

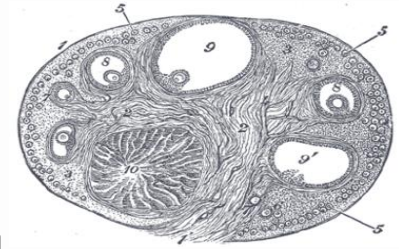


FEMALE GENITAL SYSTEM PATHOLOGY

Lec. 8

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3- Sex cord stromal ovarian tumor.



- **Incidence: General incidence: 5-10% of all ovarian tumors**
- These tumors originate from ovarian stroma, which, in turn, derives from the sex cords of the embryonic gonad. The tumors frequently produce estrogens or androgens.

Types :

- ❖ Benign:- Fibroma and thecoma
- ❖ Malignant
 - Granulosa–Theca Cell Tumors
 - Sertoli–Leydig Cell Tumors
 - Sex cord stromal tumors of mixed or unclassified cell types.

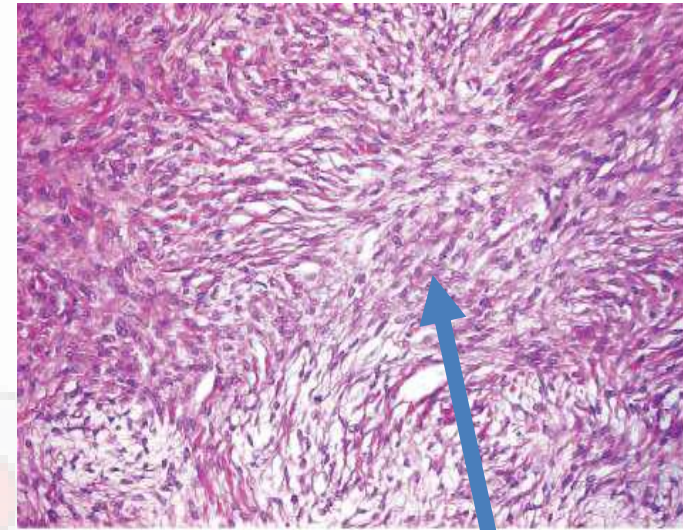
- **Fibroma**

- Usually unilateral
- Almost after puberty
- Fibromas are not hormonally functional
- Average of 5 cm in diameter
- Benign
- 40% associated with ascites and sometimes with right-sided pleural effusion (Meigs' syndrome) (disappears on removal of tumor).



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- Solid
- Lobulated
- Firm
- Uniformly white
- Usually with no adhesions
- Average diameter 5 cm



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Spindle stromal cells:
closely packed - arranged in 'feather-stitched' pattern
- no atypia and few mitoses



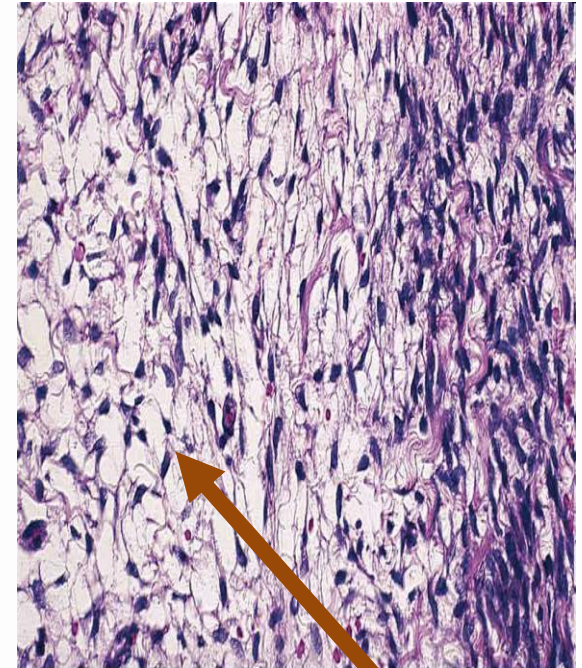
- **Thecomas**

- Benign solid firm tumor formed of theca cells
- Commonly in Postmenopausal women.
- Symptoms of **hyperestrogenism**.
- Most are unilateral and can measure up to 10 cm in diameter.
- Immunohistochemically, the tumor is positive for **inhibin** expression.
- Usually unilateral
- Variable size



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Well-defined capsule
Firm consistency
Cut surface:
* largely or entirely solid
* may be cysts



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- Fascicles of spindle cells with: centrally placed nuclei moderate amount of pale cytoplasm.

Granulosa cell tumors:-

Constitute 2% of all ovarian tumors

They are composed of various combinations of theca and granulosa cells.

2 forms: adult and juvenile:

- 1. Adult form is more common in postmenopausal women.
- 2. The juvenile form is seen the first 3 decades, can present with **precocious sexual development**
- Elaborate large amounts of **estrogen** and thus produce and **endometrial hyperplasia**; they predispose to **endometrial carcinoma**. Occasionally, and **Inhibin hormone** that can be a useful biomarker to diagnose and monitor tumors.
- Unilateral, solid and cystic
- While 5% to 25% of granulosa cell tumors are malignant,
- Most have an indolent course, with 10-year survival rates of 85%.

Morphology

The tumors are usually large (>10 cm).

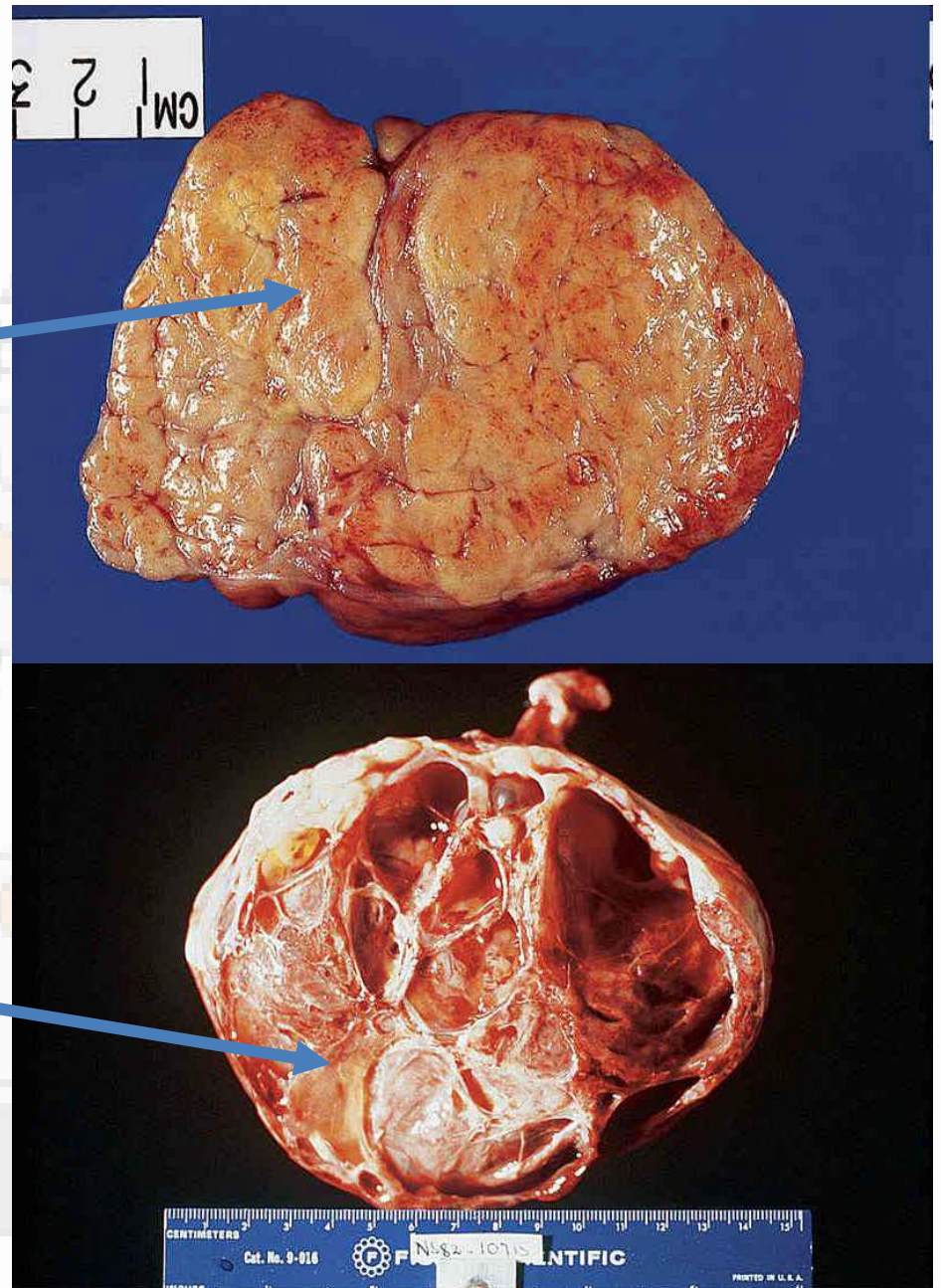
Solid or partially cystic

Smooth, lobulated outline

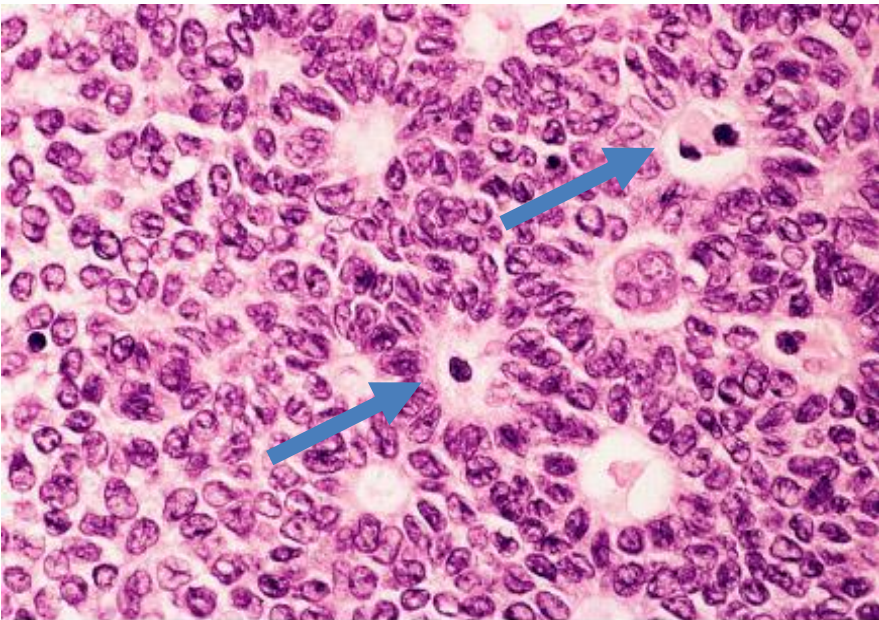
Cut surface:

- Solid or May be Cystic

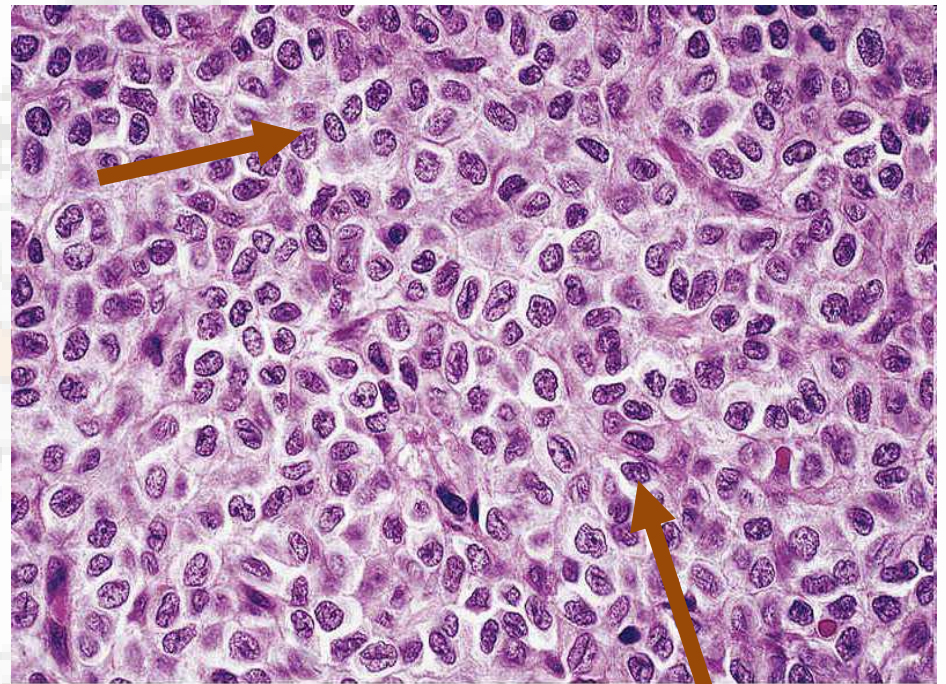
White to yellow in color d.t accumulation of lipid with He & necrosis



Morphology



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Characteristic Call–Exner bodies consisting of a very small collection of Eosinophilic material lined by well-differentiated granulosa cells.

all are composed of round to oval granulosa cells that have little cytoplasm and round to angular nuclei with longitudinal nuclear grooves (coffee bean appearance)

Sertoli-leydig cell Tumors (Androblastoma)

- **Rare tumors of low malignant potential** (10-40 % of moderately and poorly differentiated tumors are malignant)
- **Incidence: general incidence 0.5% of all ovarian tumors.**
- **All age**
- **Unilateral**
- Most of them are androgenic secreted tumor.
- Produces androgens and present with virilization in 1/3 of cases (oligo menorrhea, amenorrhea, loss of female secondary sex characteristics with hirsutism, clitoromegaly, deepening of voice)

Prognosis: generally good with 5 ys. Survival rate of 70-90%.

Metastatic (2ries) ovarian tumor

5% of all ovarian tumors (uncommon)

Refers to a malignancy in the ovary that metastasized from a primary site , most commonly derive from tumors of mullerian origin (e.g., uterus, fallopian tube, contralateral ovary, or pelvic peritoneum);

The sources of the most common extra-mullerian metastases are carcinomas of the breast and gastrointestinal tract.

Krukenberg tumors are often (over 80%) found in both ovaries, consistent with its metastatic nature.

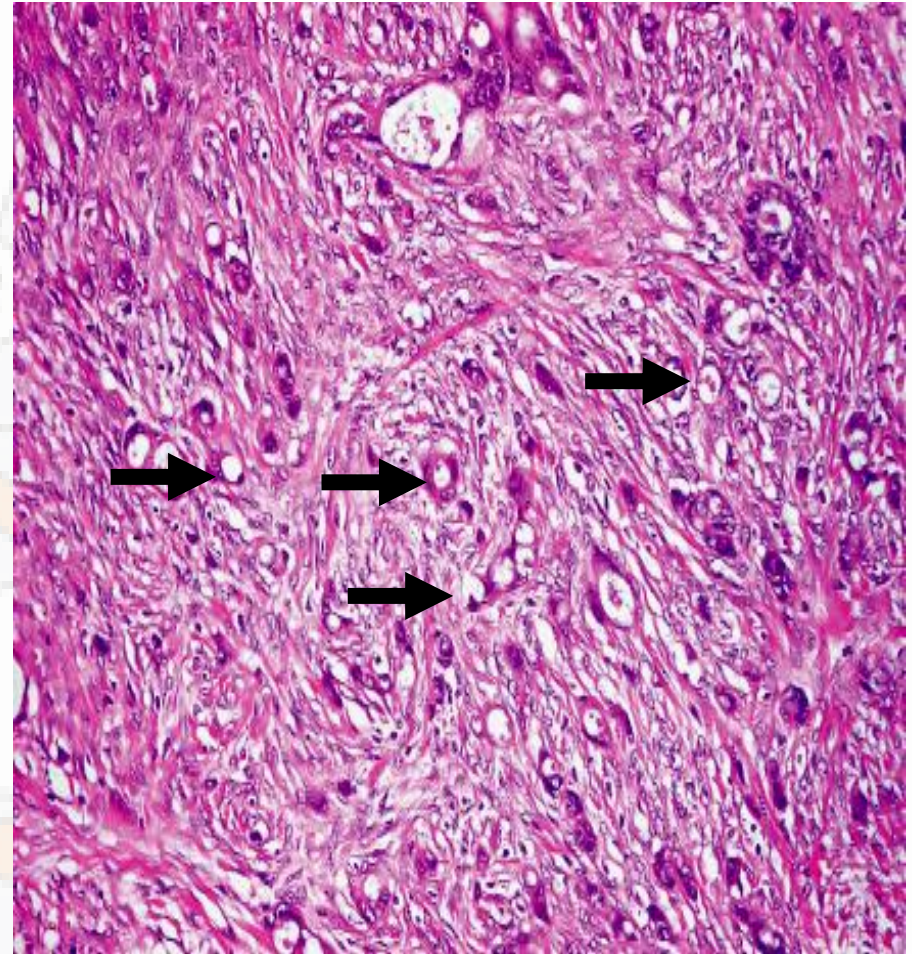
- Symptoms:- often come with **abdominal or pelvic pain, bloating, ascites, or pain during sexual intercourse.**
- Older ages, mostly bilateral and sometimes very large.
- Diagnosis can only be made following confirmatory investigations such as
 - ❖ computed tomography (CT) scans,
 - ❖ laparotomy
 - ❖ and/or a biopsy of the ovary.

Krukenberg tumors ovary



bilateral

Typical gross appearance of Krukenberg tumors of ovary. The involvement is **bilateral** and the tumors are characterized by a **multinodular** outer appearance.



Krukenberg tumor of ovary; microscopic appearance. **Numerous signet ring cells are present in a highly fibrous stroma, either individually or in small nests.**

stage:1

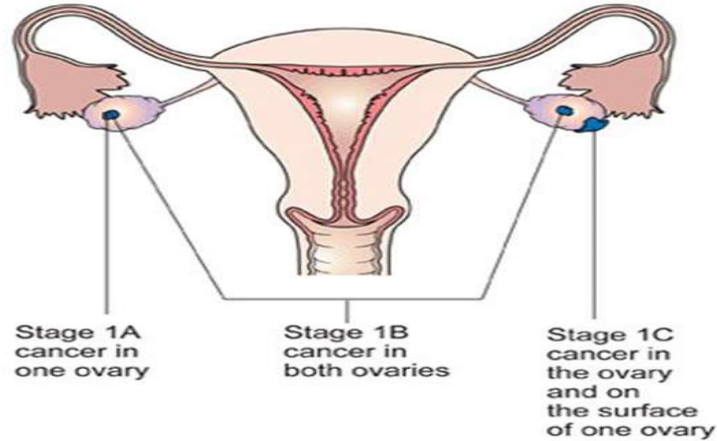


Diagram showing stage 1 ovarian cancer
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Stages

Stage:2

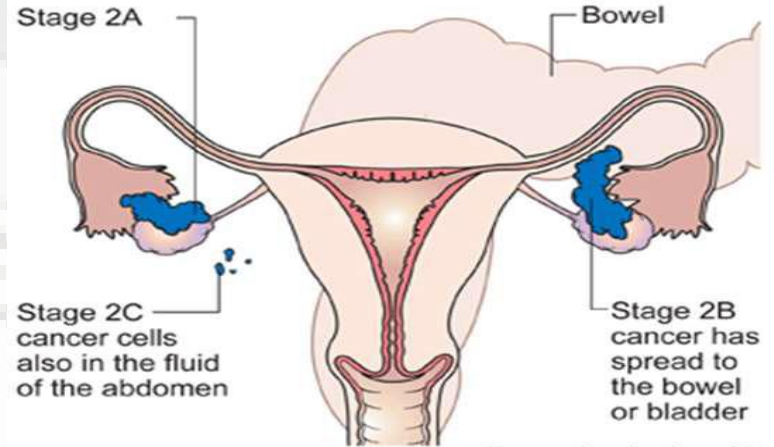


Diagram showing stage 2A to 2C ovarian cancer
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Stage: 3

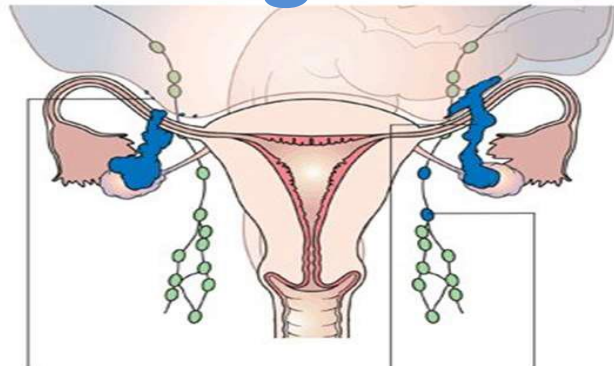


Diagram showing stage 3A to 3C ovarian cancer
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Stage:4

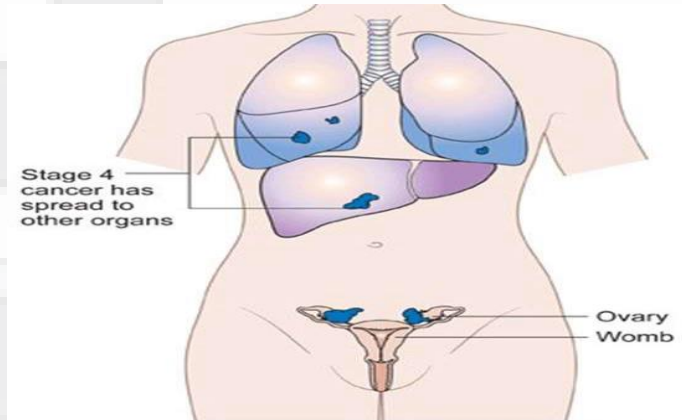
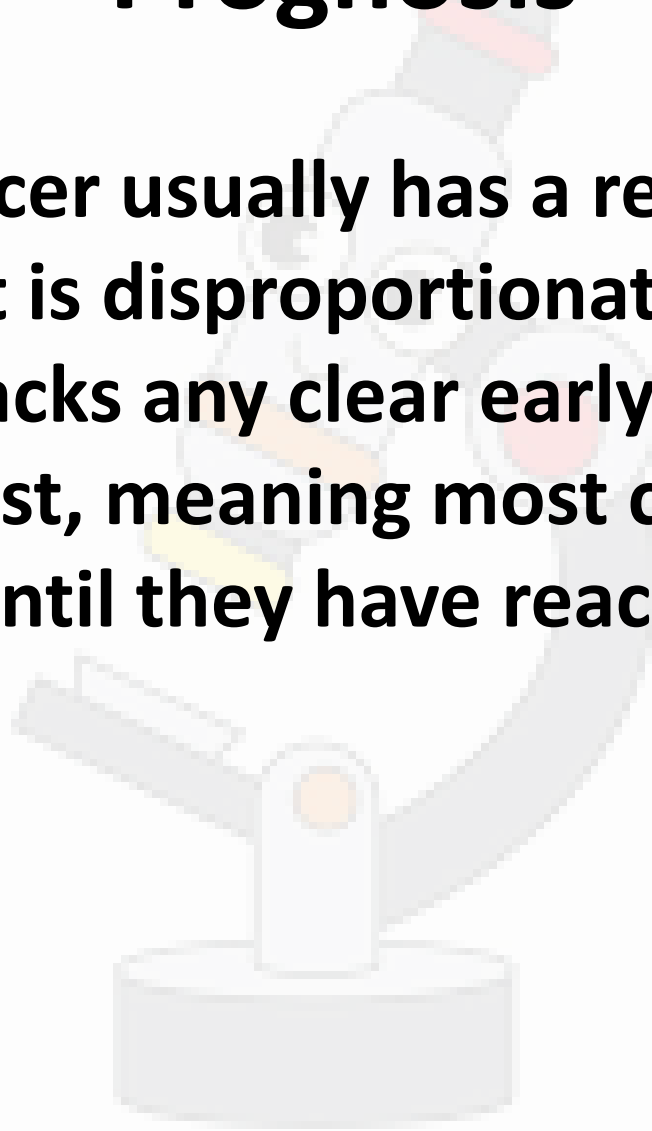


Diagram showing stage 4 ovarian cancer
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Prognosis

- **Ovarian cancer usually has a relatively poor prognosis. It is disproportionately deadly because it lacks any clear early detection or screening test, meaning most cases are not diagnosed until they have reached advanced stages**





**THANK YOU
FOR YOUR
ATTENTION**