

Karcinom prsu není jedna nemoc!

Novinky z oblasti histopatologické diagnostiky

Aleš Ryška

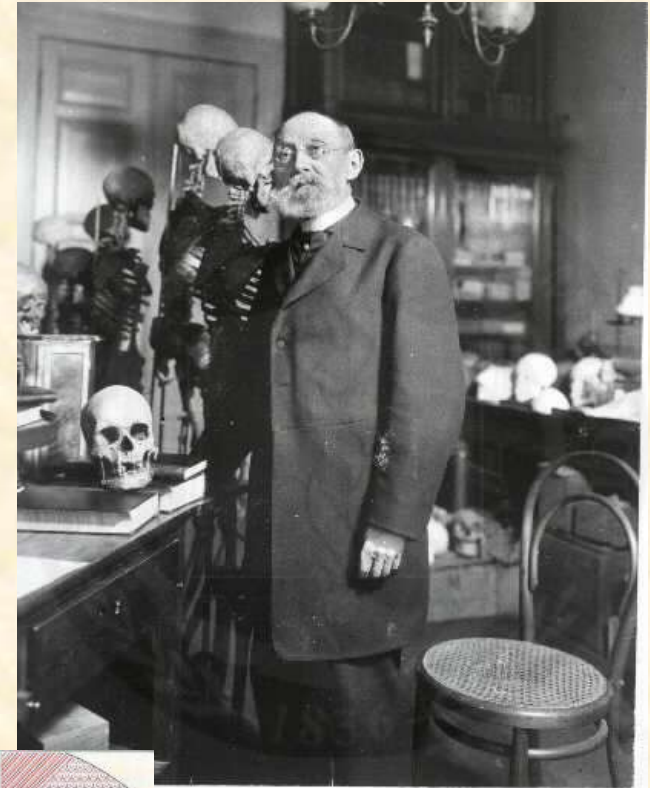
Fingerlandův ústav patologie
LF UK a FN Hradec Králové



Karel Rokitansky
(1804-1878)



Rudolf Virchow
(1821-1902)



Rudolf Virchow (1821-1902)



1843 promoce

1847 habilitace, založen Virchows Archiv

1848 epidemie skvrnitého tyfu

1849 odchod do Würzburgu



1856 Berlín, Charité

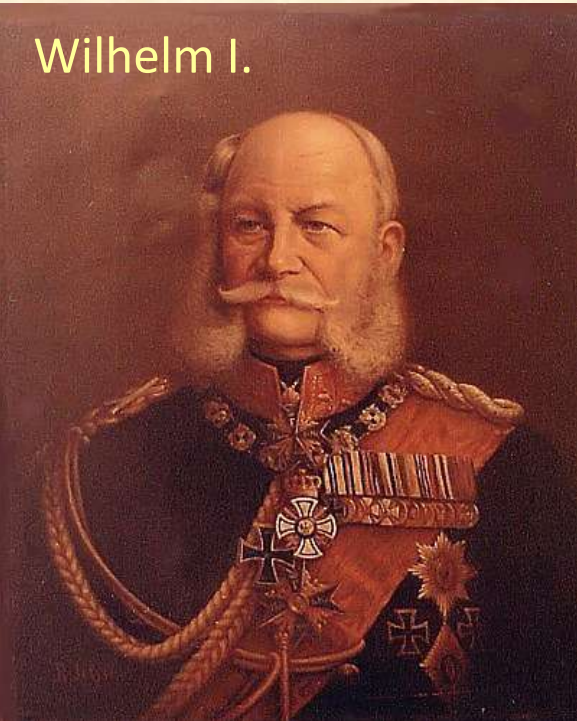
1858 Die Cellularpathologie

1859 člen berlínského zastupitelstva

1863 Die krankhaften Geschwülste



Wilhelm I.



Friedrich III



Victoria

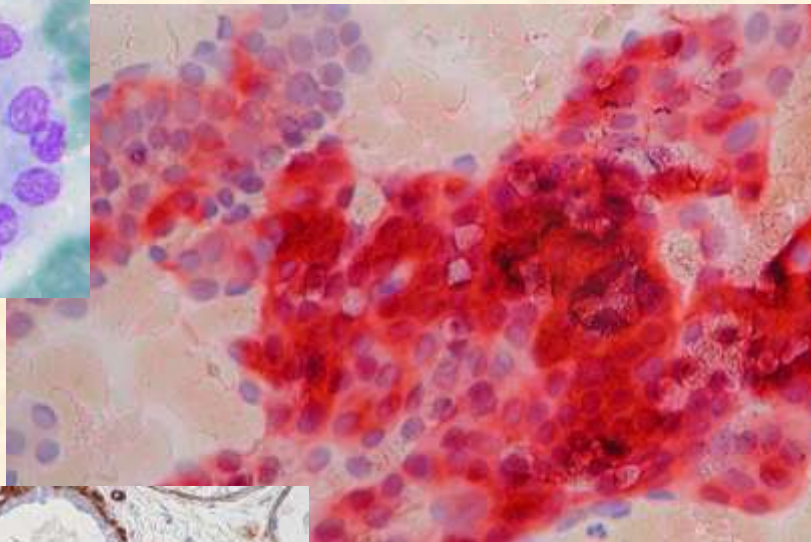
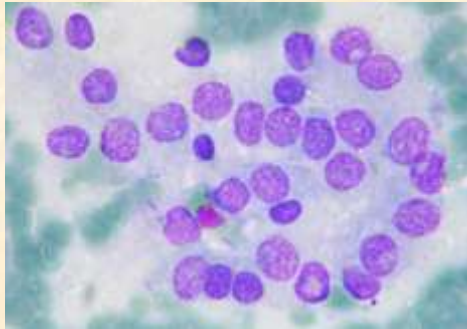


Wilhelm II.

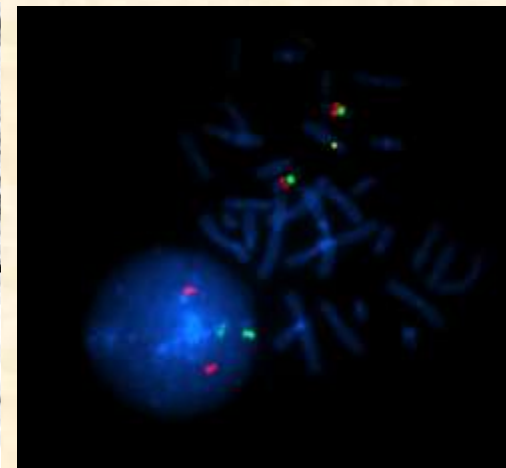
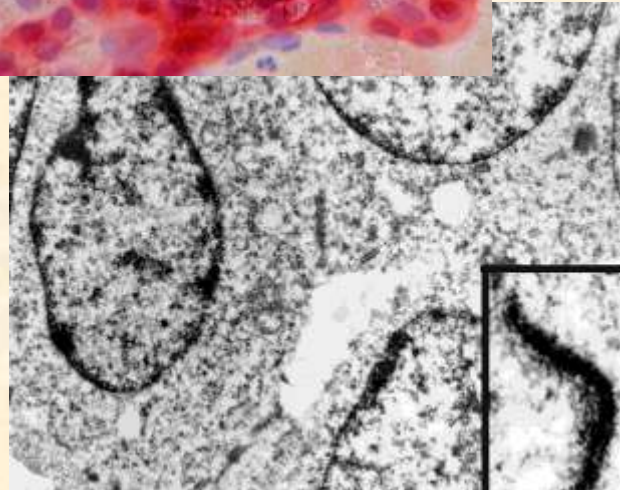
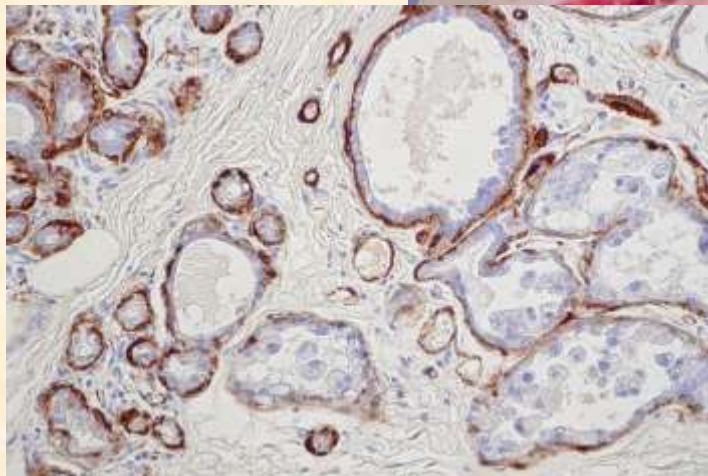


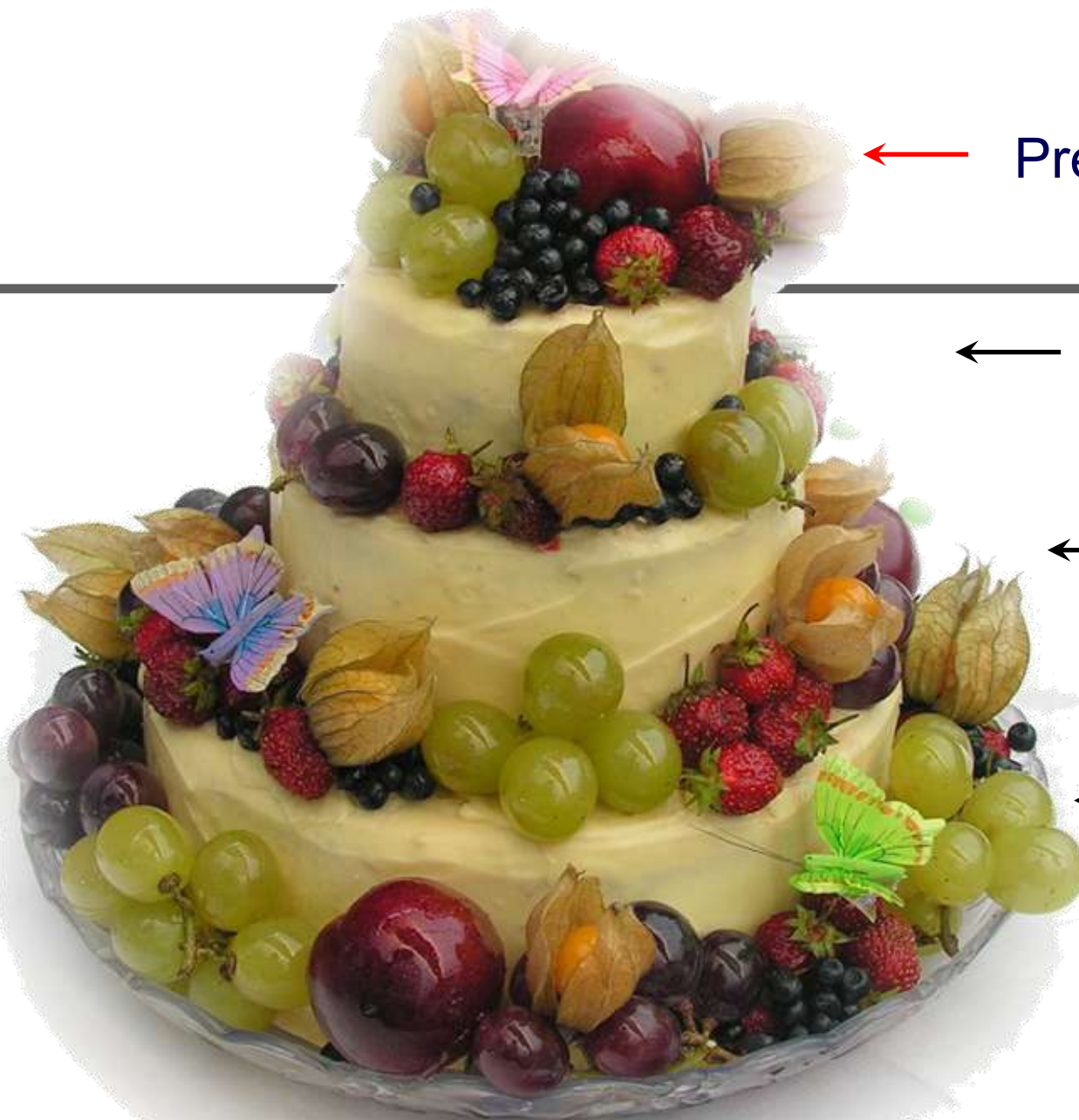
Rozvoj patologie ve 20. století

přesun od pitev k biopsiím
nové metody a jejich uplatnění:



- cytologie
- EM
- imunohistochemie
- cytogenetika
- průtoková cytometrie
- FISH, PCR
- proteomika



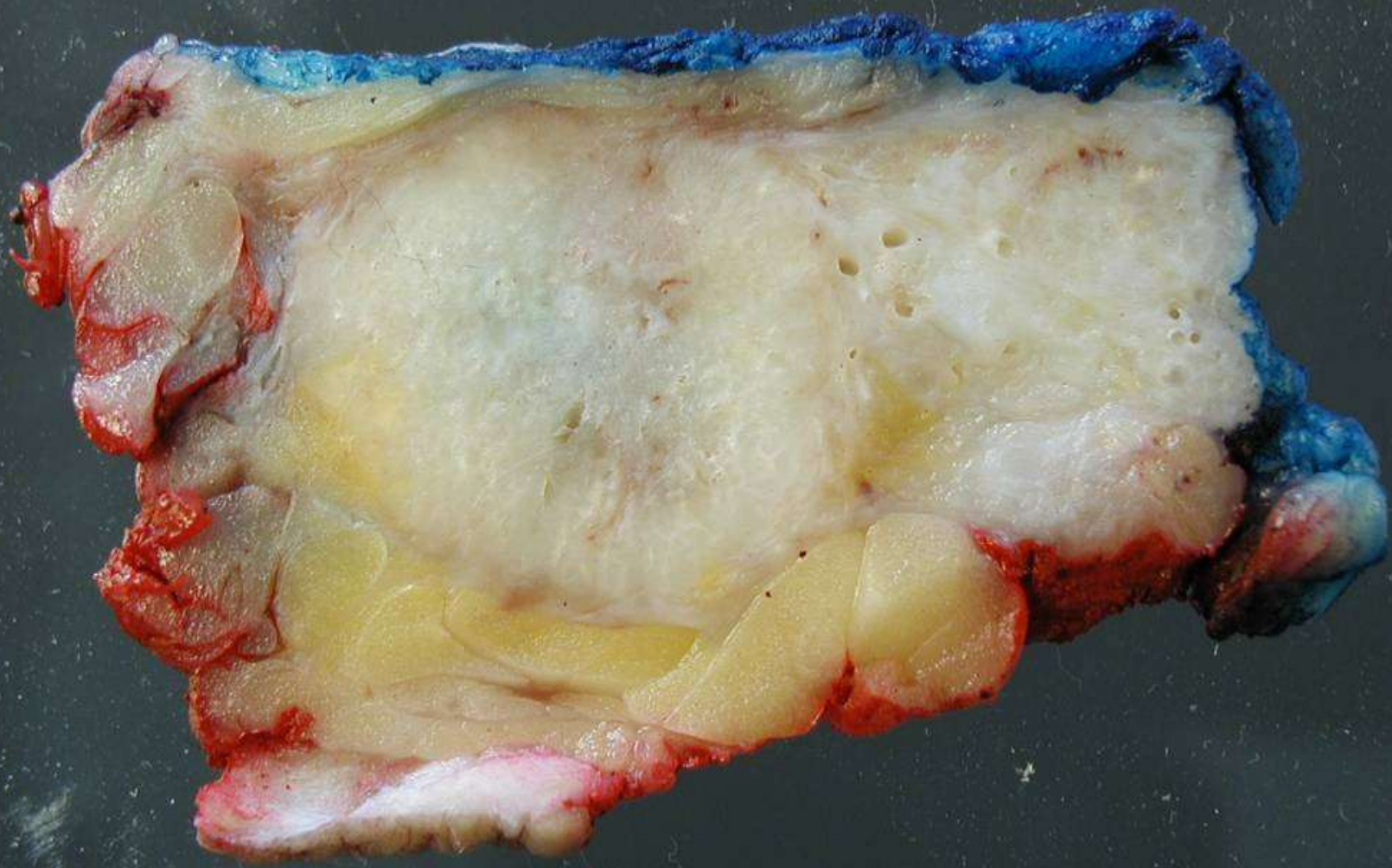


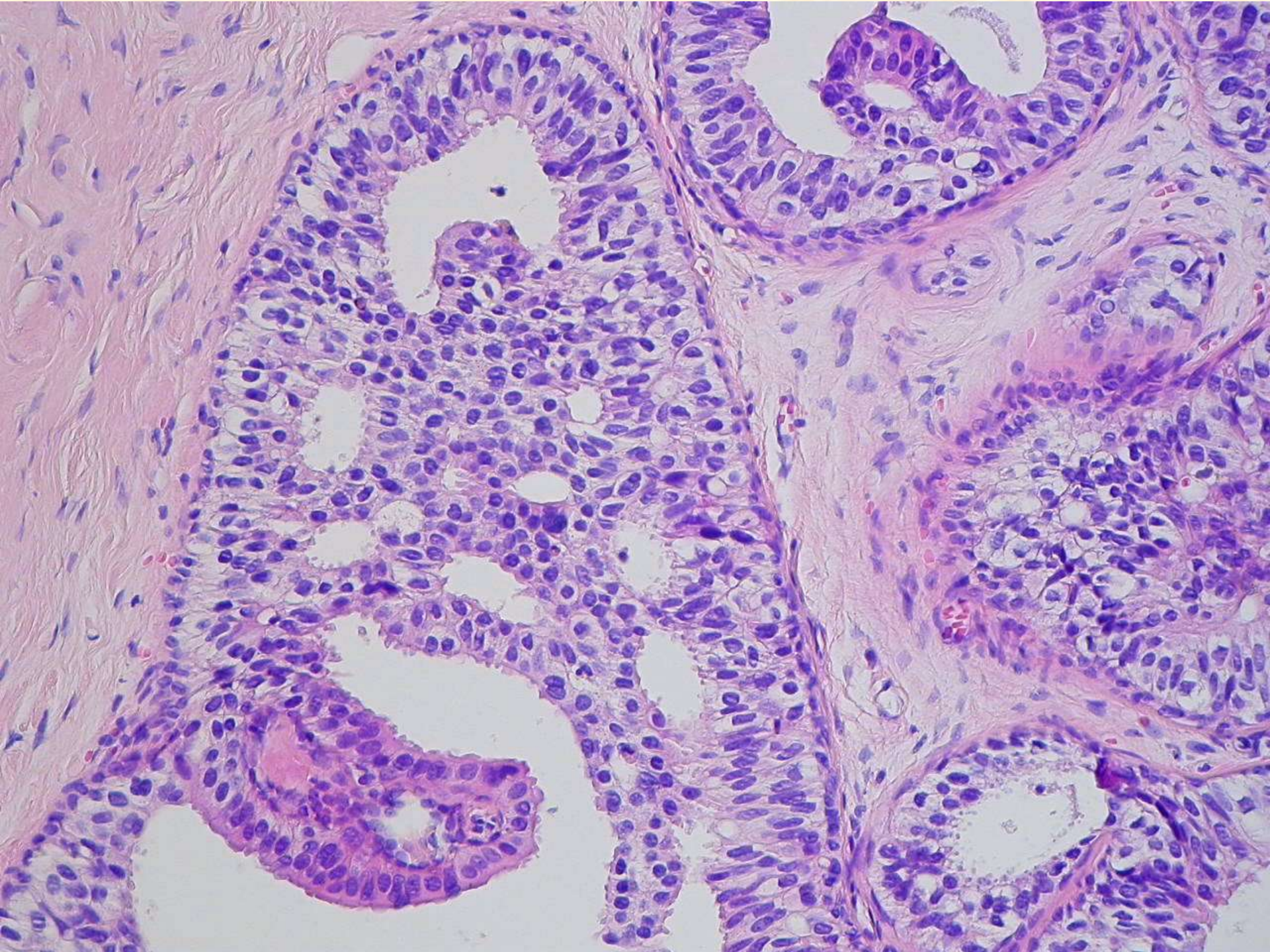
← Predikční faktory
(rating)

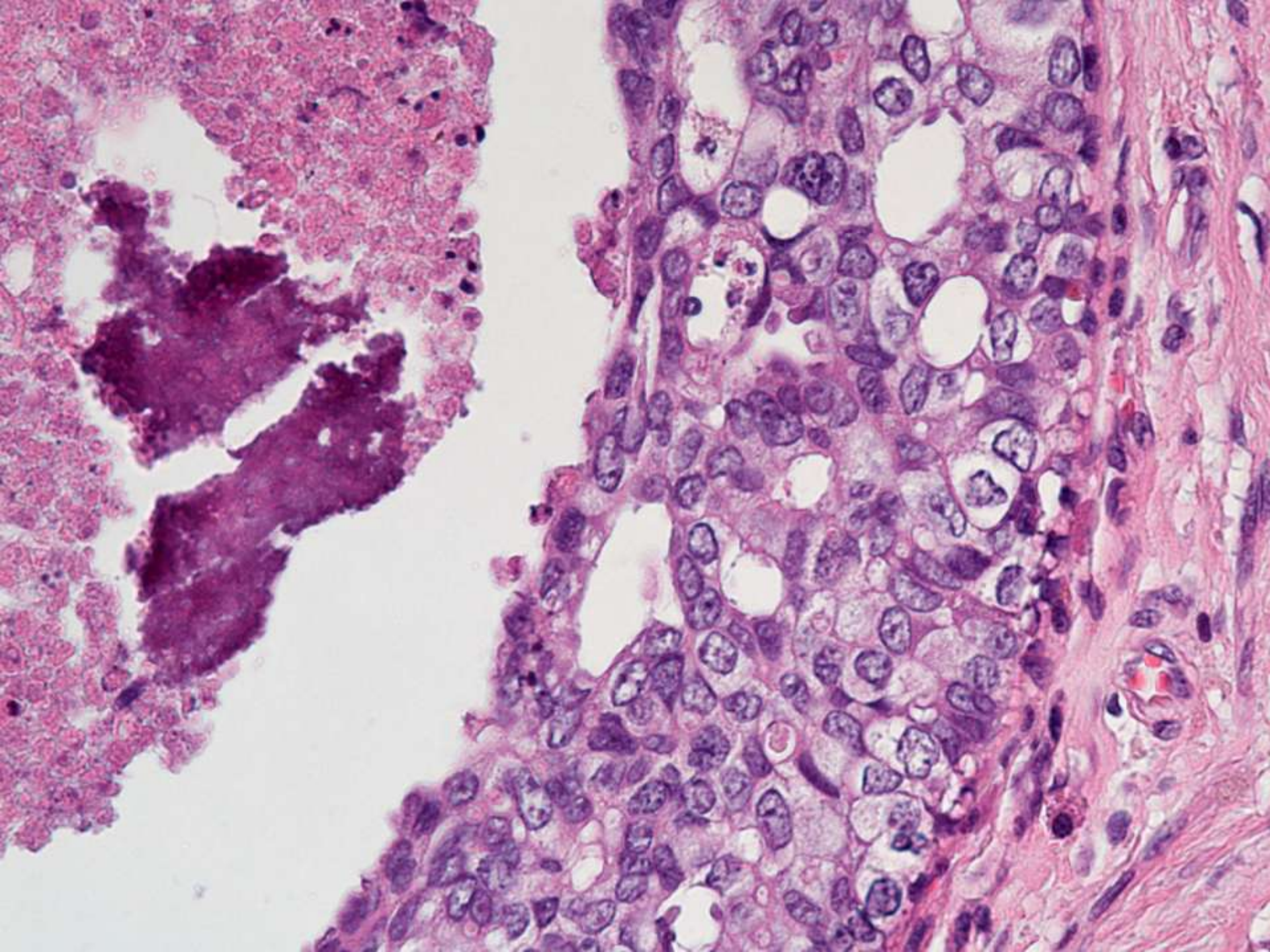
← Grade

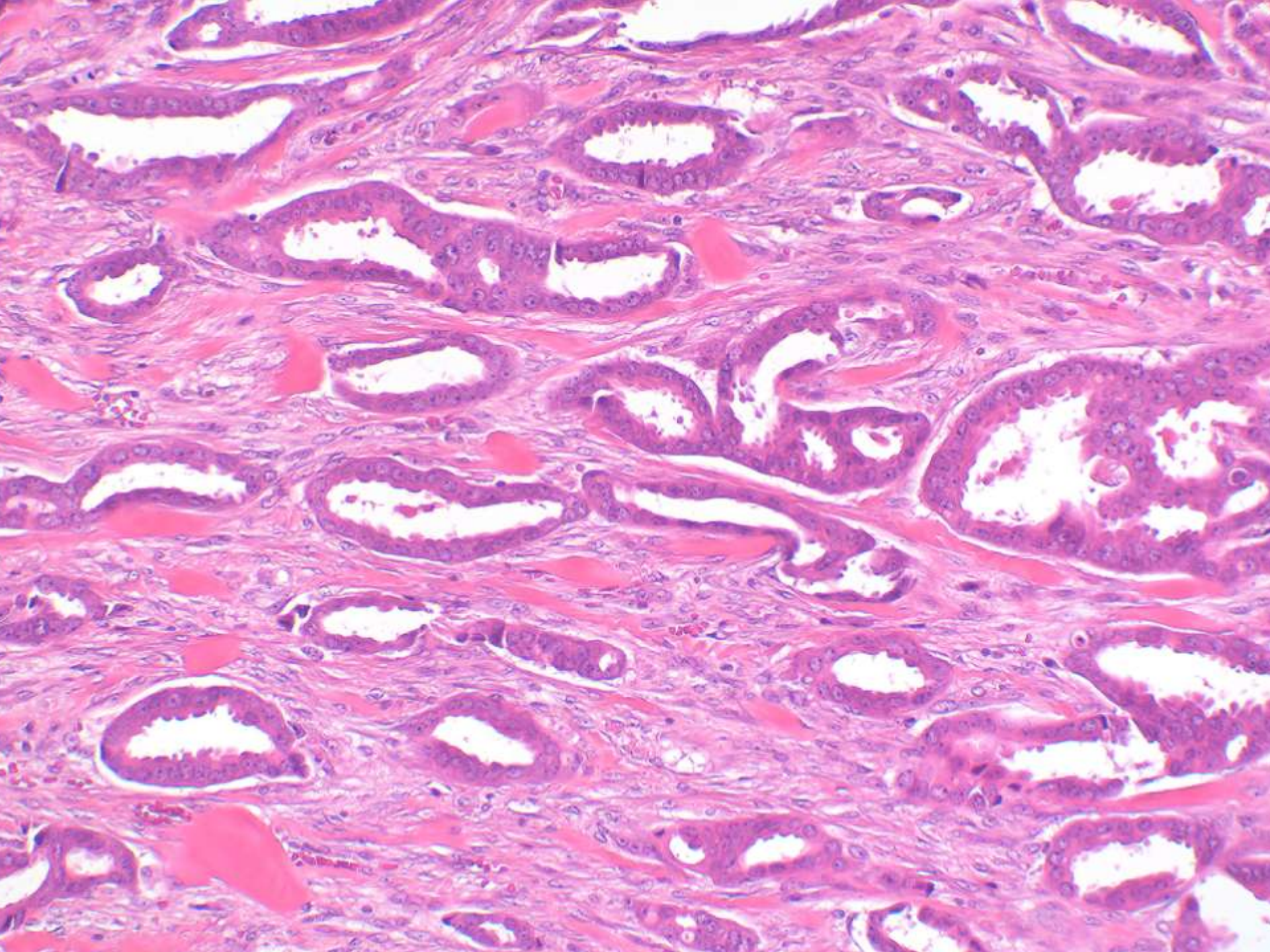
← Stage (TNM)

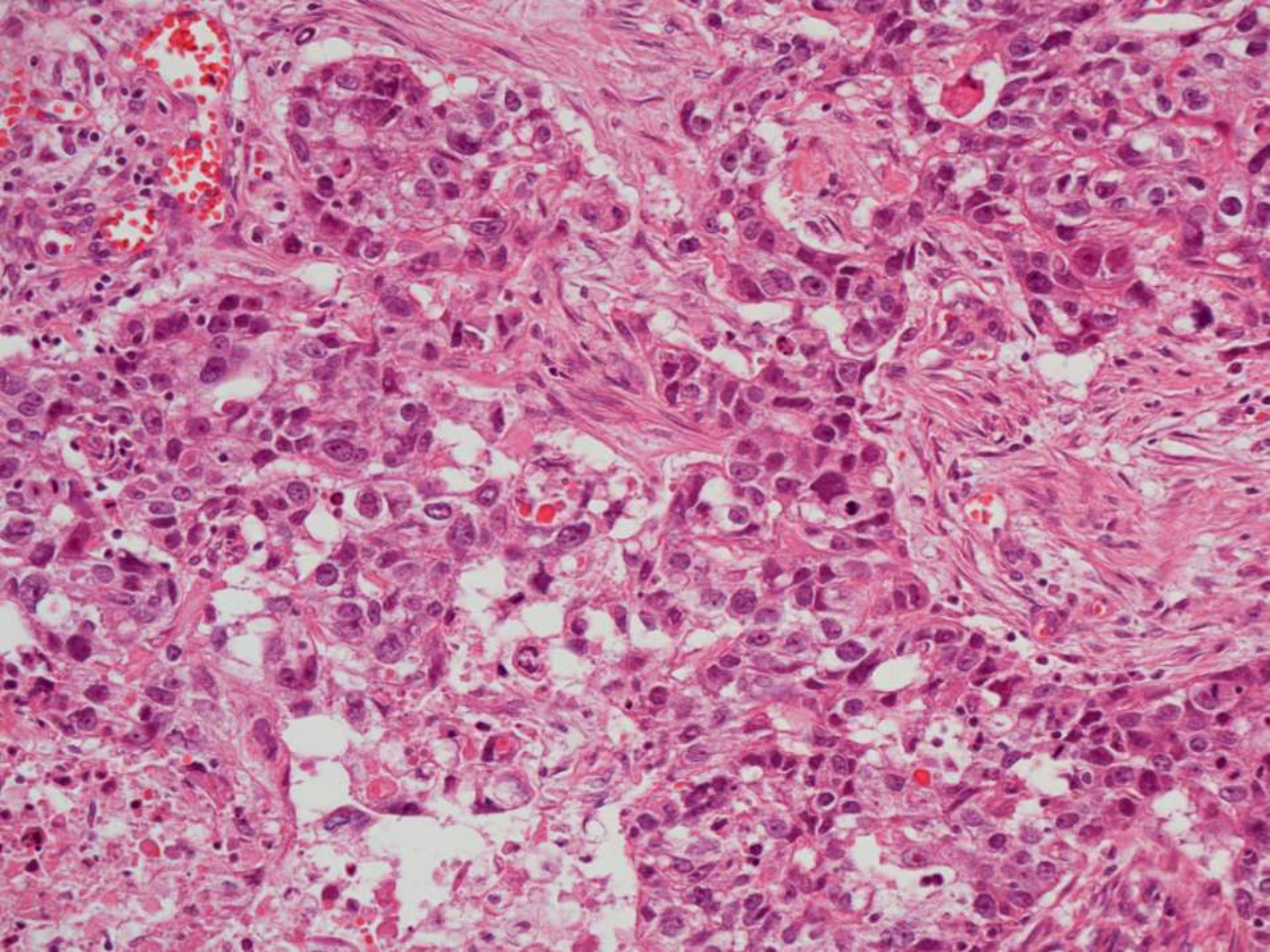
← Diagnóza

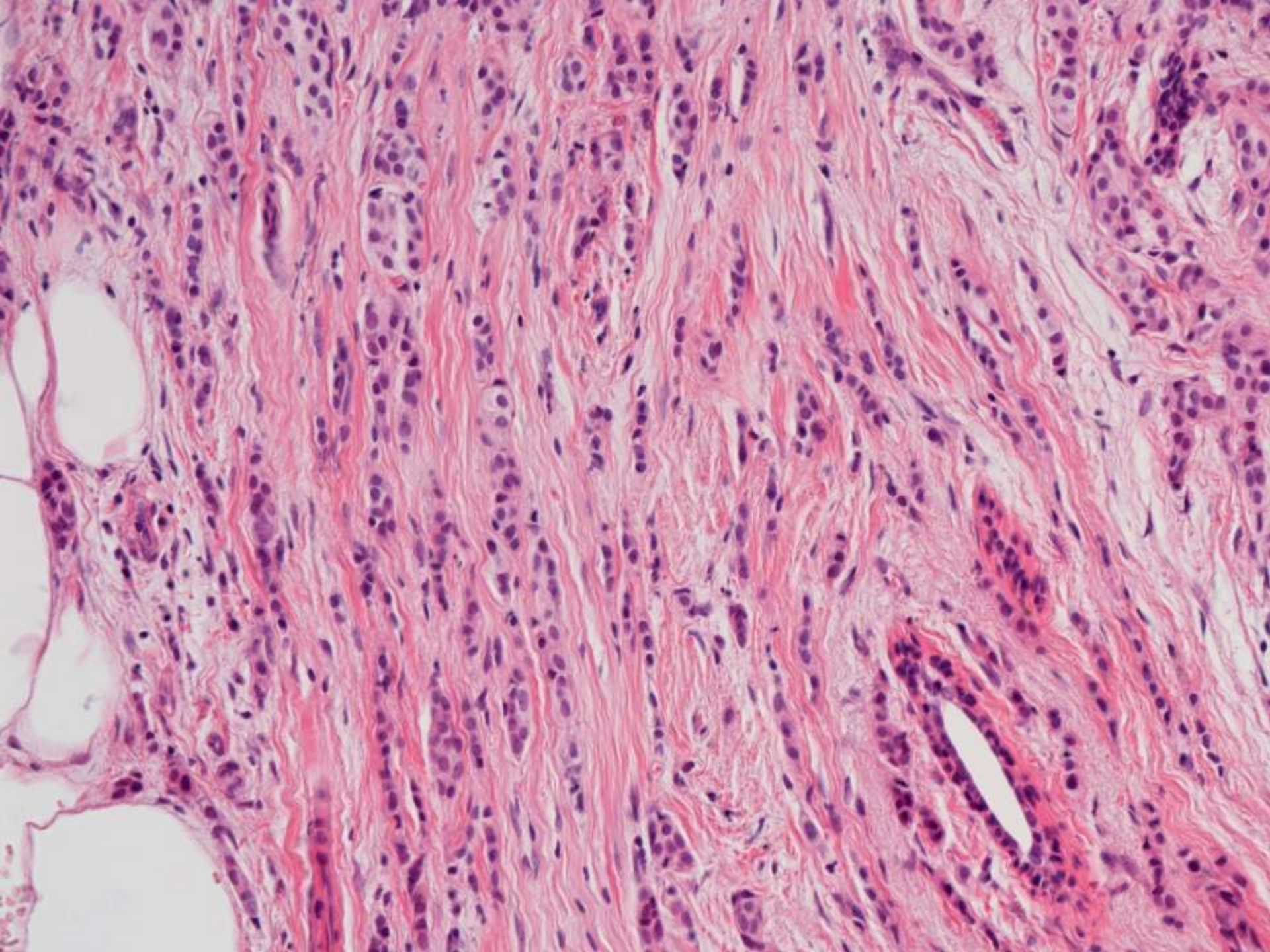


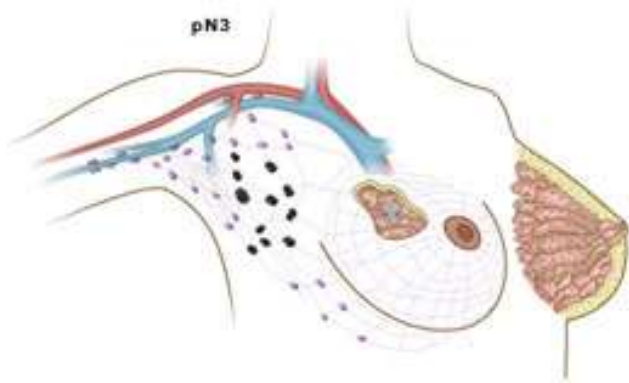
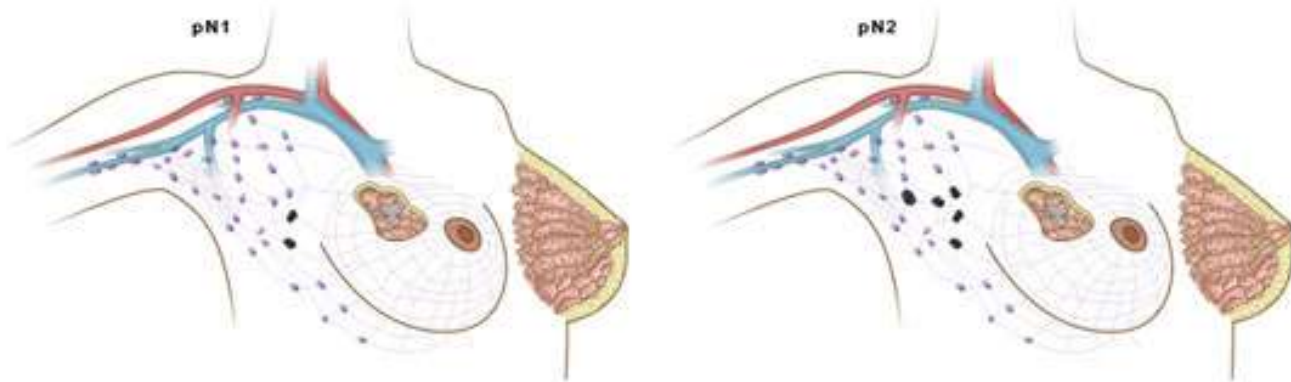
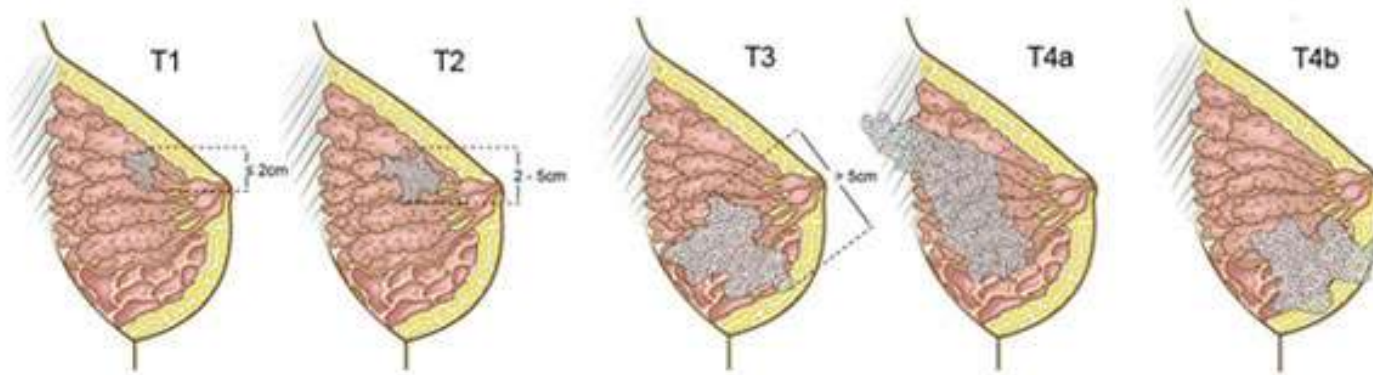


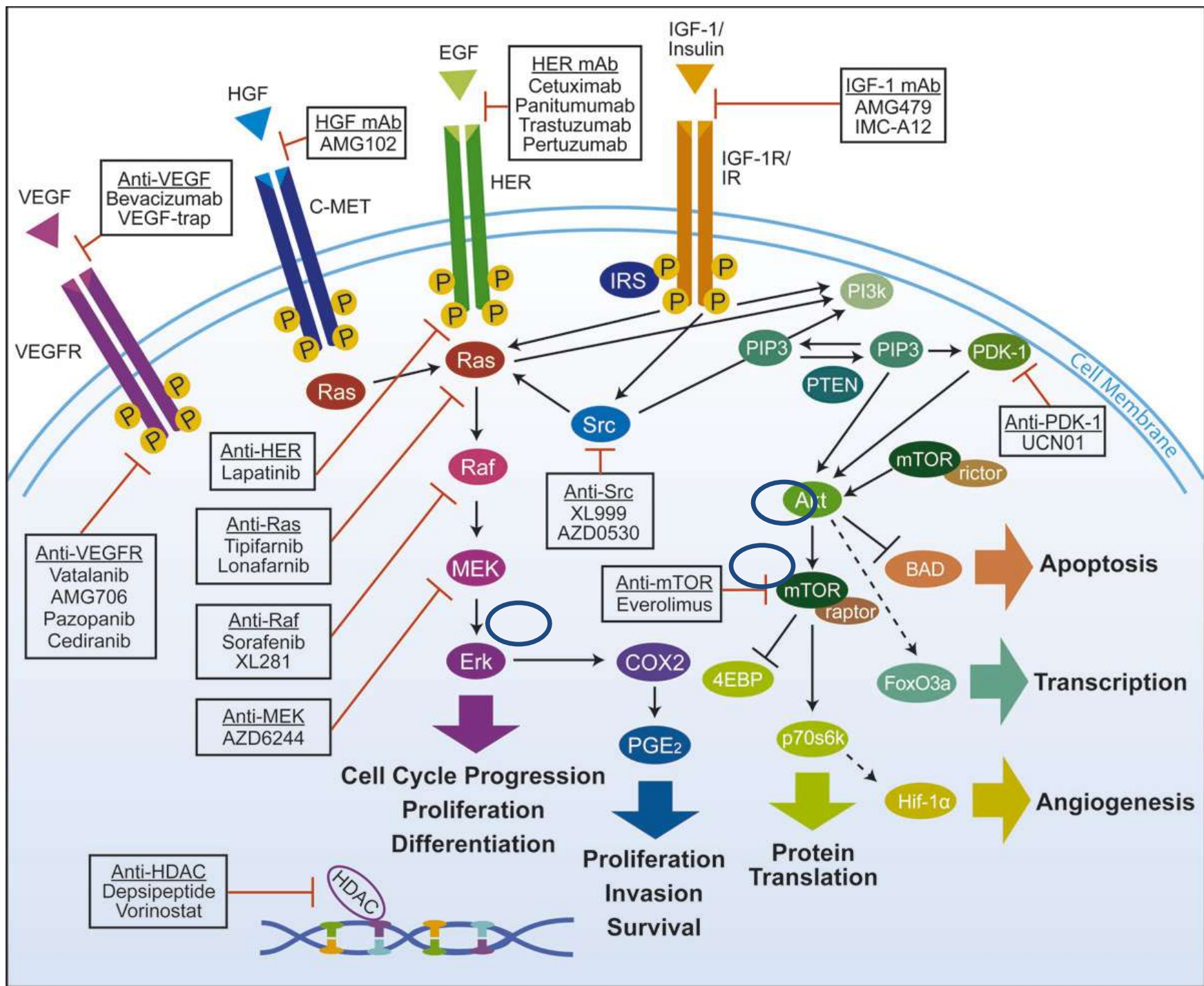


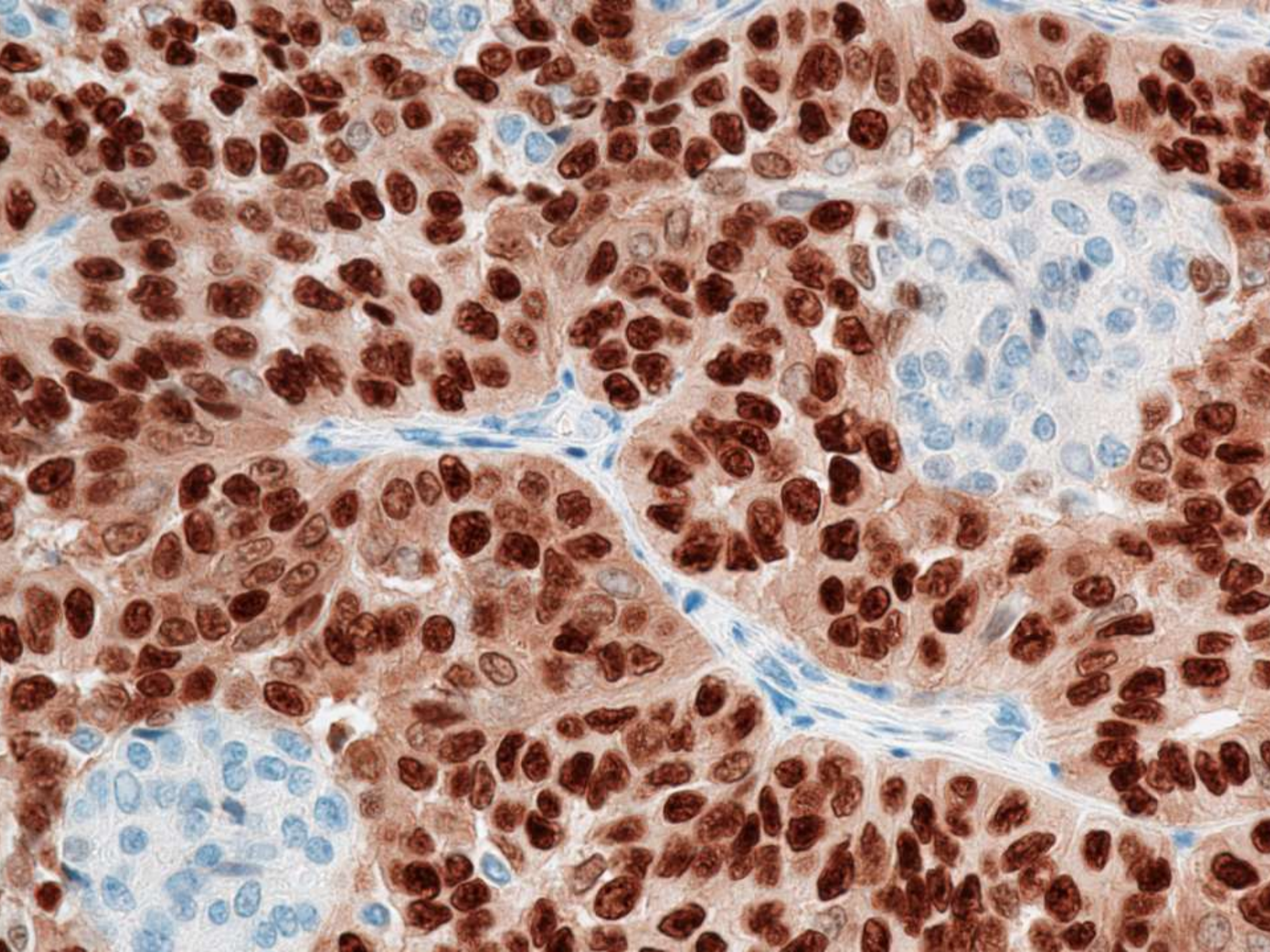


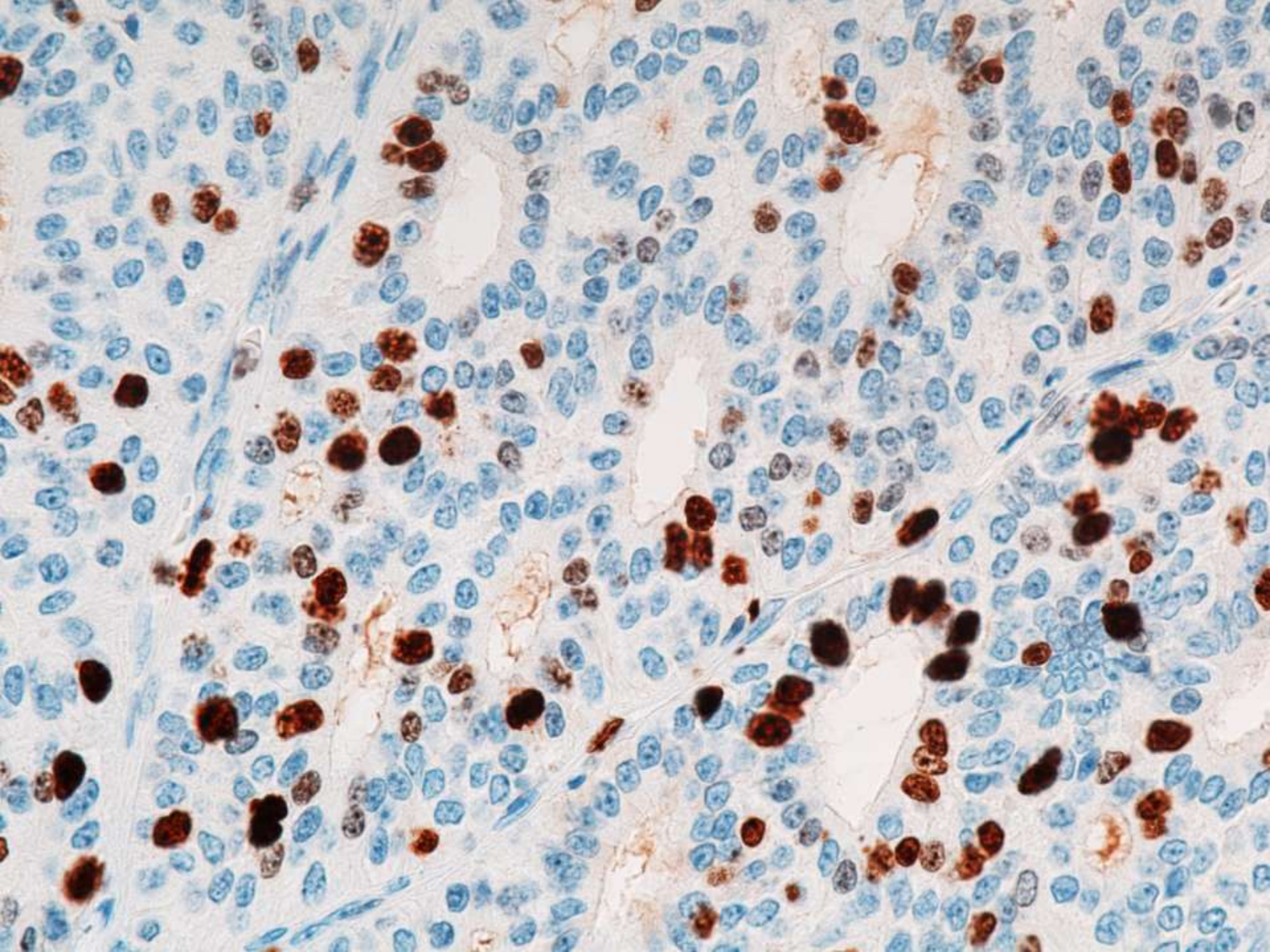


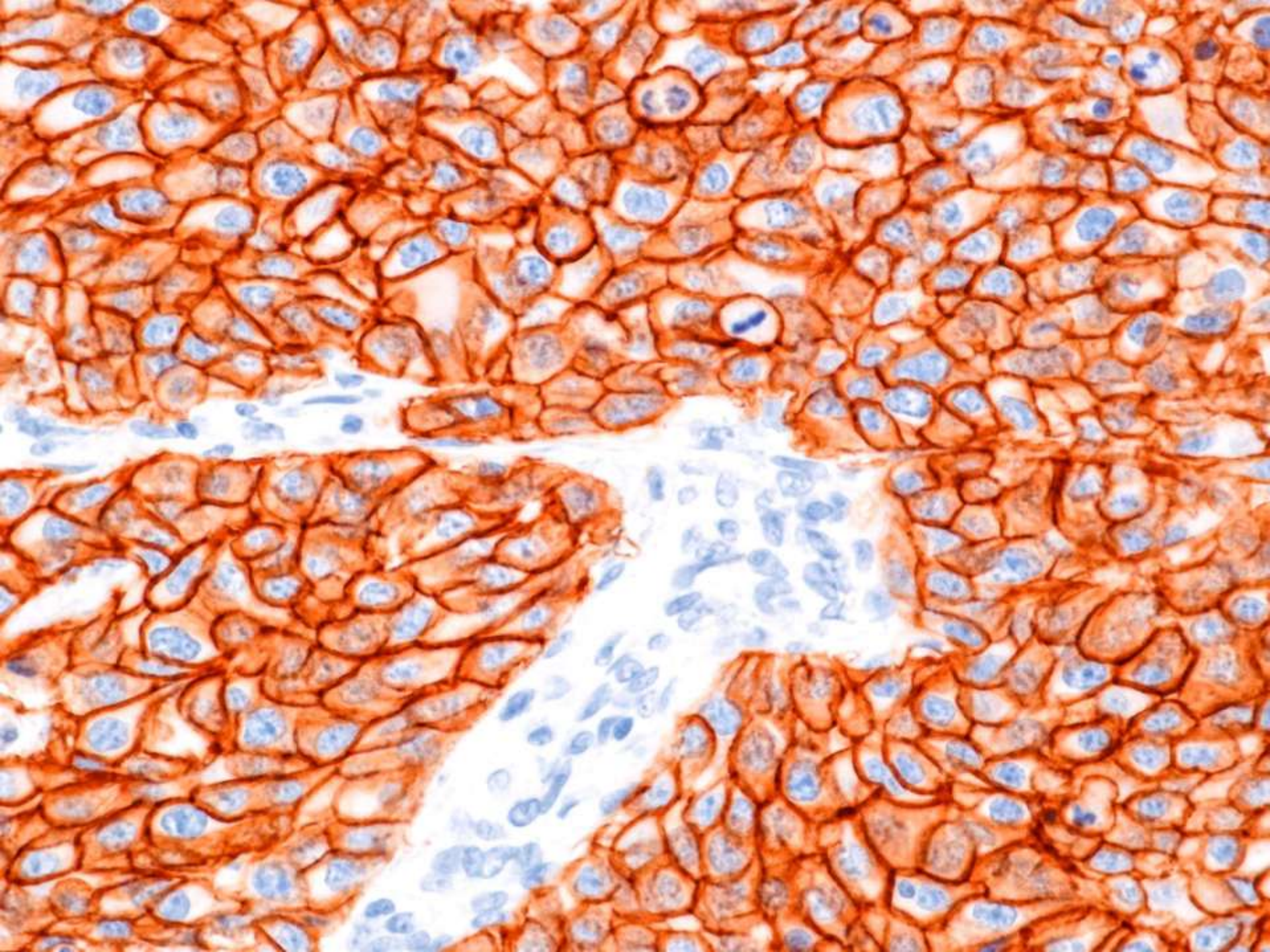






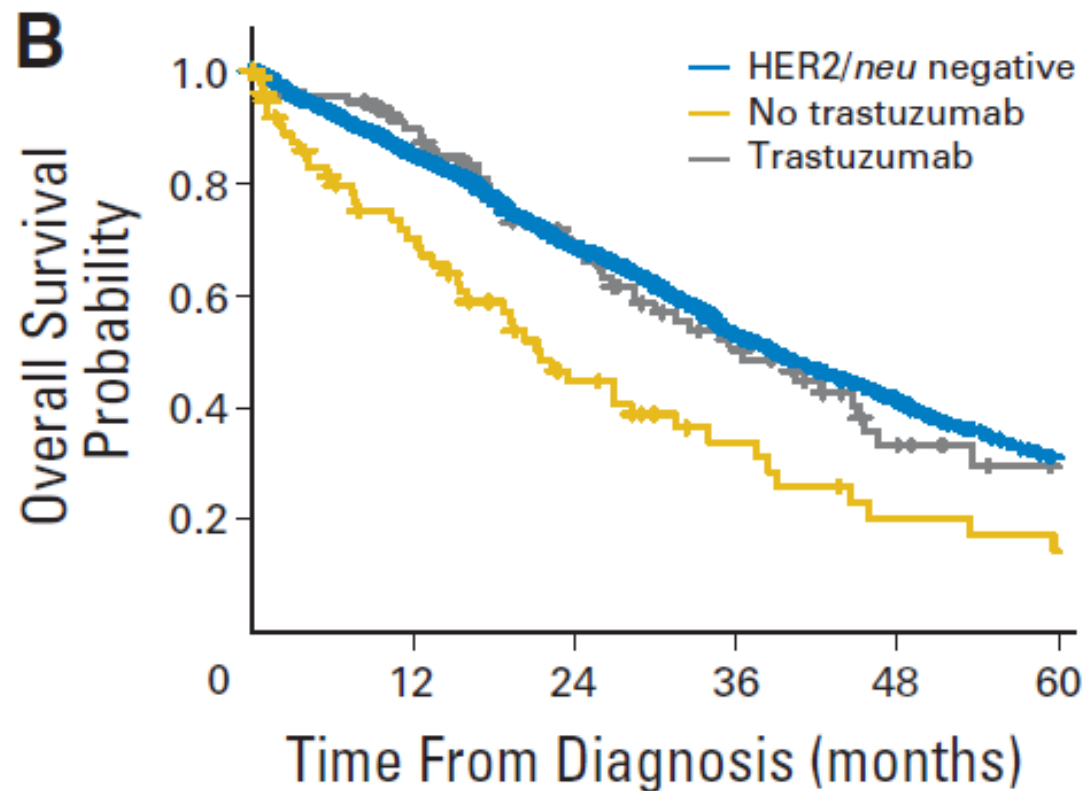






Prognosis of Women With Metastatic Breast Cancer by *HER2* Status and Trastuzumab Treatment: An Institutional-Based Review

Shaheenah Dawood, Kristine Broglio, Aman U. Buzdar, Gabriel N. Hortobagyi, and Sharon H. Giordano



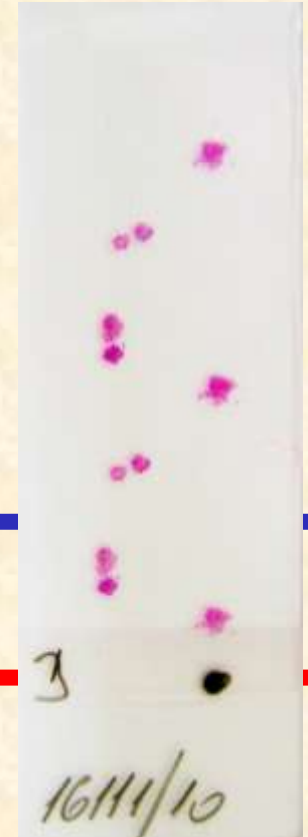
**Proč nemá predikce
100% úspěšnost?**



A



B



Heterogenita nádorové populace!

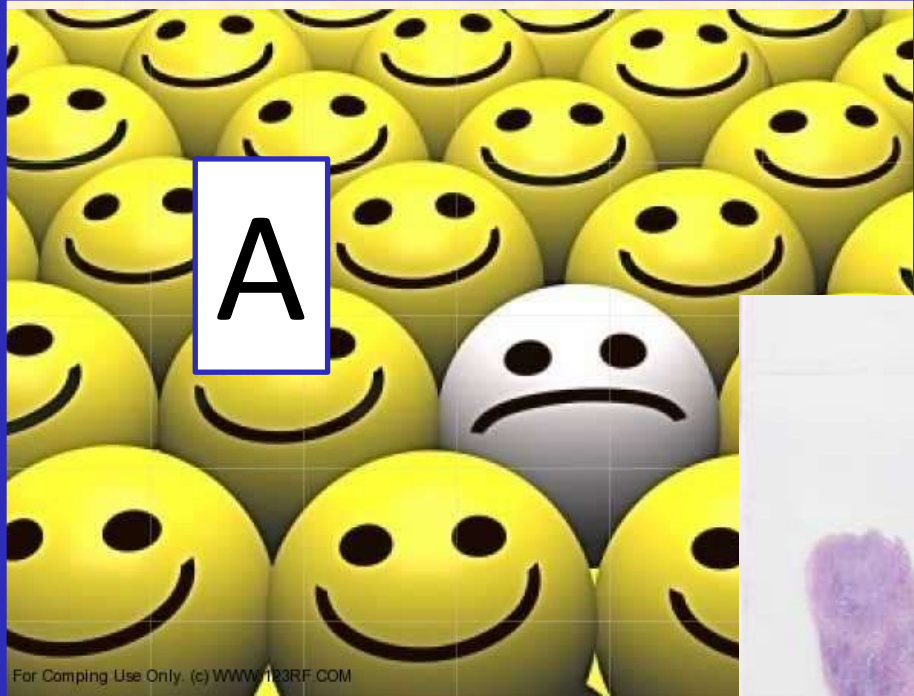


C



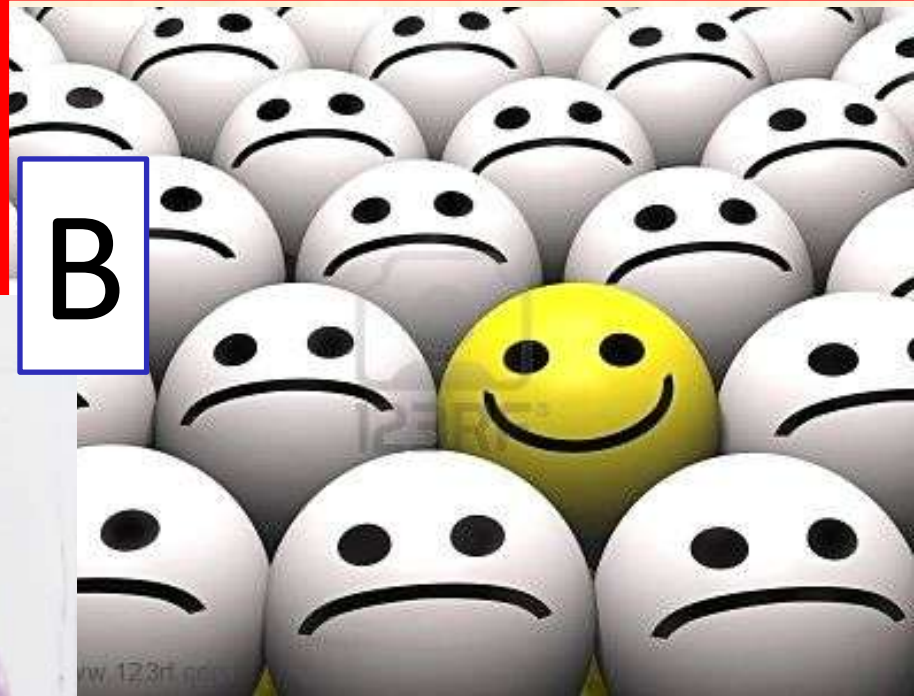
D

A



For Comping Use Only. (c) WWW.123RF.COM

B

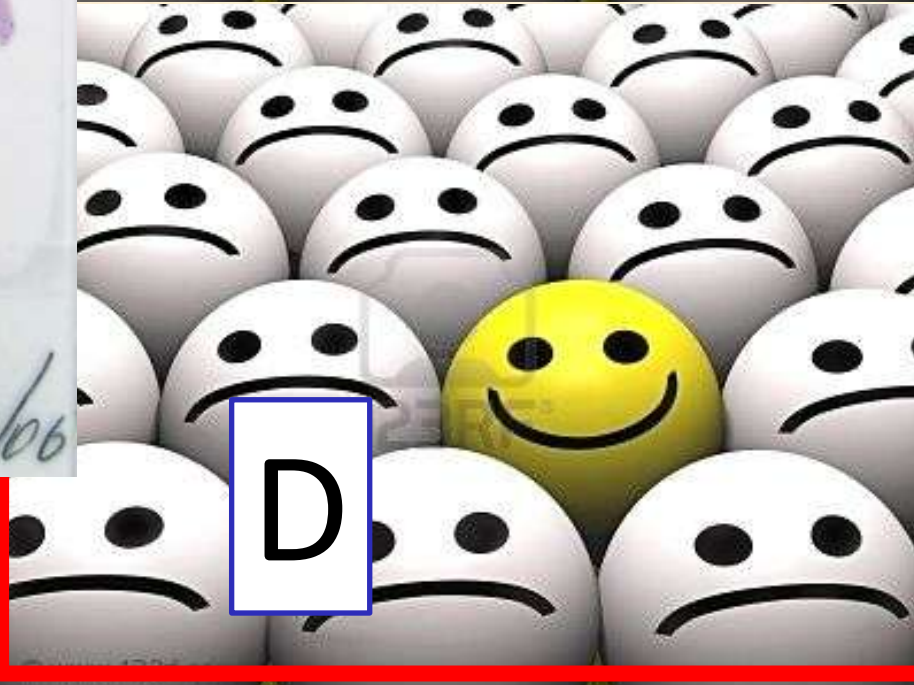


www.123rf.com

C



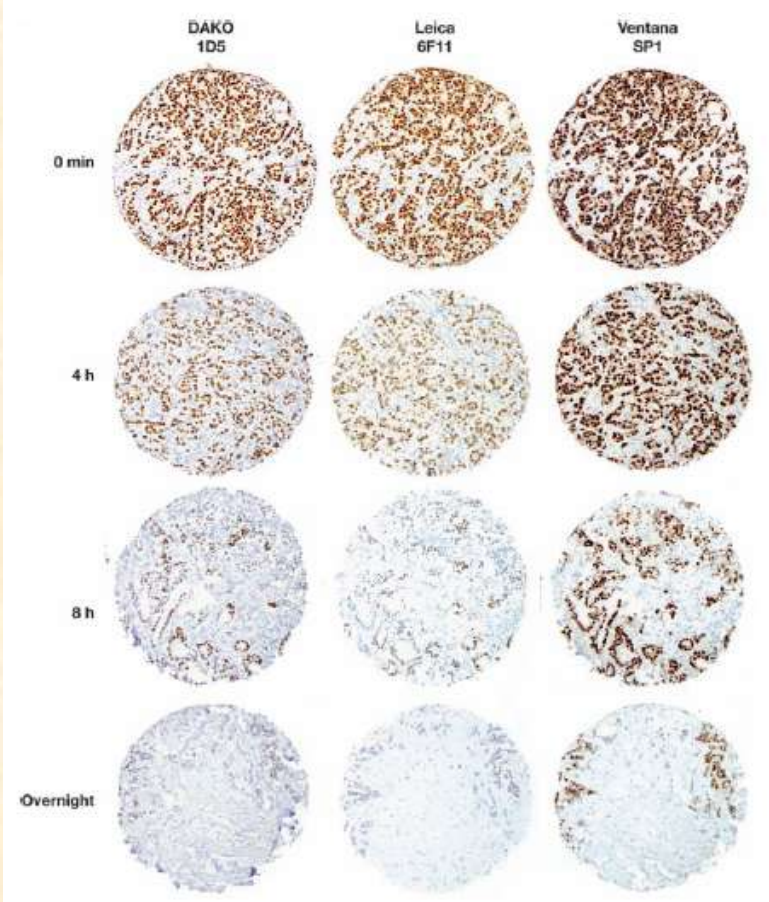
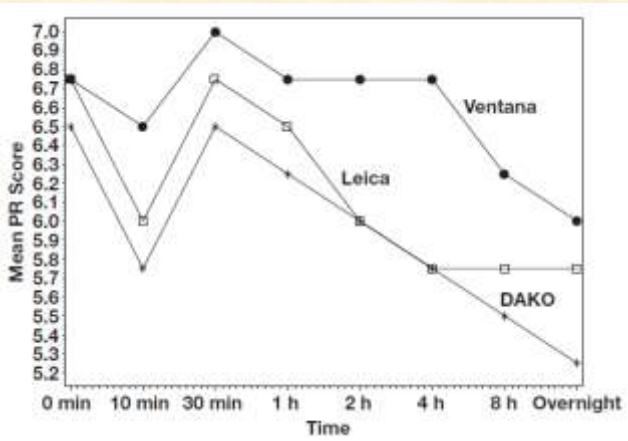
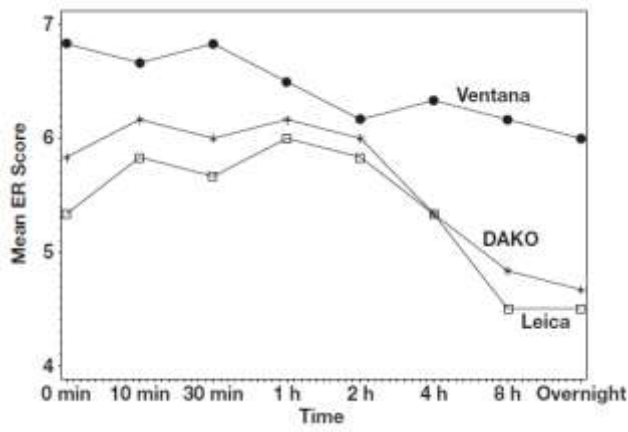
D



Effect of Delayed Formalin Fixation on Estrogen and Progesterone Receptors in Breast Cancer

A Study of Three Different Clones

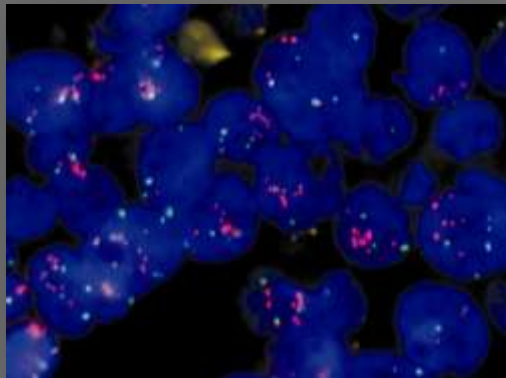
Jingxin Qiu, MD, PhD,¹ Swati Kulkarni, MD,² Rameela Chandrasekhar,³ Mark Rees, PhD,^{4,6} Kathryn Hyde,⁵ Gregory Wilding, PhD,³ Dongfeng Tan, MD,⁶ and Thayer Khoury, MD¹



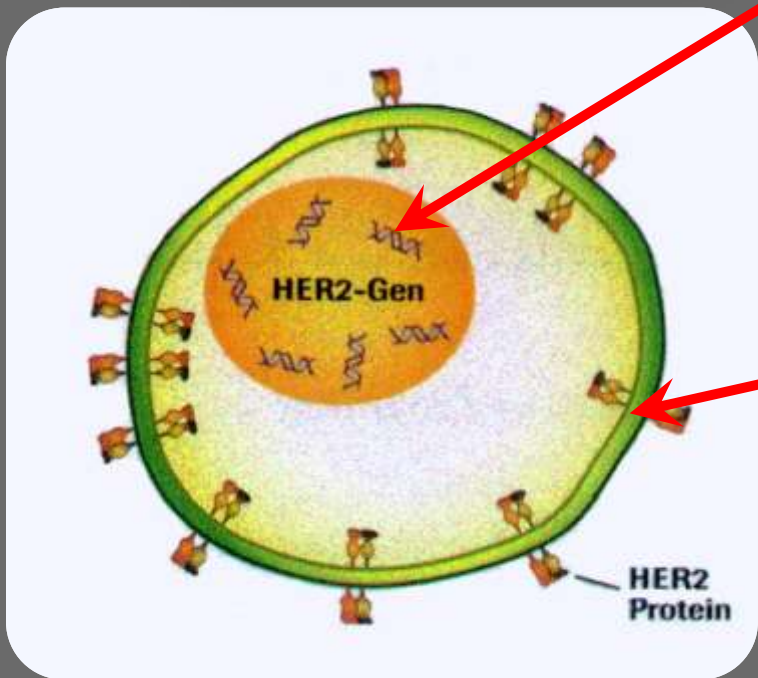
Operace



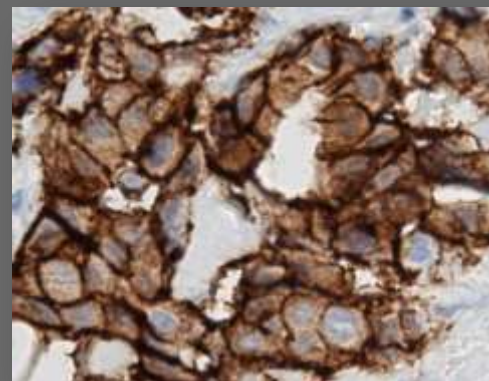
Fixace

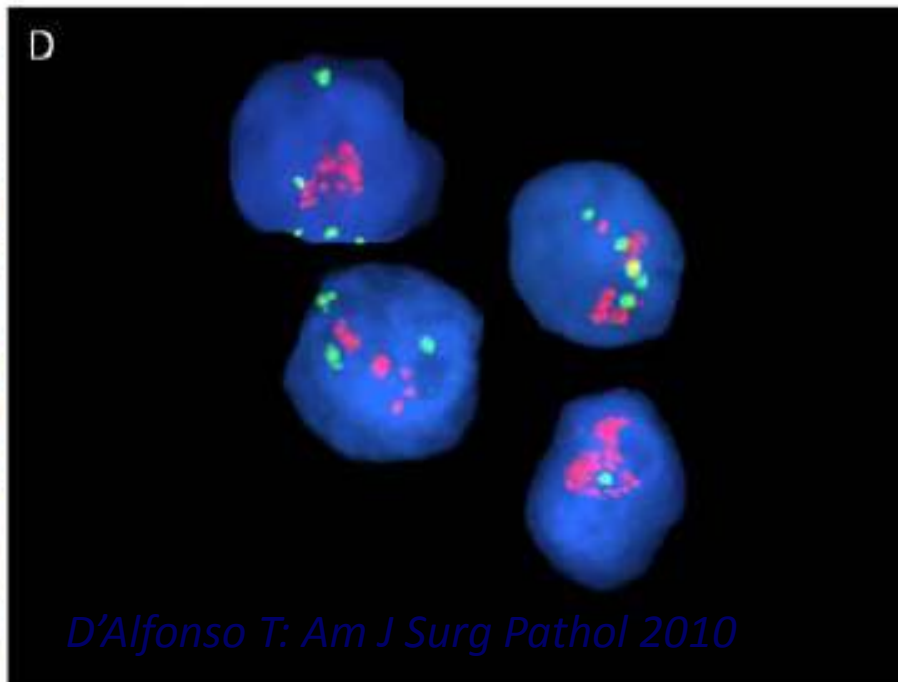
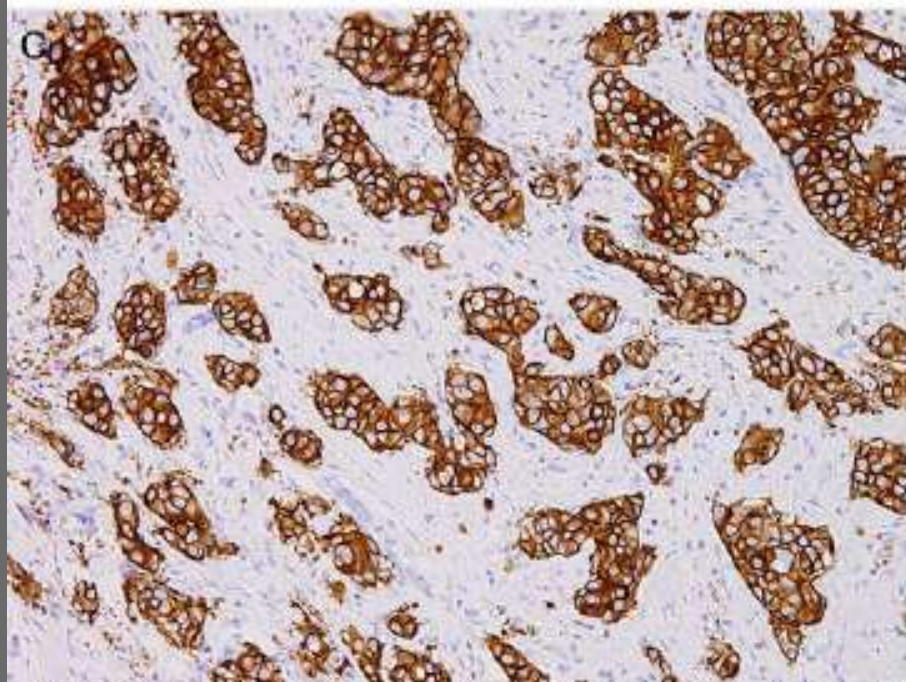
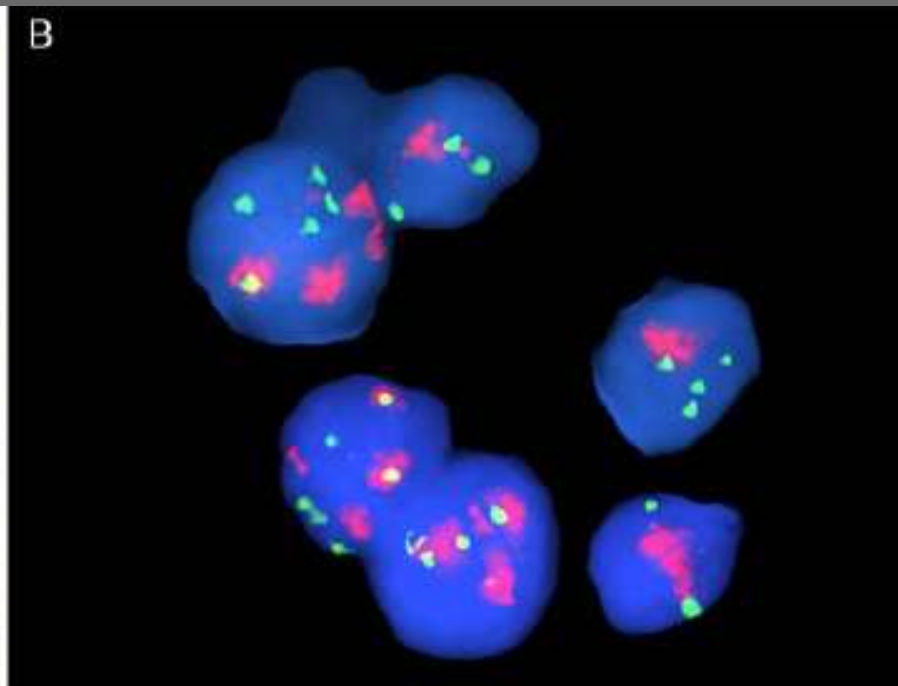
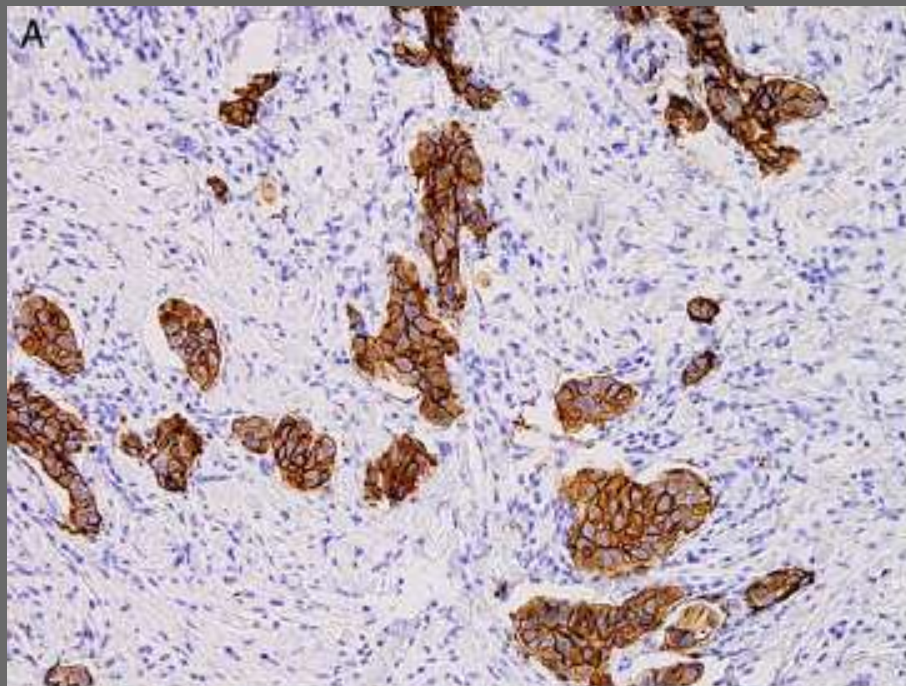


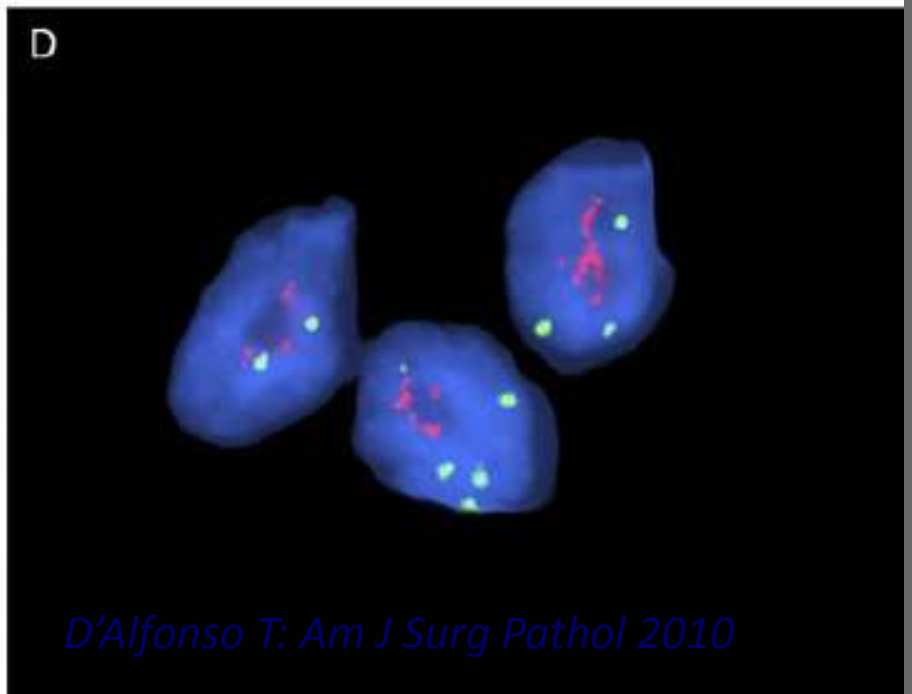
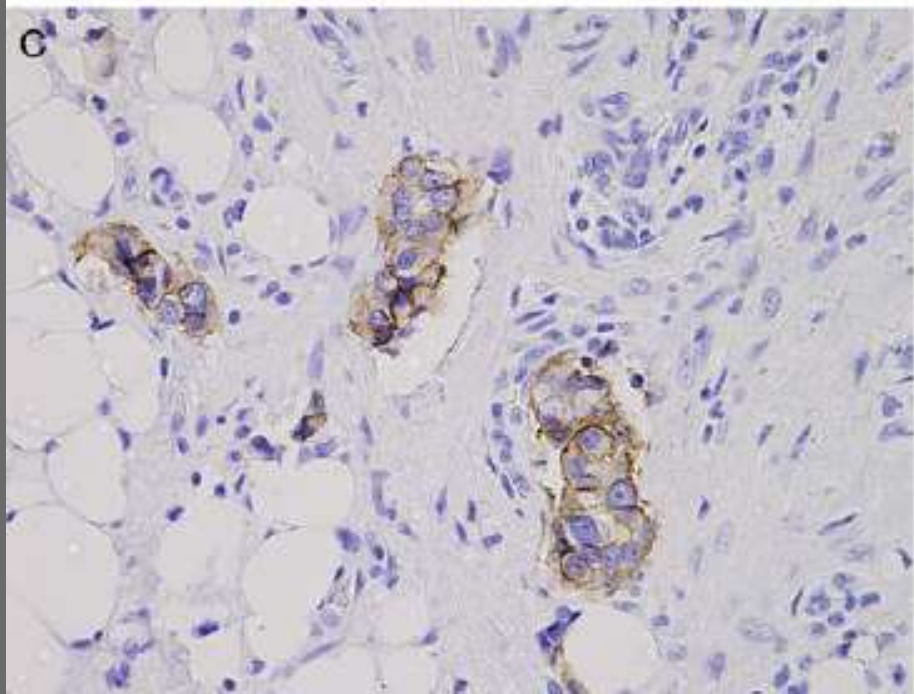
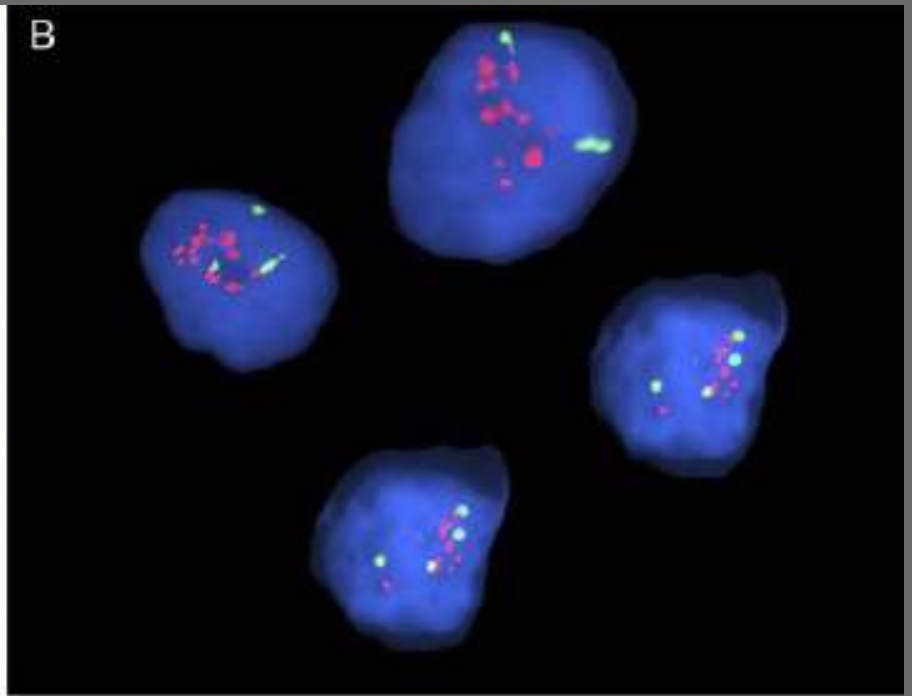
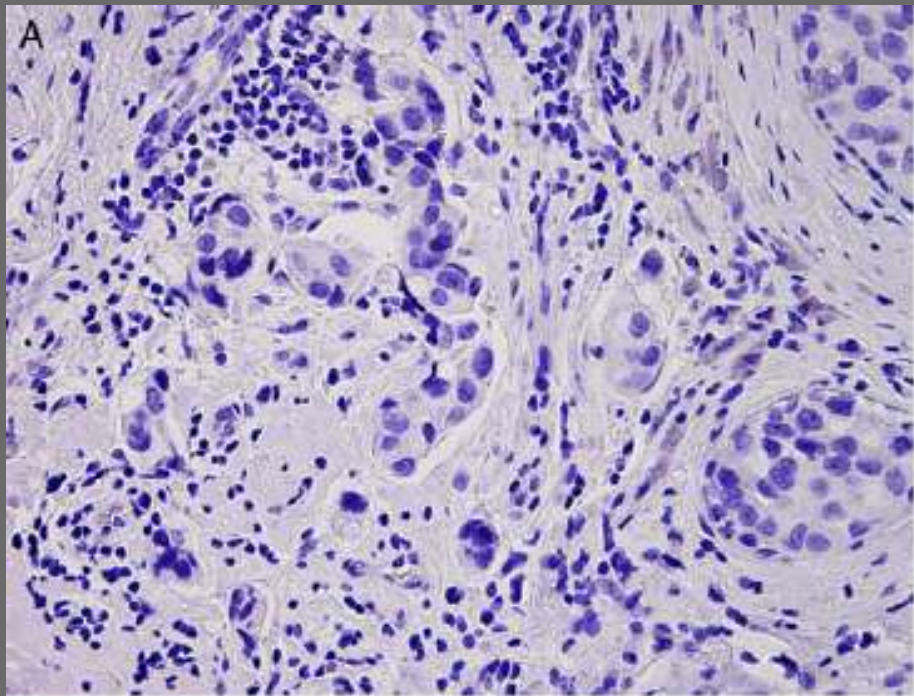
ISH (in-situ hybridizace)
= detekce kopií genu



IHC
(imunohistochemie)
= detekce kopií proteinu

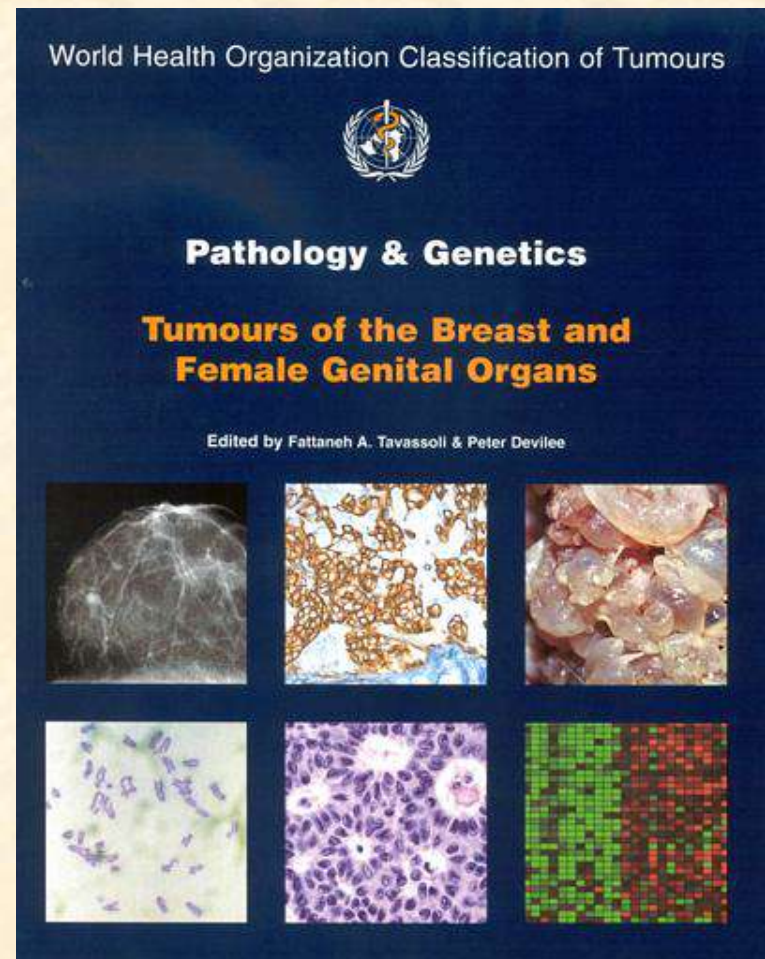






Nový pohled na karcinom prsu

- klasifikace vycházející nikoli výlučně z morfologického vzhledu, ale i z klinického dopadu
- genetické vyšetření – nedílná součást diagnostiky



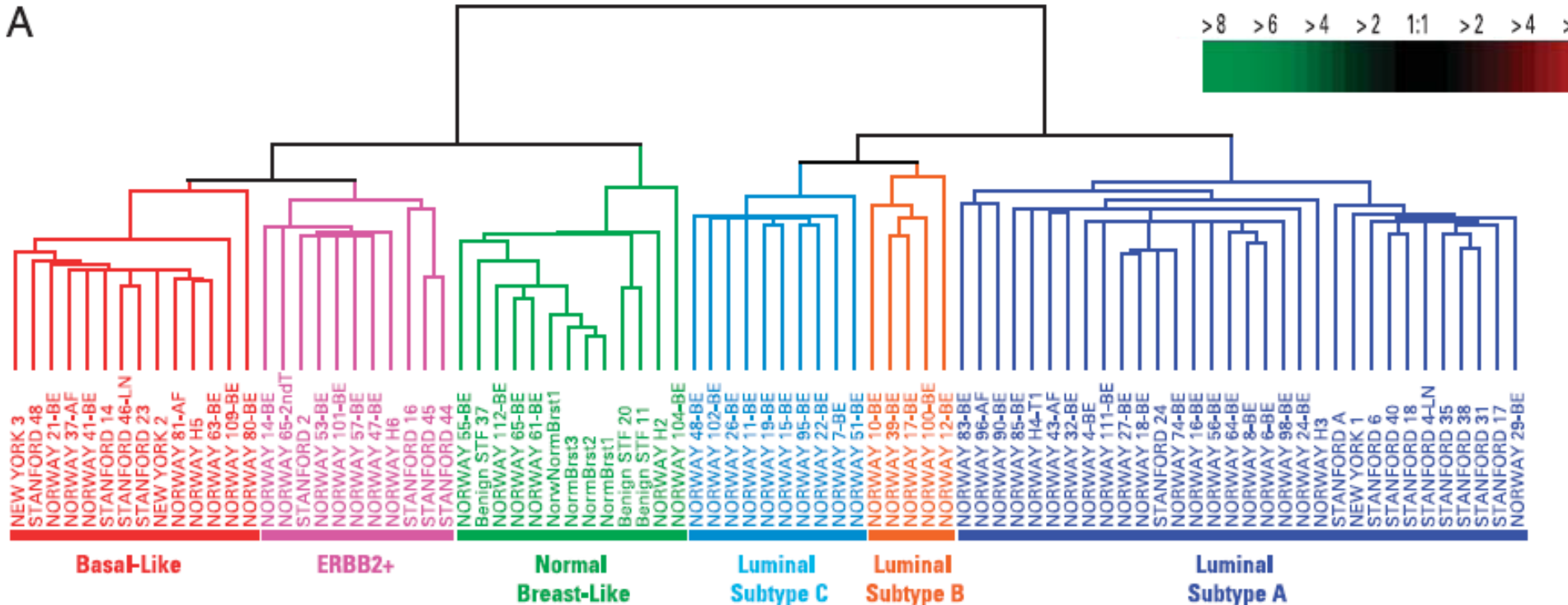
Karcinomy prsu – klasifikace dle expresního genového profilu

LCI x DCI x ostatní



luminální x HER2+ x bazální

A



DUKTÁLNÍ

LOBULÁRNÍ

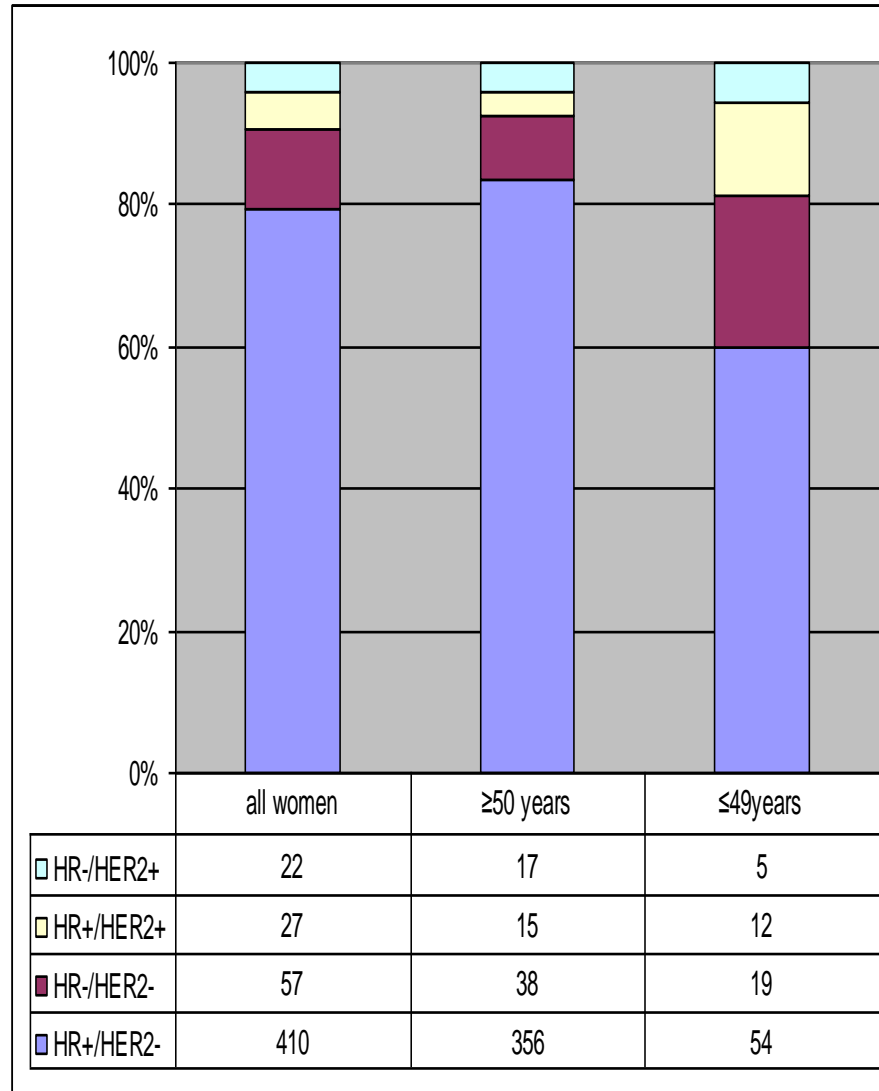
Luminální A

Luminální B

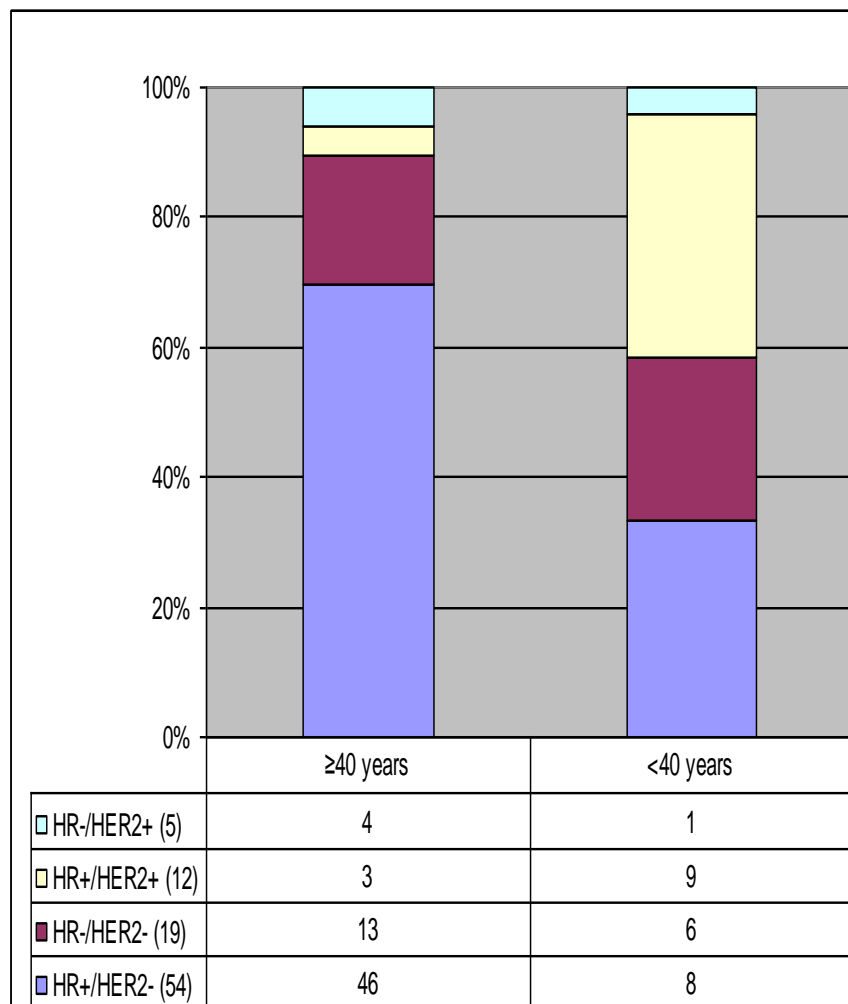
HER2+

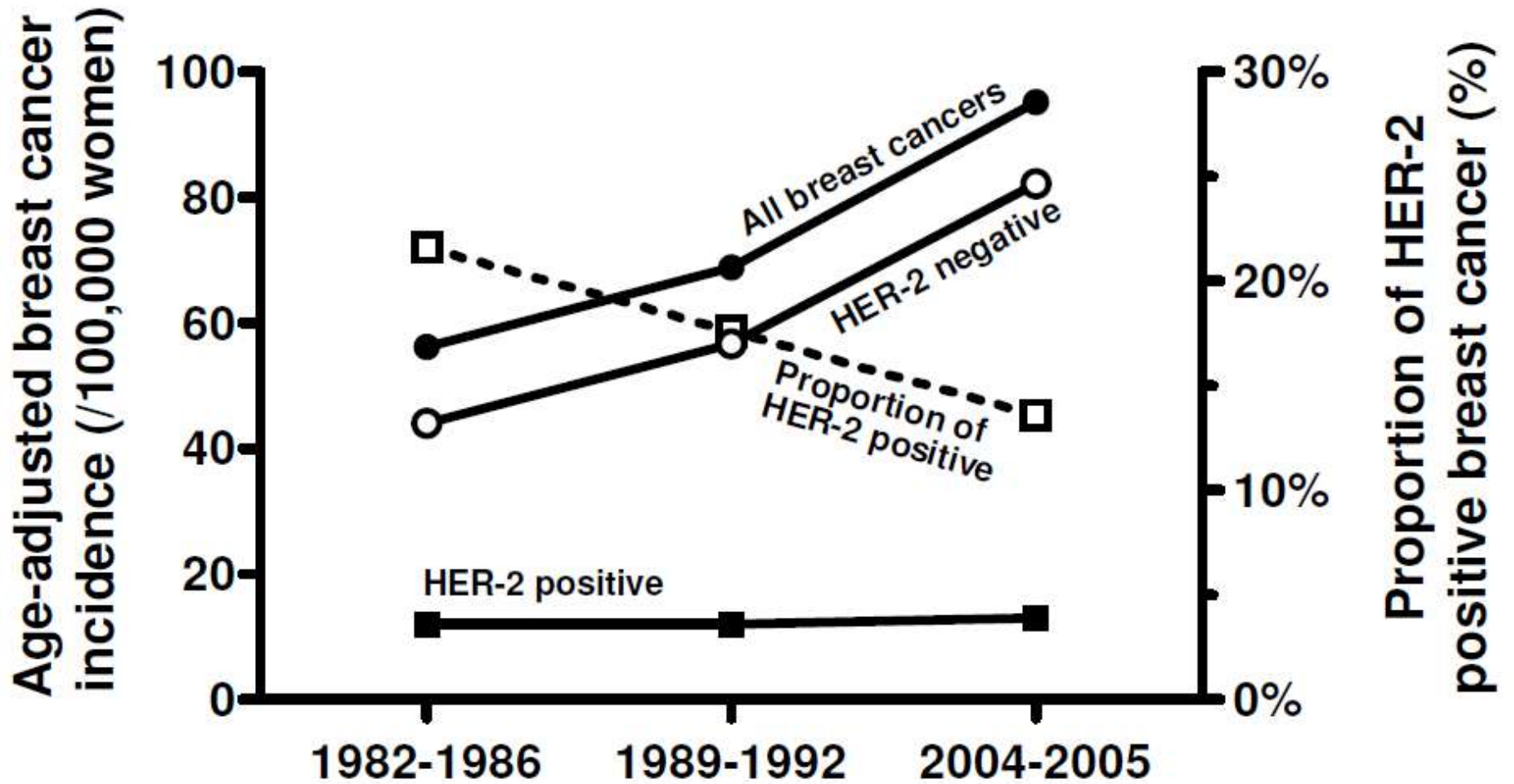
Triple negativní

Expresse HER2 – závislost na věku

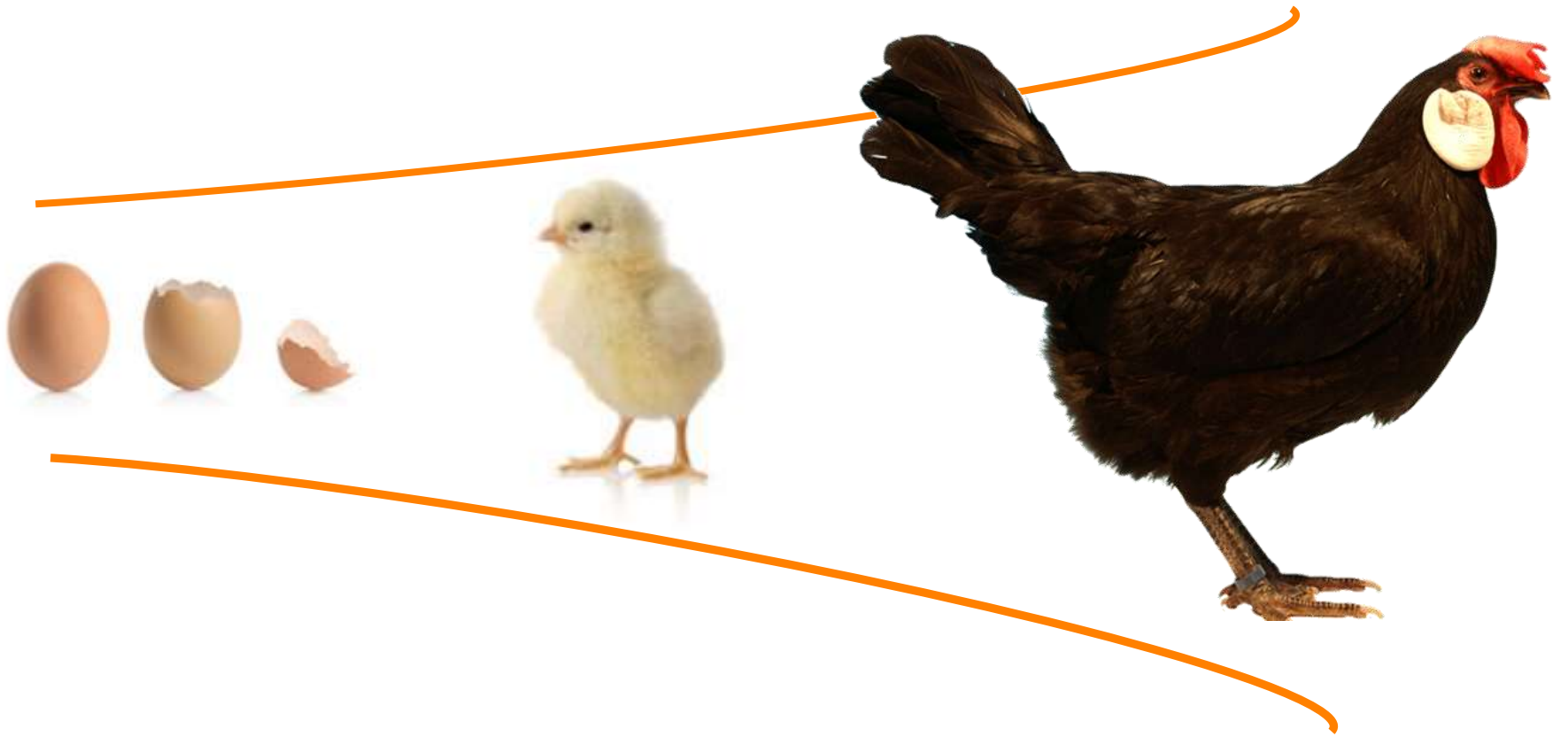


Expresse HER2 – mladé pacientky





Koninki K, et al. HER-2 positive breast cancer: decreasing proportion but stable incidence in Finnish population from 1982 to 2005. *Breast Cancer*



Breast cancer

