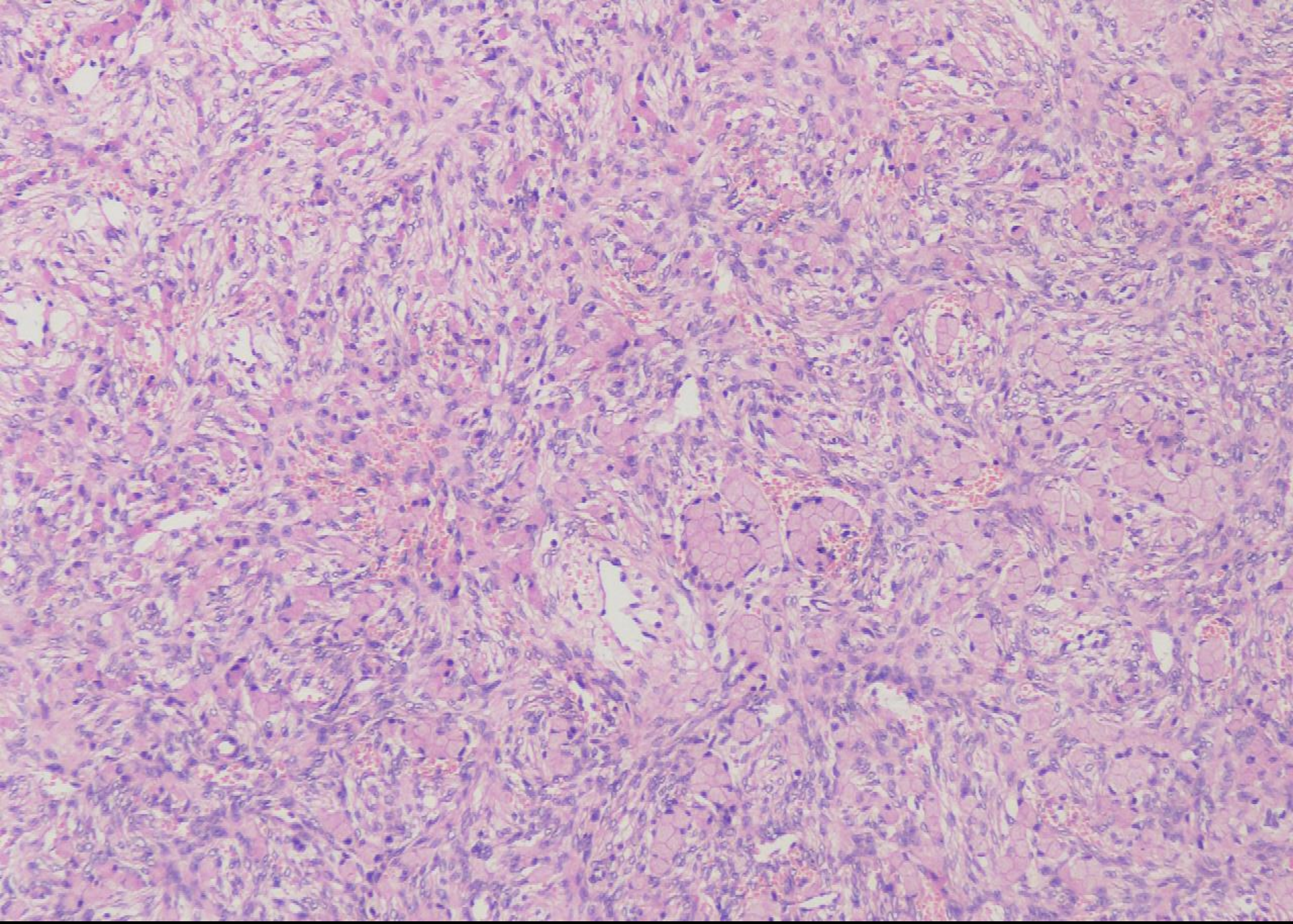
# CASE OF THE MONTH (OCTOBER)

DR. GURUDUTT GUPTA

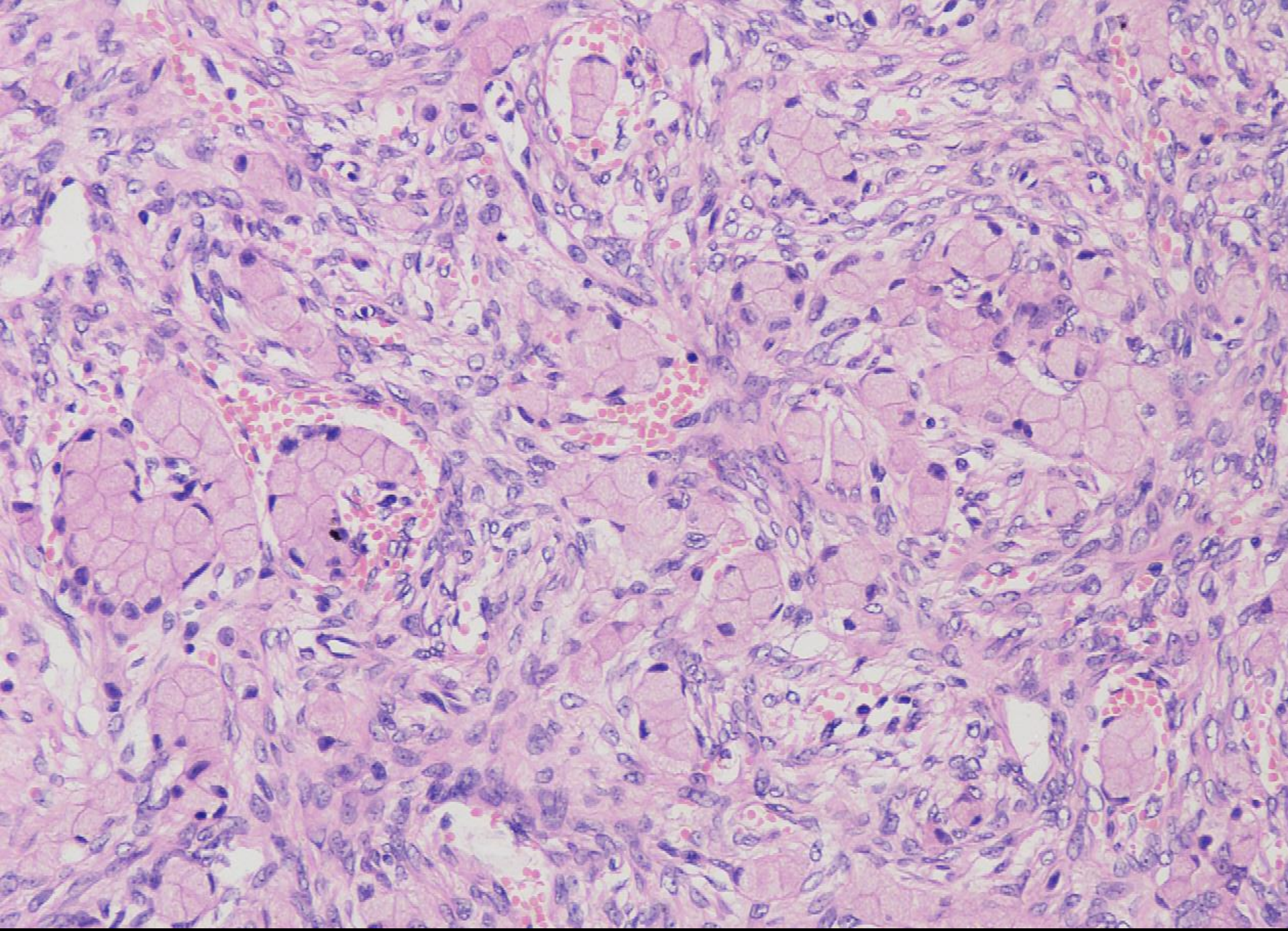
- 31 Years / female
- Presented with abdominal pain and shortness of breath for 1 week
- She underwent bilateral oophorectomy due to torsion and subsequent gangrene
- Histopathology was suggestive of Well Differentiated Sertoli Leydig Cell Tumor

- The patient then received one cycle of chemotherapy comprising of Cyclophosphamide+ Mesna + Lipodox
- She was asymptomatic for a month, however, again developed abdominal pain and shortness of breath for one week and came to RGCI for further management.

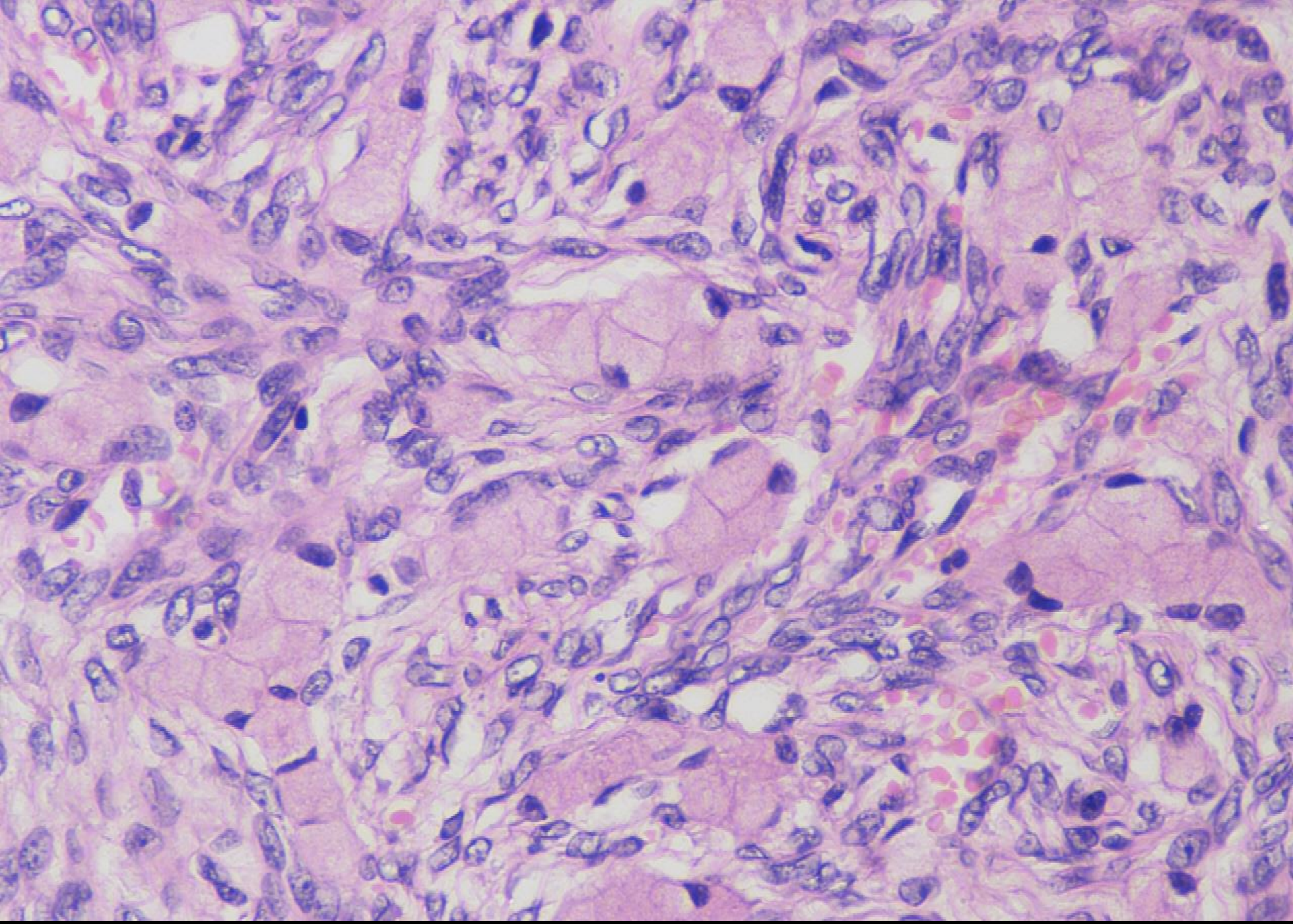
- A PET CT done revealed mild metabolically active bilateral lung infiltrates,mediastinal lymphadenopathy, right pleural effusion.
- A DOTANOC scan revealed non-avid bilateral lung infiltrates, mediastinal lymphadenopathy and bony lesions.
- Blocks and slides from left oophorectomy were sent for review, which showed:



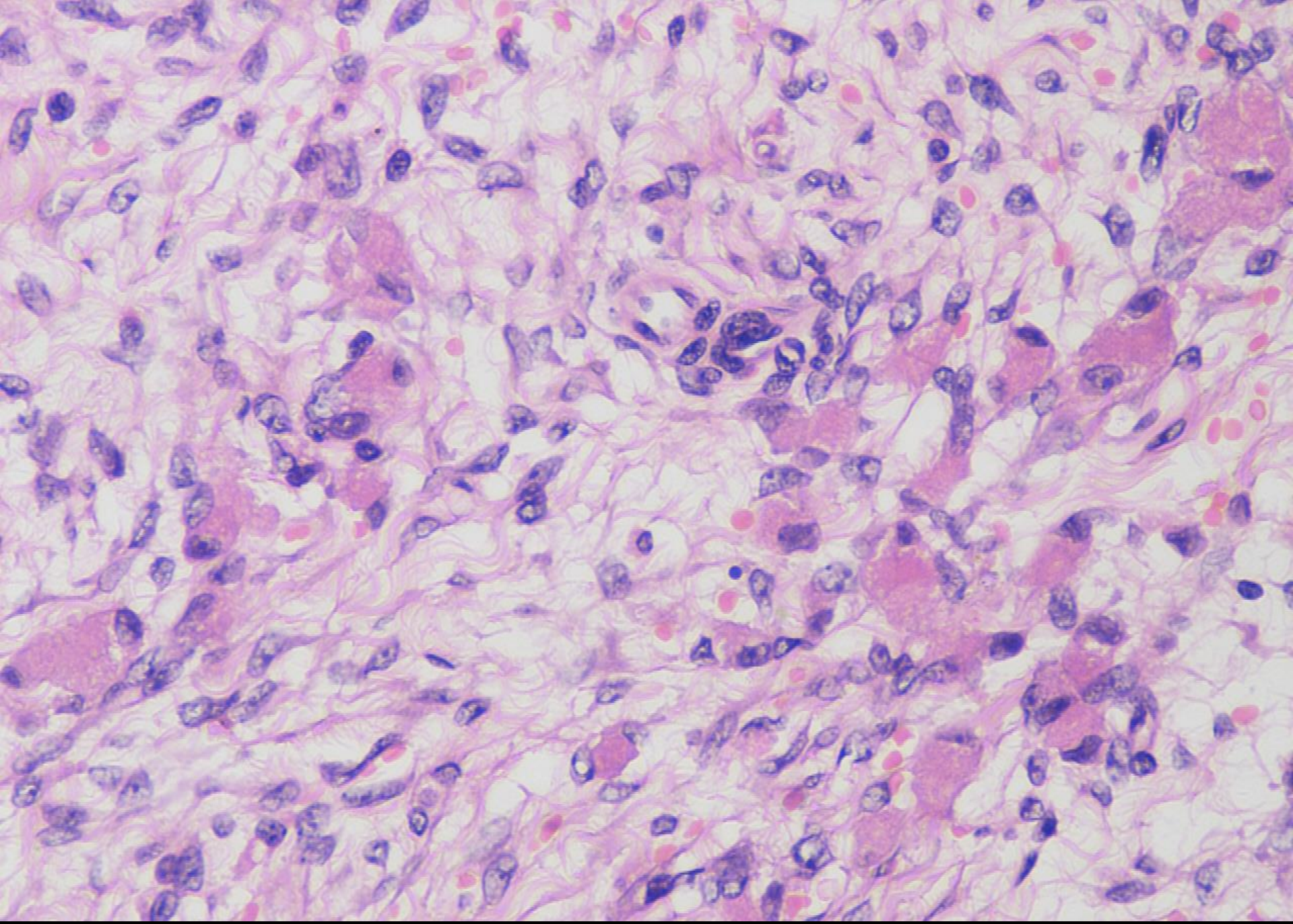
Ovarian stroma wIth embedded glands lined by mucin containing cells (H& E;10X)



Cords and nests of  glands lined by mucin containing bland looking cells (H& E;20X)



Tumor cells show fine granular to clear cytoplasm (H& E;40X)



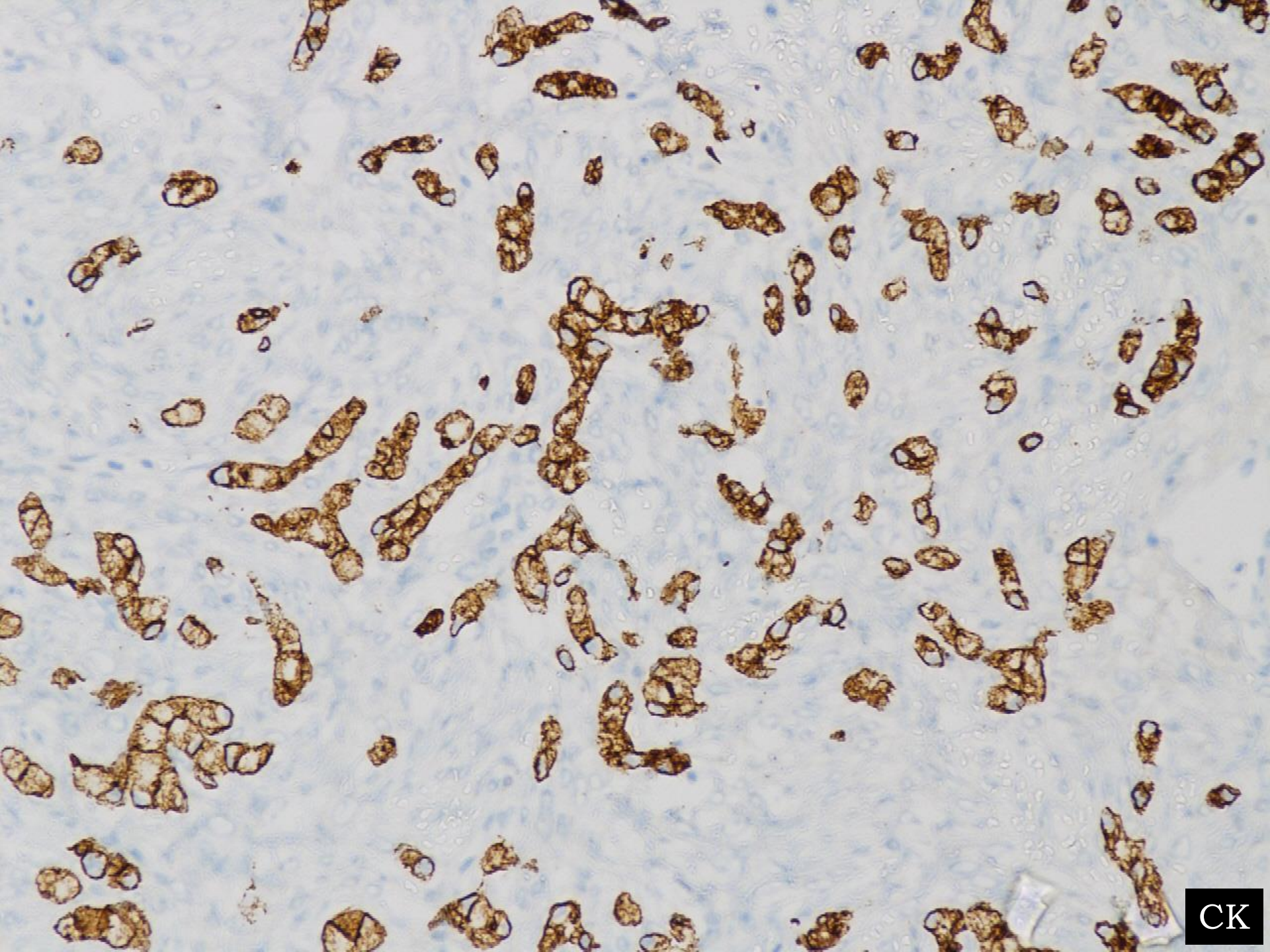
Tumor cells focally show fine granular  dense eosinophilic cytoplasm (H& E;40X)

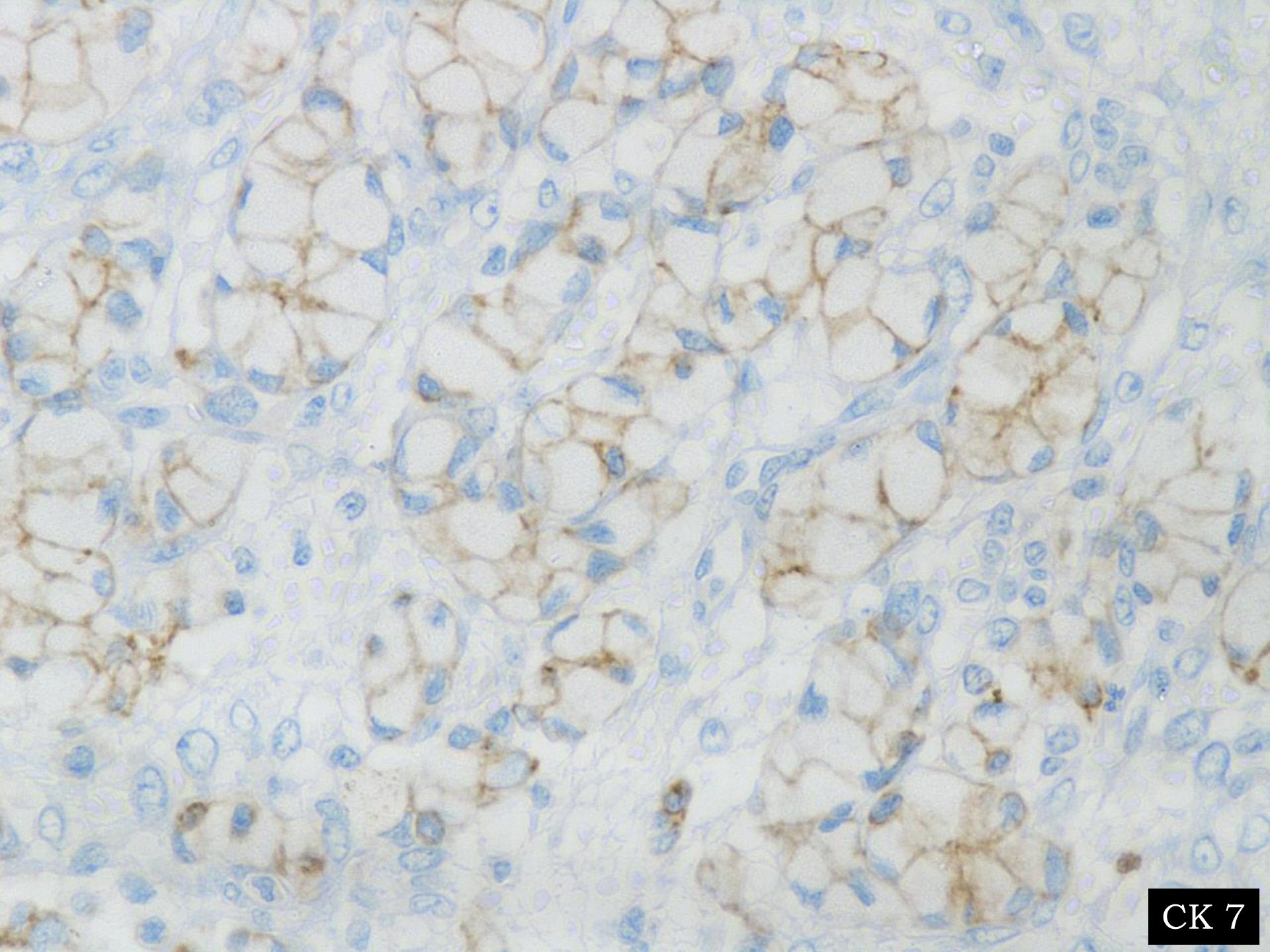
# Histomorphological features

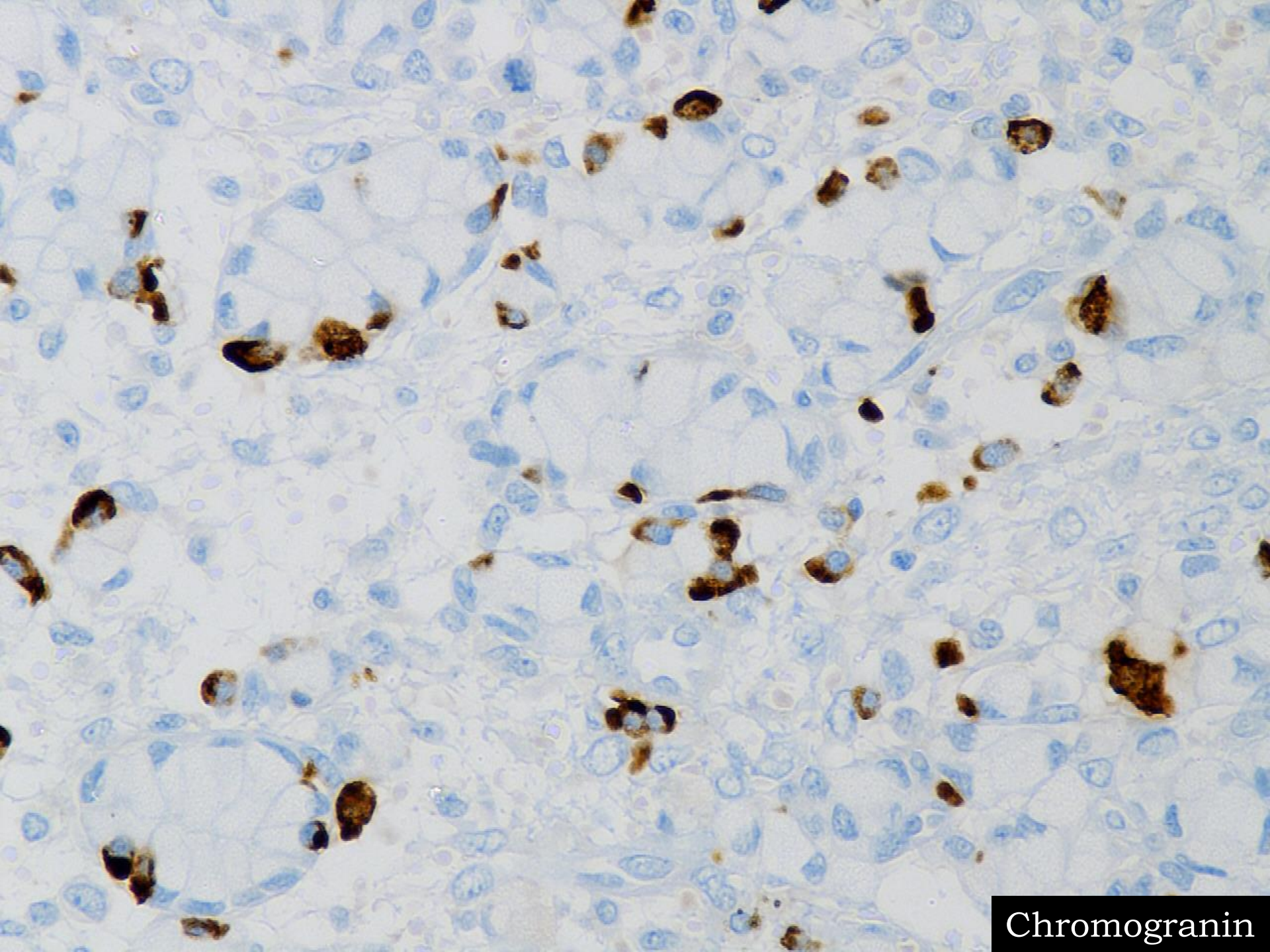
- Tubules, nests and clusters of tumor cells in the ovarian stroma
- Tumor cells have pale to clear to eosinophilic abundant cytoplasm
- Peripherally pushed nuclei(Not compressed)
- Stroma shows edema and hemorrhage
- No atypia / mitosis / necrosis seen

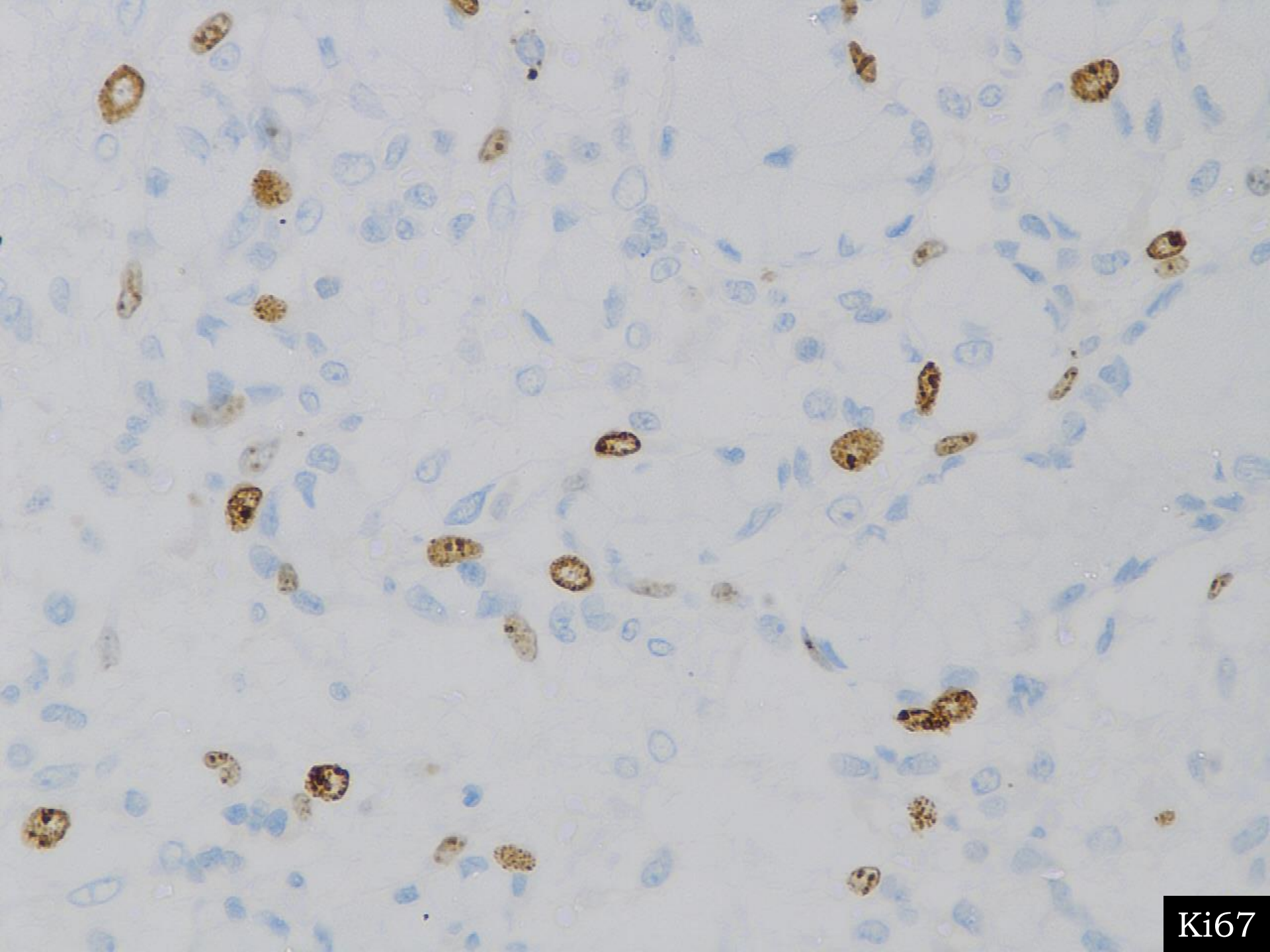
- Differentials considered were:

1. Ovarian stromal tumor
2. Sertoli-leydig cell tumor
3. Krukenberg tumor
4. Carcinoid


CK


CK 7


Chromogranin


Ki67

| IHC MARKER | Expression |
|---|---|
| CK | + |
| CK 7 | + |
| Chromogranin | + |
| Synaptophysin | + |
| WT1 | - |
| Melan-A | - |
| Inhibin | - |
| SATB2 | - |
| TTF-1 | - |
| PAX-8 | - |
| CK20 | - |
| Ki-67 index | ~12-14% |

# FINAL DIAGNOSIS

***Goblet cell Carcinoid***

# Discussion

- Ovarian carcinoids are usually metastatic tumors from the gastrointestinal tract, especially arising from the appendix.

- Primary ovarian carcinoid tumors are very rare, and represent less than 0.1% of all ovarian cancers.

- They are considered as monodermal teratomas with uncertain biological behaviour

- While several cases of metastatic ovarian carcinoids exist in literature, only few cases of primary mucinous (goblet cell carcinoids ) have been reported with a single large series published by Baker et al.

- Histologically they are subdivided into:
  - Insular
  - Trabecular
  - Stromal
  - Mucinous/goblet cell type

- Primary ovarian carcinoids have been reported in association with adjacent
  - mature cystic teratoma,
  - borderline mucinous tumors/ mucinous cyst adenocarcinoma or
  - along with an epidermoid cyst

Baker PM, Oliva E, Young RH, Talerman A, Scully RE. 2001. Ovarian mucinous carcinoids including some with a carcinomatous component. A report of 17 cases. American Journal of Surgical Pathology 25:557–568.

- Histomorphological features, Immunohistochemistry and ultra structural findings have limited role in differentiating primary from metastatic carcinoids of the ovary.

- The clinicopathologic criteria in favour of the primary origin are:
  - Unilaterality,
  - Presence of teratomatous elements and
  - The absence of extraovarian neoplasia

- Alenghat et al. have observed that:
- In absence of a primitive carcinoid tumor of the appendix,
- The negativity of all radiologic and clinical investigations carried out postoperatively, for other primary sites
- Support hypothesis of an ovarian primary tumor deriving from the transformation of a mucinous carcinoid into a highly aggressive carcinoma rather than a metastatic neoplasia.

Maria G. Fiore, Roberta Rossi, Claudia Covelli, Vera Loizzi, Domenic Piscitelli & Gennaro Cormio (2016): Goblet-cell carcinoid of the ovary: A case report with ultrastructural analysis, Journal of Obstetrics and Gynaecology

- In our case the appendix was unremarkable radiologically
- Disease was bilateral and no teratomatous component was seen
- The constellation of features favors an ovarian primary

***THANK YOU***