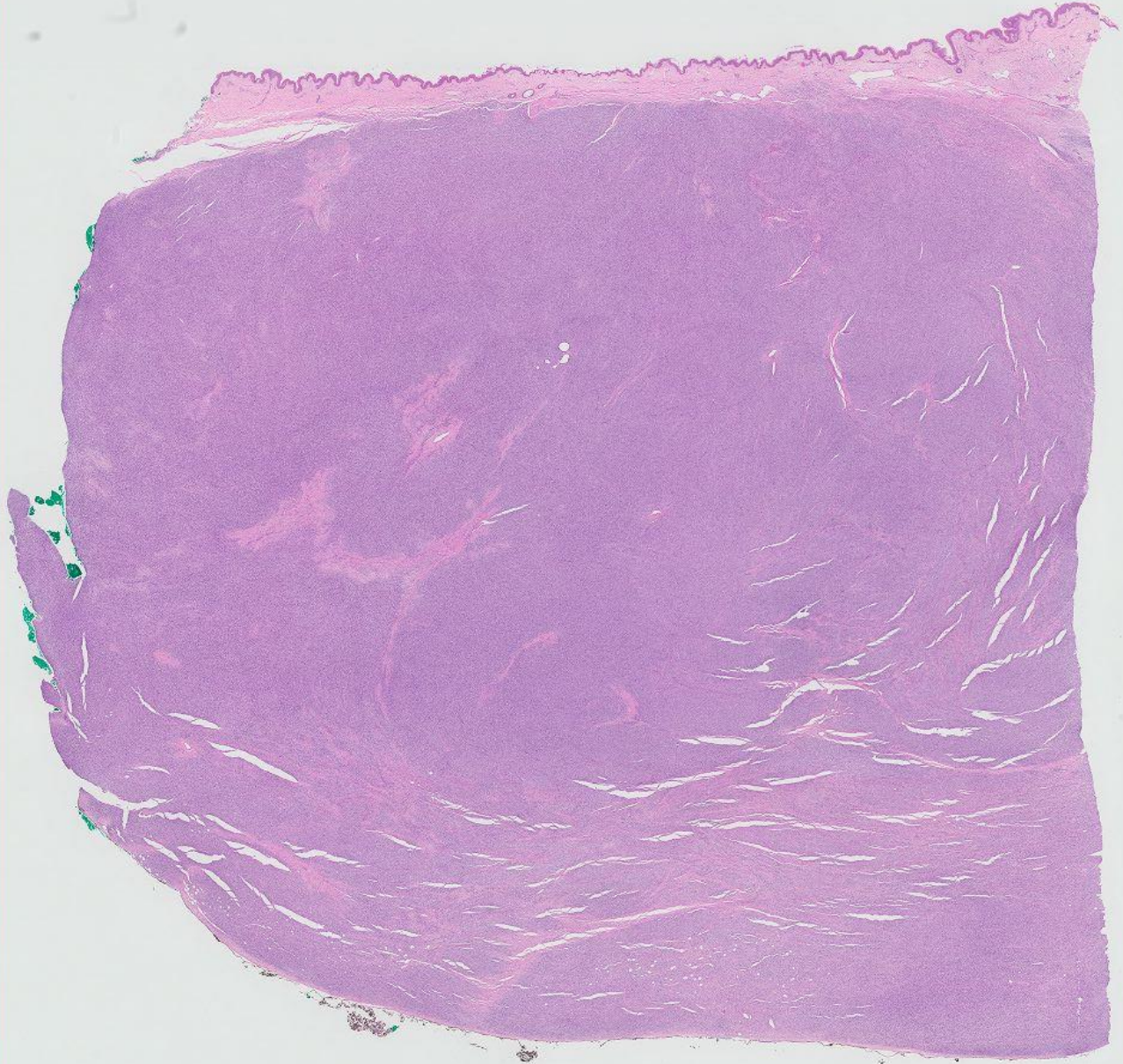


# *Case 7*

17 year old girl with a right breast lump,  
measuring close to 3cm.  
Excision biopsy.

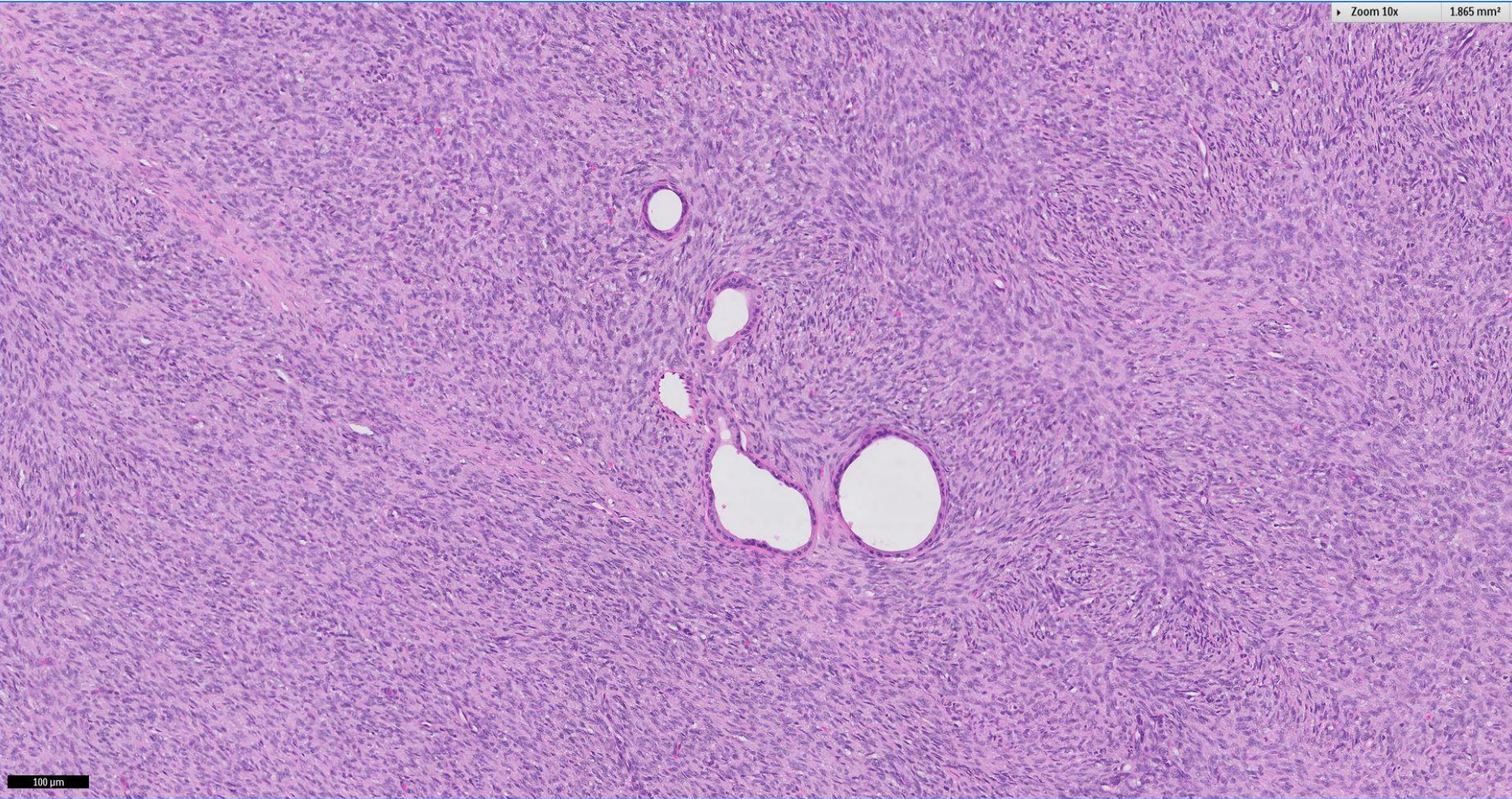




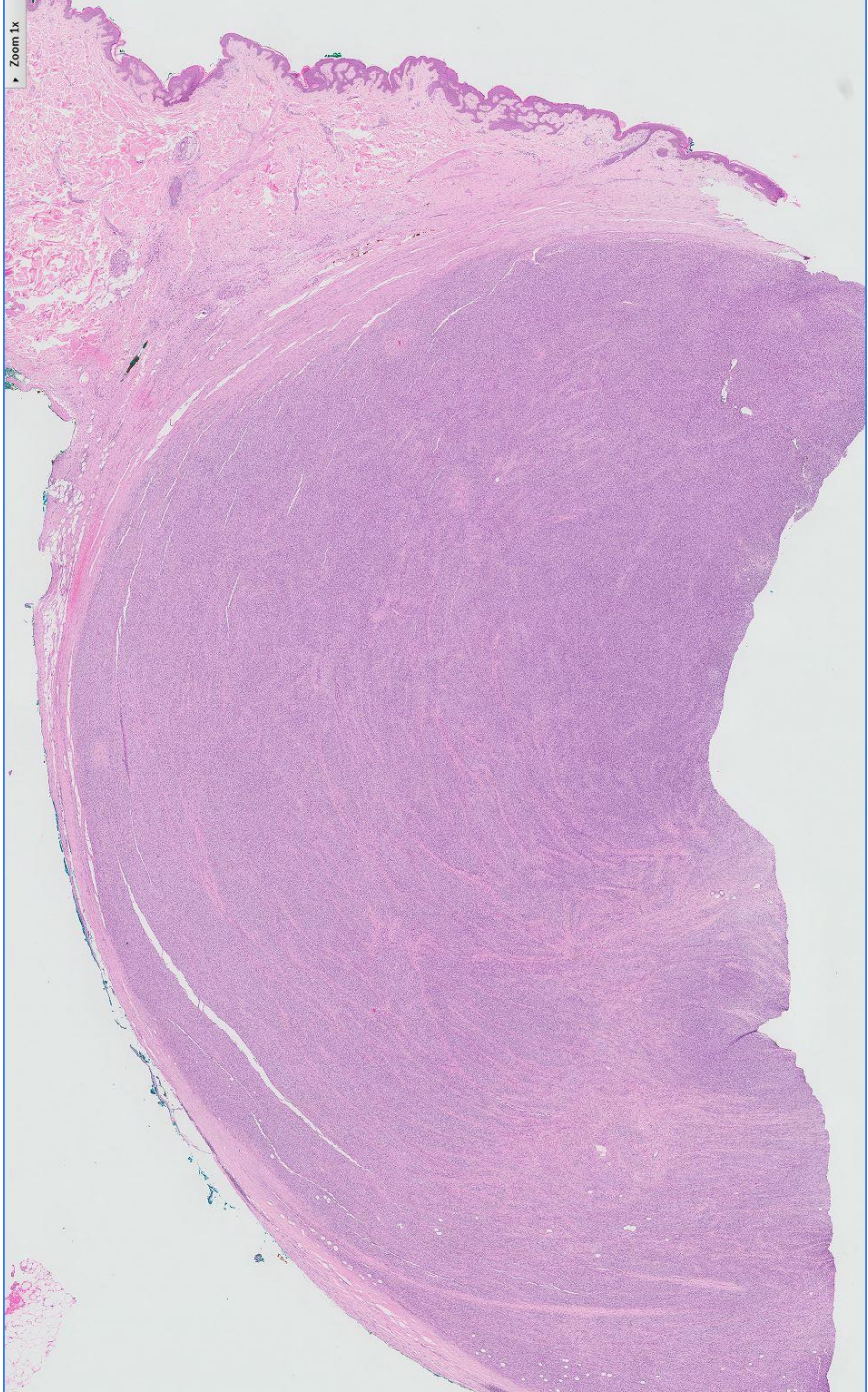








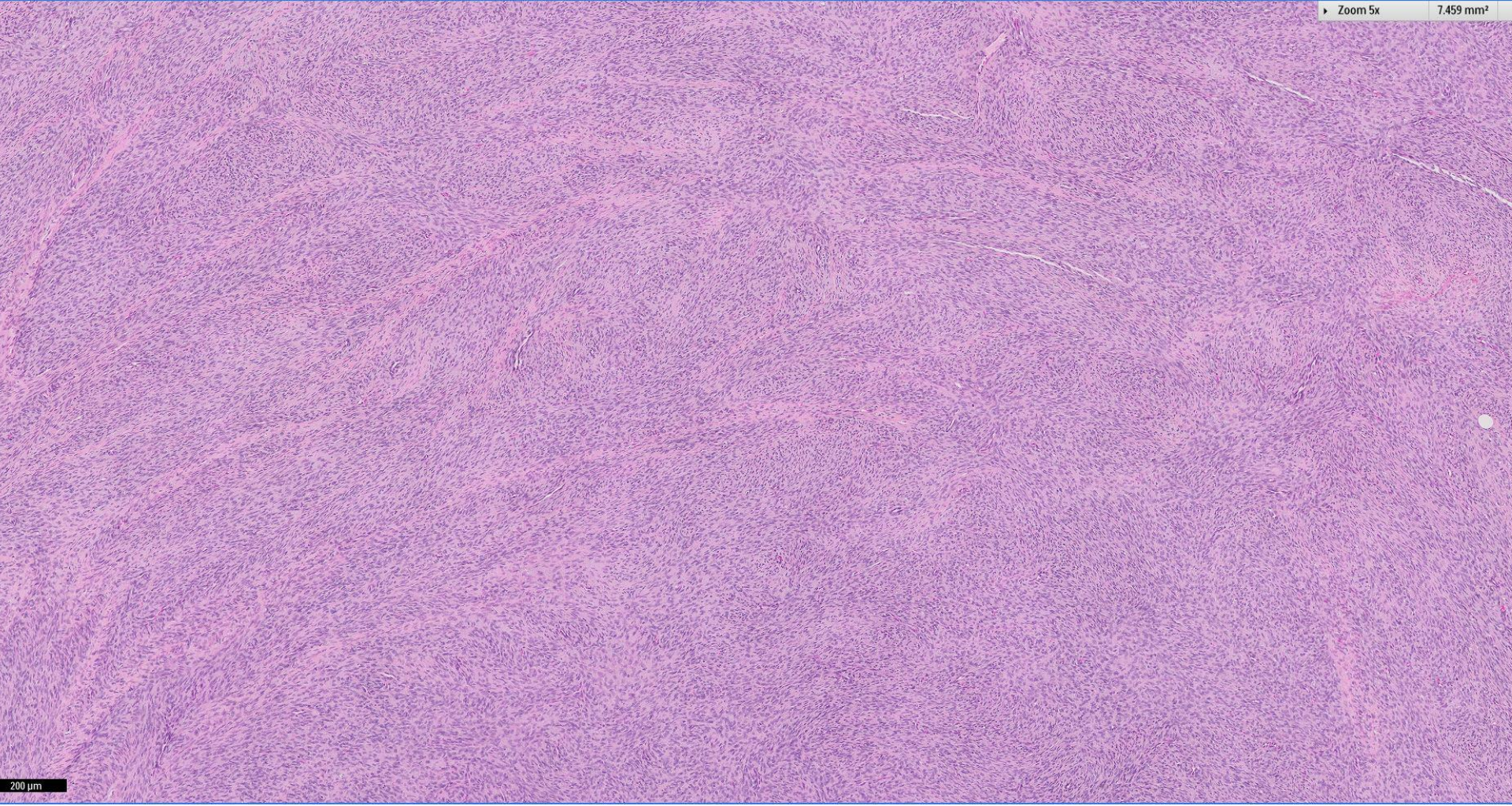






► Zoom 5x

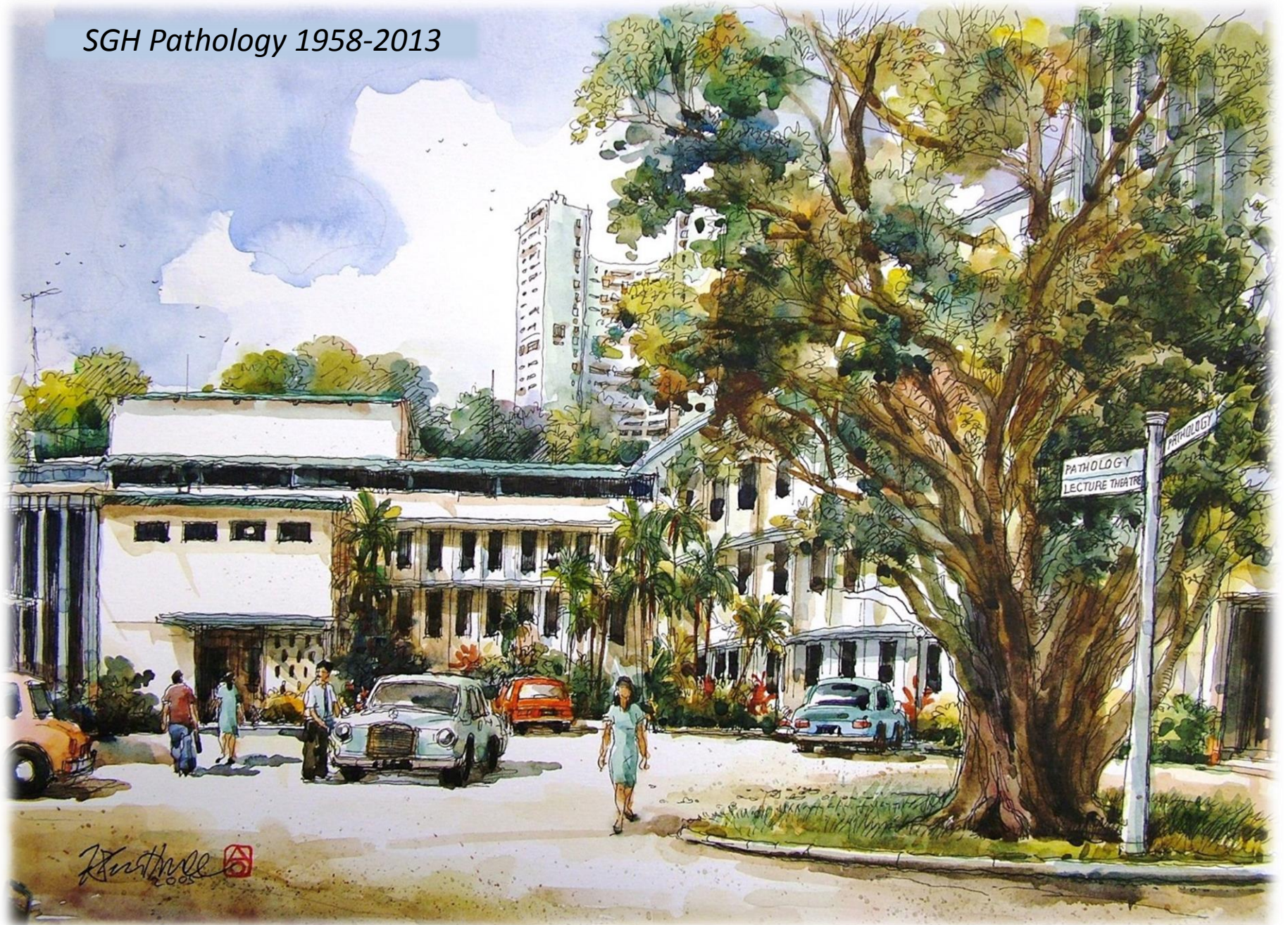
7.459 mm<sup>2</sup>



200  $\mu$ m

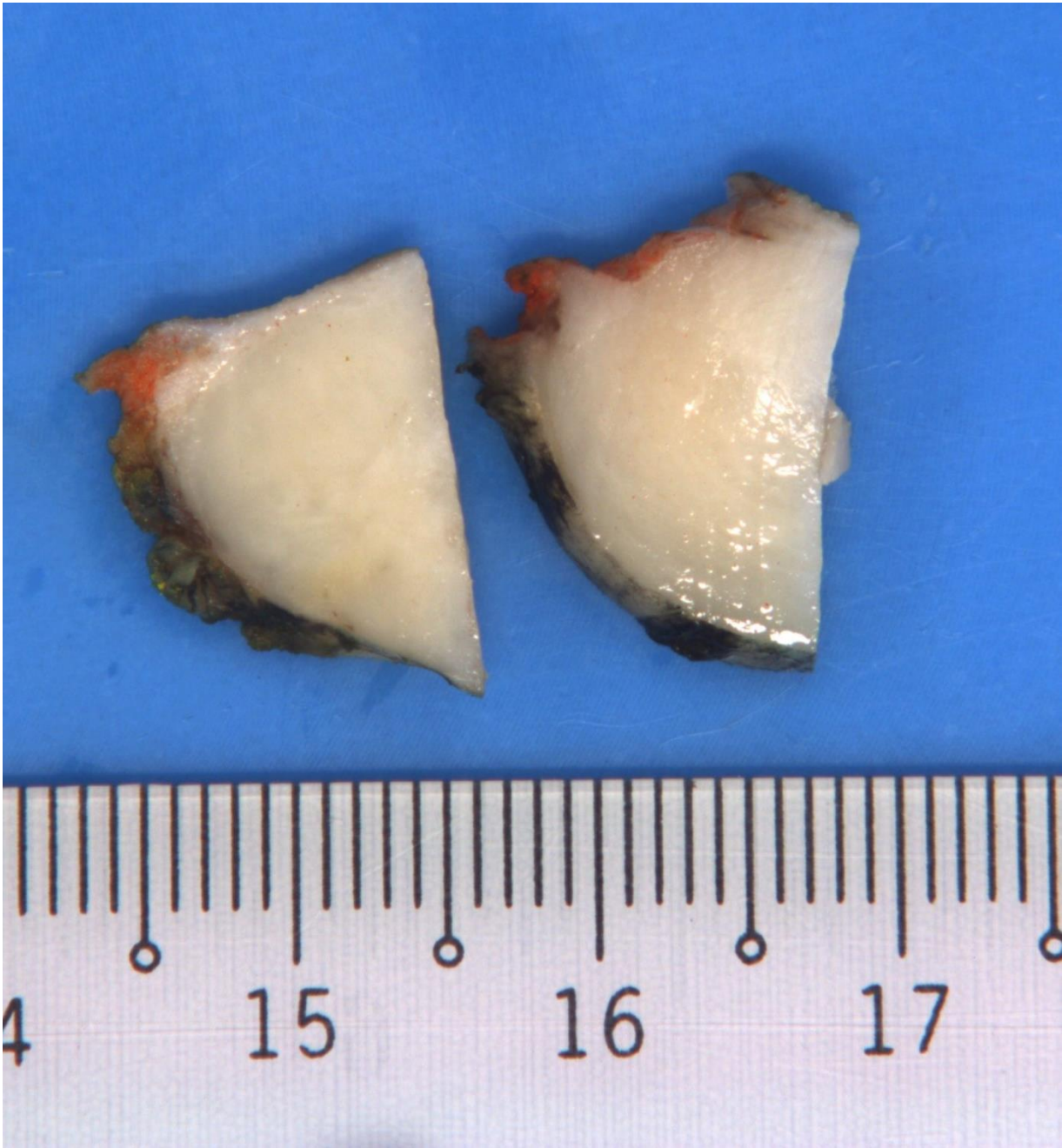


SGH Pathology 1958-2013

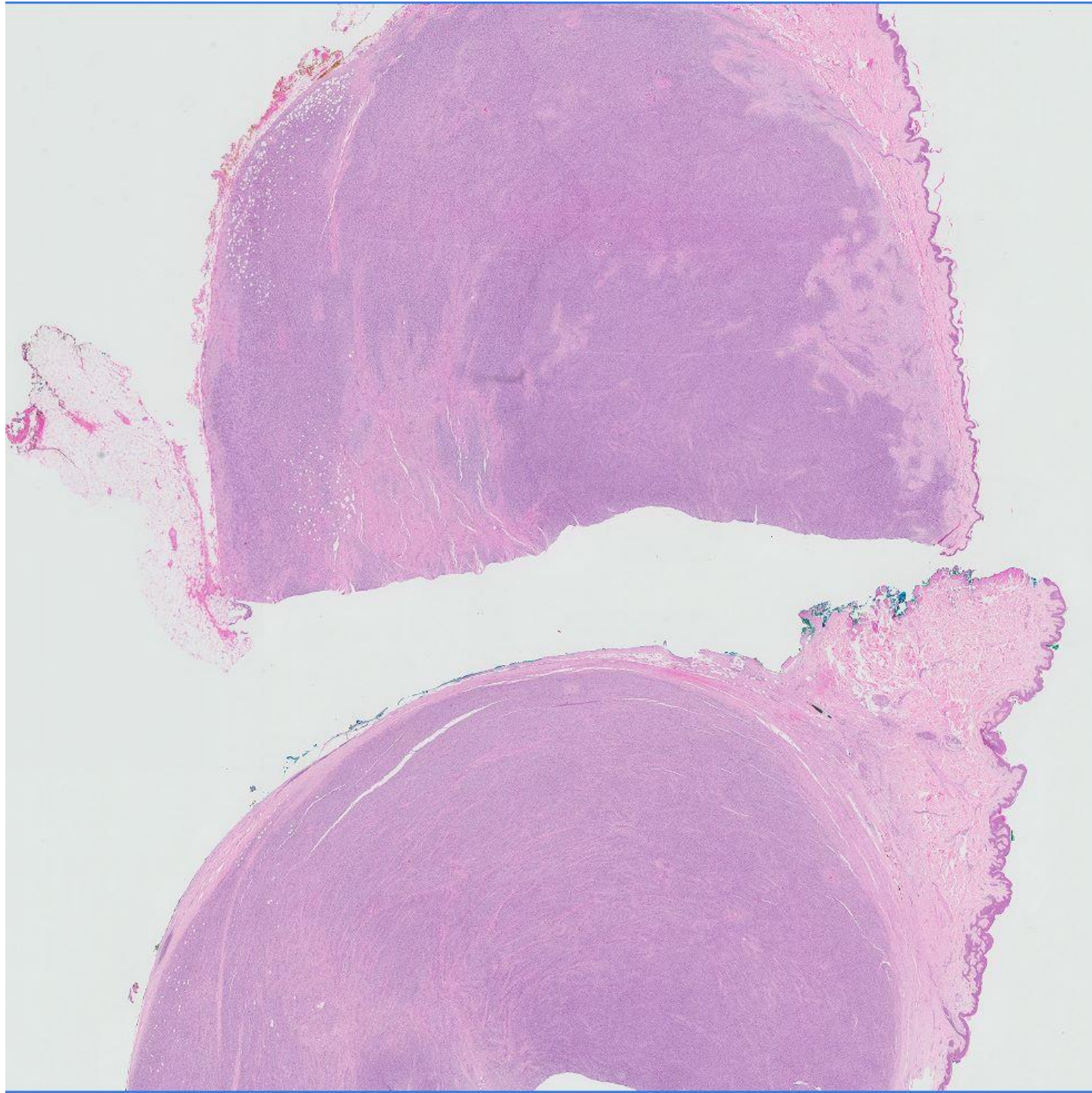


*Handwritten signature* 





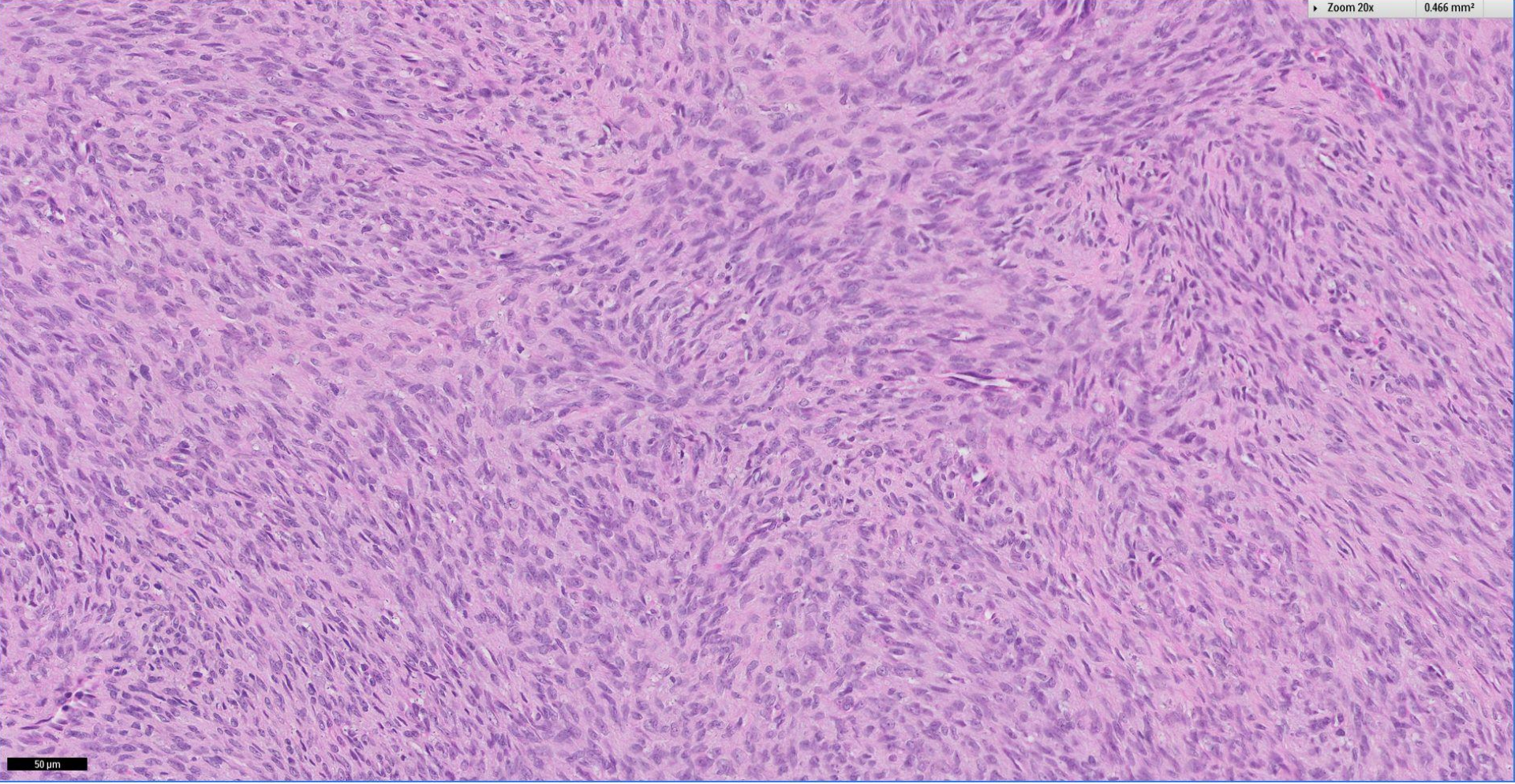






Zoom 20x

0.466 mm<sup>2</sup>

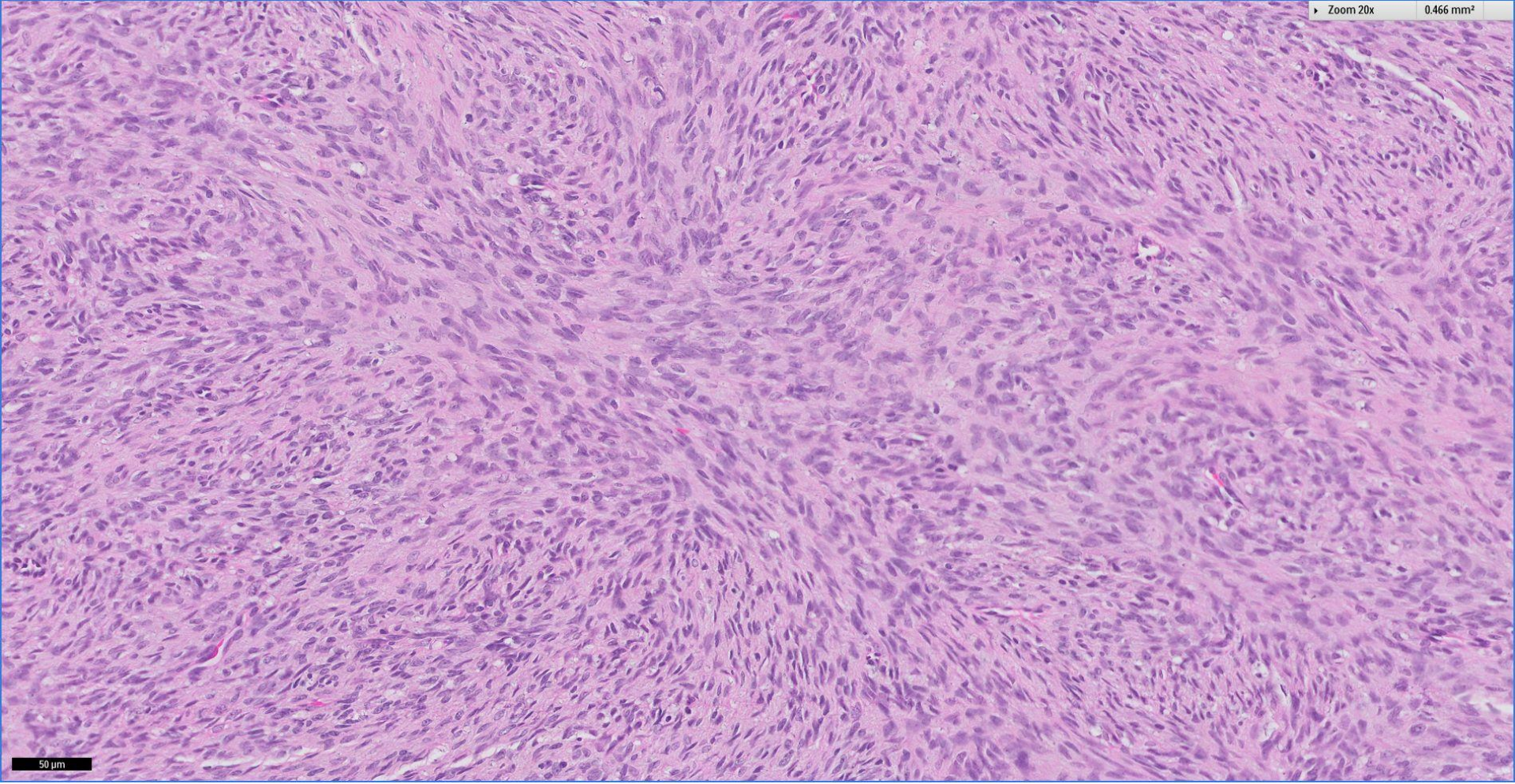


50 μm



Zoom 20x

0.466 mm<sup>2</sup>

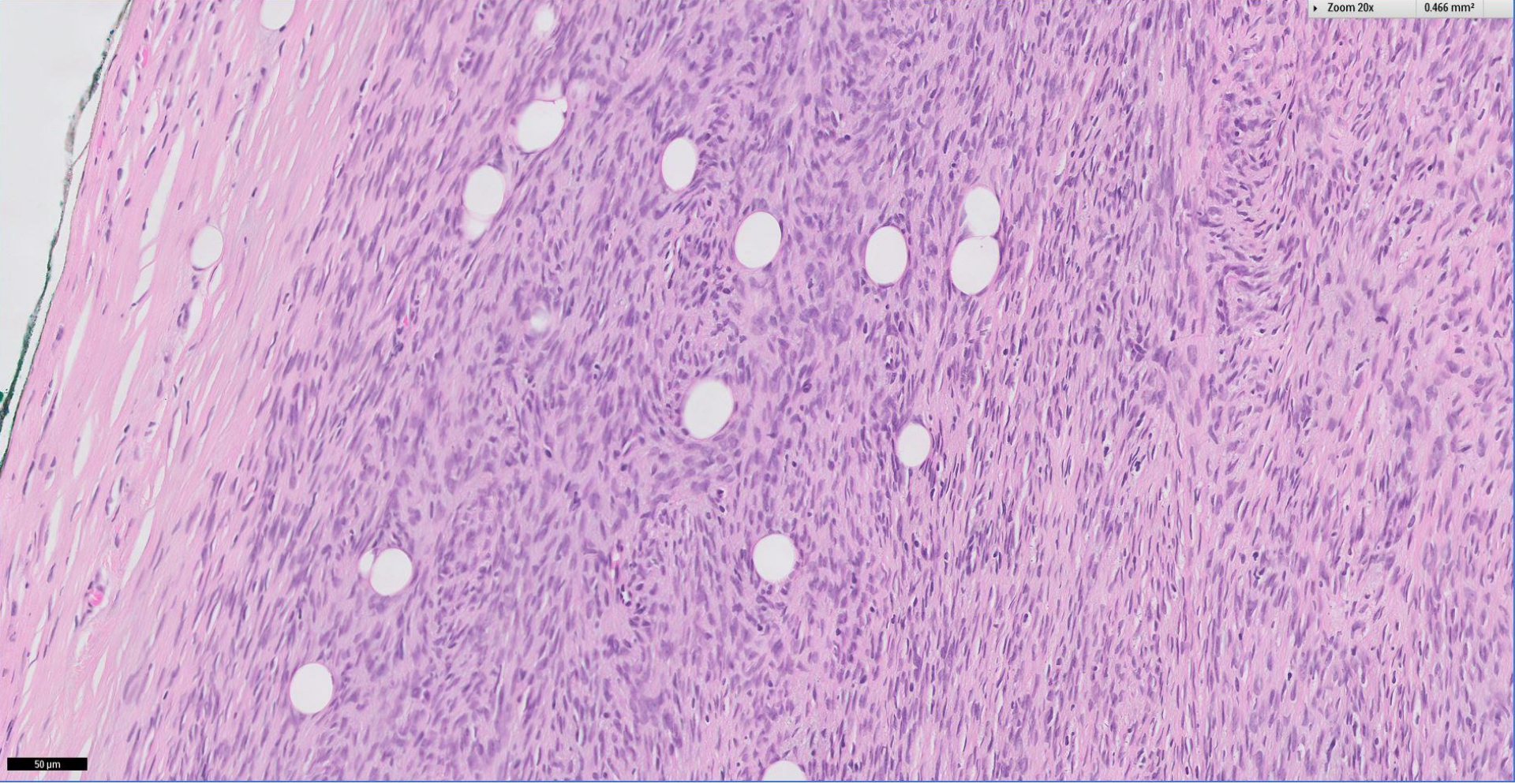


50  $\mu$ m



Zoom 20x

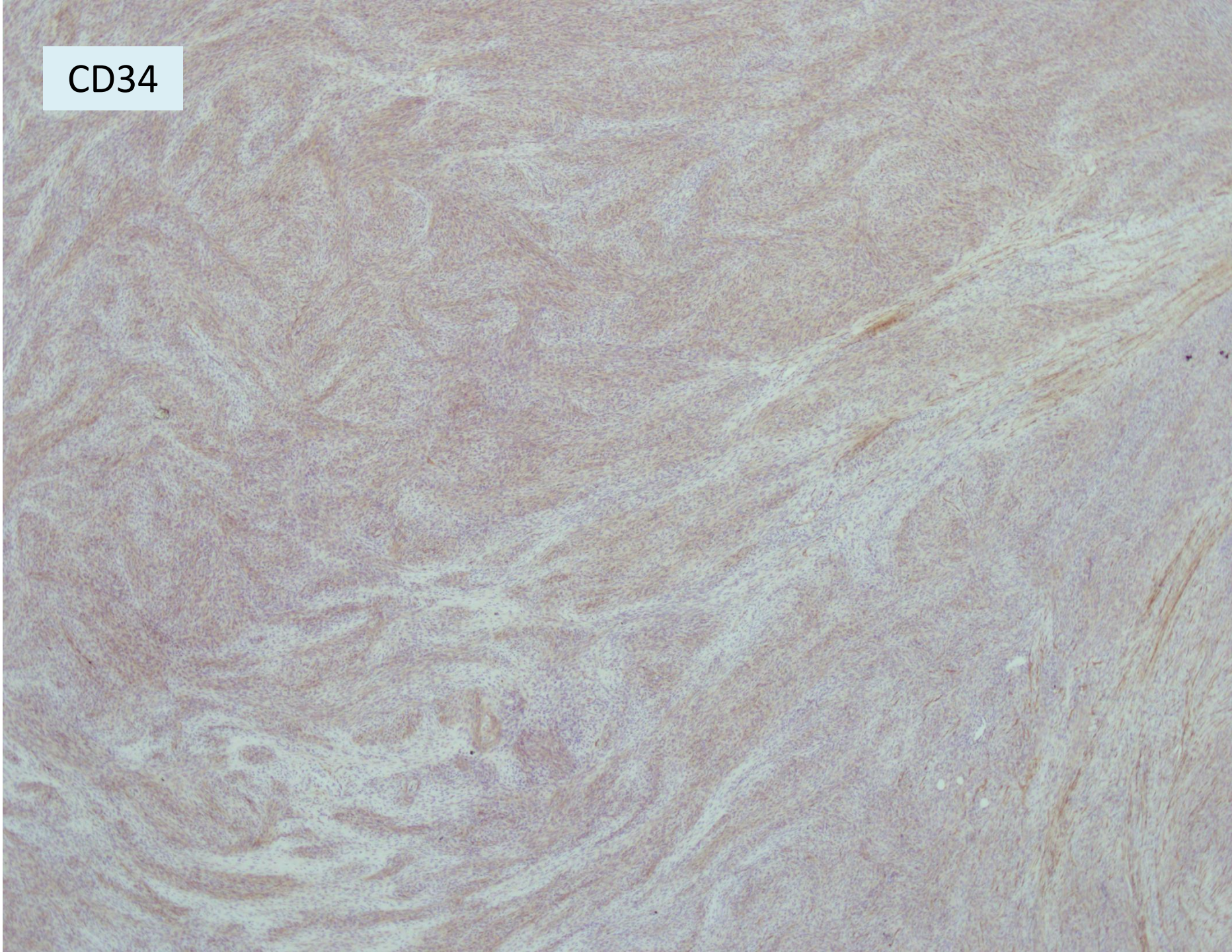
0.466 mm<sup>2</sup>



50 μm

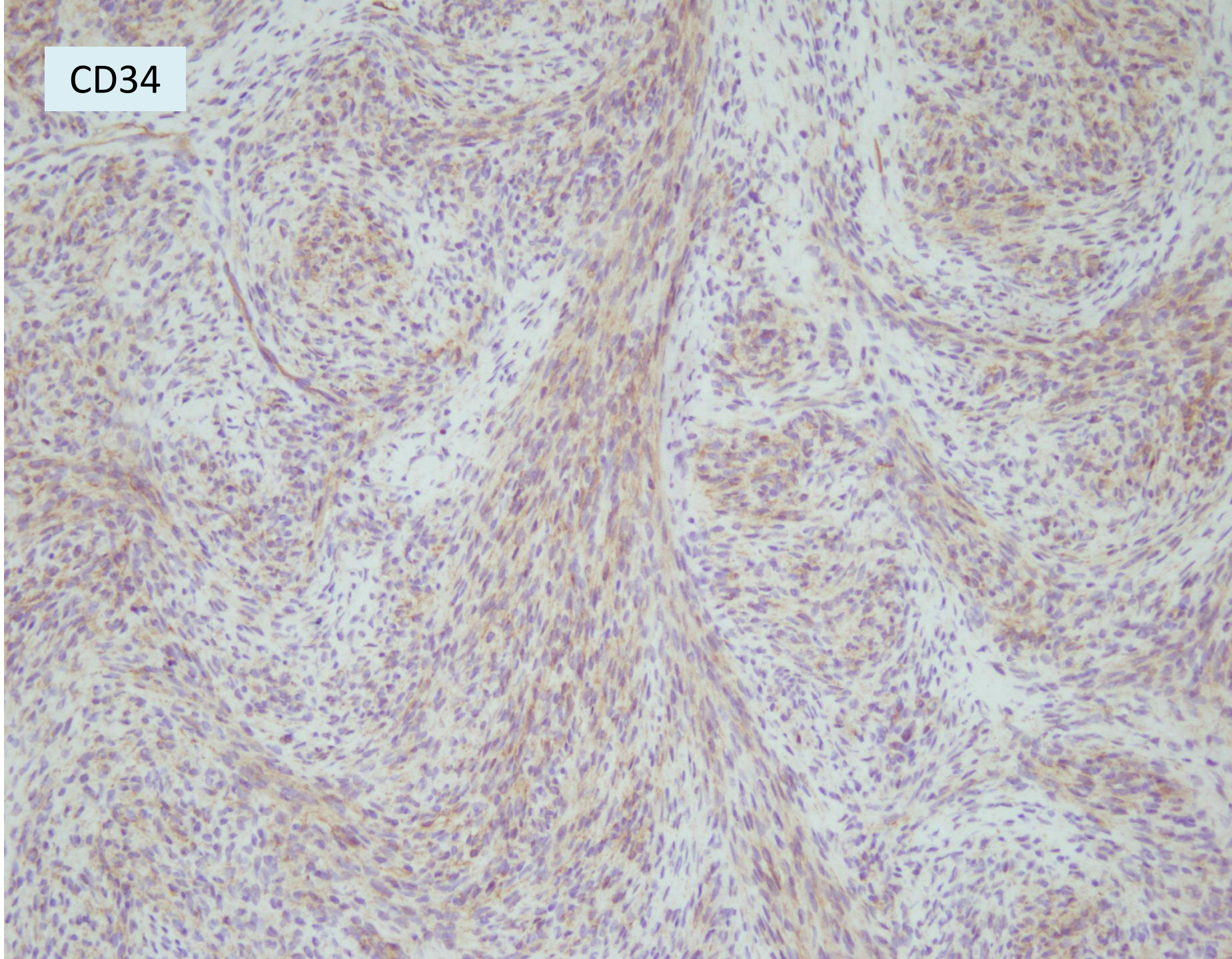


CD34



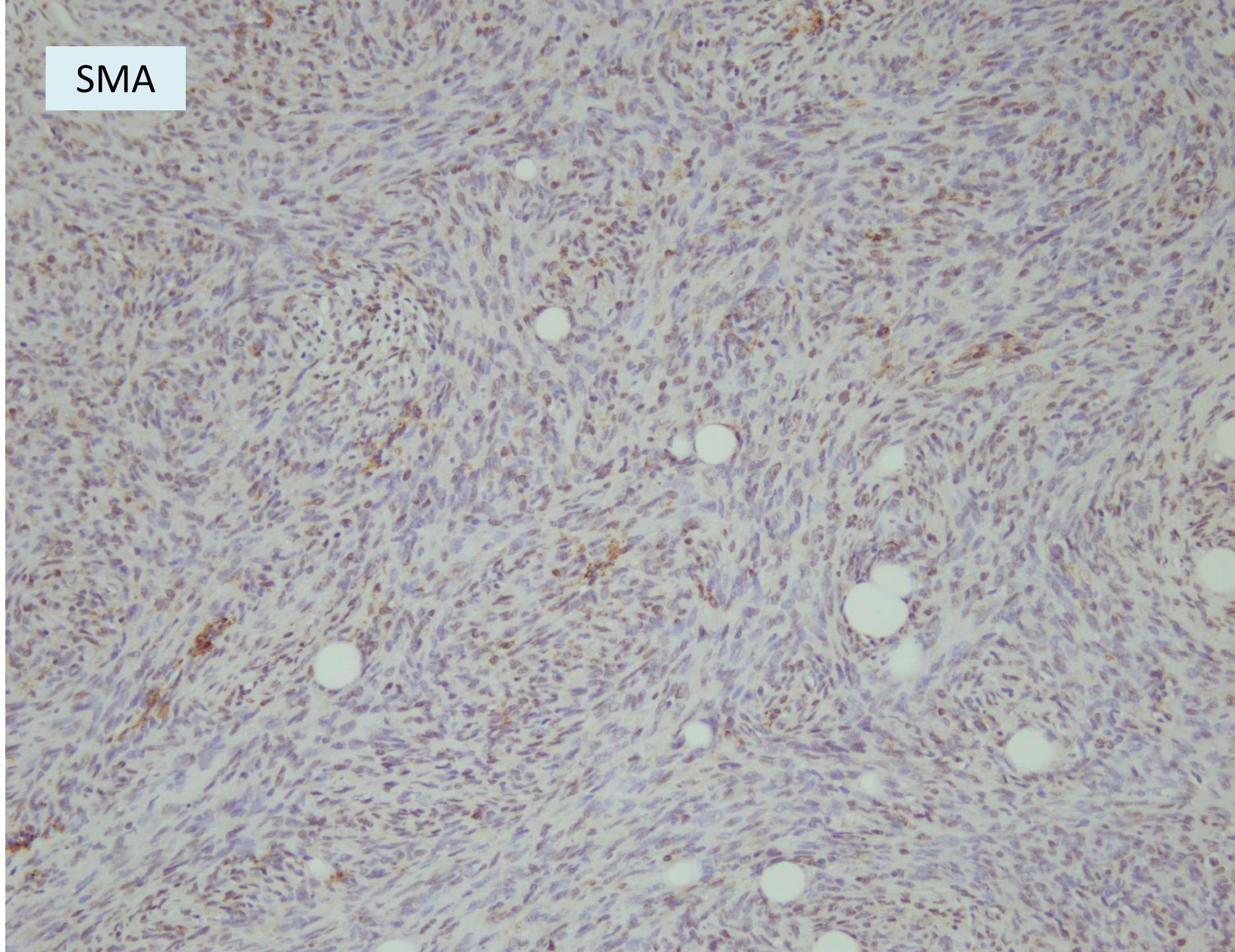


CD34





SMA





# Other immunohistochemical results

- Bcl-2 diffusely & strongly positive.
- EMA, AE1/3 negative.
- Desmin negative.
- S100 negative.
- ER, PR negative.





Right breast lump, excision:

*Dermatofibrosarcoma protuberans*





# Dermatofibrosarcoma protuberans

- Tumour arising from the skin and subcutaneous tissue.
- Not a primary breast neoplasm, but may present clinicoradiologically as a breast mass.
- Occurs at any age group, average age is 40 years.
- Immunohistochemistry:
  - CD34, vimentin positive.
  - S100, actin, desmin, CD31, cytokeratin, FXIIIA, EMA, HMB45, ER, PR, CD31, CD99, c-kit negative.





# Dermatofibrosarcoma protuberans

- Genetic studies show characteristic translocation  $t(17;22)(q22;q23)$  in which the *COL1A1* and *PDGFB* genes form a fusion gene.
- Fusion gene can be detected by chromosome analysis, FISH, RT-PCR (products of the fusion gene).





# Dermatofibrosarcoma protuberans: *treatment & prognosis*

- Recurrent potential if not completely resected.
- Difficult to achieve negative margins due to the deep penetration of lesional cells into the surrounding tissue.
- Mastectomy is necessary for large bulky tumours; local excision for smaller lesions.
- May evolve into fibrosarcoma:
  - Development of herringbone growth pattern.
  - Increased cellularity.
  - Increased mitotic activity.
  - Necrosis.
  - Loss of CD34 reactivity.





# Dermatofibrosarcoma protuberans: *treatment & prognosis*

- Recurrences usually occur within a few years, but can happen within 6 months or after decades.
- No role for adjuvant radiation treatment.
- Imatinib mesylate, an inhibitor of the PDGFR associated tyrosine kinase, may be useful in treating advanced cases.





 Breast  
Pathology  
Course 2014

