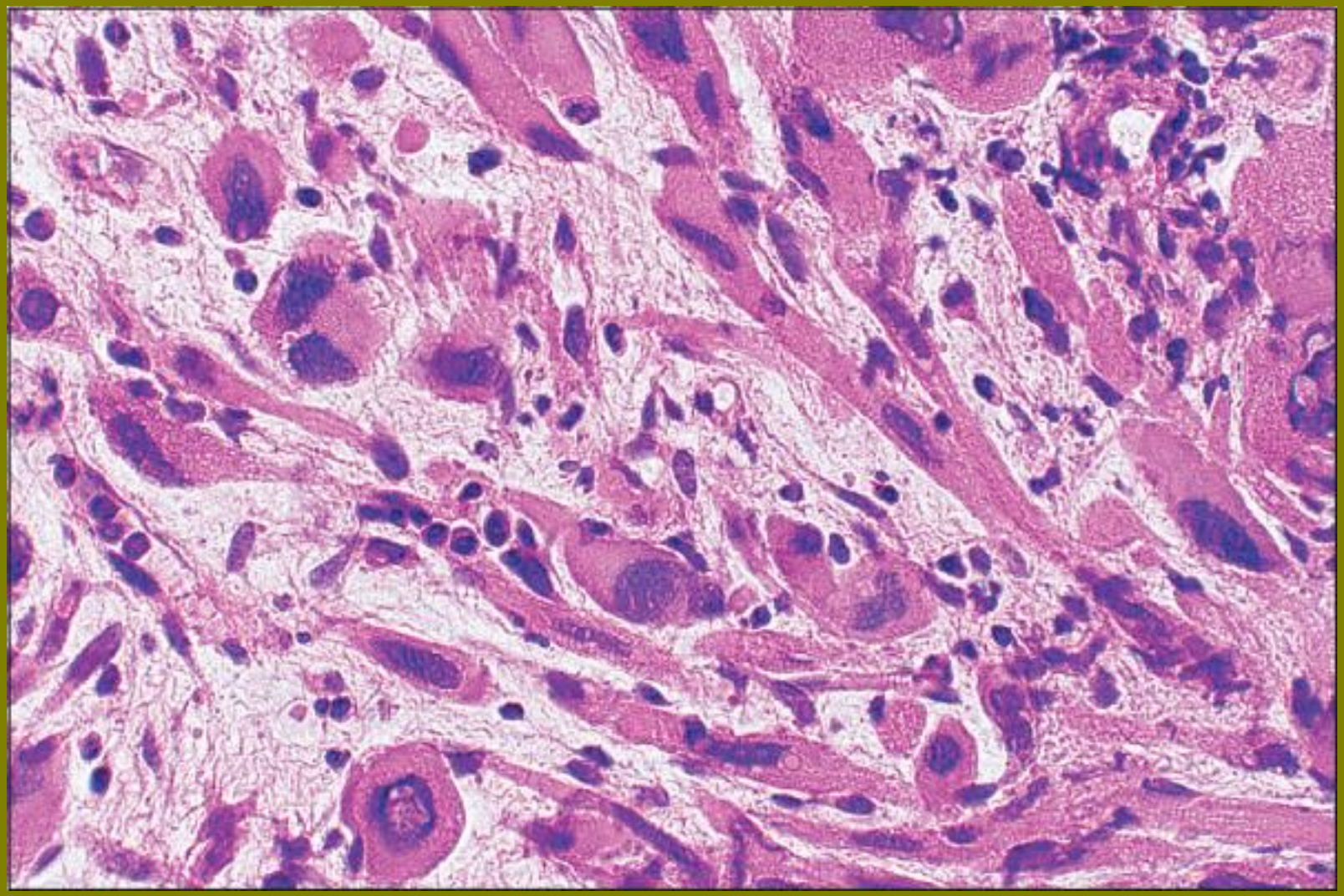
Fibroepithelial polyp, villiform. The tumor has numerous finger-like projections.



Fibroepithelial polyp. Large atypical stromal cells with delicate, pointed cytoplasmic processes are conspicuous.



Rhabdomyoma of vagina.



HUMAN PAPILLOMAVIRUS (HPV) INFECTION

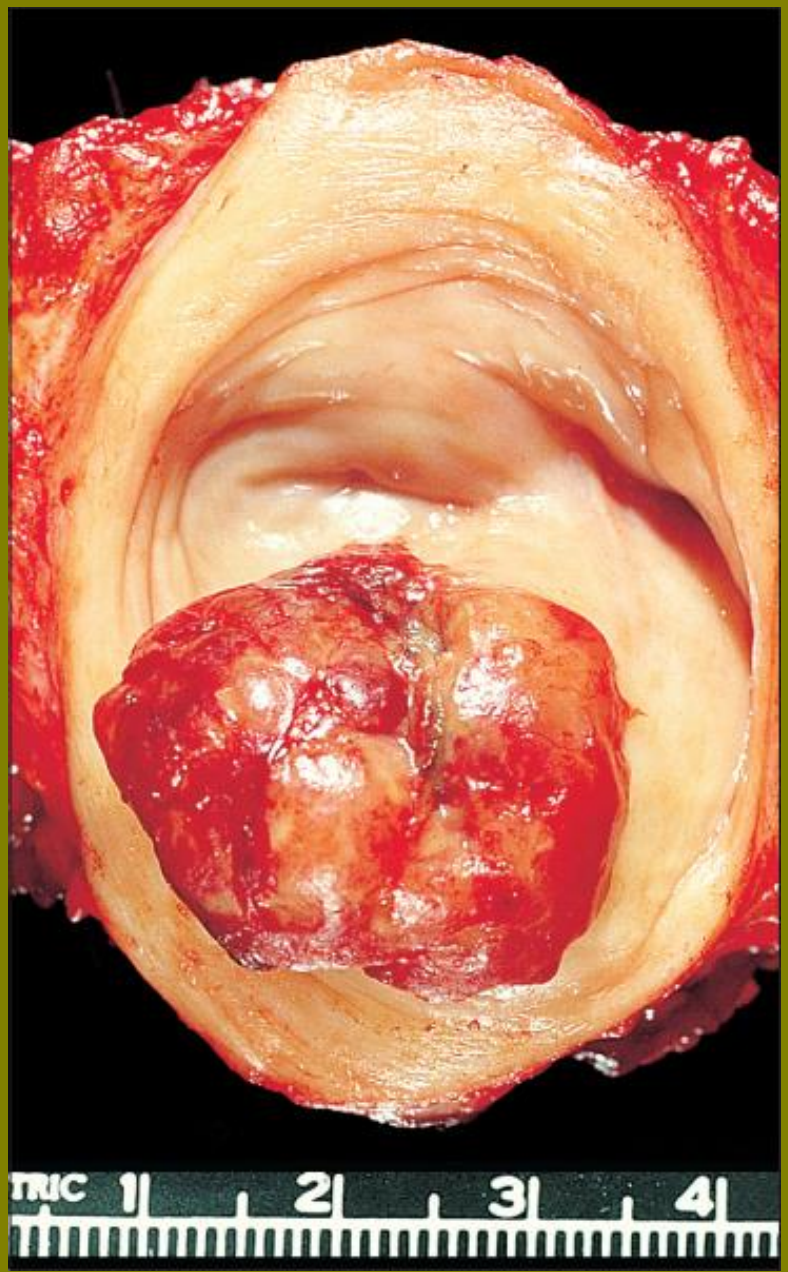
Vaginal mucosa is frequently the site of genital papillomavirus infections, hosting approximately one-fourth of genital condylomata.

Lesions may be flat, slightly raised, or verrucous with stromal papillae (asperities). While frequently small and virtually invisible without colposcopic visualization, they usually become more easily identified following application of 3% acetic acid.

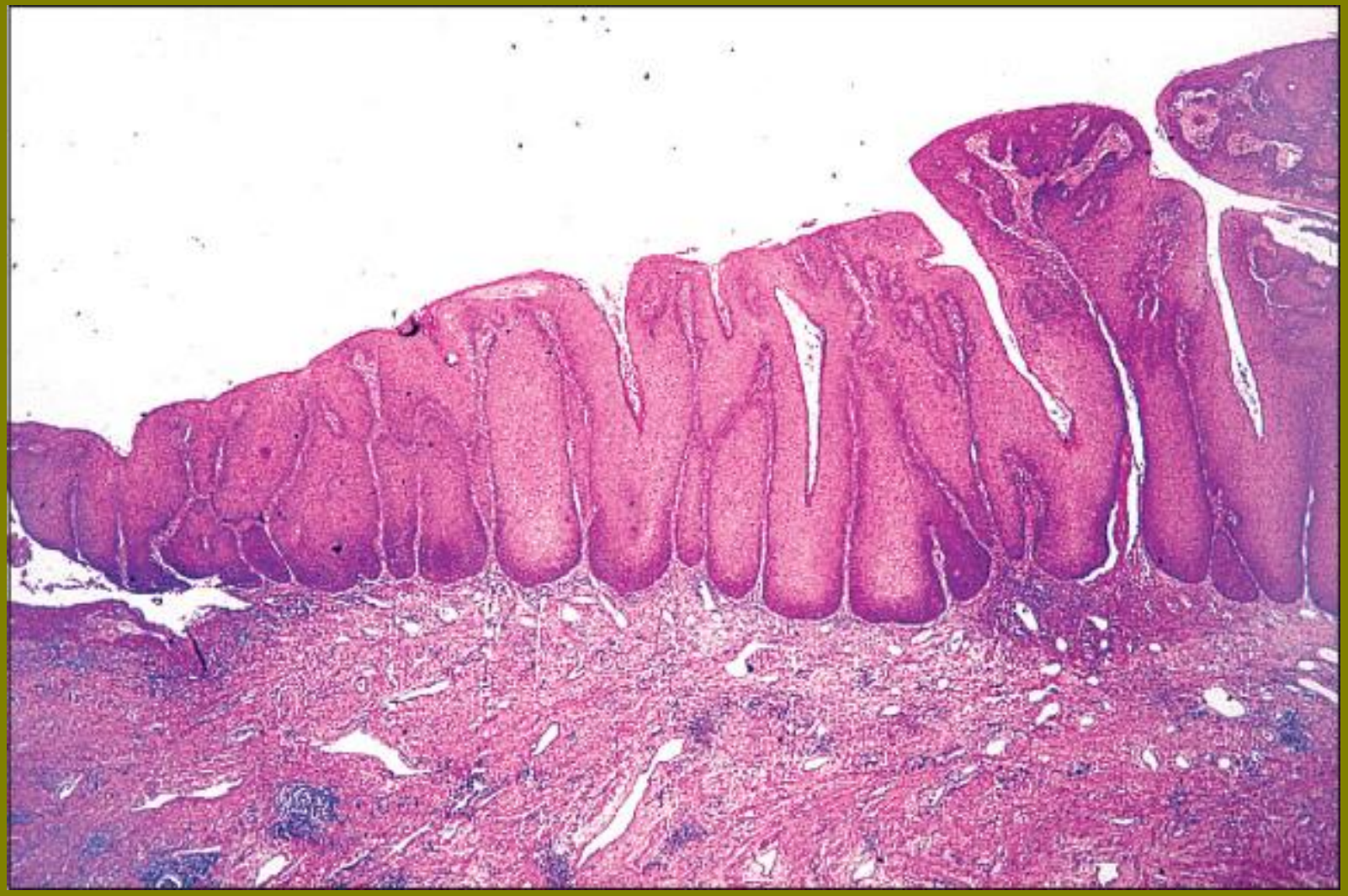
Biopsy usually discloses cells with a characteristic perinuclear halo (koilocytes).

Condylomata acuminata are predominantly HPV 6 or 11 positive.
In one study of 71 patients with premalignant changes, 15 different HPV DNA types were found (HPV 16, 18, 30, 31, 35, 40, 42, 43, 51, 52, 53, 54, 56, 58 and 66)

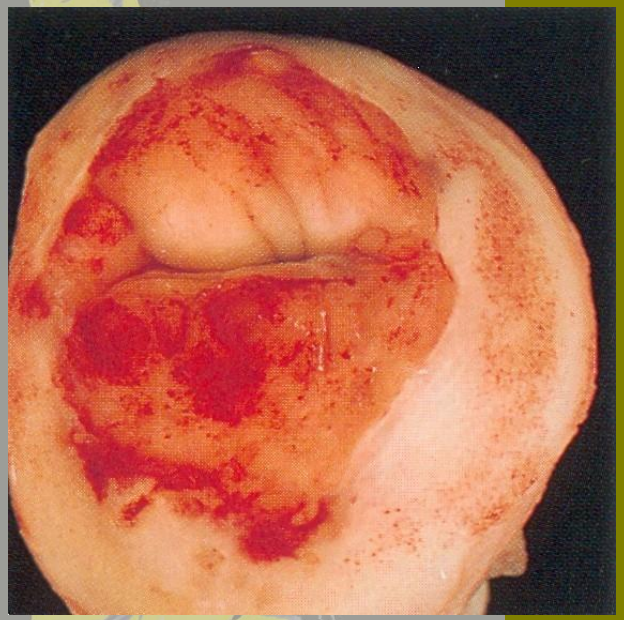
Verrucous carcinoma (vagina).



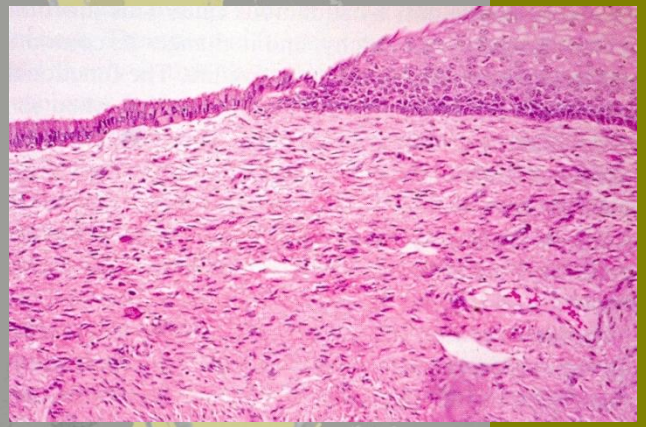
Verrucous carcinoma. The deep margin discloses no invasion (vagina)



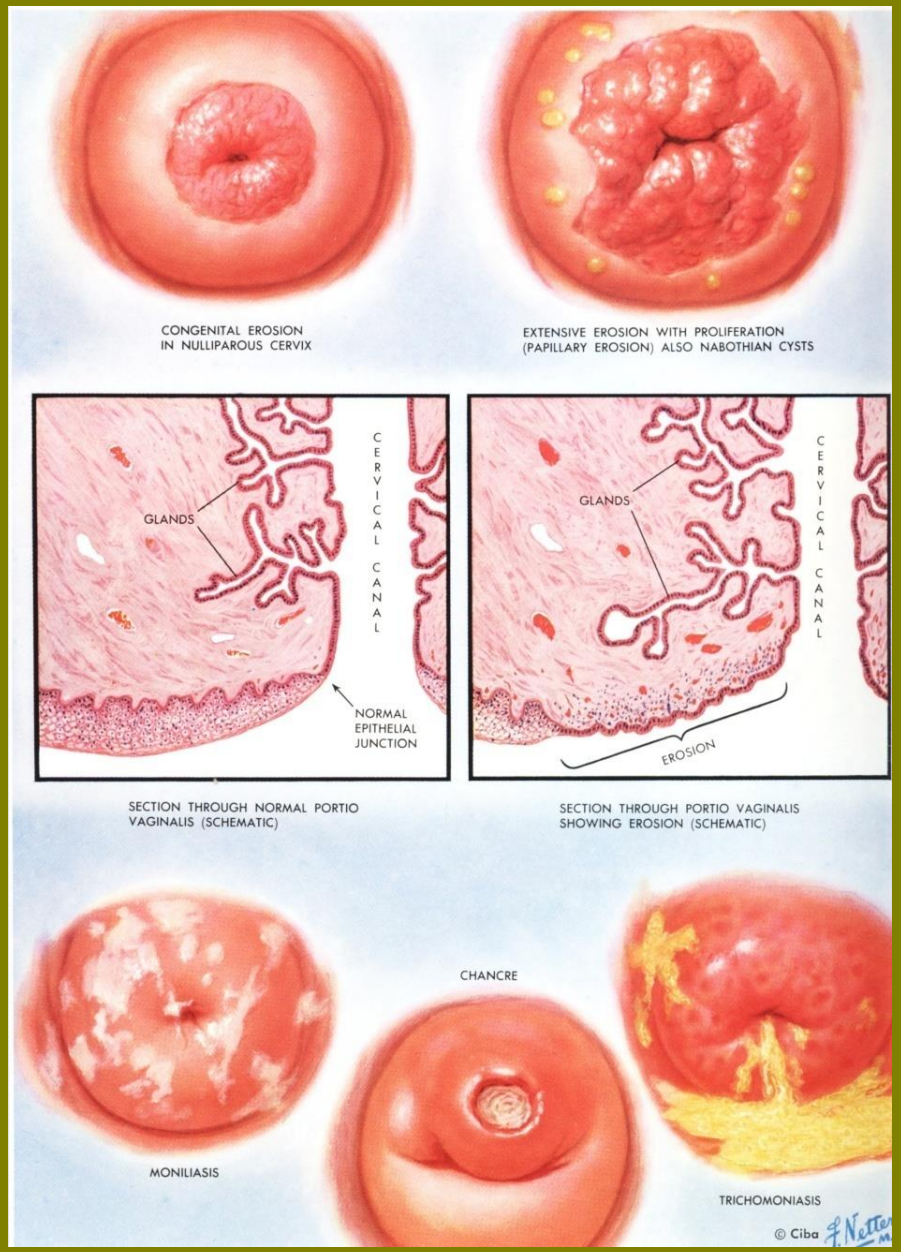
CHANGES IN THE CERVIX

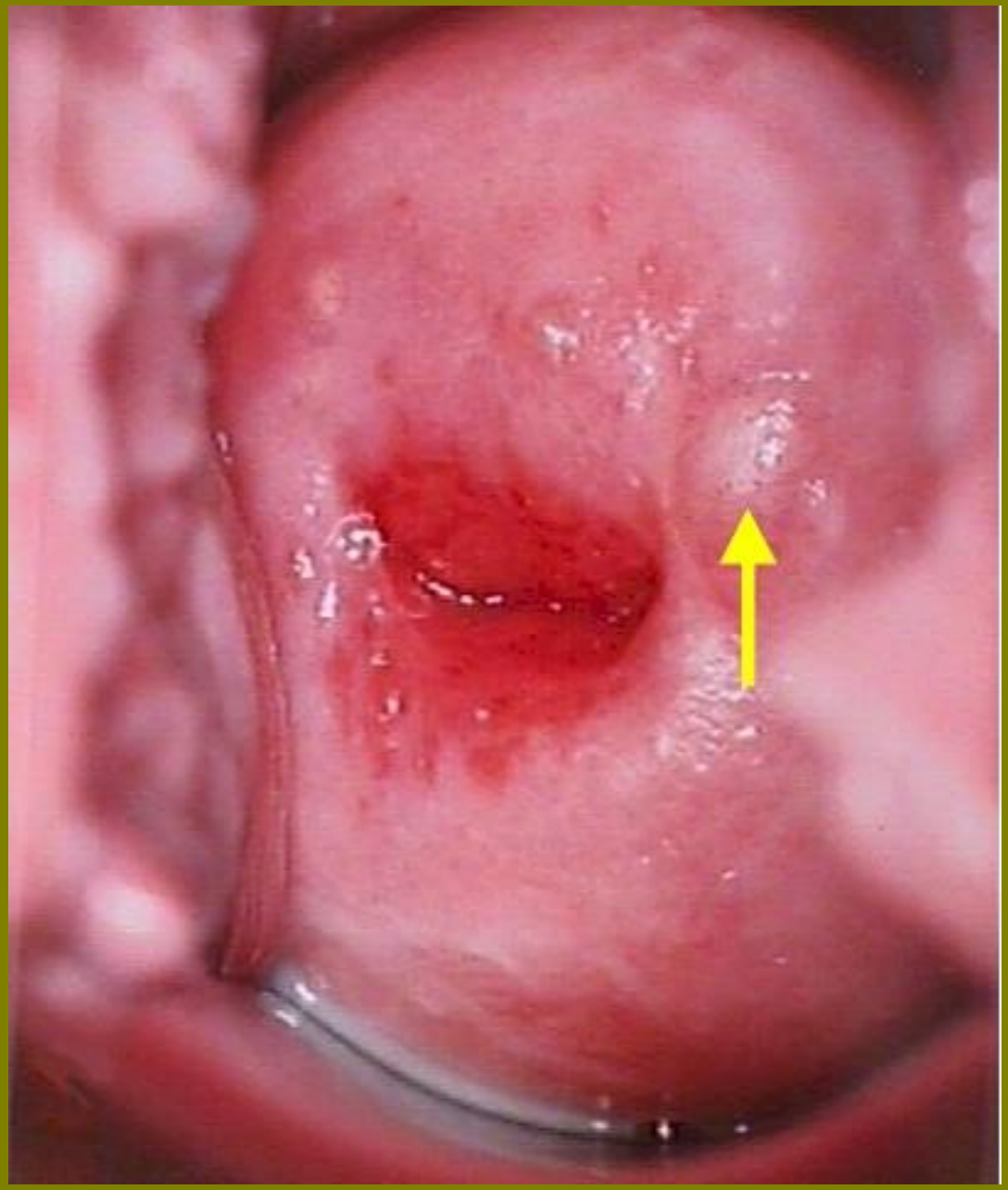


GLANDULAR EROSION, ECTROPION



TRANSITIONAL ZONE

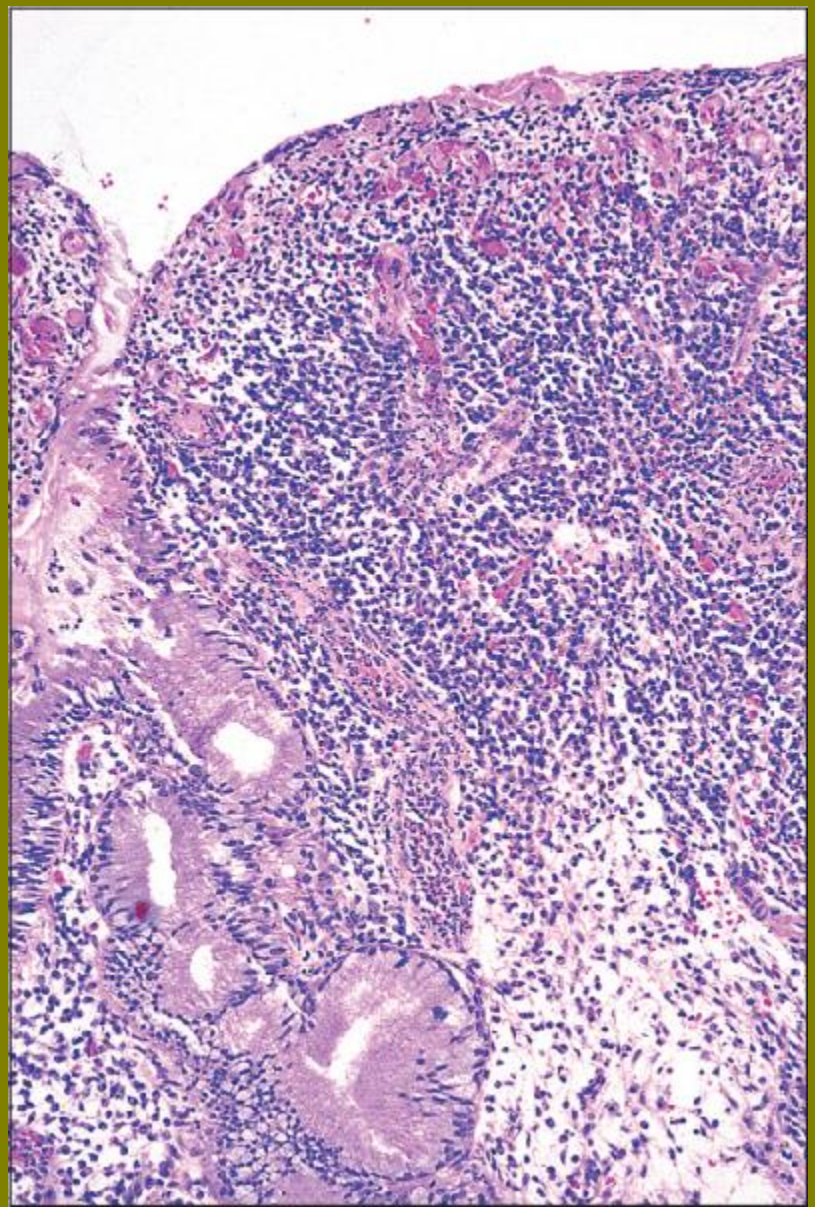




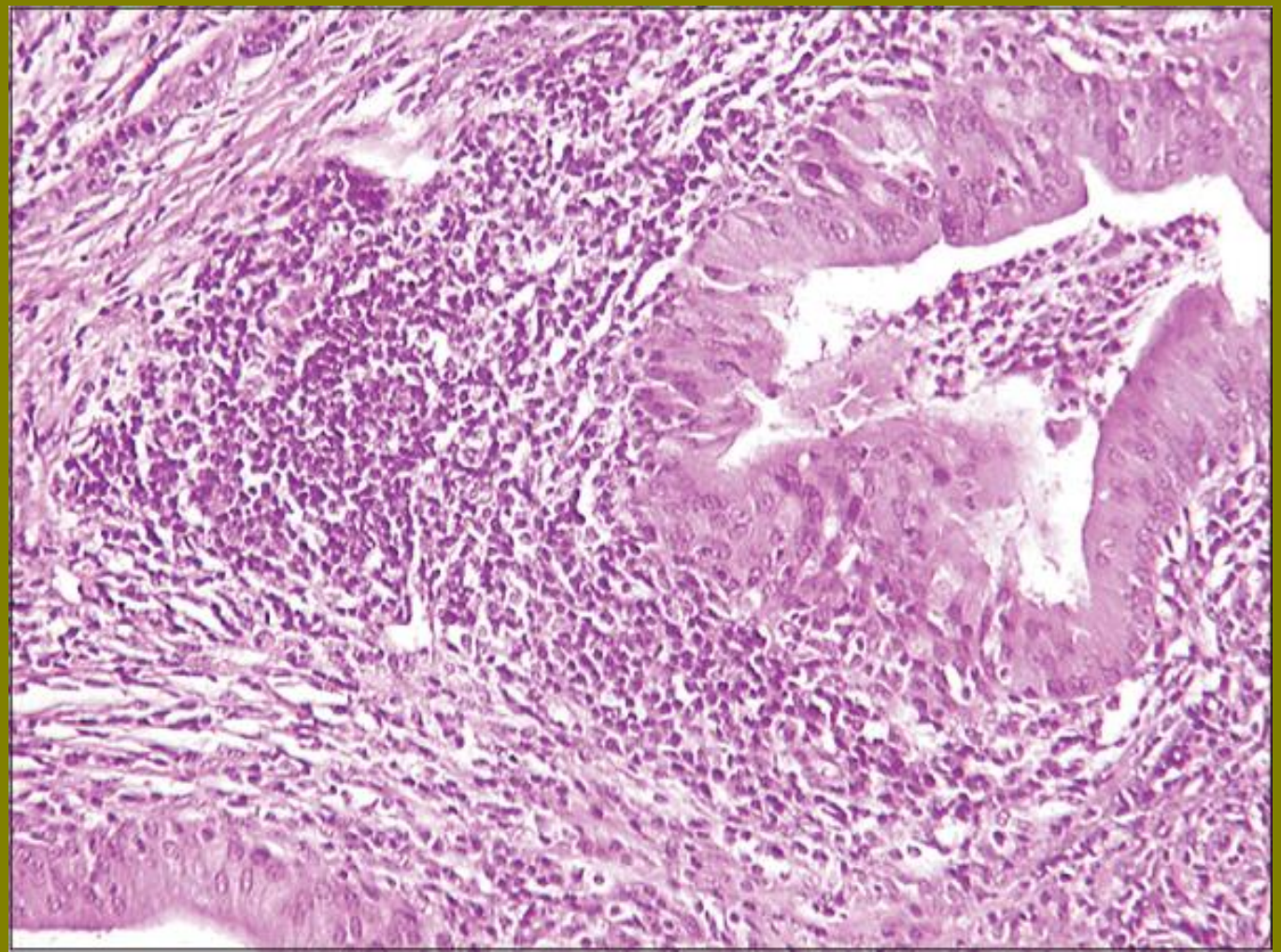
CERVICAL ECTROPION

(www.womanhealth)

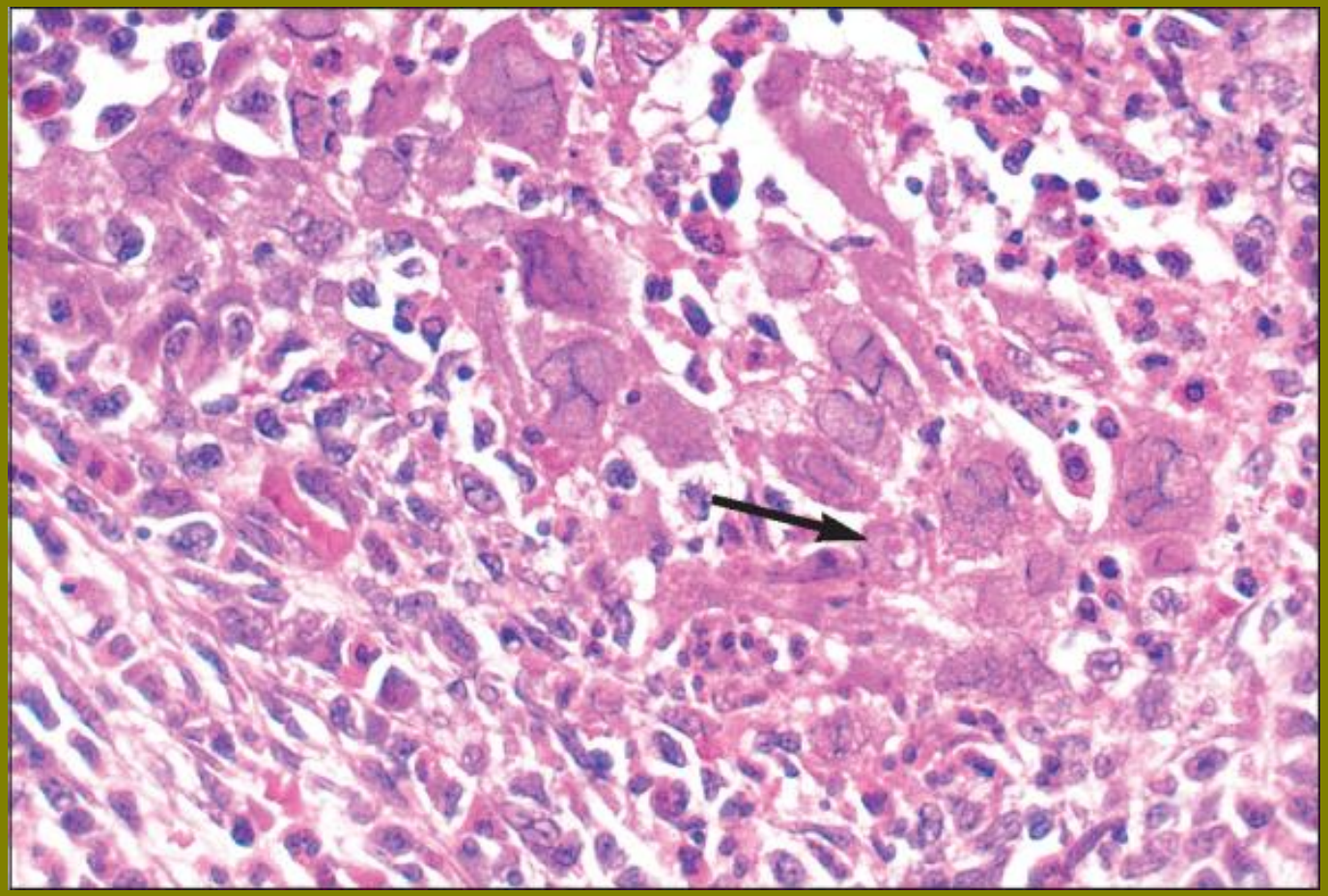
Chronic cervicitis. There is a dense infiltrate of lymphocytes and neutrophils, with new blood vessel formation and dilated vessels packed with neutrophils.



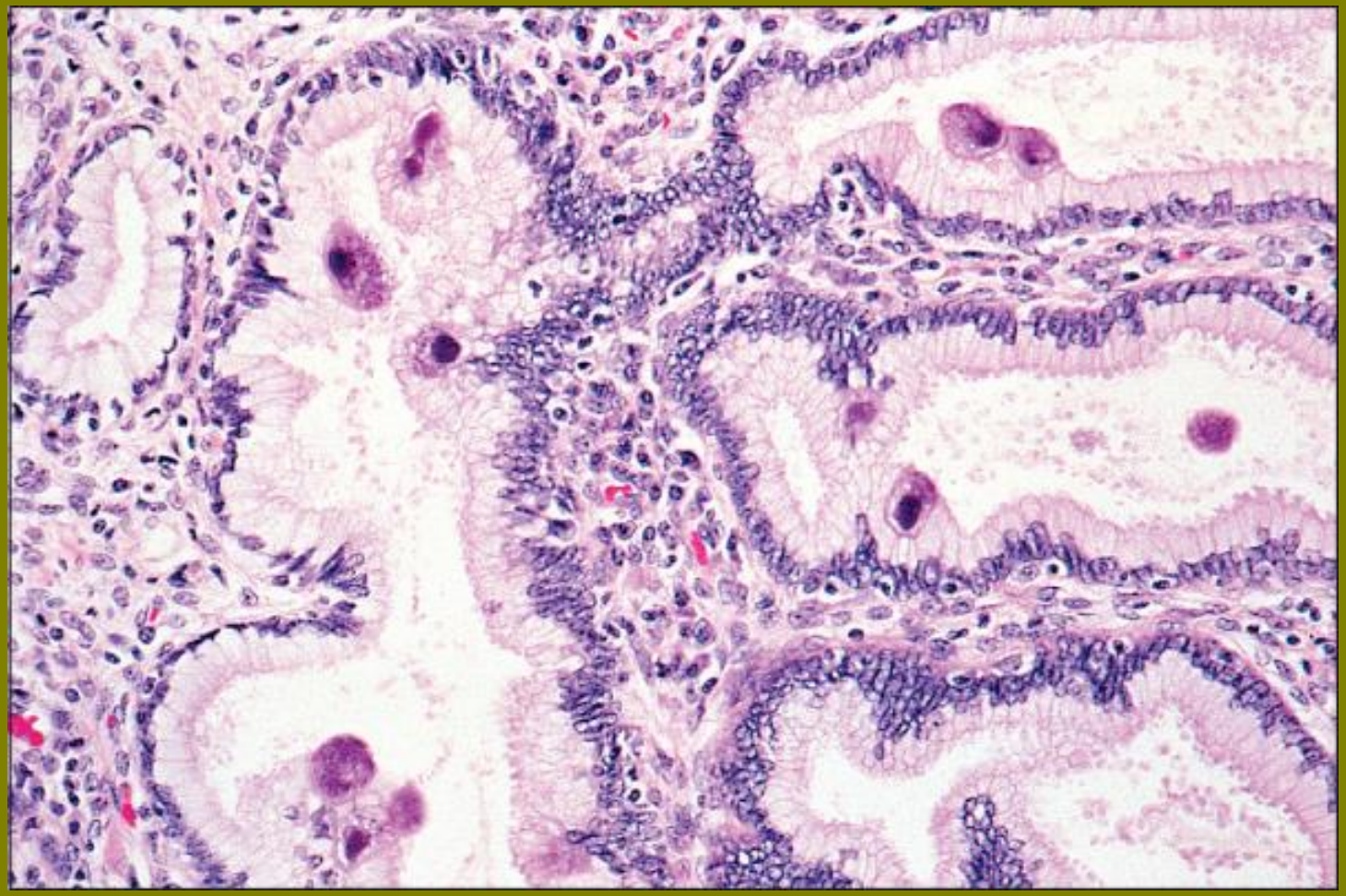
Chlamydial cervicitis. A gland crypt surrounded by a dense infiltrate of lymphocytes and plasma cells. The infiltrate also affects the epithelium and is present in the gland lumen.



Herpes simplex infection. There is lysis of the epithelial tissue. Multinucleated giant cells are present (arrow), showing margination of chromatin and a 'ground-glass' appearance of the nuclei.



Cytomegalovirus infection. Several endocervical cells within the crypt epithelium show large, rounded, basophilic inclusions.



CERVICAL CARCINOMA

1. THE DEVELOPMENT OF CERVICAL CANCER IS PRECEDED BY CHANGES IN THE EPITHELIUM.
2. IN THE PATHOMECHANISM OF CANCER TRANSFORMATION THE KEY ROLE IS PLAYED BY HSV AND HPV VIRUSES
3. CERVICAL CANCER IS ONE OF THE MOST COMMON MALIGNANT CANCERS IN WOMEN
4. MOSTLY DEVELOPS IN THE REPRODUCTIVE PERIOD
5. RISK GROUPS: MANY PREGNANCIES, PROSTITUTES

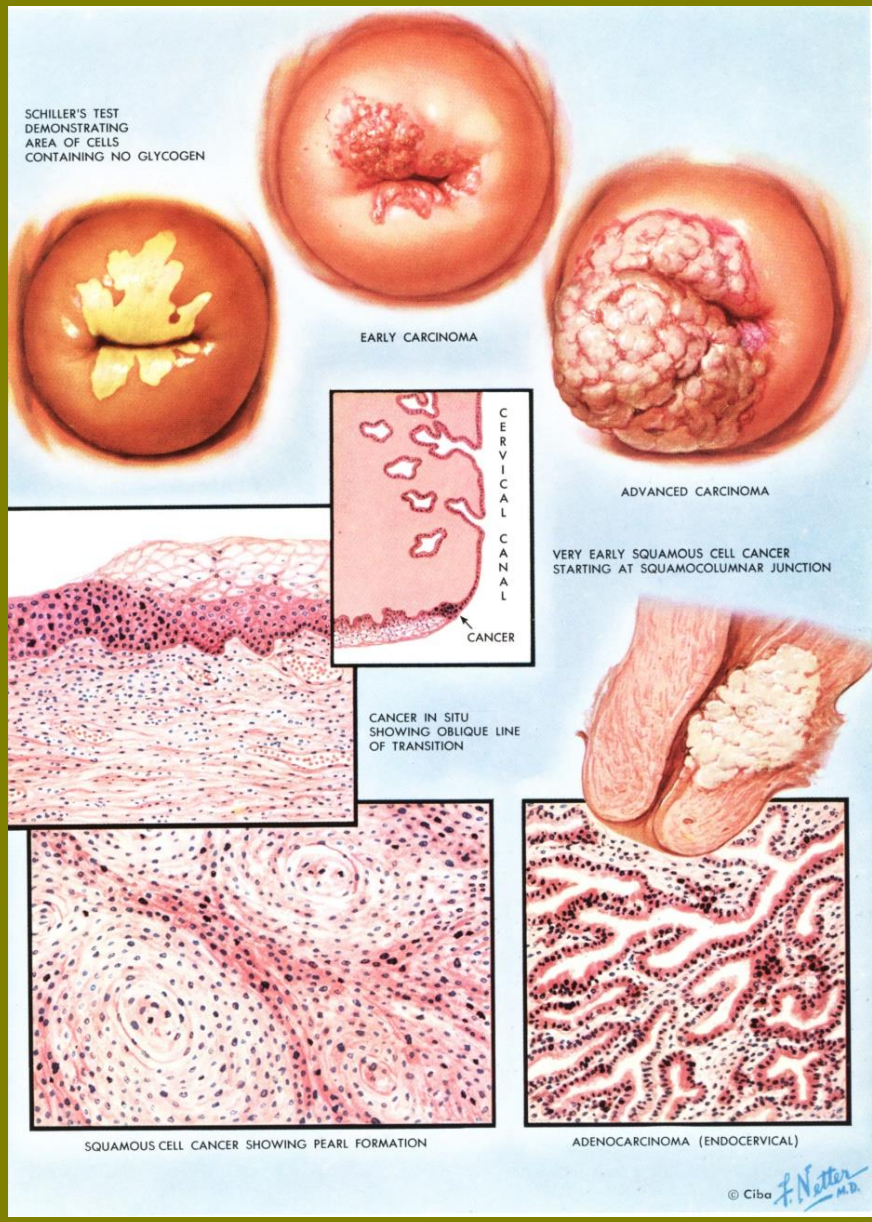
Comparison of HPV frequency detected by laboratory techniques

	DNA hybridization (%)	Koilocytosis (%)	1 Immunocyto chemistry (%)
Condyloma	100	80	80
CIN 1	100	89	61
CIN 2	86	57	29
CIN 3 (severe dysplasia)	100	33	17
CIN 3 (carcinoma *in situ*)	100	20	0

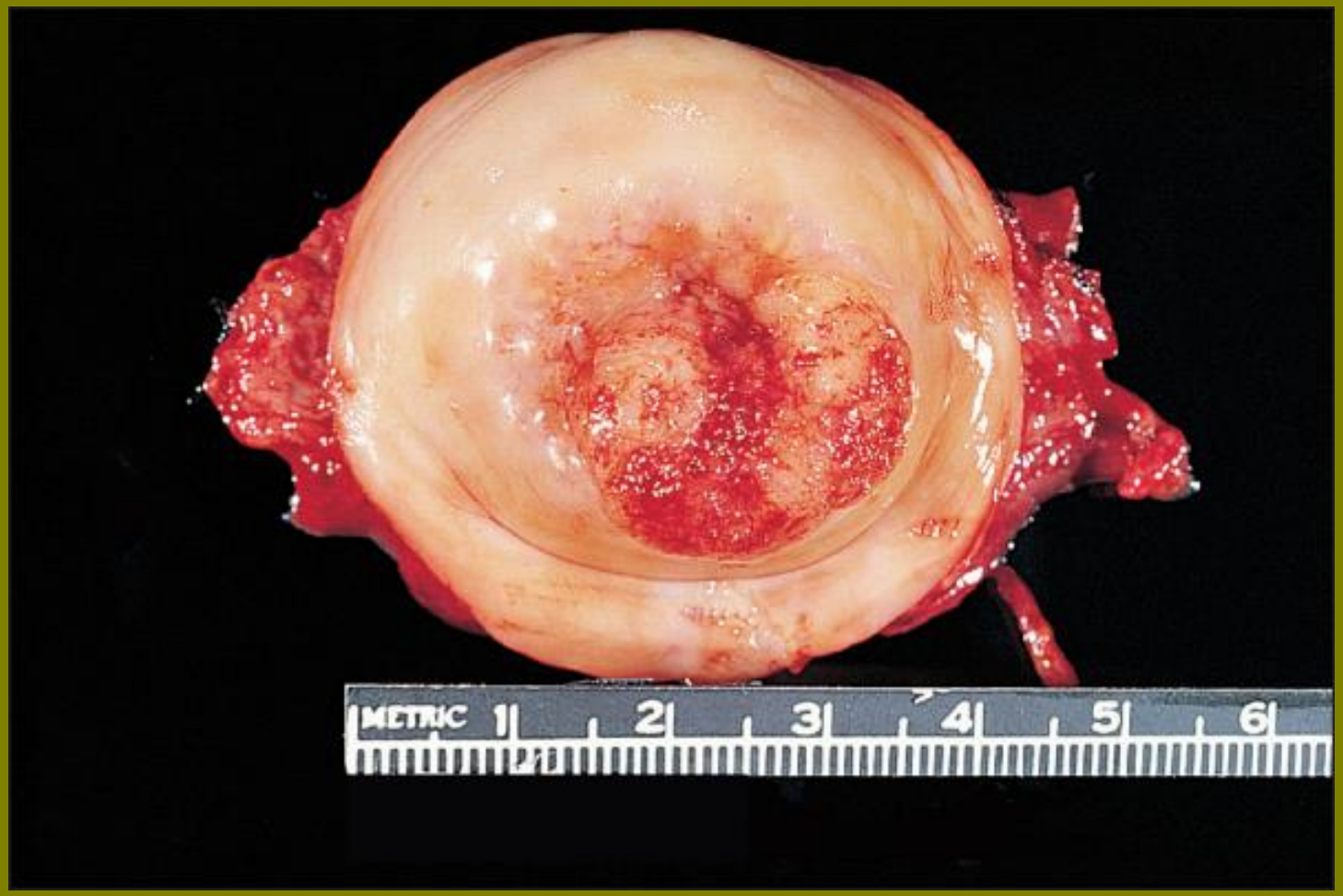
CERVICAL CARCINOMA – MACROSCOPIC PICTURE HISTOLOGICAL FORMS

THE MOST COMMON FORM OF CANCER IN THE CERVIX IS SQUAMOUS CELL CARCINOMA (SCC) – 95%.
5% - ADENOCARCINOMA

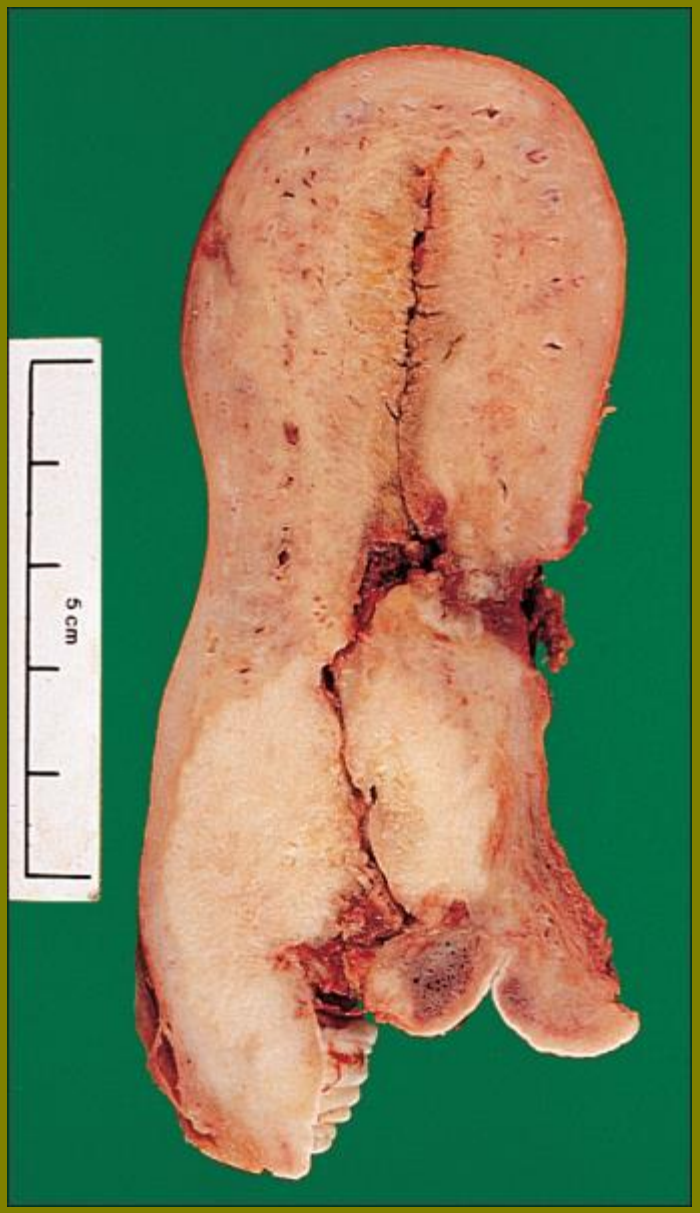
Cancer of the cervix is the second most common cancer in women worldwide after cancer of breast. It is a single most common female genital cancer in developing countries.



Squamous cell carcinoma. Tumor protrudes through the external os and involves the exocervix.

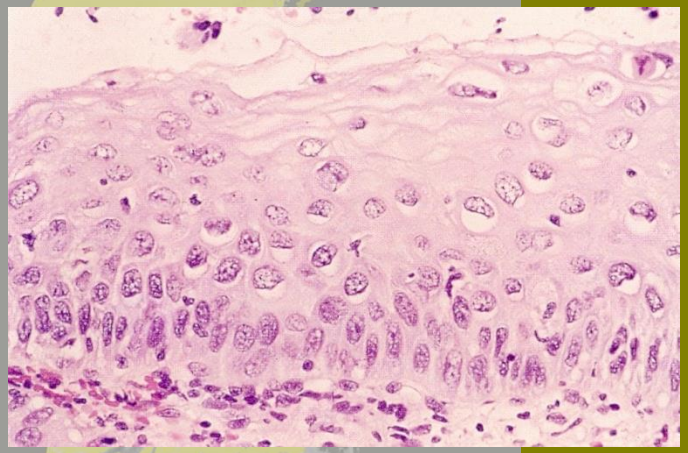


Squamous cell carcinoma. The uterus, cut in cross-section, discloses an extensive tumor infiltrating throughout the wall of the endocervix (white)

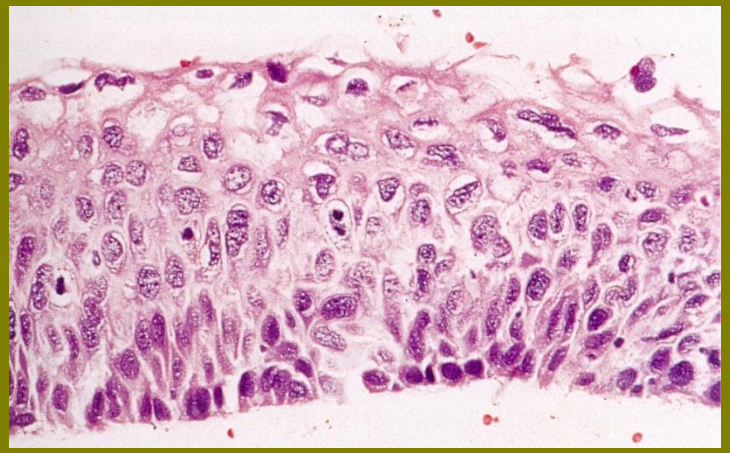


CERVICAL CARCINOMA – CARCINOMA PLANOEPITHELIALE (SCC)

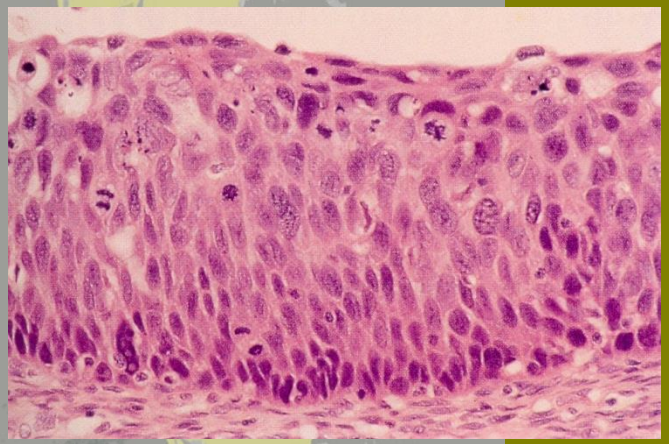
DEVELOPMENT OF SCC IS PRECEDED BY MANY DYSPLASTIC CHANGES IN THE EPITHELIUM



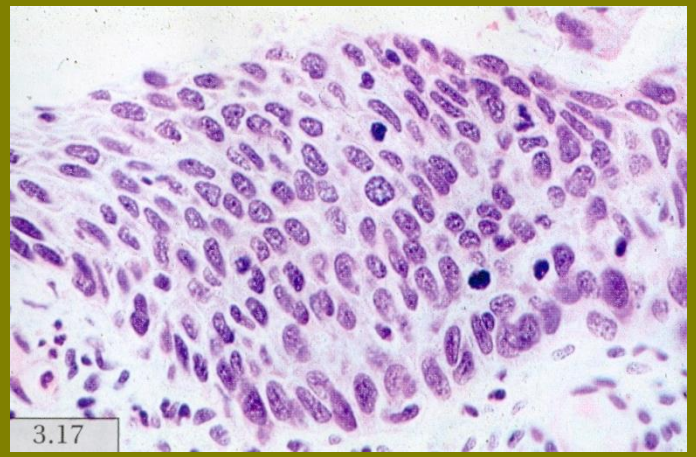
***DYSPLASIA LEVIS* (CIN 1)**



***DYSPLASIA MEDII GRADUS* (CIN 2)**

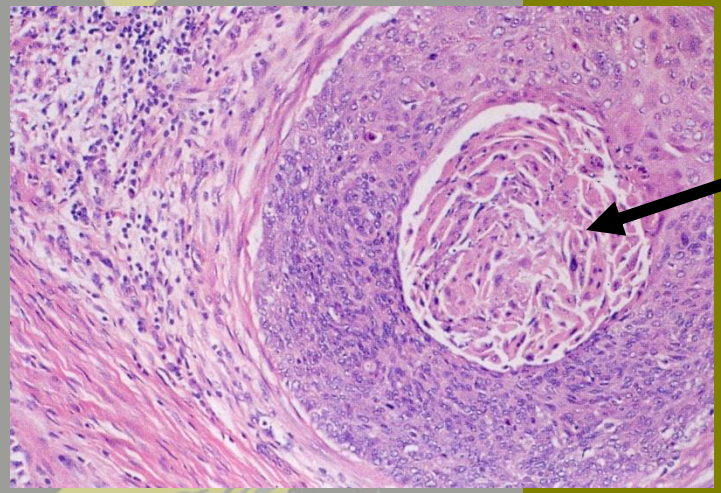


***DYSPLASIA MAIORIS GRADUS* (CIN 3)**

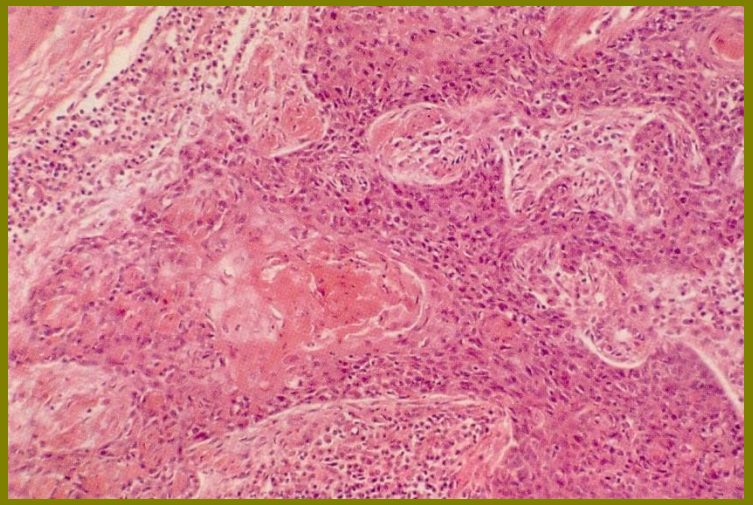


***PREINVASIVE CARCINOMA (IN SITU)* (CIN 3)**

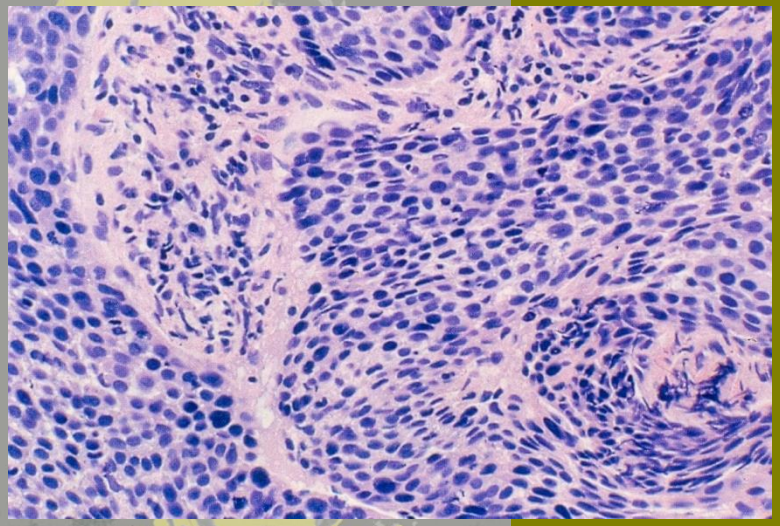
CERVICAL CARCINOMA – CARCINOMA PLANOEPITHELIALE (SCC)



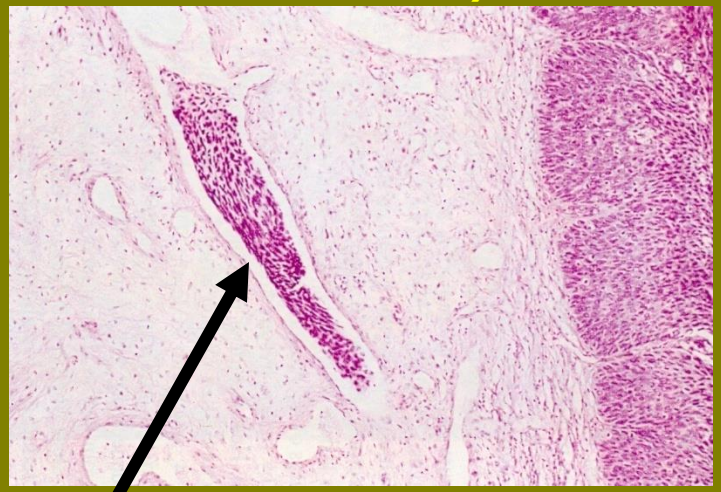
KERATINIZING SCC



KERATINIZING SCC (WITH LARGE CELLS)

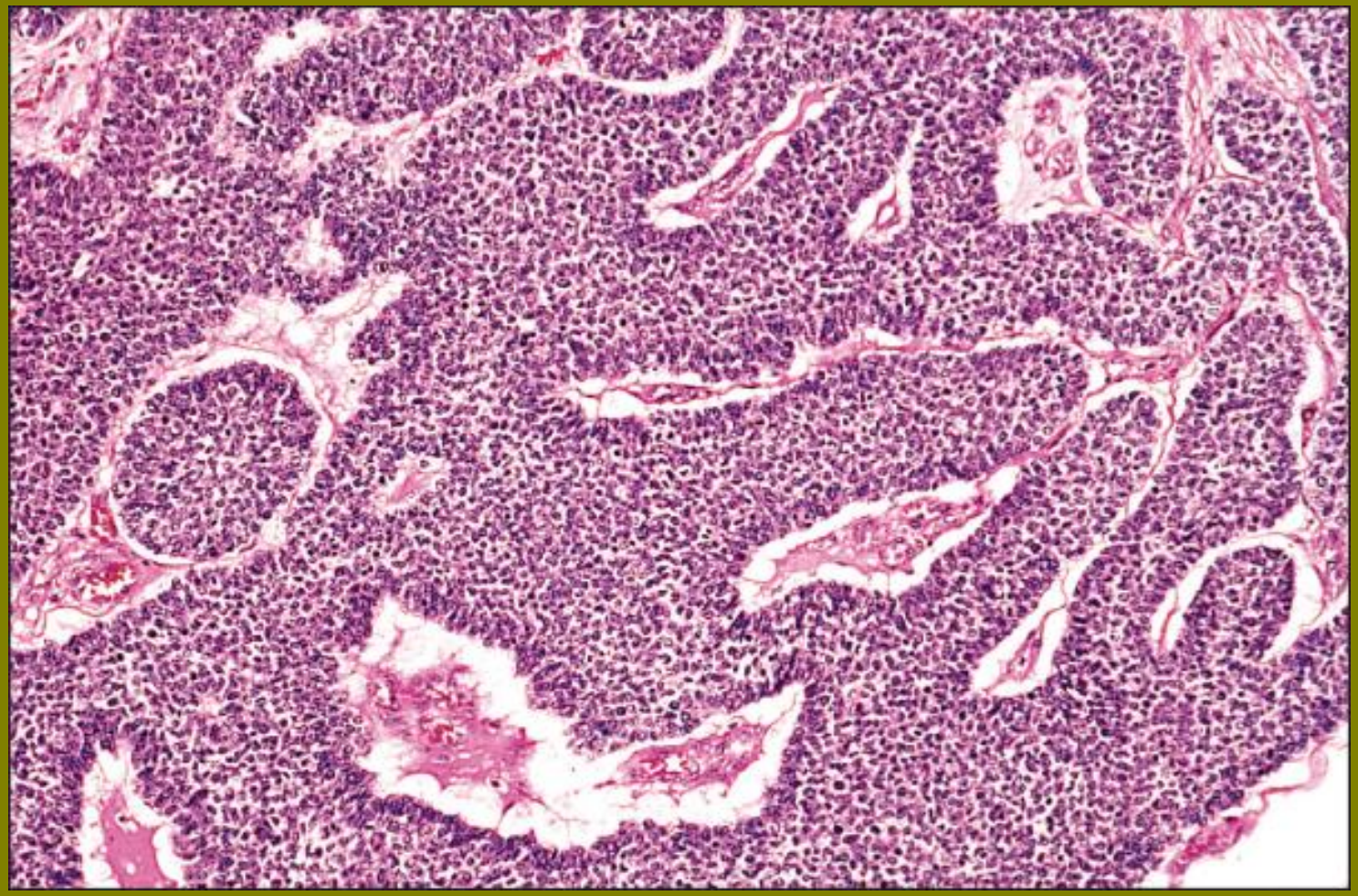


NON-KERATINIZING SCC (WITH SMALL CELLS)

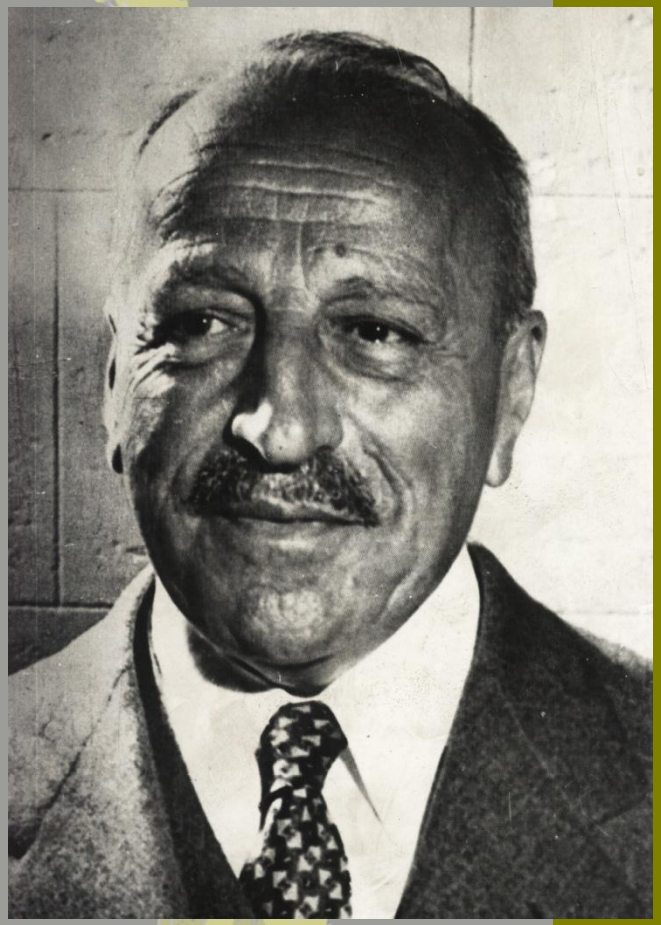


INVASION OF LYMPHATIC VESSELS IN CERVICAL CANCER

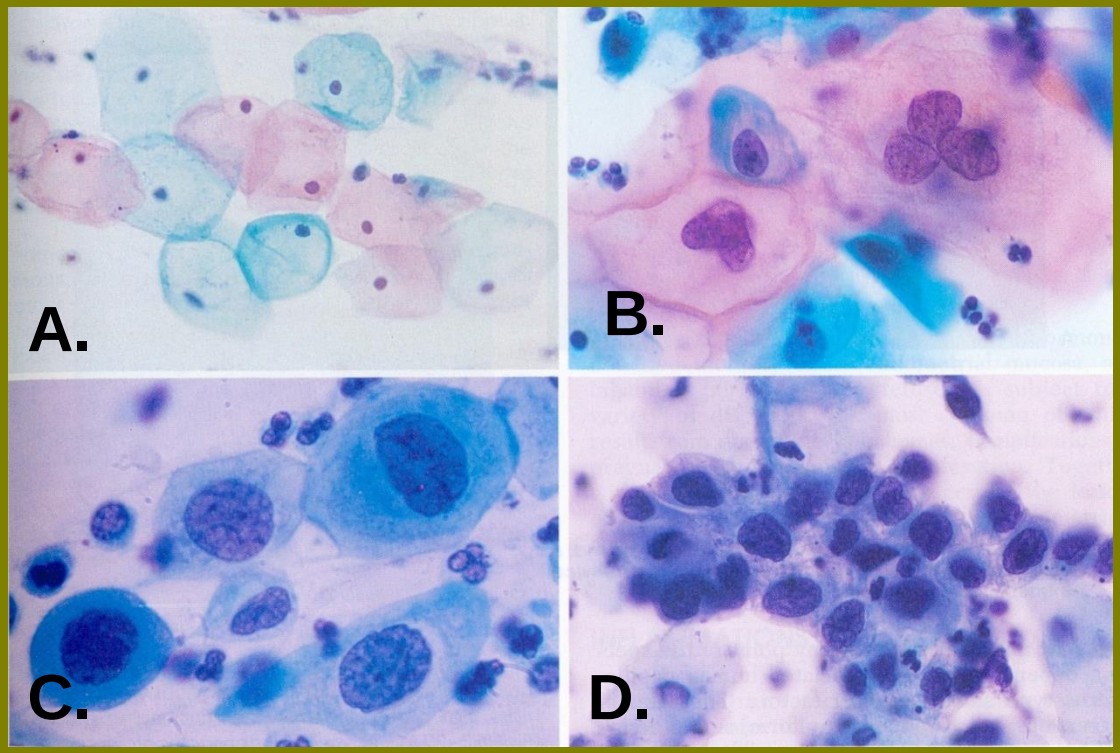
Basaloid (small cell) squamous cell carcinoma. The cells contain minimal cytoplasm.



CYTOLOGY



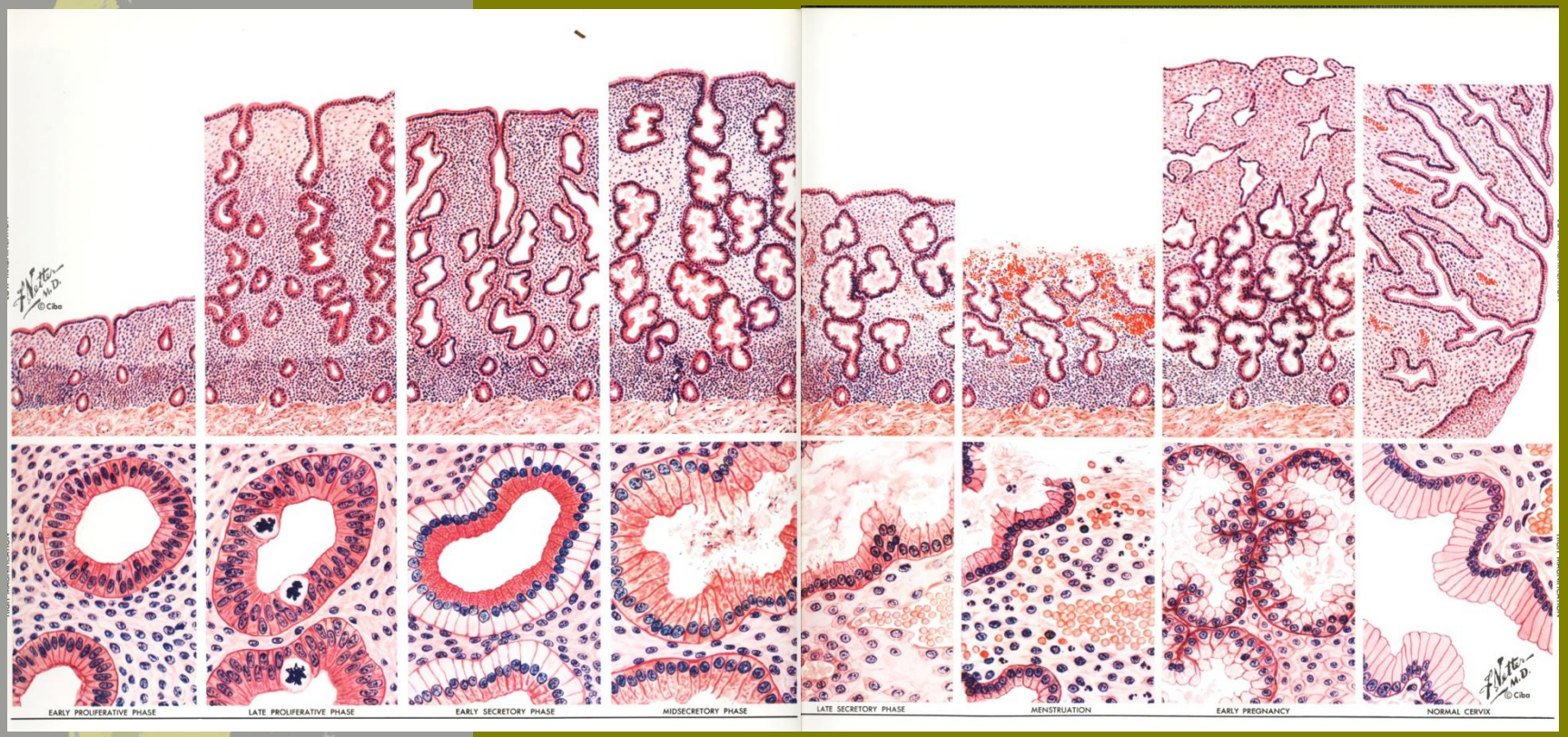
INVENTOR OF CYTOLOGY
GEORGE NICOLAS PAPANICOLAOU
(1883-1962)

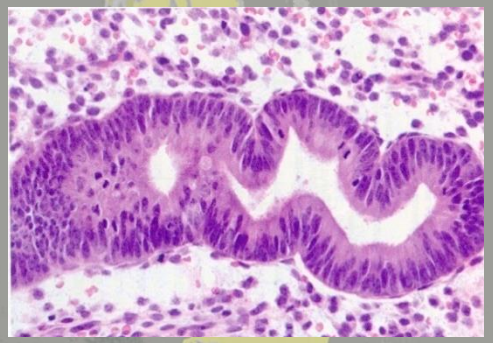


A. NORMAL SMEAR
B. SMEAR WITH CIN 1
C. SMEAR WITH CIN 2
D. SMEAR WITH CIN 3

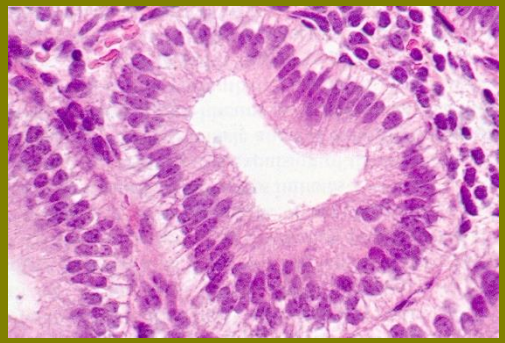
CIN = cervical intraepithelial neoplasia

PHASES OF MENSTRUAL CYCLE – ENDOMETRIUM

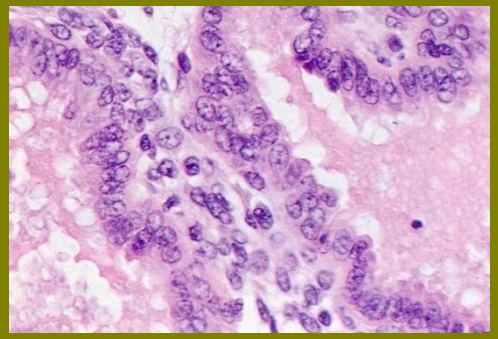




PROLIFERATION



EARLY SECRETION



LATE SECRETION

BETHESDA SYSTEM

- **Based on workshop held in April / May 2001 at National Cancer Institute (JAMA 2002;287:2114)**
- **By 2003, was implemented by 85% of labs participating in College of American Pathologists' Interlaboratory Comparison Program in Cervicovaginal Cytology (Arch Pathol Lab Med 2004;128:1224)**

BETHESDA SYSTEM

- **<u>Interpretation/result</u>**
- **1. Negative for Intraepithelial Lesion or Malignancy (NILM):**
- **A. Organisms**
- **Trichomonas vaginalis**
- **Fungal organisms morphologically consistent with Candida species**
- **Shift in flora suggestive of bacterial vaginosis**
- **Bacteria morphologically consistent with Actinomyces species**
- **Cellular changes associated with Herpes simplex virus**

BETHESDA SYSTEM

- **B. Other nonneoplastic findings (optional to report, list is not inclusive)**
- **Reactive cellular changes associated with:**
- **Inflammation (includes typical repair)**
- **Radiation**
- **Intrauterine contraceptive device (IUD)**
- **Glandular cells status post hysterectomy**
- **Atrophy**

BETHESDA SYSTEM

- **C. Other**
- **Endometrial cells (in a woman older than or equal to 40 years of age; specify if "negative for squamous intraepithelial lesion")**

BETHESDA SYSTEM

- 2. **Epithelial Cell Abnormalities A. Squamous cell**
- **Atypical squamous cells: of undetermined significance (ASC-US); cannot exclude HSIL (ASC-H)**
- **Low grade squamous intraepithelial lesion (LSIL): encompassing HPV/mild dysplasia / CIN I**
- **High grade squamous intraepithelial lesion (HSIL): encompassing: moderate and severe dysplasia / CIN2 / CIN3 / CIS; with features suspicious for invasion (if invasion suspected)**
- **Squamous cell carcinoma**

BETHESDA SYSTEM

- **B. Glandular cell**
- **Atypical:**

  Endocervical cells (NOS or specify in comment)

  Endometrial cells (NOS or specify in comment)

  Glandular cells (NOS or specify in comment)

BETHESDA SYSTEM

- **Atypical:**
- **Endocervical cells, favor neoplastic**
- **Glandular cells, favor neoplastic**

- **Endocervical Adenocarcinoma in situ**

BETHESDA SYSTEM

- **Adenocarcinoma:**

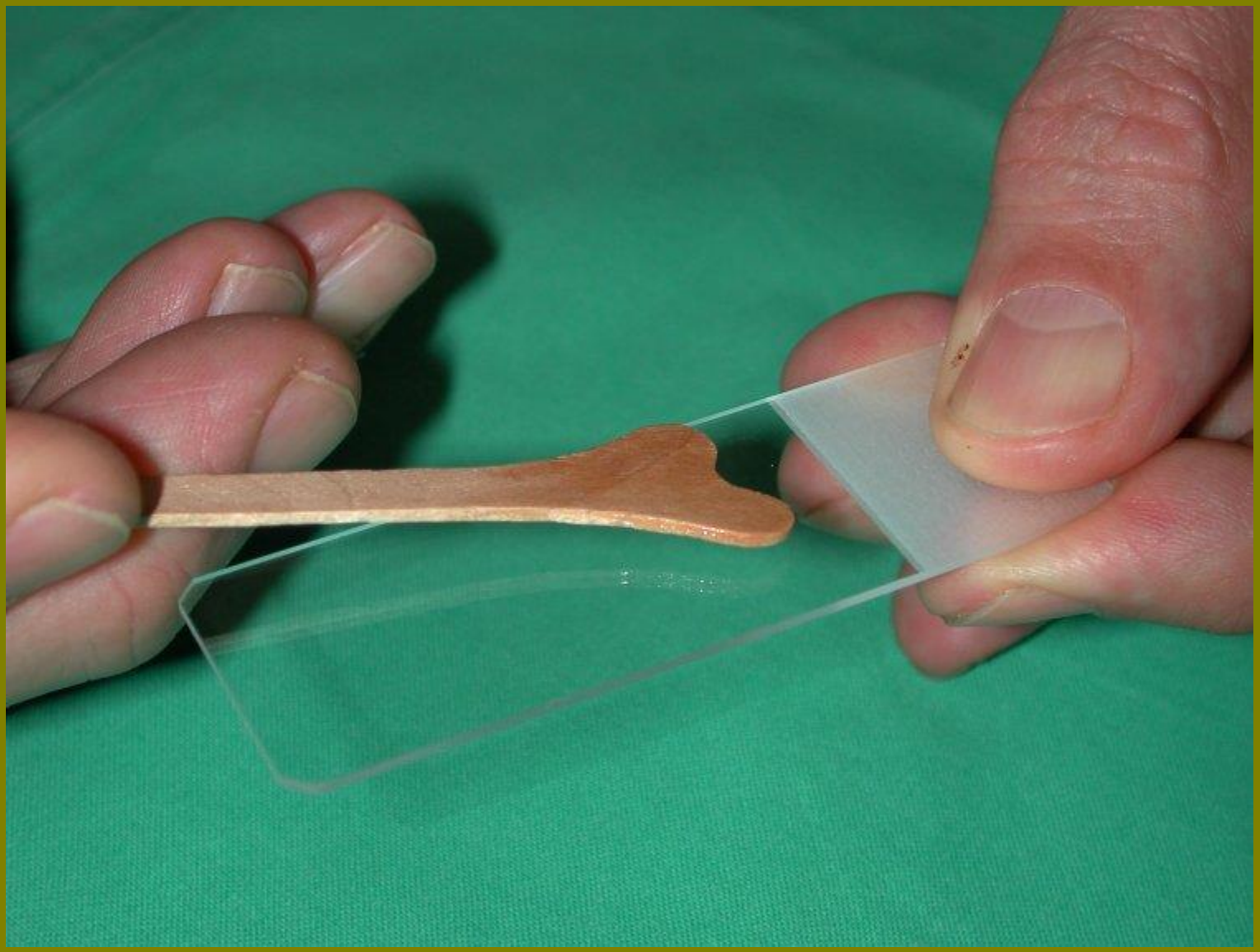
  Endocervical

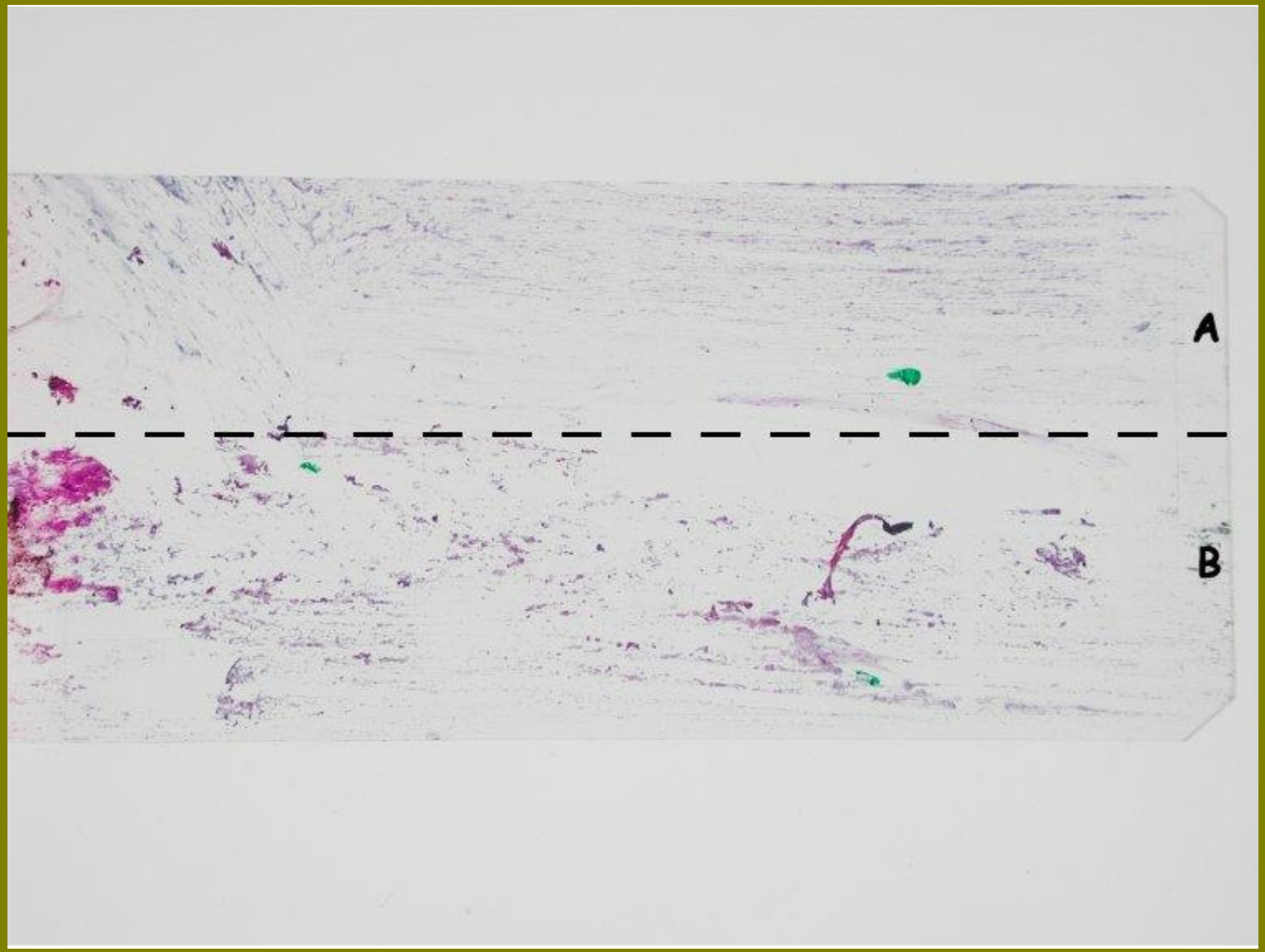
  Endometrial

  Extrauterine

  Not otherwise specified (NOS)

C. Other malignant neoplasms (Specify)

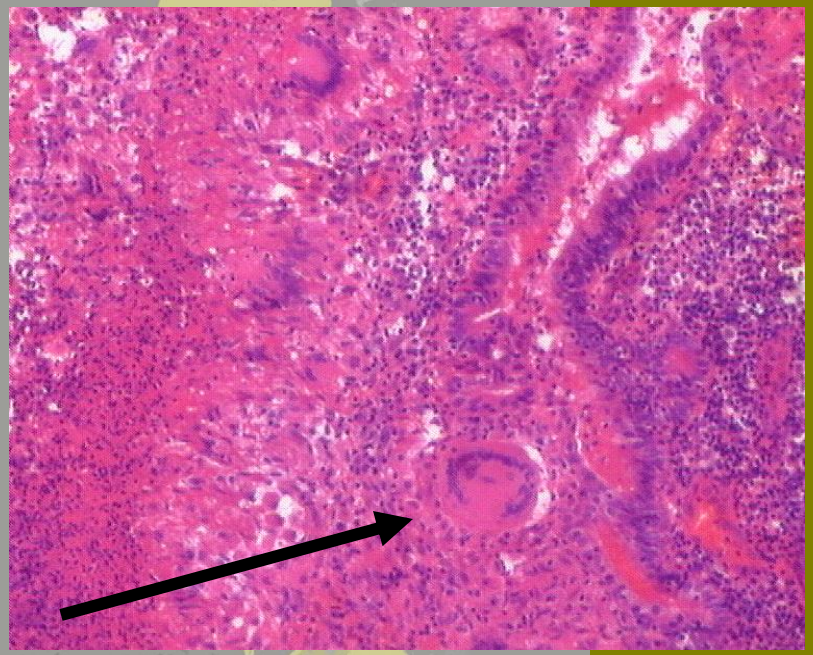



A
B

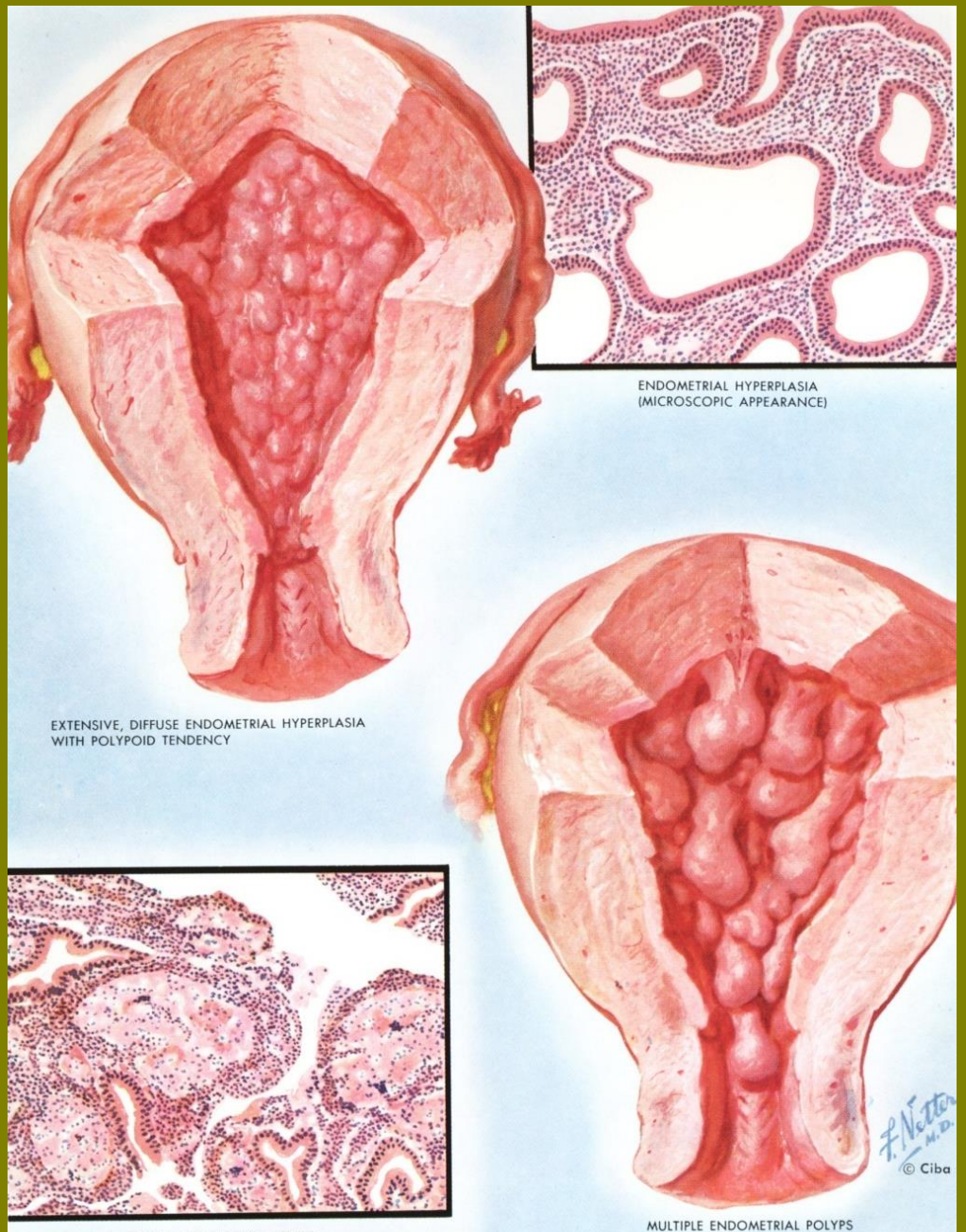
ENDOMETRITIS

NON-SPECIFIC INFLAMMATION

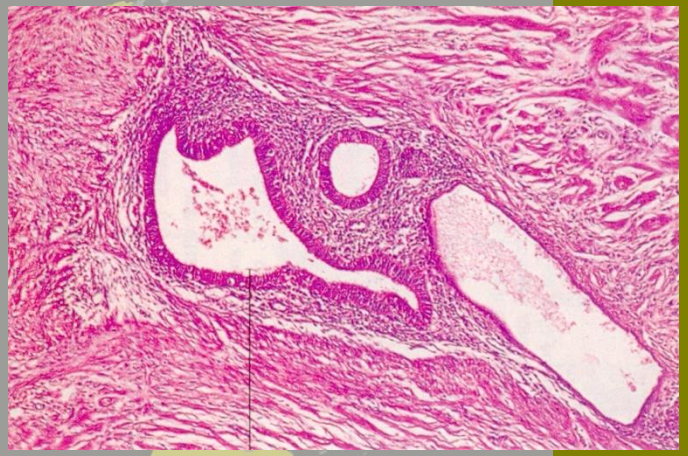
SPECIFIC INFLAMMATION



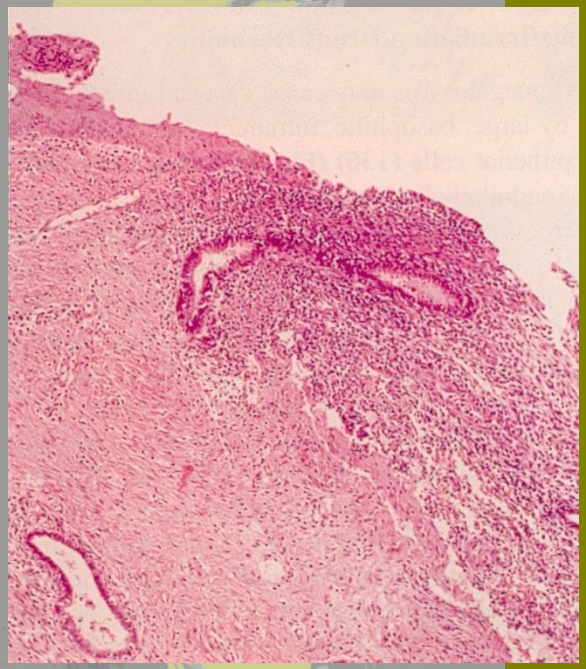
TUBERCULOSIS OF ENDOMETRIUM



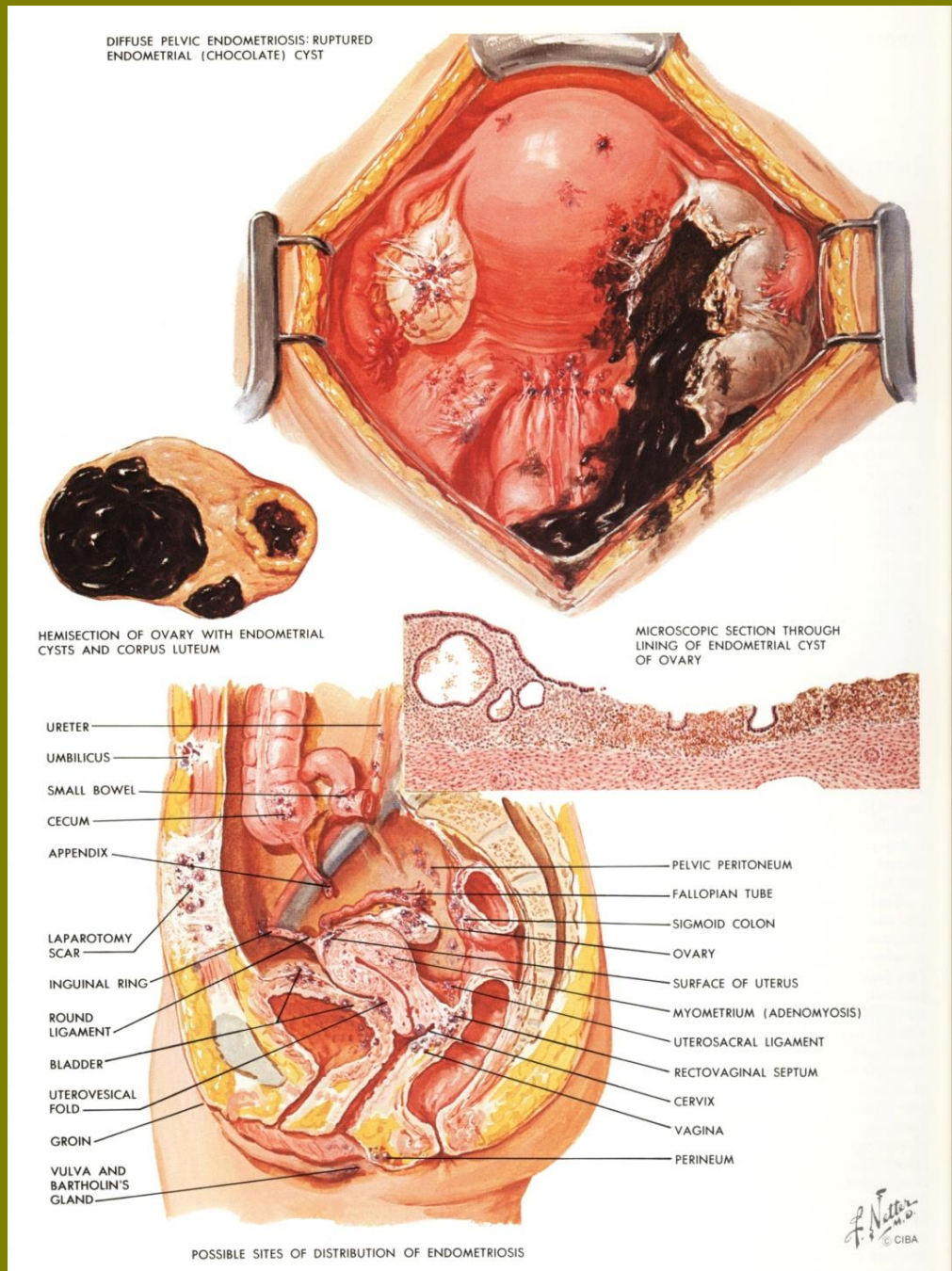
ENDOMETRIOSIS



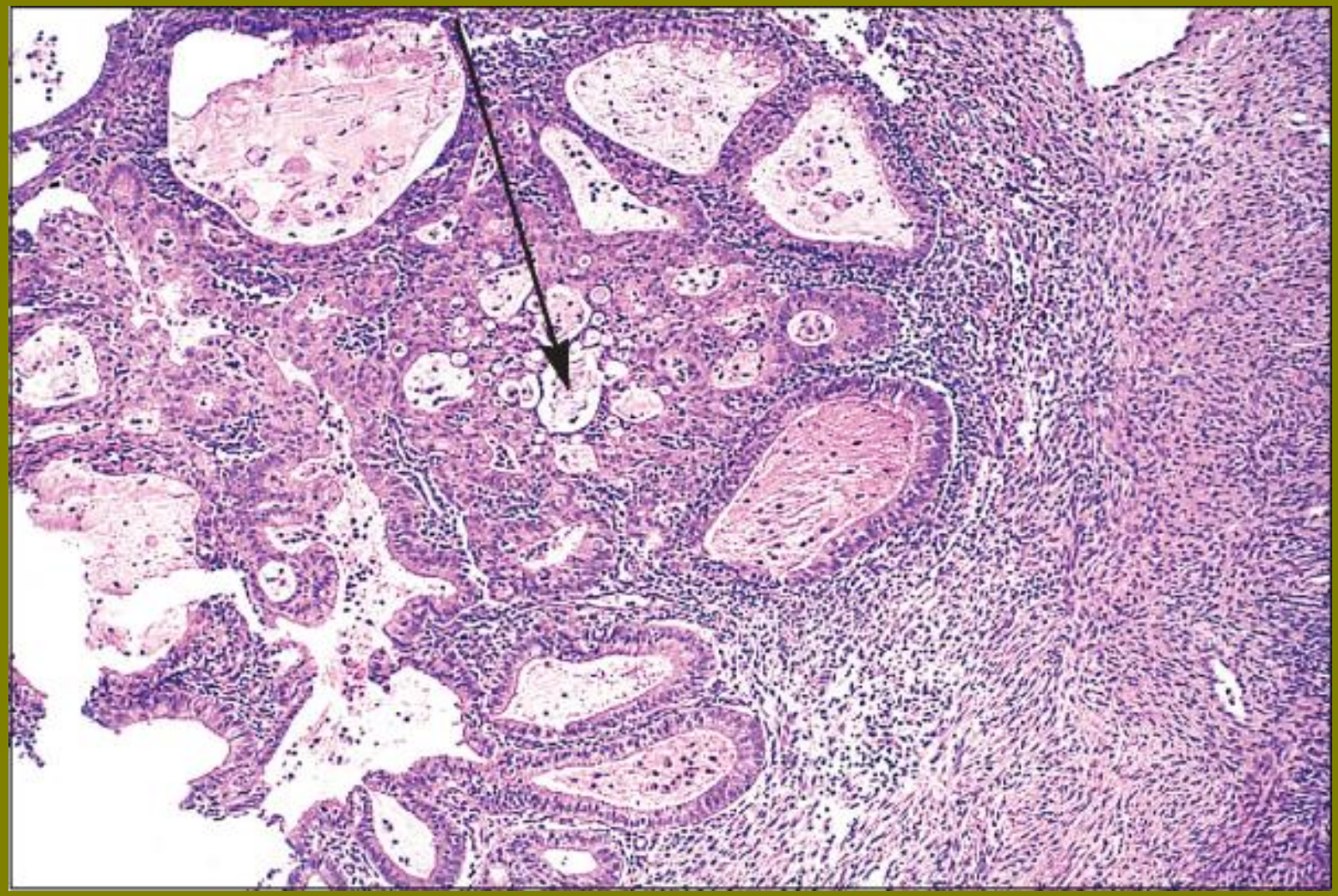
ENDOMETRIOSIS OF MYOMETRIUM (ADENOMYOSIS)



ENDOMETROSIS OF CERVIX

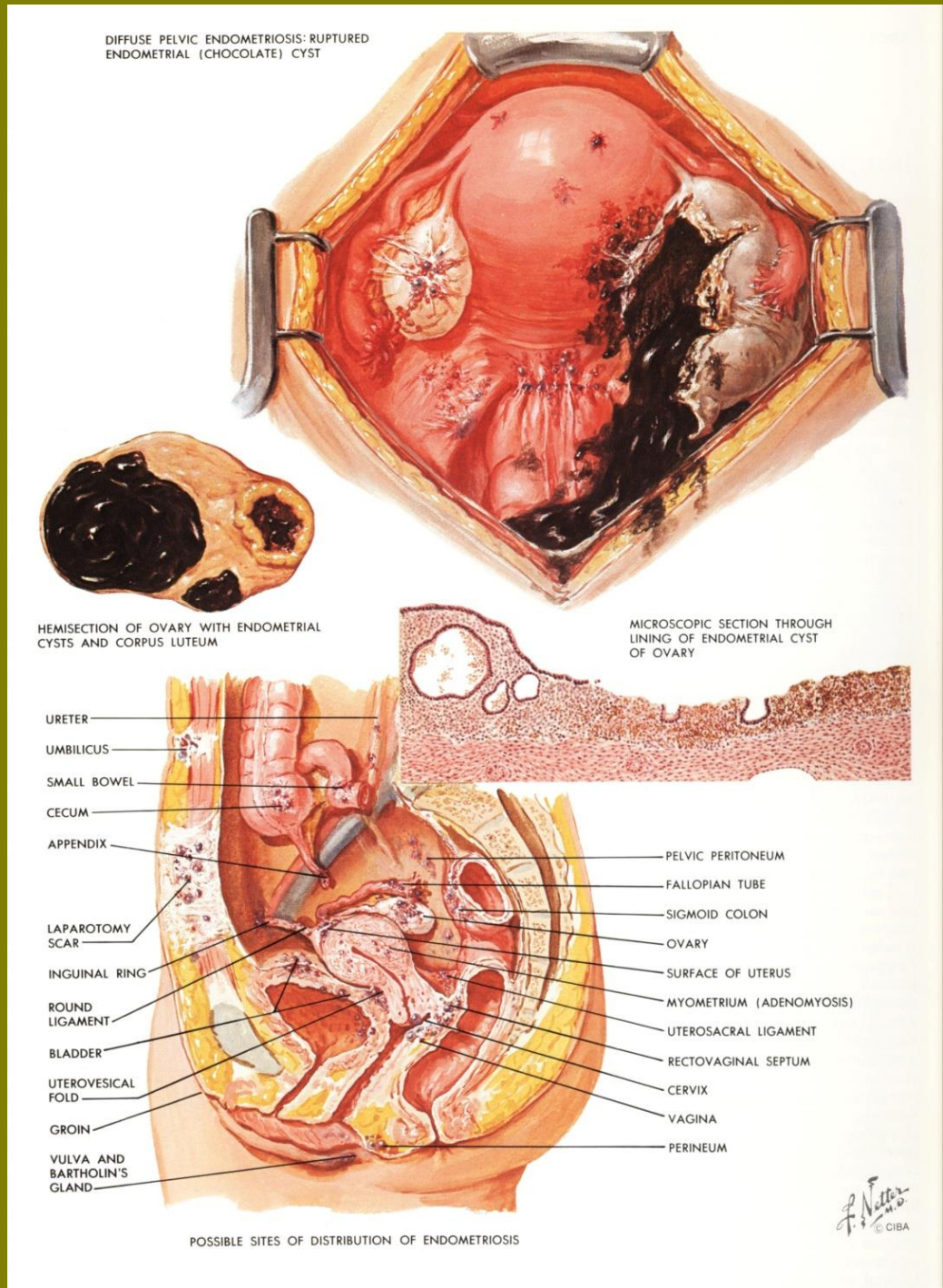


Endometrioid adenocarcinoma (arrow) arising in atypical endometriosis.



Clinical location of endometrial implants

Location	Frequency
Uterosacral ligaments	63%
Ovaries	
Superficial	56%
Deep (endometrioma)	20%
Ovarian fossae	33%
Anterior vesicle pouch	22%
Pouch of Douglas	19%
Intestines	5%
Fallopian tubes	5%
Uterus	5%

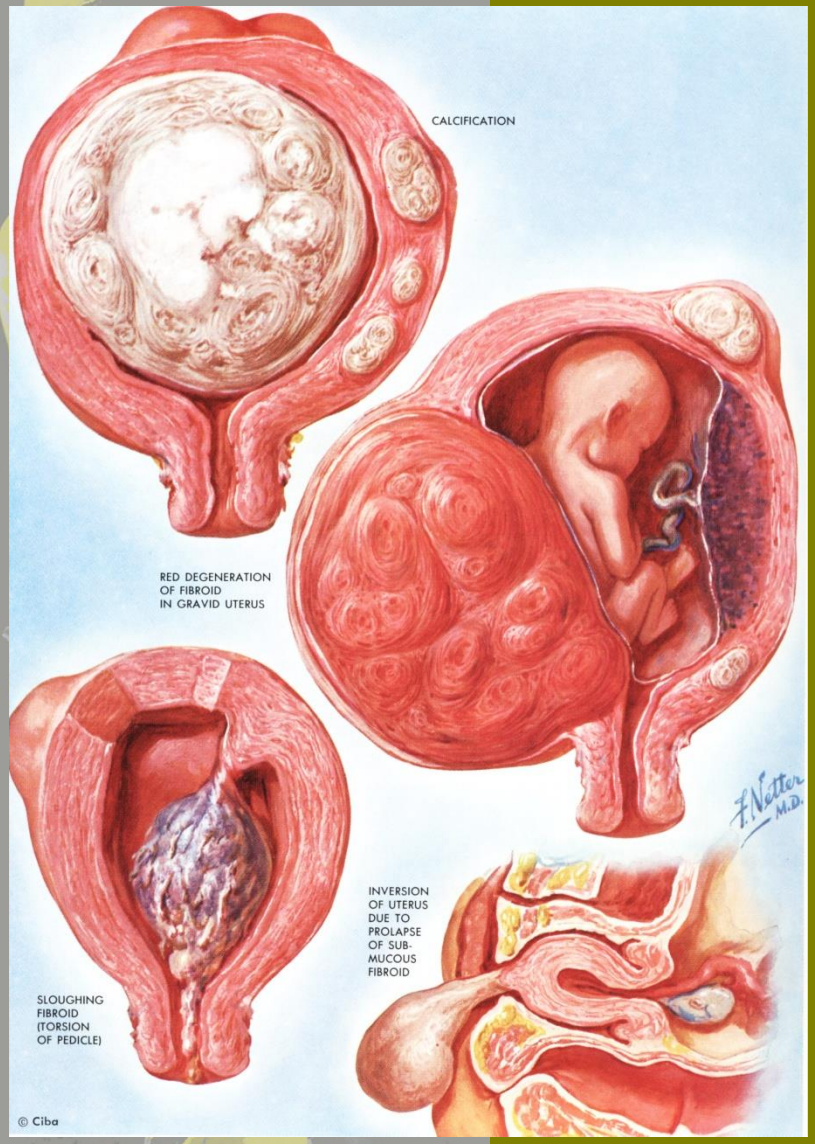


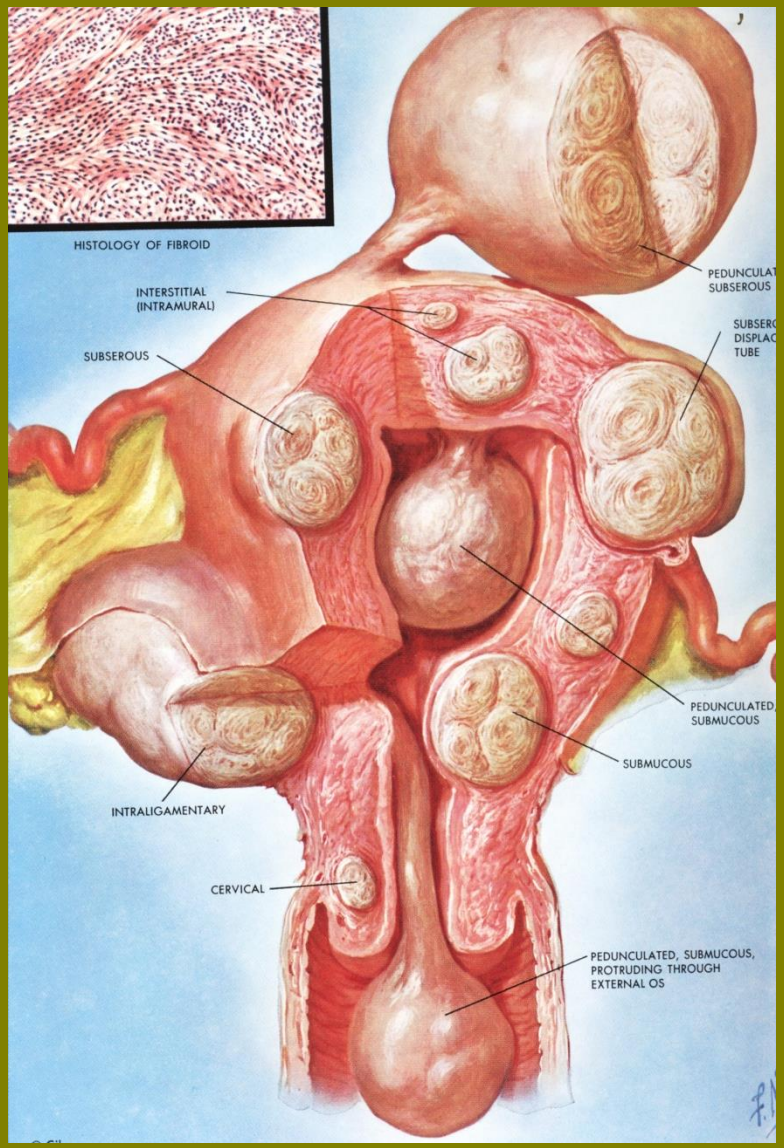
Location of endometriosis based upon biopsy findings

Location	Frequency
Ovary	36%
Fallopian tube	14%
Uterine serosa	12%
Cul-de-sac	6%
Cervix	3%
Colon	3%
Peritoneum	3%
Appendix	2%
Broad ligament	2%
Pelvis	2%
Uterosacral ligament	2%
Vagina	2%
Abdominal wall	1%
Bladder	1%
Fibrous tissue	1%
Parametrium	1%
Rectum	1%
Small intestine	1%
Other sites (>20)	7%

END OF PART I

LEIOMYOMAS

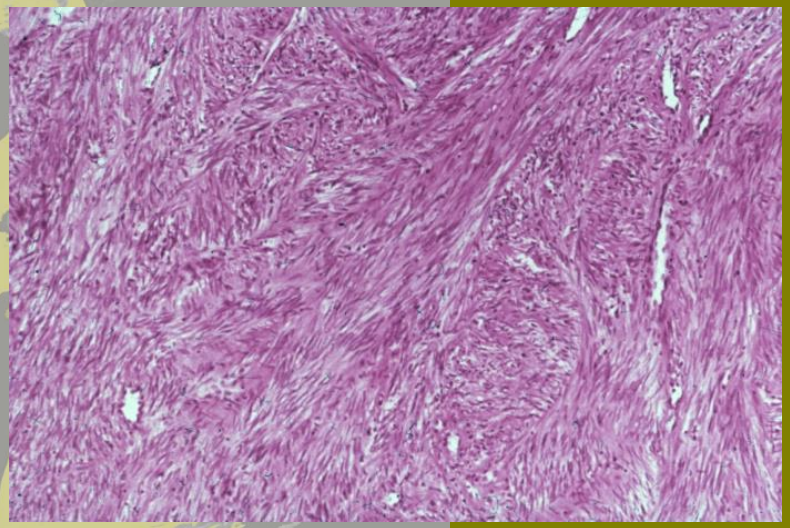




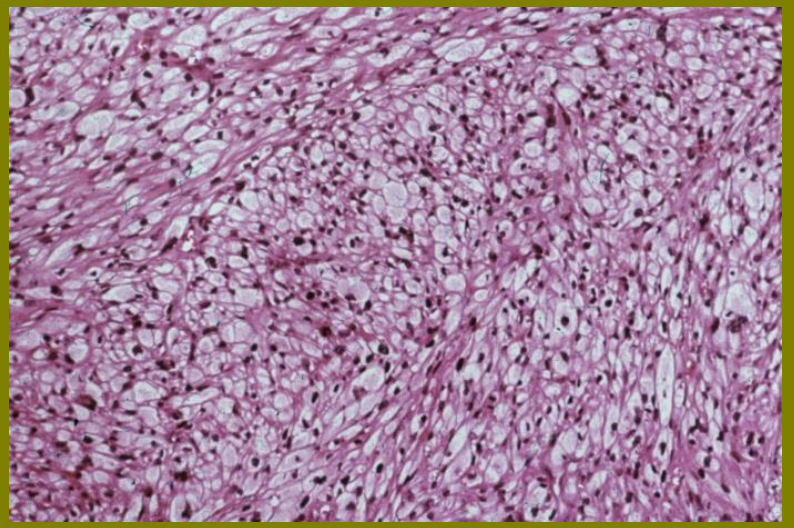
MOST COMMON LOCALIZATION OF LEIOMYOMA IN THE UTERUS

LEIOMYOMA

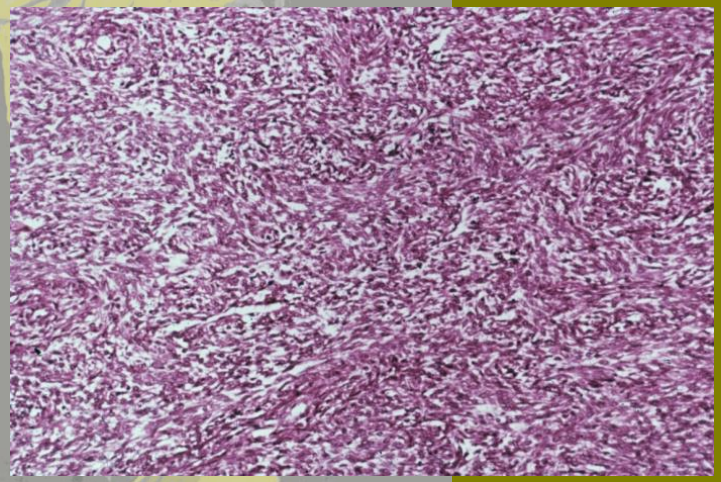
HISTOLOGICAL FORMS



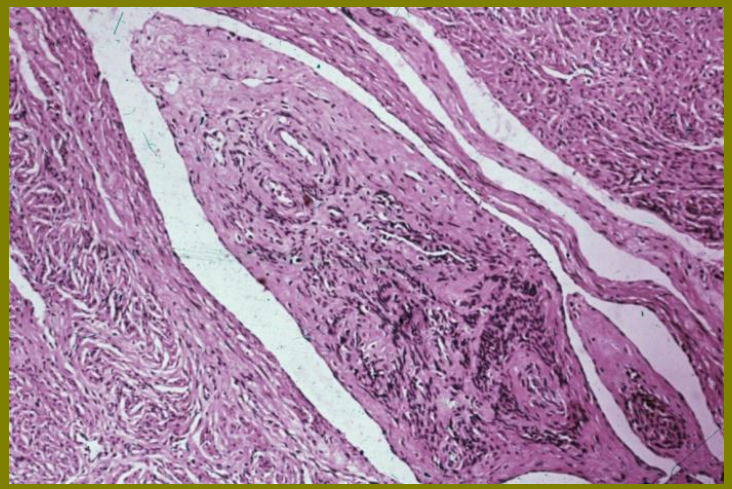
LEIOMYOMA



LEIOMYOBLASTOMA

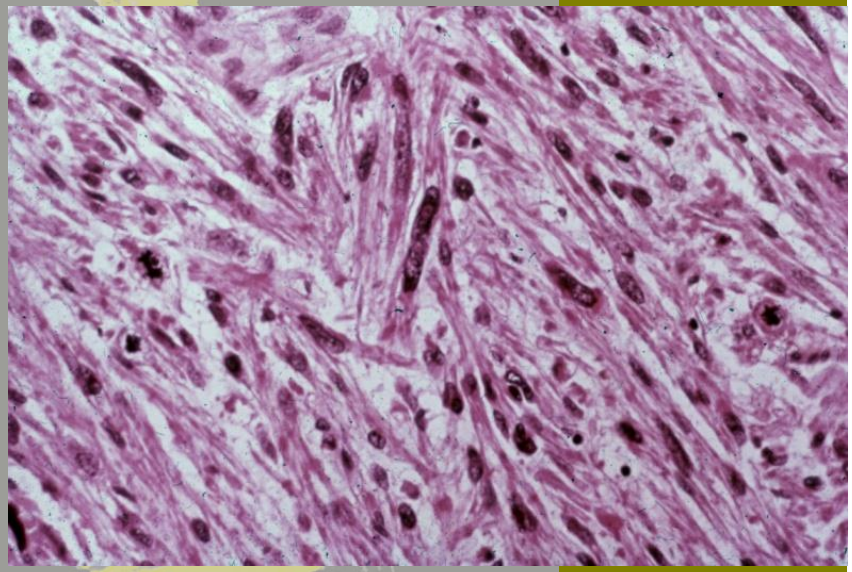


CELLULAR LEIOMYOMA

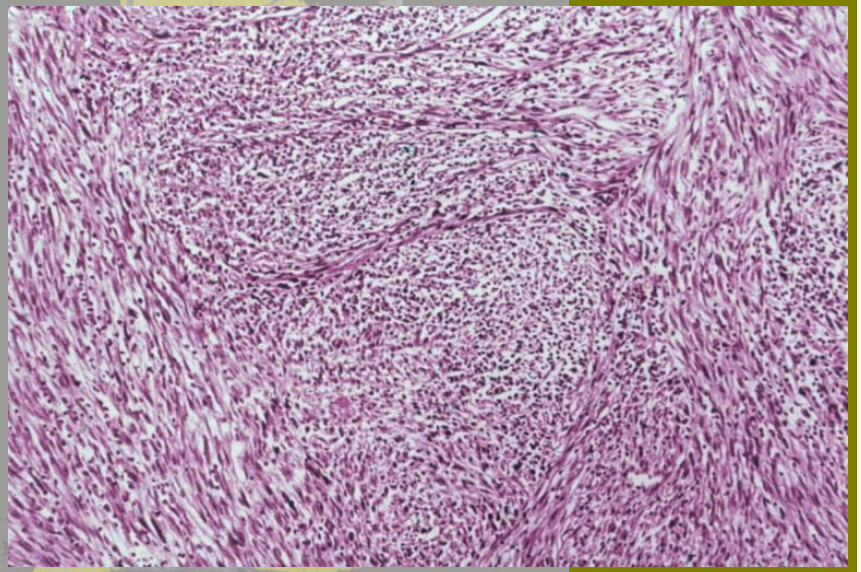


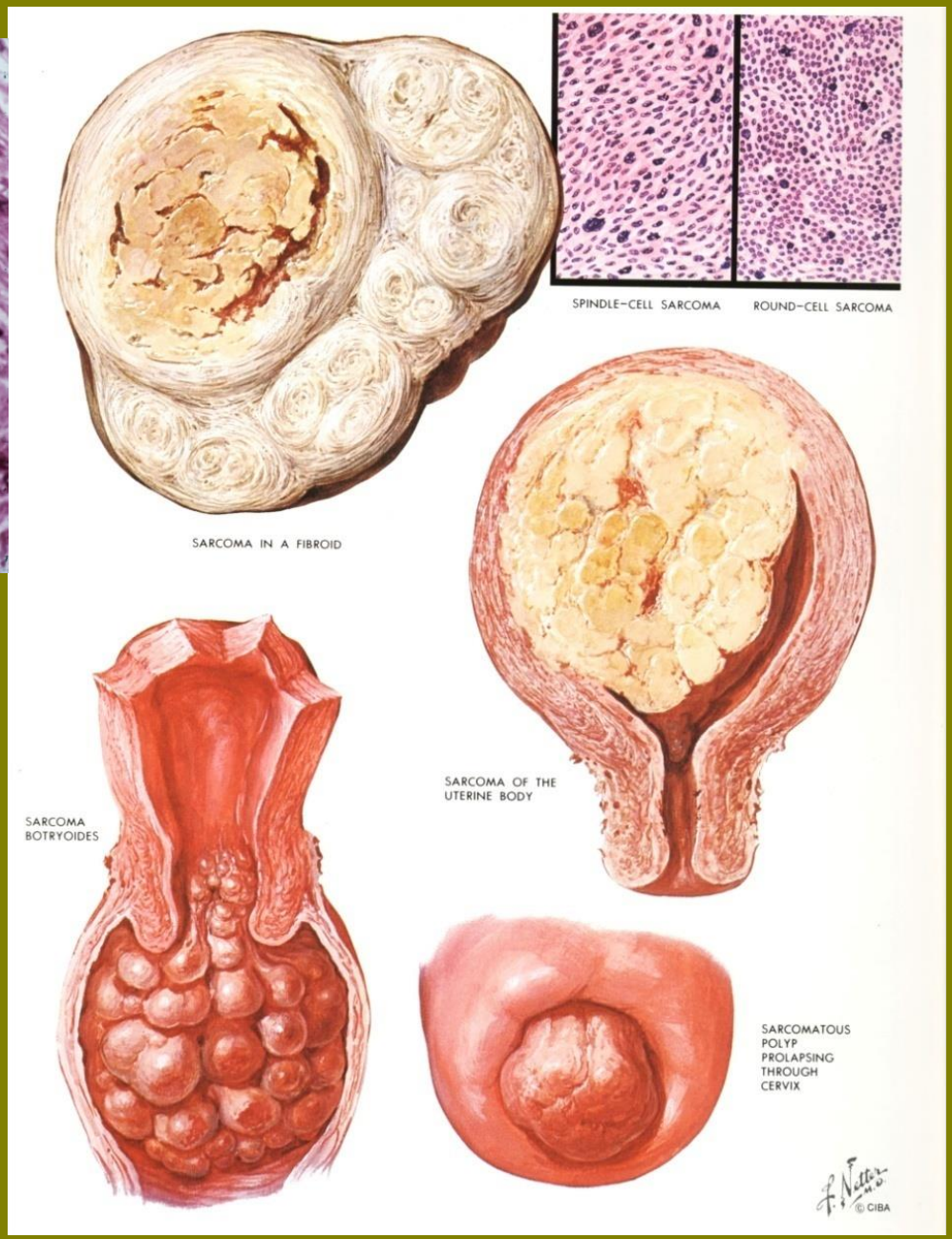
INTRAVASCULAR LEIOMYOMATOSIS

LEIOMYOSARCOMA

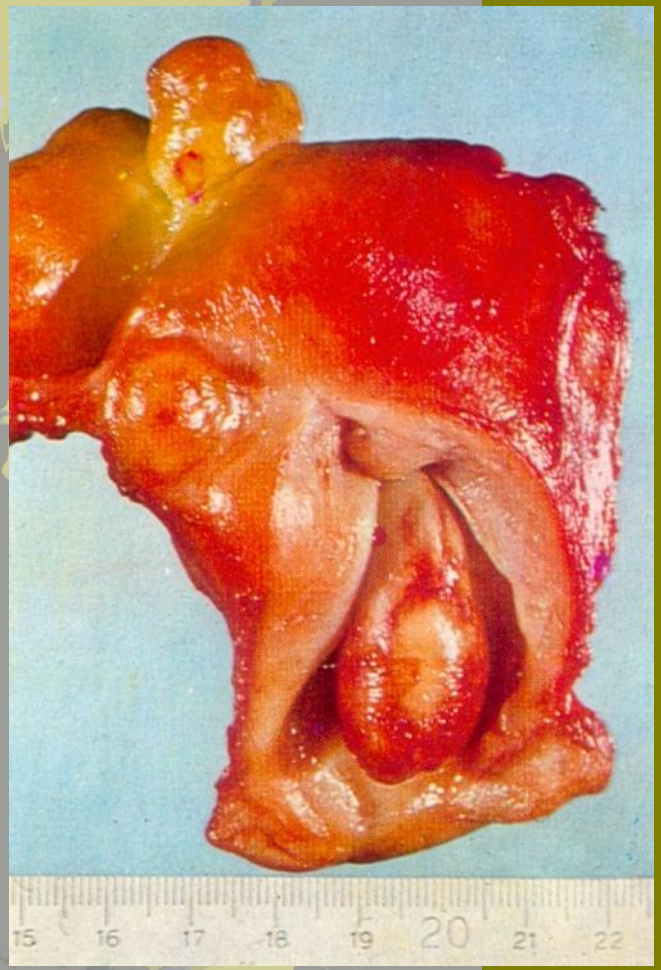


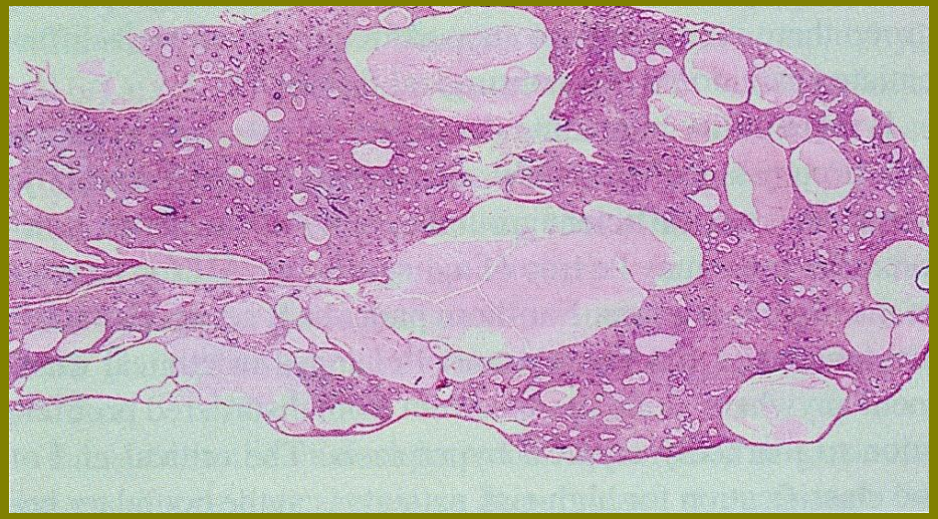
LEIOMYOSARCOMA



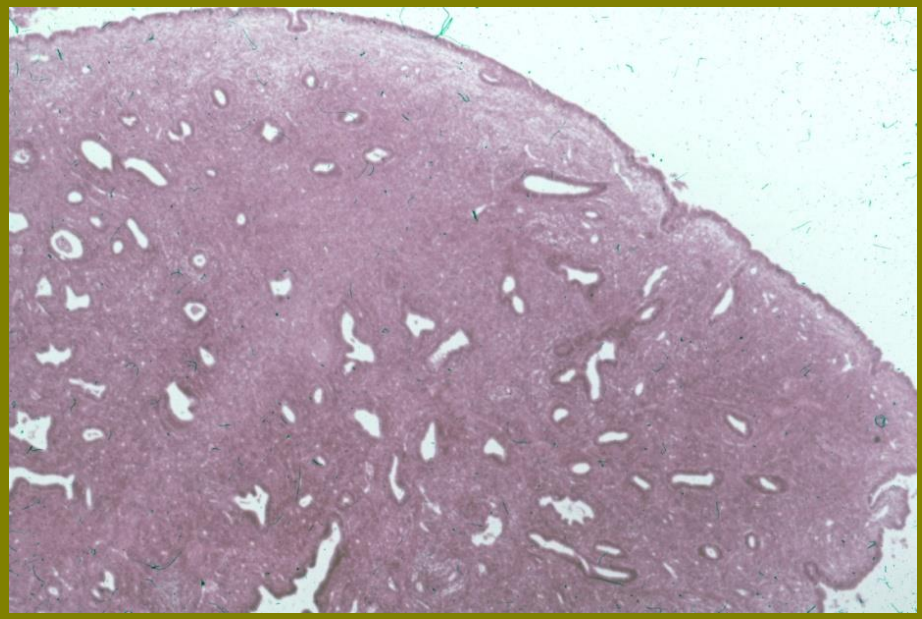


ENDOMETRIAL POLYP



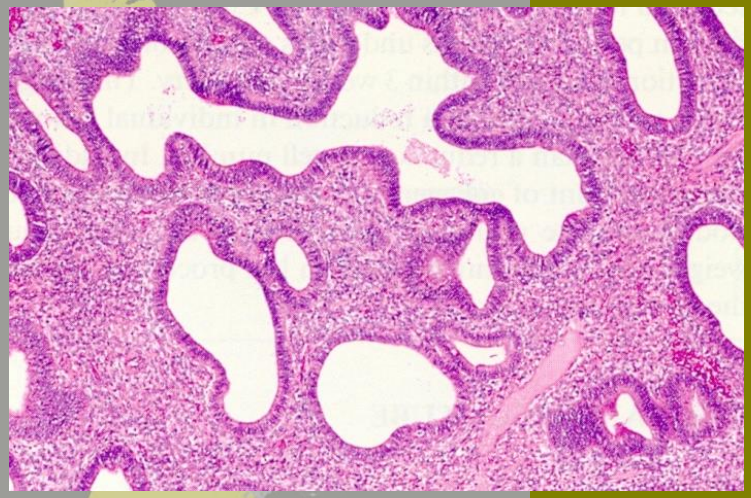


CYSTIC ENDOMETRIAL POLYP

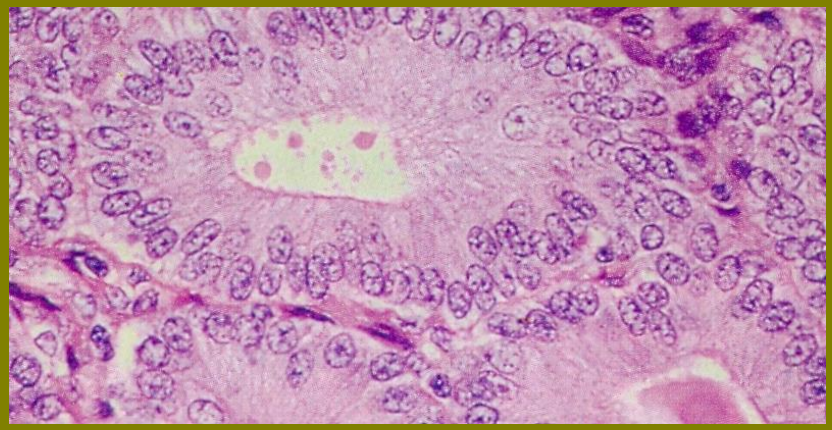


ENDOMETRIAL GLANDULAR POLYP

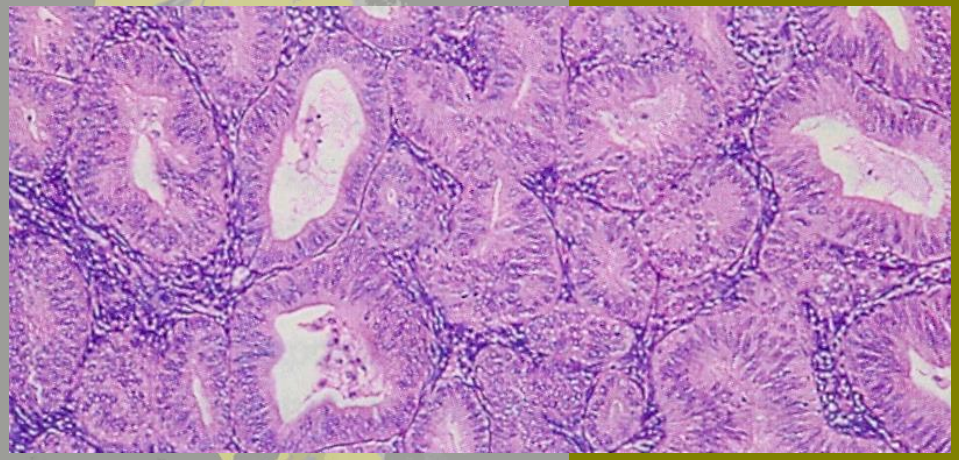
ENDOMETRIAL HYPERPLASIA



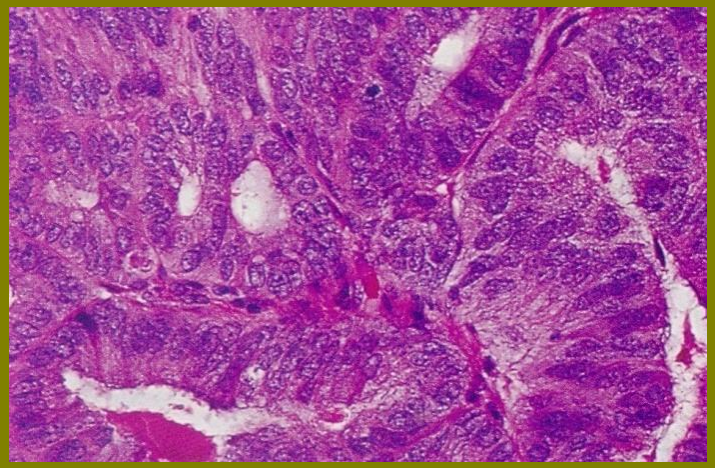
SIMPLE HYPERPLASIA WITHOUT ATYPIA



SIMPLE HYPERPLASIA WITH ATYPIA



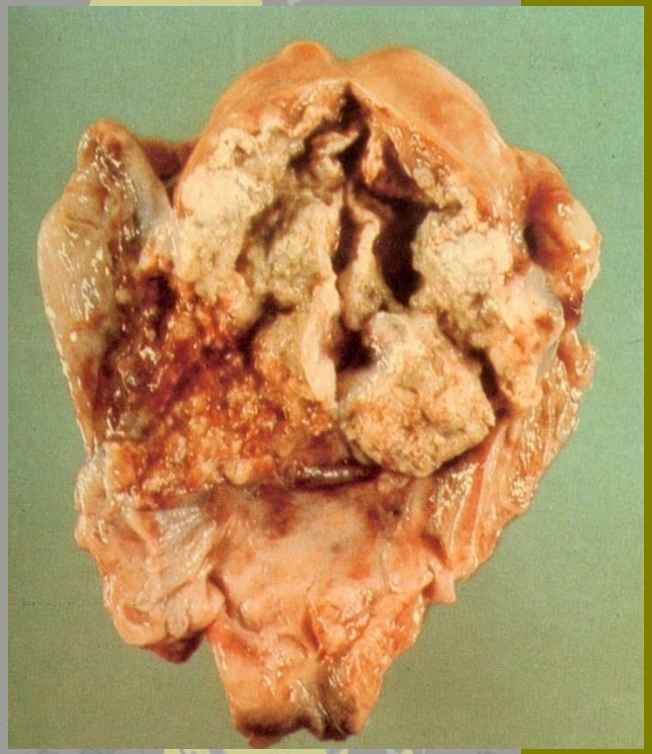
COMPLEX HYPERPLASIA WITHOUT ATYPIA

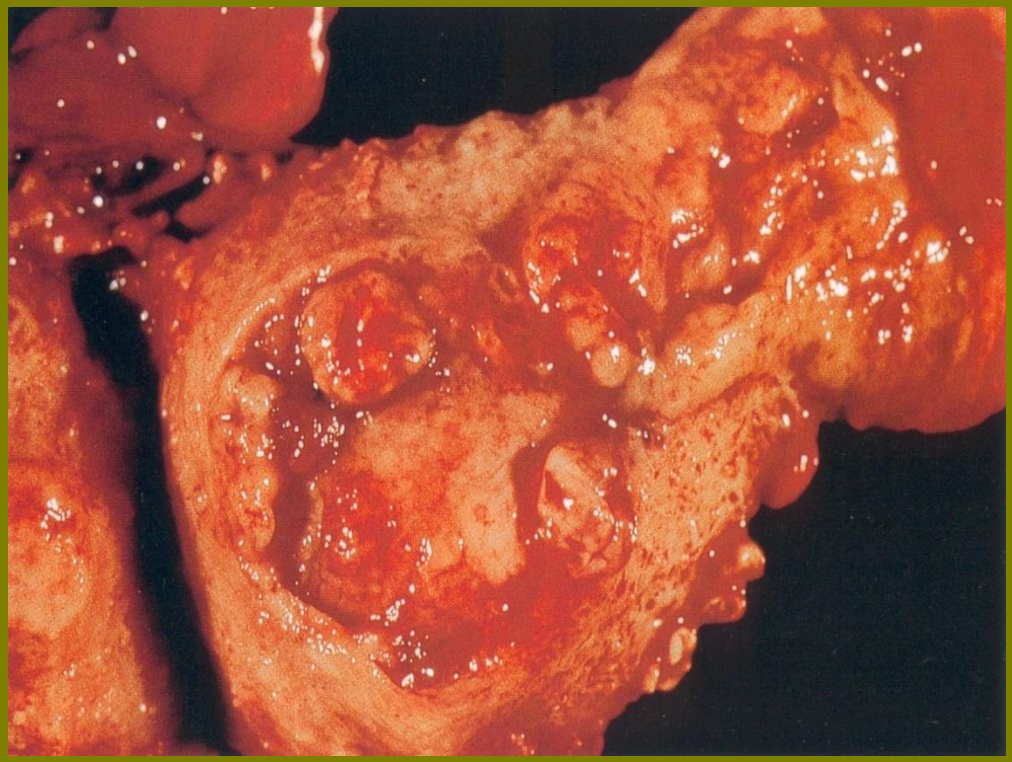


COMPLEX HYPERPLASIA WITH ATYPIA

ENDOMETRIAL CARCINOMA

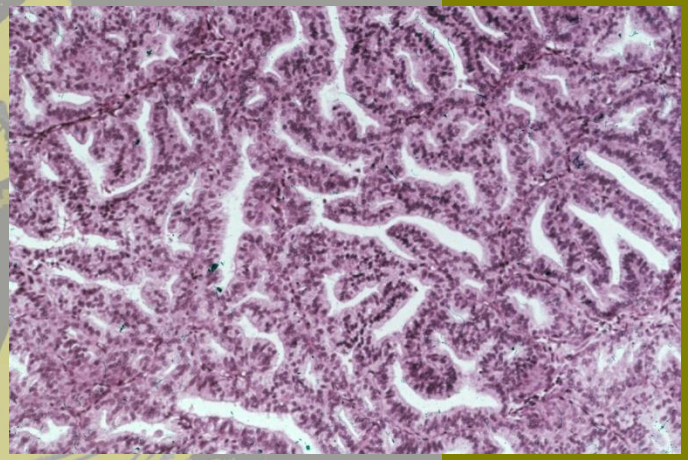
APPROX. 7% OF MALIGNANT TUMORS IN WOMEN. MORE FREQUENT THAN CERVICAL CANCER. RARE BEFORE 40, MOST COMMONLY BETWEEN THE 55TH AND 65TH YEAR OF LIFE. INVOLVED WITH THE OVERPRODUCTION OF ESTROGEN; OTHER FACTORS INVOLVED: 1. OBESITY 2. DIABETES 3. HYPERTENSION 4. LACK OF PREGNANCY.



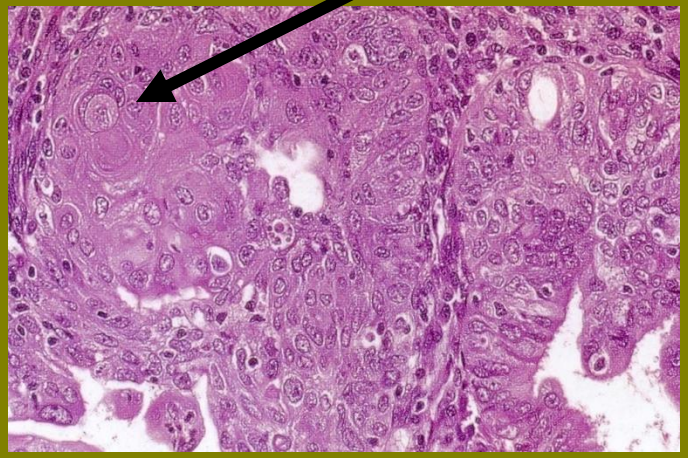


ENDOMETRIAL CARCINOMA

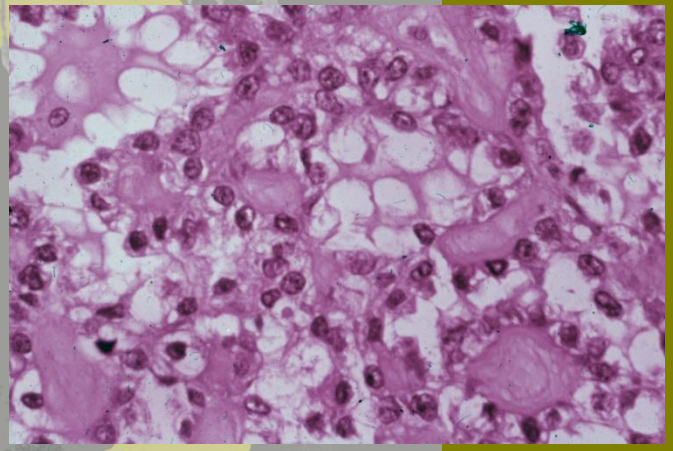
HISTOLOGICAL FORMS



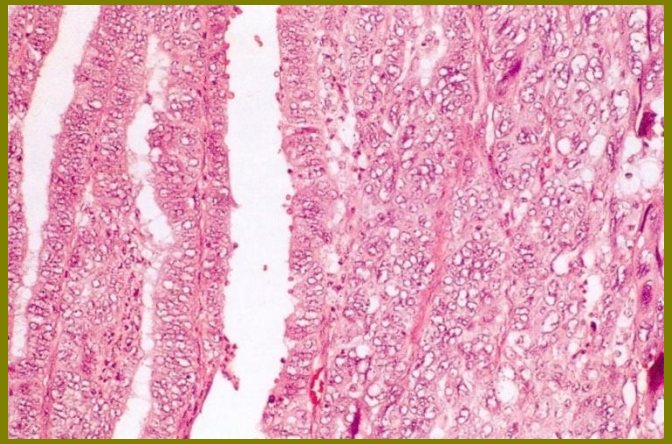
WELL-DIFFERENTIATED CARCINOMA



ADENOACANTHOMA



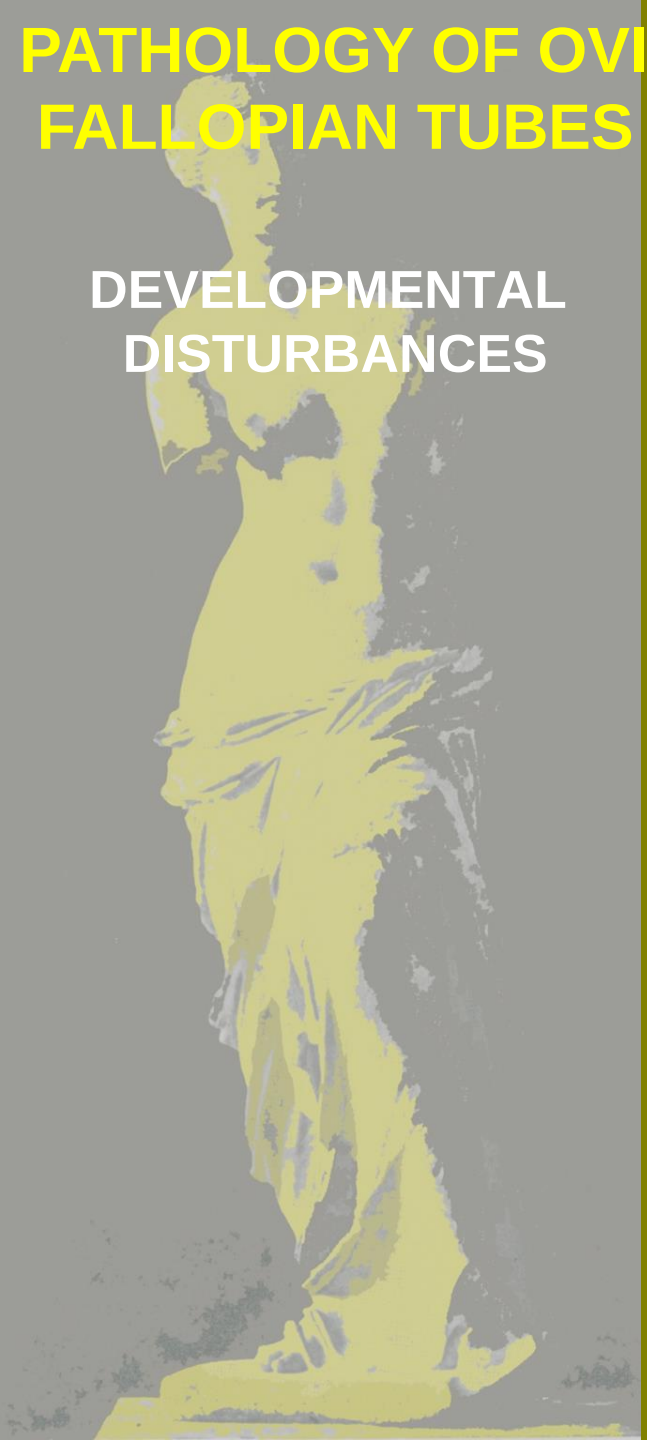
CLEAR CELL CARCINOMA (MESONEPHROID)

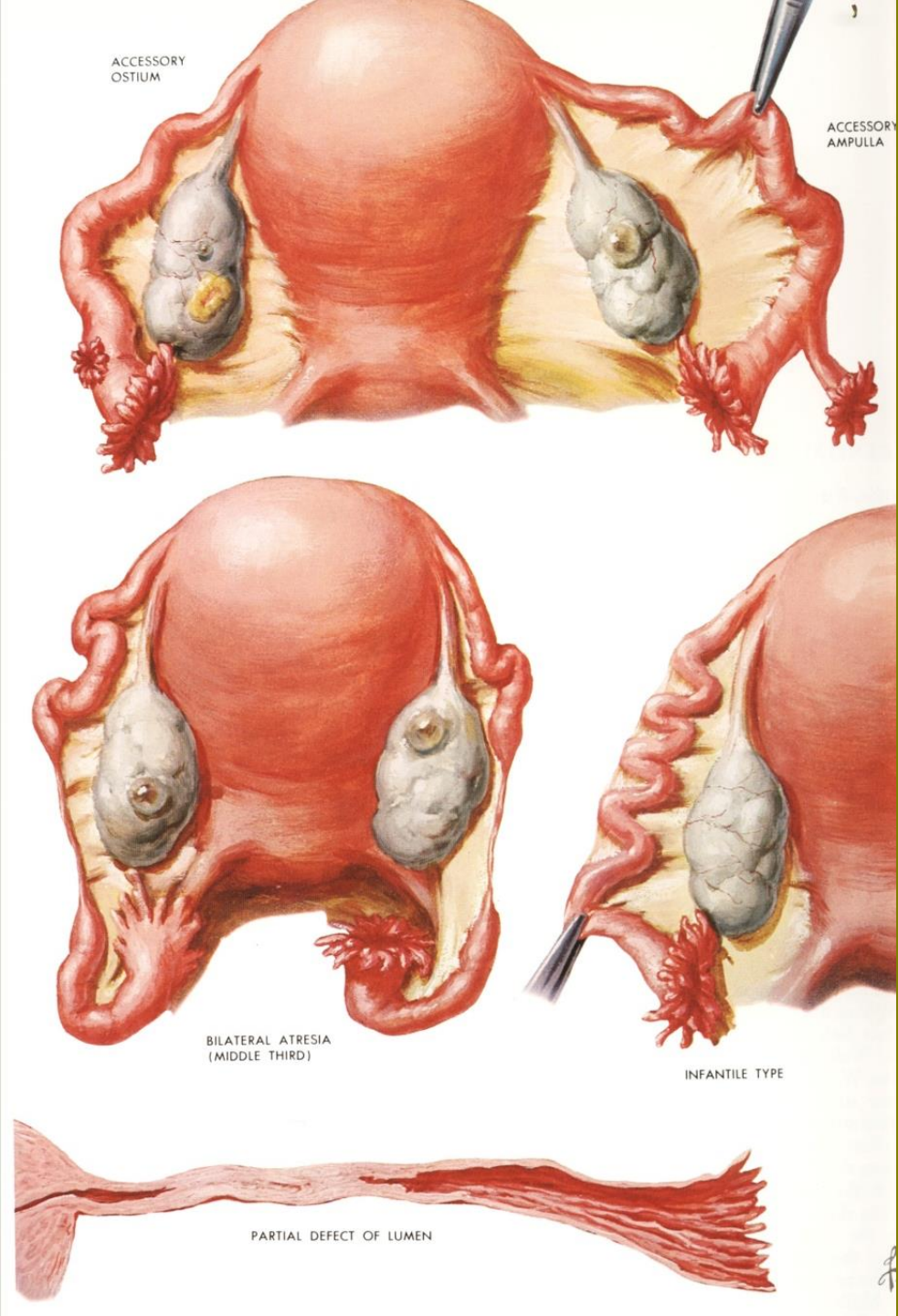


POORLY-DIFFERENTIATED CARCINOMA

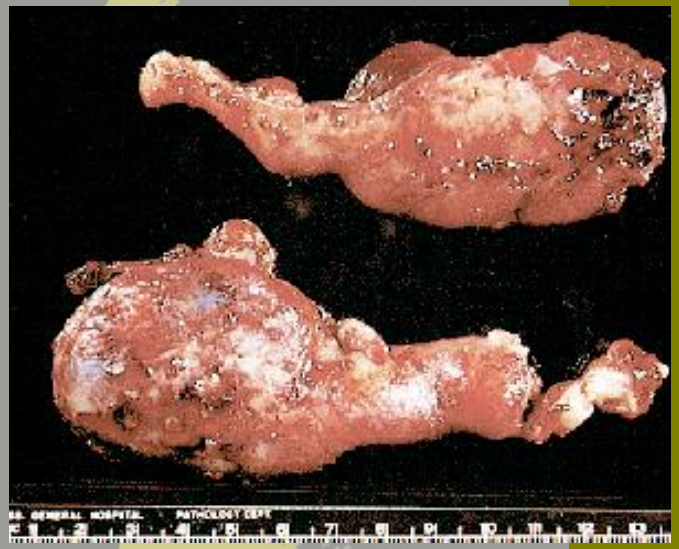
PATHOLOGY OF OVIDUCTS; FALLOPIAN TUBES

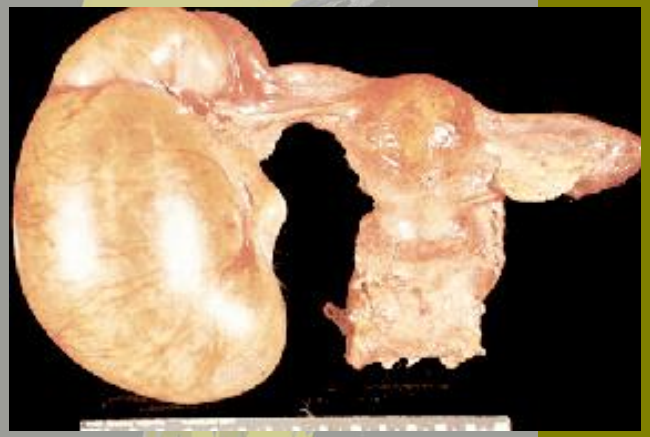
DEVELOPMENTAL DISTURBANCES





PATHOLOGY OF OVIDUCTS

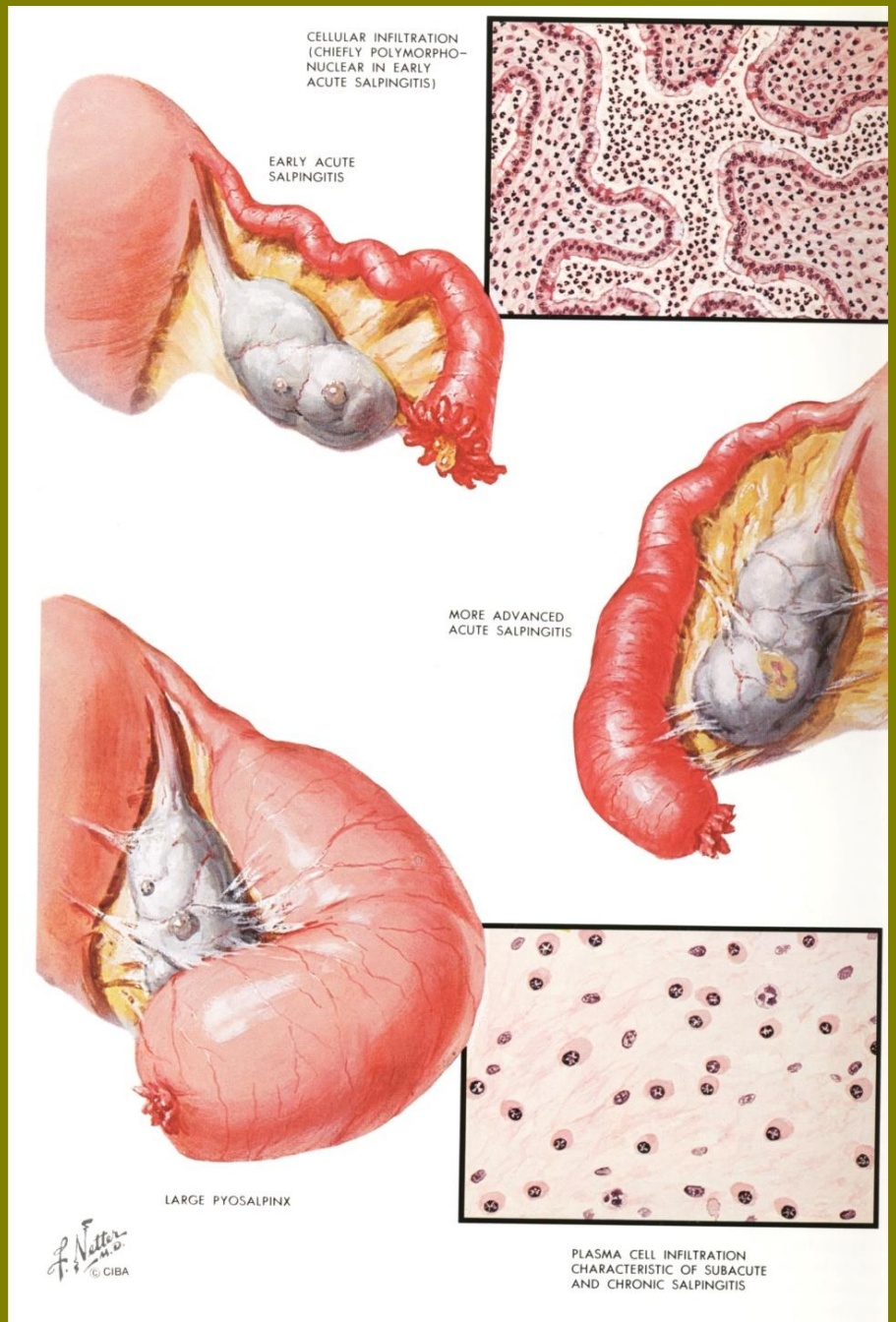




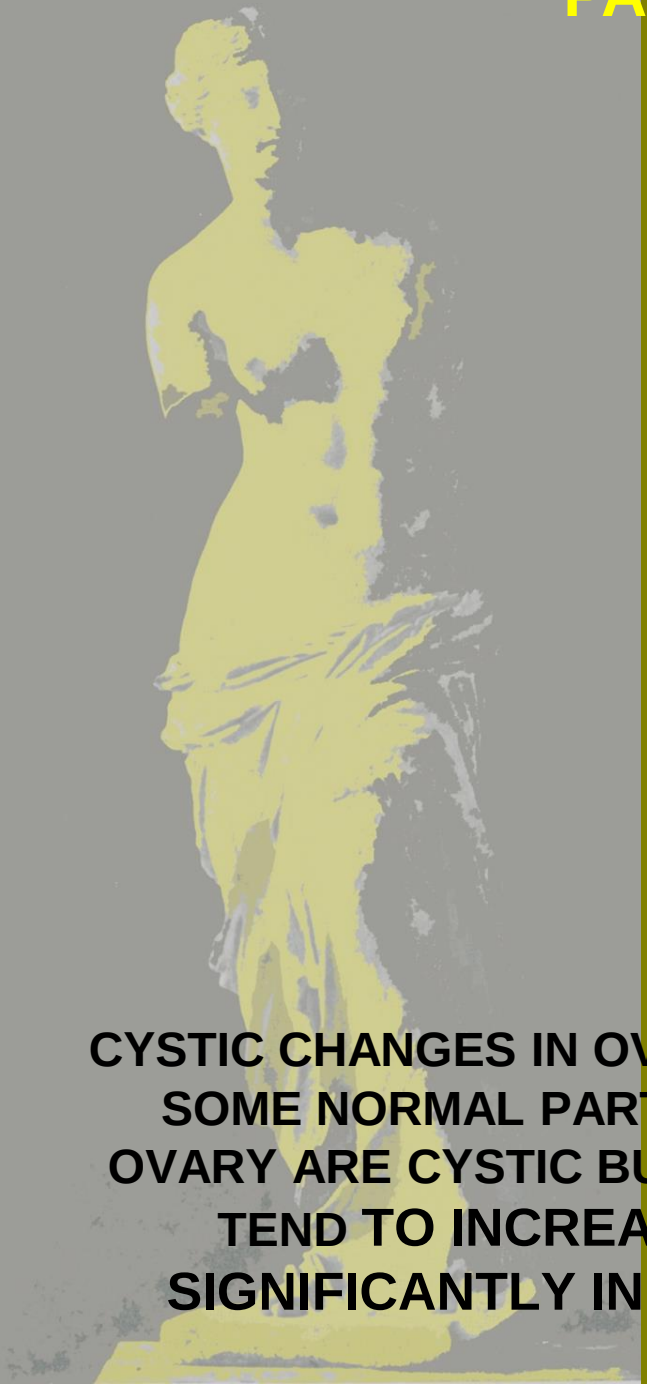
ACUTE SALPINGITIS

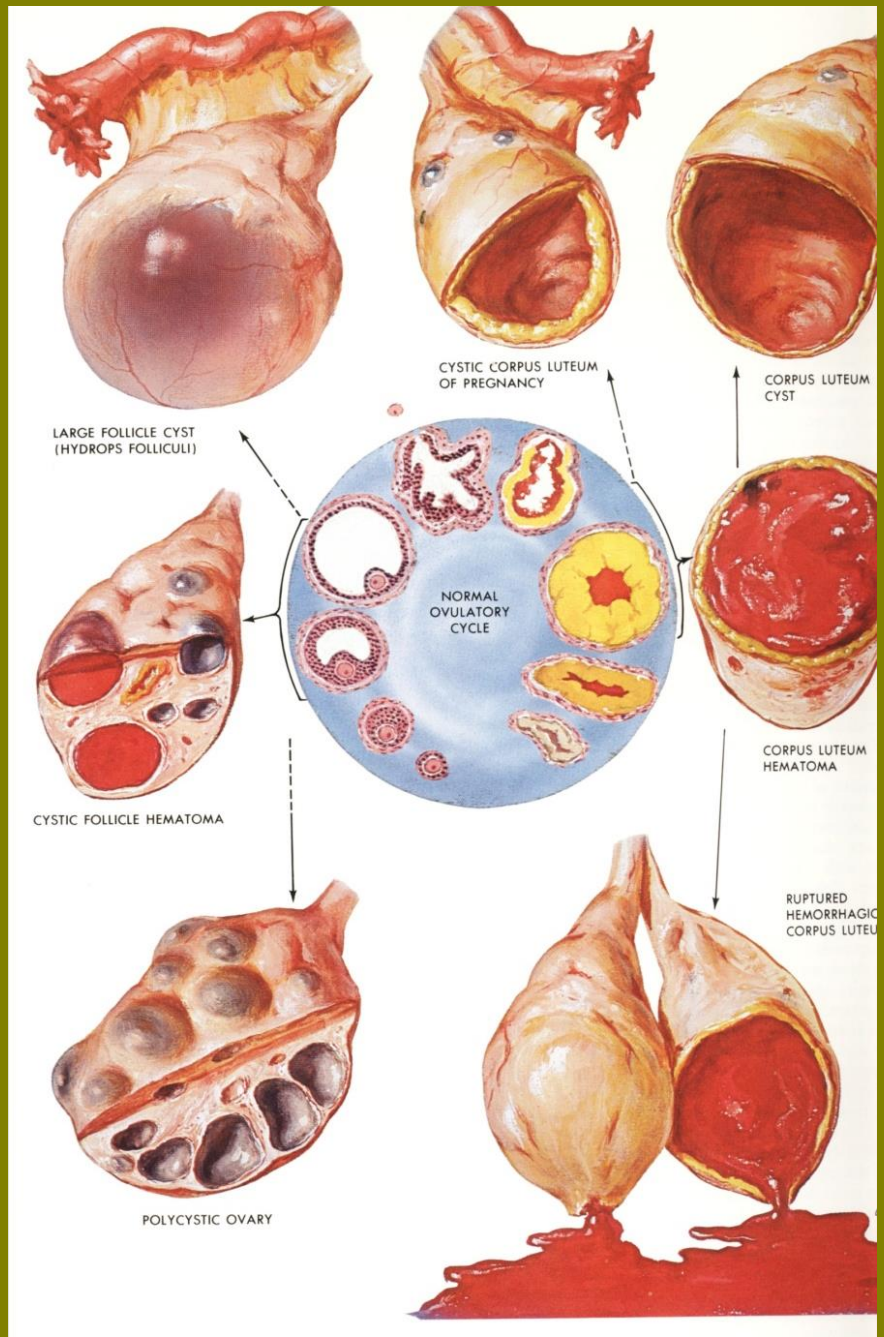
PYOSALPINX

SACTOSALPINX



PATHOLOGY OF OVARIES



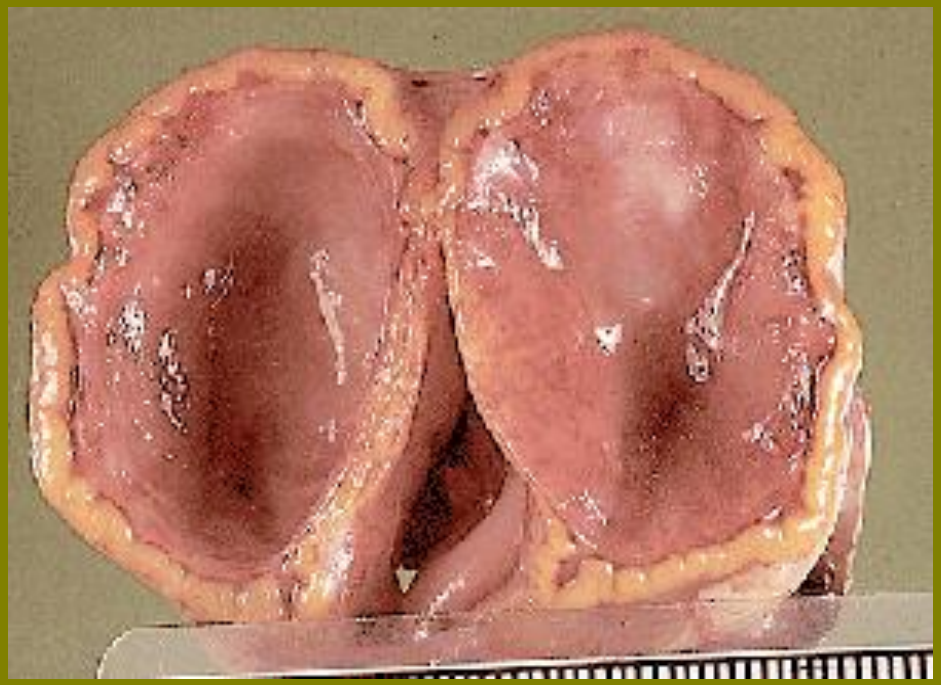


CYSTIC CHANGES IN OVARIES ! SOME NORMAL PARTS OF OVARY ARE CYSTIC BUT THEY TEND TO INCREASE SIGNIFICANTLY IN SIZE

PATHOLOGY OF OVARIES

CYSTS

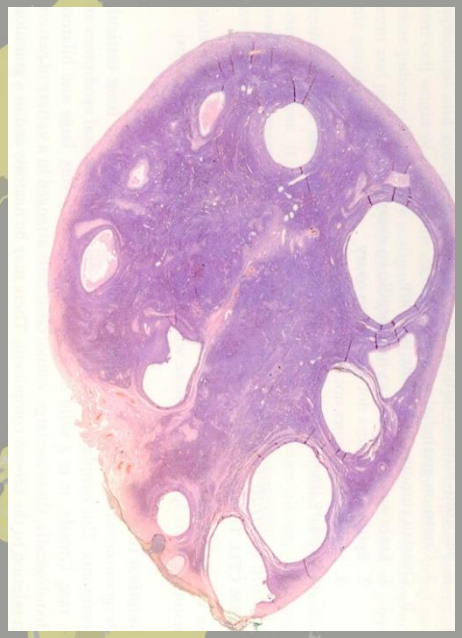
FOLLICULAR CYST



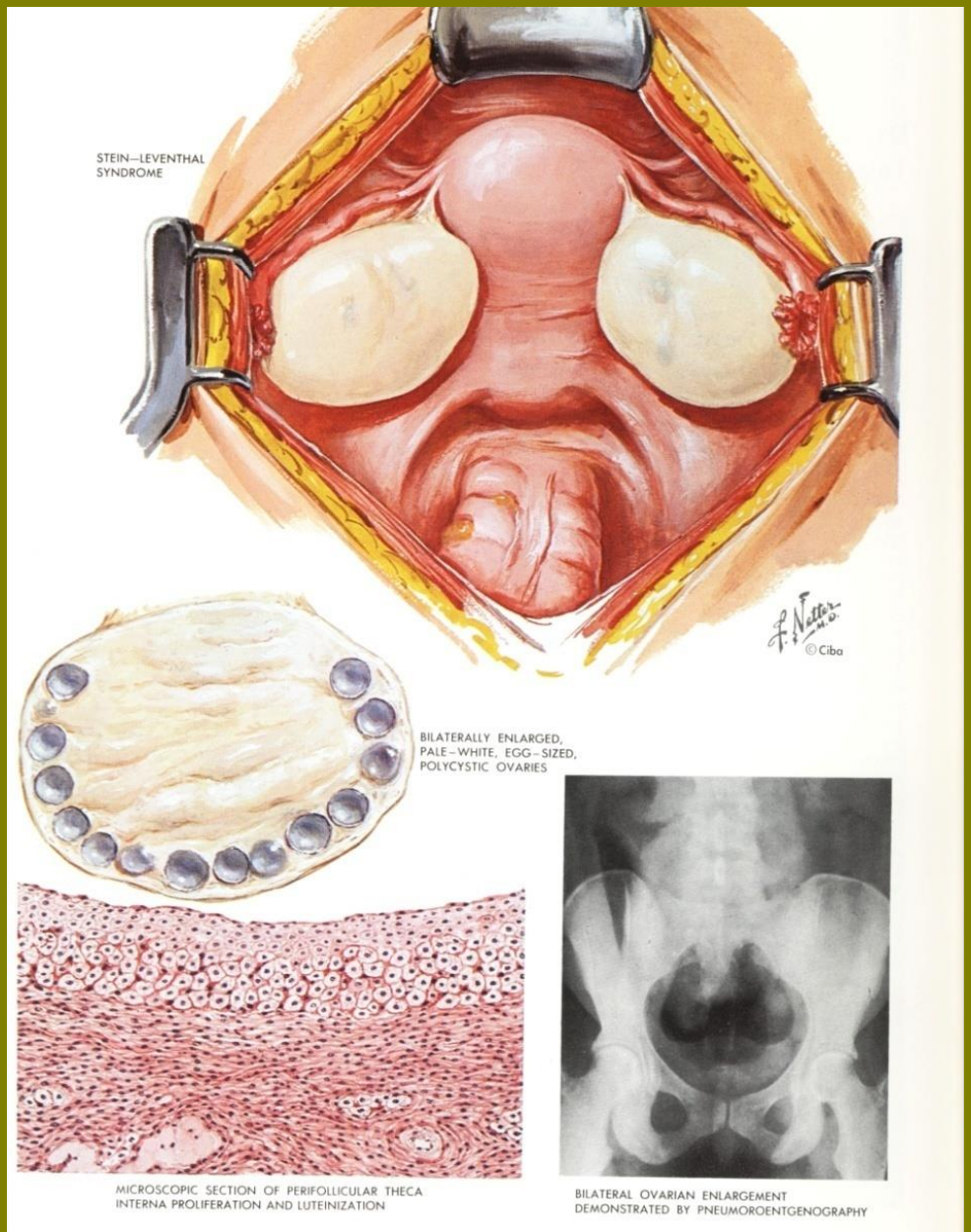
LUTEIN CYST (CORPUS LUTEUM CYST)

PATHOLOGY OF OVARIES

STEIN-LEVENTHAL SYNDROME, PCO SYNDROME

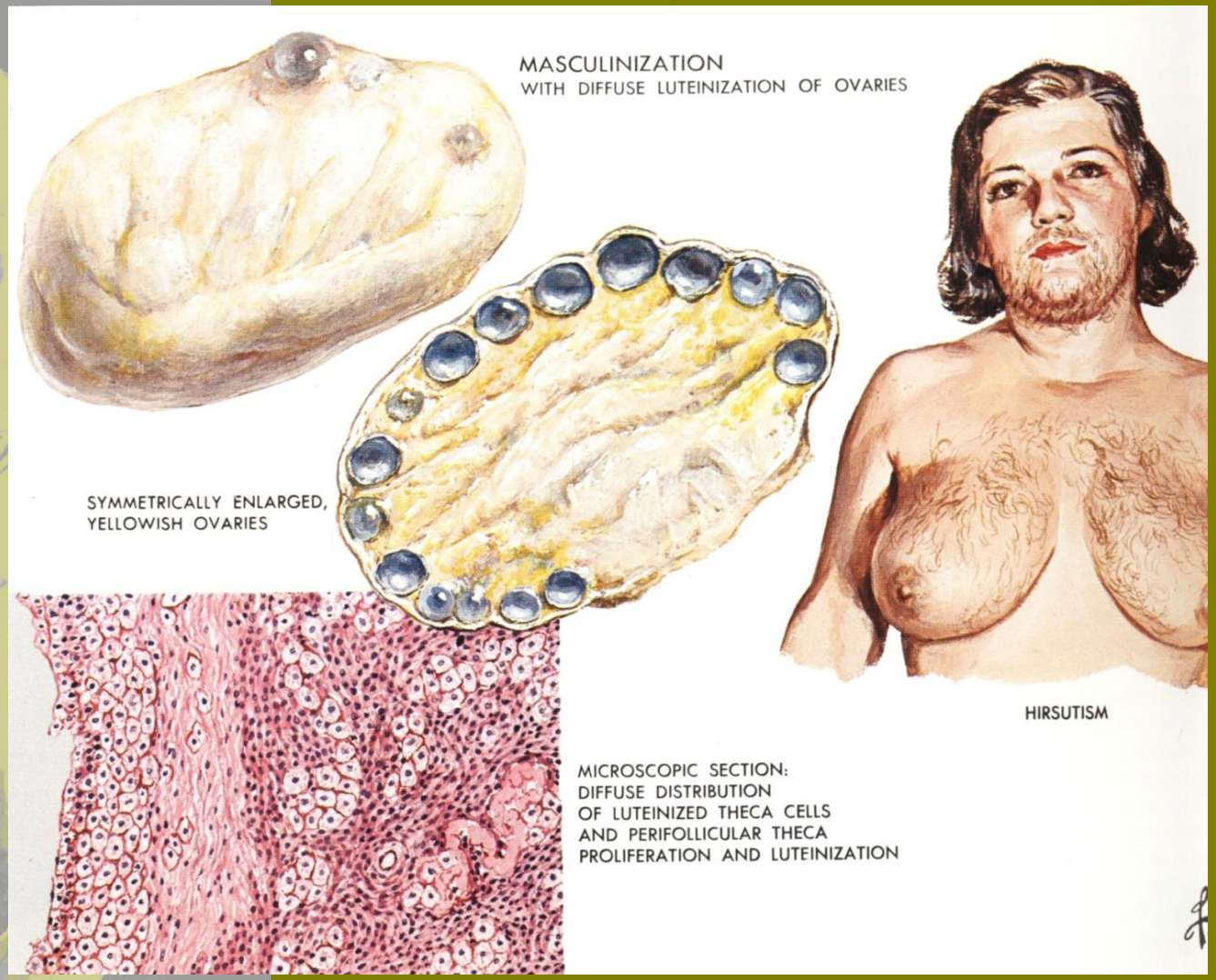


NUMEROUS CYSTS + OLIGOMENORRHEA, STEIN LEVENTHAL SYNDROME. THESE PATIENTS HAVE AN ANOVULAR CYCLE, THEY ARE OBESE (40%), WITH HIRSUTISM (50%) AND RARELY VIRILISM



PATHOLOGY OF OVARIES

(STEIN-LEVENTHAL SYNDROME, PCO SYNDROME



THE ETIOLOGY OF PCO IS NOT CLEAR

PATHOLOGY OF OVARIES

CLASSIFICATION OF OVARIAN TUMORS (ACCORDINGLY TO WHO)

I. COMMON EPITHELIAL
- A. SEROUS TUMORS
- B. MUCOUS TUMORS
- C. ENDOMETRIAL TUMORS
- D. MESONEPHROID TUMORS
- E. BRENNER TUMOR
- F. UNDIFFERENTIATED CARCINOMA
- G. MIXED MESODERMAL MÜLLERS' TUMOR

II. FROM SEX CORDS AND STROMAL TUMORS
- A. FOLLICULOMA (GRANULOSA CELL TUMOR)
- B. XANTHOFIBROMA THECOCELLULARE AND FIBROMA
- C. ANDROBLASTOMA
- D. SERTOLI-LEYDIG TUMORS

III. LIPID-CONTAINING TUMORS

IV. GERMINAL CELL TUMORS
- A. DYSGERMINOMA
- B. YOLK-SAC TUMOUR (ENDODERMAL SINUS TUMOR)
- C. EMBRYONAL CARCINOMA
- D. POLYEMBRIOMA
- E. CHORIOCARCINOMA
- F. TERATOMA

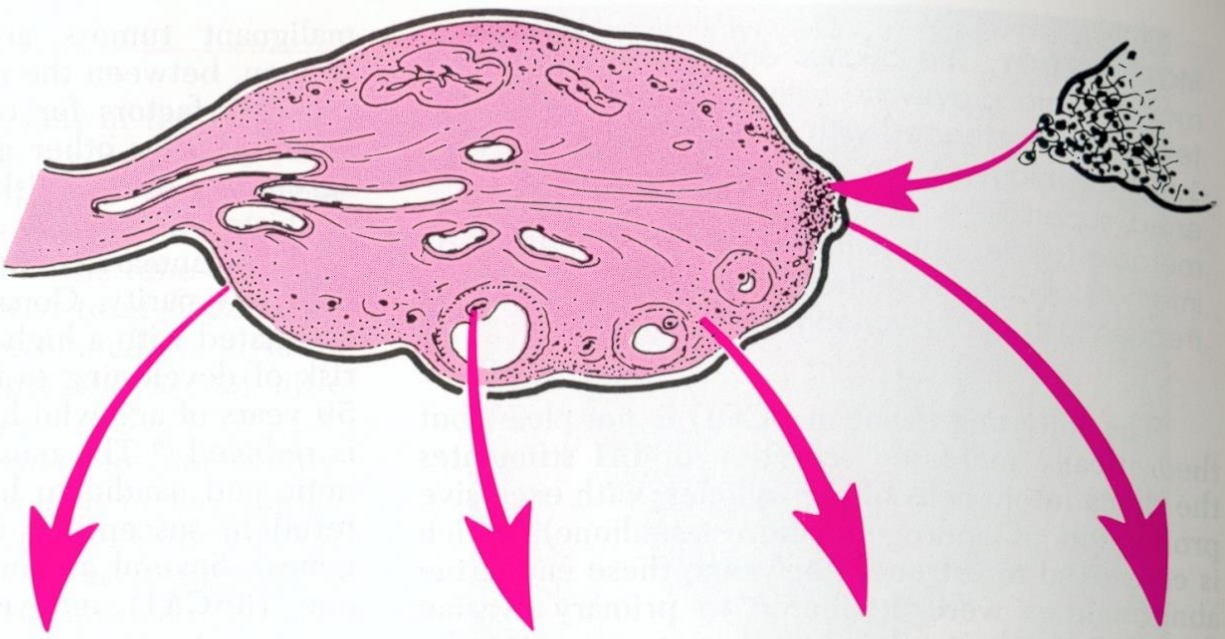
V. GONADOBLASTOMA

VI. NON-SPECIFIC CONNECTIVE TISSUE TUMORS

VII. NON-CLASSIFIED TUMORS

VIII. METASTATIC TUMORS

PATHOLOGY OF OVARIES
HISTOGENESIS OF OVARIAN TUMORS

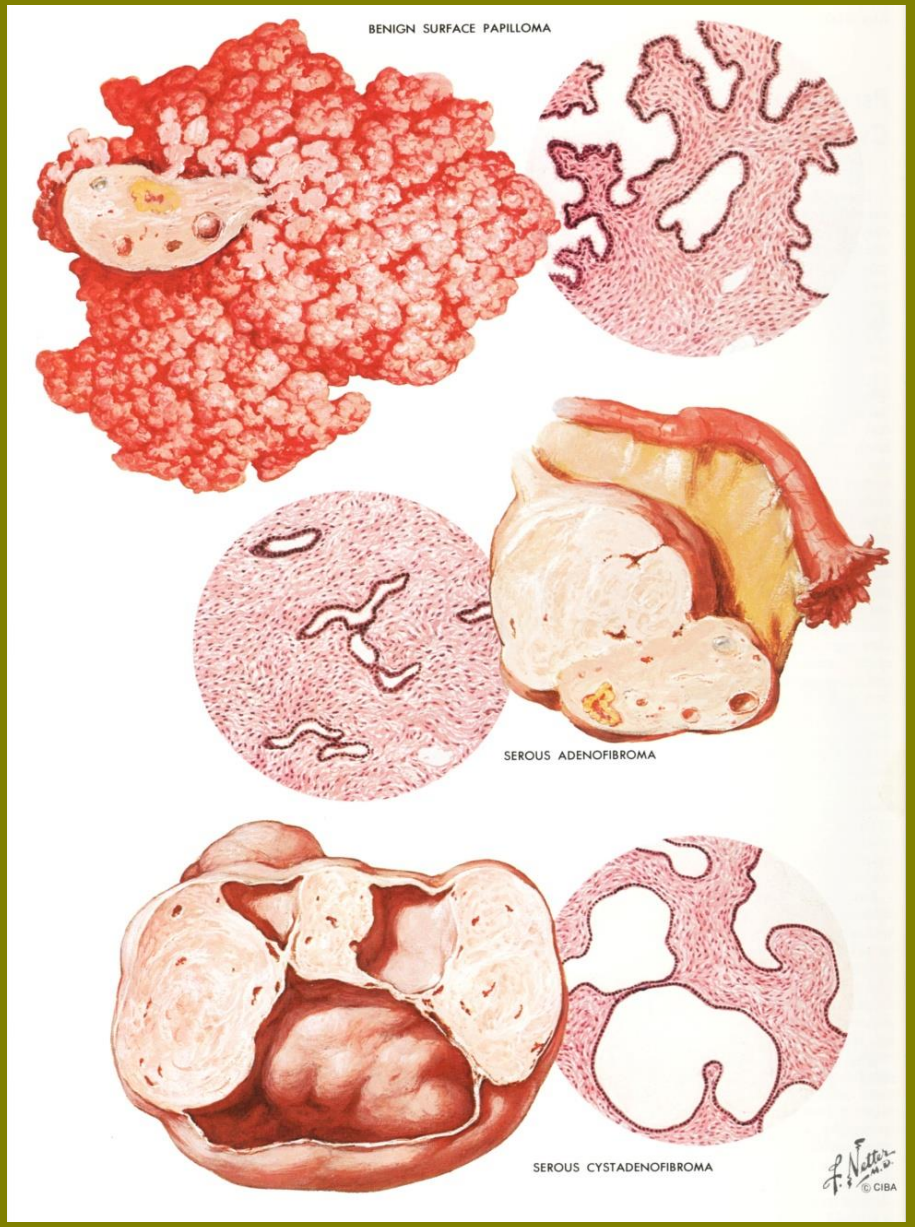


Origin	Surface epithelial cells (common epithelial tumors)	Germ cell	Sex cord–stroma	Metastasis to ovaries
Frequency	65–70%	15–20%	5–10%	5%
Age group affected	20+ years	0–25+ years	All ages	Variable
Types	• Serous tumor • Mucinous tumor • Endometrioid tumor • Clear cell tumor • Brenner tumor	• Teratoma • Dysgerminoma • Endodermal sinus tumor • Choriocarcinoma	• Fibroma • Granulosa–theca cell tumor • Sertoli-Leydig cell tumor	

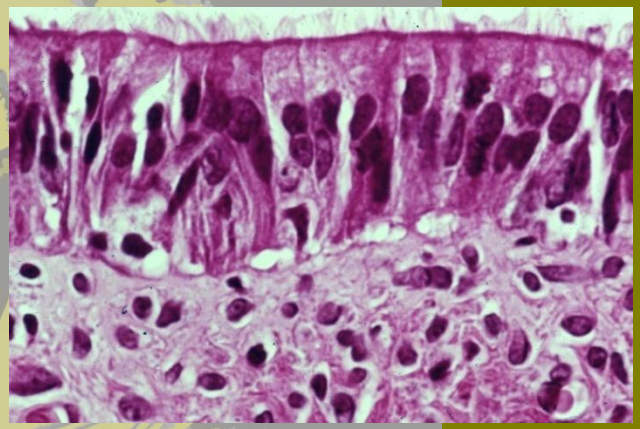
PATHOLOGY OF OVARIES

OVARIAN TUMORS

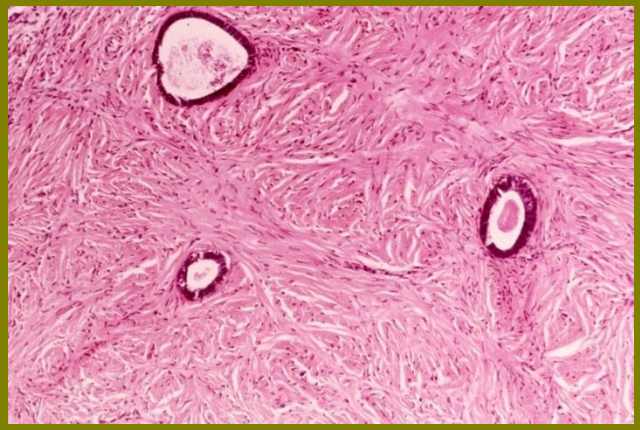
APPROX. 65% OF SEROUS CYSTS ARE BENIGN, AT EVERY AGE, MOST COMMON IN THE 5TH DECADE. IN ABOUT 25% - BILATERAL.



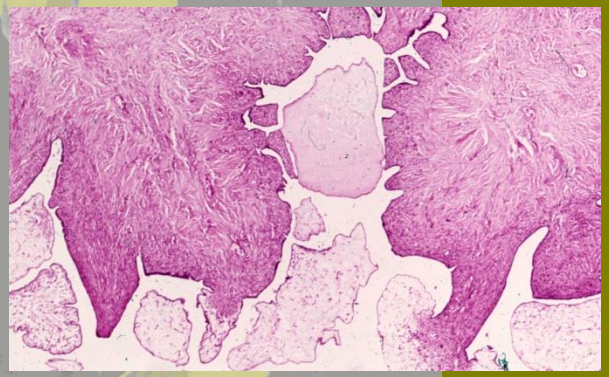
SEROUS TUMORS
BENIGN



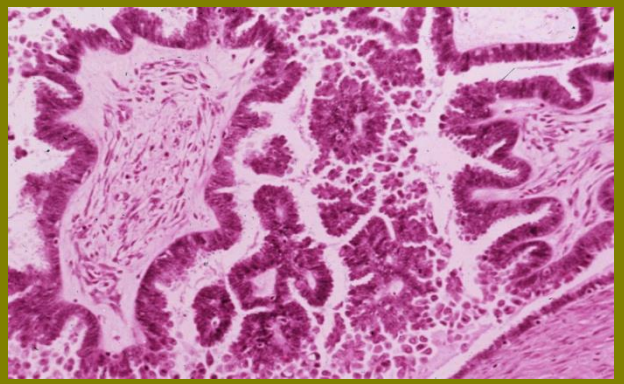
CILIATED EPITHELIUM OF SEROUS CYST



SEROUS ADENOFIBROMA

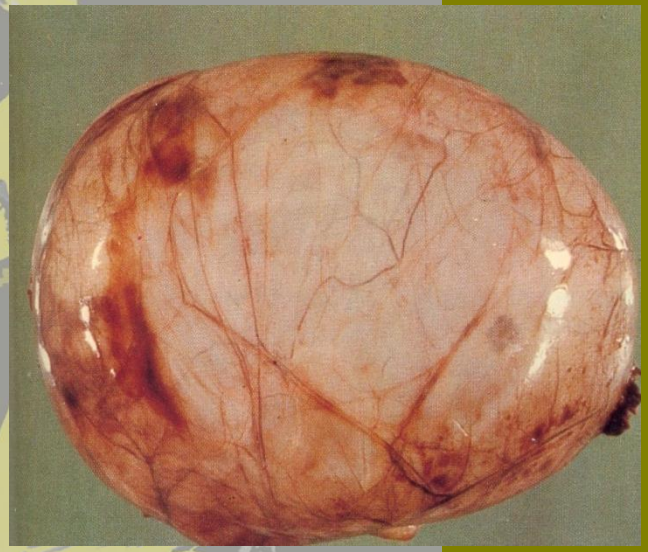


SEROUS PAPILLARY KYSTADENOMA

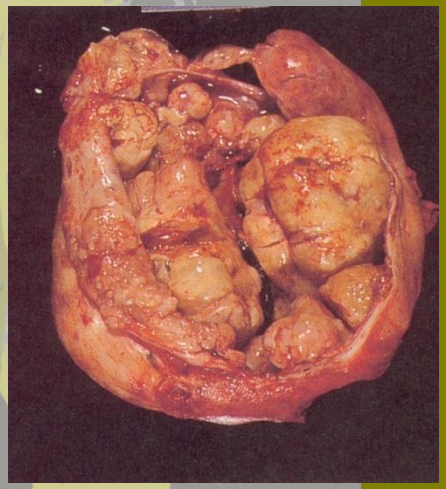


SEROUS PAPILLARY KYSTADENOMA (BORDERLINE TYPE) – OMENTAL IMPLANTS

SEROUS TUMORS
BENIGN



SEROUS CYST OF OVARY



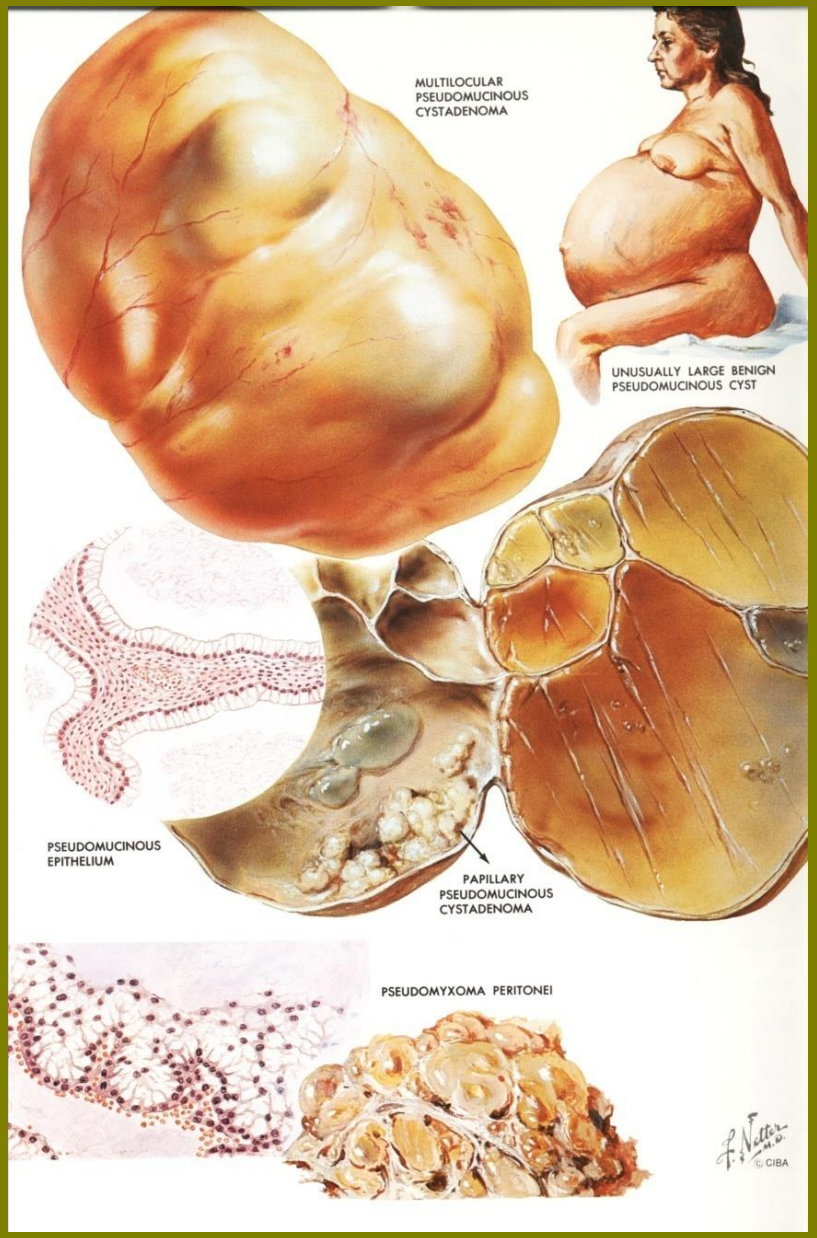
PAPILLARY SEROUS KYSTADENOMA

PAPILLARY SEROUS KYSTADENOMA

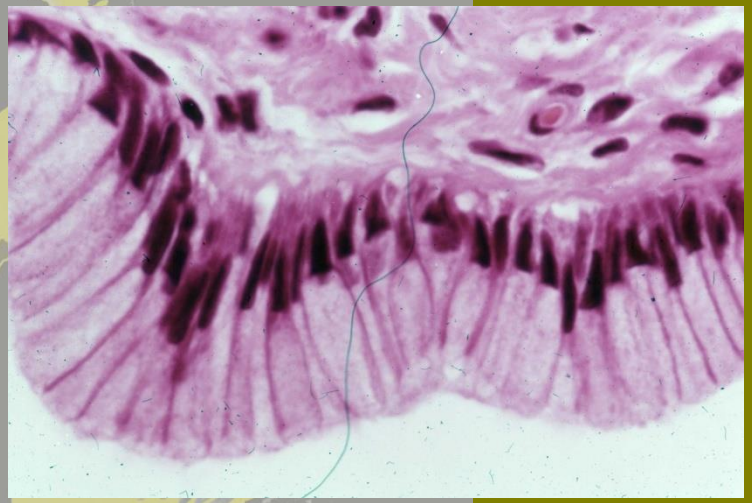
OVARIAN TUMORS

MUCINOUS CYSTS ARE THE BIGGEST OF ALL OVARIAN TUMORS. 85% ARE BENIGN TUMORS

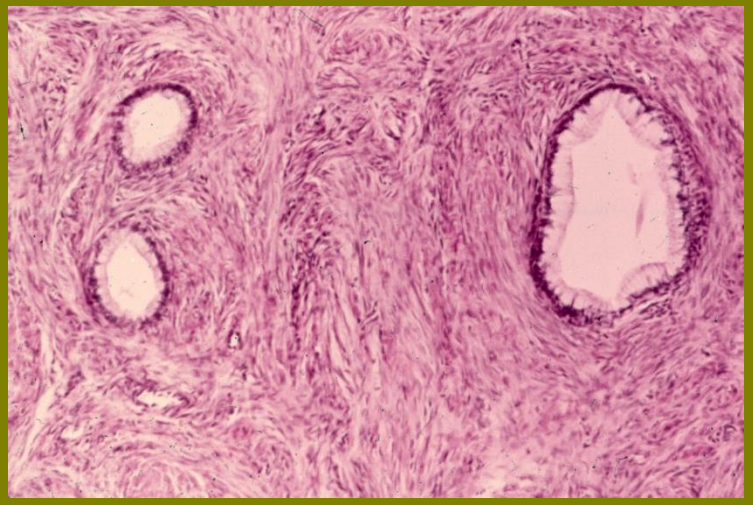
MUCINOUS MULTILOCULAR KYSTADENOMA



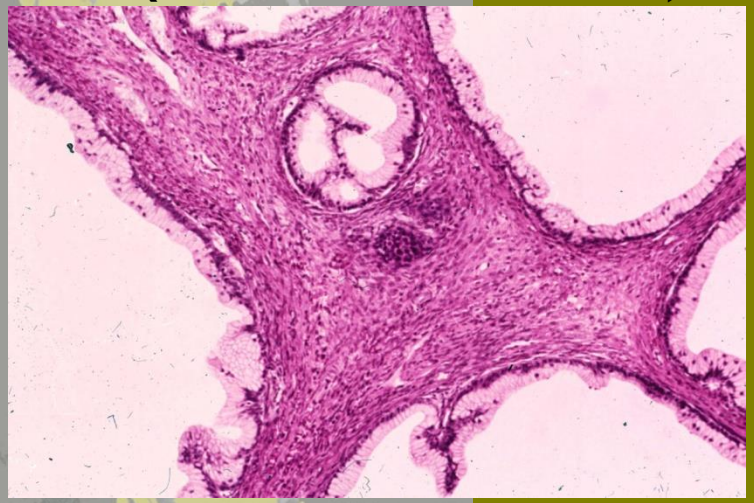
MUCINOUS TUMORS
BENIGN



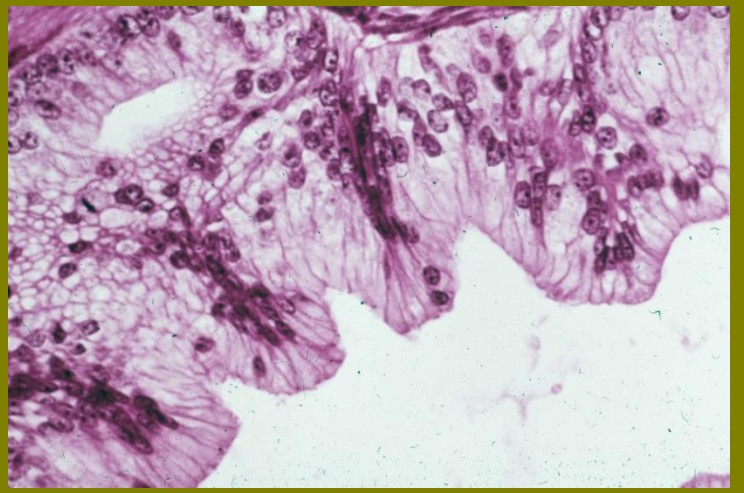
MUCINOUS KYSTADENOMA
(TYPICAL EPITHELIUM)



MUCINOUS ADENOFIBROMA

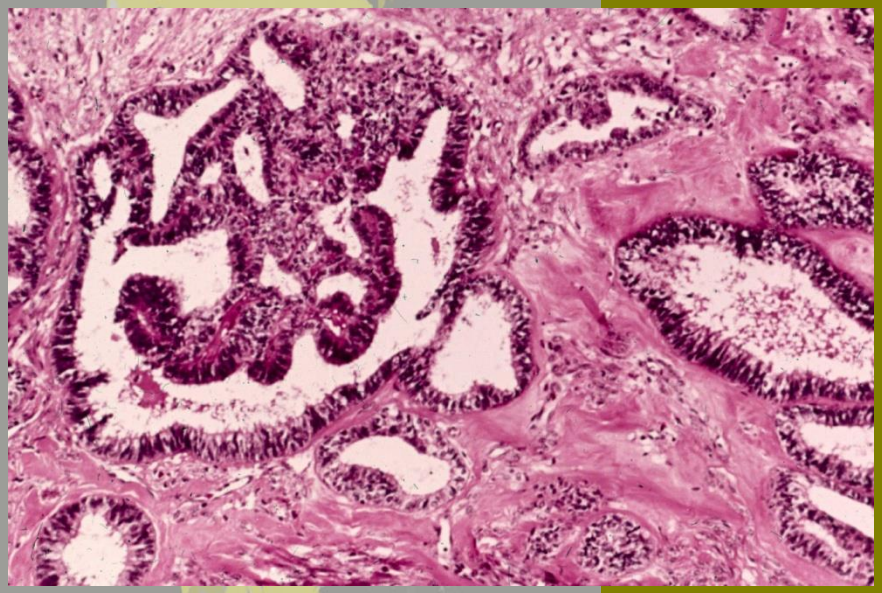


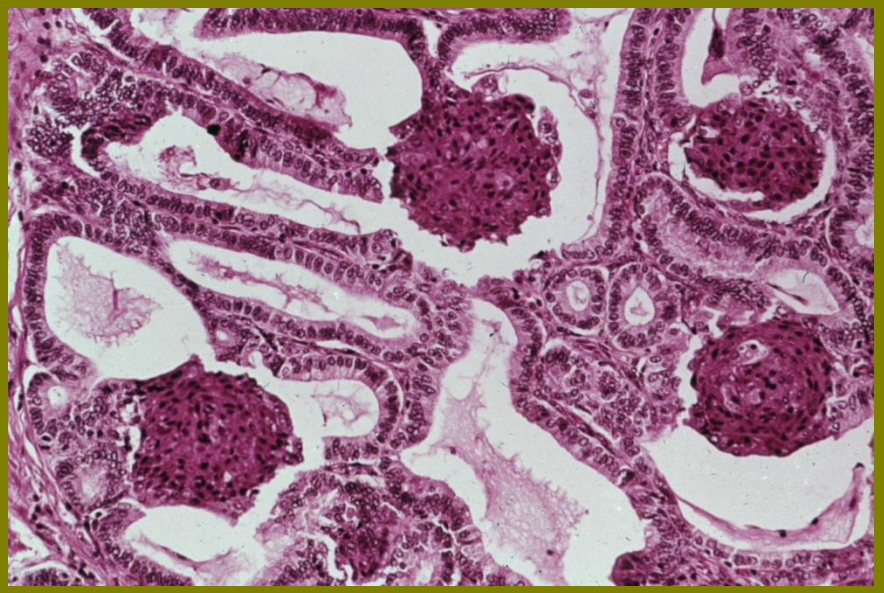
MUCINOUS MULTILOCULAR
KYSTADENOMA



MUCINOUS KYSTADENOMA
(BORDERLINE)

ENDOMETRIOIDAL TUMORS





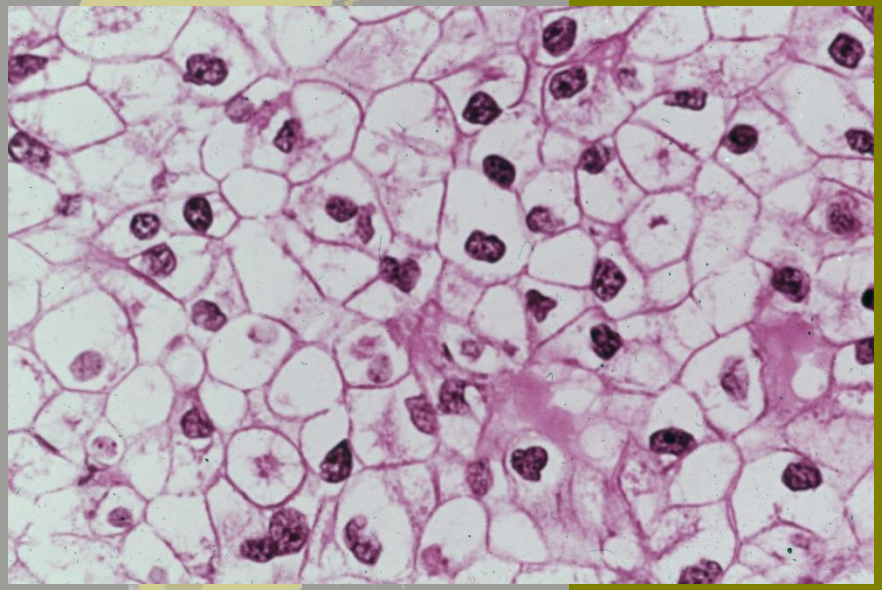
ENDOMETRIOIDAL KYSTADENOCARCINOMA

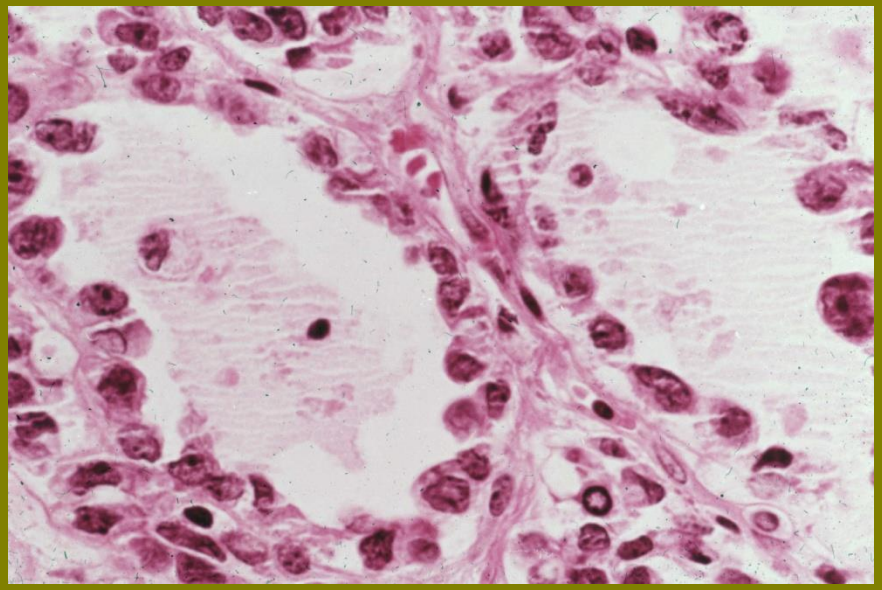
KYSTADENOCARCINOMA WITH SQUAMOUS METAPLASIA (ADENOACANTHOMA)

THEY ARE MALIGNANT (ABOUT 15% OF ALL MALIGNANT OVARIAN TUMORS)

CLEAR CELL CARCINOMA

CARCINOMA CLAROCELLULARE





CLEAR CELLLS

GLANDS

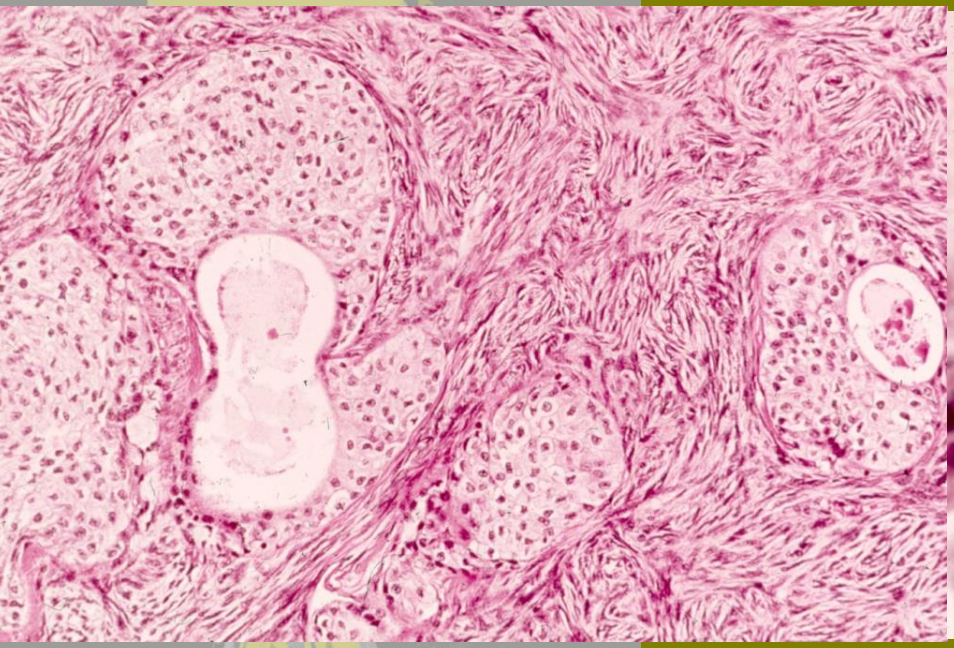
BRENNER TUMOR - general

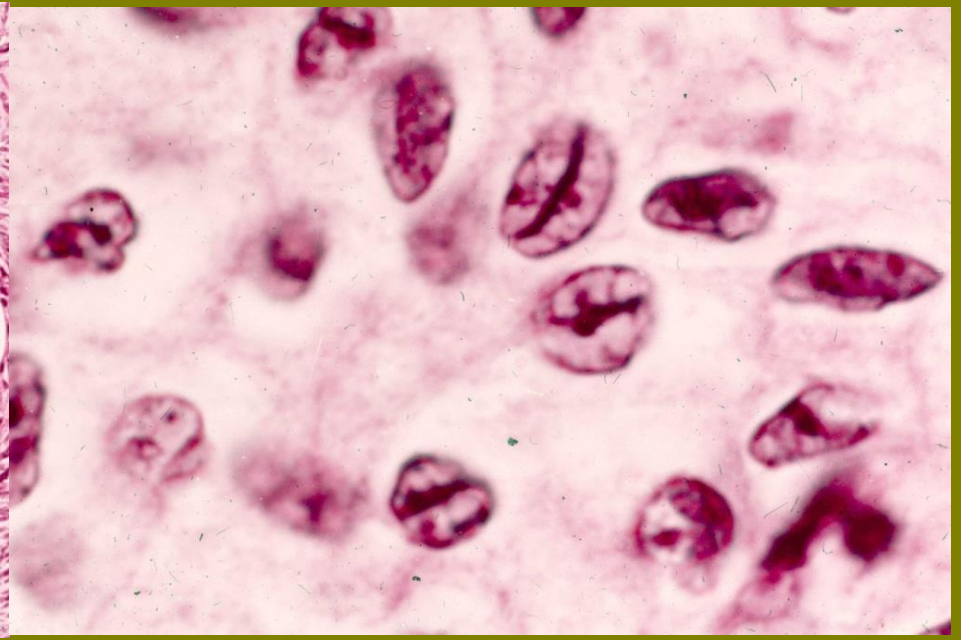
- One of two types of transitional cell tumors - also transitional cell carcinoma; 1 - 2% of ovarian neoplasms
- Usually age 40+; median age 50 years
- Slow growth, rarely ascites
- Adenofibromas in which epithelial component consists of sharply demarcated nests of urothelial-like cells
- Associated with hyperestrinism (endometrial hyperplasia and uterine bleeding), mucinous cystadenoma, struma ovarii, urothelial carcinoma of bladder
- Has true urothelial differentiation based on immunostains Epidermoid cysts may originate from epithelial cell nests of Brenner tumor (Am J Clin Pathol 1980;73:272)

EPITHELIAL TUMORS

BRENNER TUMOR

BENIGN





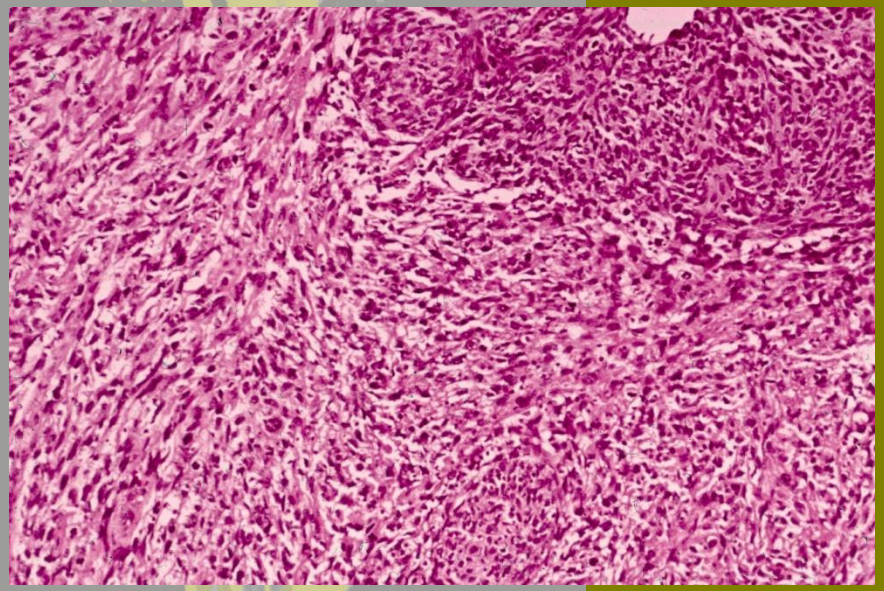
TYPICAL MICROSCOPIC PICTURE

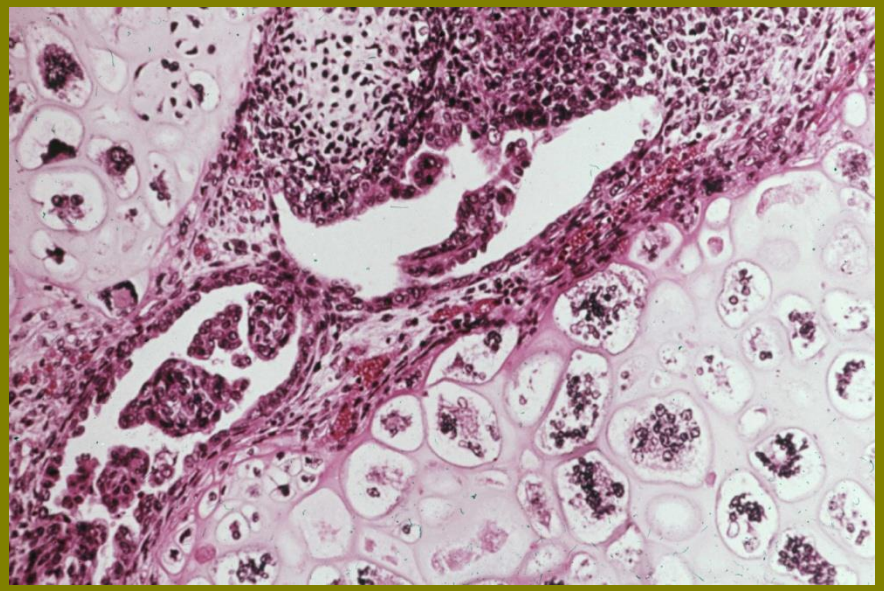
COFFEE BEAN-LIKE NUCLEI

MOST COMMONLY BILATERAL, COMMONLY CYSTIC.
SOMETIMES PRODUCES ESTROGENS

EPITHELIAL TUMORS

MIXED MESODERMAL TUMOR (MÜLLER)



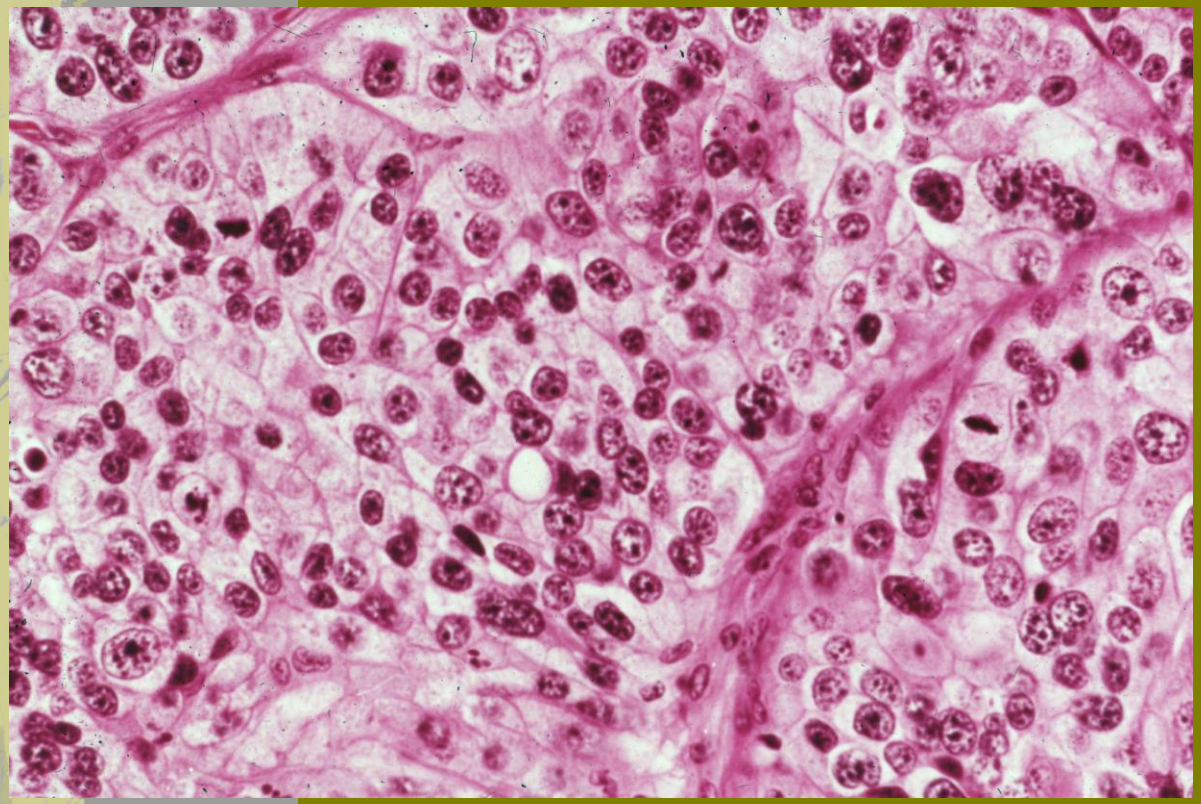


HOMOLOGOUS

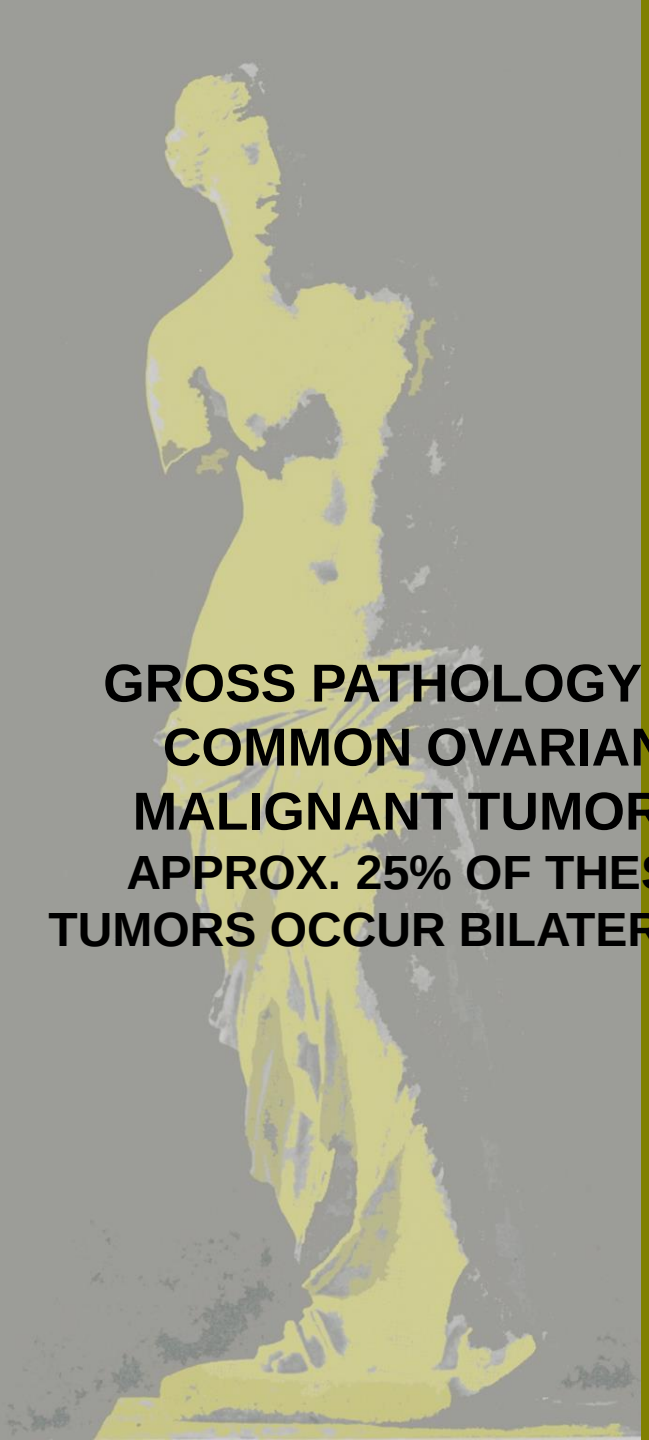
HETEROLOGOUS

EPITHELIAL TUMORS

UNDIFFERENTIATED CARCINOMA

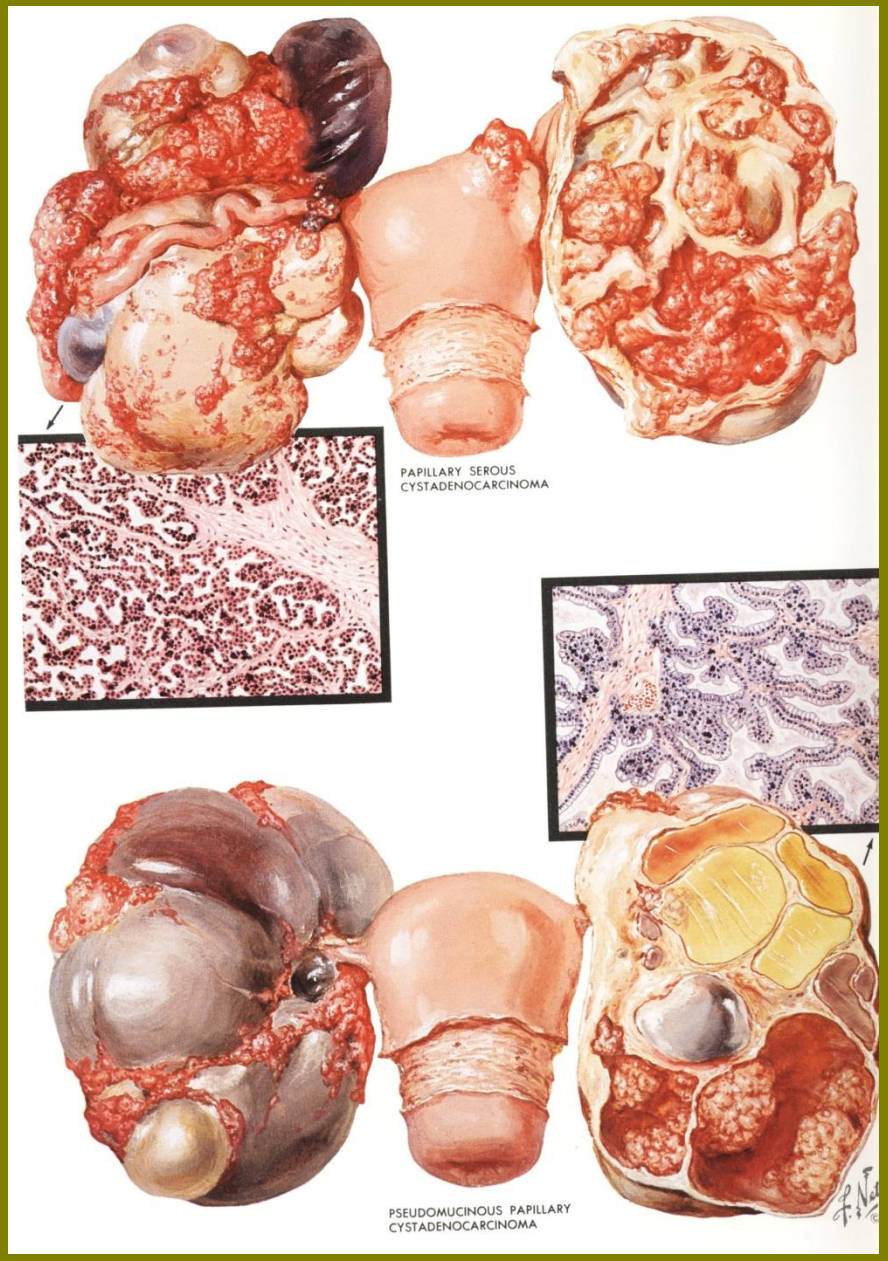


TYPICAL MICROSCOPIC PICTURE



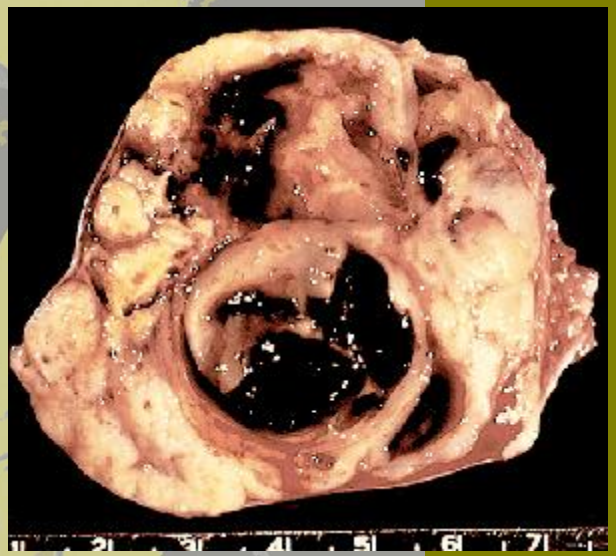
GROSS PATHOLOGY OF COMMON OVARIAN MALIGNANT TUMORS

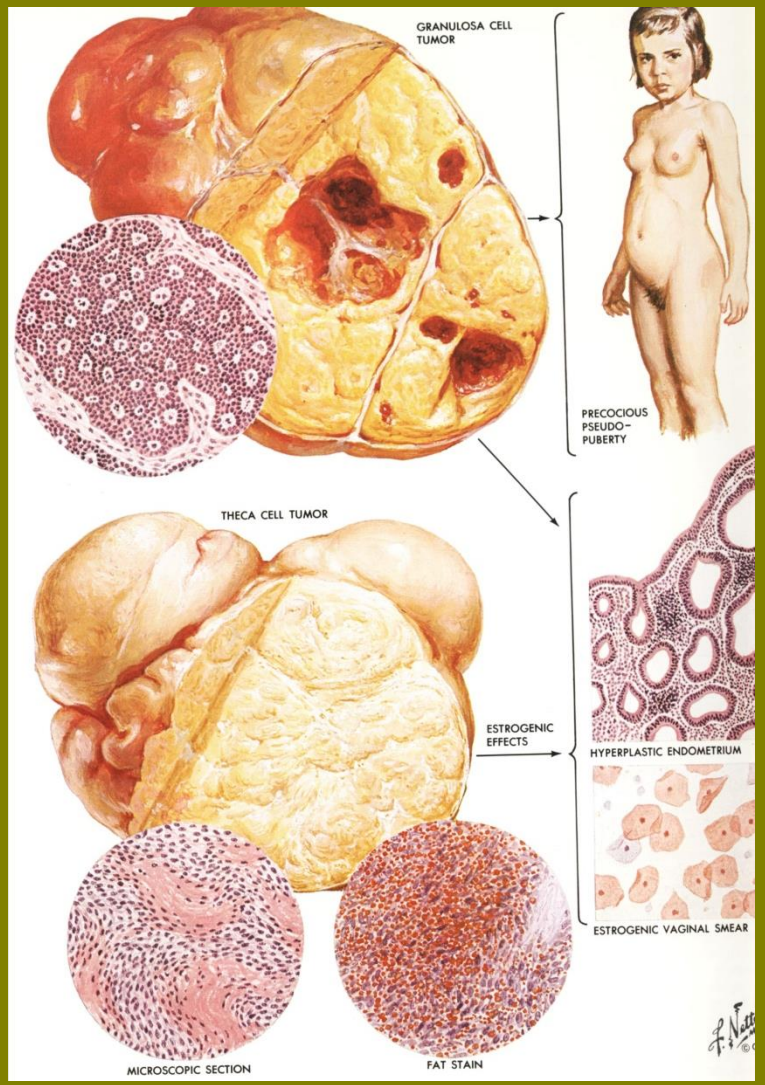
APPROX. 25% OF THESE TUMORS OCCUR BILATERALLY



SEX CORDS-STROMAL TUMORS

FROM GRANULOSA CELLS





FOLLICULOMA – ADULT TYPE

FROM THE GRANULOSA CELLS OF GRAAFIAN FOLLICLE. TUMOR IS SOLID, SOMETIMES CYSTIC, USUALLY UNILATERAL. PRODUCES ESTROGENS → HYPERPLASIA OF ENDOMETRIUM.

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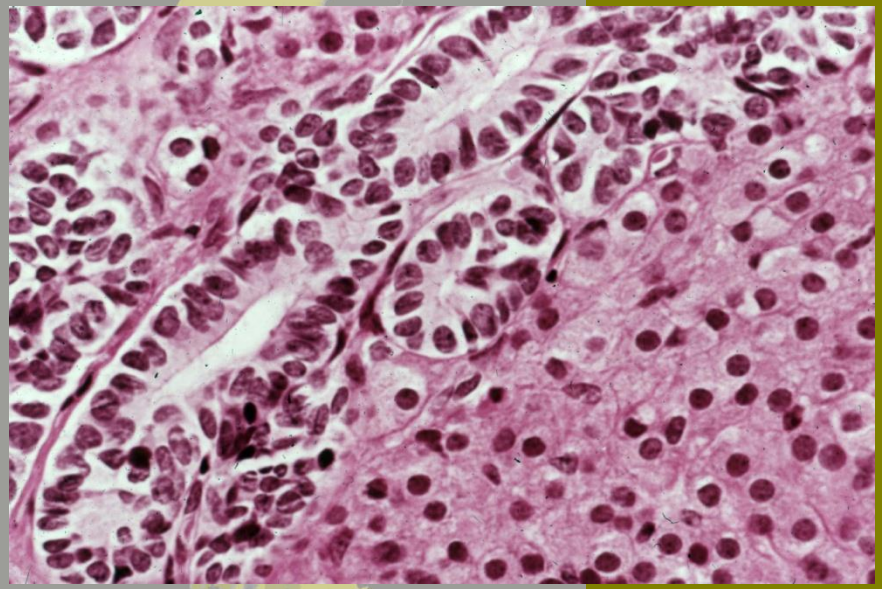
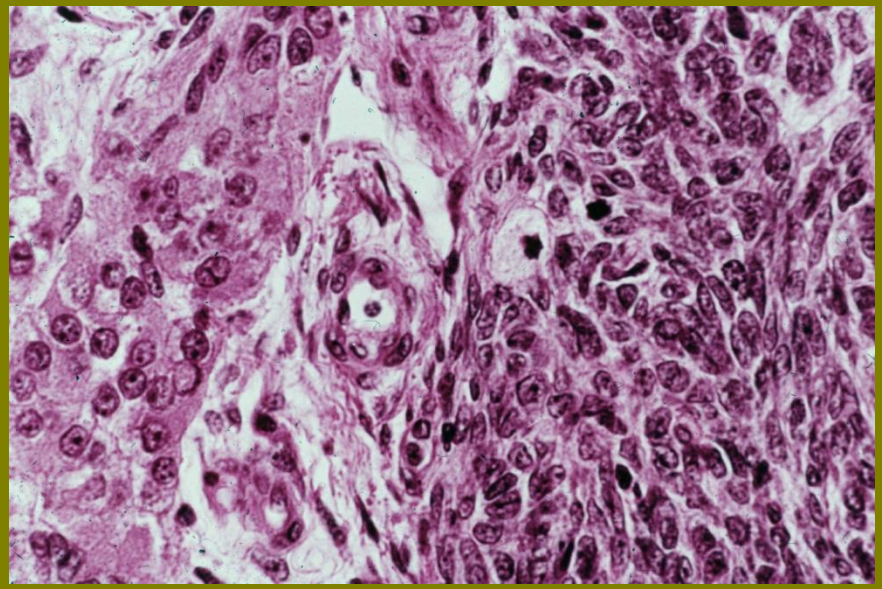
SEX CORDS-STROMAL TUMORS

FROM SERTOLI AND LEYDIG CELLS – ANDROBLASTOMA, ARRHENOBLASTOMA

SERTOLI-LEYDIG TUMOR

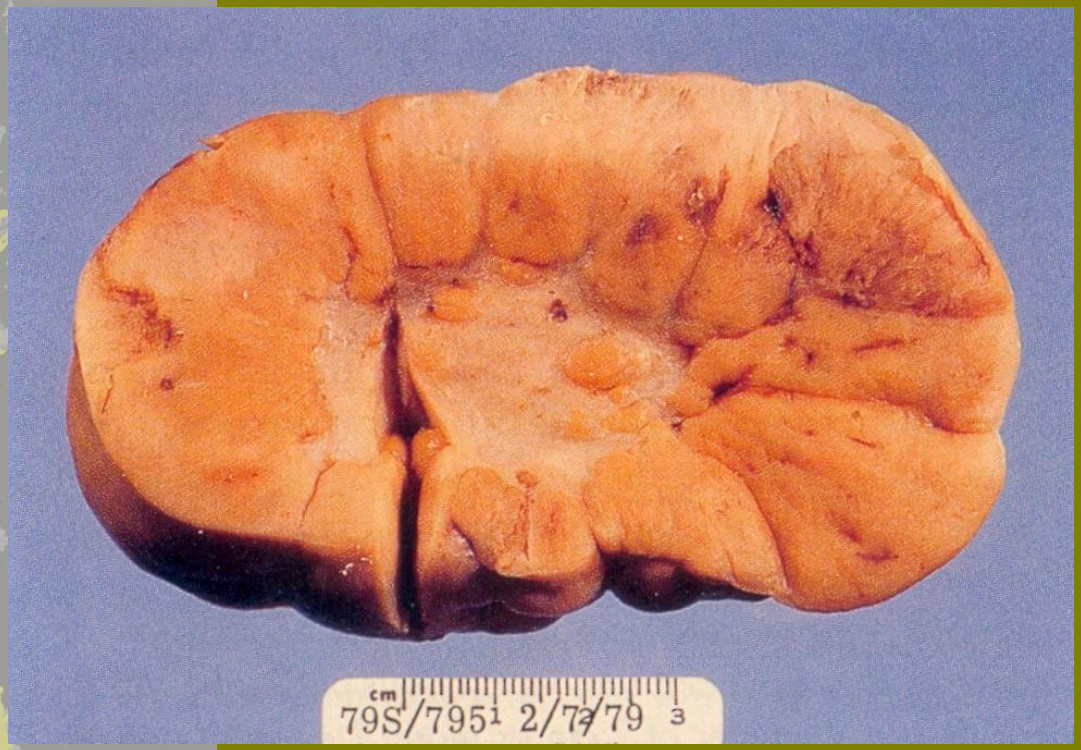




BUILT FROM CELLS TYPICAL FOR TESTIS IN DIFFERENT PHASES OF DEVELOPMENT. USUALLY OCCURS IN THE 2ND AND 3RD DECADE OF LIFE, UNILATERAL. MASCULATION, ALTHOUGH SOMETIMES HYPERESTROGENISM. GROSS: YELLOW TO BROWN TUMOR.

GERMINAL CELL TUMORS

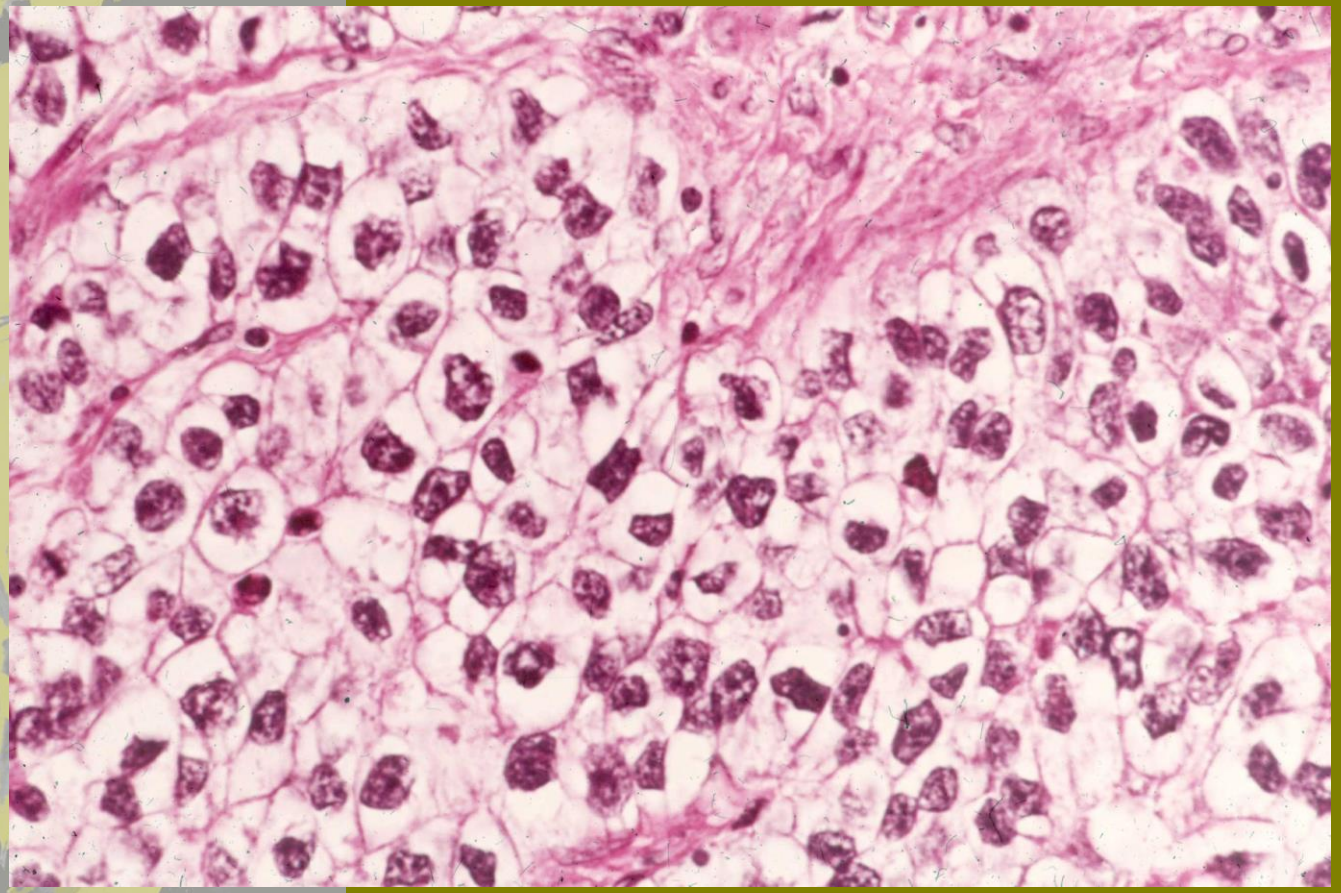
DYSGERMINOMA



UP TO 1% OF MALIGNANT OVARIAN TUMORS, AND AS MUCH AS 5-10% OF MALIGNANT TUMORS IN THE 1ST – 2ND DECADE OF LIFE. AVERAGE AGE OF WOMAN: 21

GERMINAL CELL TUMORS

D Y S G E R M I N O M A



BUILT FROM CELLS RESEMBLING PRIMARY SEX CELLS; ABUNDANT IN GLYCOGEN, WITH LYMPHOCYTES

GERMINAL CELL TUMORS

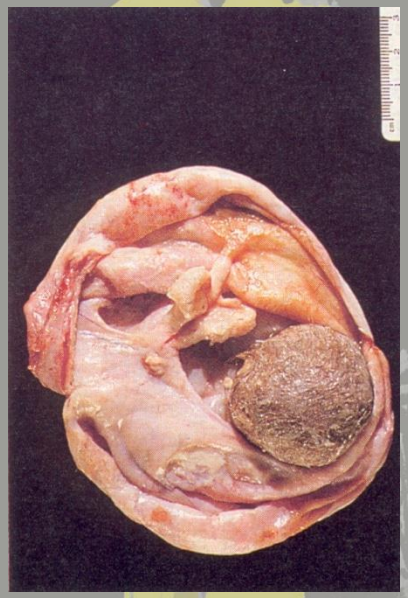
YOLK SAC TUMOR (ENDODERMAL SINUS TUMOR)

UP TO 20% OF MALIGNANT GERMINAL TUMORS. AVERAGE AGE IS 19 YEARS !! EXTREMELY INCREASED LEVELS OF AFP IN SERUM.

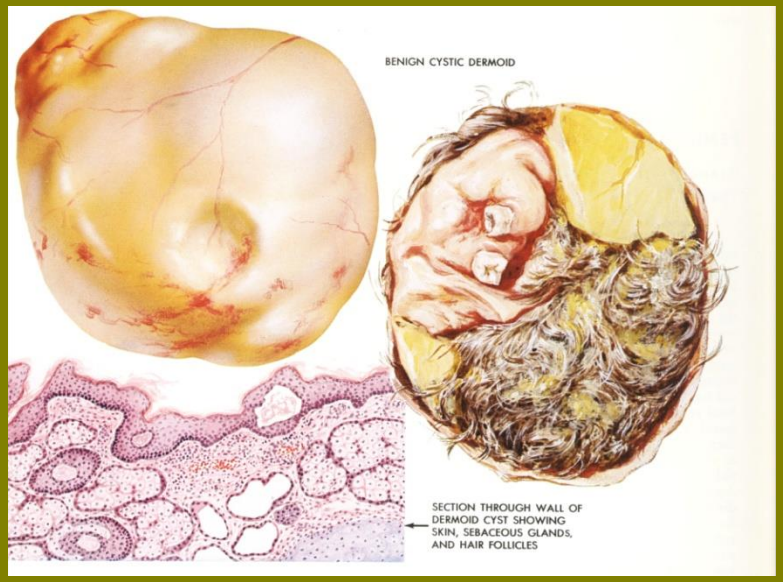
GERMINAL CELL TUMORS

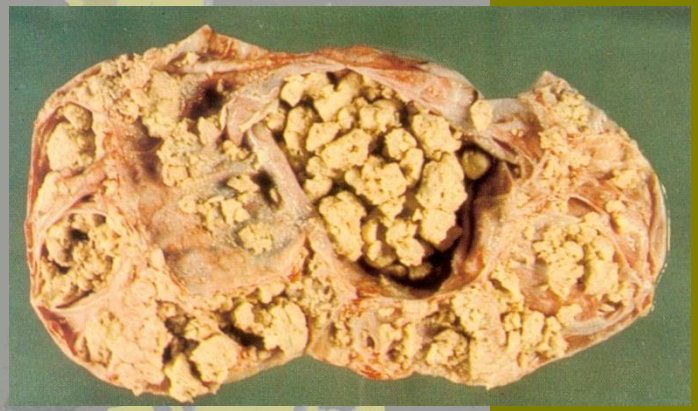
TERATOMA

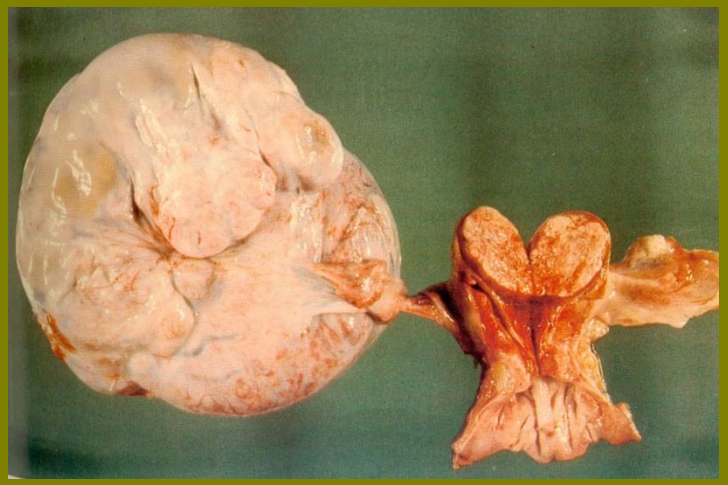
MATURE (ADULT) TERATOMA



DIFFERENT MACROSCOPIC PICTURES OF MATURE TERATOMA

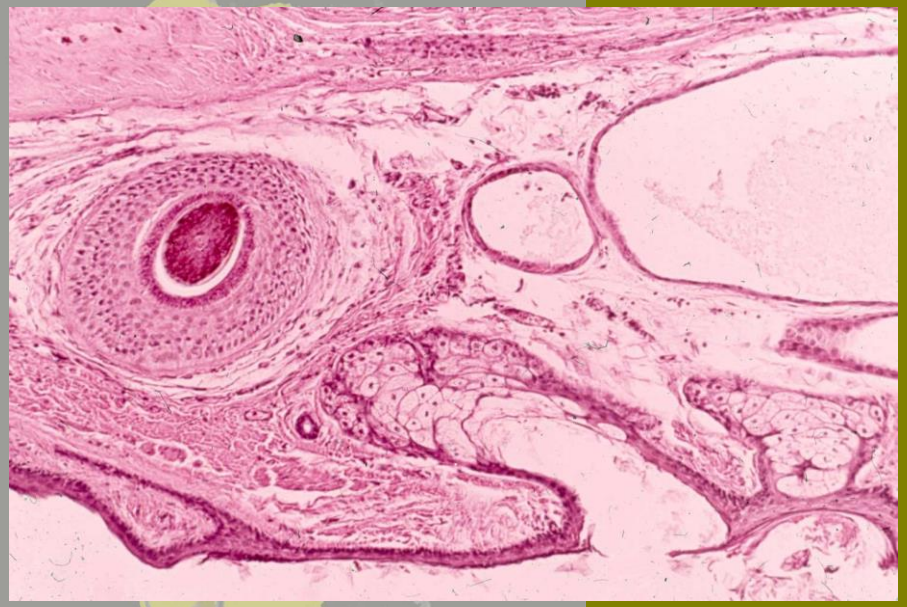




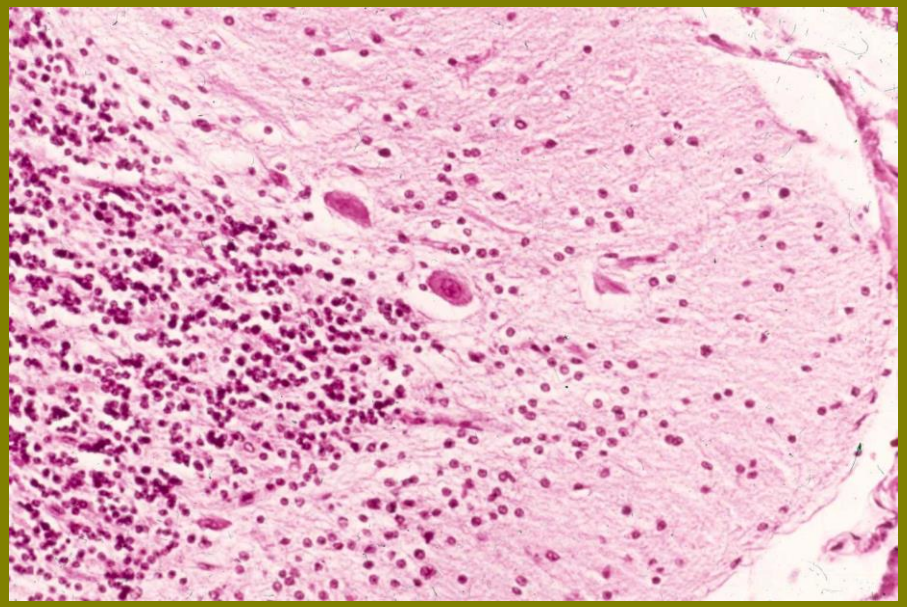


GERMINAL CELL TUMORS

TERATOMA



SKIN WITH ADNEXA IN DERMOID CYST

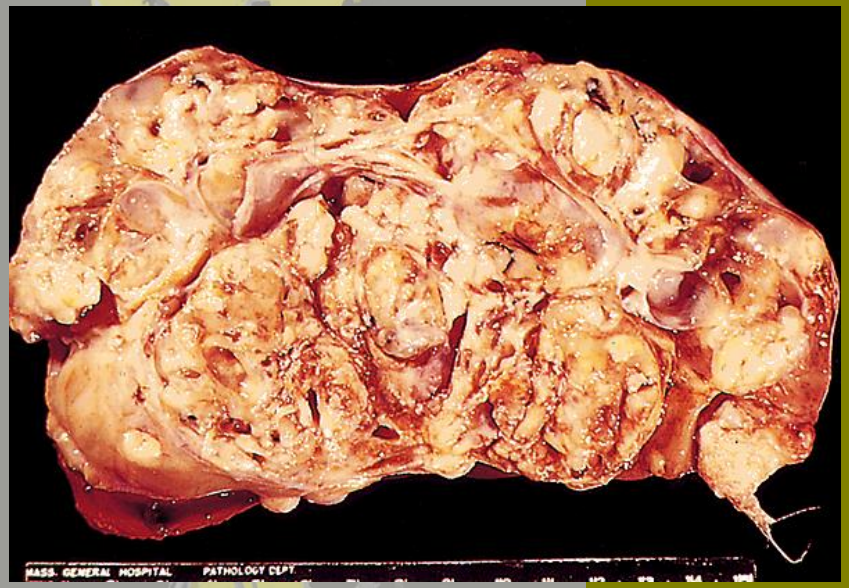


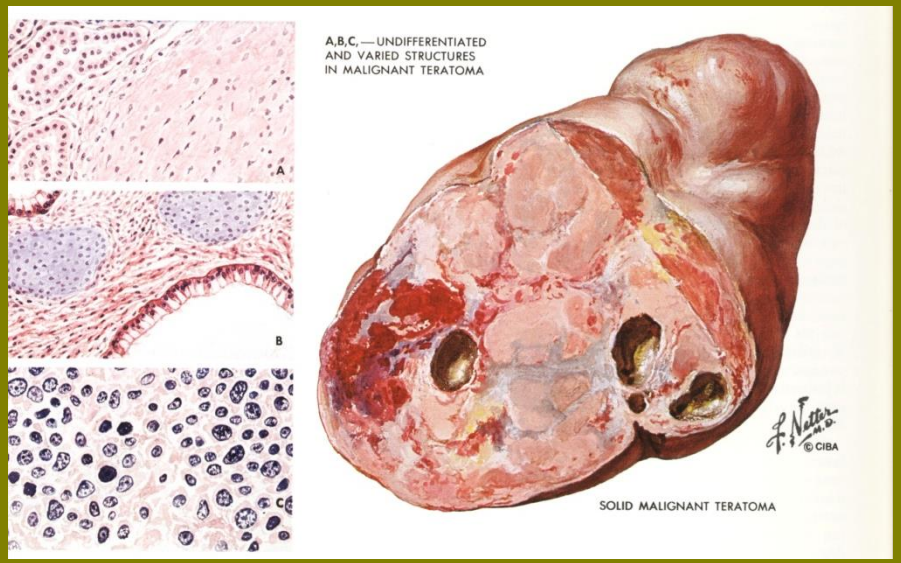
CEREBELLAR CORTEX IN ADULT TERATOMA

UP TO 25% OF ALL OVARIAN TUMORS; MAINLY IN YOUNGER WOMEN

GERMINAL CELL TUMORS

IMMATURE EMBRYONAL TERATOMA



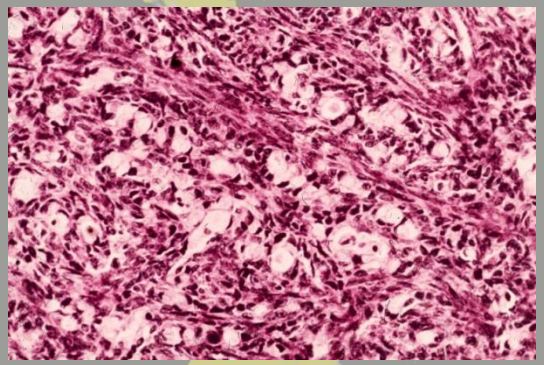


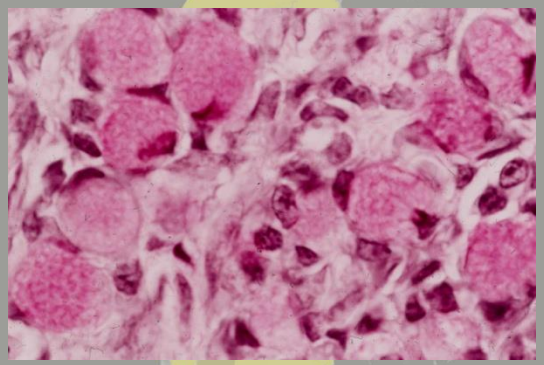
EMBRYONAL TERATOMA

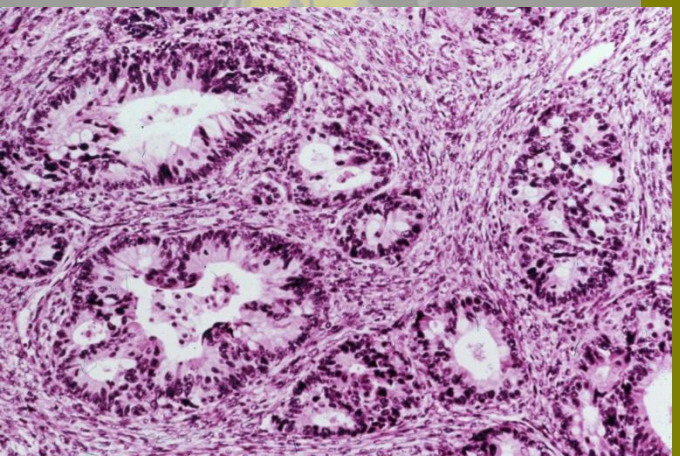
1% OF MALIGNANT OVARIAN TUMORS AND AS MUCH AS 10-20% OF MALIGNANT TUMORS IN THE FIRST AND SECOND DECADE OF LIFE.

PATHOLOGY OF OVARIES

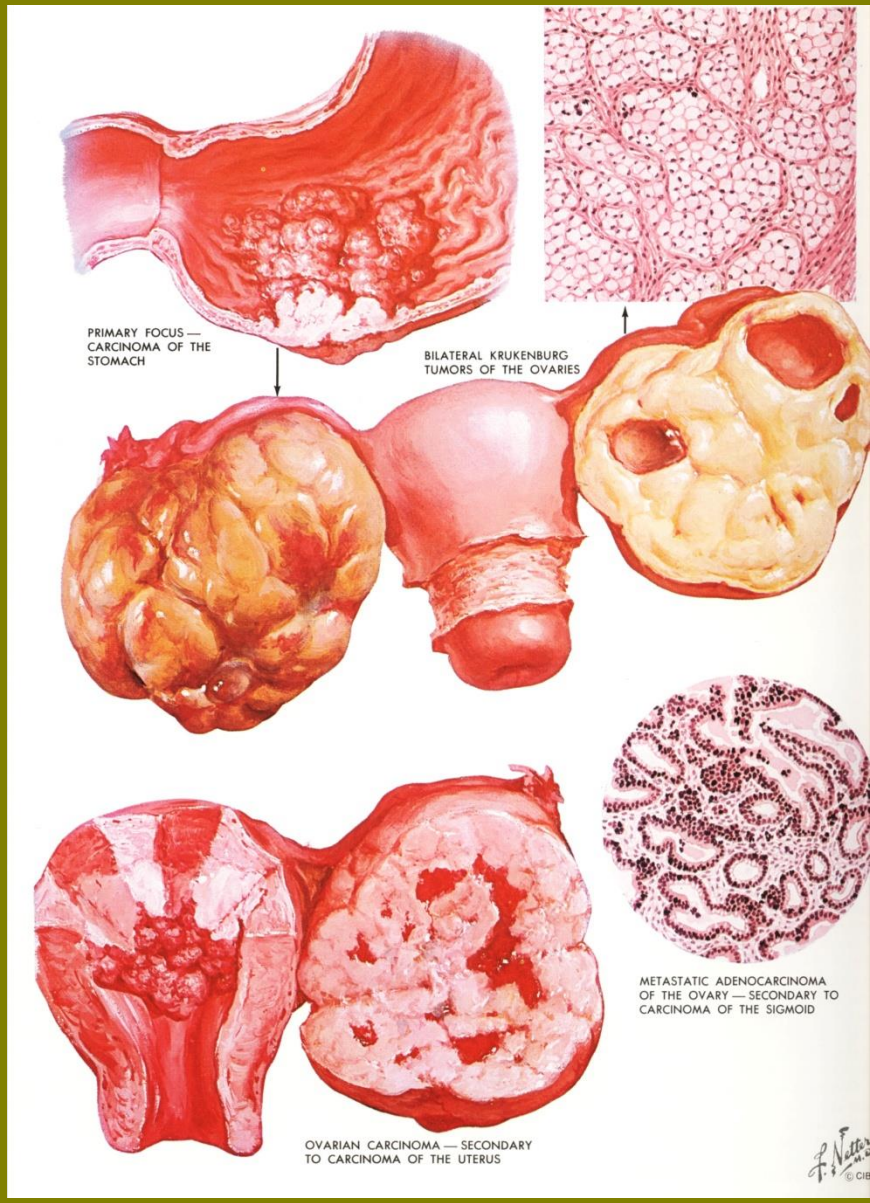
METASTATIC TUMORS



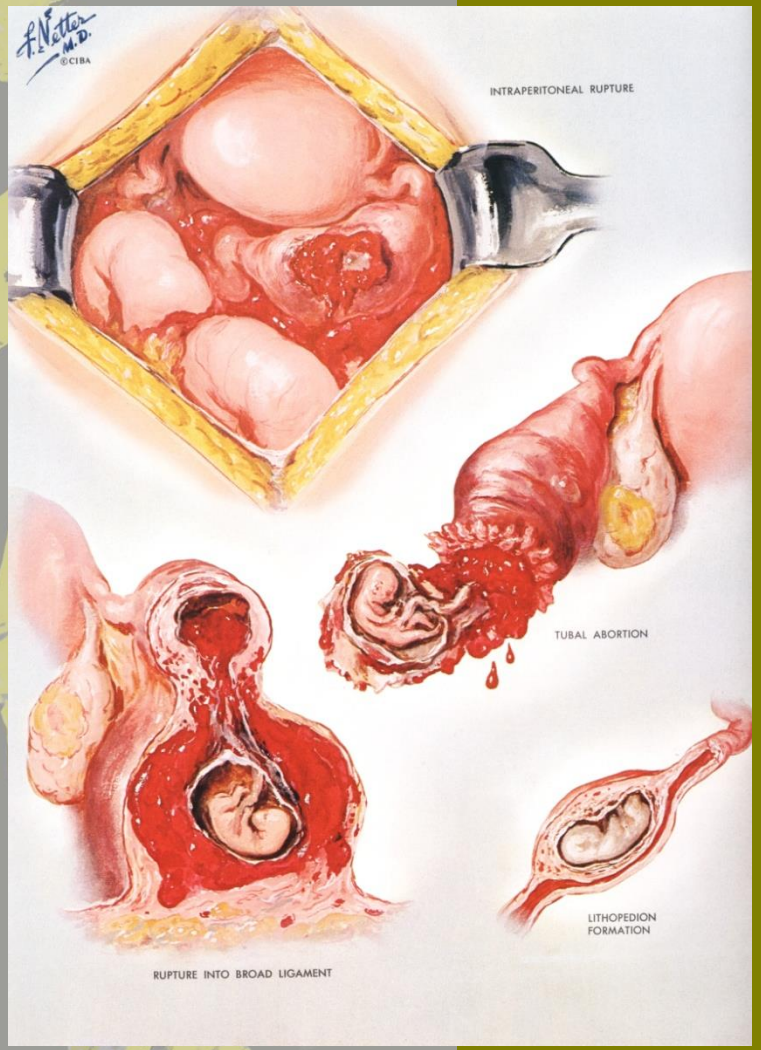


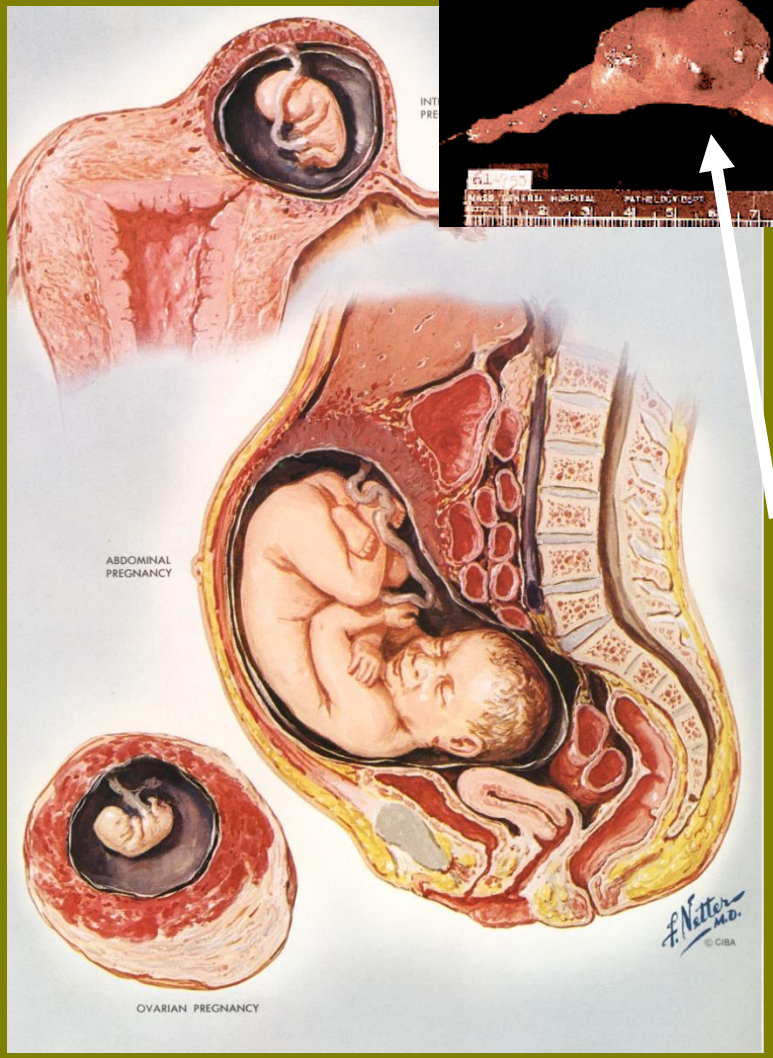


KRUKENBERG TUMOR – USUALLY THE METASTASIS TO THE OVARY FROM MUCINOUS CARCINOMA



ECTOPIC PREGNANCY

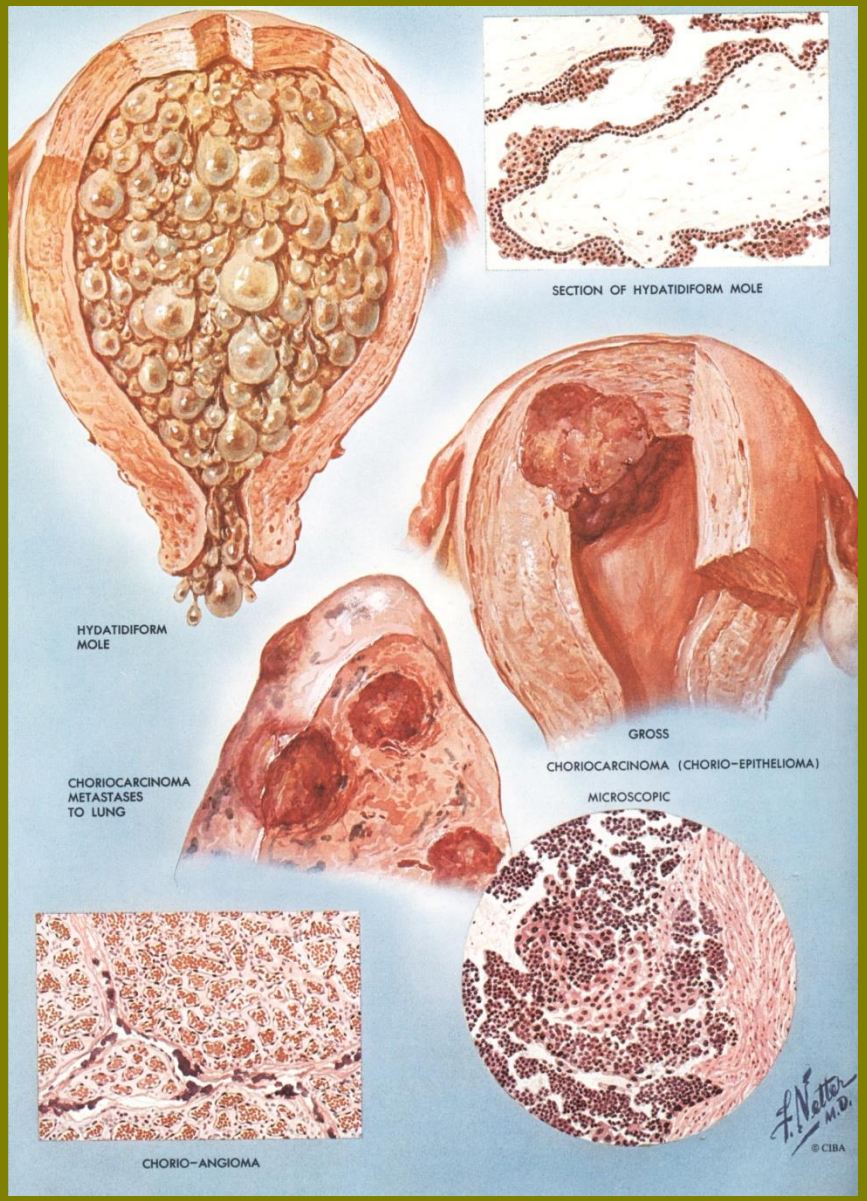




TUBAL PREGNANCY, TUBAL ABORTION, HEMASCOS, ABDOMINAL PREGNANCY, OVARIAN PREGNANCY

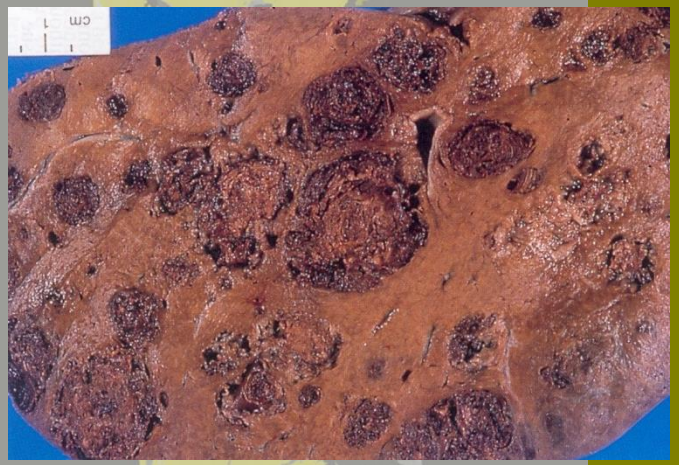
TROPHOBLASTIC DISEASE

HYDATID MOLE CHARACTERIZED BY THE EDEMA OF THE CHORIONIC VILLI AS WELL AS PROLIFERATION OF TROPHOBLAST.

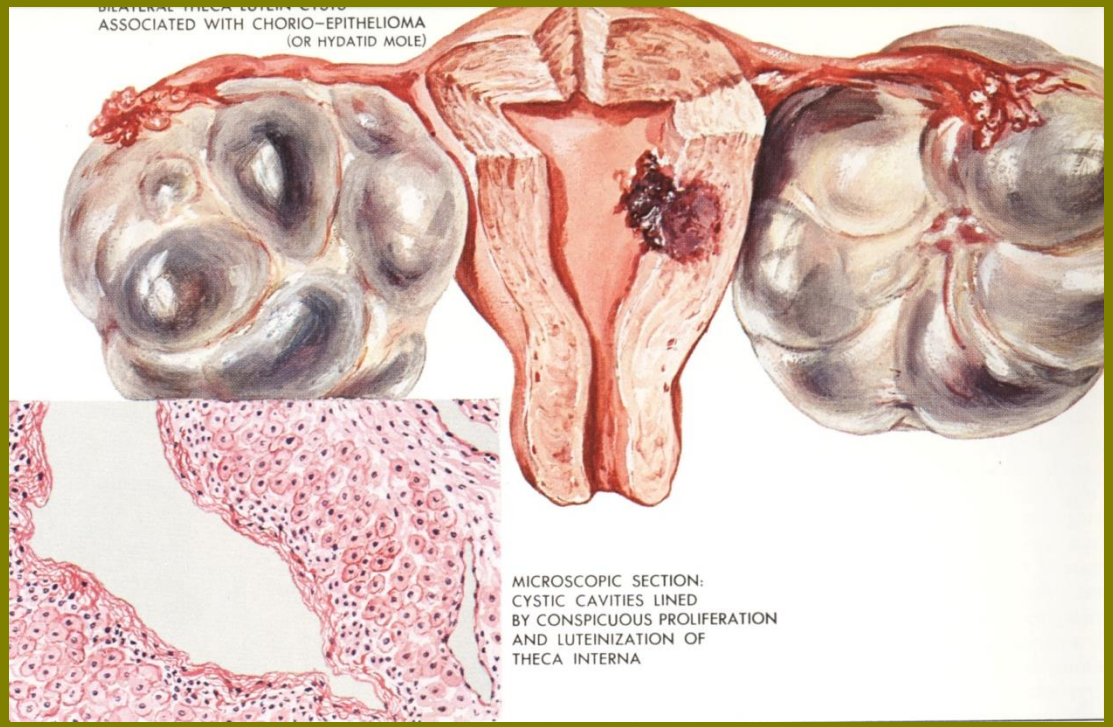


TROPHOBLASTIC DISEASE

CHORIOEPITHELIOMA



METASTASIS OF CHORIOEPITHELIOMA TO LIVER

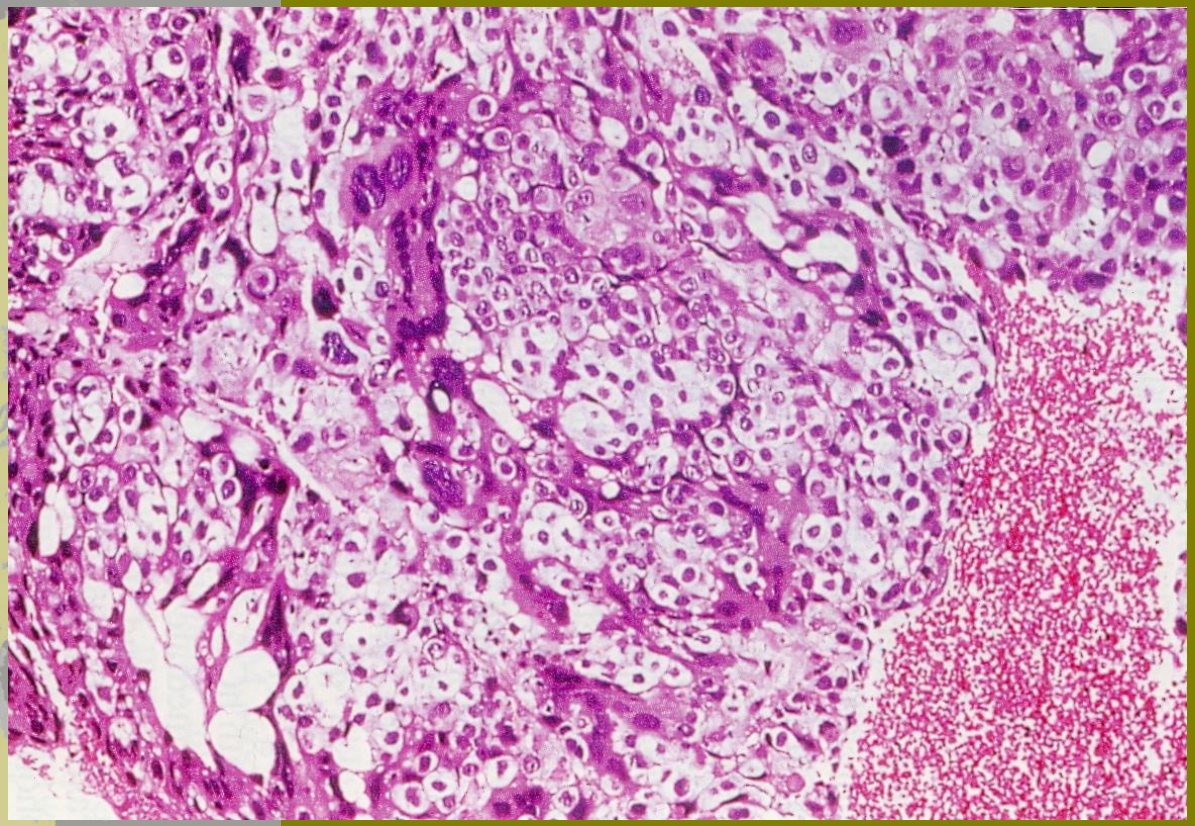


THECALUTEIN CYSTS DEVELOP IN THE OVARIES

INVASIVE TUMOR BUILT FROM TROPHOBLAST (MAINLY CYTO- AND SYNCYTIOTROPHOBLAST), EXTREME DIMORPHISM AND LACK OF CHORIONIC VILLI. DEVELOPS DURING OR AFTER PREGNANCY. EXTREMELY AGGRESSIVE, AND INFILTRATIVE GROWTH, HEMORRHAGIC, METASTATIC. PRODUCES LARGE AMOUNTS OF hCG.

TROPHOBLASTIC DISEASE

CHORIOEPITHELIOMA



CHORIOEPITHELIOMA (CHORIOCARCINOMA)
SYNCYTIO- AND CYTOTROPHOBLAST AND HEMORRHAGE