

Case 21

38 year old woman had a history of left breast invasive carcinoma diagnosed in 2002, managed with wide excision and postoperative radiation.

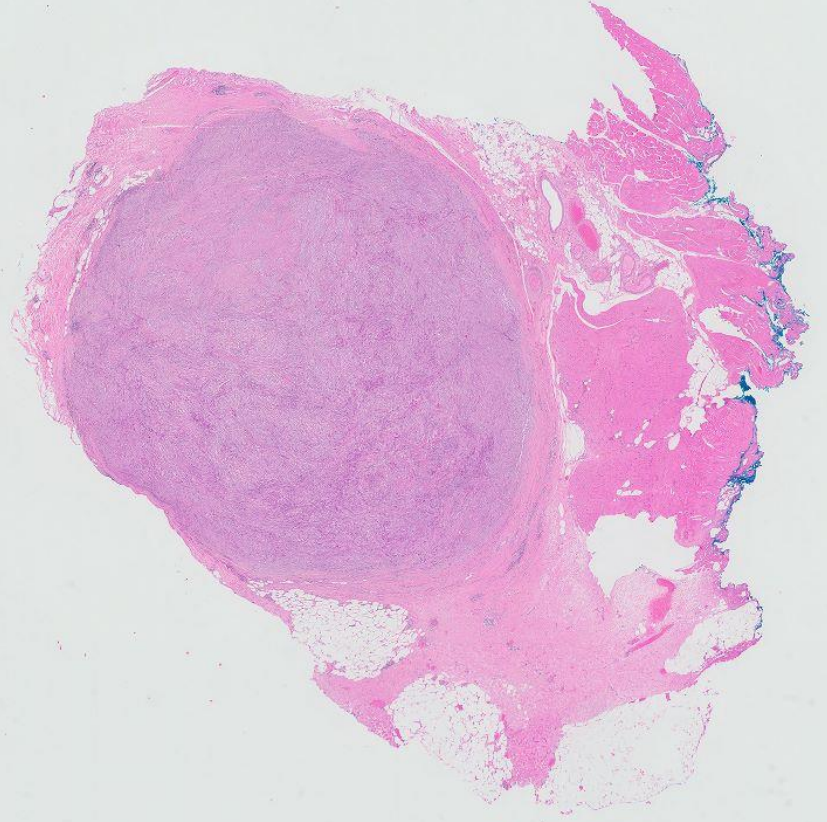
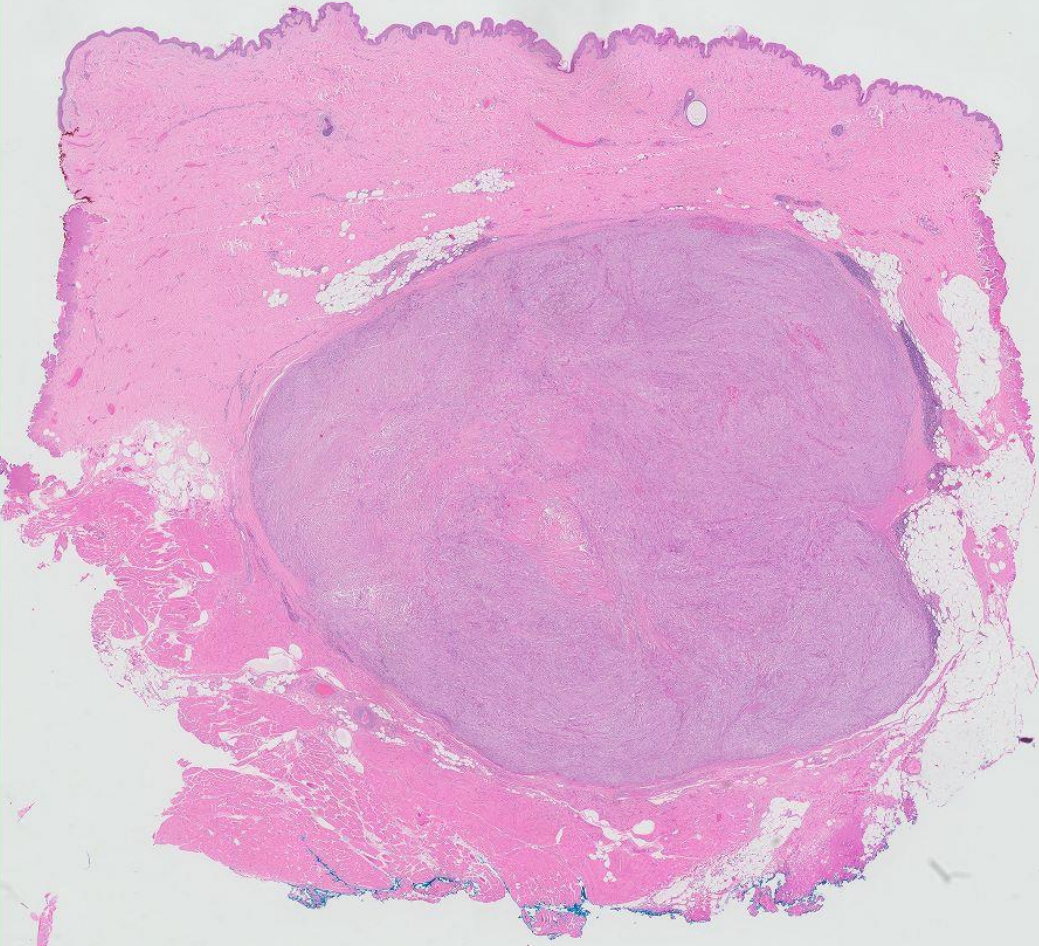
Several years later, she developed right breast ductal carcinoma in situ (DCIS) for which lumpectomy and radiation were administered.

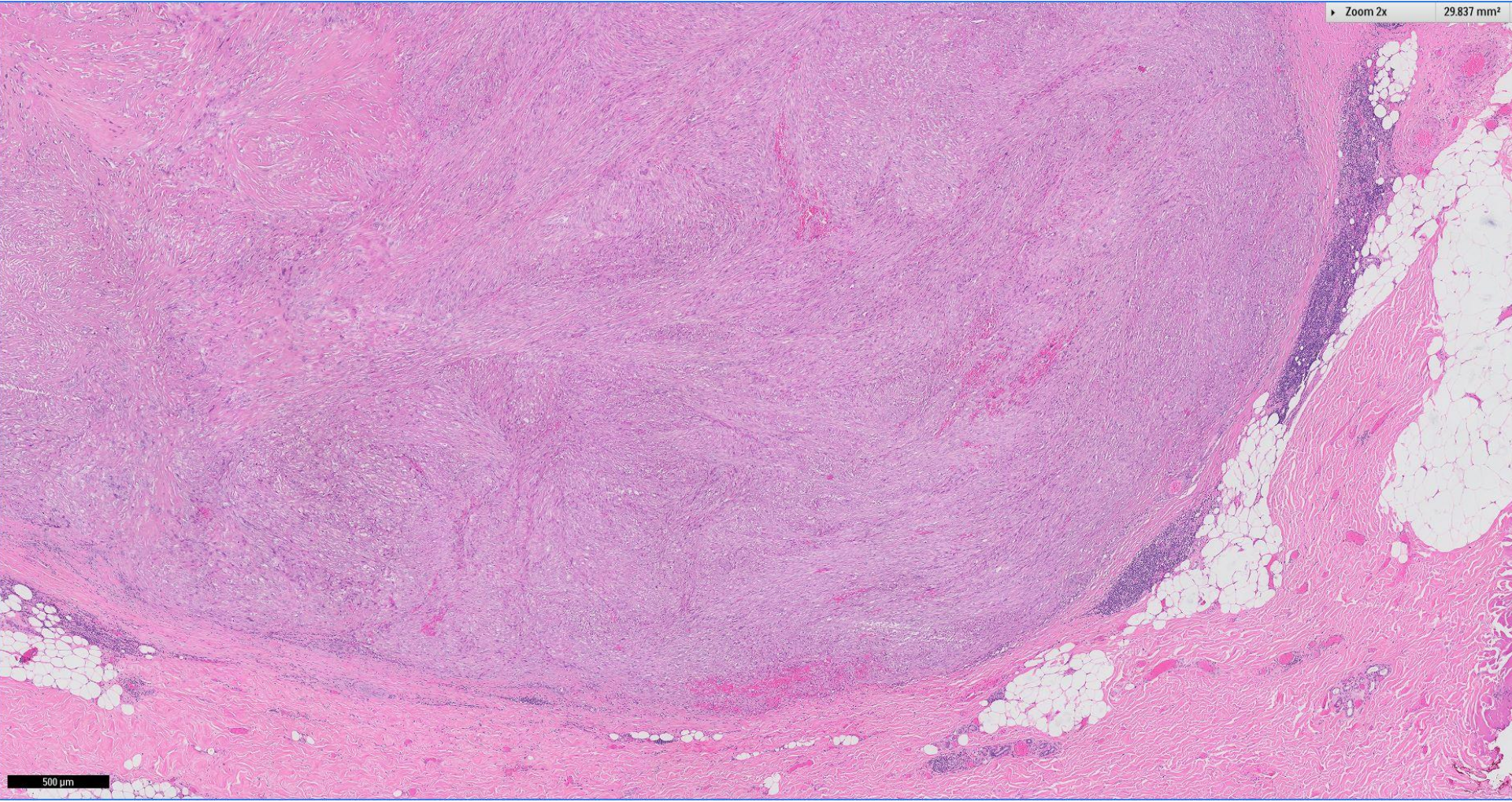
A few years ago, she opted for bilateral mastectomy for left breast DCIS and a right breast abnormal spindle cell tumour.

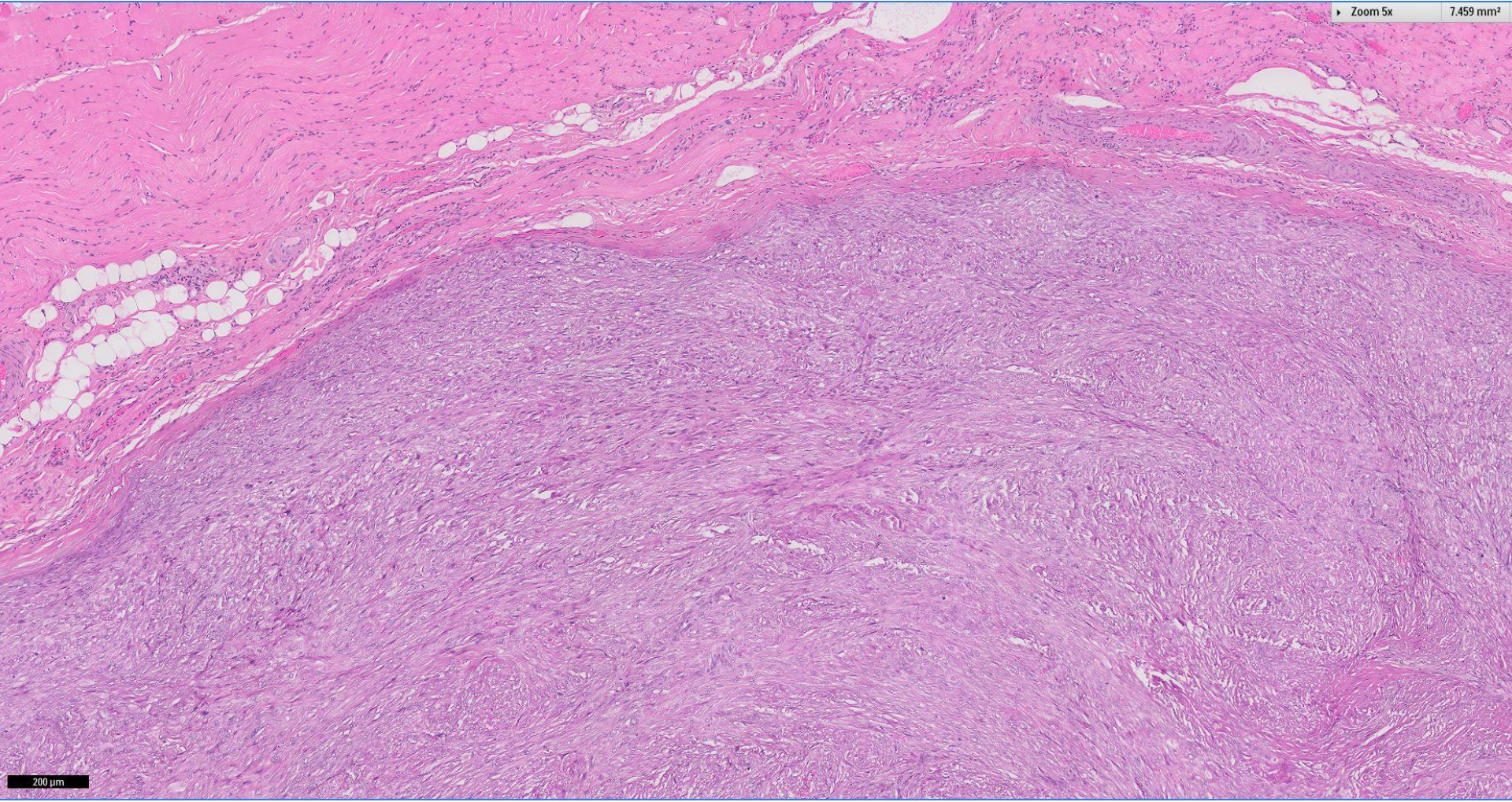
Current presentation was with a lump over the left chest wall.
A wide excision was carried out for the left chest wall lump.



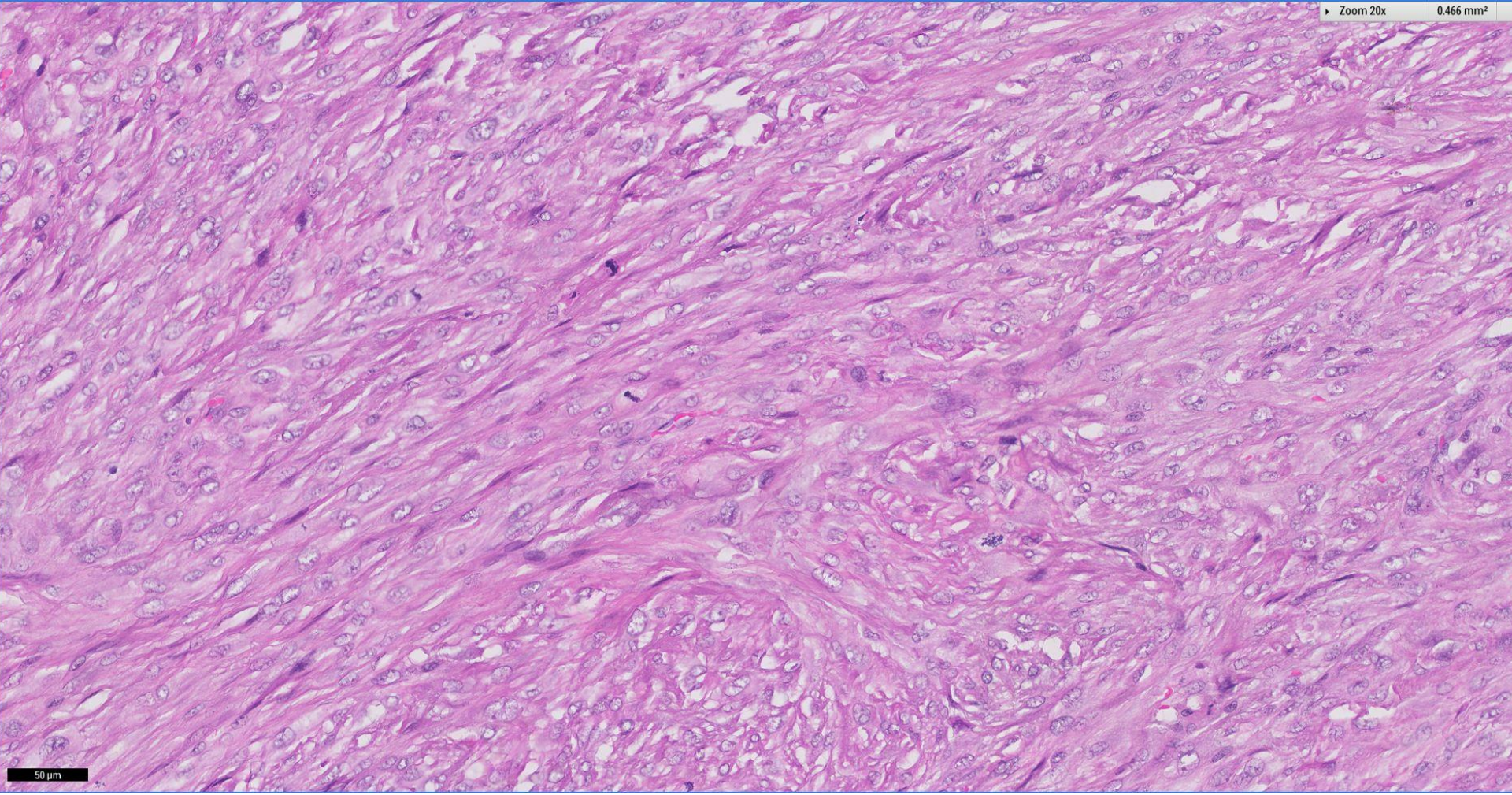
mm 5





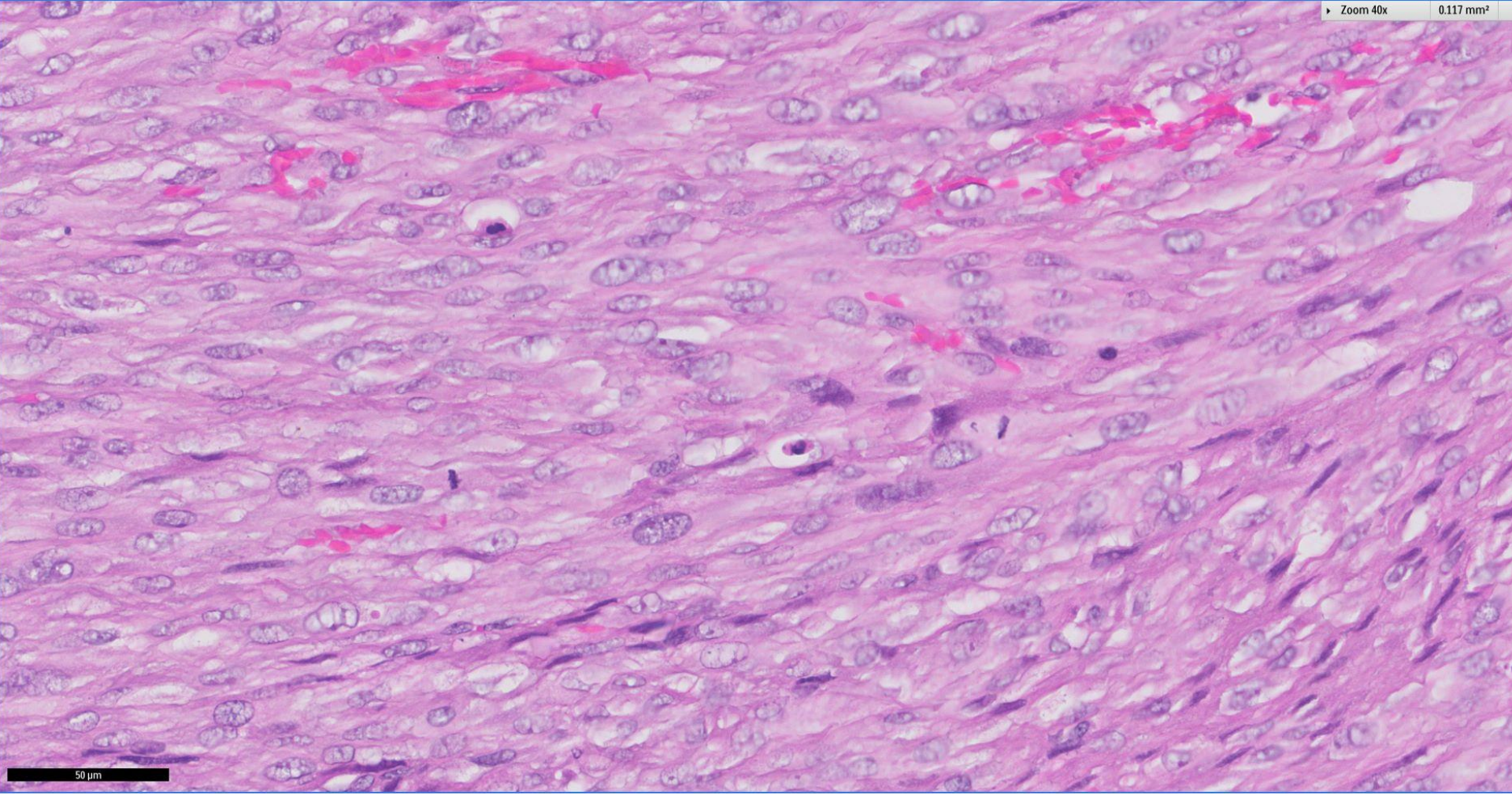


Zoom 20x 0.466 mm²



50 µm

Zoom 40x 0.117 mm²

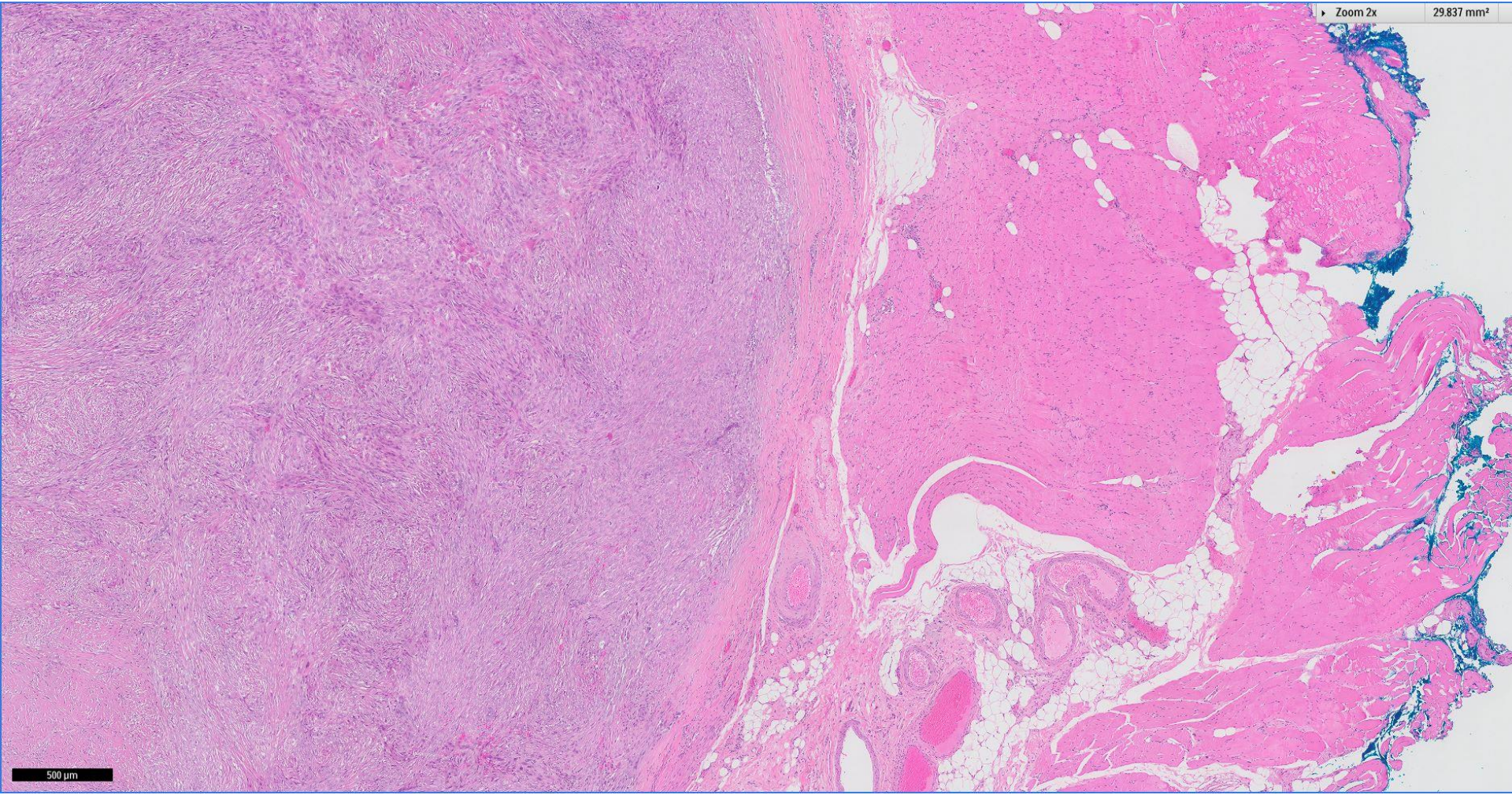


50 μm



Zoom 2x

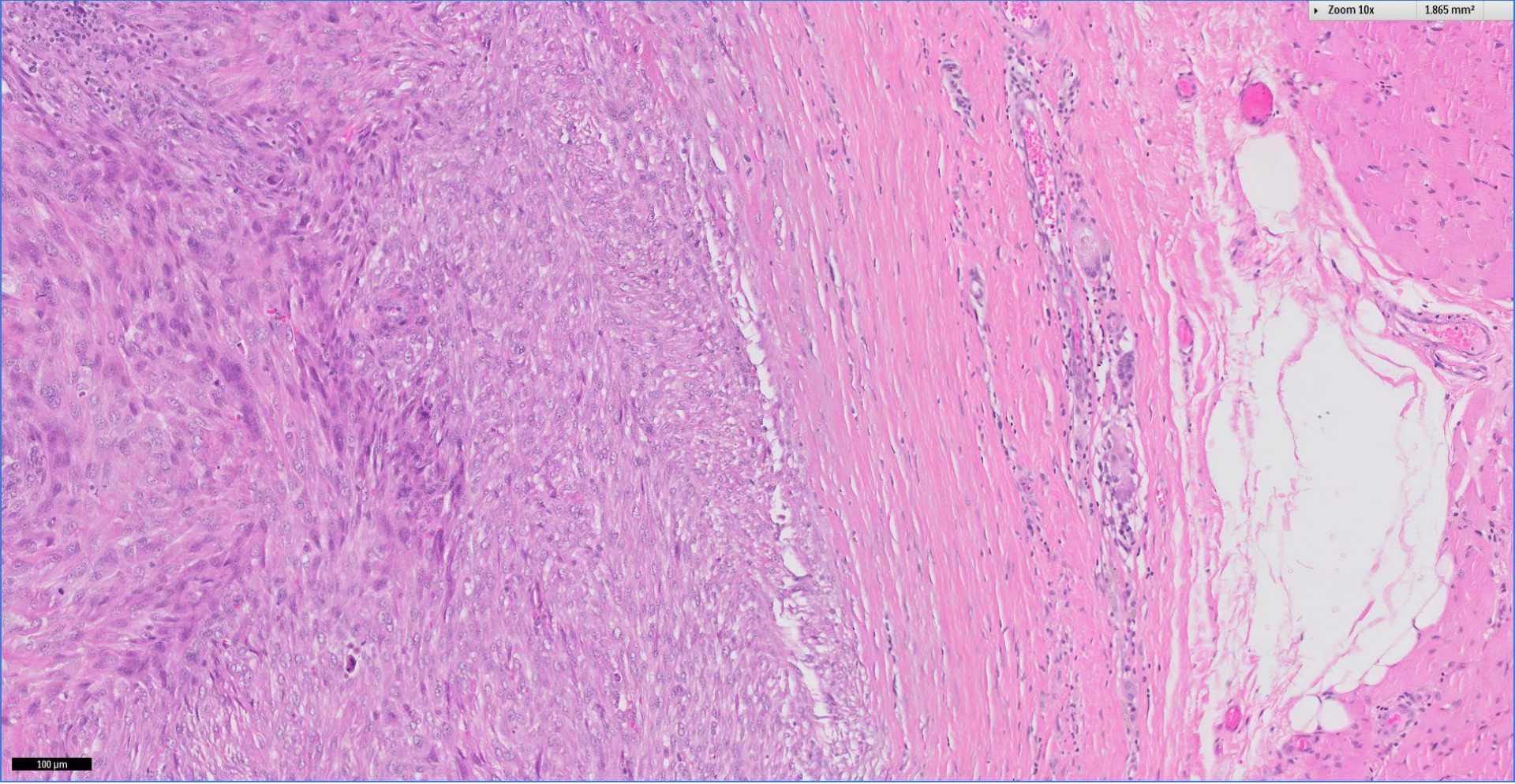
29.837 mm²



500 μm

Zoom 10x

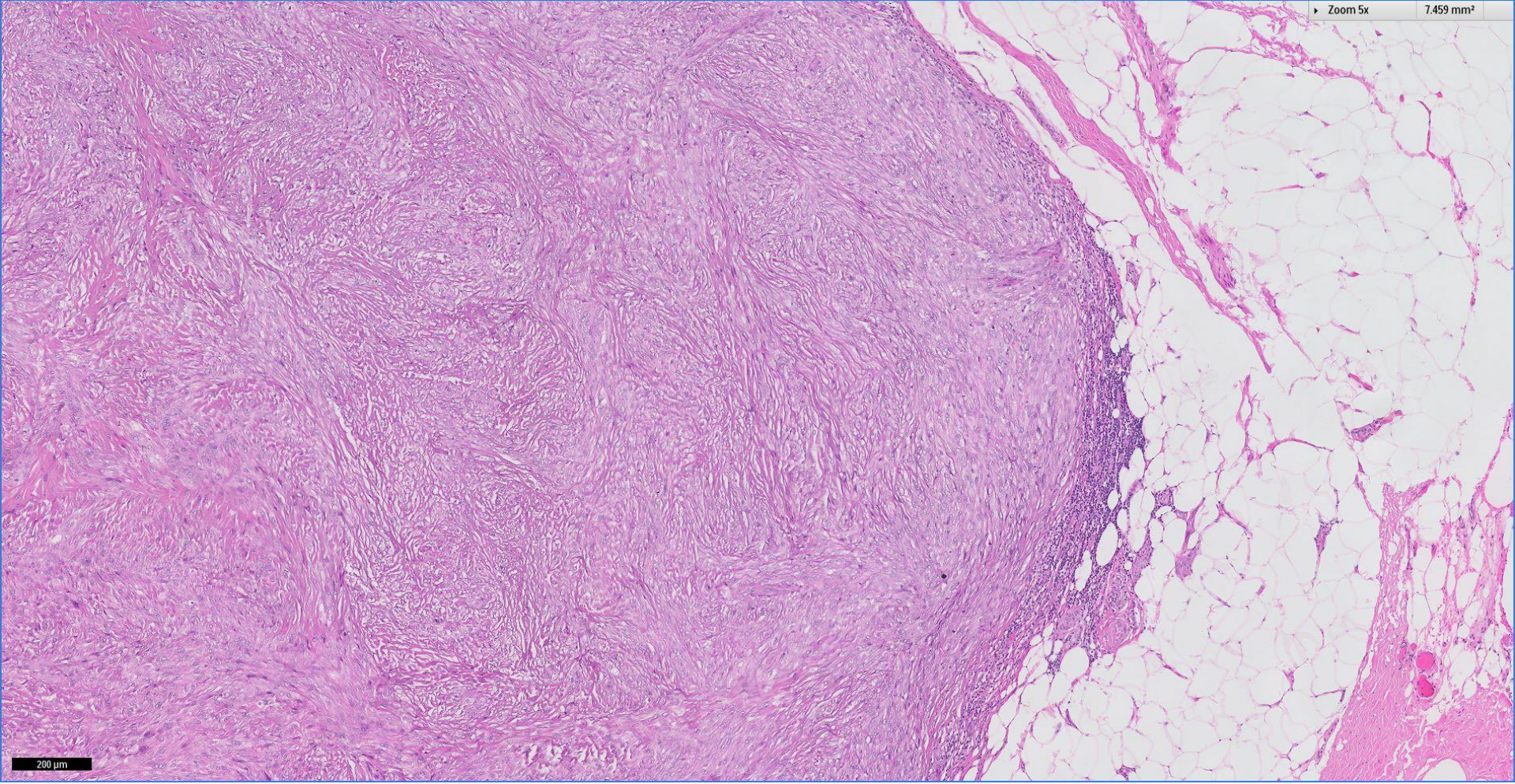
1.865 mm²



100 μ m

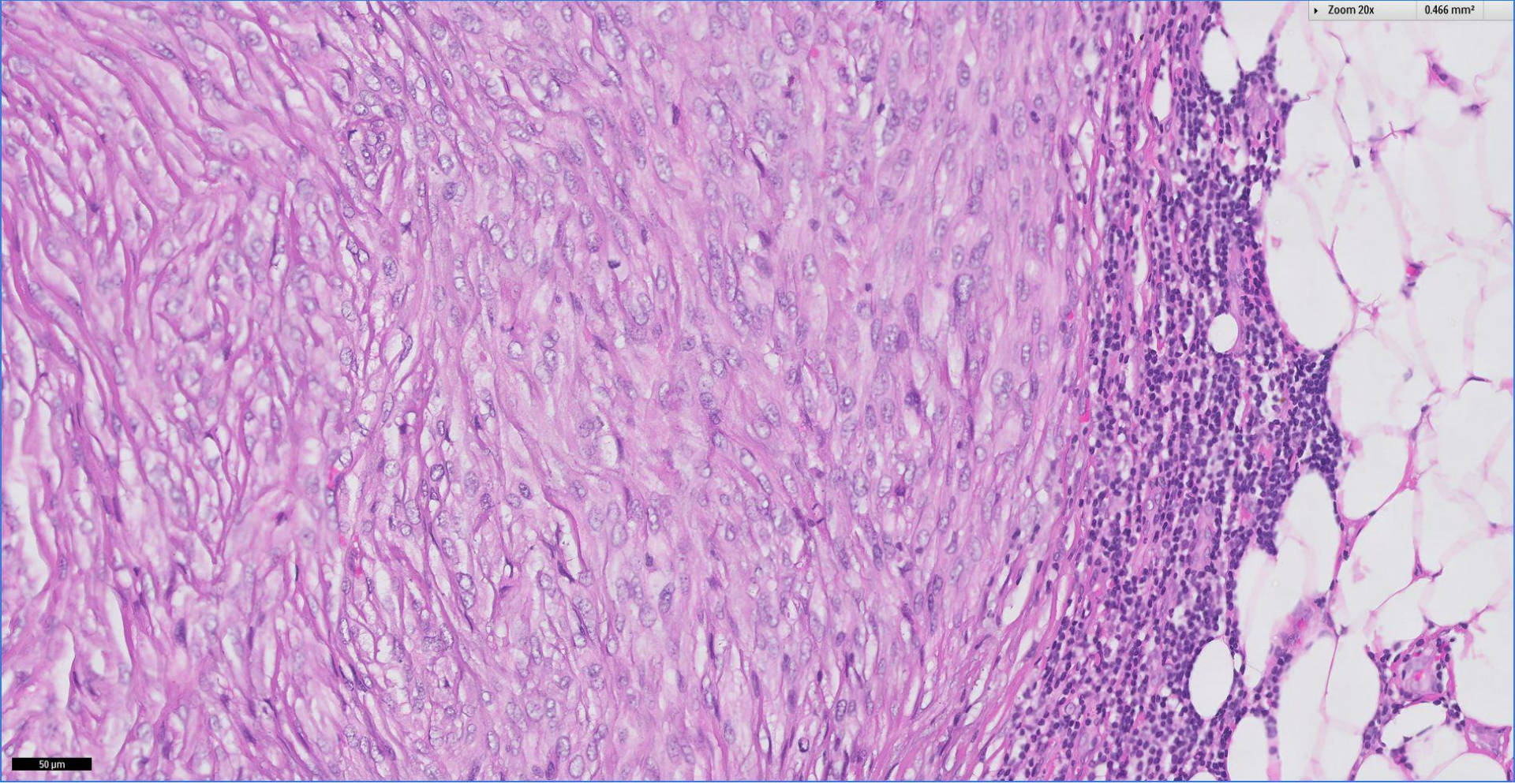
Zoom 5x

7.459 mm²

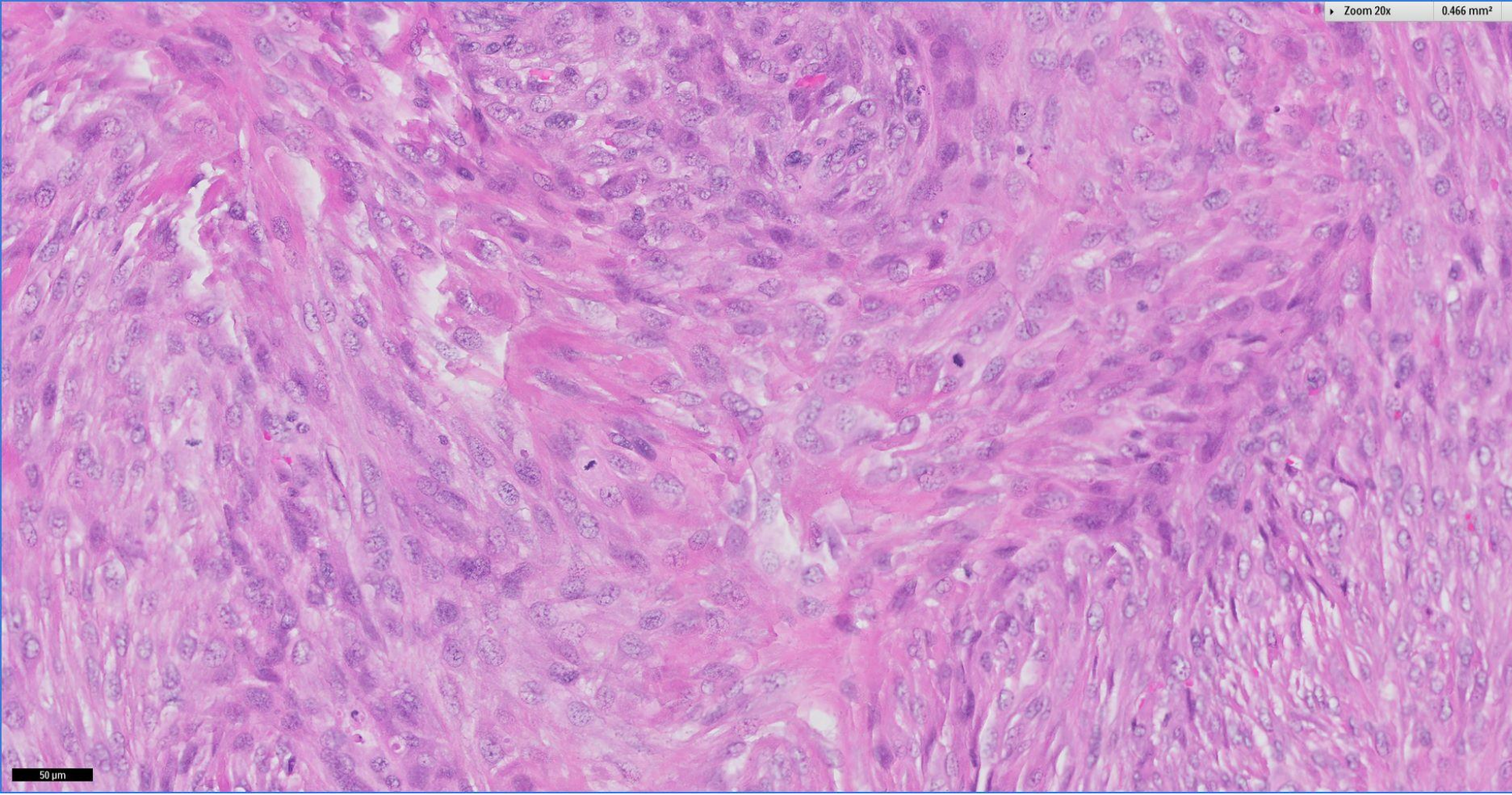


200 μm

Zoom 20x 0.466 mm²

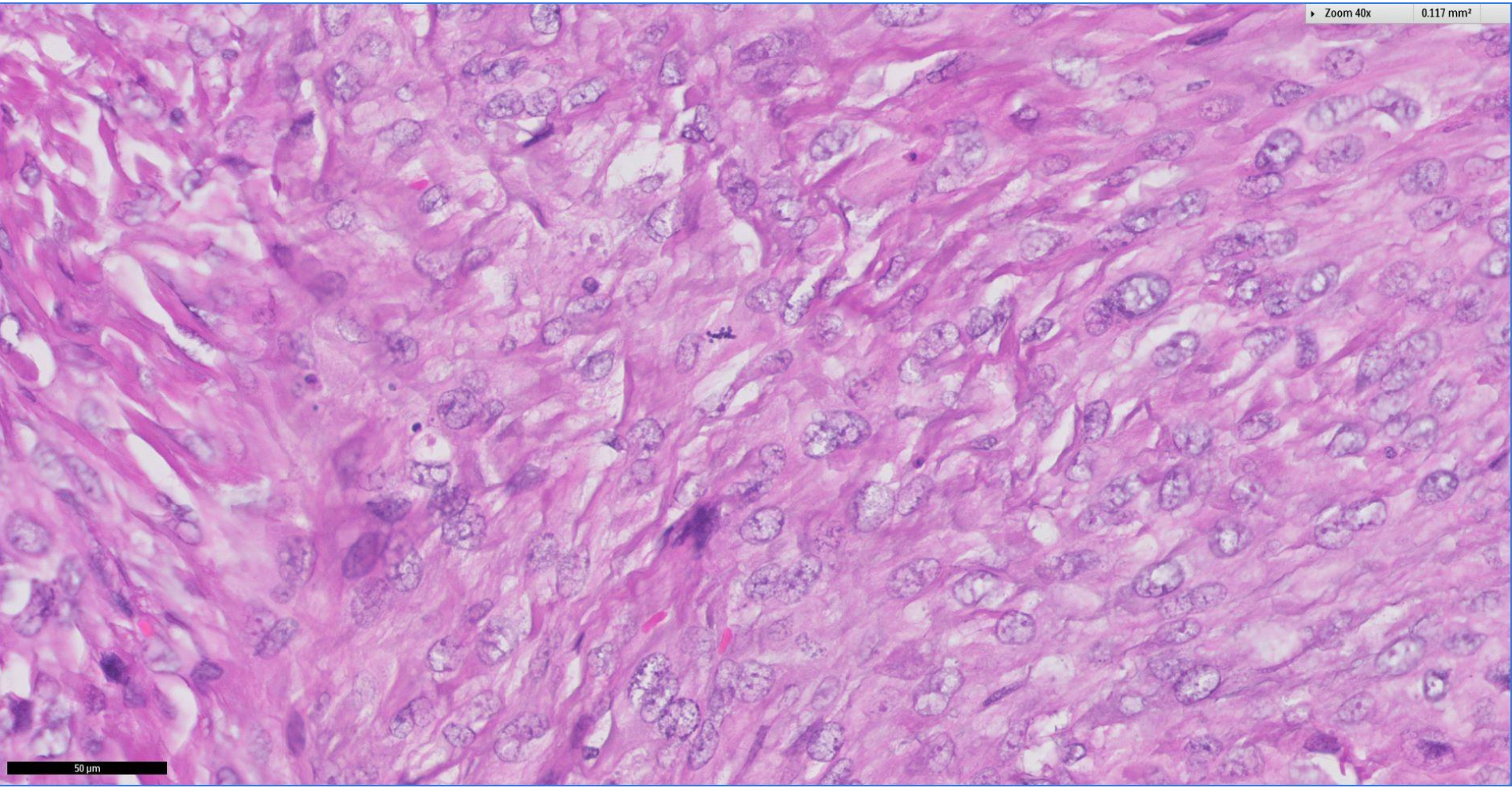


50 μm



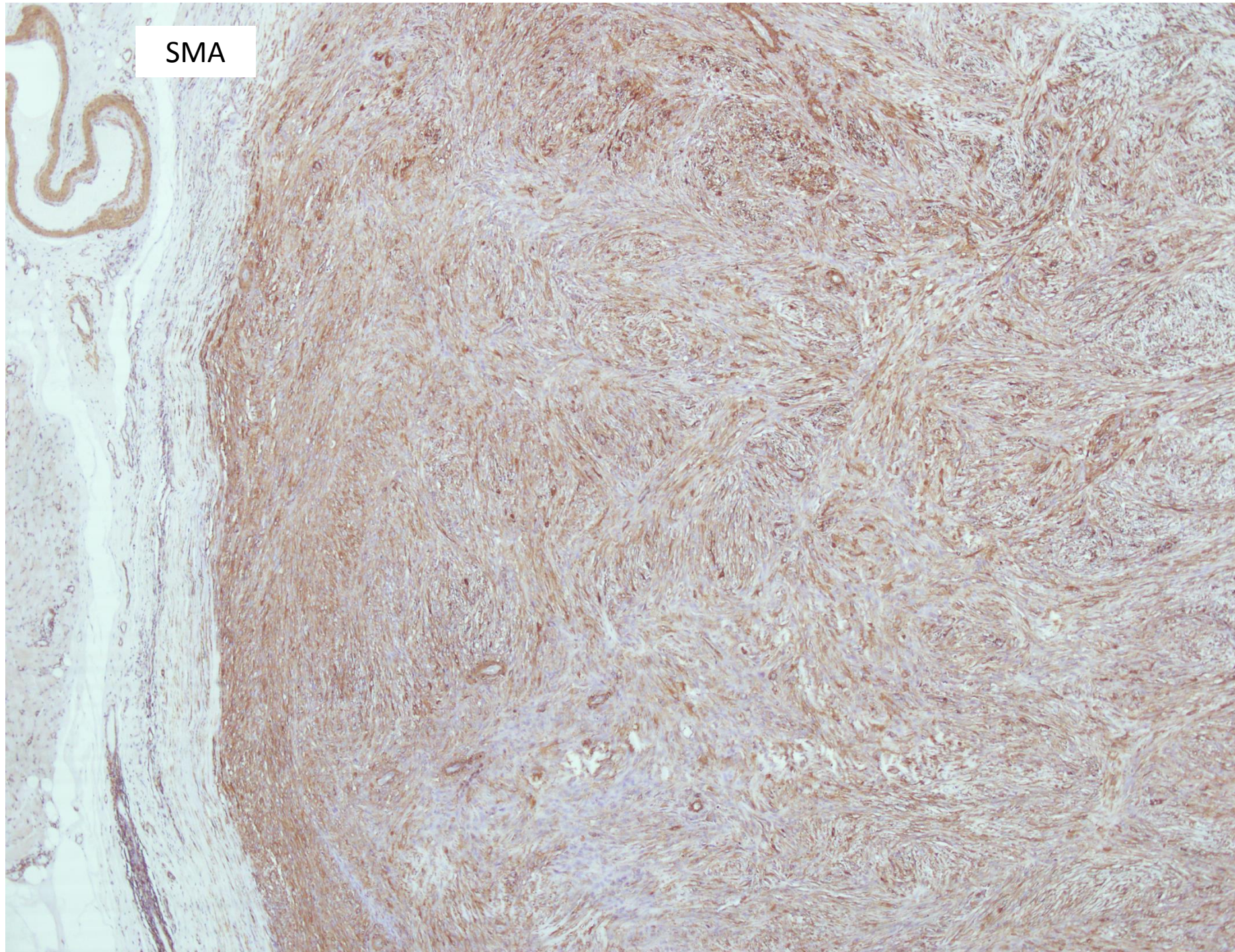
Zoom 40x

0.117 mm²

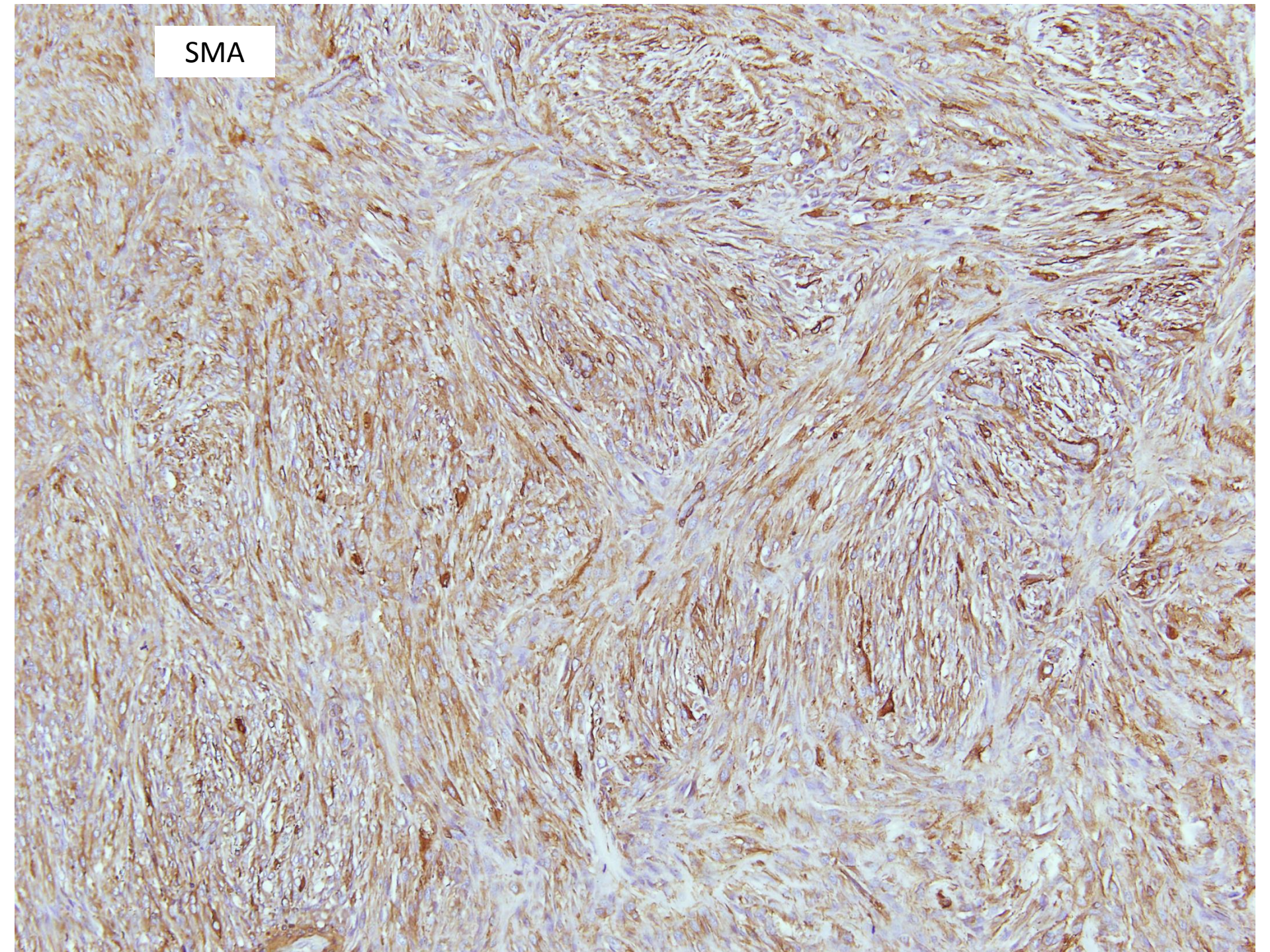


50 μm

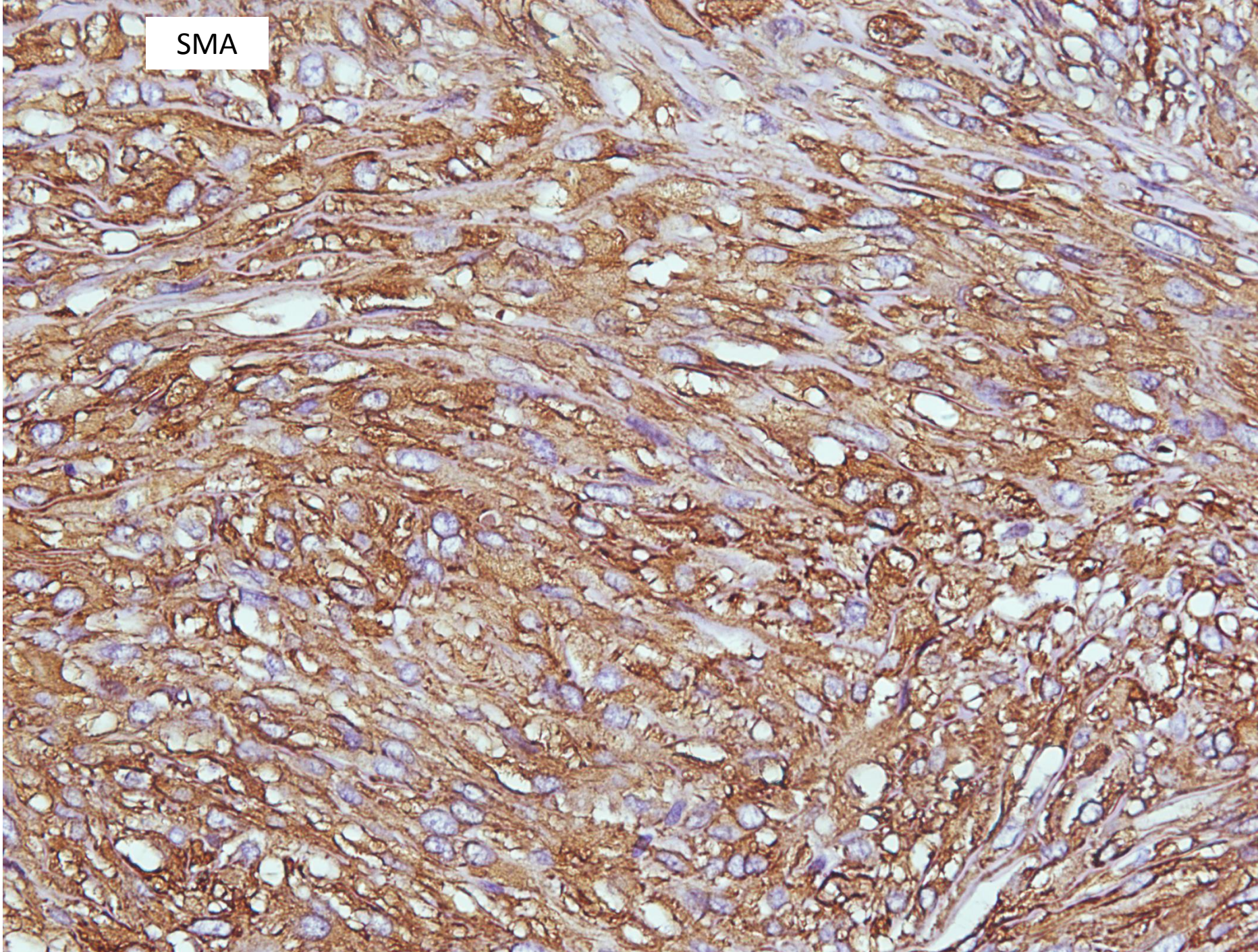
SMA



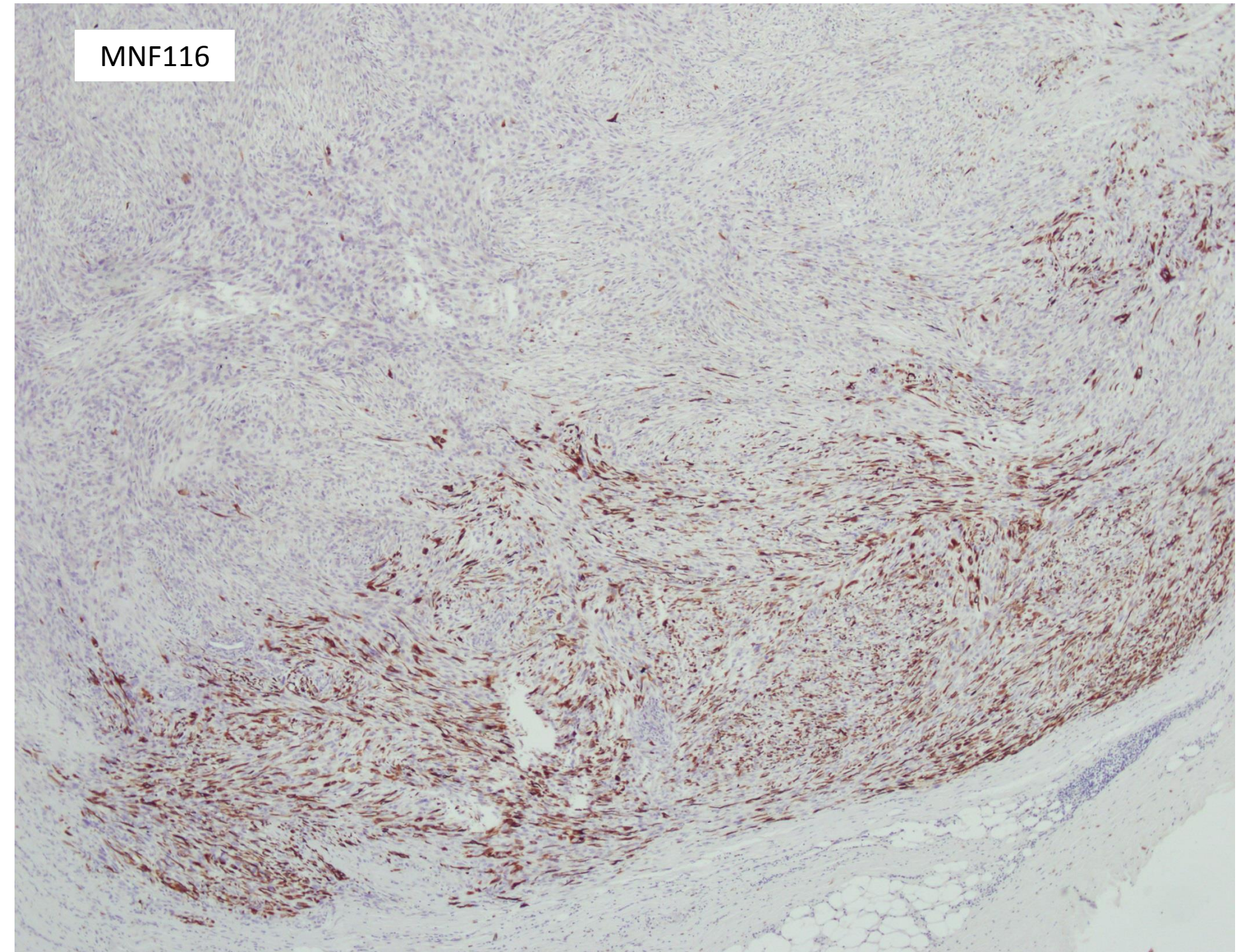
SMA



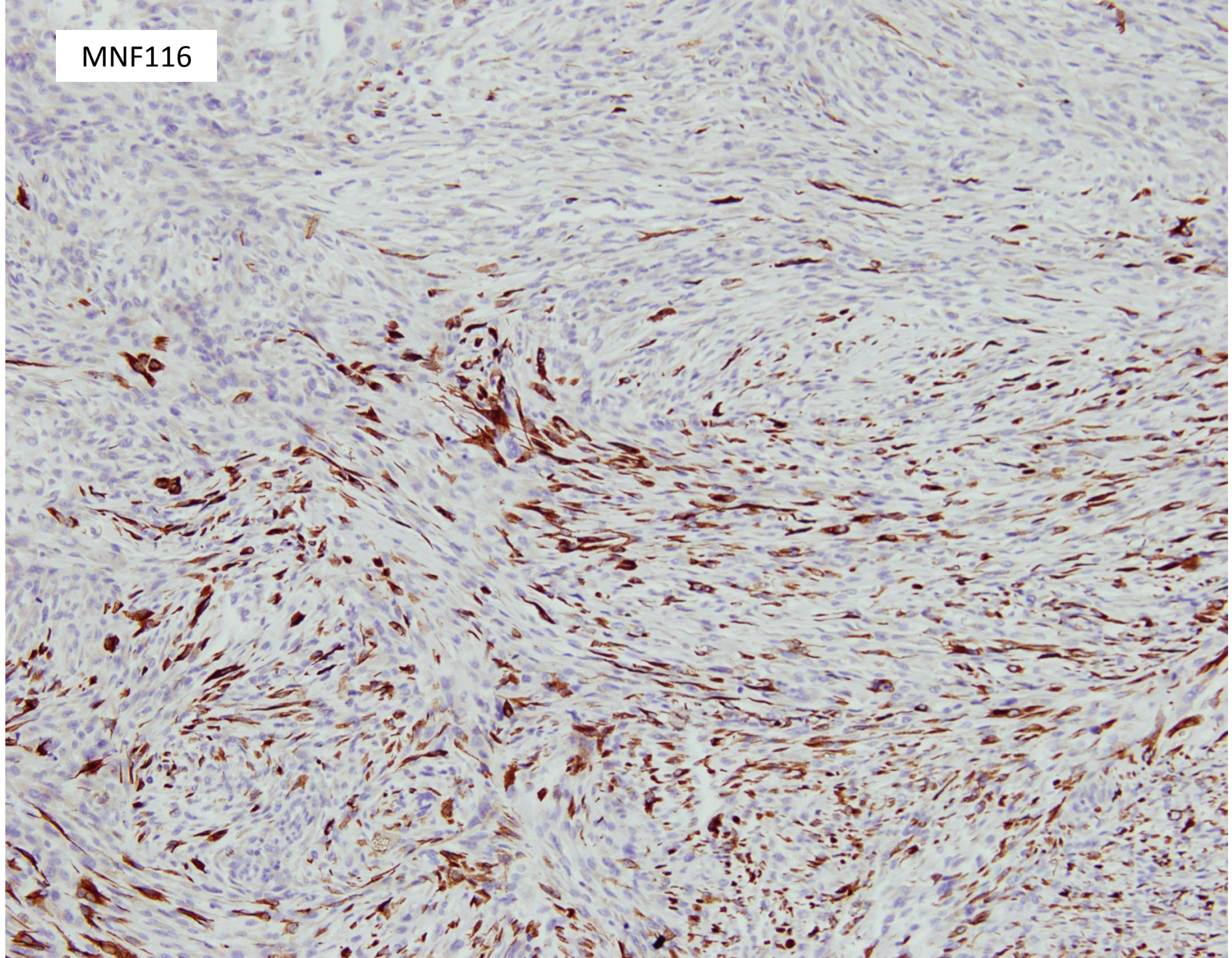
SMA



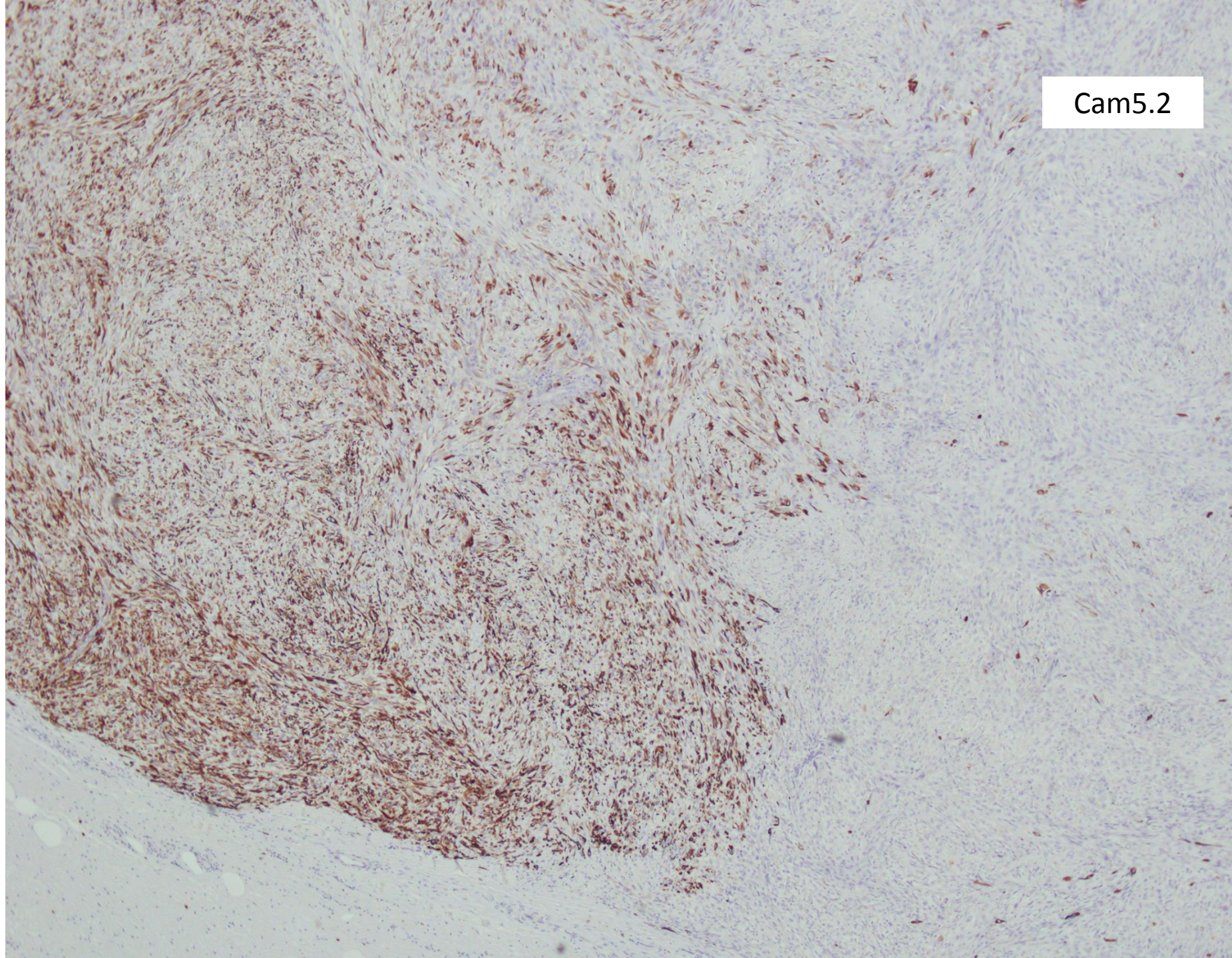
MNF116



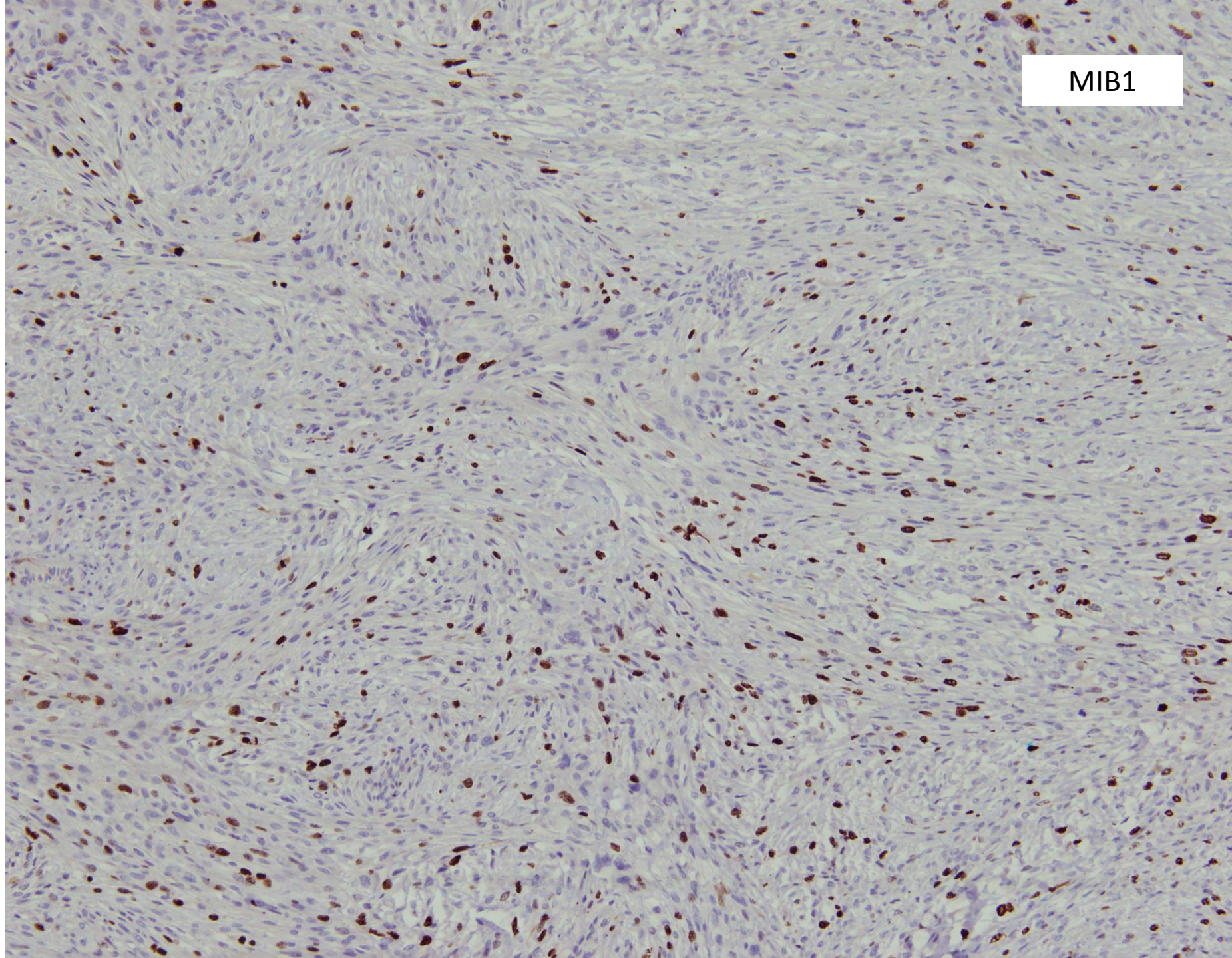
MNF116



Cam5.2



MIB1



Additional immunohistochemical results

- Desmin
 - p63
 - SMMHC
 - 34 β E12
 - CK5/6
 - CK7
 - CK14
 - CK19
 - CD31
 - CD34
- NEGATIVE*
- AE1/3 focal positive staining
 - S100 weak cytoplasmic blush



Left chest wall nodule:

Malignant spindle cell tumour



Differential diagnosis

- ***Metaplastic carcinoma (spindle cell)***

- *Points for:*

- Past history of invasive carcinoma with subsequent DCIS recurrence in the same breast.
- Cam5.2 and MNF116 immunohistochemical positivity.

- *Points against:*

- No metaplastic component to previous carcinoma.
- No immunoreactivity for p63 and other keratins including high molecular weight keratins.



Differential diagnosis

- ***Sarcoma***

- *Points for:*

- Purely spindle cell tumour.
 - Past irradiation to the breast – postirradiation sarcoma.

- *Points against:*

- Immunoreactivity for Cam5.2 and MNF116.



Chronological sequence of events in both breasts

Right breast

2007 ~ DCIS high nuclear grade



***2007 ~ Wide excision,
radiation treatment***



2011 ~ spindle cell tumour, diagnosed
as atypical fibroxanthoma



2011 ~ Wide excision



2013 ~ Bilateral mastectomy

Left breast

2002 ~ invasive ductal
carcinoma with high grade
DCIS



***2002 ~ Wide excision, axillary clearance,
radiation treatment***



2013 ~ DCIS high nuclear grade



2013 ~ Bilateral mastectomy



2014 ~ Chest wall nodule (case 21)



2014 ~ Wide excision

Sarcoma of the breast

- Heterogeneous group of malignant tumours that arise from the mammary stroma.
- Excludes lymphomas and malignant phyllodes tumours.
- Believed to develop from the interlobular stroma.
- Diagnosis of sarcoma is made only after excluding metaplastic carcinoma and malignant phyllodes tumour.
- Extensive sampling for in situ or invasive carcinoma to rule out metaplastic carcinoma is needed.



Sarcoma of the breast

- Irradiation increases the risk of developing angiosarcoma, pleomorphic undifferentiated carcinoma and other rare sarcomas within the radiation field.
- Risk of postirradiation sarcoma increases significantly 3 years after carcinoma diagnosis, peaking at 10 years and declining subsequently.



Sarcoma of the breast

- Complete excision is key to the treatment of mammary sarcoma.
- Prognostic factors of radiation induced sarcoma include tumour size and grade.



Metaplastic spindle cell carcinoma

- Most or all of the tumour has a spindle cell growth pattern.
- Distinction from primary sarcoma is difficult.
- Tumour border can be pushing or infiltrative.
- Focal squamous differentiation is often seen.
- Usually entraps residual breast ducts and lobules.
- Immunohistochemistry shows keratin positivity, with frequent p63 reactivity.
- Often triple negative.



 Breast
Pathology
Course 2014

