

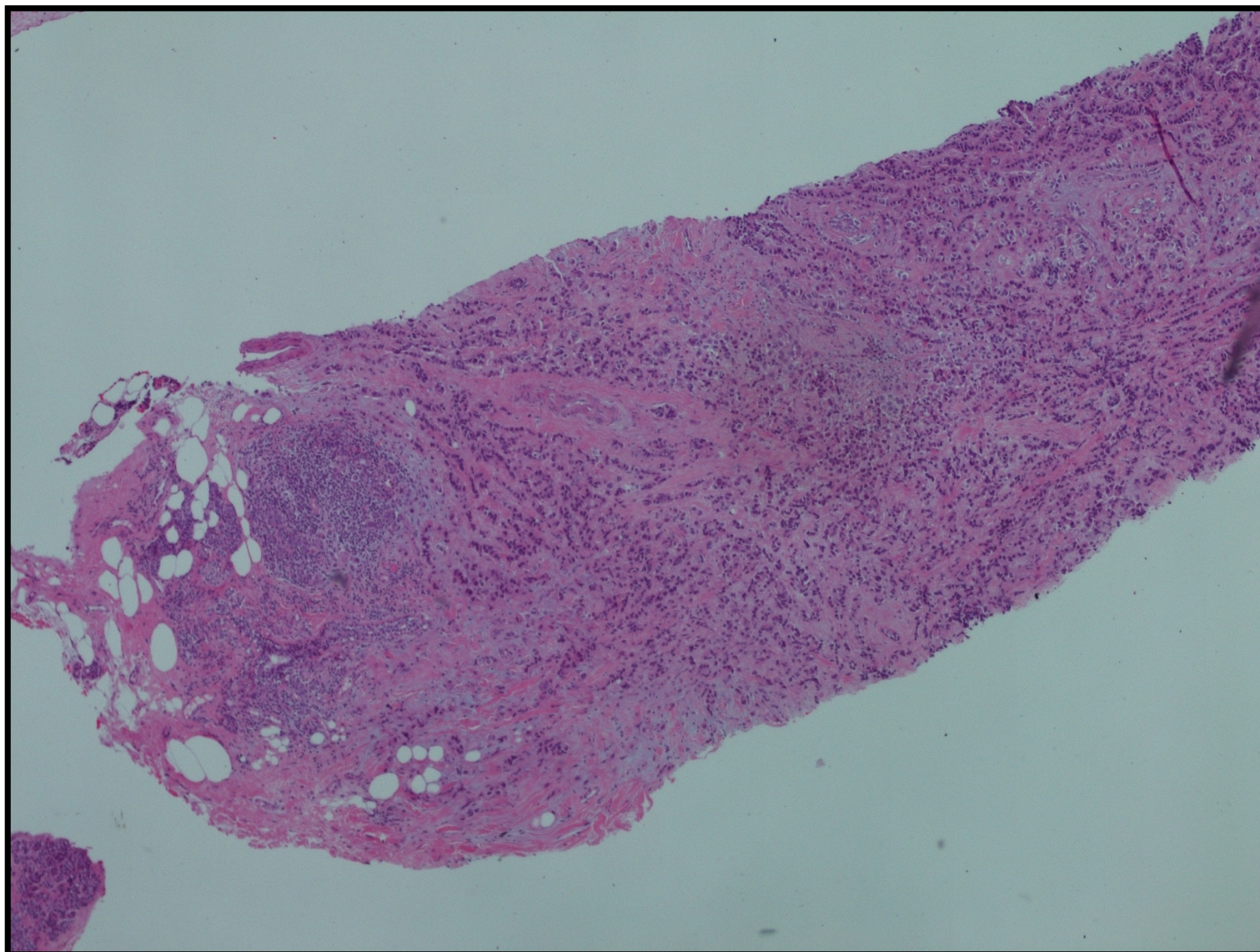
Letný bioptický seminár 2016

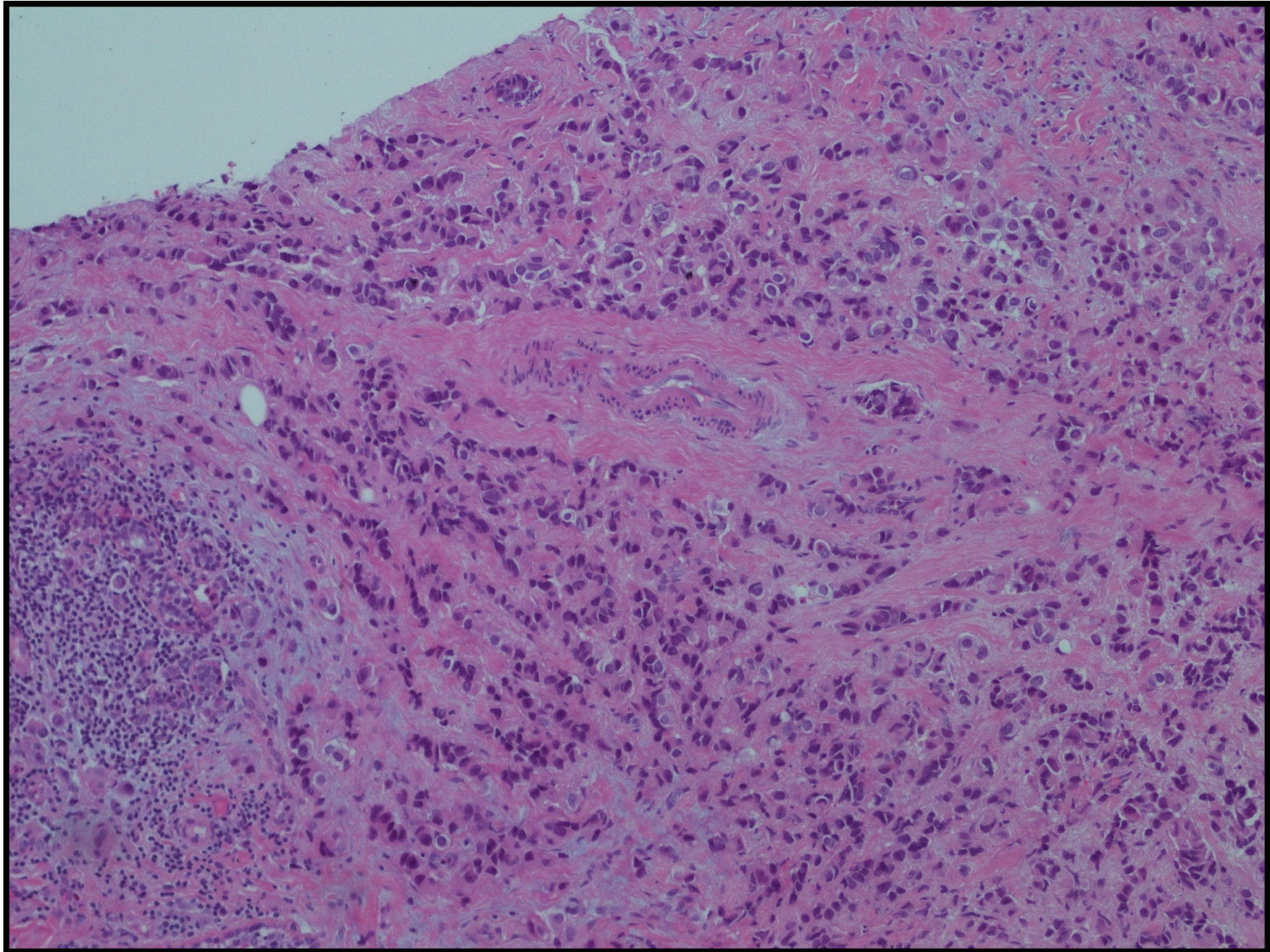
SENEC

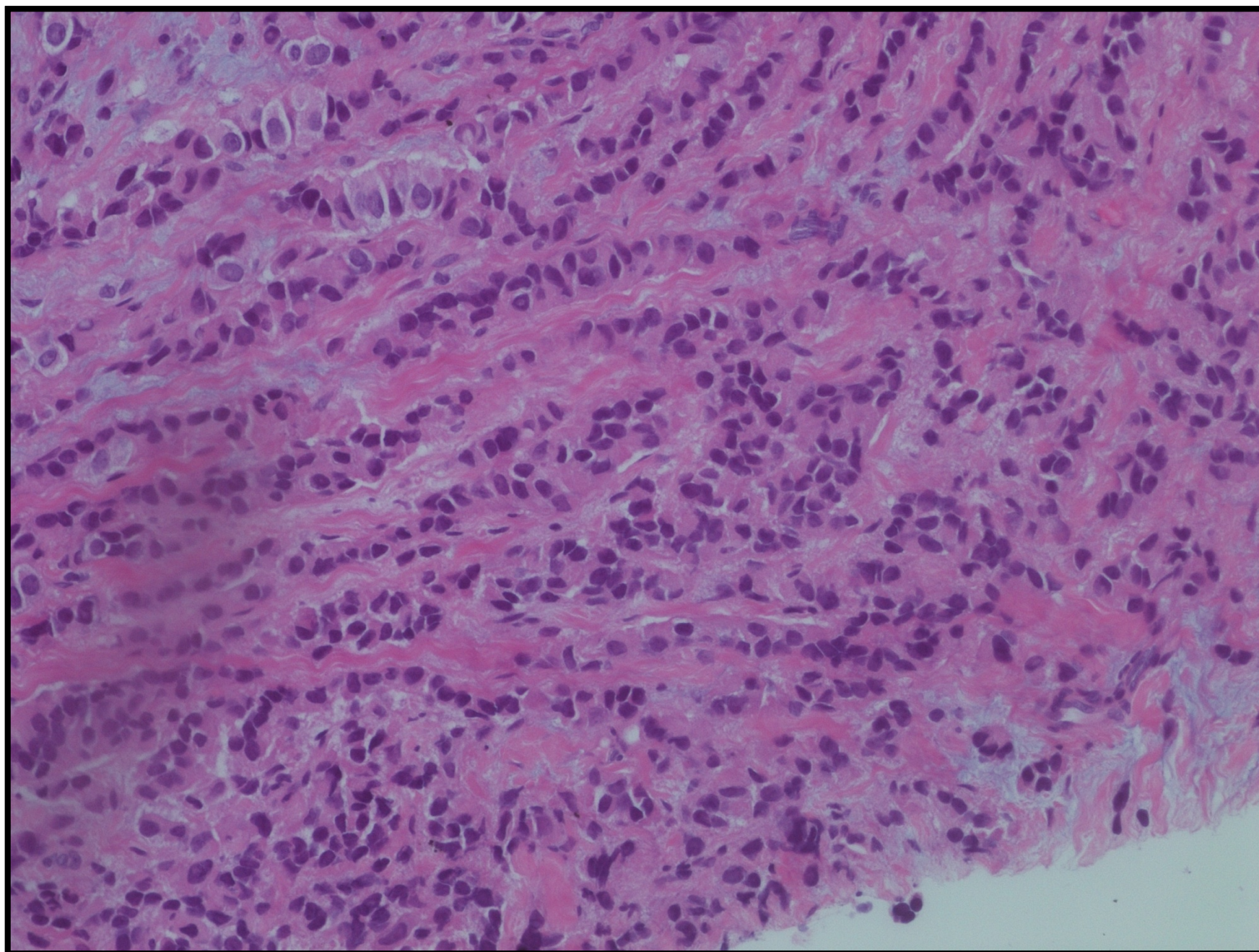
Prípad SD-IAP č. 604

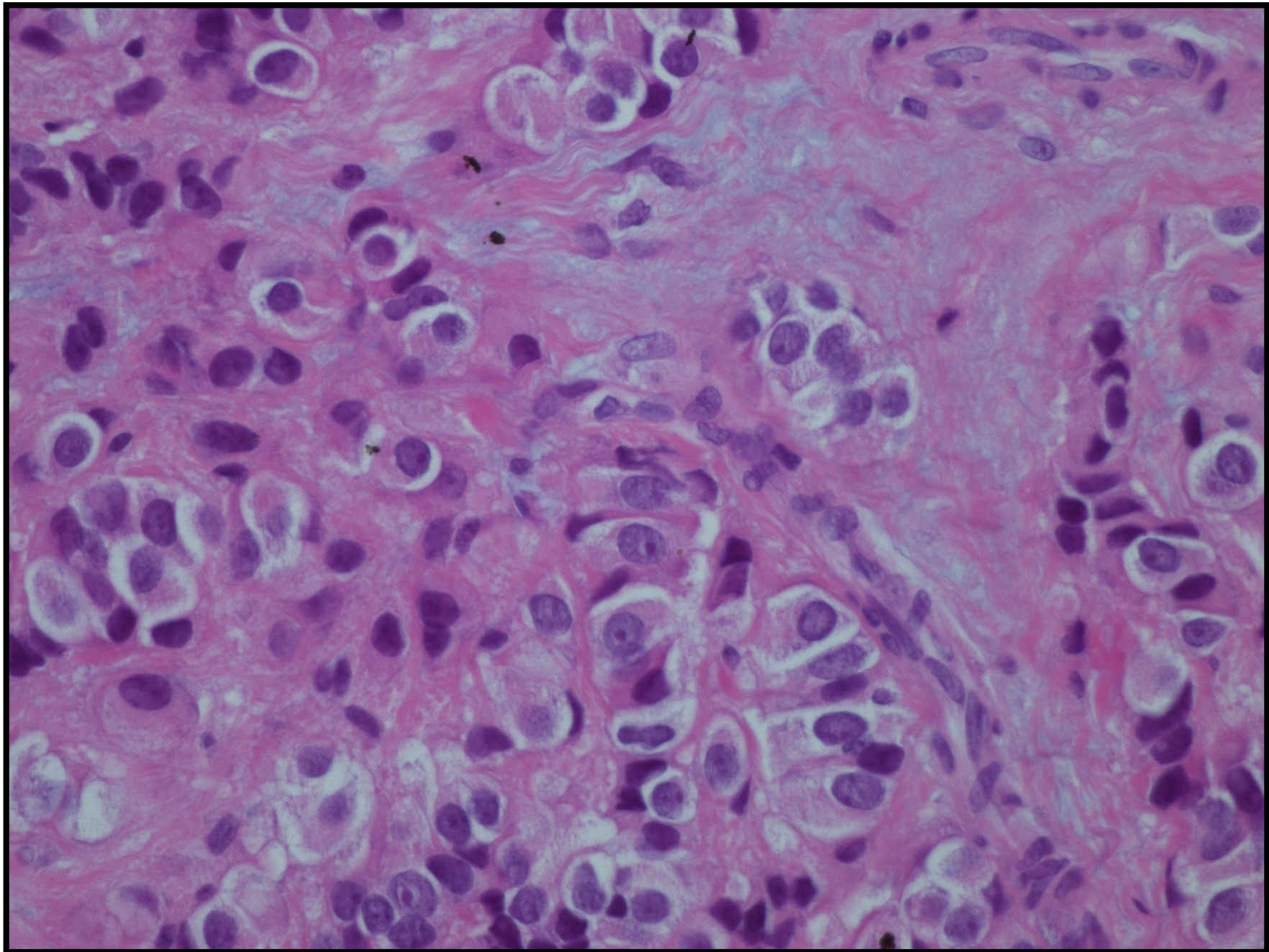
Peter Bohuš, Medicyt Košice

- Core-cut biopsia pravého prsníka 47-ročnej pacienty
- 5 valčekom žltobelavého tkaniva dĺžky do 4 mm.

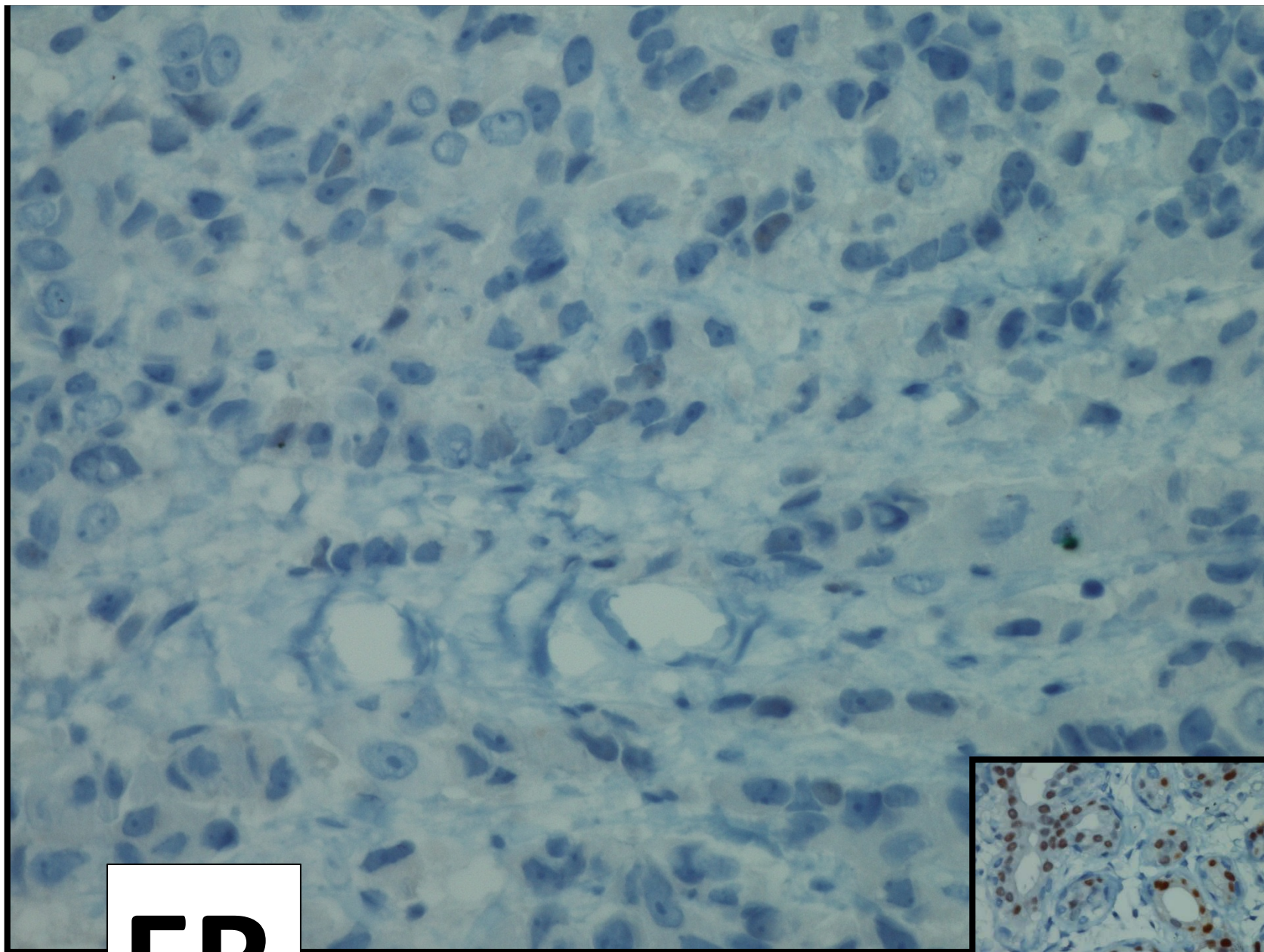




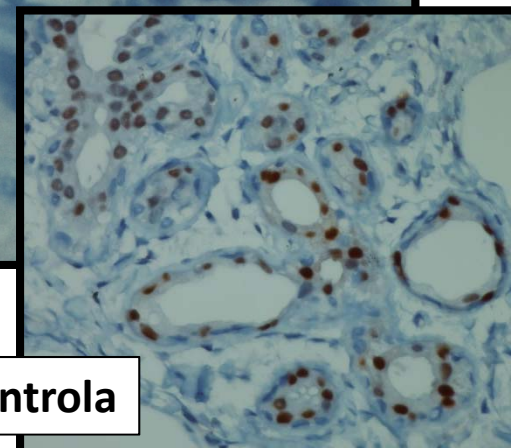




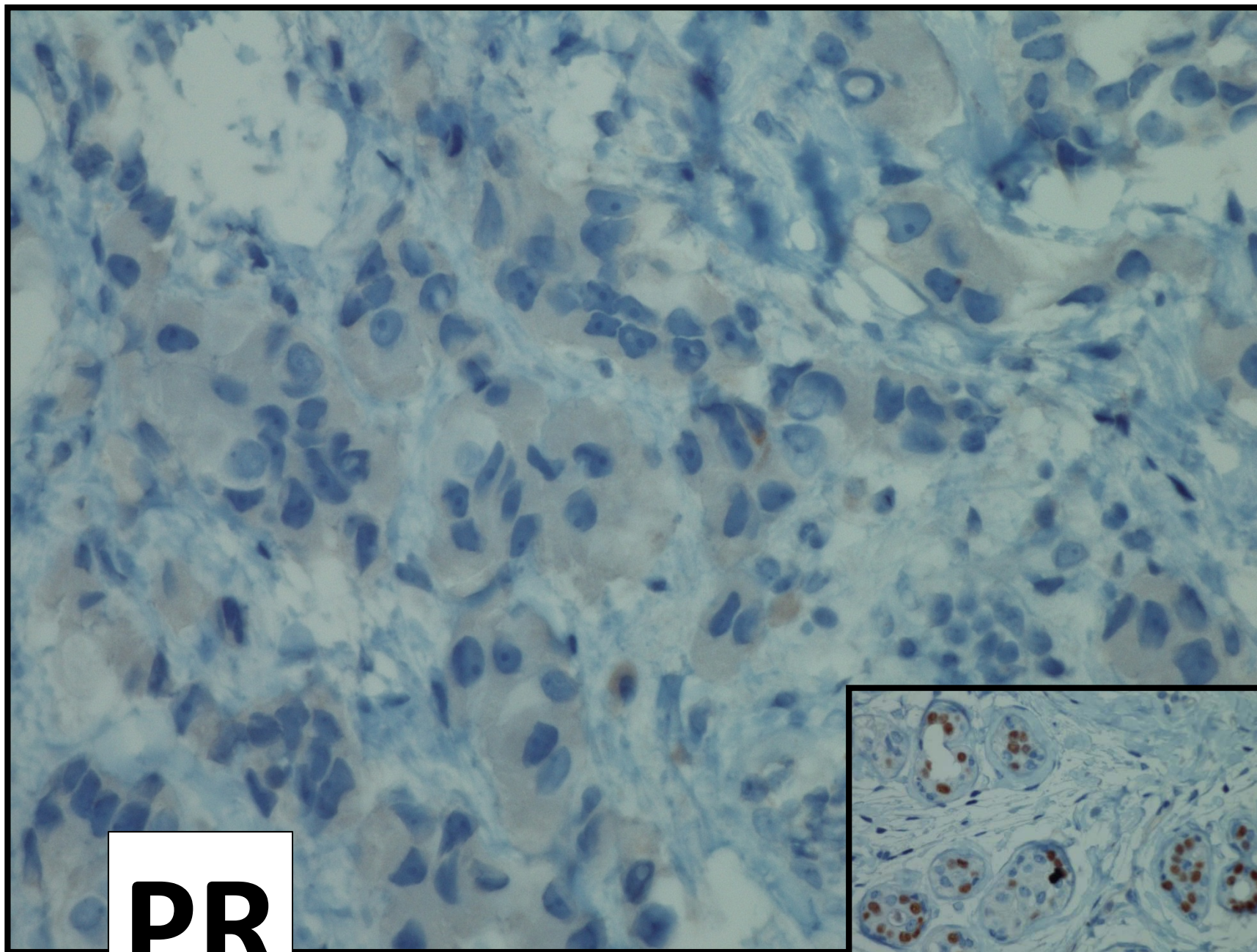
?



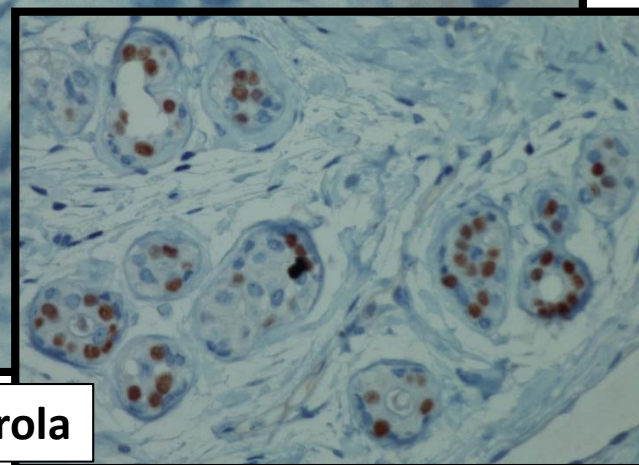
ER



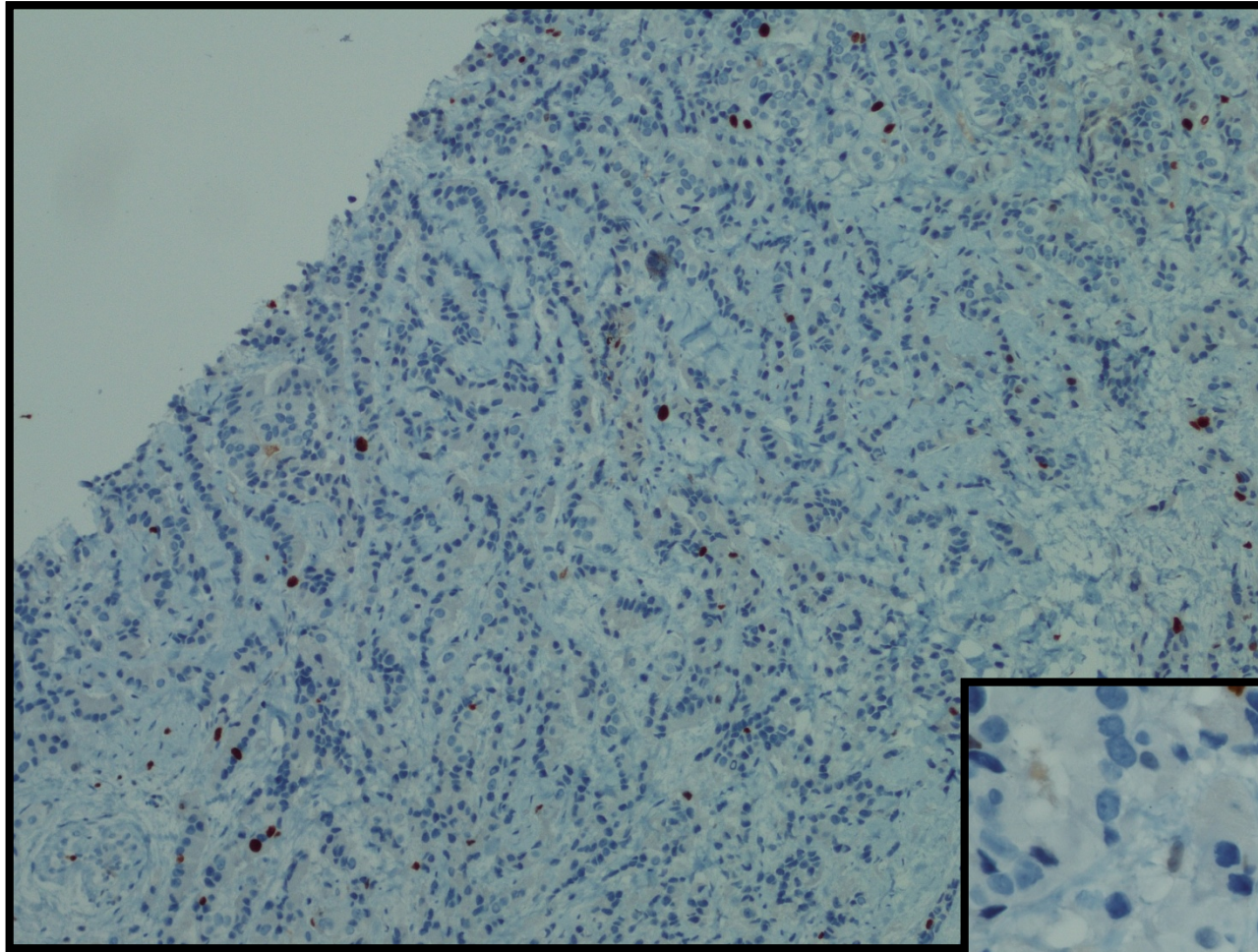
Pozitívna kontrola



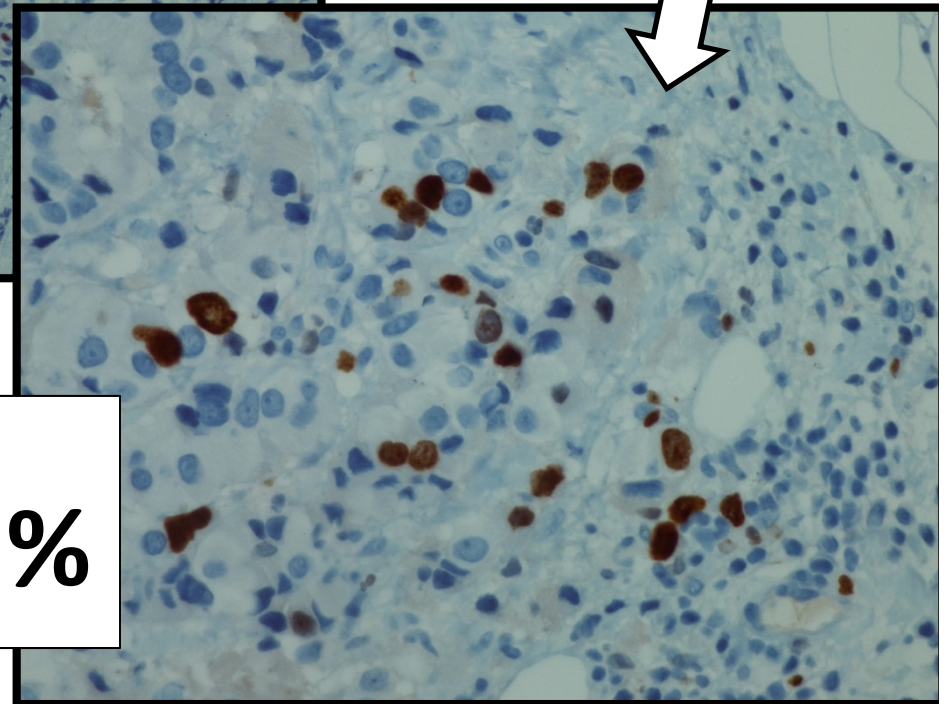
PR



Pozitívna kontrola

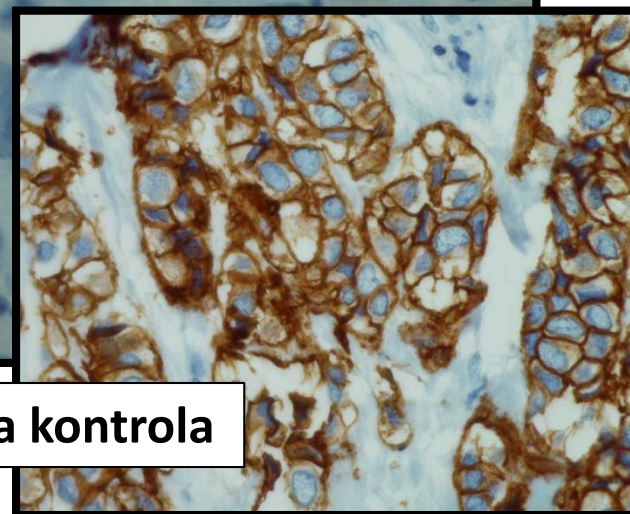
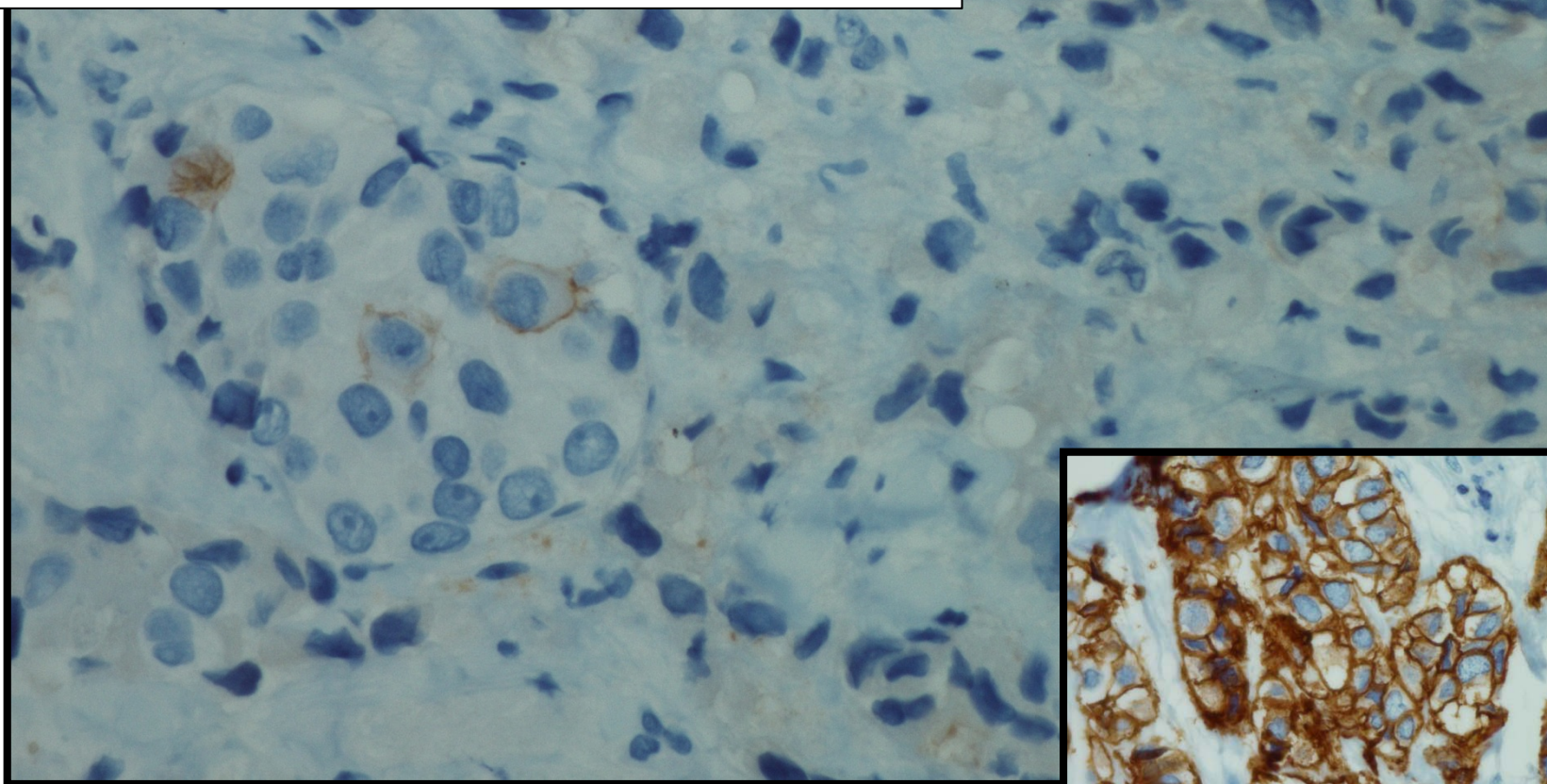


Hot spot

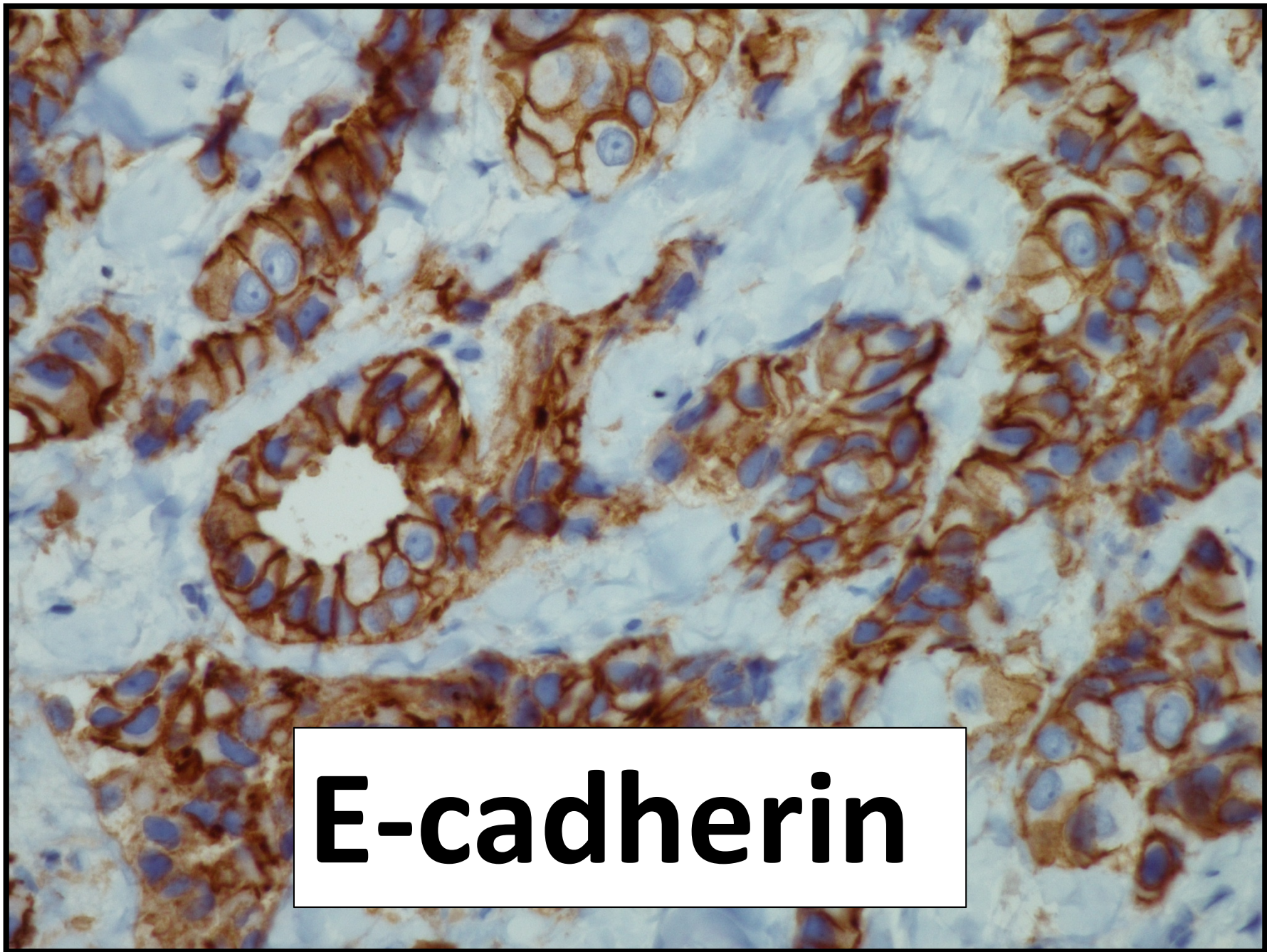


Ki-67 10 %

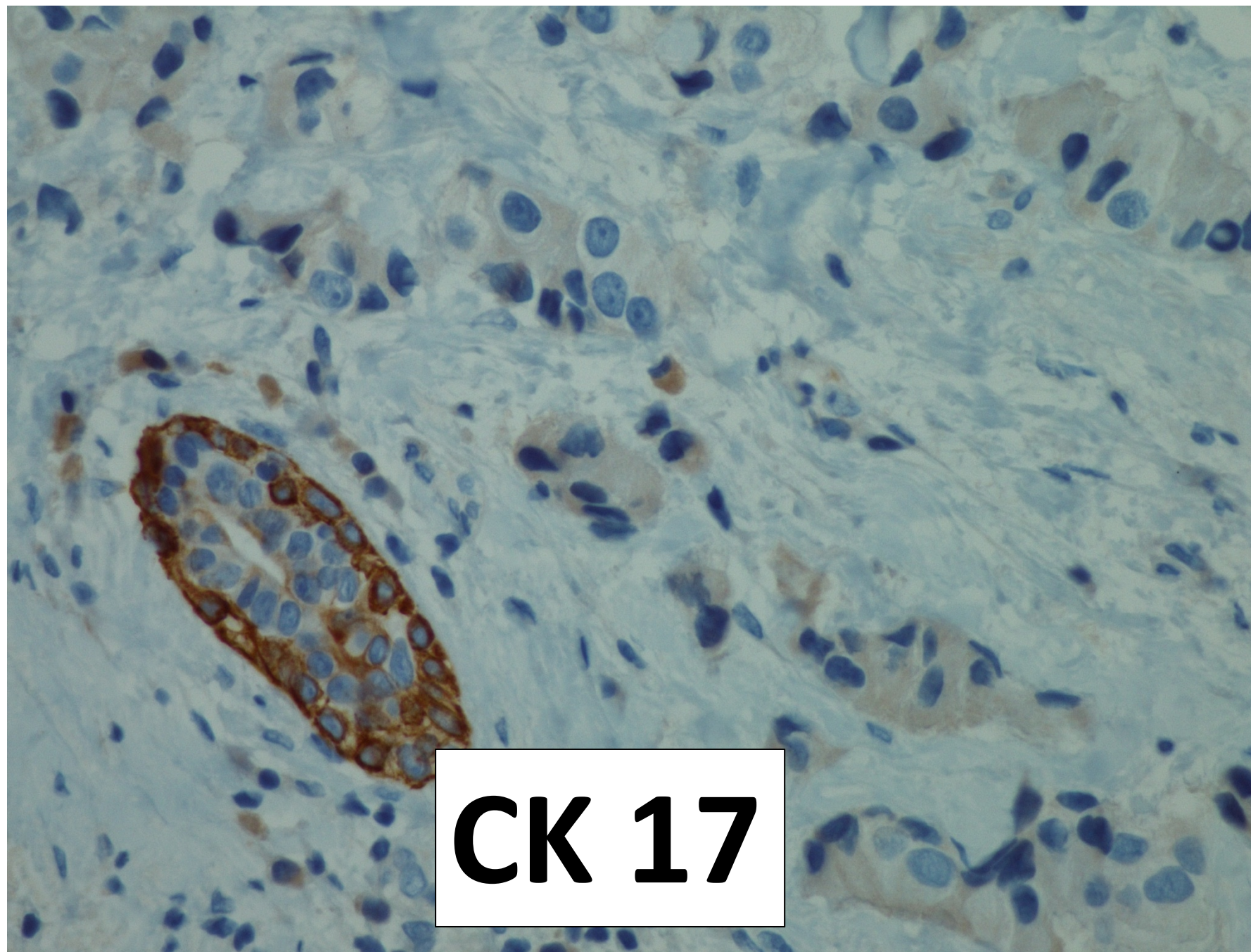
HER2 – score 0



Pozitívna kontrola



E-cadherin



CK 17

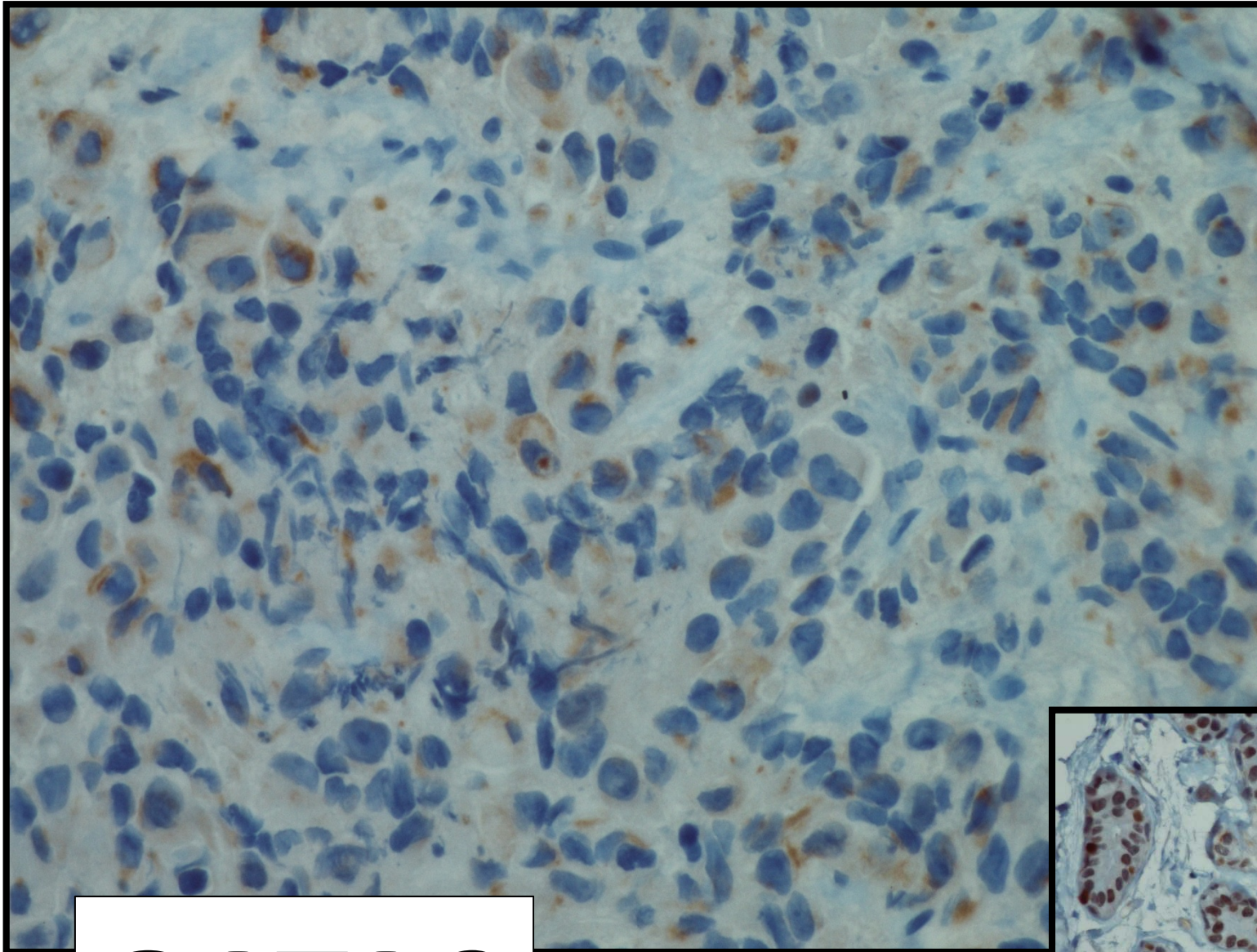
Tumor / karcinóm (?)

...triple negative...

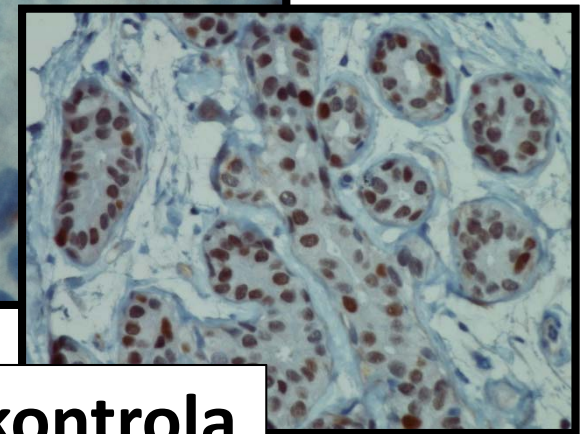
... „non basaloid“...

...low Ki-67...

?



GATA3

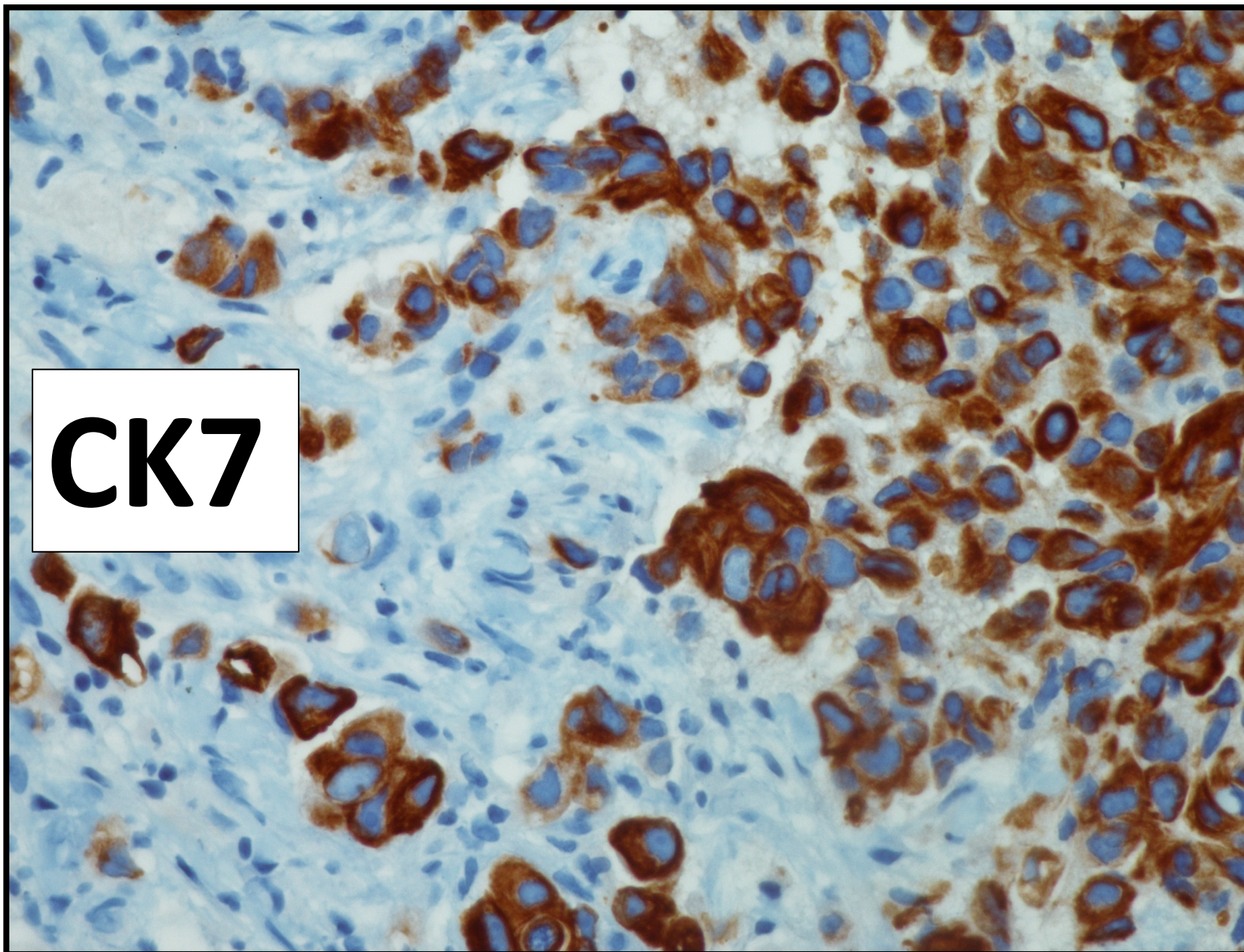


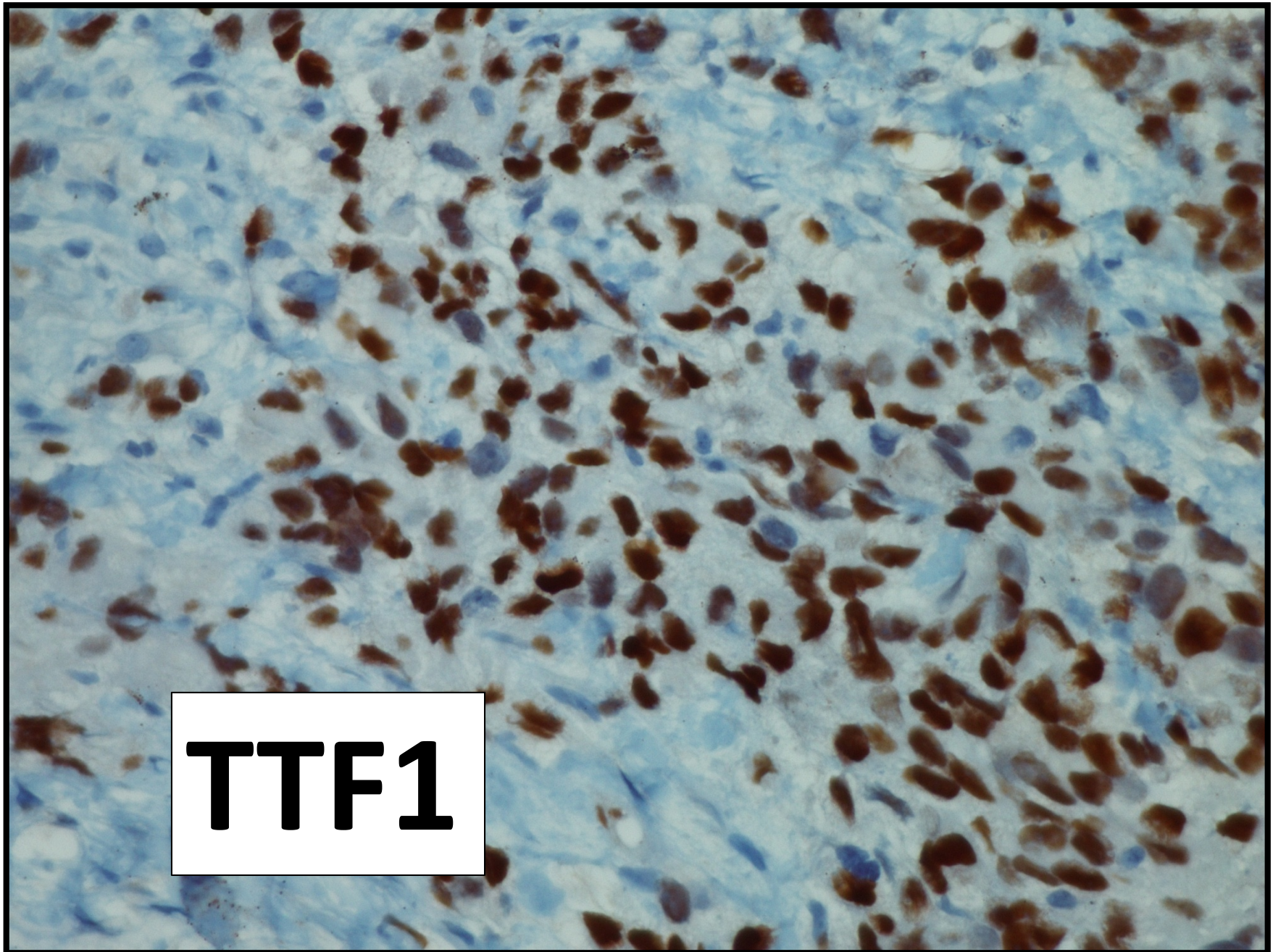
Pozitívna kontrola

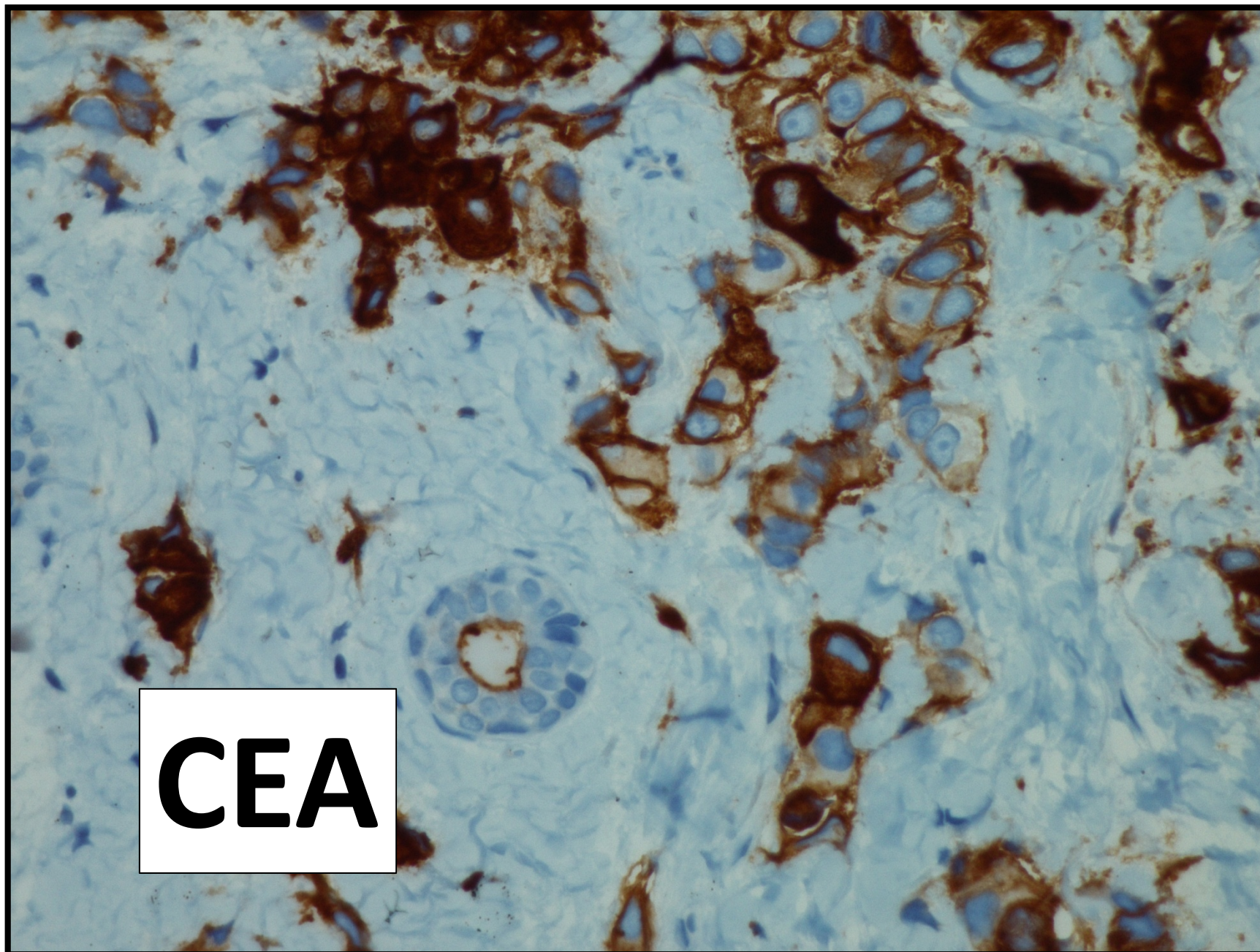
?

mammárny karcinóm to asi
nebude

CK7

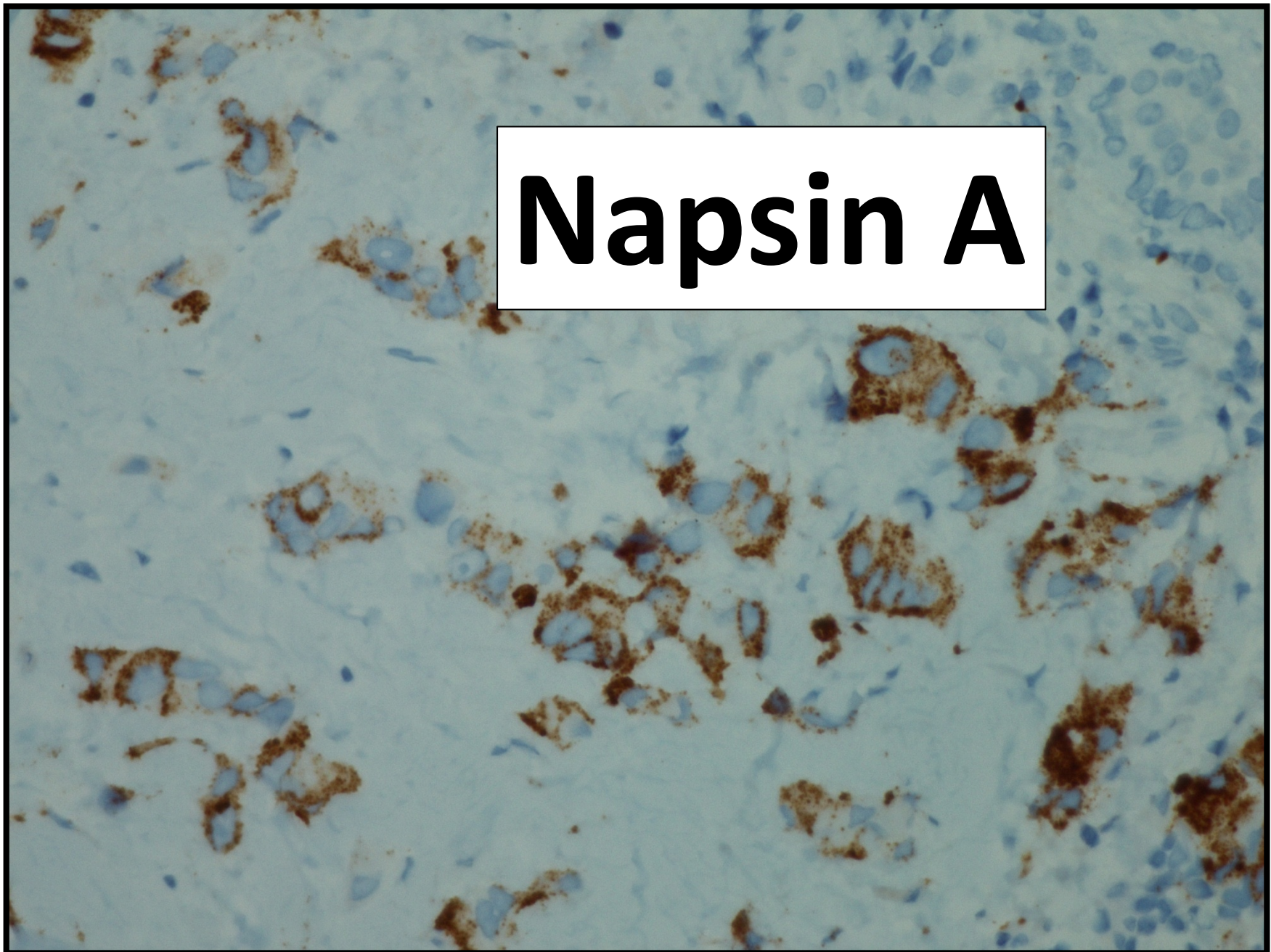


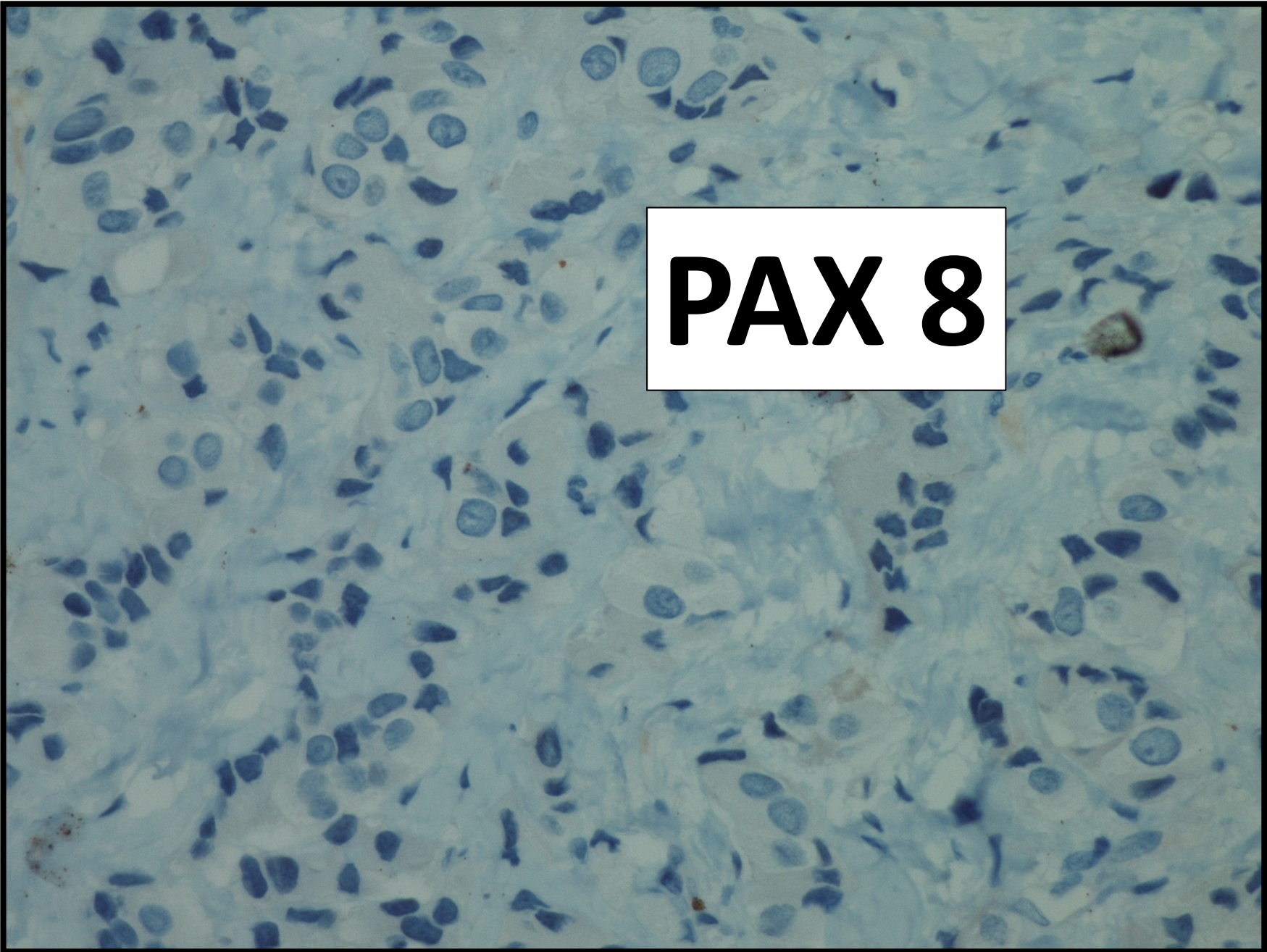




CEA

Napsin A

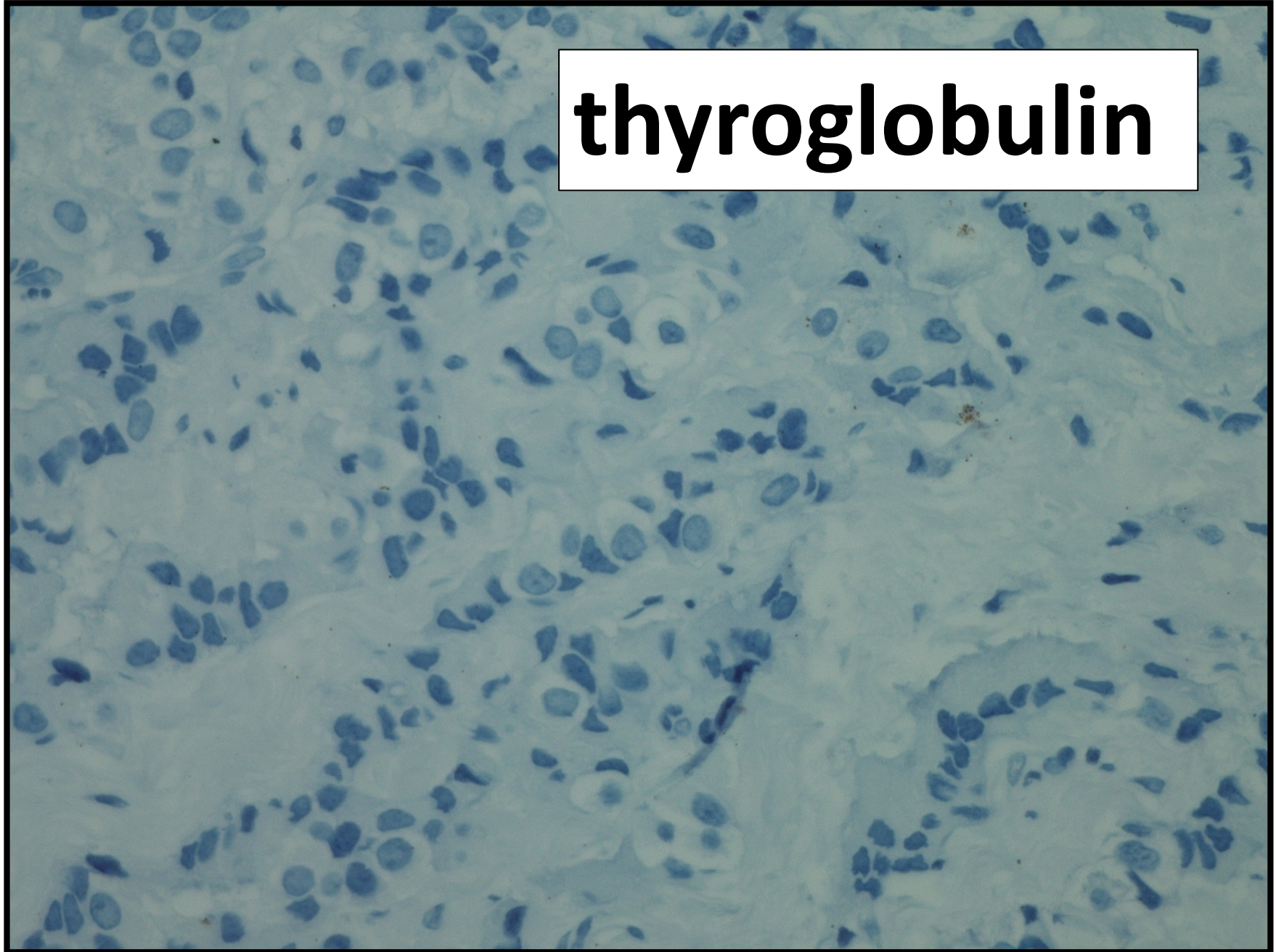




PAX 8

A microscopic image of tissue, likely a histological section, showing numerous cells with blue-stained nuclei. The cells are densely packed and exhibit various shapes, including some with prominent nucleoli. The background is a light blue, suggesting a counterstain. A white rectangular box with a black border is overlaid on the right side of the image, containing the text "PAX 8" in bold black font.

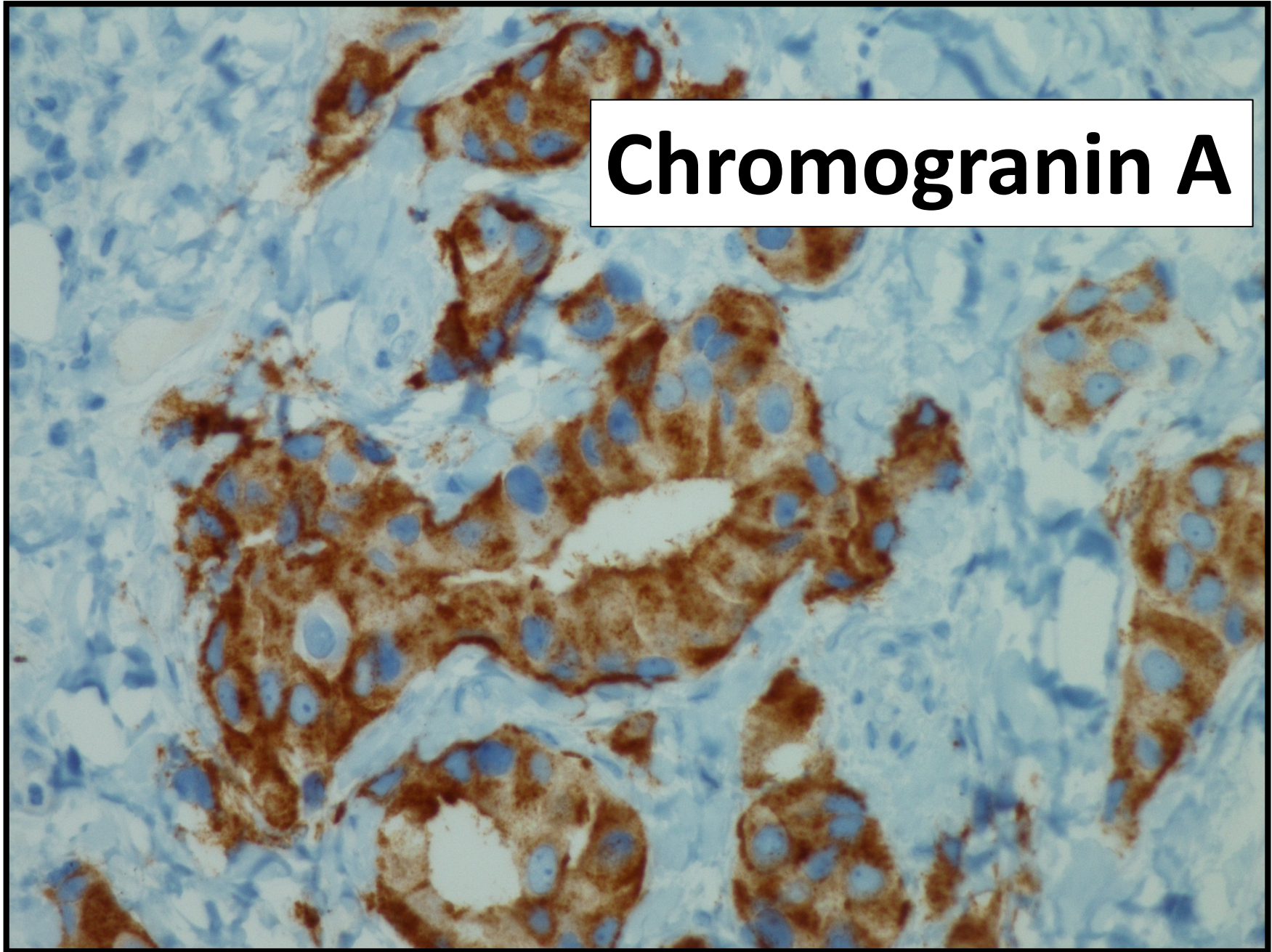
thyroglobulin

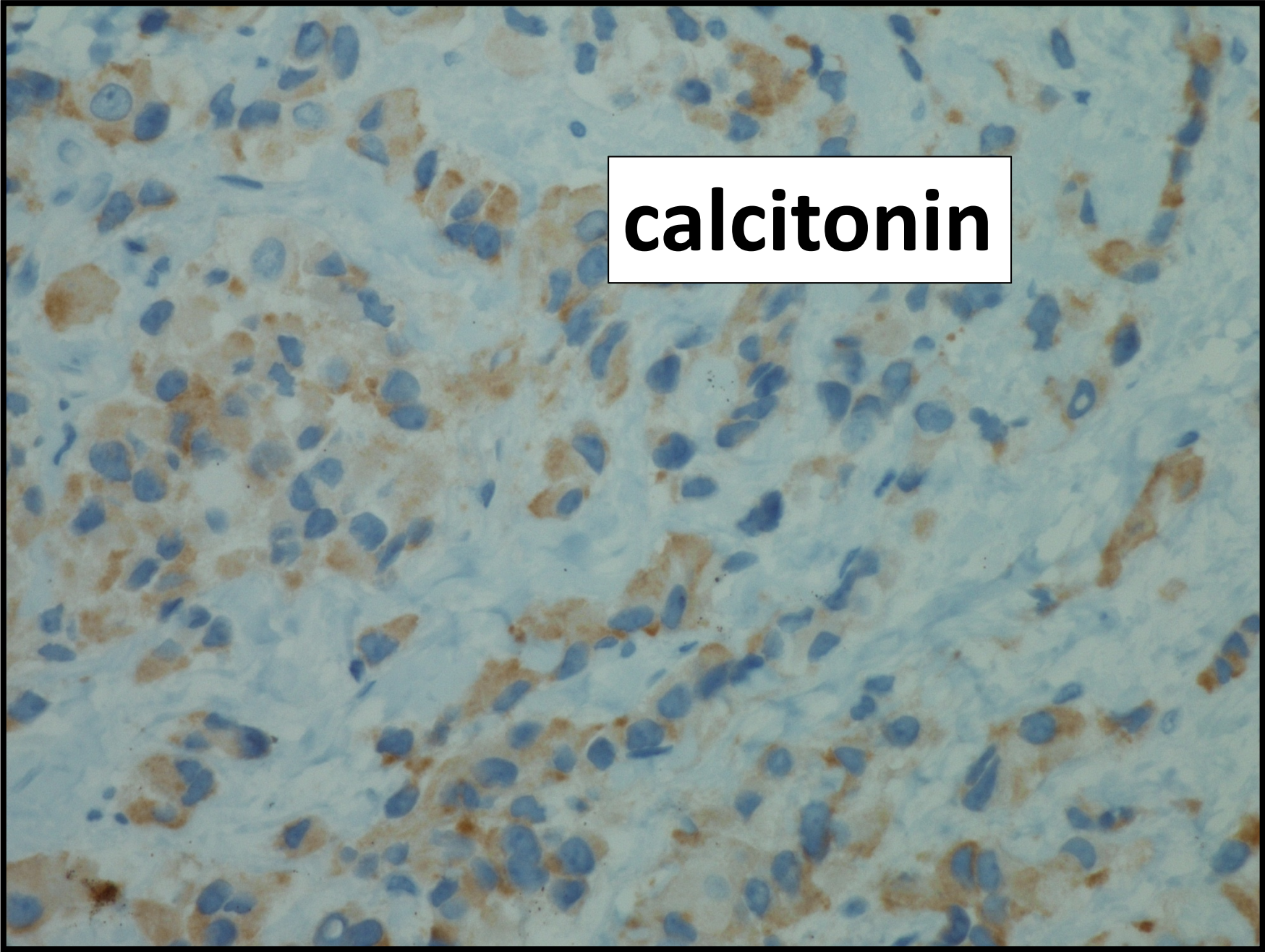


.....ešte budú 2 imuná

.....?

Chromogranin A

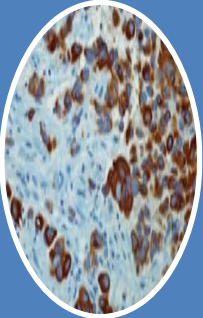
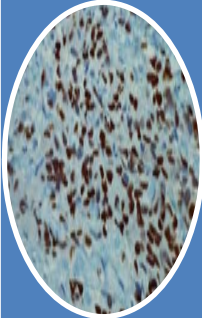
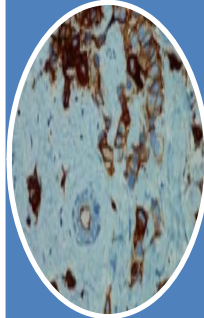
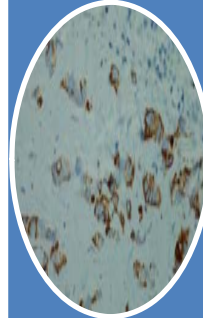
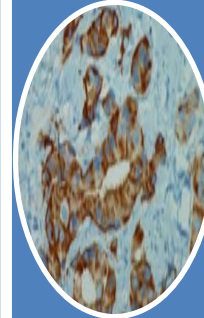
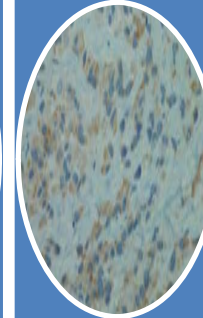
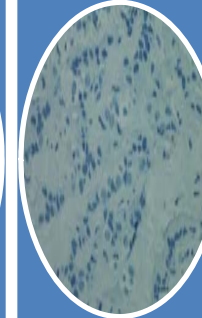
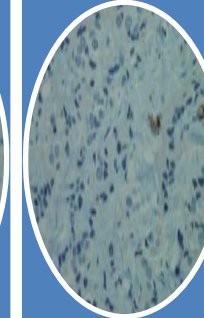




calcitonin

This is a histological slide showing immunohistochemical staining for calcitonin. The tissue is stained with hematoxylin and eosin (H&E), resulting in blue nuclei and pink cytoplasm/extracellular matrix. The calcitonin staining is indicated by brownish-yellow deposits, which are scattered throughout the tissue, primarily around the nuclei. A white rectangular box with a black border is superimposed on the right side of the slide, containing the word "calcitonin" in bold black text.

?

							
CK7	TTF1	CEA	Napsin	CHRO	CALCIT	TGB	PAX8
+	+	+	+	+	+	-	-

Zhrnutie bioptického záveru

- **CCB pravého prsníka:**
- Sekundárna malígna nádorová infiltrácia
pľúcny adenokarcinómom s prejavmi
neuroendokrinnej diferenciácie
- ***Poznámka:***
- *Dovoľujeme si doporučiť i prípadné vylúčenie
MTS medulárneho karcinómu štítnej žľazy*

Telefón od klinika



Gratulujem, ste dobrí 😊; pacientka sa už

xxxxxxx rokov lieči na CA pľúc

Mohli sme to tam napísať, ušetrili by sme Vám prácu ☹

ÚPA v Martine

- Negatívny nález EGFR - bez mutácie (WT/WT) vo vyšetrených exónoch: 18, 19 ,20 a 21.
- Negatívny výsledok. ALK lokus (2p23) je bez prestavby.
- Nehodnotiteľný stav ROS1 expresie z dôvodu nedostatku nádorových buniek v preparáte

Anamnéza od onkológa

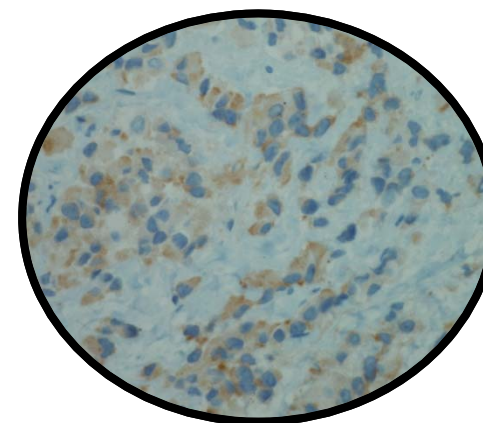
- **2006**
- G1 pulmonary adenoCA ; pracovisko a lokalita biopsie ????
- **2013**
- bronchoskopia:
- small cell lung CA (TTF1+, syn+, chro+, CD56-)
- **2016**
- PET CT:
- ložiská v prsníkoch (**prezentovaná core cut biopsia**), v axilách, v pankrease
- Nádorové markery: calcitonin v norme, CEA v norme, NSE: 31! (16,3)
- **Terapia:**
- konvenčná th ako **na adenoCA wild type**; onkológovia to berú ako adenoCA „s rysmi dediferenciácie“

Anamnéza od onkológa

Pacientka je
NEFAJČIARKA

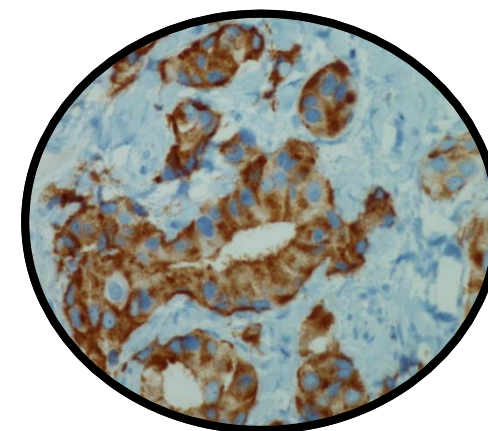
DISKUSIA

Calcitonin +



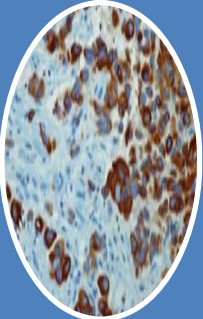
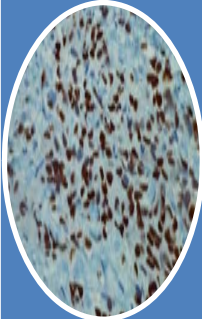
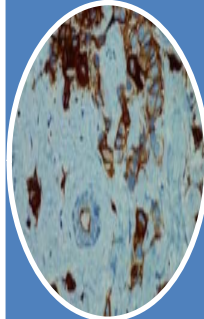
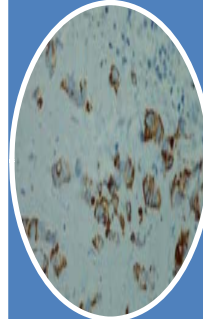
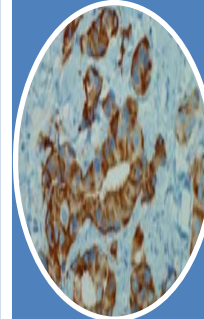
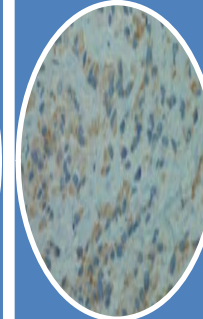
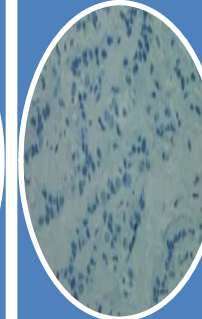
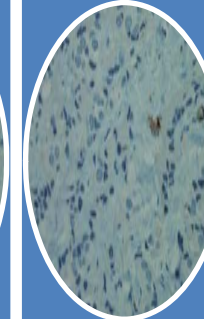
Keby nebolo ...

Chromogranin A+



...bol by to bol býval **ĽAHKÝ pľúcny adenoCA**

DISKUSIA

							
CK7	TTF1	CEA	Napsin	CHRO	CALCIT	TGB	PAX8
+	+	+	+	+	+	-	-



DISKUSIA

DF DX

- Medullary thyroid CA
- Pulmonary adenoCA
- Pulmonary neuroendocrine CA / Tumor

Medullary thyroid CA

Prečo áno

Mikroskop

- „najviac zodpovedajúci“ IHC profil (CK7+++, TTF1+++, CEA+++, CHRO++, calcitonin+, *PAX8*-)
- Môže vyzeráť hociako

Prečo nie

Mikroskop

- Calcitonin farbí difúzne, ale slabo
- Histomorfológia netypická pre medulárny CA ŠŽ

Klinika

- Normálne sérové hladiny kalcitonínu a CEA
- Anamnéza CA pľúc
- Negatívny nález na ŠŽ

Medullary thyroid CA & PAX8

PAX8 - transkripčný faktor - embryogenéza

- Thyroidey
- Mülleriánskych pohlavných štruktúr
- Obličiek

PAX8+ novotvary

- Thyreoidea (folikulárne)
- Ovária, uterus
- RCC, renálny onkocytóm
- Tymómy / tymické CA

- *Neuroendokrinné TU – hlavne GIT*
- *Lymfómy*
- *Nefrogénny adenóm*
- *+/- parathyroid*

Medullary thyroid CA & PAX8

- Medullary thyroid carcinoma 0/8 (**0%**)
- „***always negative*** in medullary carcinoma“

Modern Pathology (2011) **24**, 751–764; doi:10.1038/modpathol.2011.3; published online 11 February 2011

- Medullary carcinomas were reported to be ***PAX8 nonreactive with rare exceptions***: positive in 75% (6 of 8, most 1†)46 and 41% (13 of 32)54 of cases.

Arch Pathol Lab Med—Vol 139, January 2015 Immunohistochemistry in Thyroid Pathology—Liu & Lin

PAX8 – negatívny novotvar

Carcinoid (typical + atypical; pulmonary)

Prečo áno

Mikroskop

- CHRO++
- Calcitonin+
- Ki67 cca na úrovni atypical carcinoid TU
- **Klinika**
- V sére mierne zvýšené len NSE

Prečo nie

Mikroskop

- Histomorfológia je „non-neuroendokrinná“ – nie je zrnitý chromatín, sú tu nápadné jadierka
- CEA+++, Napsin A+++

Pulmonary neuroendocrine CA (small cell + large cell)

Prečo áno

Mikroskop

- CHRO++
- Calcitonin+

Klinika

- SCLC v bronchoskopii (2013)
- V sére mierne zvýšené len NSE

Prečo nie

Mikroskop

- Histomorfológia je „non-neuroendokrinná“ – nie je zrnitý chromatín, sú tu nápadné jadierka (SCLC); bez palisádovania, roziet....(LCNEC)
- CEA+++, Napsin A+++
- Ki-67 cca 10 %

Klinika

- Dlhé prežívanie
- Nefajčiarka

Pulmonary adenoCA

Prečo áno

Mikroskop

- Zodpovedajúca histomorfológia
- Zodpovedajúci základný IHC profil (TTF1+, CEA+, Napsin A+)

Klinika

- Pľúcny adenoCA v 2006
- Dlhé prežívanie
- Nefajčiarka

Prečo nie

Mikroskop

- CHRO++, calcitonin+

Klinika

- V sére len mierne zvýšené NSE
- SCLC v 2013

NSCLC with neuroendocrine differentiation (WHO 2015)

- 10 - 20 % NSCLC (SCC, adenoCA, LCC) bez neuroendokrinnej morfológie imunohistochemicky a/alebo elektrón – mikroskopicky vykazuje neuroendokrinnú diferenciáciu
- Odporúčanie typizovať ich ako SCC, adenoCA, LCC s komentárom ohľadom neuroendokrinnej diferenciácie
- Klinický význam (prežívanie, terapia) je nejasný

Napsin A & neuroendocrine TU

- [Am J Clin Pathol](#). 2014 Sep;142(3):320-4. doi: 10.1309/AJCPGA0IU8BHQEZ.
 - **Evaluation of napsin A, TTF-1, p63, p40, and CK5/6 immunohistochemical stains in pulmonary neuroendocrine tumors.**
 - [Zhang C](#)¹, [Schmidt LA](#)², [Hatanaka K](#)³, [Thomas D](#)², [Lagstein A](#)², [Myers JL](#)².
-
- „... **Napsin A**, p63, p40, and CK5/6 were **consistently negative in neuroendocrine tumors...**“
 - „... *These tumors are **consistently negative for napsin A**, which helps to differentiate them from adenocarcinomas...*“

Napsin A & neuroendocrine TU

- *Am J Clin Pathol* 2013;139:160-166
 - ***Napsin A Expression in Primary Mucin-Producing Adenocarcinomas of the Lung***
 - ***An Immunohistochemical Study***
 - Jeffrey Wu, Peiguo G. Chu MDPH, Zhong Jiang MD, Sean K. Lau MDDOI: <http://dx.doi.org/10.1309/AJCP62WJUAMSZCOM>160-166First published online: 1 February 2013
-

„... In contrast to adenocarcinomas, other histologic types of lung neoplasms, including squamous cell carcinoma and neuroendocrine tumors (carcinoid, atypical carcinoid, small cell carcinoma), have been shown to generally lack napsin A expression...”

pulmonary ADENO
VS
pulmonary NEURO

Pulmonárne adenoCA

- môžu exprimovať neuroendokrinné markery

Pulmonárne neuroendokrinné tumory

- „nemôžu“ exprimovať Napsin A



ĎAKUJEME ZA POZORNOST