

Doplnkový  
text

## ***8. Východoslovenský BIOPTICKÝ SEMINÁR***

27. a 28. apríla 2018, Košice  
Golden Royal Boutique Hotel

Prípád SD-IAP 675  
Peter Bohuš, Medicyt Košice



***70-ročný pacient***

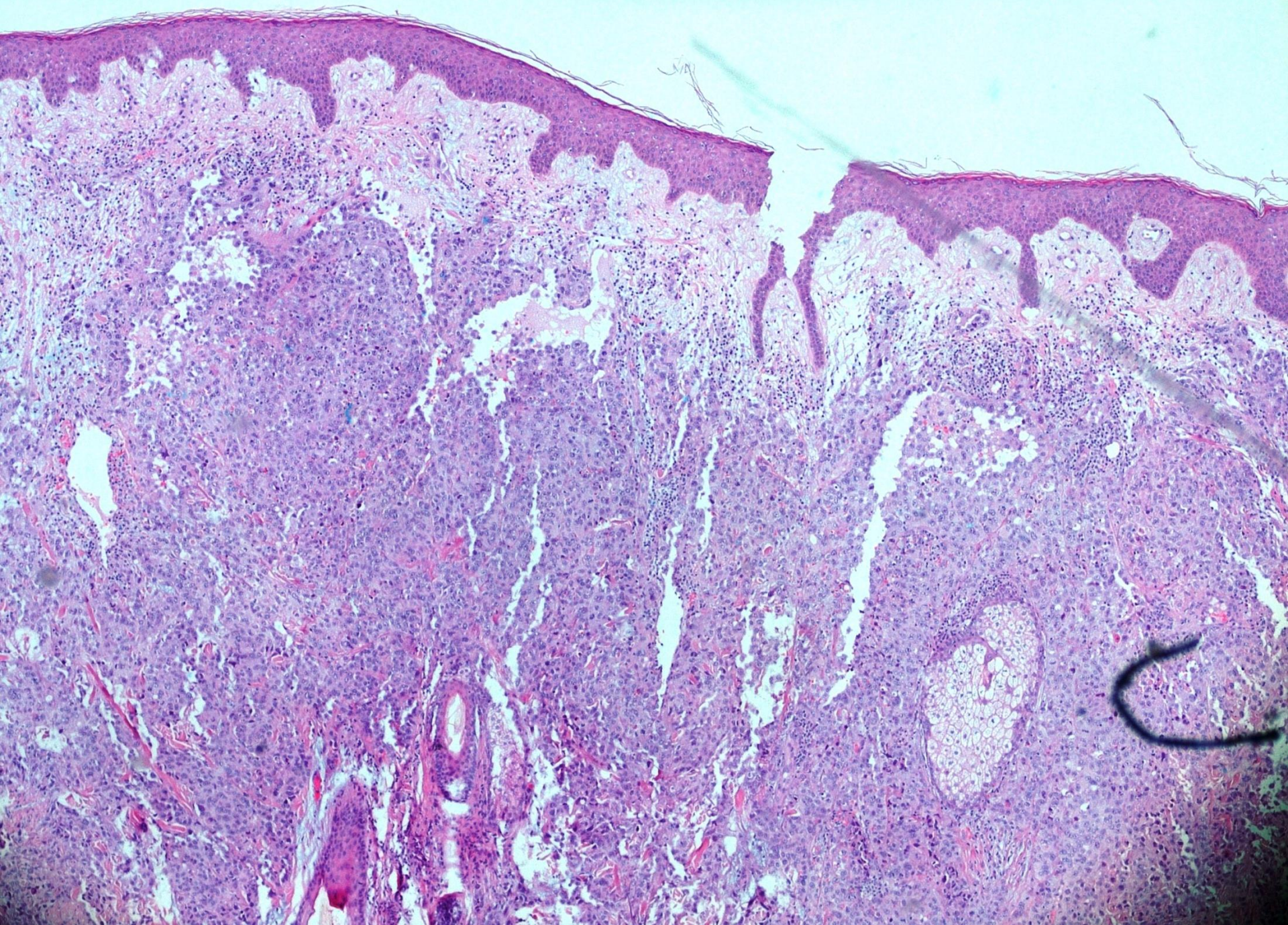
***Klinická diagnóza:***

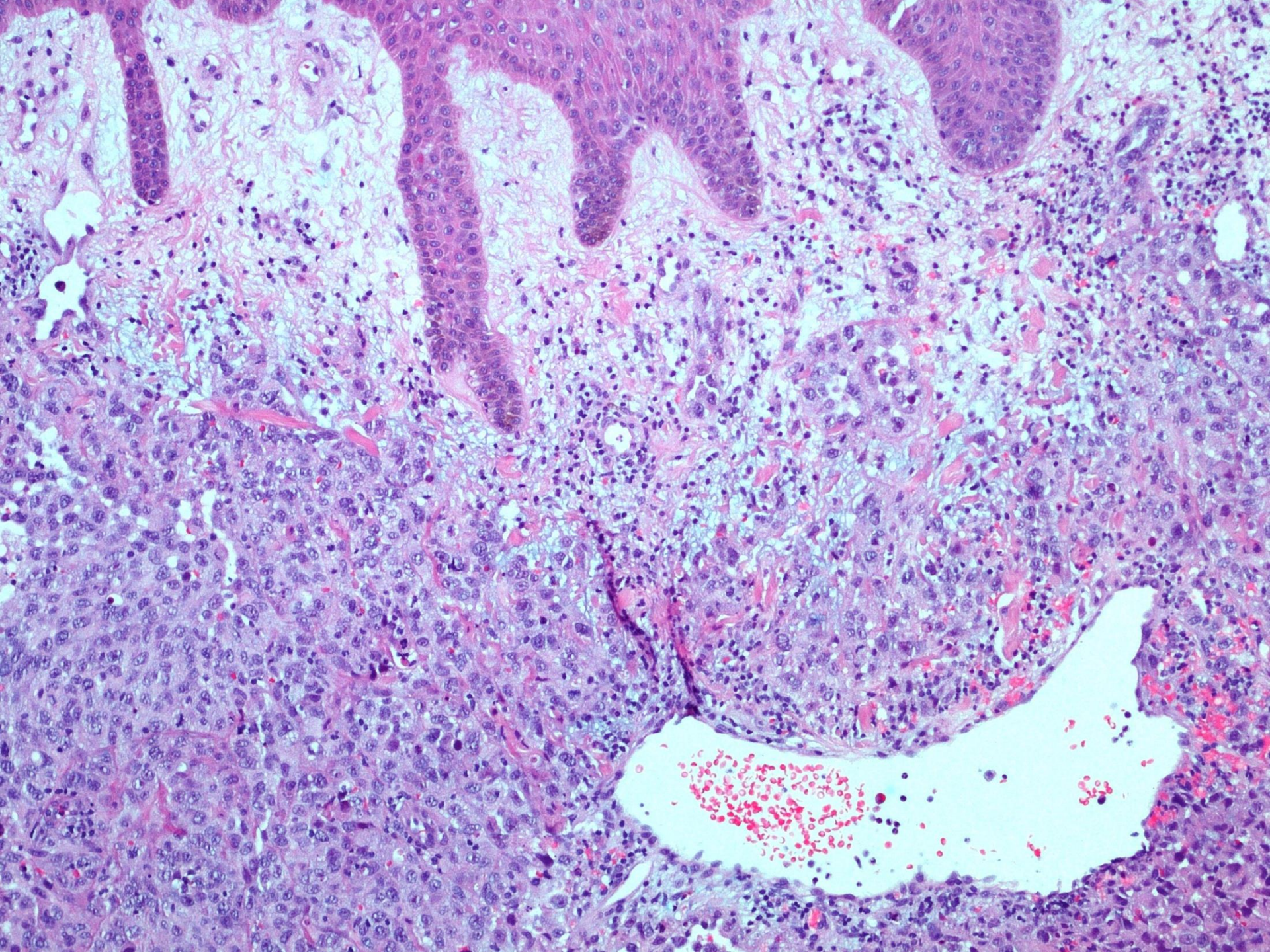
***Exulcerovaný tumor pravej strany  
vlasatej časti hlavy.***

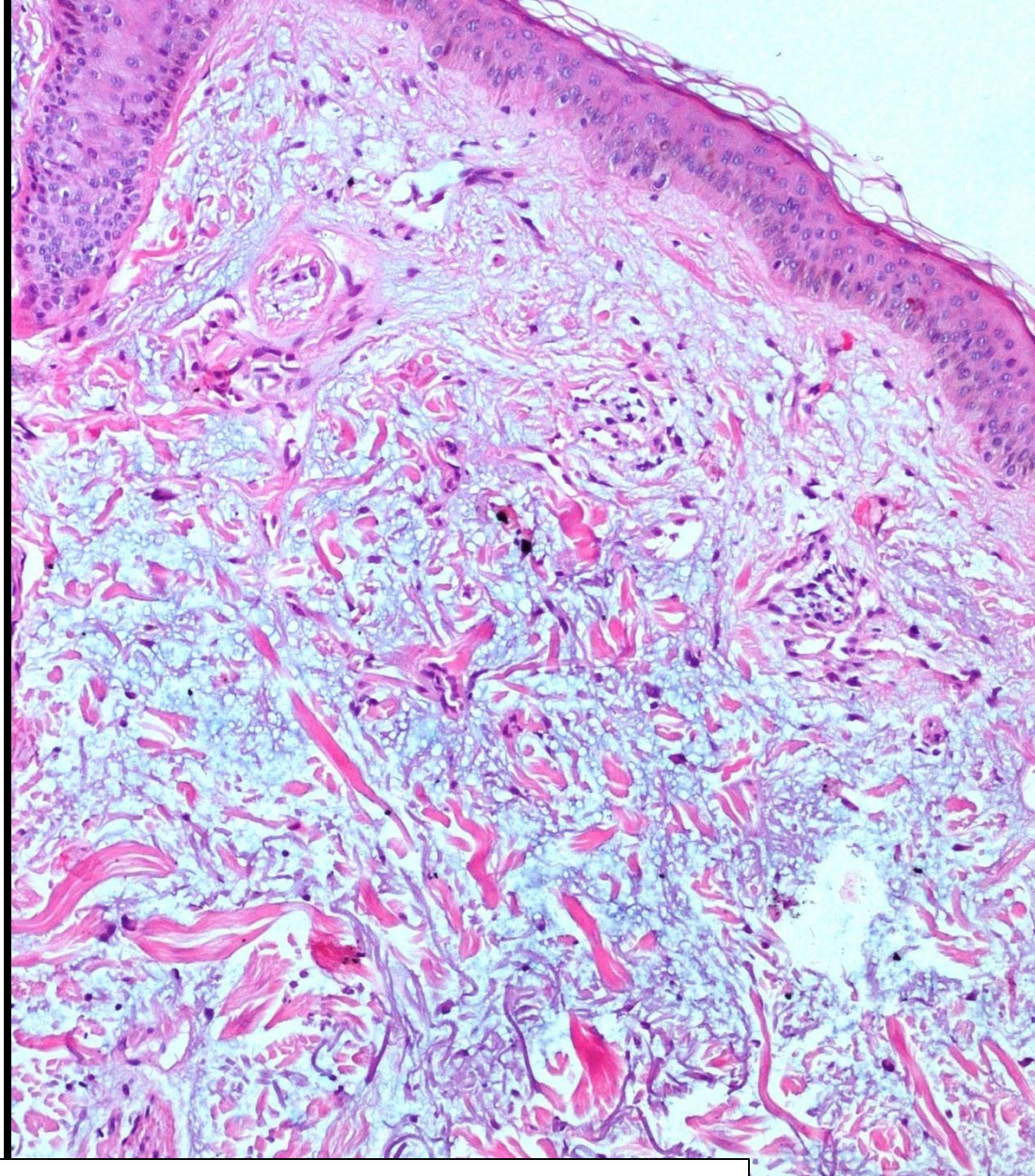
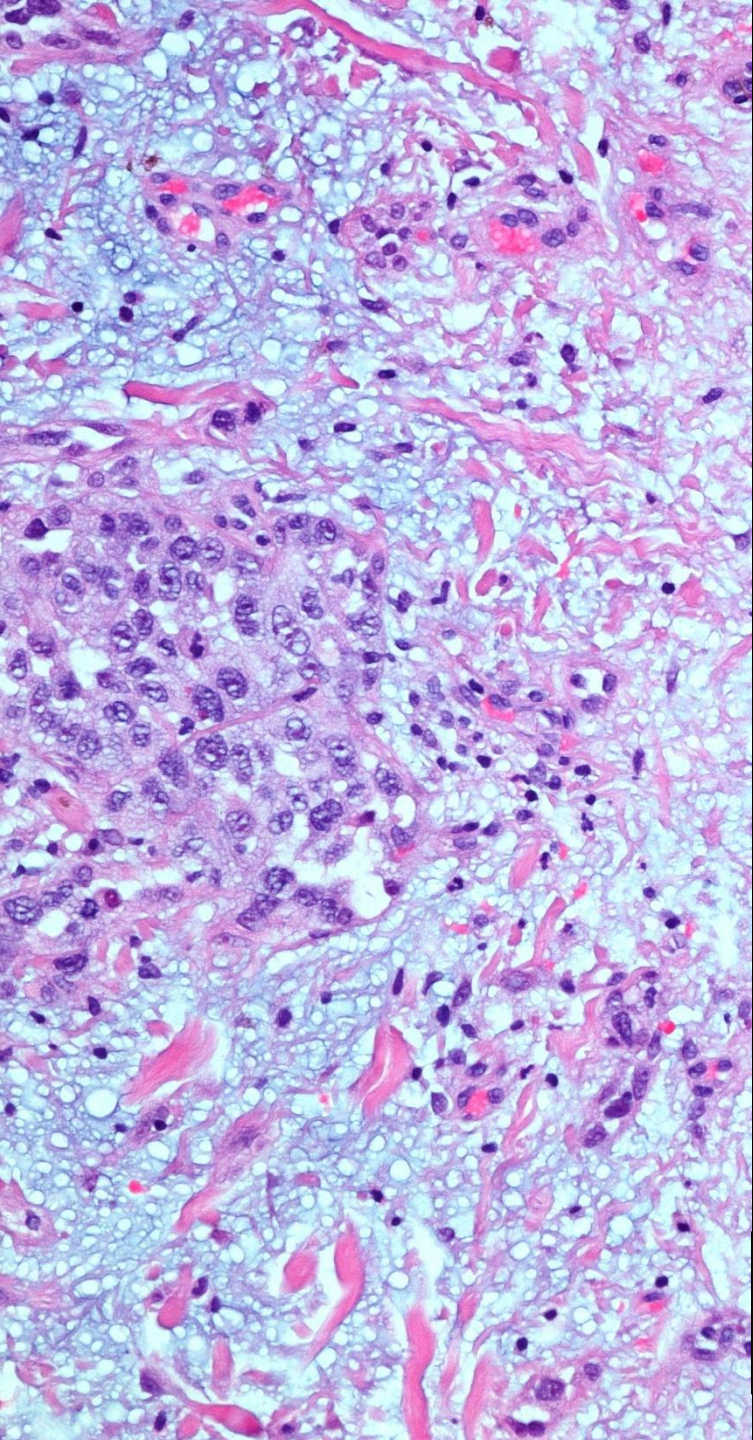
*Fotografia poskytnutá s láskavosťou dermatológa – MUDr.  
Rugoóvá*

# KLINIKA

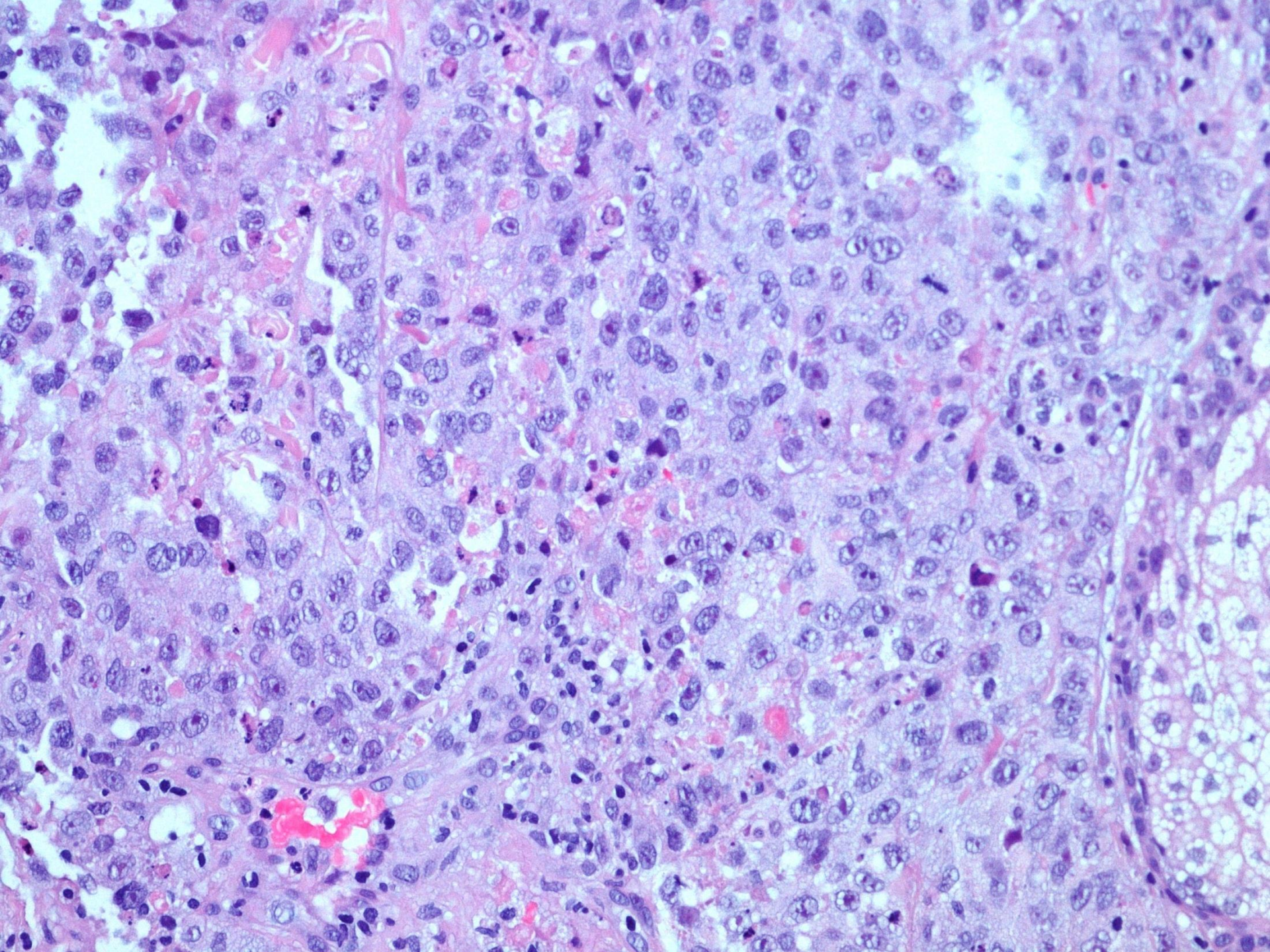
- Imobilný pacient
- Anamnesticky:
- Jún 2017 „po páde hematóm“
- Evidovaný a liečený ako posttraumatický infikovaný ulkus, poúrazový defekt
- Po ½ roku (december 2017 – poskytnutá fotografia) ho vidí dermatológ: zvažuje agresívny malígný novotvar , nevylučuje možnú trichofytia profunda, mykologické vyšetrenie negatívne.

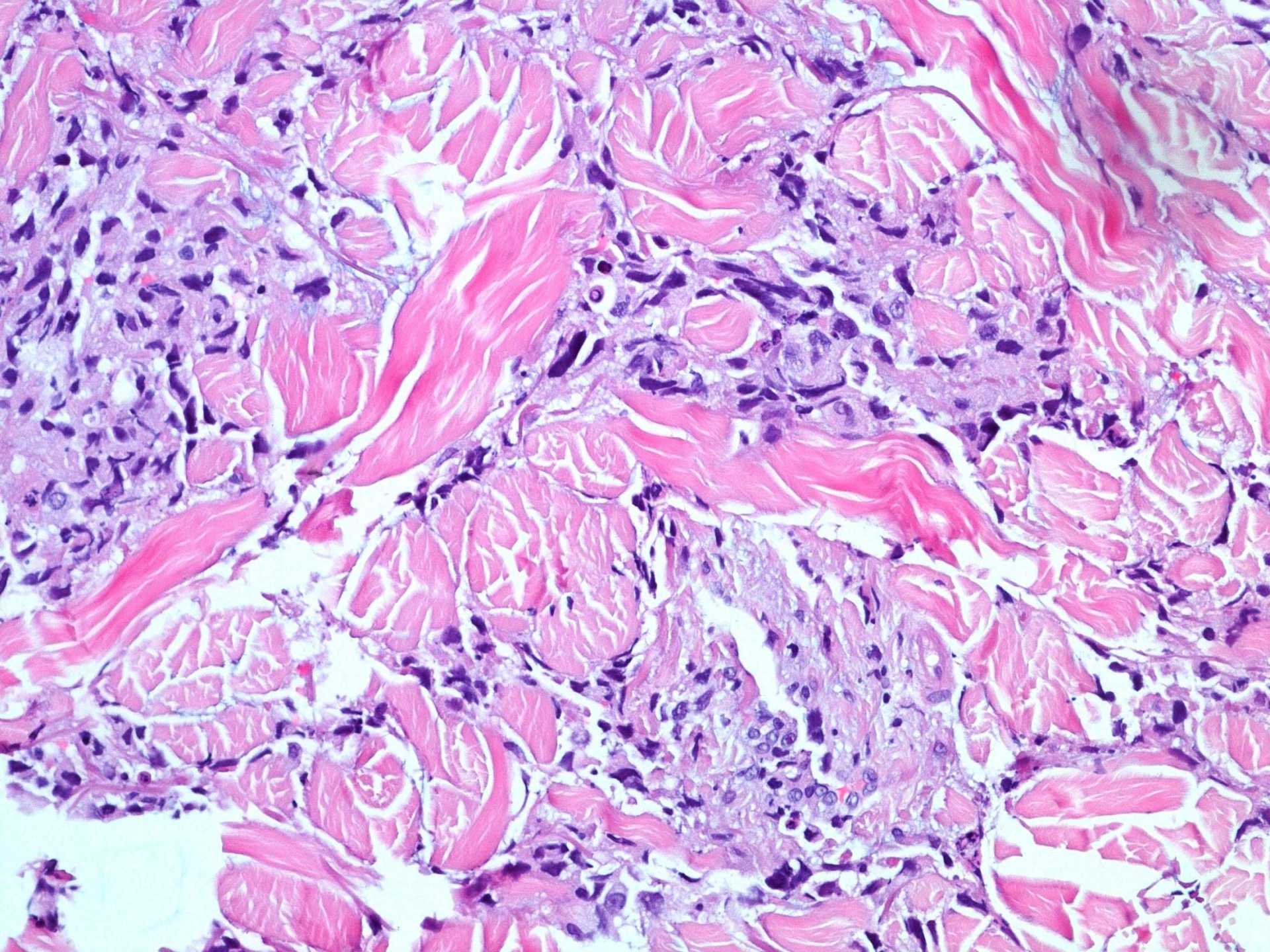




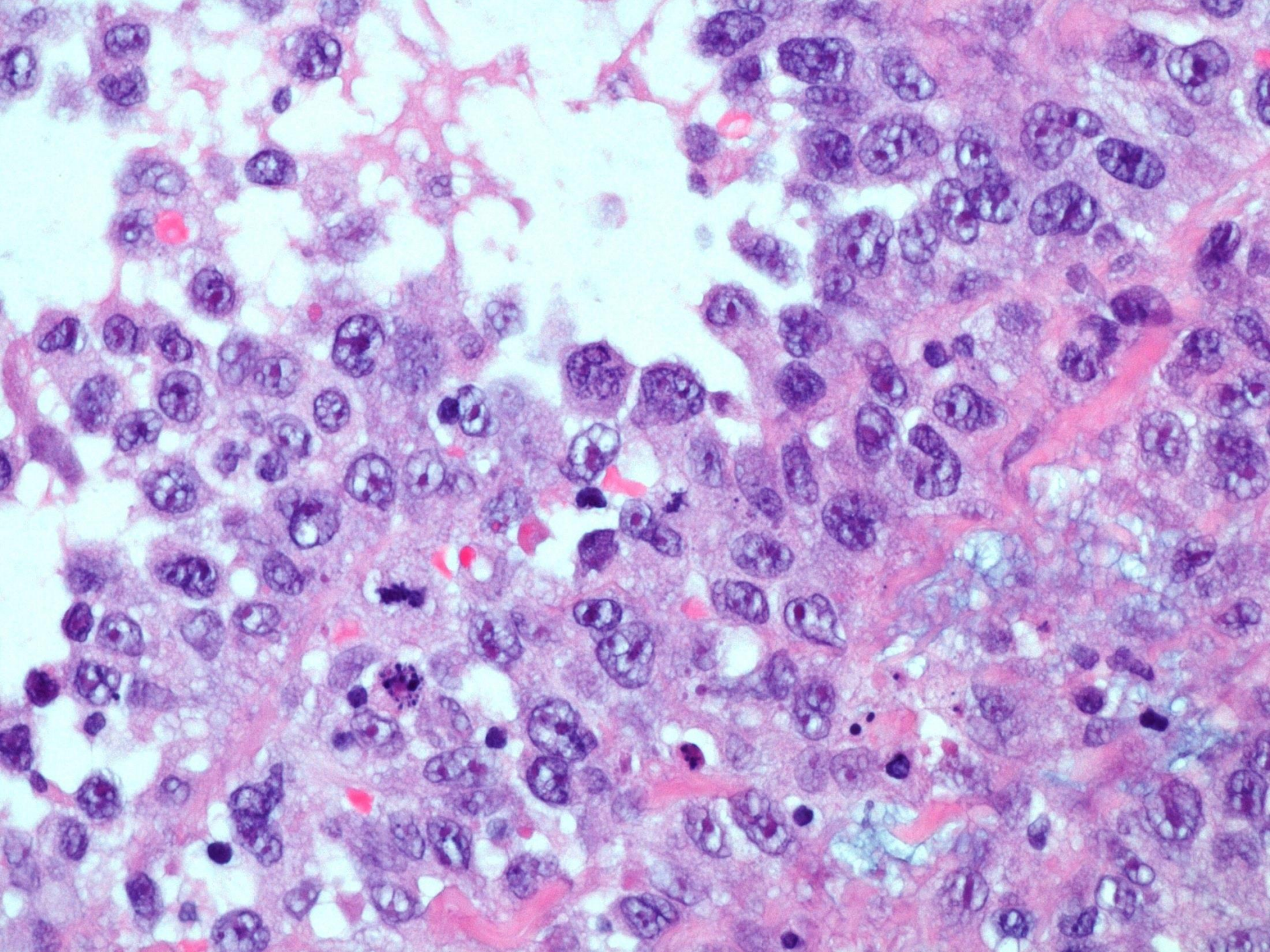


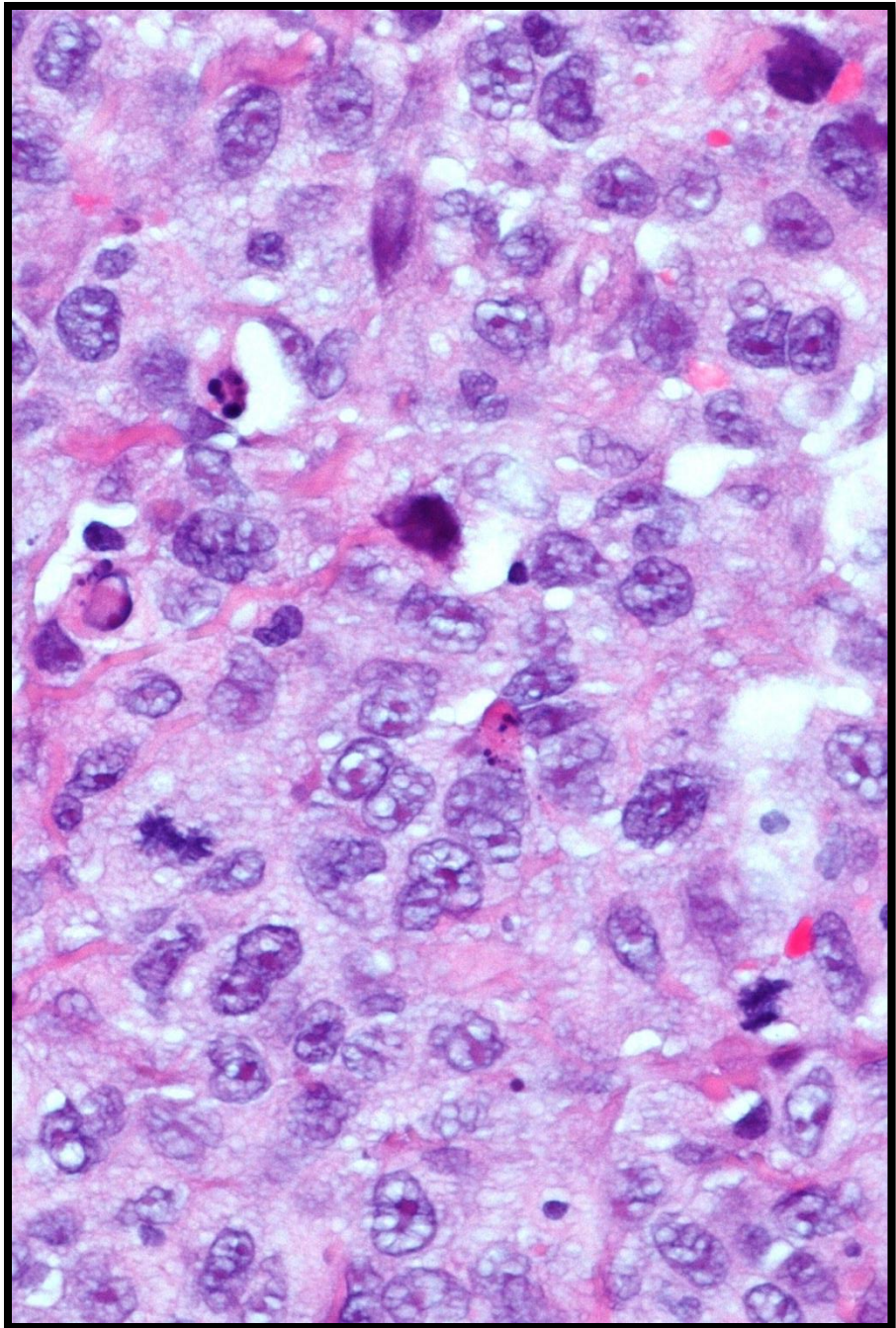
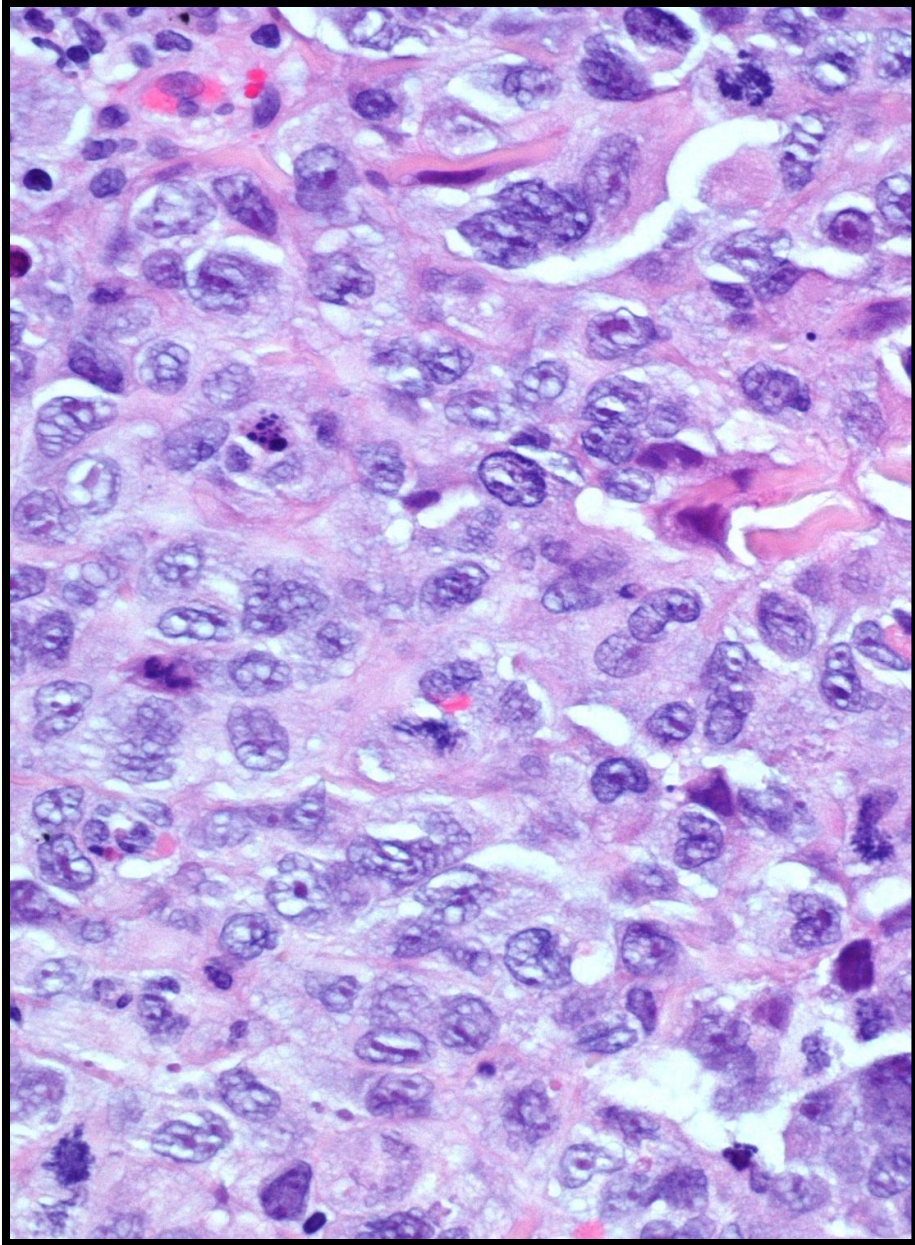
**Solárna elastóza**





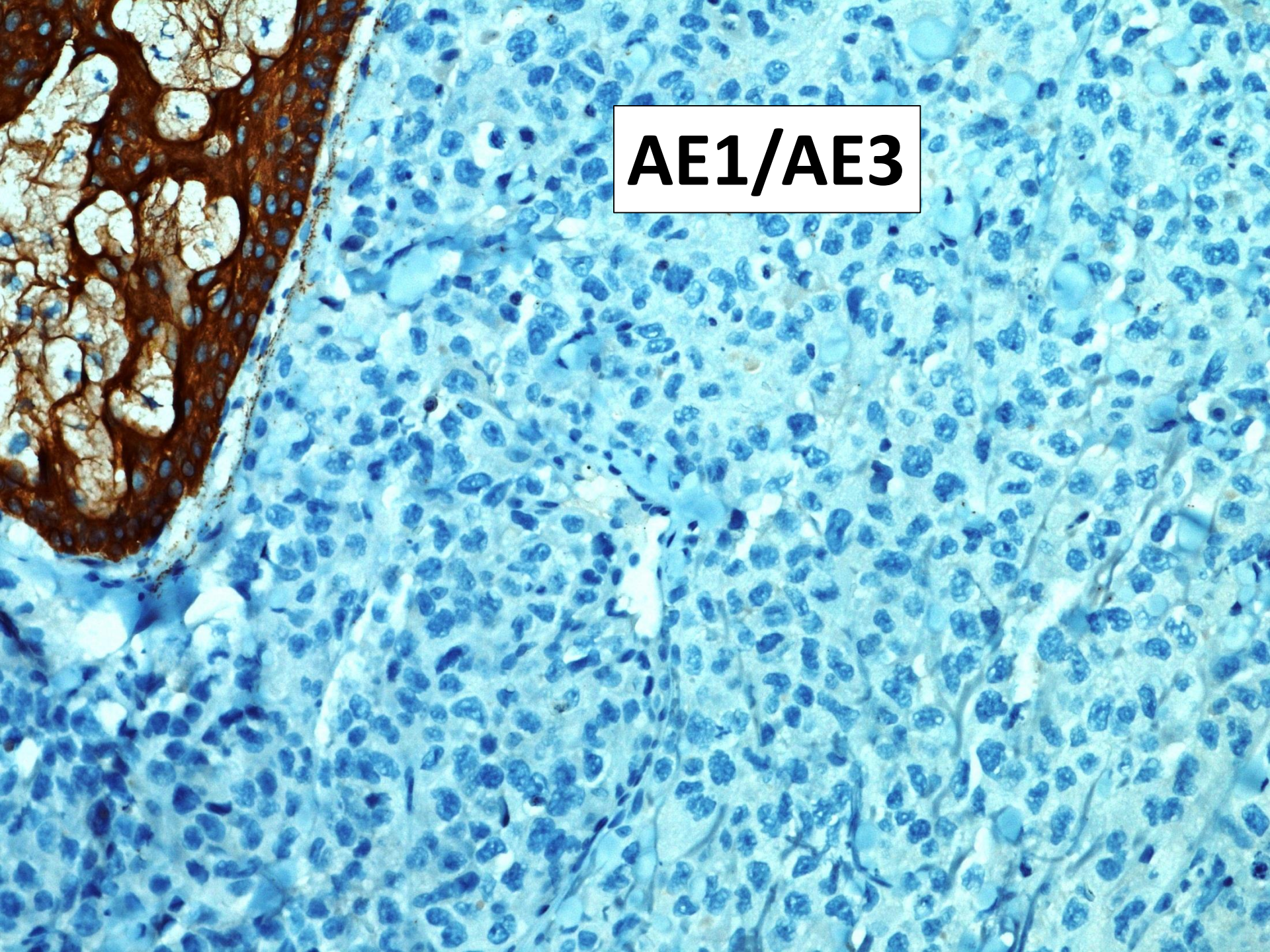


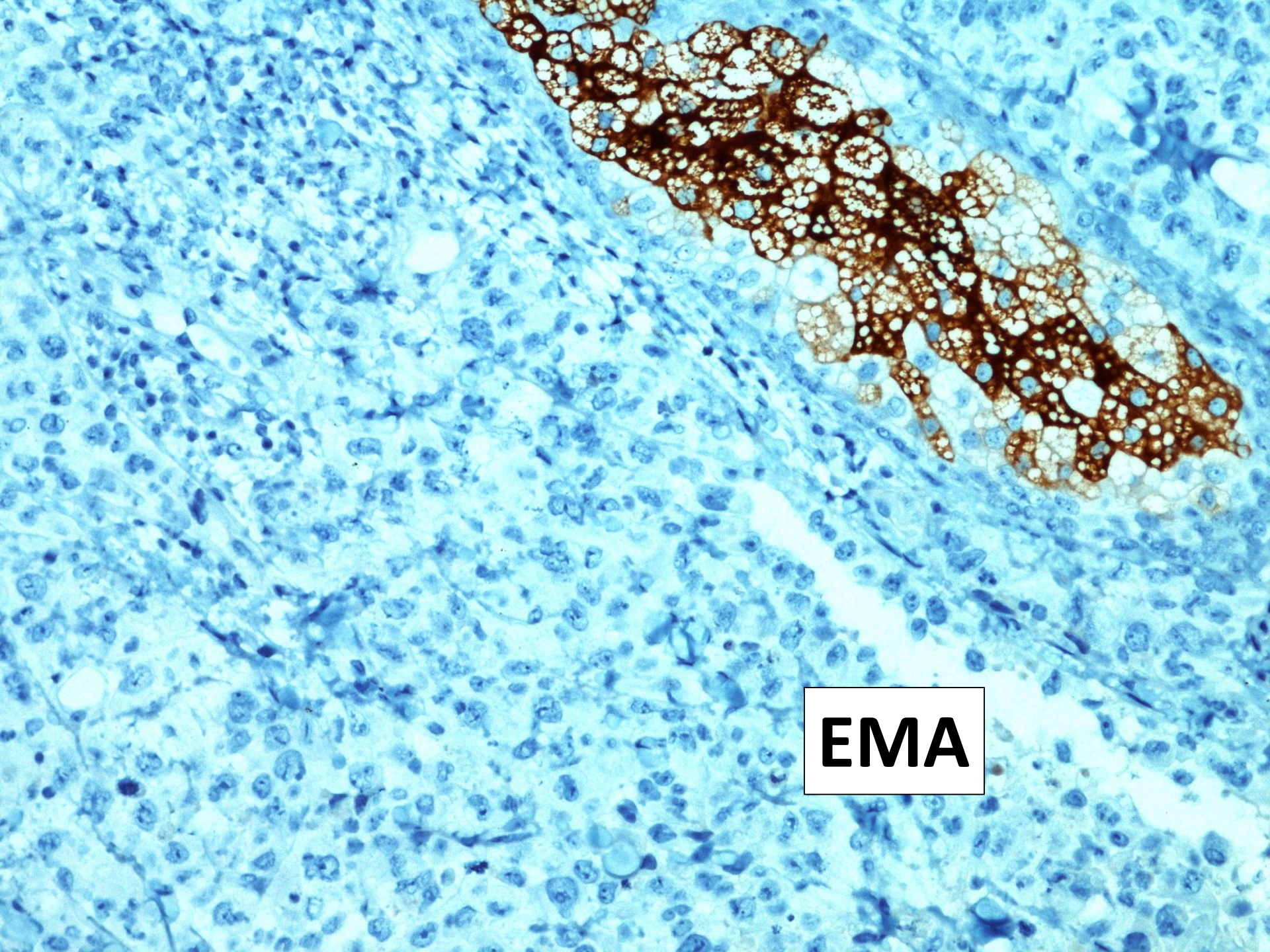




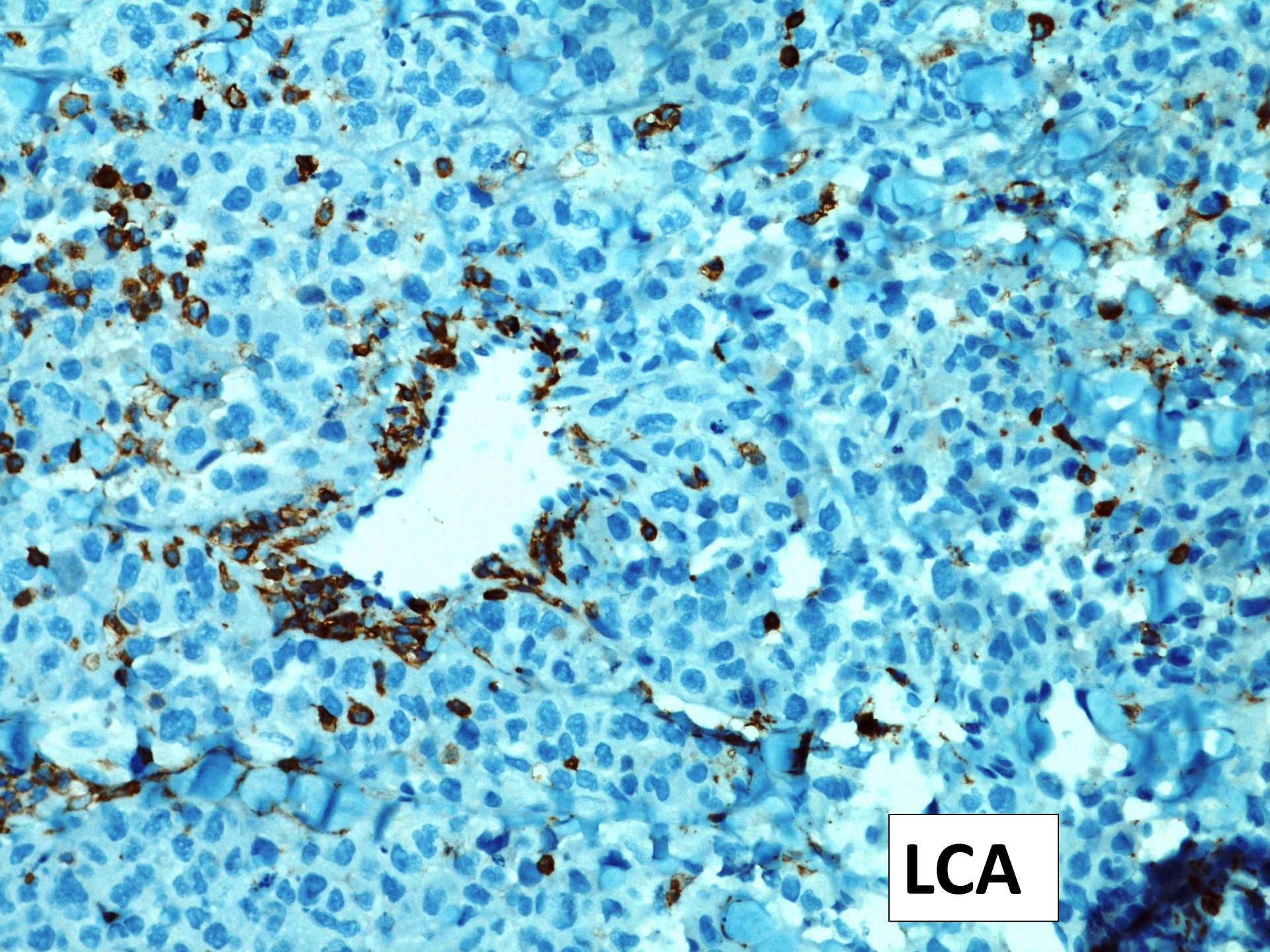
?

**AE1/AE3**

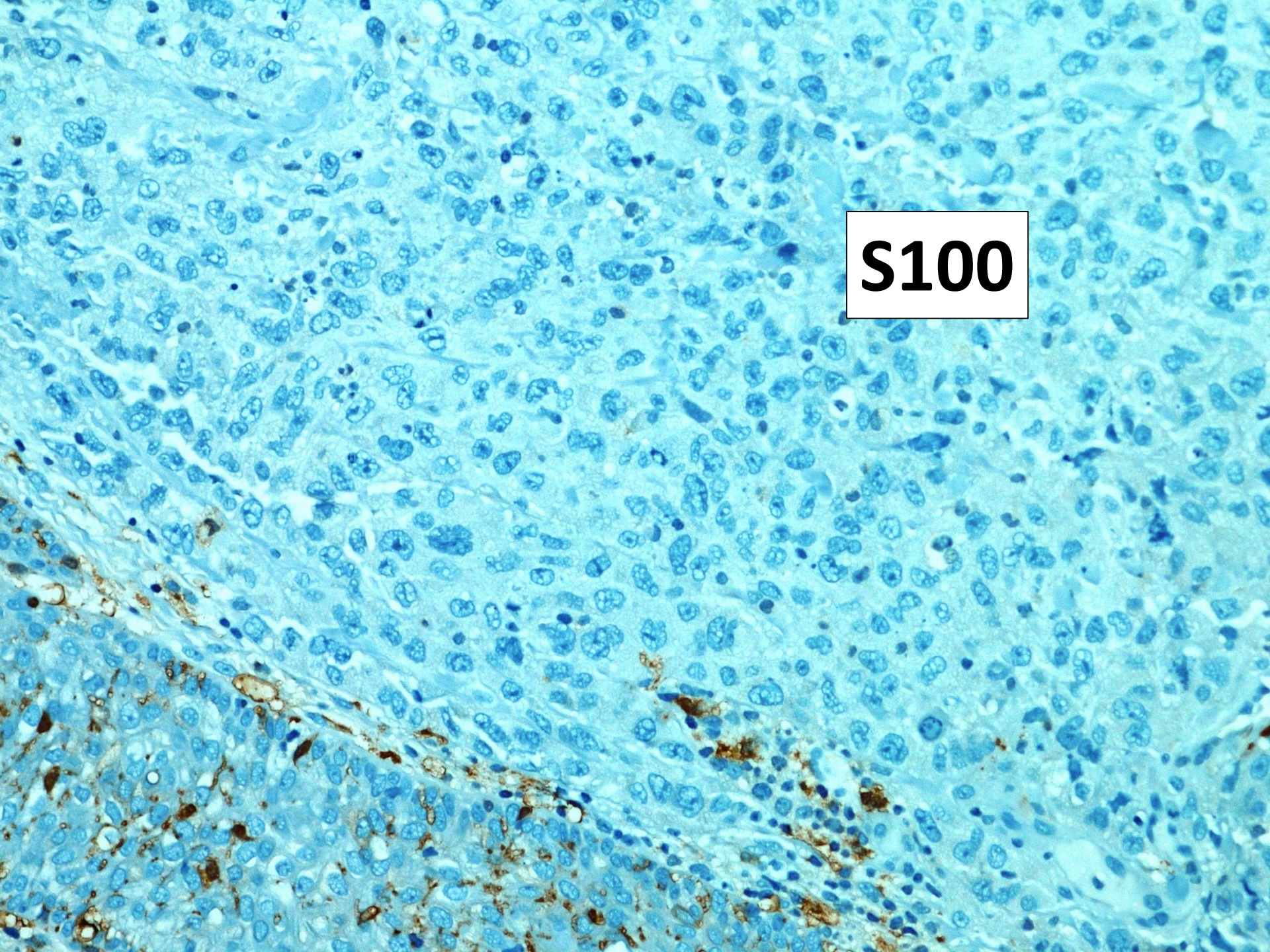




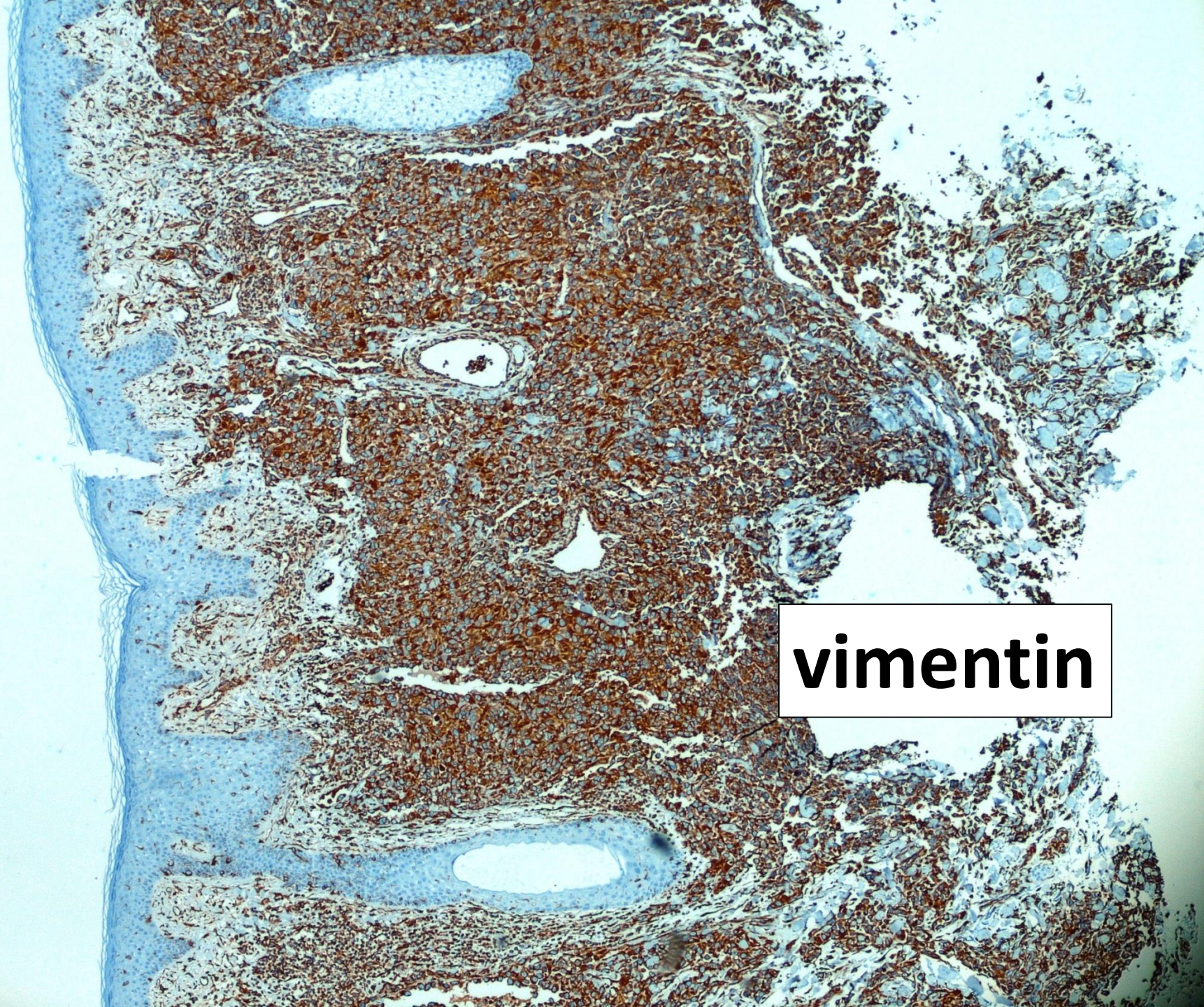
**EMA**



**LCA**

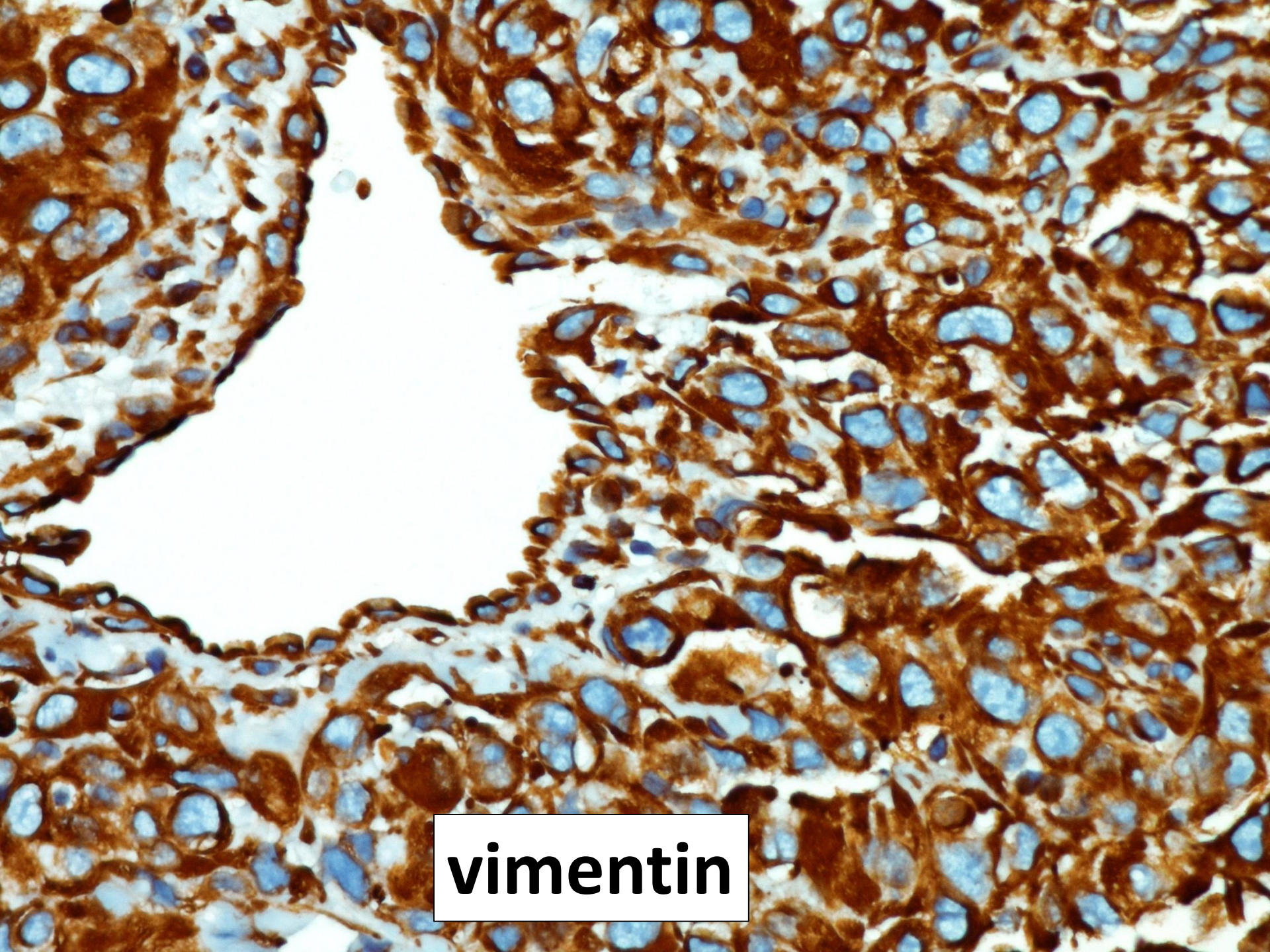
A histological slide showing a dense population of cells stained with hematoxylin and eosin (H&E). The nuclei are stained blue, and the cytoplasm and extracellular matrix are stained pink. There are several areas of brown staining, likely representing immunohistochemical (IHC) staining for S100 protein. The brown staining is localized to certain cells and structures, particularly in the lower-left and lower-right quadrants. A white box with a black border is overlaid on the right side of the image, containing the text "S100".

**S100**

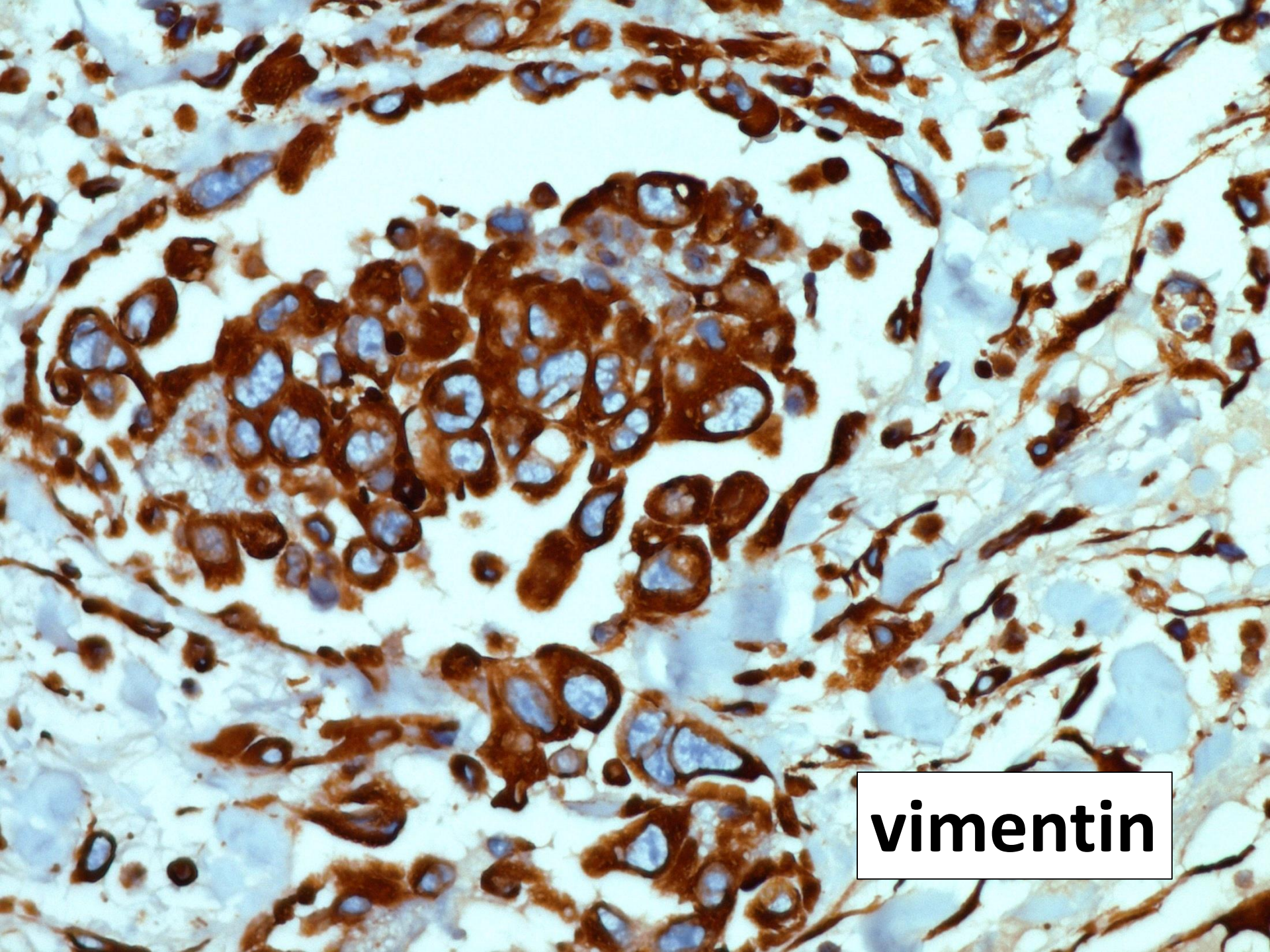


**vimentin**



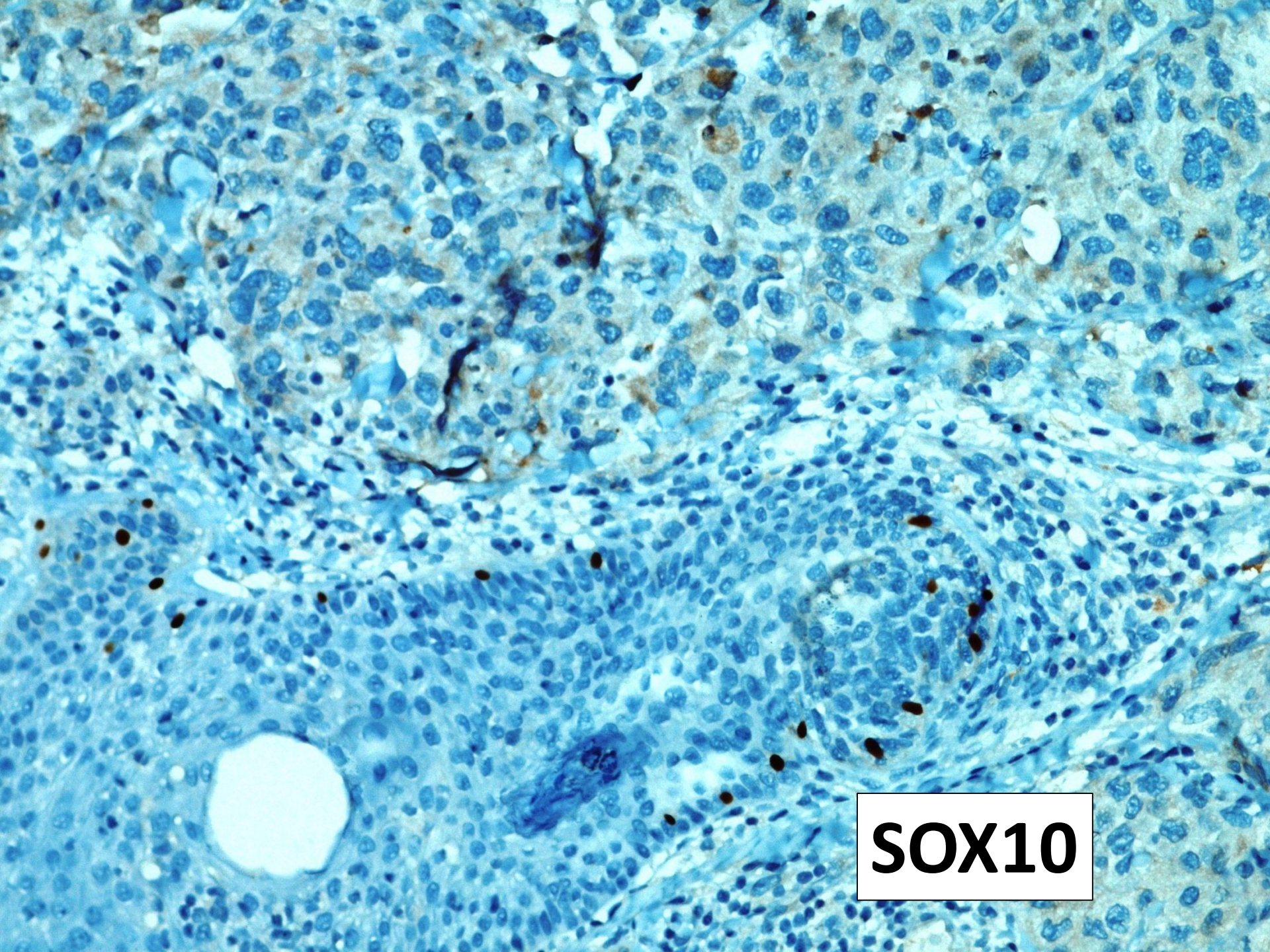


**vimentin**

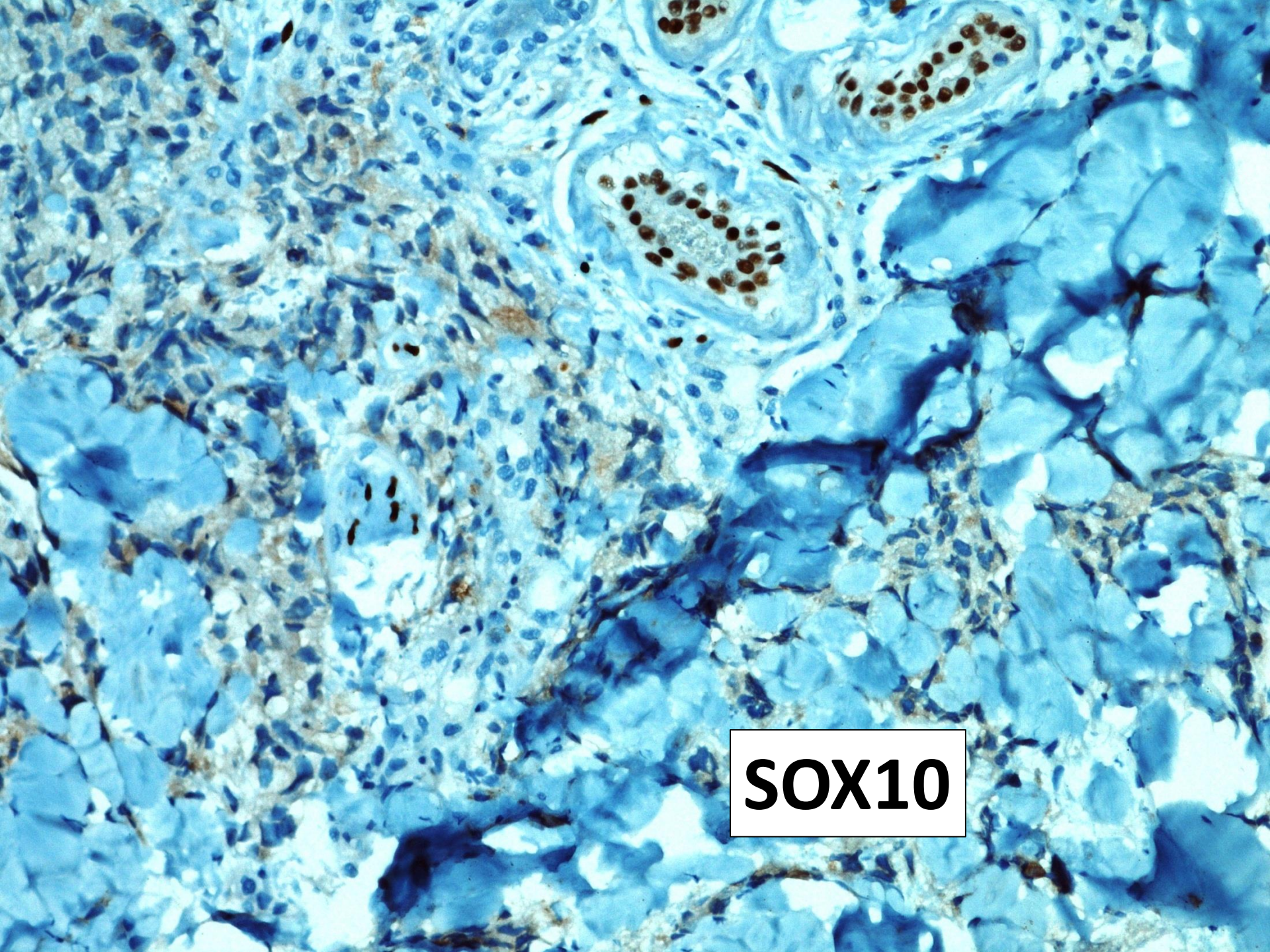


**vimentin**

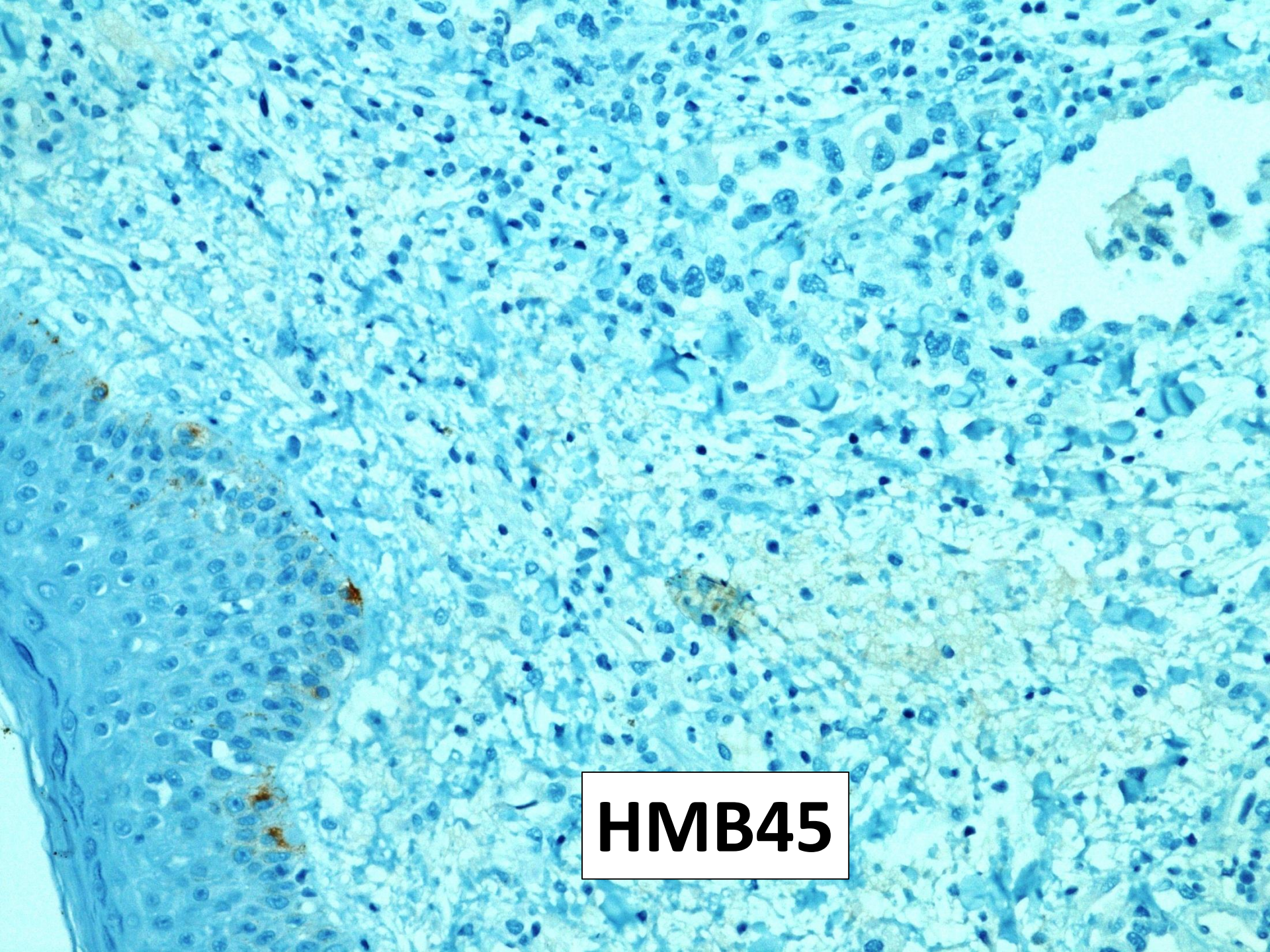
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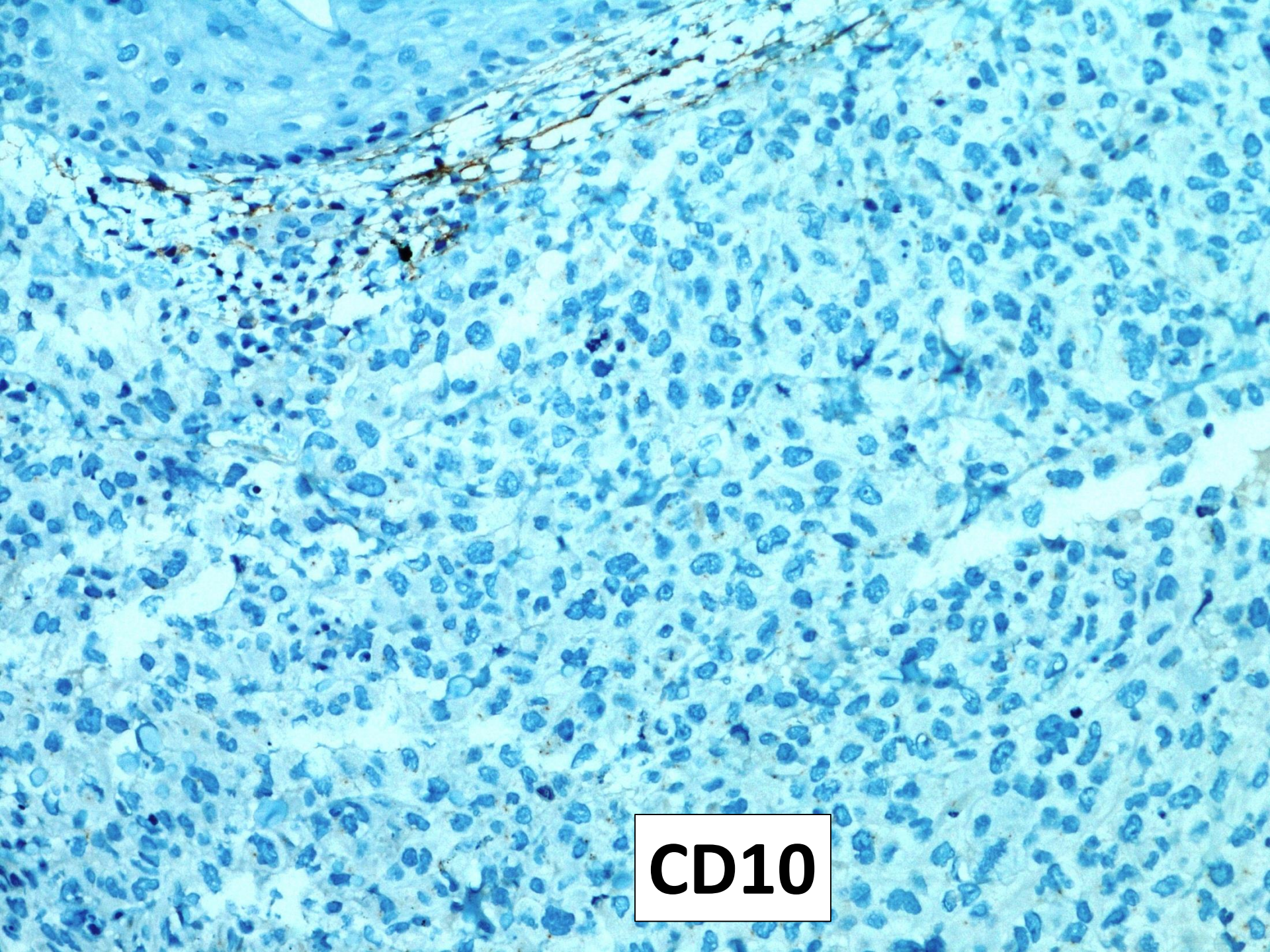
**SOX10**



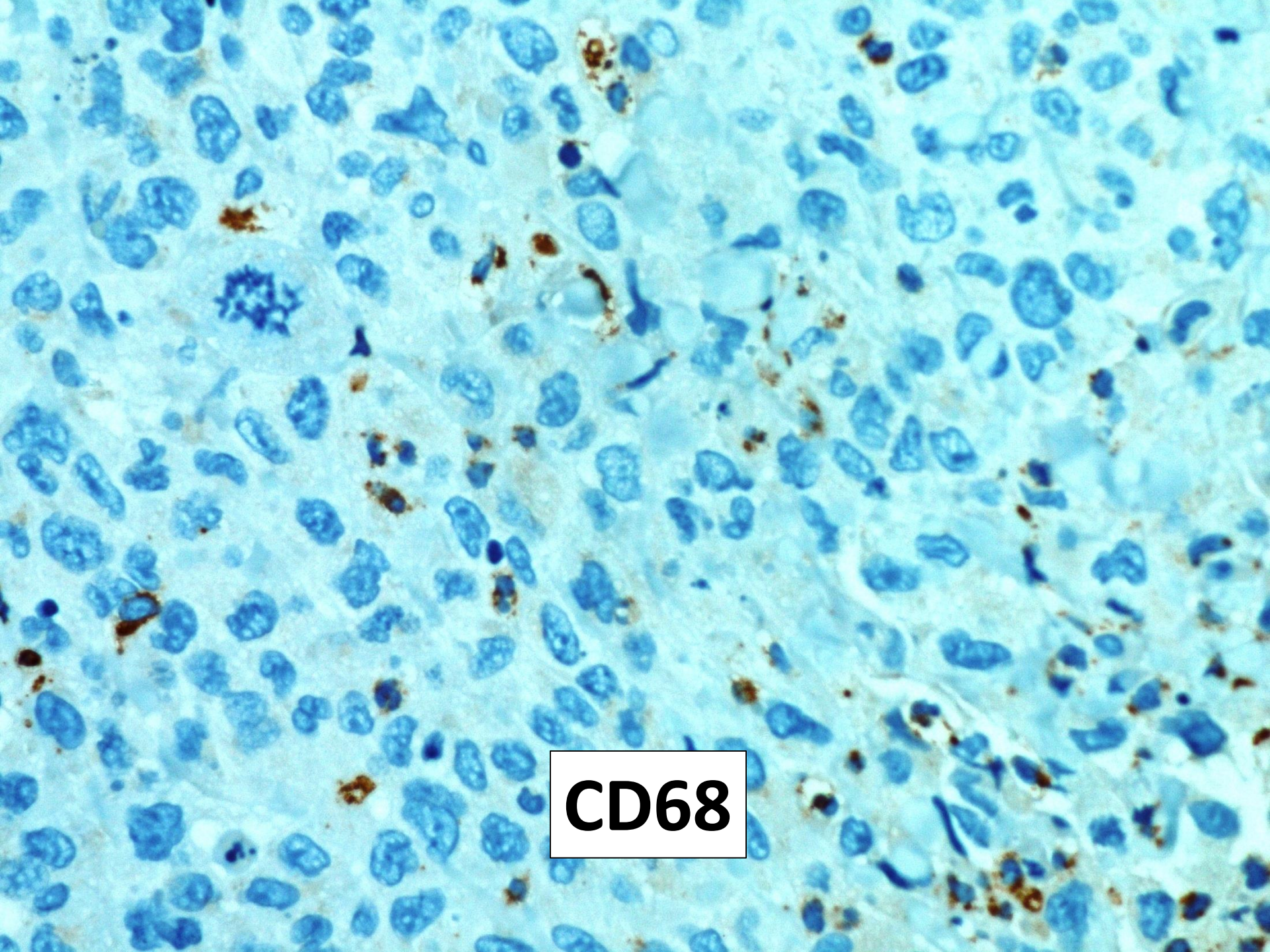
**SOX10**



**HMB45**



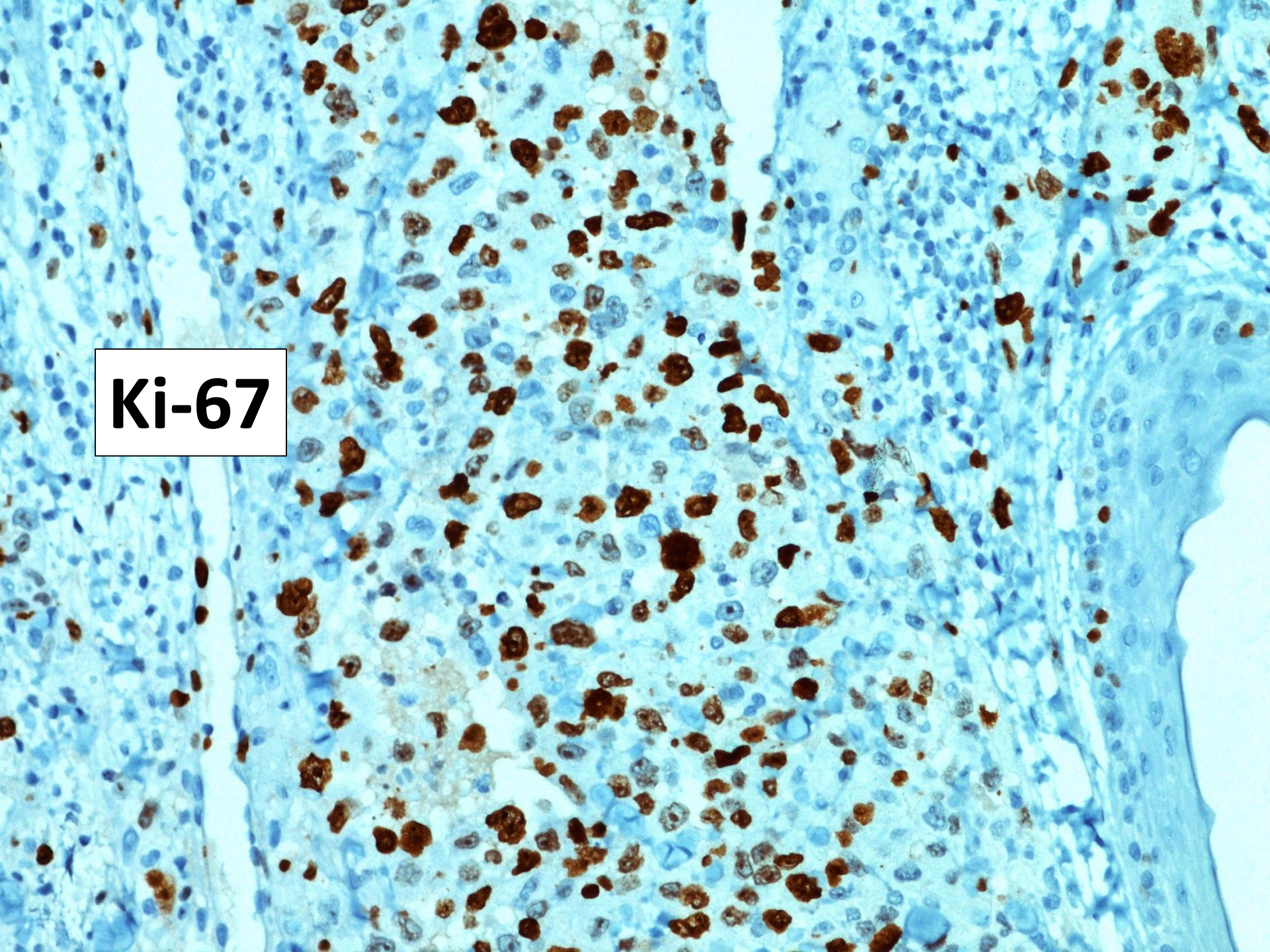
**CD10**



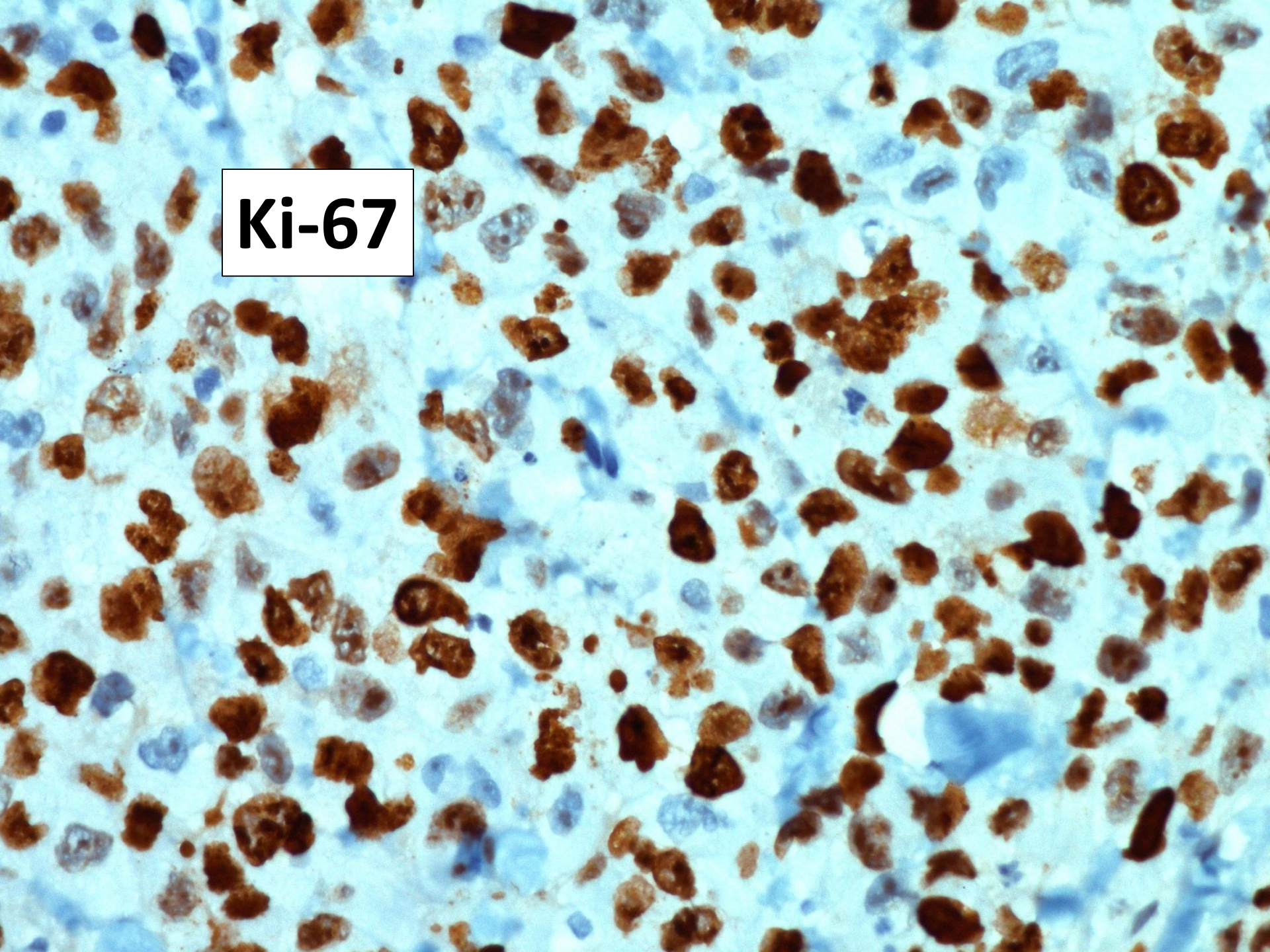
**CD68**



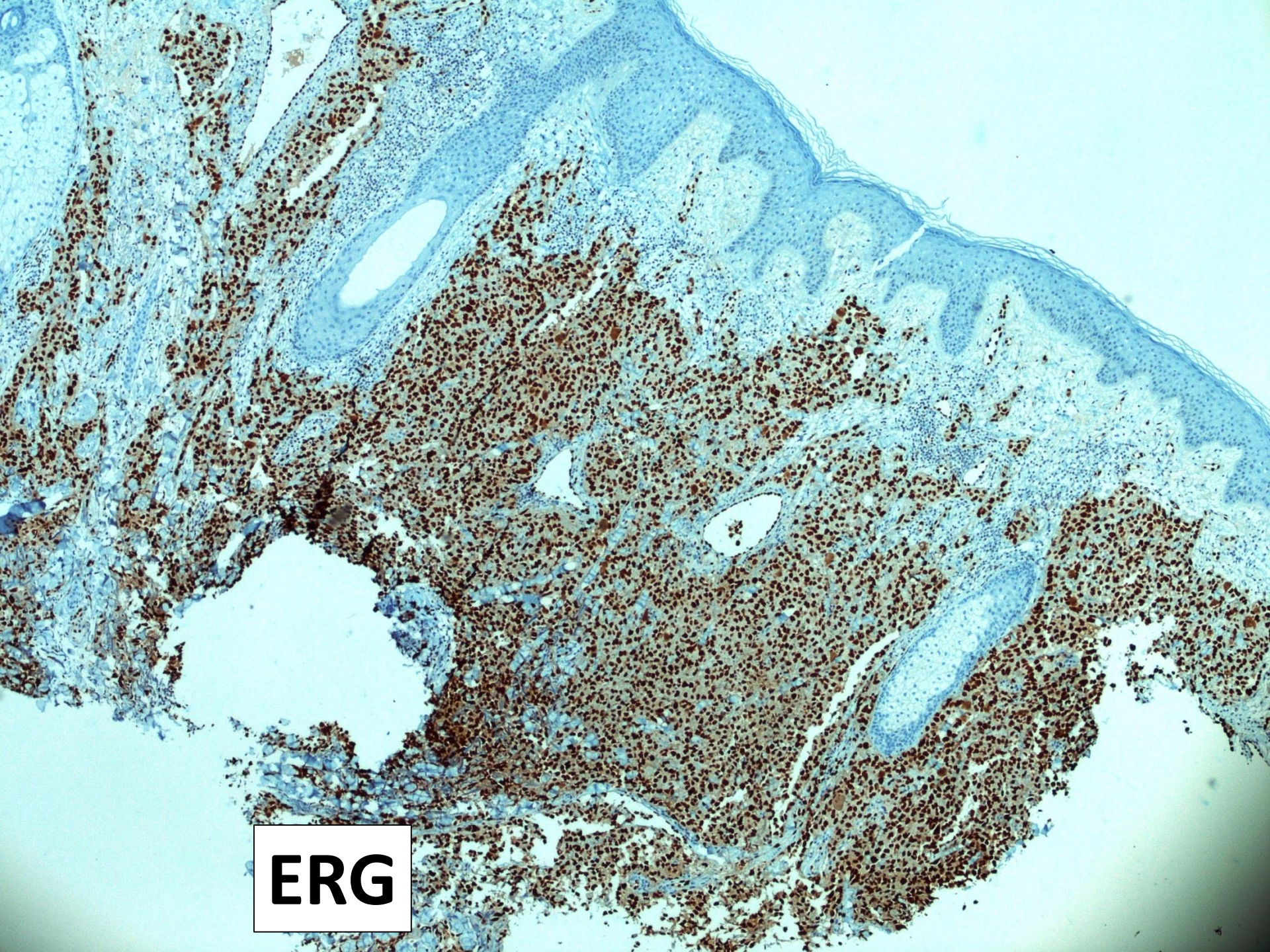
**Ki-67**



**Ki-67**

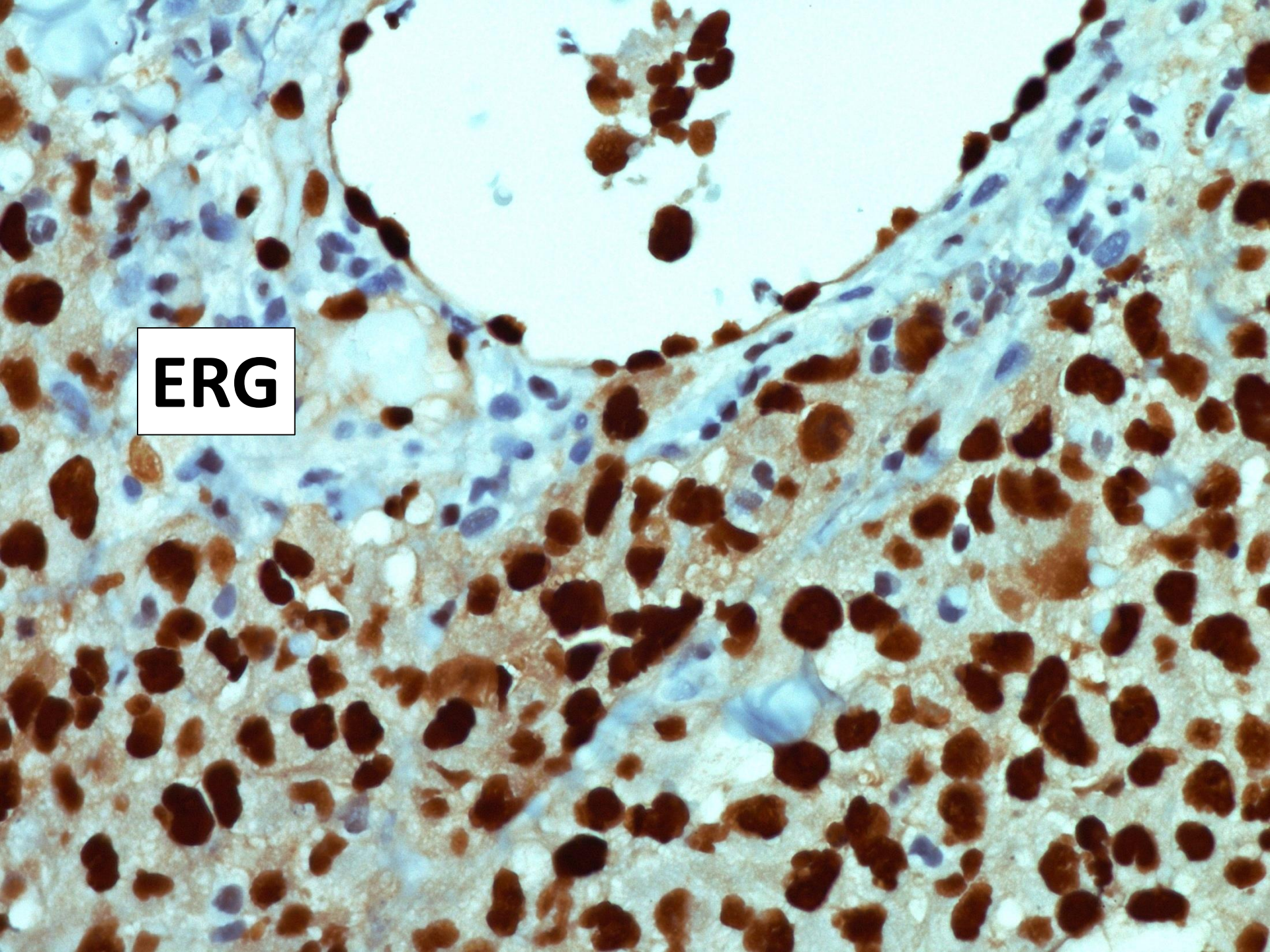


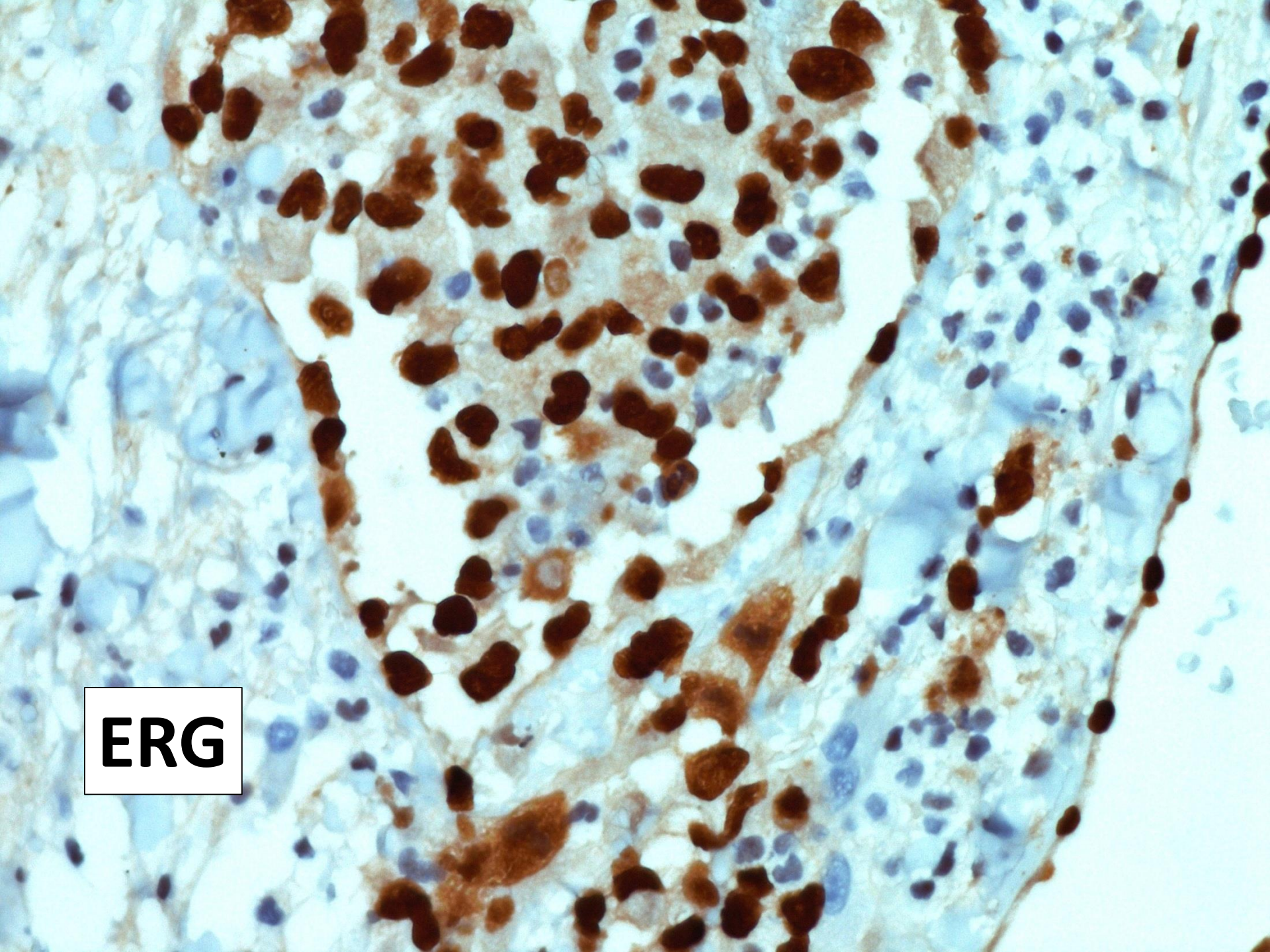
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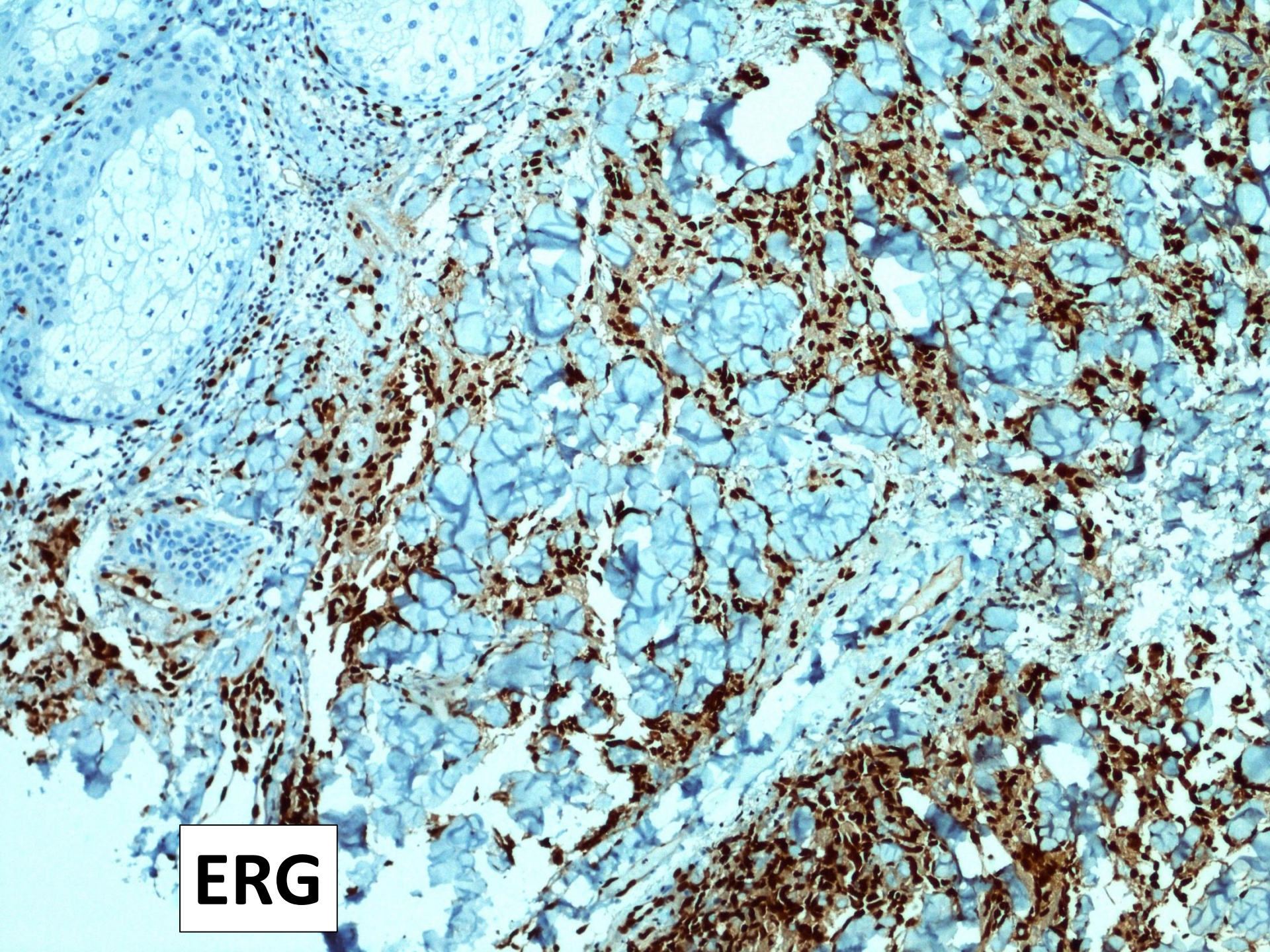
**ERG**

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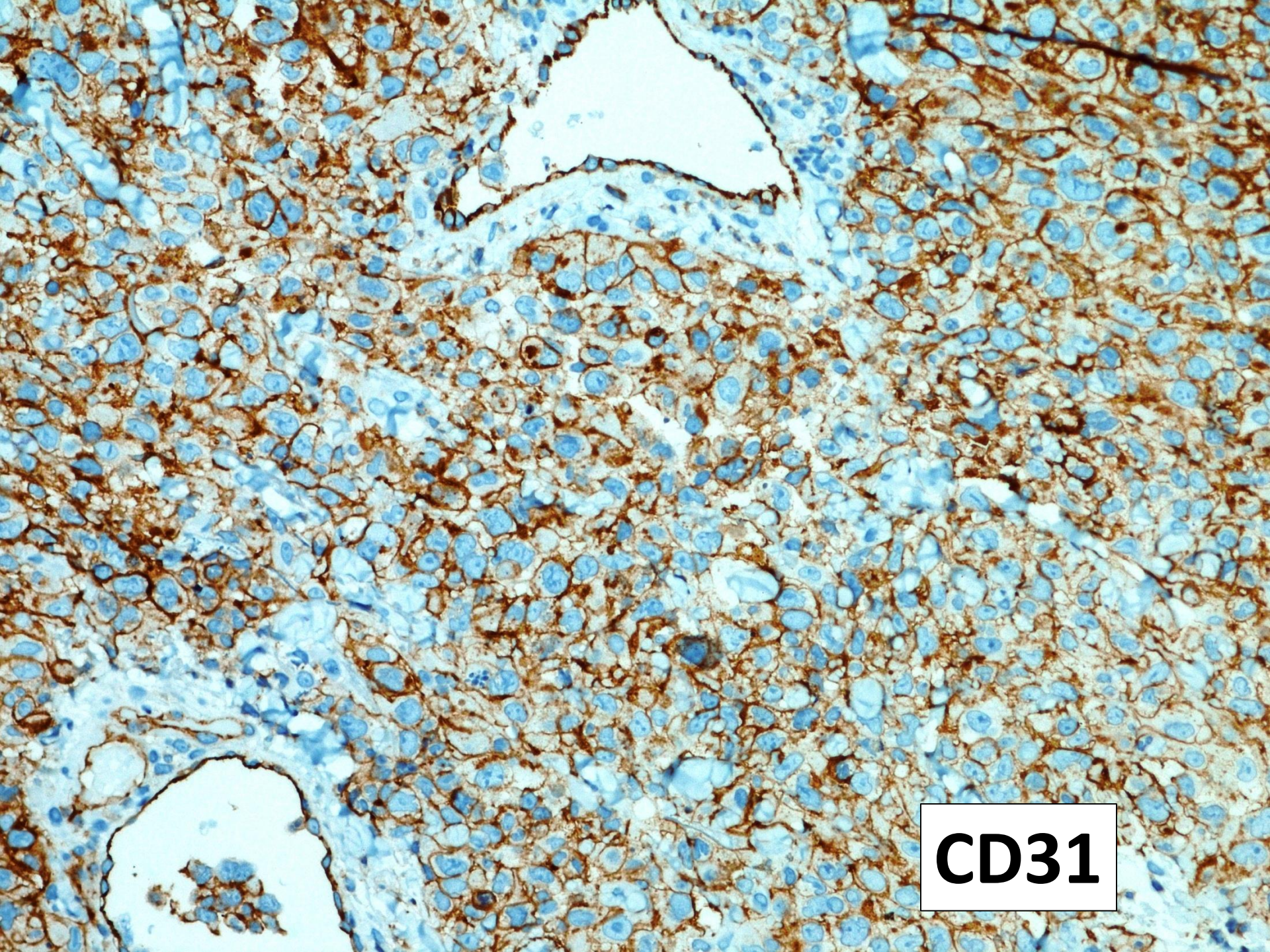




**ERG**

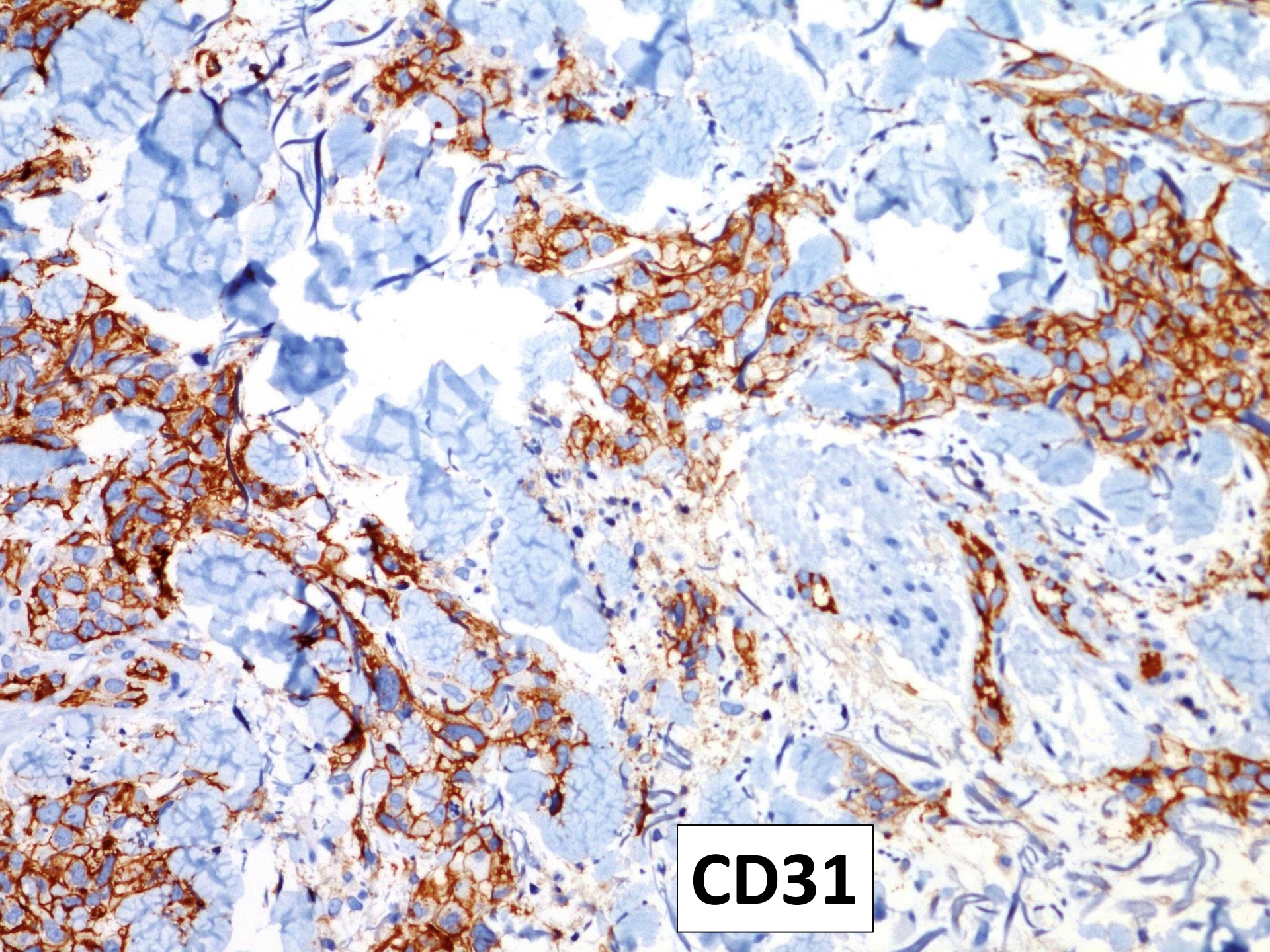


**ERG**

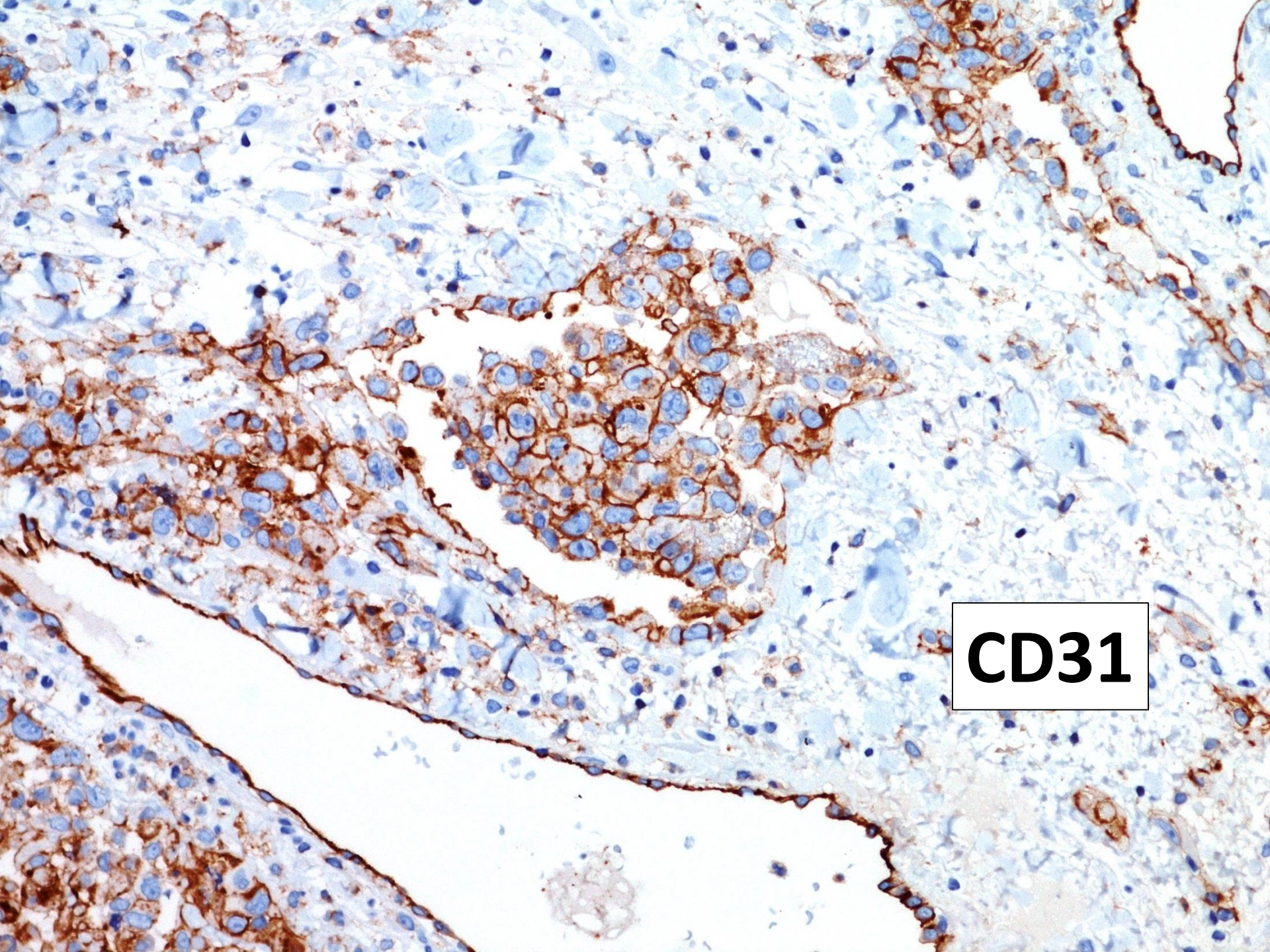


**CD31**

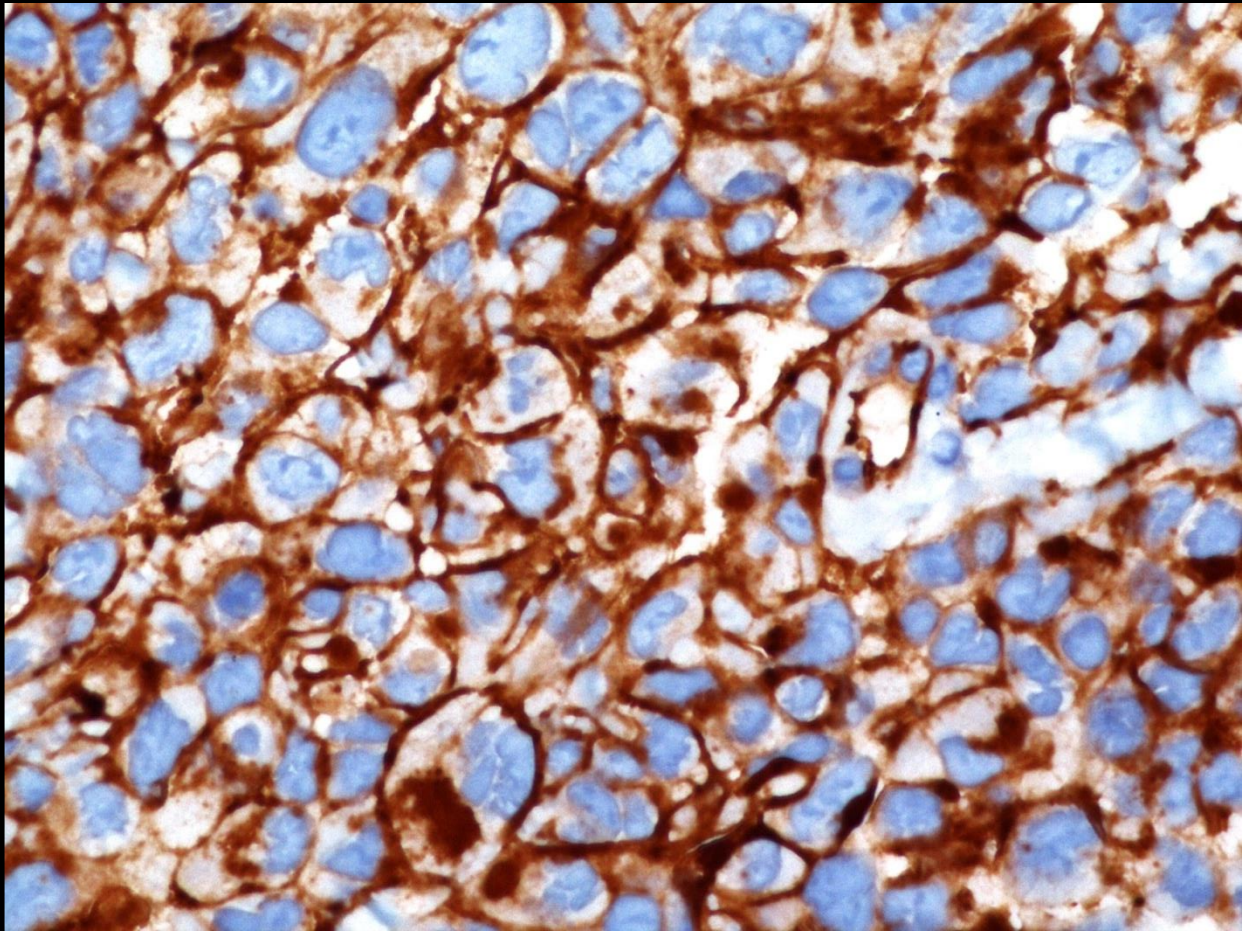
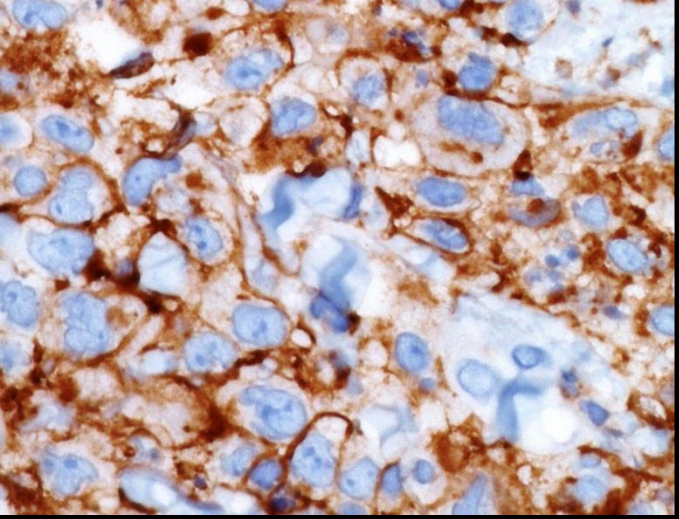
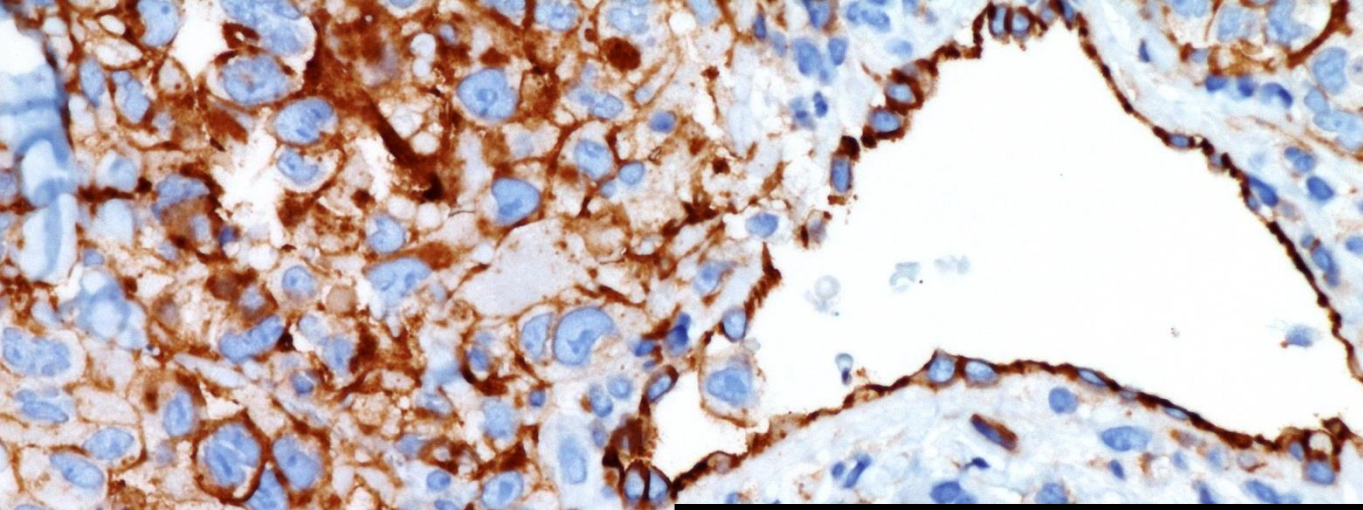




**CD31**



**CD31**



**CD31**

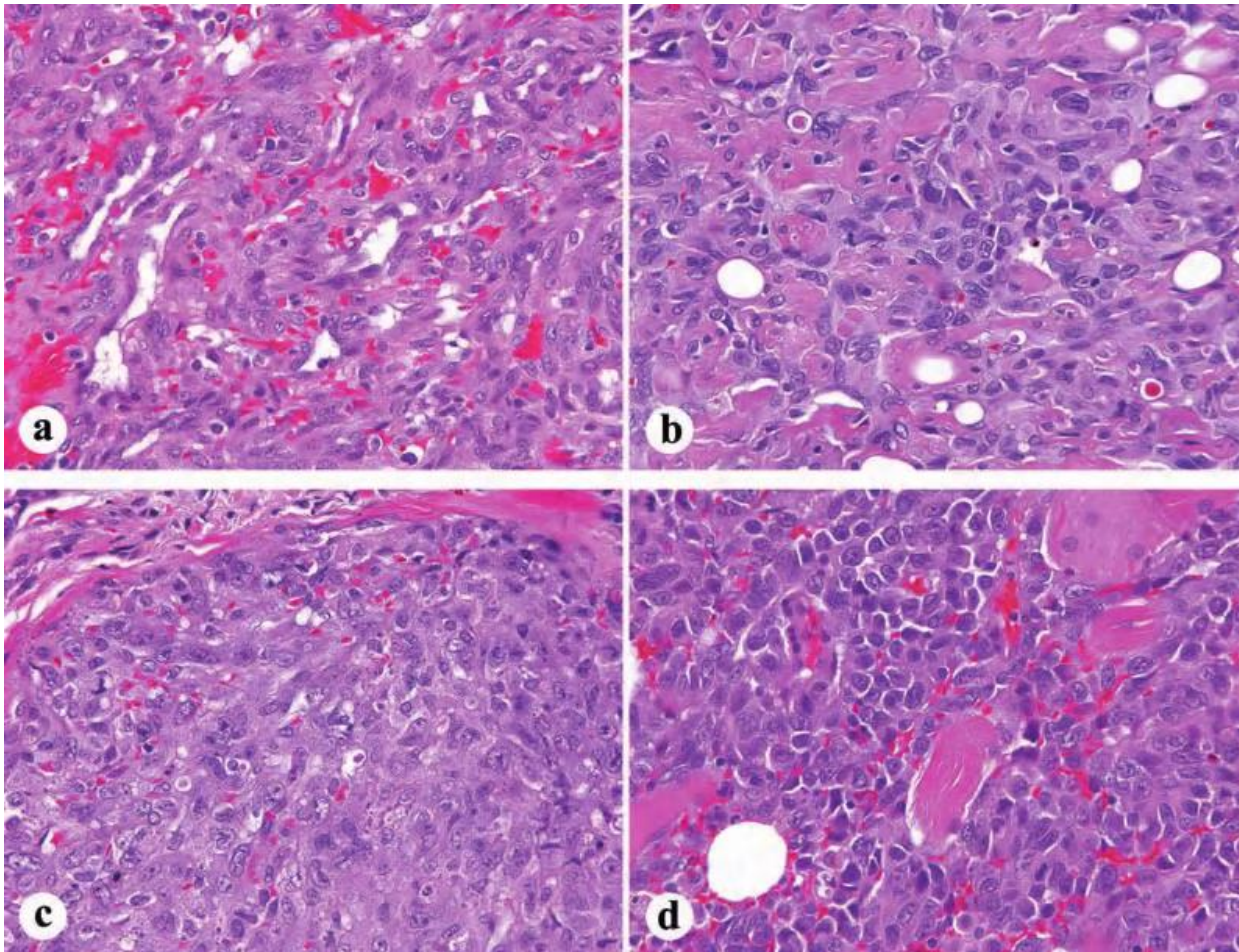
?

# **Kutánný angiosarkóm**

**Epiteloidný/nízko diferencovaný**

M-9120/3

Poorly differentiated cutaneous AS  
*Modern Soft Tissue Pathology*  
*Miettinen*



# ANGIOSARKÓM

- Malígný endotelový novotvar
- < 1 % vaskulárnych novotvarov
- 1 – 2 % všetkých sarkómov
  
- Tendencia k multifokalite – nie sú zahrnuté v stagingovom systéme sarkómov

# Angiosarkóm (AS) – lokalita

*(Enzinger 2014; Ann Surg 2010)*

- Kutánný (49,6 %)
- Mammárny parenchým (14,4 %)
- Mäkké tkanivá (11,2 %)
- Srdce (6,7 %)
- Kostný (4,1 %)
- Iné lokality (14 %)



# Klinické podtypy angiosarkómu

*(Enzinger 2014)*

- Primárny kutánný AS
- Sekundárny kutánný (asociovaný s lymfedémom) AS
- Poradiačný AS
- AS mammy a iných parenchymatóznych orgánov
- AS mäkkých tkanív

# ETIOLÓGIA

- **Chronický lymfedém** (*Stewart Treves syndrome*)
- **Radiácia** (*po časovom odstupe po RAT v miestach bez lymfedému*)
- **Arteriovenózne fistuly** (*transplantované obličky + imunosupresia*)
- **Cudzorodý materiál**
- **Thorotrast** (*cerebrálna angiografia*)
- **Zlúčeniny arzénu** (*pesticídy vo vinohradníctve*)
- **Slnečné žiarenie ?**

# GENETIKA

- Vaskulárne špecifické tyrozín-kinázové receptory: ***TIE1, KDR (VEGFR2), SNRK, TEK, FLT1 (VEGFR1)***
- *Radiačné (LYN, PRKCO) a non-radiačné (FLT1, ACT3) AS*
- *Aktivačné mutácie KDR = možná cielená terapia (Sunitinib)*
- *Amplifikácia MYC (poradiačné a s lymfedémom asociované AS; 50 – 100 %)*

# PRIMÁRNÝ KUTÁNNY ANGIOSARKÓM

- ½ AS
- M > Ž
- 90 % belosi
- Po 70-tke
- 50 % oblasť kože hlavy a krku (skalp, horné čelo)
- Expozícia slnečnému (UV) žiareniu ???



# MAKROSKOPICKÝ OBRAZ

- „Modrina“
- Noduly
- Ulcerácia
- Multifokalita
- Nejasné hranice
- Rezné plochy: hemoragické / špongiovité areály

# MIKROSKOPICKÝ OBRAZ

- Väčšina kutánných AS je dobre a stredne diferencovaných
- *Tvorba vaskulárnych priestorov*
- *Iregularita*
- *Disekcia dermálneho kolagénu a fascie*
- *Papilárne intraluminálne projekcie (papillations, tufting)*
  
- Minorita kutánných AS = *high grade (vretenobunkové, epiteloidné) tumory*
  
- ***Foamy cell variant AS***

**Cutaneous Angiosarcoma of the Scalp**  
***A Multidisciplinary Approach***  
**Pawlik et al.**  
***CANCER October 15, 2003 / Volume 98 / Number 8***

- **TABLE 1**
- **Patient Characteristics (*n* 29 patients)**
- **Characteristic No. (%)**
- Age (yrs)
- Median 71.0
- Range 33–90
- Gender
- Female 11 (37.9)
- Male 18 (62.1)
- Follow-up (mos)
- Median 18.3
- Range 3.2–106.0
- Delay in diagnosis (mos)
- Median 5.1
- Range 0–12
- Total no. of lesions on presentation
- One lesion 17 (58.6)
- One lesion plus satellitosis 4 (13.8)
- Multifocal disease 8 (27.6)
- T classification of disease
- Initial clinical T1 18 (62.1)
- Initial clinical T2 11 (37.9)
- Final pathologic T1 7 (24.1)
- Final pathologic T2 21 (72.5)
- No pathologic T stage available (no surgery) 1 (3.4)
- **Grade of angiosarcoma**
- **Low 6 (20.7 %)**
- **High 19 (65.6 %)**
- Unknown (no surgery) 1 (3.4)
- Not available for review 3 (10.3)

# GRADING

## STANFORD (AS of the breast)

- **Low grade tumors**
  - **Prominent freely anastomosing vascular channels**
  - Papillary growth and endothelial tufting minimal to absent
  - **Cytologic atypia may be difficult to identify** even after extensive sampling
- **Intermediate grade tumors**
  - Freely anastomosing vascular channels
  - **Papillary growth and endothelial tufting**
  - May have focal solid areas with polygonal or spindle cells
- **High grade tumors**
  - **Prominent solid areas of clearly malignant cells**
    - Polygonal and spindled cells
  - **Blood lakes and necrosis are common**
  - **Vascular channels may be difficult to identify**
    - May require extensive sampling, especially at edge of lesion
  - Demonstration of vascular nature may require immunohistology



# IHC

- CD31
- CD34
- FLI1
- ERG (senzitivny vaskulárny marker nezávislý od stupňa diferenciácie / Miettinen)
- Claudin- 5
  
- CD117 (50-60 % AS; expresia ako u fetálnych endotélií; Miettinen – bez KIT mutácie exónov 11 a17, bez efektu liečby TKI)
- CK7, CK8, EMA (!)

# Kutánný AS

## diferenciálna diagnostika

### Non - vaskulárne lézie

- Melanoma
- Lymphoma
- Carcinoma ( aj MTS RCC)
- ...sarcoma

### Vaskulárne lézie

- Hemangioma (*hobnail, spindle cell, angiomatosis, papillary endothelial hyperplasia - Masson*)
- Kaposi sarcoma
- Hemangioendothelioma (*epitheloid, Kaposiform, hobnail – Dabska+retiform, epitheloid sarcoma-like / pseudomyogenic, composite*)
- AVL

# Kutánný AS

## Prognóza

- Agresívny novotvar
- Časté vzdialené MTS
- 50 % pacientov umiera do 15 mesiacov
- 15 % pacientov prežíva > 5 rokov

# Prognostické faktory AS

(všetky lokality)

| FAVORABLE                 | UNFAVORABLE                   |
|---------------------------|-------------------------------|
| < 50 rokov                | > 50 rokov                    |
| Trup                      | Hlava a krk                   |
| Unifokalita               | Multifokalita                 |
| Lokalizovaný proces       | Šírenie do okolia             |
| < 5 cm                    | > 5 cm                        |
| Povrchová lokalizácia     | Hlboké mäkké tkanivá / orgány |
| Negatívne resekčné okraje | Pozitívne resekčné okraje     |
| Nonepiteloidná histológia | Epiteloidná histológia        |
| Absencia nekrózy          | Prezencia nekrózy             |

# FOLLOW UP

- Bioptický nález
- Onkológia – hospitalizácia, nález pľúcnych MTS
- Cca 1 mesiac exitus letalis

**ĎAKUJEM ZA POZORNOST**