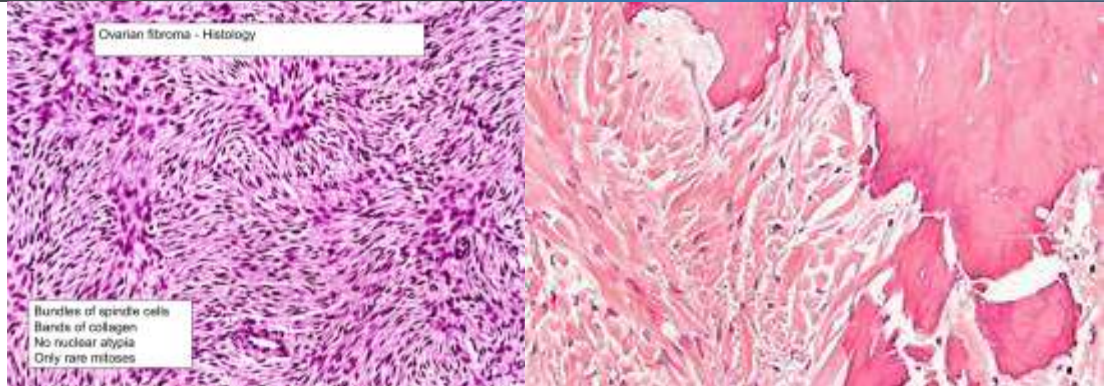


XXI. Diseases of the Female Genital System

Fibroma	
Ovary:	<ul style="list-style-type: none"> • Is enlarged • Shows a tumour
The tumour:	<ul style="list-style-type: none"> • Is moderately-large • Slightly ovoid (or rounded)
Cut surface:	<ul style="list-style-type: none"> • Well-circumscribed • Encapsulated • Solid in appearance • Whorled and intersecting fibres • Trabeculated (in some parts) • Homogeneous (in other parts) • Of pale greyish-white fibrous tissue
Consistence:	<ul style="list-style-type: none"> • Firm-to-hard



N.B.:

- **Ascites is sometimes associated with fibromata of ovaries** when they are bilateral of considerable size and diffuse.
- Occasionally, the tumour gives rise to a fibrosarcoma.
 - **Clinically**, pelvic mass, pain, pressure-symptoms (especially intestinal) and ascites.
 - Occasionally, ascites + hydrothorax are associated with an ovarian tumour → **Meigs syndrome**.



Carcinoma (ovary)

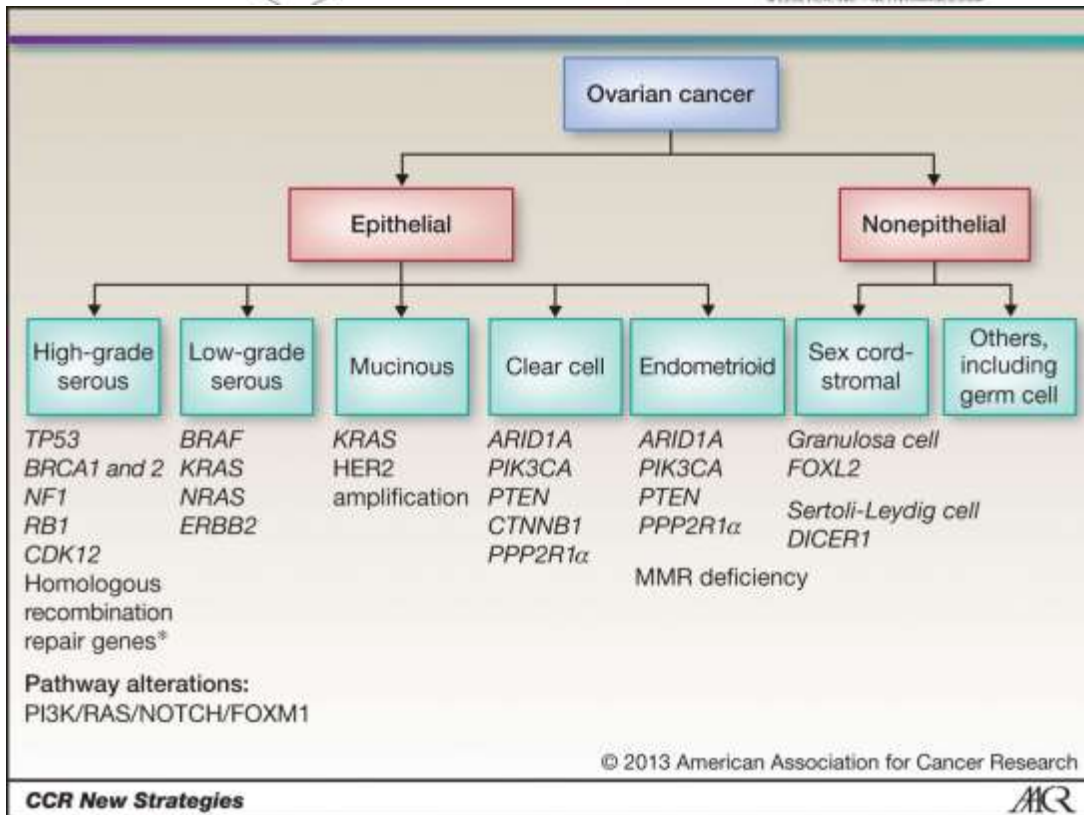
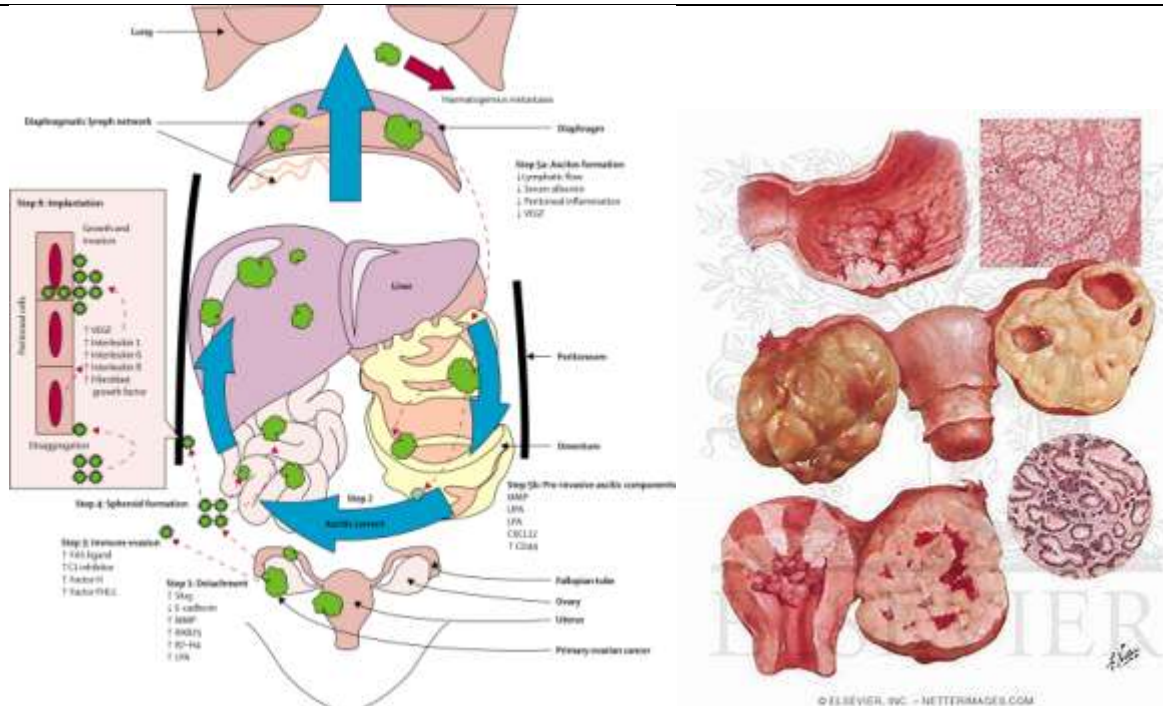
Ovary:	<ul style="list-style-type: none">• Is enlarged• Shows infiltration by a tumour
The tumour:	<ul style="list-style-type: none">• Large (moderately)• Lobulated
Cut surface:	<ul style="list-style-type: none">• Shows invasion of capsule (malignancy)• Opaque whitish-grey• Fleshy
	With areas of: <ul style="list-style-type: none">• Haemorrhage• Necrosis• Calcification
Consistence:	<ul style="list-style-type: none">• Soft-firm (in parts)• Friable (in other parts)



N.B.:

1. **Primary carcinoma** of the ovary is uncommon & is often bilateral.
Its metastases occur:
 - (a) Over the peritoneum → haemorrhagic ascites containing exfoliative tumour cells.
 - (b) In uterine muscle (along uterine tubes).
2. **Carcinoma of the ovary may be secondary to malignant change in cystadenoma or in a**

dermoid cyst.



Carcinoma (Krukenberg's tumour)

Ovary:

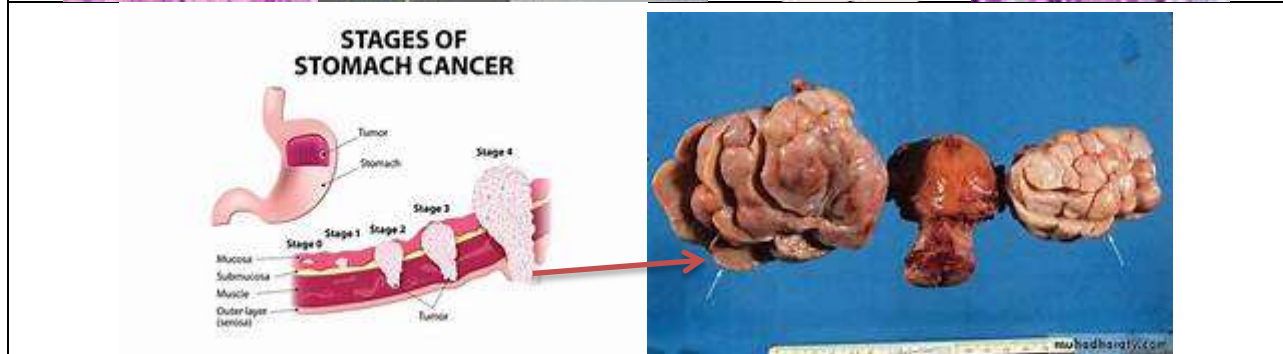
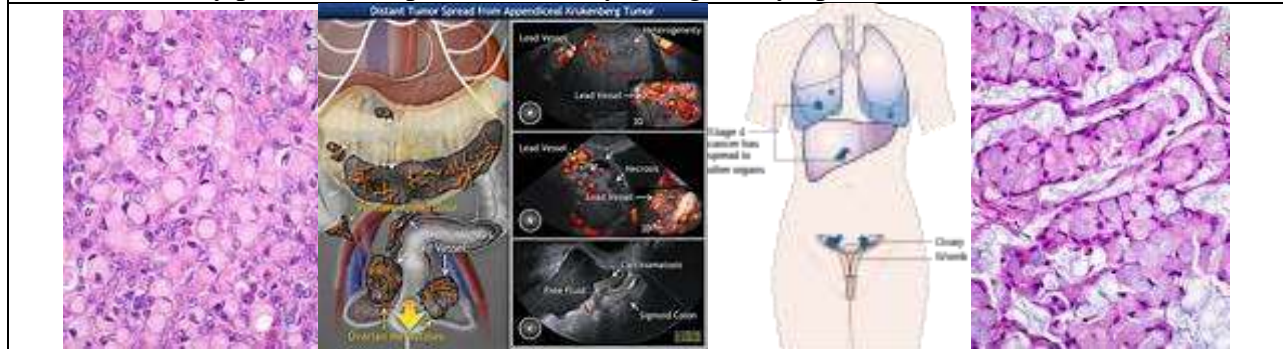
- Is enlarged
- Shows a tumour

	<p>The tumour:</p> <ul style="list-style-type: none"> • Large • Lobulated • Opaque whitish-grey • With areas of: <ul style="list-style-type: none"> ○ Necrosis ○ Soft mucoid tissue ○ Dark brownish-red haemorrhages • Infiltrating the ovarian tissue (malignancy) • Soft-fleshy (in parts) • Firm-solid in other parts)
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N.B.:

- This is a metastatic carcinoma from mucoid carcinoma of the stomach, colon or gall bladder by peritoneal implantation (or by retrograde lymphatics).



Metastasis

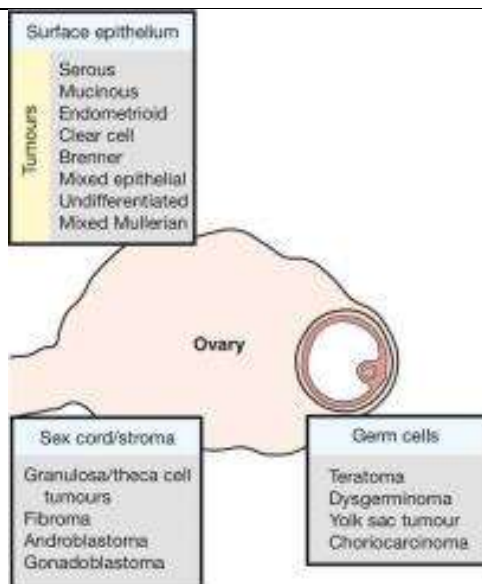
- **Blummer shelf:** A shelf palpable by rectal examination, due to metastatic tumor cells gravitating from an abdominal cancer and growing in the recto-vesical or recto-uterine pouch
- **Krukenberg tumor:** A tumor in the ovary by the spread of stomach cancer
- **Virchow Lymph nodes:** Left Supraclavicular lymph node
- **Sister Mary Joseph nodule:** Periumbilical nodule



Classification of ovarian tumour

Definition / general

- The World Health Organization Histological Classification for ovarian tumors separates ovarian neoplasms
- **According to the most probable tissue of origin:**
 1. **Surface epithelial (65%),**
 2. **Germ cell (15%),**
 3. **Sex cord-stromal (10%),**
 4. **Metastases (5%),**
 5. **Miscellaneous**



III. Lipid cell tumors

IV. Germ cell tumors:

- Dysgerminoma
- Endodermal sinus tumor
- Embryonal ca.
- Polyembryoma
- Choriocarcinoma
- Teratoma
- Mixed

- **Surface epithelial tumors are further classified by**

- **Cell type**

- Serous,
- Mucinous,
- Endometrioid, etc.

- **Atypia**

- **Benign,**
- **Borderline may be:**
 - Atypical proliferation,
 - Low malignant potential or
- **Malignant; may be:**
 - Invasive or
 - Non-invasive)

- **Most malignant tumors are surface epithelial (90%)**

- **Surface epithelial - stromal tumors**

- **Serous tumors:**

- Benign (cystadenoma)
- Borderline tumors (serous borderline tumor)
- Malignant (serous adenocarcinoma)

- **Mucinous tumors, endocervical-like and intestinal type:**

- Benign (cystadenoma)
- Borderline tumors (mucinous borderline tumor)
- Malignant (mucinous adenocarcinoma)

- **Endometrioid tumors:**

- Benign (cystadenoma)
- Borderline tumors (endometrioid borderline tumor)
- Malignant (endometrioid adenocarcinoma)

- **Clear cell tumors:**

- Benign
- Borderline tumors
- Malignant (clear cell adenocarcinoma)

- **Transitional cell tumors:**

- Brenner tumor
- Brenner tumor of borderline malignancy
- Malignant Brenner tumor
- Transitional cell carcinoma (non-Brenner type)

- **Epithelial-stromal:**

- Adenosarcoma
- Carcinosarcoma (formerly mixed Müllerian tumors)

SURFACE EPITHELIAL TUMORS

- Serous (tubal) ----75-80%
- Mucinous (endocx & intestinal)-----8-10%
- Endometrioid-----10%
- Transitional cell – Brenner-----<1%
- Clear cell-----<1%

- **Sex cord - stromal tumors**

- **Granulosa tumors:**

- Fibromas
- Fibrothecomas
- Thecomas

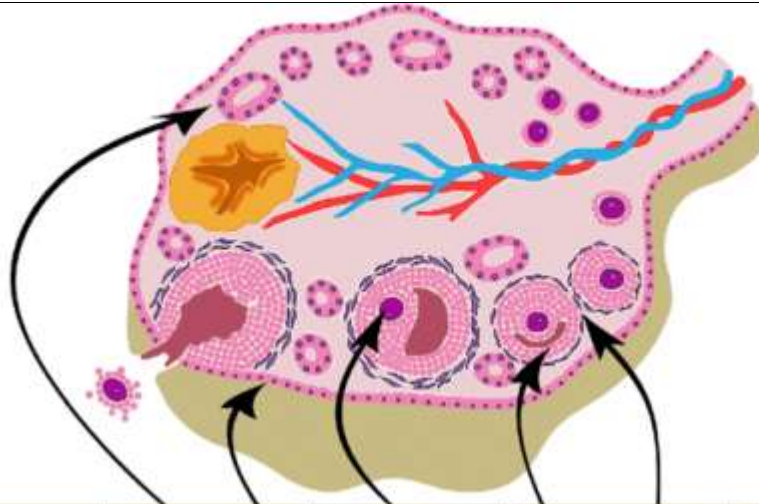
- **Sertoli cell tumors:**

- Leydig cell tumors

- **Sex cord tumor with annular tubules**

- **Gynandroblastoma**

- **Steroid (lipid) cell tumors**



Cell of origin	Epithelial cells	Germ cells	Sex cord-stromal cells	Germ cells <i>plus</i> sex cord stromal cells
Proportion (%) of ovarian tumours	46-60% ^(1,5)	4-20% ^(1,4)	27-34% ^(1,2)	NA
Proportion (%) of malignant tumours	14-64% ^(1,5)	14-93% ^(1,3)	35-100% ^(1,2)	NA
Age group	6-15 years ^(1,2)	2-13 years ⁽¹⁾	4-15 years ^(1,3)	11 years ⁽²⁾
Histological types	Adenoma Cystadenoma Adenocarcinoma Cystadenocarcinoma Undifferentiated carcinoma Brenner tumour	Dysgerminoma Teratoma Malignant teratoma	Granulosa cell tumour Theca cell tumour Luteoma Sertoli-Leydig cell tumour	Mixed dysgerminoma/ granulosa cell tumour

Source: (1) Patznik and Oroszko, 1987; (2) Hayes and Young, 1978; (3) Sforna et al., 2003; (4) Dehner et al., 1970; (5) Bertazzolo et al., 2004
NA non-available

- **Germ cell tumours**

- **Teratoma:**
 - Immature
 - Mature
 - Solid
 - Cystic (dermoid cyst)
- **Monodermal (e.g., Struma ovarii, carcinoid)**
- **Dysgerminoma**
- **Yolk sac tumor (endodermal sinus tumor)**
- **Mixed germ cell tumours**

- **Malignant, not otherwise specified**

- **Metastatic cancer from non-ovarian primary:**
 - Colonic, appendiceal
 - Gastric
 - Breast