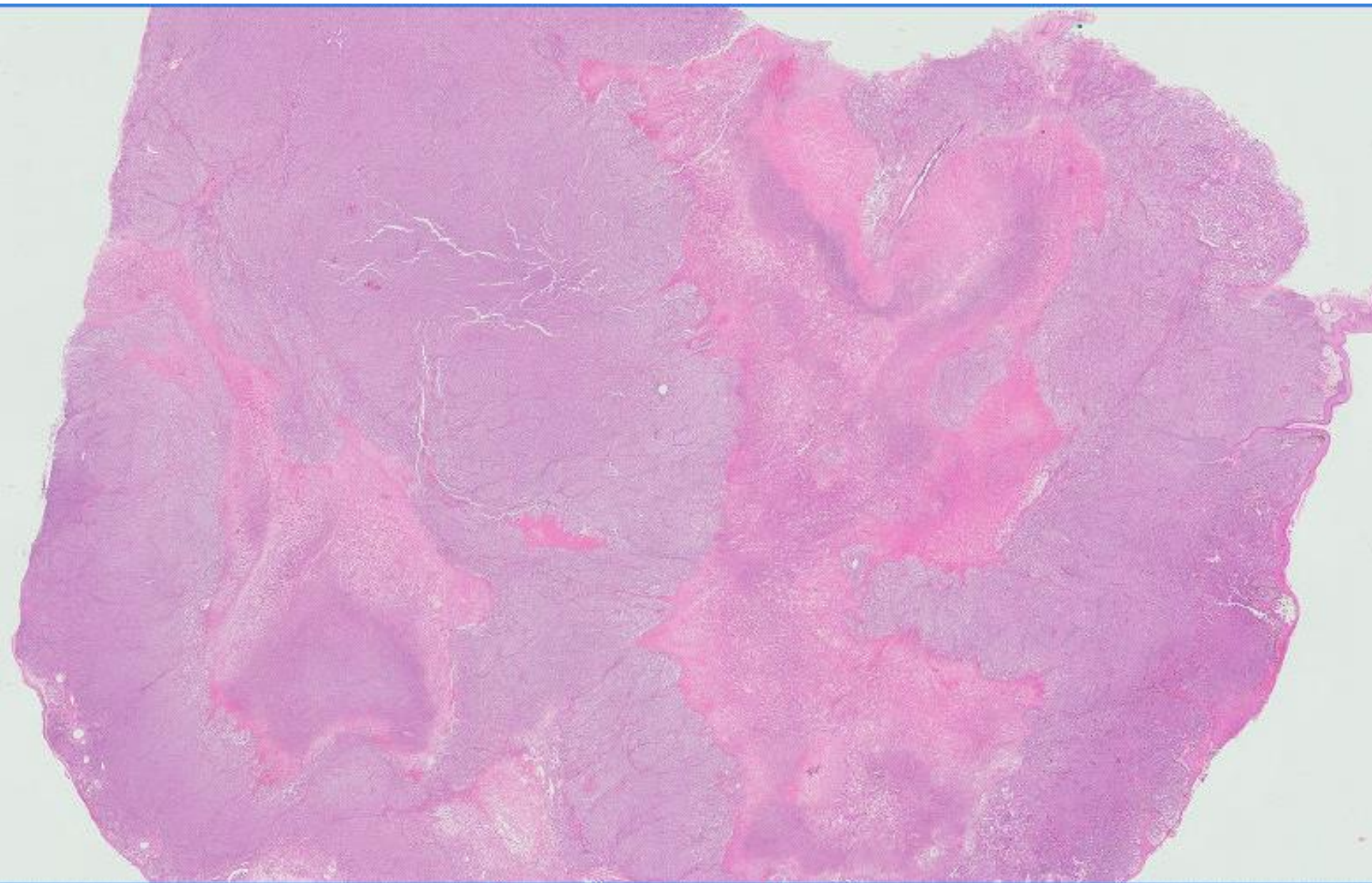
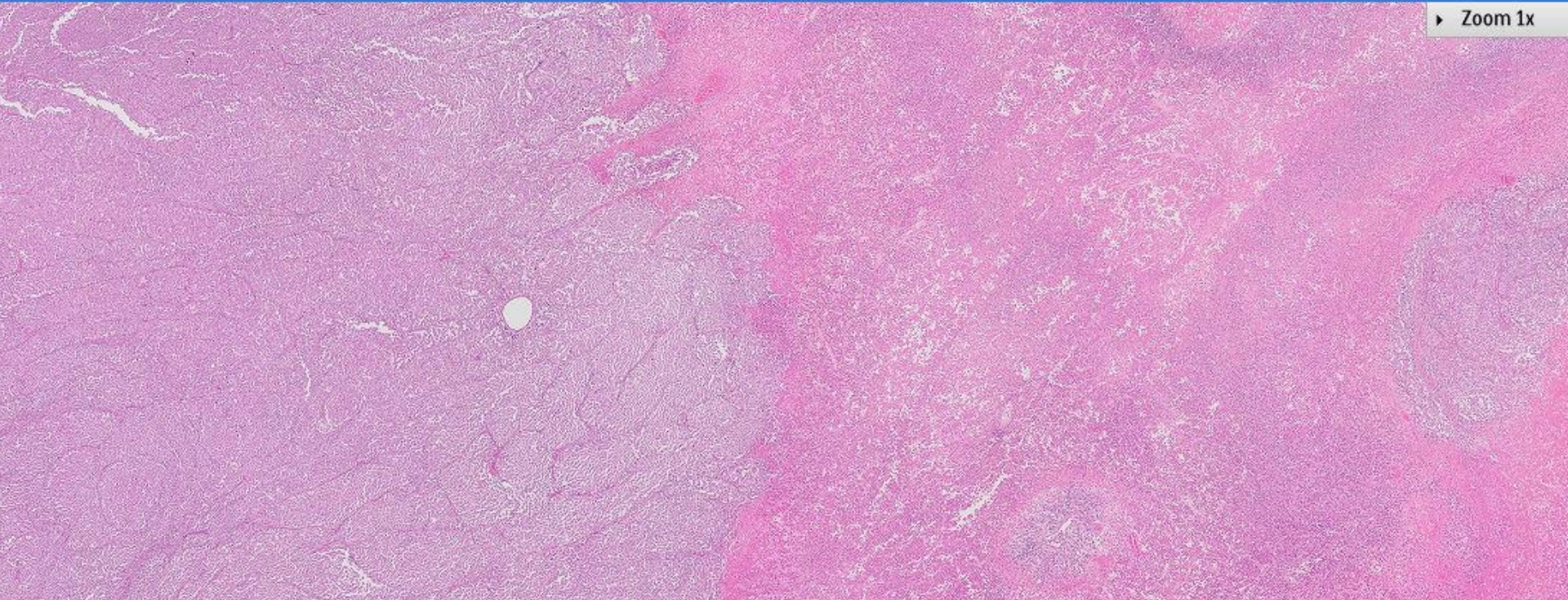


## Case 4

43 year old Chinese woman presented with a tumour in the right nipple. Wide excision and axillary clearance were performed.

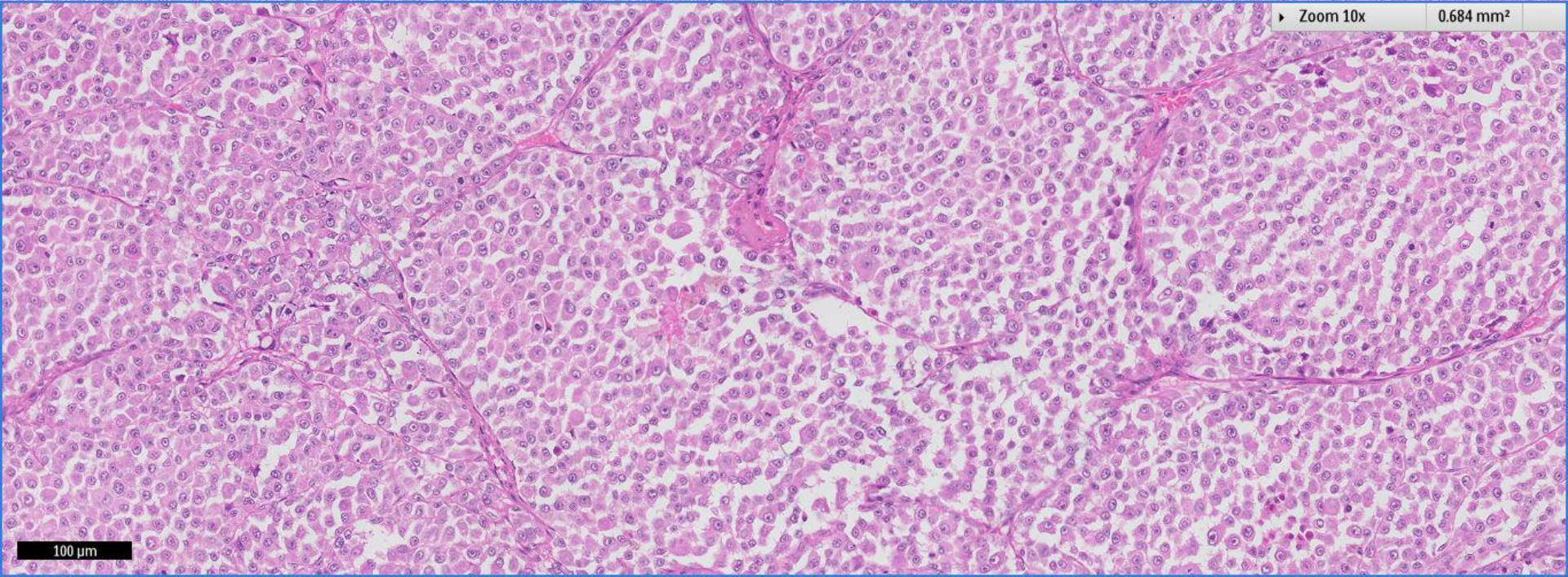


▶ Zoom 1x

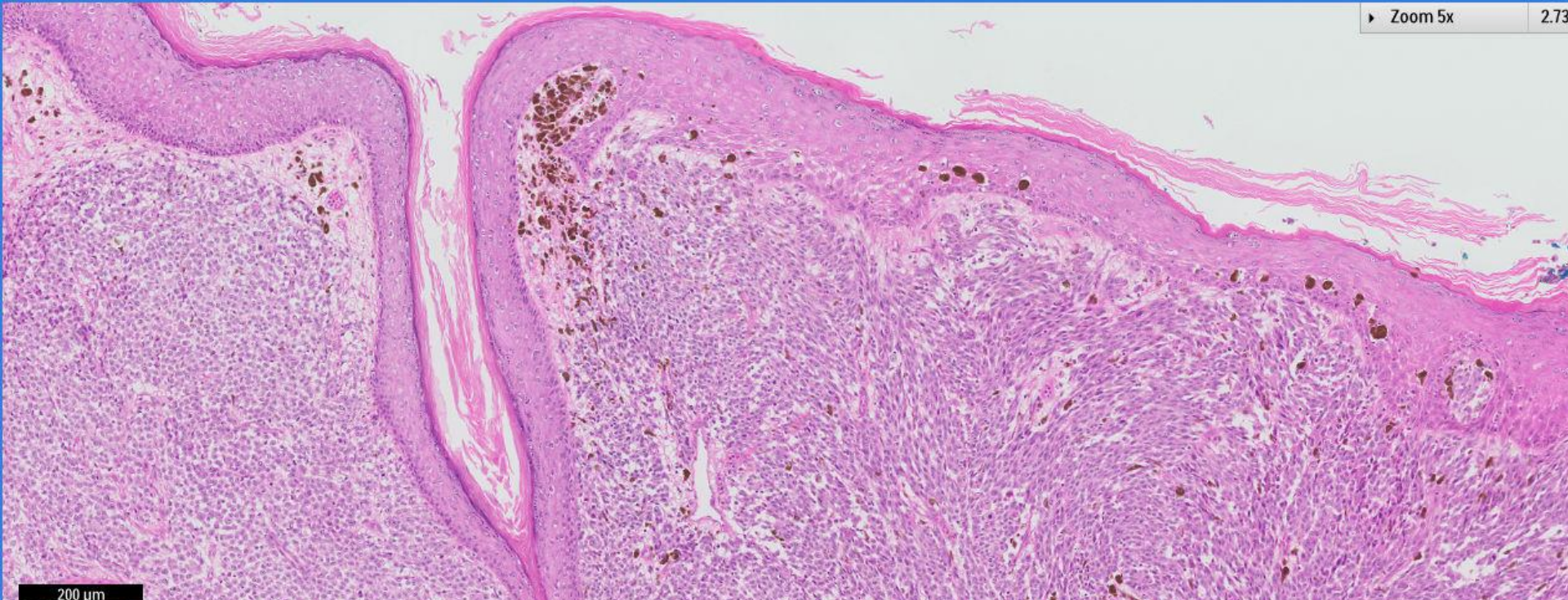


▶ Zoom 10x

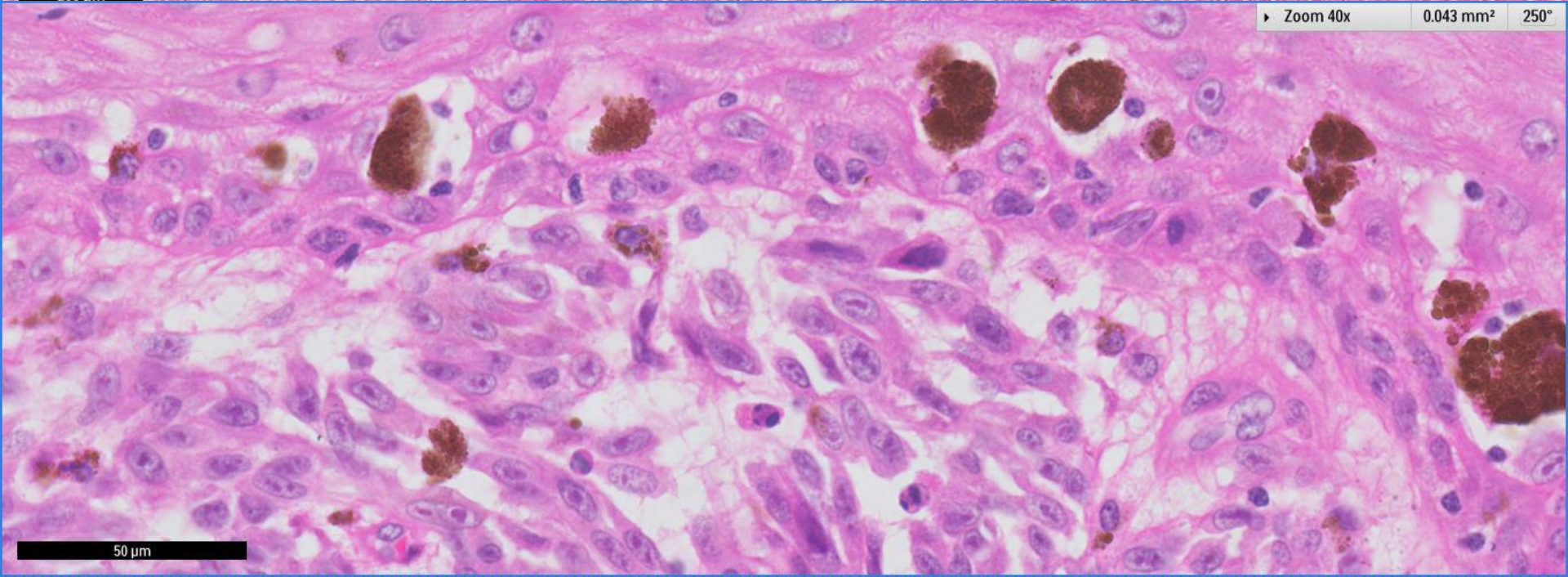
0.684 mm<sup>2</sup>



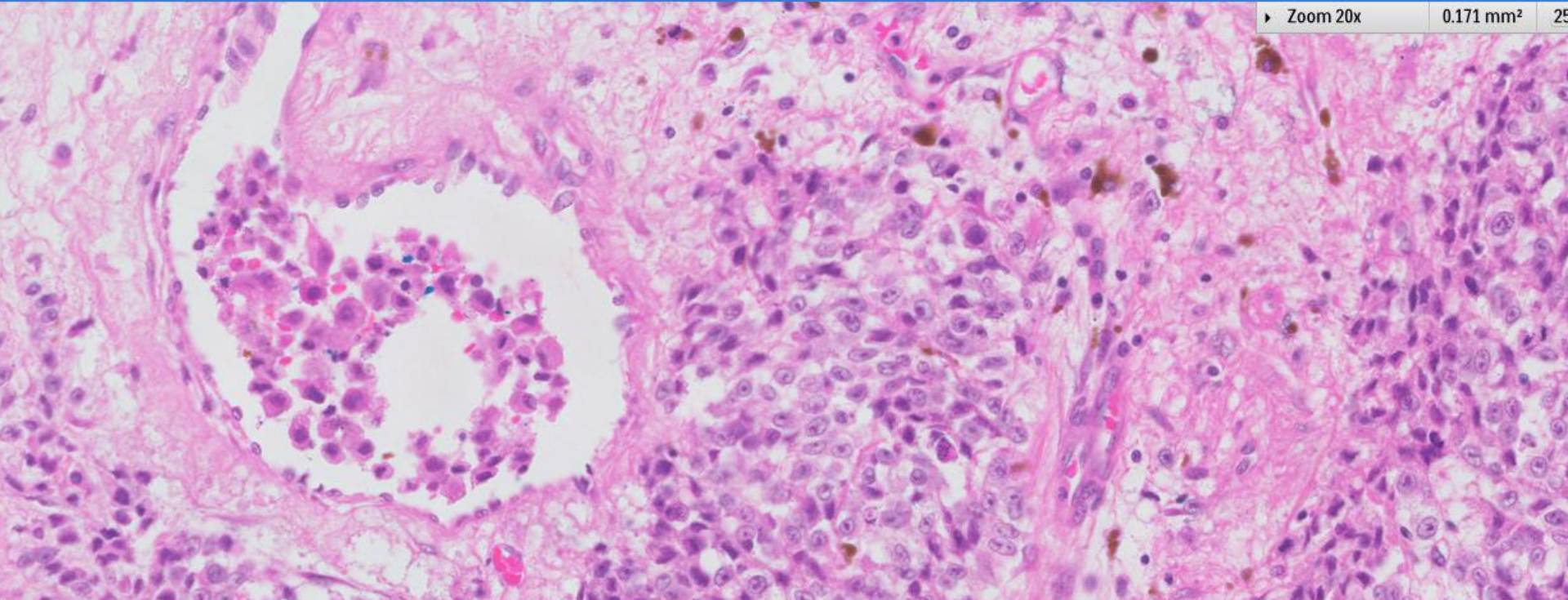
100 μm



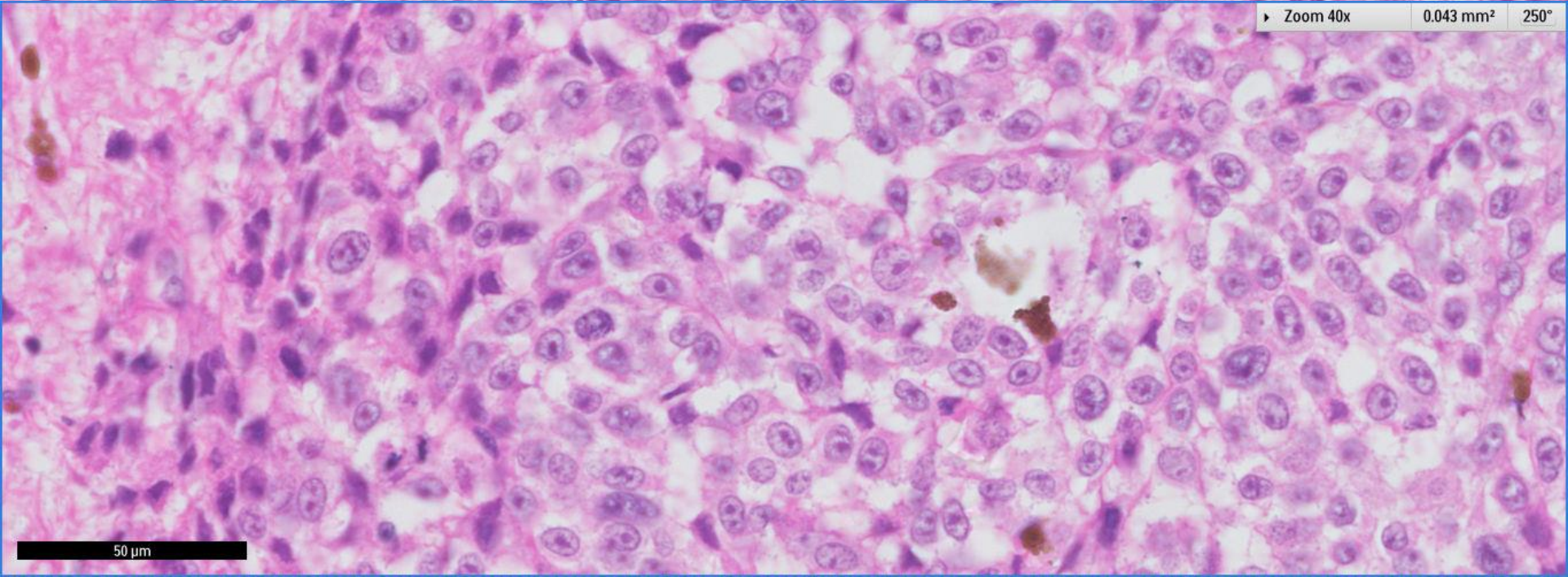
200  $\mu$ m



50  $\mu$ m



Zoom 20x 0.171 mm<sup>2</sup> 25°

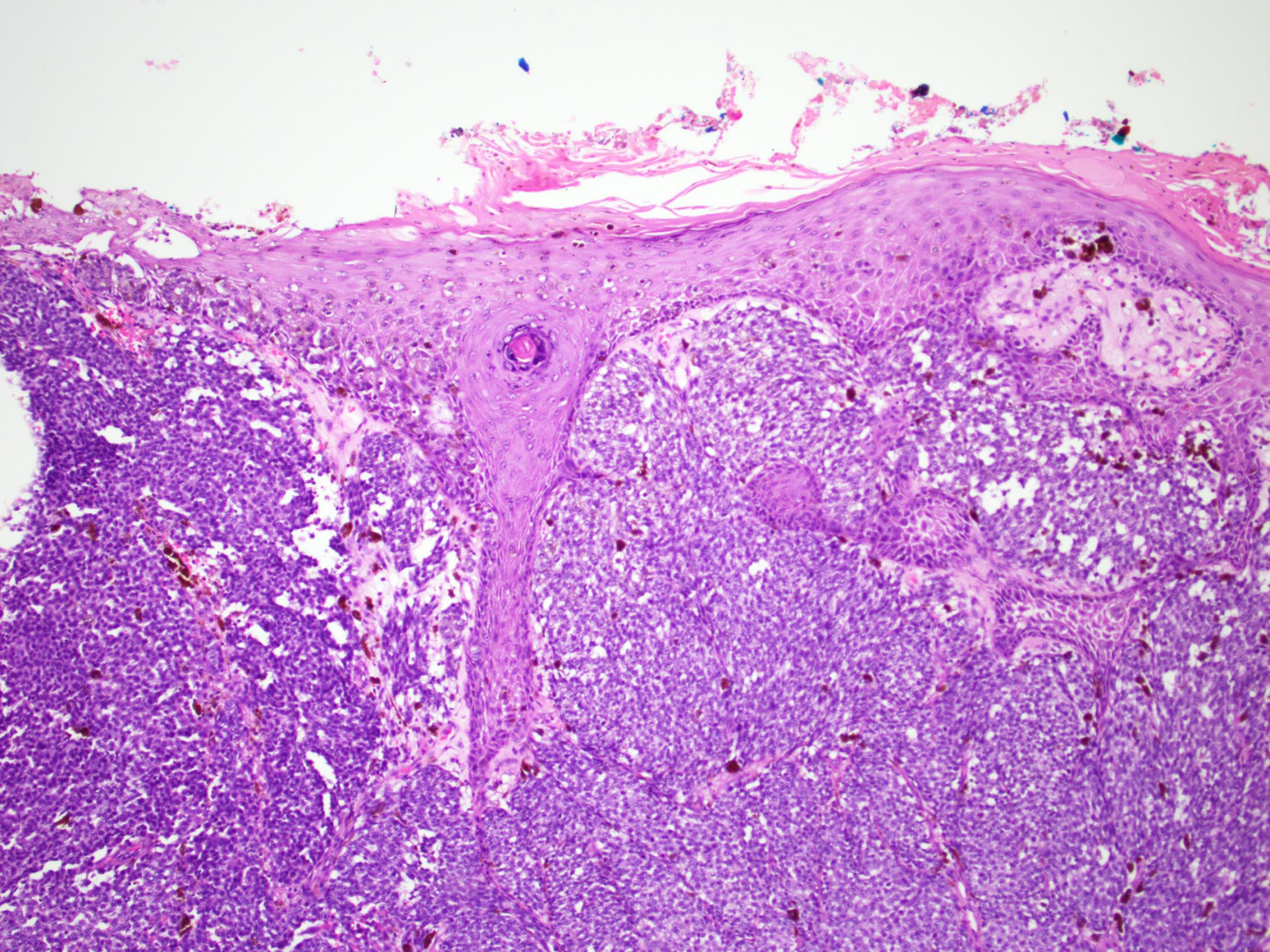


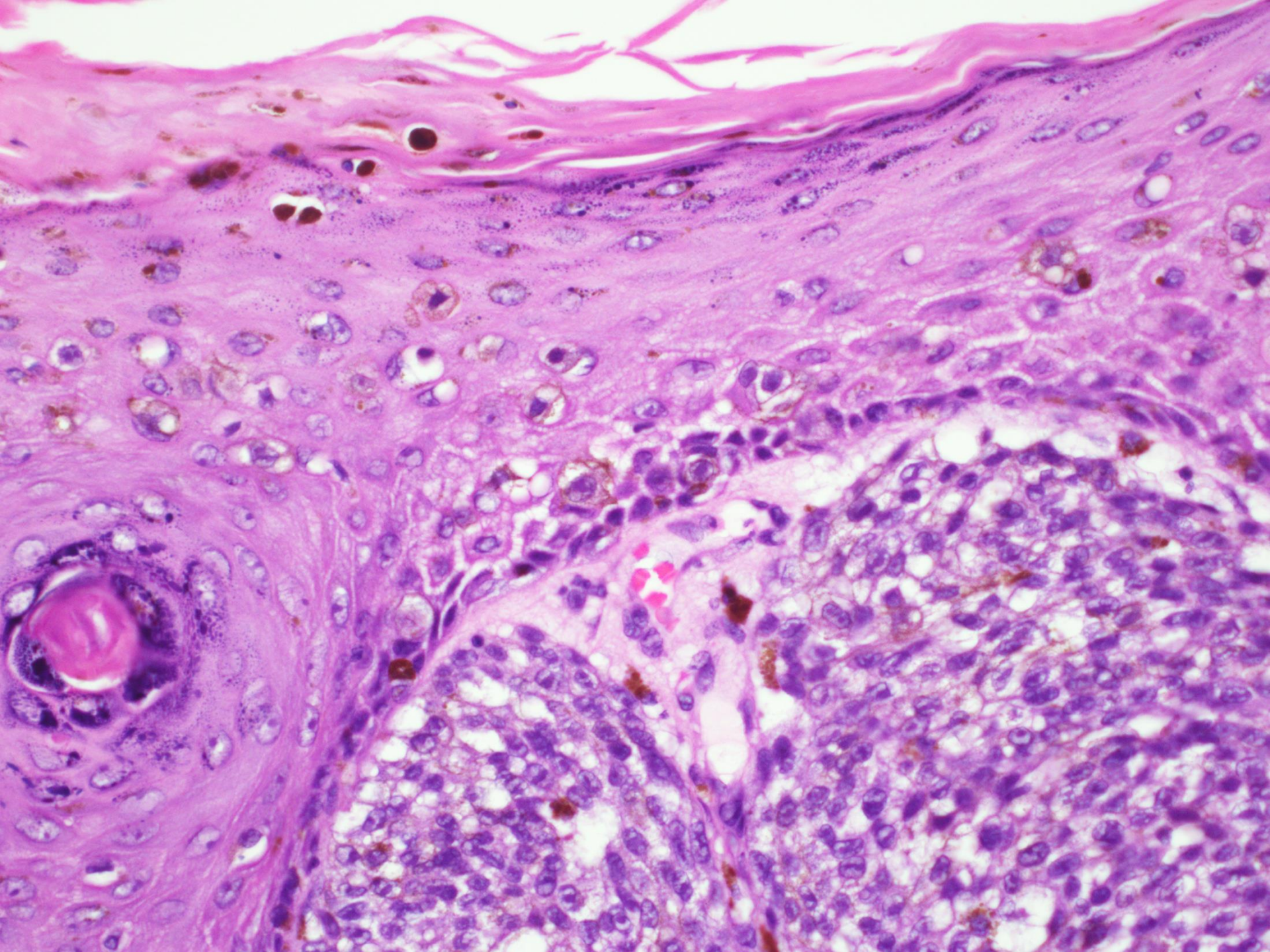
Zoom 40x 0.043 mm<sup>2</sup> 250°

50 μm

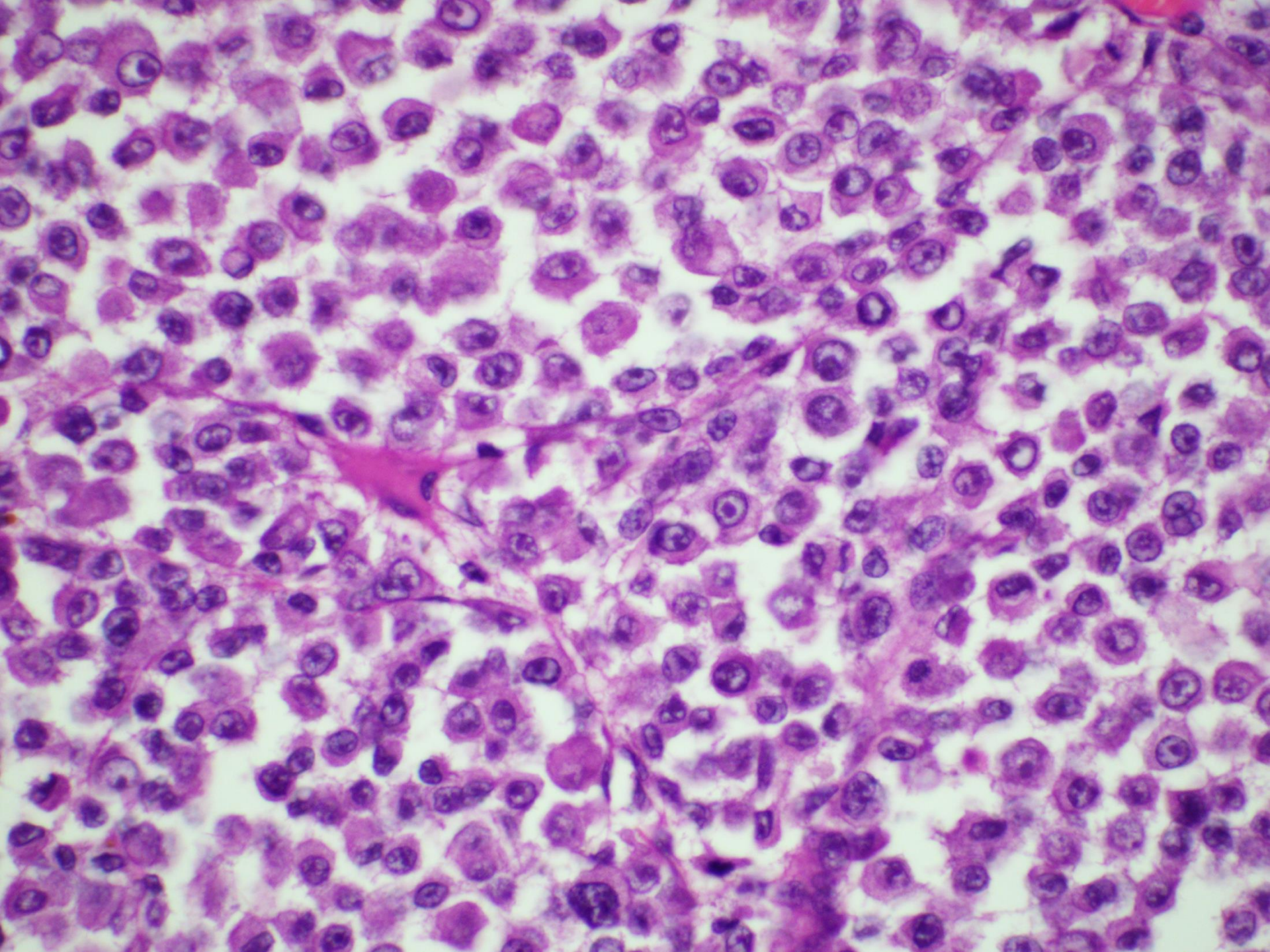
*Fossil marble*



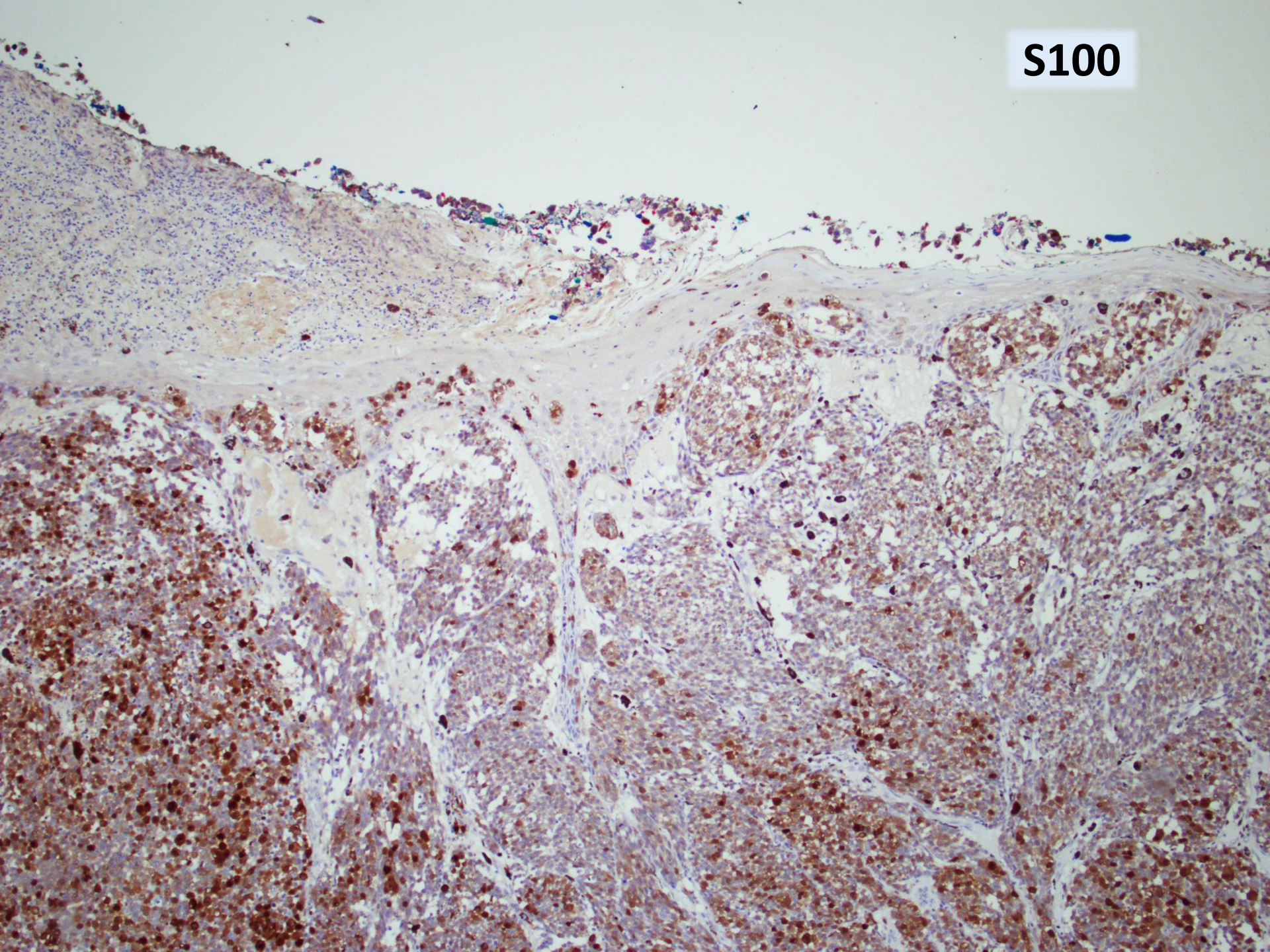




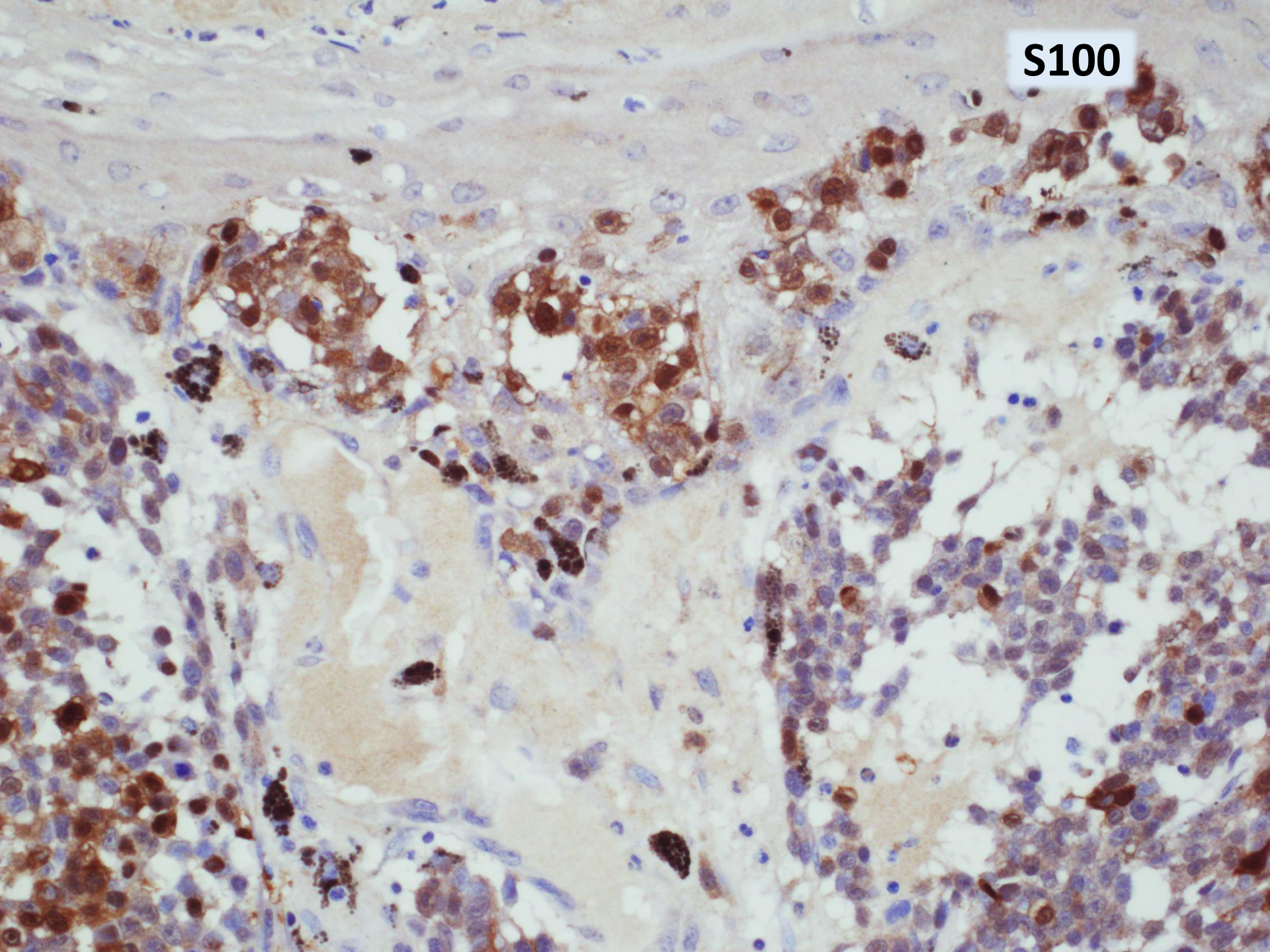




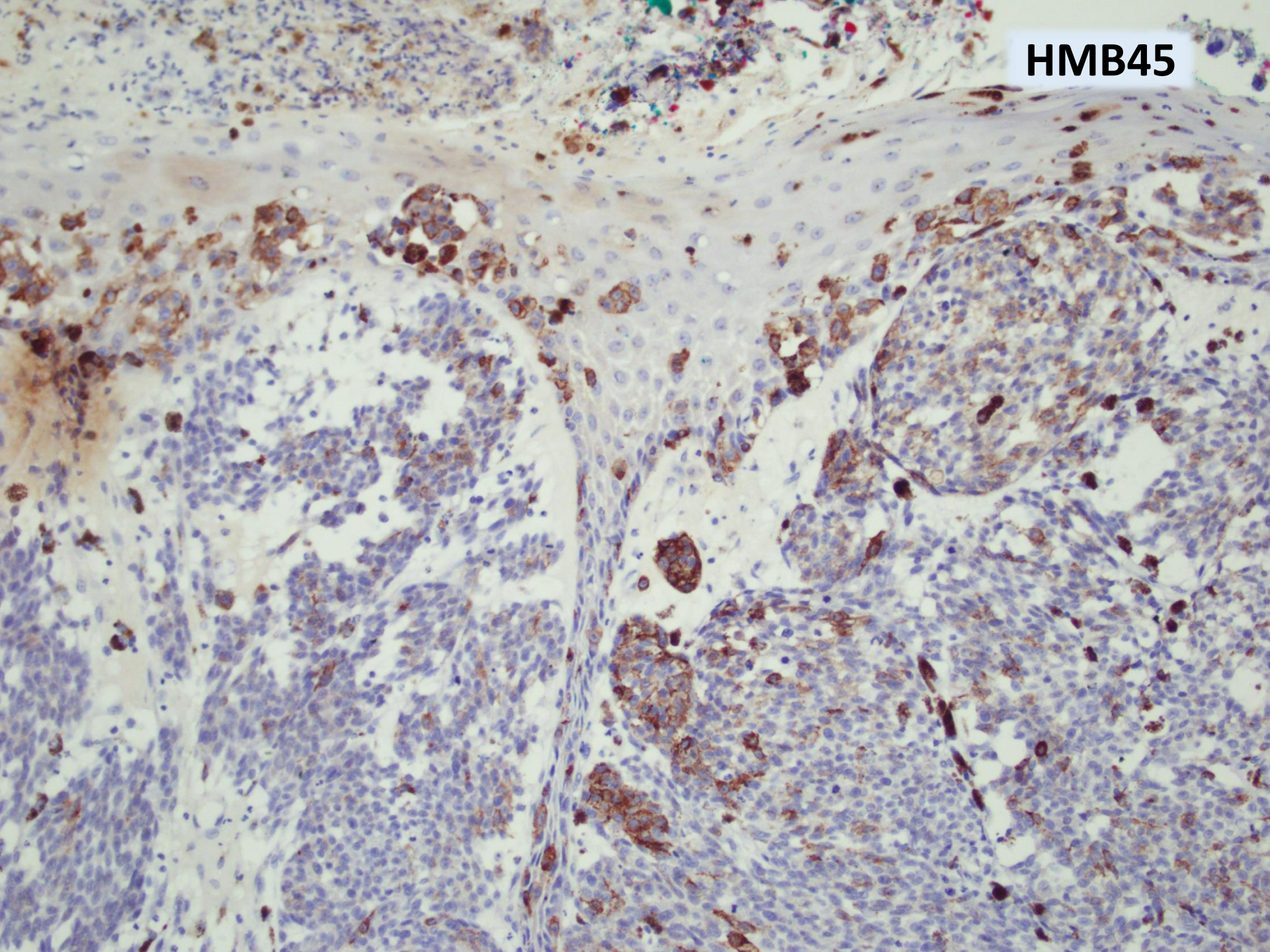
**S100**



S100



HMB45



# Diagnosis

Right nipple, wide excision:

***Nodular melanoma, 6.5cm with skin ulceration.  
Invading subcutaneous adipose***

Right axillary clearance:

***Matted lymph nodes, positive for metastatic  
melanoma***



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# Melanoma of the breast

- Metastasis from melanoma at another site.
- Primary cutaneous melanoma of breast skin.
- Primary non-cutaneous melanoma of the breast.

# Melanoma of breast skin

- Upper outer and inner breast quadrants are more frequent locations.
- Sun-exposed skin.
- Origin in the nipple-areolar complex is uncommon.
- Superficial spreading, nodular, ulcerated melanomas can occur.
- Need to rule out metastases before concluding a primary origin in the breast skin.

# Melanoma of breast skin ~

## *Differential diagnosis*

- Pigmentation of conventional breast carcinoma involving the skin.
  - Melanin in melanocytes and melanophages.
  - Immunoreactivity for S100 and HMB45 confined to melanocytes.
  - Melanin can be released by melanocytes and transferred to carcinoma cells.



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# Melanoma of breast parenchyma

- Need to primarily exclude metastasis from extramammary malignant melanoma.
- Rule out melanin producing breast carcinoma ~ epithelial markers are positive in breast carcinoma but not in melanoma.
- Breast carcinoma with lipofuscin pigment within tumour cells can mimic melanoma.

# Primary non-cutaneous melanoma of breast

- Rare.
- Proposed theories ~
  - Undiscovered primary.
  - Primary that has completely regressed.
  - True primary arising from ectopic melanocytes.

*Breast J 2016; Aug 4, epub*

 Breast  
Pathology  
Course 2016



*Pathology Building 1958-2013, by Ong Kim Seng*