Case 1

Rares Buiga, Oana Tarta

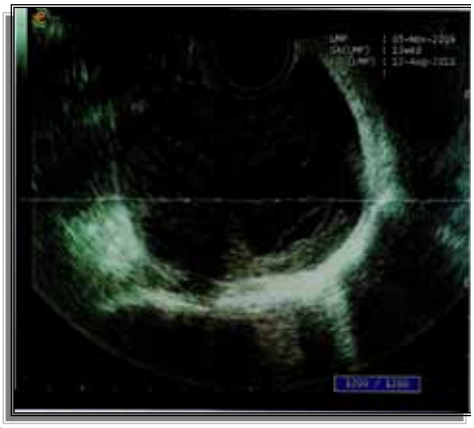
- A 28-year-old woman was referred for:
  + pelvic pain
  + irregular menses starting five months earlier;

- Physical examination revealed a large, palpable abdomino-pelvic mass;

- All tumor markers and serum hormonal levels were normal;

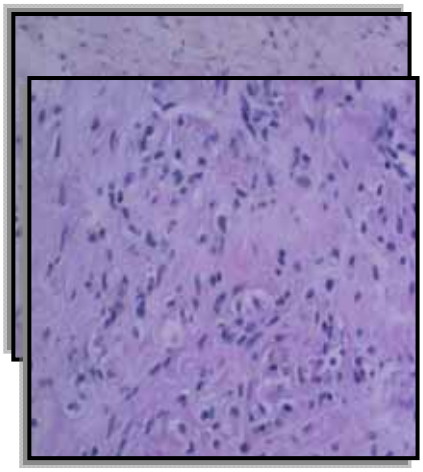
- Pelvic ultrasonography showed a well defined pelvic mass, predominantly solid with some cystic foci;

- The patient underwent left salpingo-oophorectomy with intraoperatory frozen section examination- the diagnosis was „*benign ovarian fibroma".*

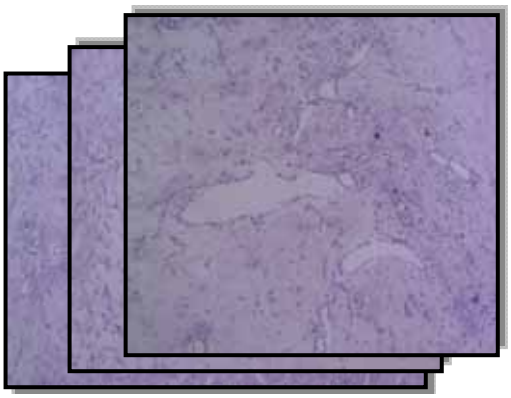


-Gross examination showed an ovarian mass of 7,5 x 5 cm with smooth exterior surface and rubbery consistency;

-The cut surface revealed solid, cystic and edematous areas, no necrotic or hemorrhagic areas.



- the stroma is hypocellular, densely hyalinized or markedly edematous, myxoid-like;
- a rich network of thin-walled vessels;



-the cells are grouped around the vessels, forming ill defined nodules;

-there are 2 types of cells:
+ vacuolated cells with shrunken nuclei;
+ spindle cells

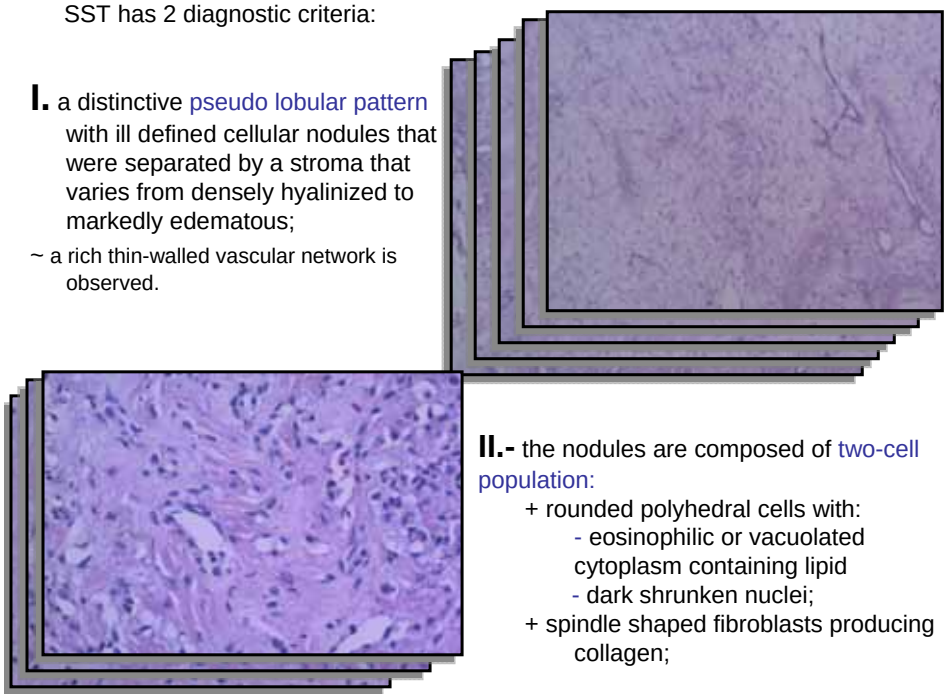
Which is your diagnosis?

OVARIAN
SCLEROSING STROMAL TUMOR

SST has 2 diagnostic criteria:

I. a distinctive pseudo lobular pattern with ill defined cellular nodules that were separated by a stroma that varies from densely hyalinized to markedly edematous;

~ a rich thin-walled vascular network is observed.

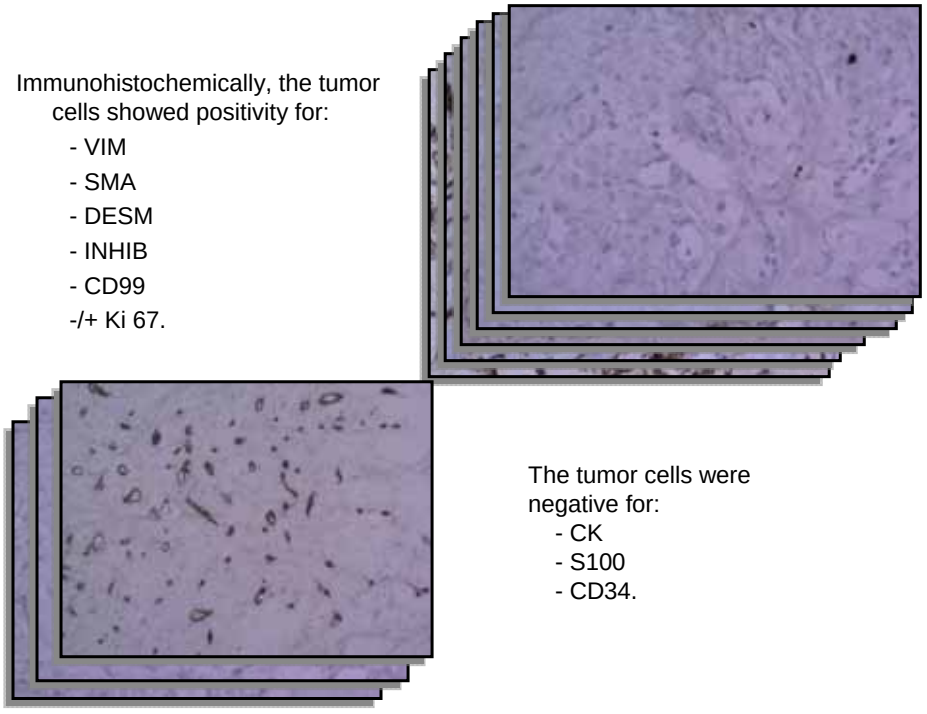


II.- the nodules are composed of two-cell population:

+ rounded polyhedral cells with:
  - eosinophilic or vacuolated cytoplasm containing lipid
  - dark shrunken nuclei;
+ spindle shaped fibroblasts producing collagen;

Immunohistochemically, the tumor cells showed positivity for:

- VIM
- SMA
- DESM
- INHIB
- CD99
- -/+ Ki 67.



The tumor cells were negative for:

- CK
- S100
- CD34.

Differential diagnosis:

1. Ovarian fibroma:
   - more homogeneous;
   - there are hyaline plaques;
   - the edema is generally diffuse rather than focal;
   - pseudo lobular pattern and vacuolated cells are missing or rare.
2. Krukenberg tumor:
   - cells contain mucin rather than lipid
   - citokeratin positive

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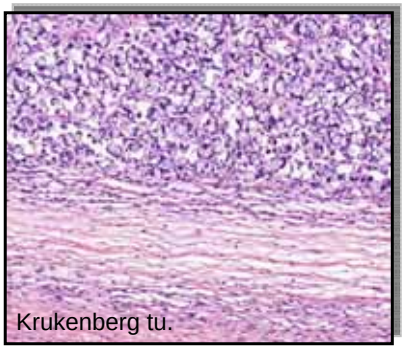
3. Hemangiopericytoma:
   - suggested by the rich vascular network, but no well documented ovarian example of this tumor has been reported.
4. Burnt-out gonadoblastoma:
   - present smooth, rounded calcify masses with scarce or absent tumor cells;
   - it can act as a source of malignant germ cell tumors, bilateral oophorectomy is advocated, unlike unilateral ovariectomy in SST.


Krukenberg tu.

Thanks for your attention

Case 2

Rares Buiga

Clinical data

- **Patient:** Female, 53 years old.
- **Intervention:** Hysterectomy with bilateral anexectomy for left ovarian cyst of 7 cm
- **Details:** Left ovarian unilocular cystic lesion of 7 cm diameter, smoth glistening exterior surface, elastic consistency.
- Serous-citrin fluid content. Inner surface of te cyst has delicate fibrin deposits, no vegetations.
- Presence of several hemorrhagic intramural „nodules” of 0,5 - 4 cm in greatest diameter.
- Contralateral adnexa and uterus have a normal appearance.

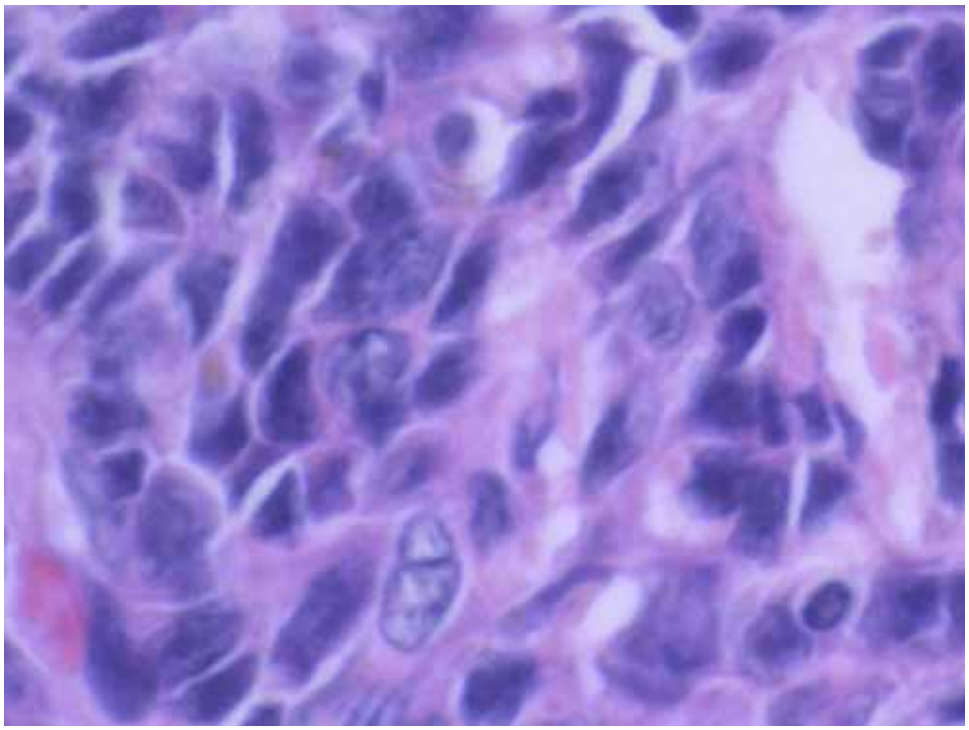
Microscopy

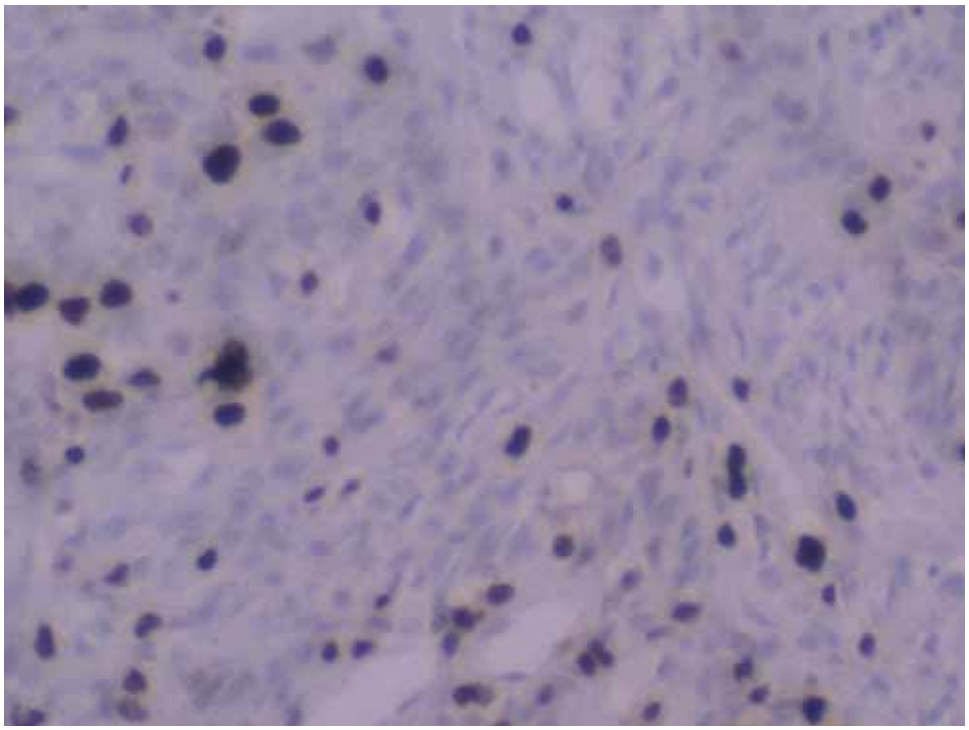
- Cystic unilocular lesion with thin fibrous wall
- a population of small to medium sized, bland, cuboidal to polygonal cells
- trabecular, solid, insular patterns
- hemorhagic intramural nodules
- Is there a layer of flat cells bordering the lumina? Not really.

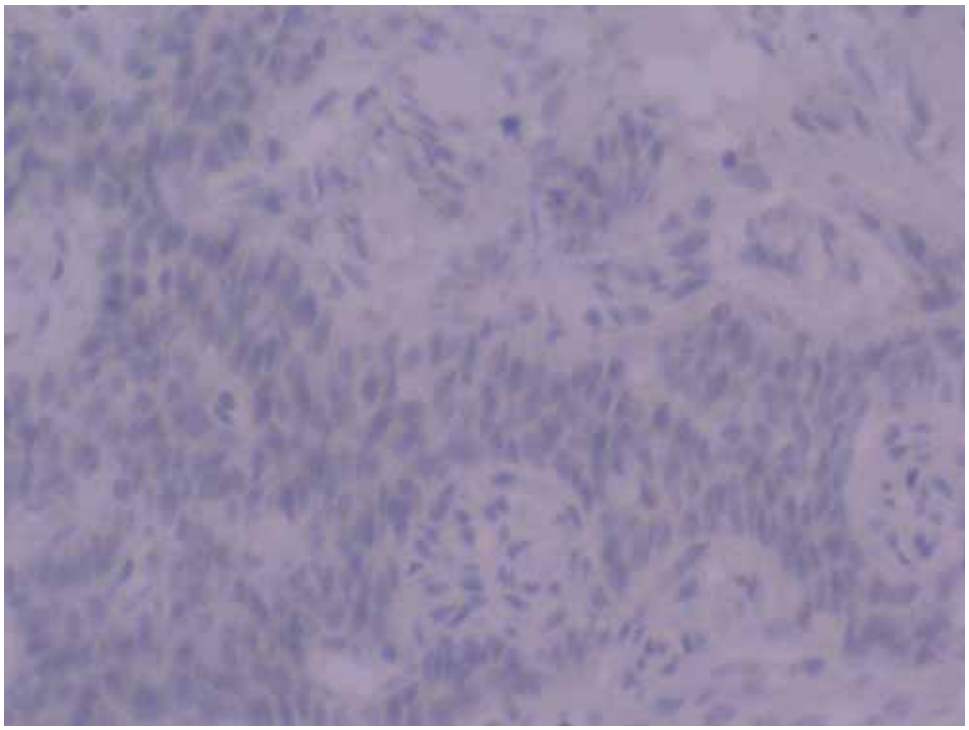
Which is your diagnostic?

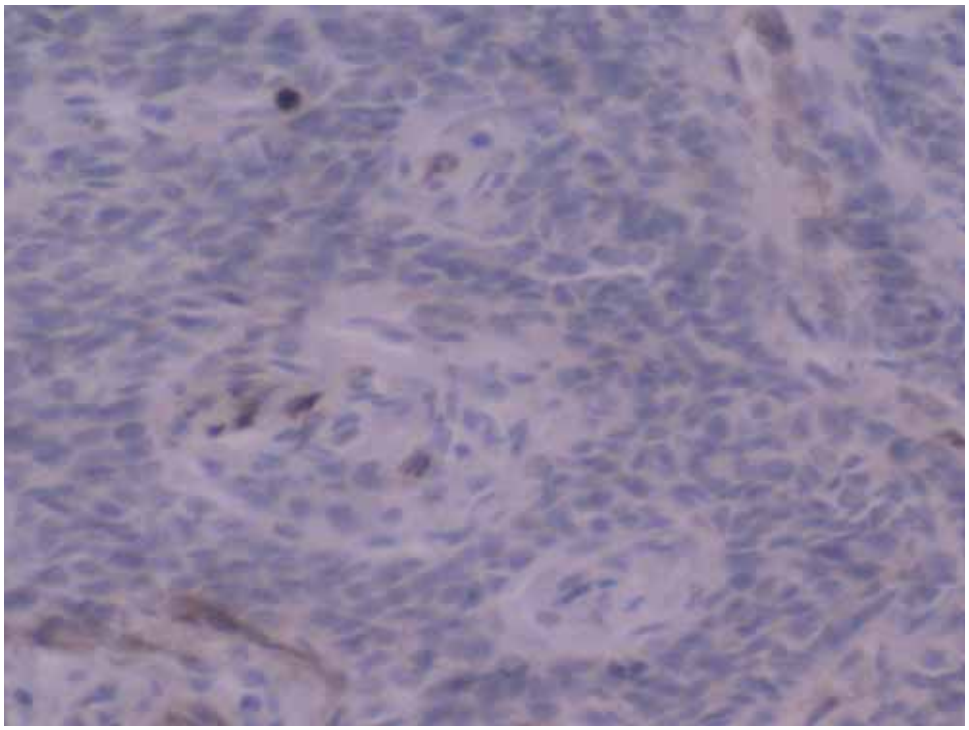
Hypothesis

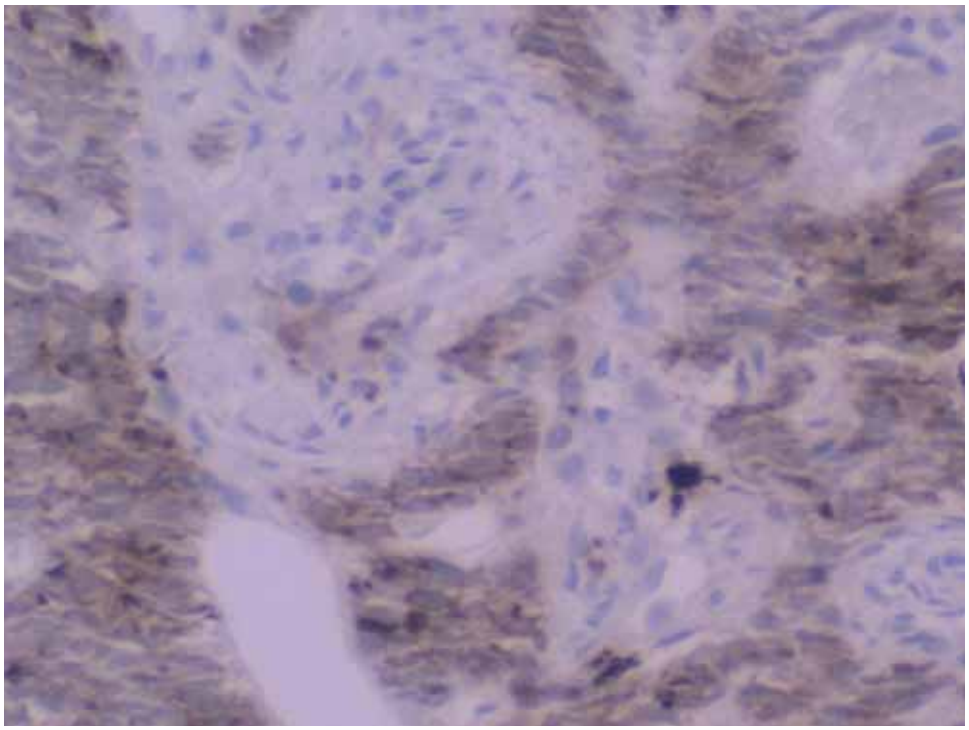
Immunohistochemistry

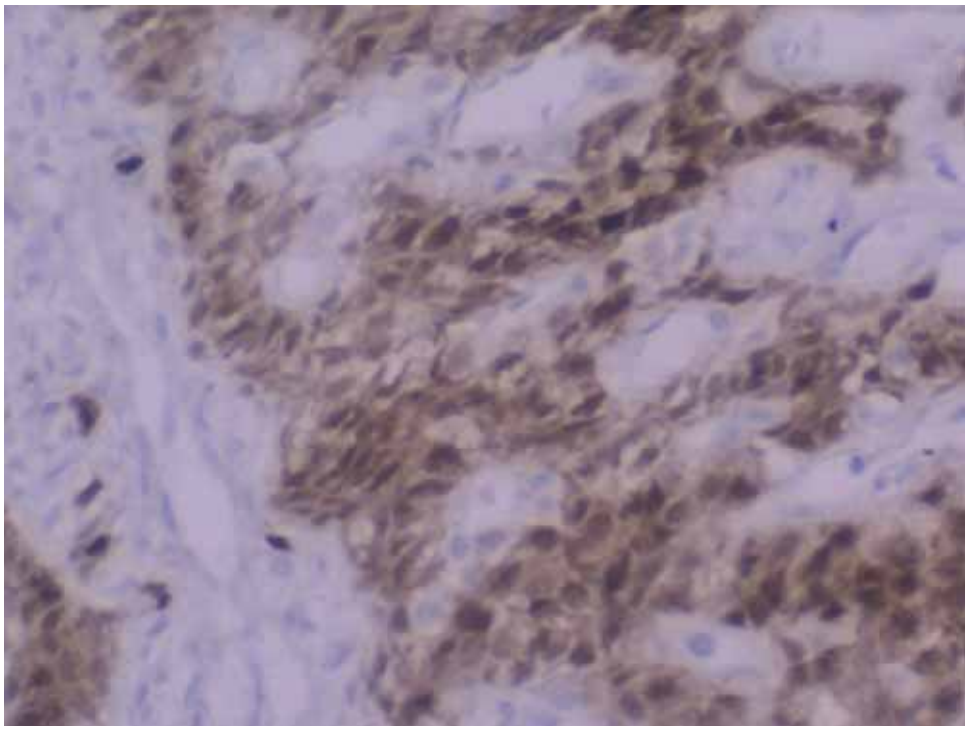


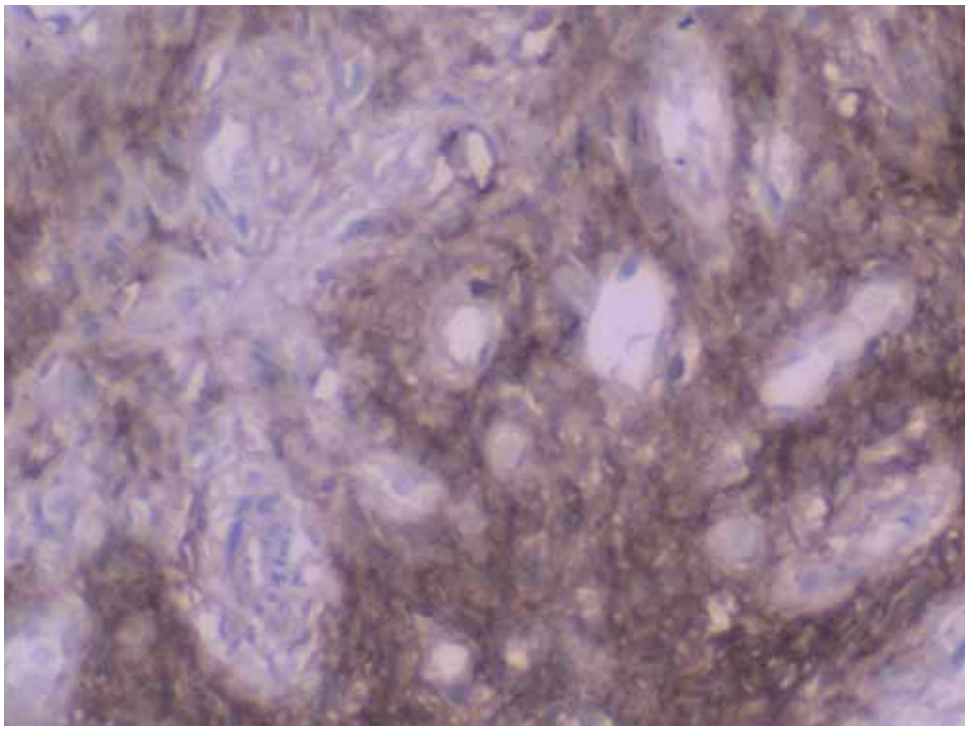












Diagnostic:

Cystic Unilocular
Granulosa Cell Tumor,
Adult type

Granulosa Cell Tumor, Adult type

- Definition
- Epidemiology
- Clinical features
- Macroscopy
- Histopathology
- Immunohistochemistry, ultrastructure
- Genetics
- Prognostic factors

Conclusions and final diagnosis

Case 3

Rares Buiga

Clinical data

- **Patient:** Male, 52 years old.
- **Intervention:** Open surgical biopsy of a mediastinal tumor invading sternum and pectoral muscle (case adressed for consultation).
- **Details:** CT scan images show a mediastinal mass of 12 x 10 cm which invades the anterior thoracic wall, sternum as well as the great intrathoracic vessels. The case was adressed with the proposed diagnosys of lymphoma.

Microscopy:

- A population of large cells, isolated or grouped in ill-defined sheets,
- Clear to pale cytoplasm, distinct cell membranes, prominent nucleoli
- Frequent mitotic and apoptotic figures
- A background of fibrosis and smaller cells with a morphology consistent of lymphocytes
- epithelioid granuloma ?
- No necrosis
- Invasion of fat, skeletal muscle, nerves

Which is your diagnosis?

Hypothesis

- Lung carcinoma
- Thymoma / thymic carcinoma
- Hodgkin’s lymphoma (ev. syncitial variant)
- Mediastinal large B cell lymphoma
- Anaplastic T cell lymphoma
- Malignant mesothelioma
- Seminoma
- Metastatic undifferentiated carcinoma
- Melanoma
- Thyroid carcinoma

Immunohistochemistry

Diagnostic:

Primary mediastinal seminoma

Mediastinal seminoma

- Definition
- Epidemiology
- Clinical features
- Macroscopy
- Histopathology
- Immunohistochemistry, ultrastructure
- Genetics
- Prognostic factors

- Almost always males, within thymus
- 5 year disease free survival is 50-65%; 10 year actuarial survival is 69%
- **Favorable prognostic factors:** age 35 years or less at diagnosis, no superior vena caval syndrome, no mediastinal lymphadenopathy, no fever
- **Treatment:** excision, radiation therapy
- **Gross:** solid, homogenous, tan-white bulging cut surface, residual thymic tissue may be present
- **Micro:** nests of large tumor cells with clear cytoplasm, distinct cell membranes, prominent nucleoli, separated by fibrous stroma with abundant lymphocytes; often epithelioid granulomas, numerous germinal centers, cytoplasmic glycogen, variable geographic necrosis, no nuclear blebs; may entrap normal thymus cells
- **Positive stains:** PLAP (membranous), PAS, CD57/Leu7
- **Negative stains:** keratin (may be focal, thymic epithelial cells are keratin+), EMA, LCA, CEA, S100, muscle specific actin
- **EM:** primitive appositional intercellular junctions, prominent and complex nucleoli (nucleolonemata), abundant cytoplasmic glycogen, no premelanosomes, no complex branching microvilli
- **DD:** thymomas, diffuse large cell lymphoma

Conclusions and final diagnosis