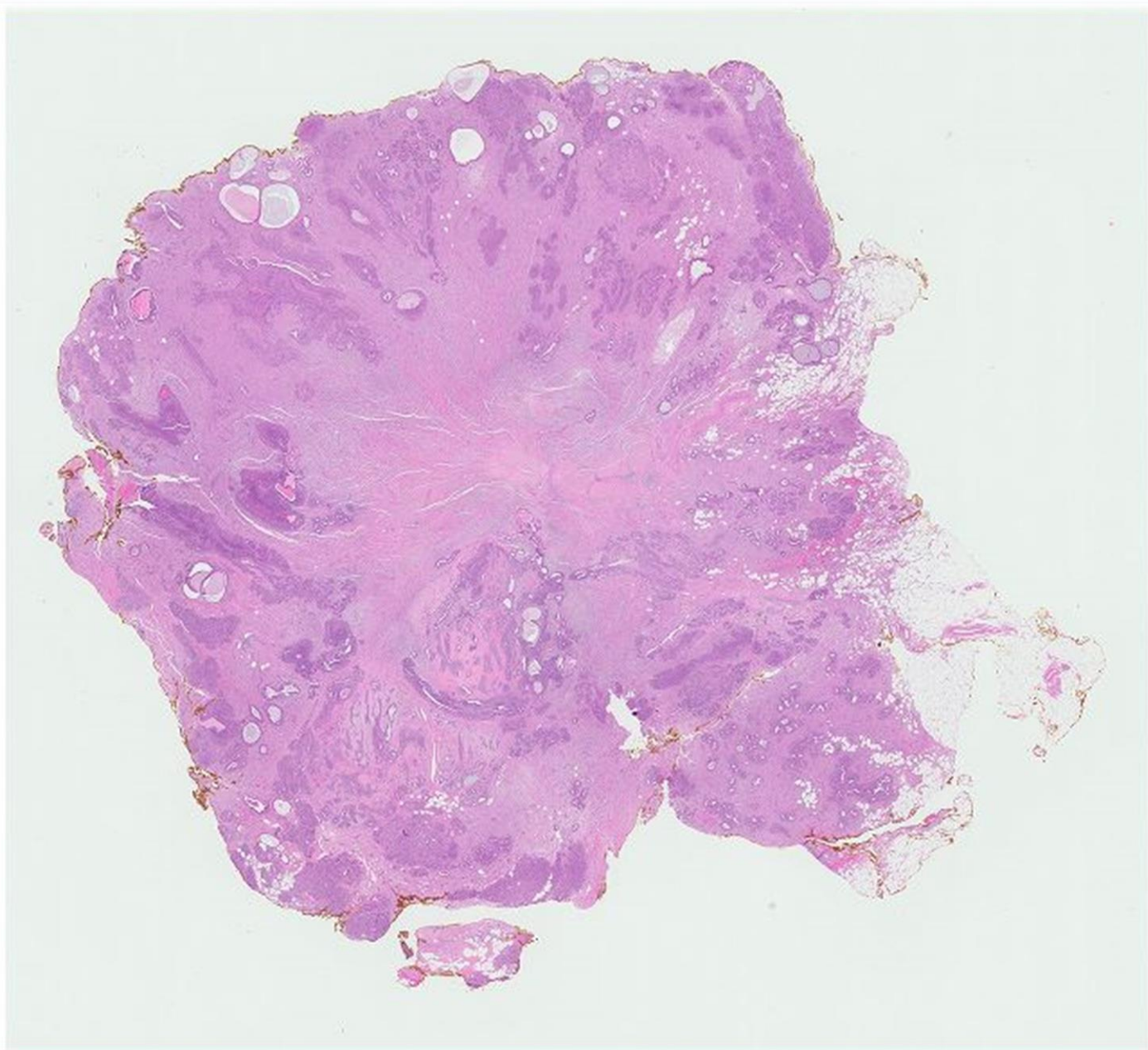


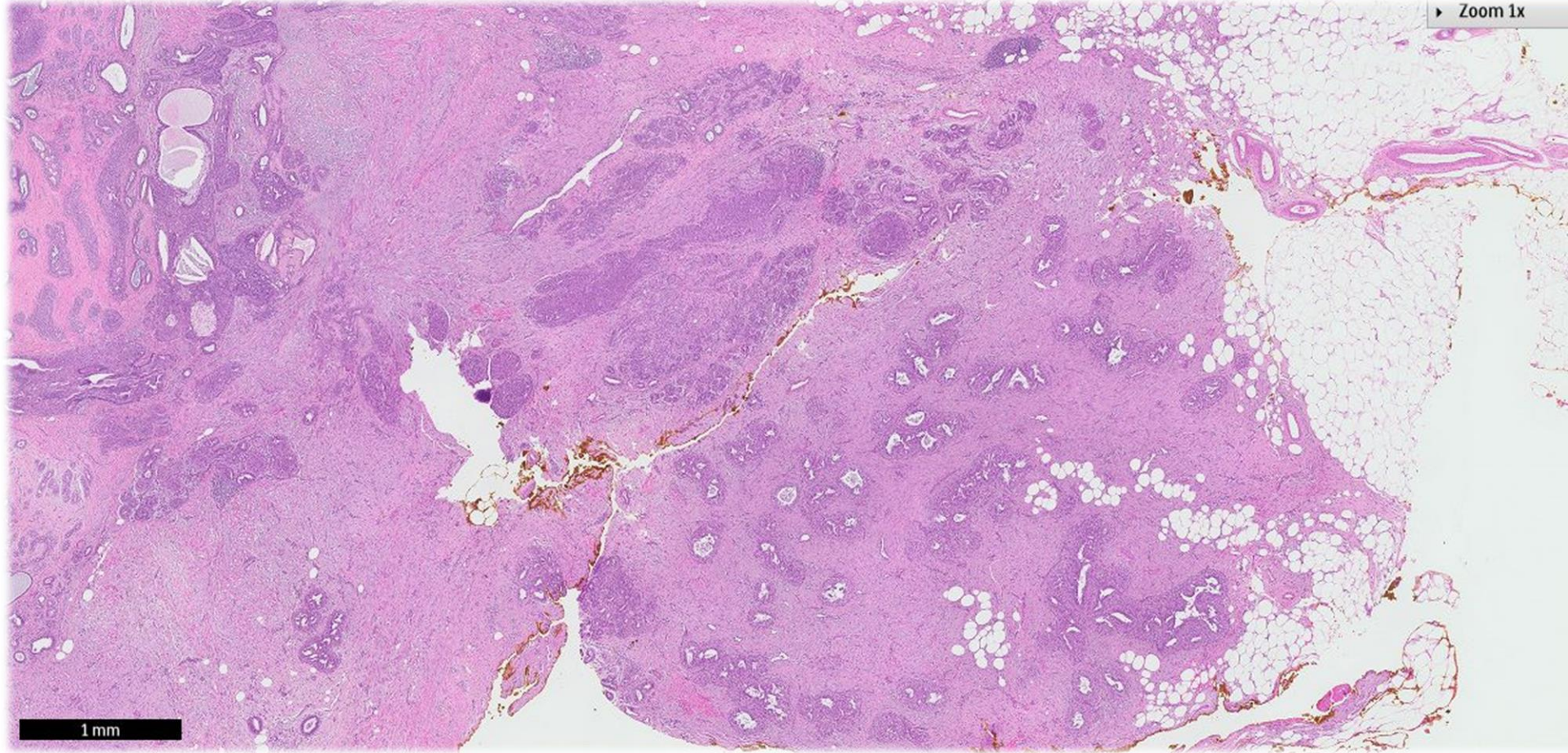
Case 28

44 year old Chinese lady underwent an excision of a left breast lump.





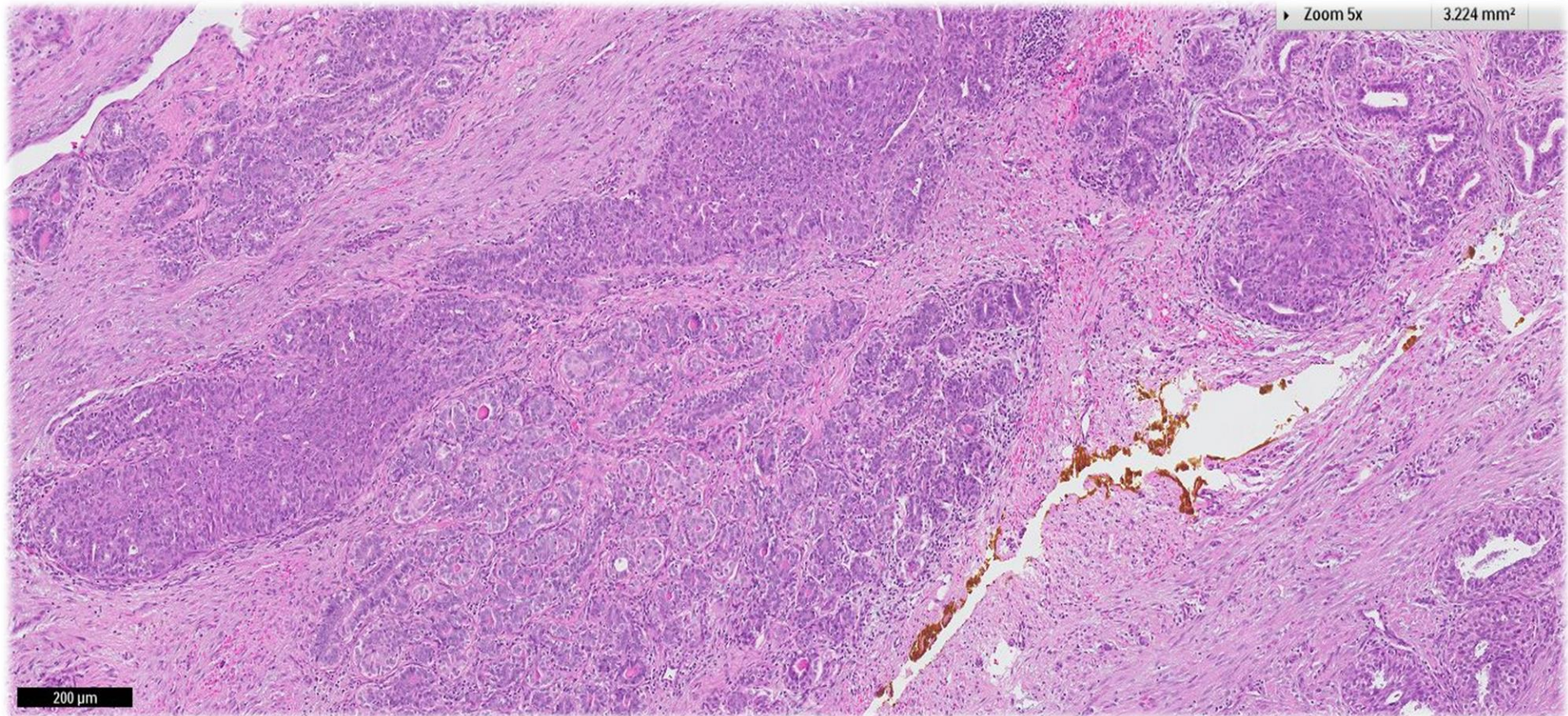
► Zoom 1x



1 mm

▶ Zoom 5x

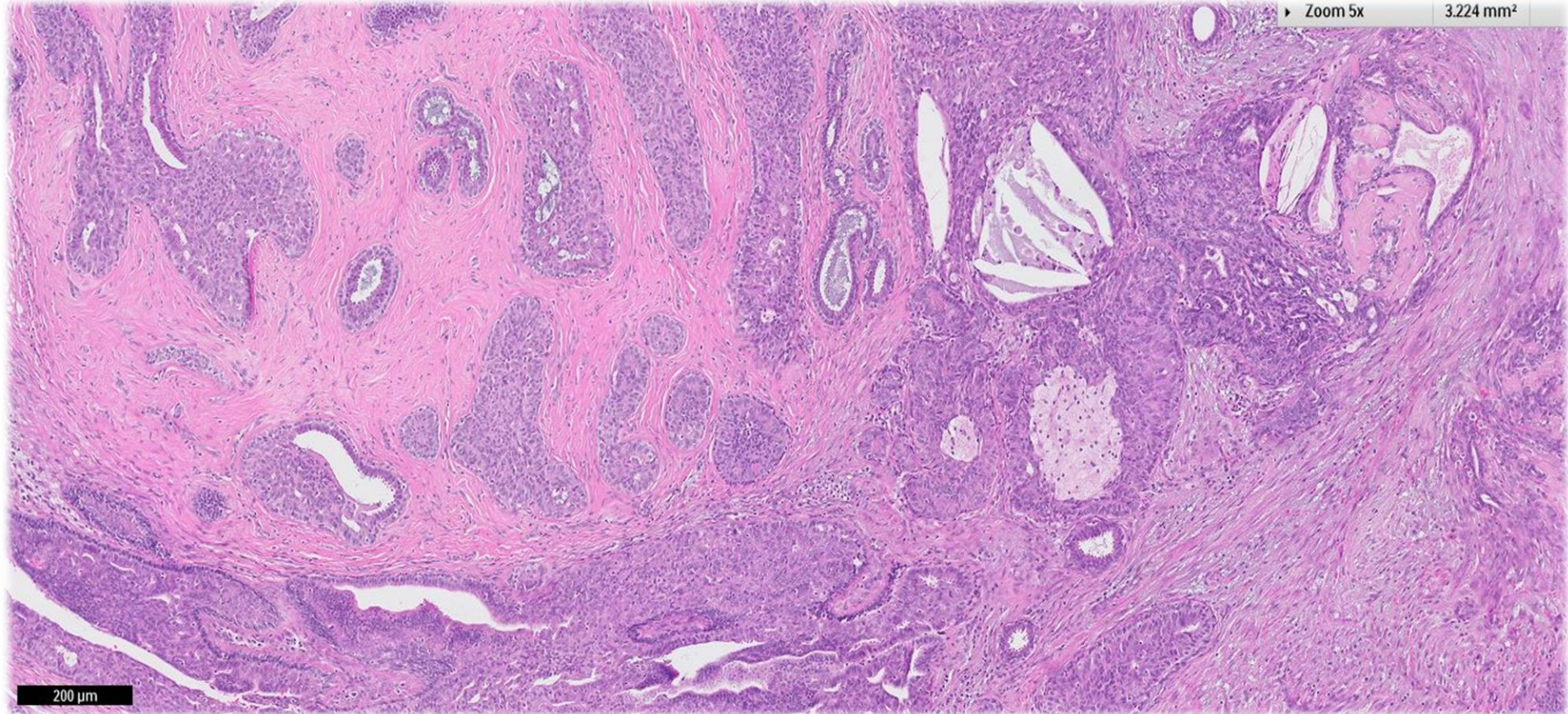
3.224 mm²



200 μm

▶ Zoom 5x

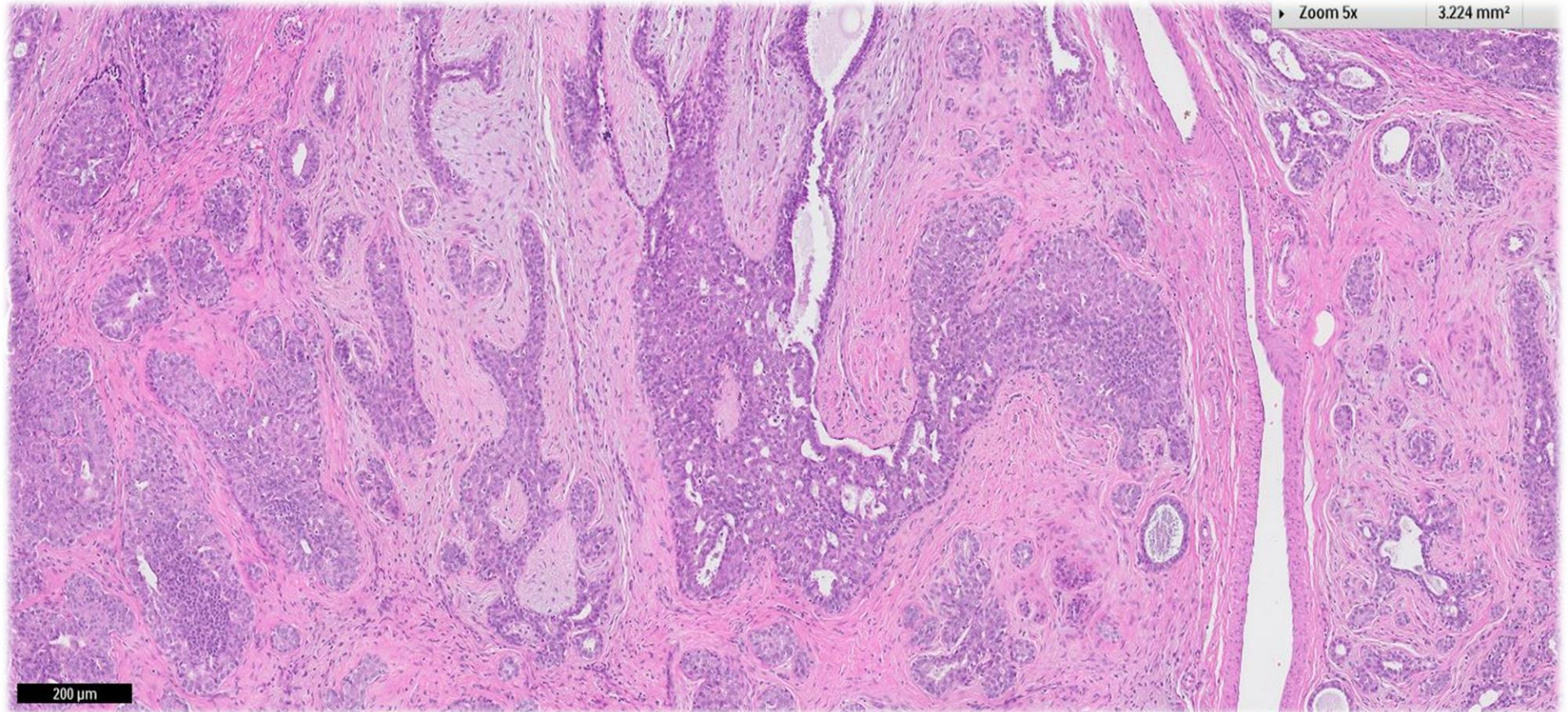
3.224 mm²



200 μm

▶ Zoom 5x

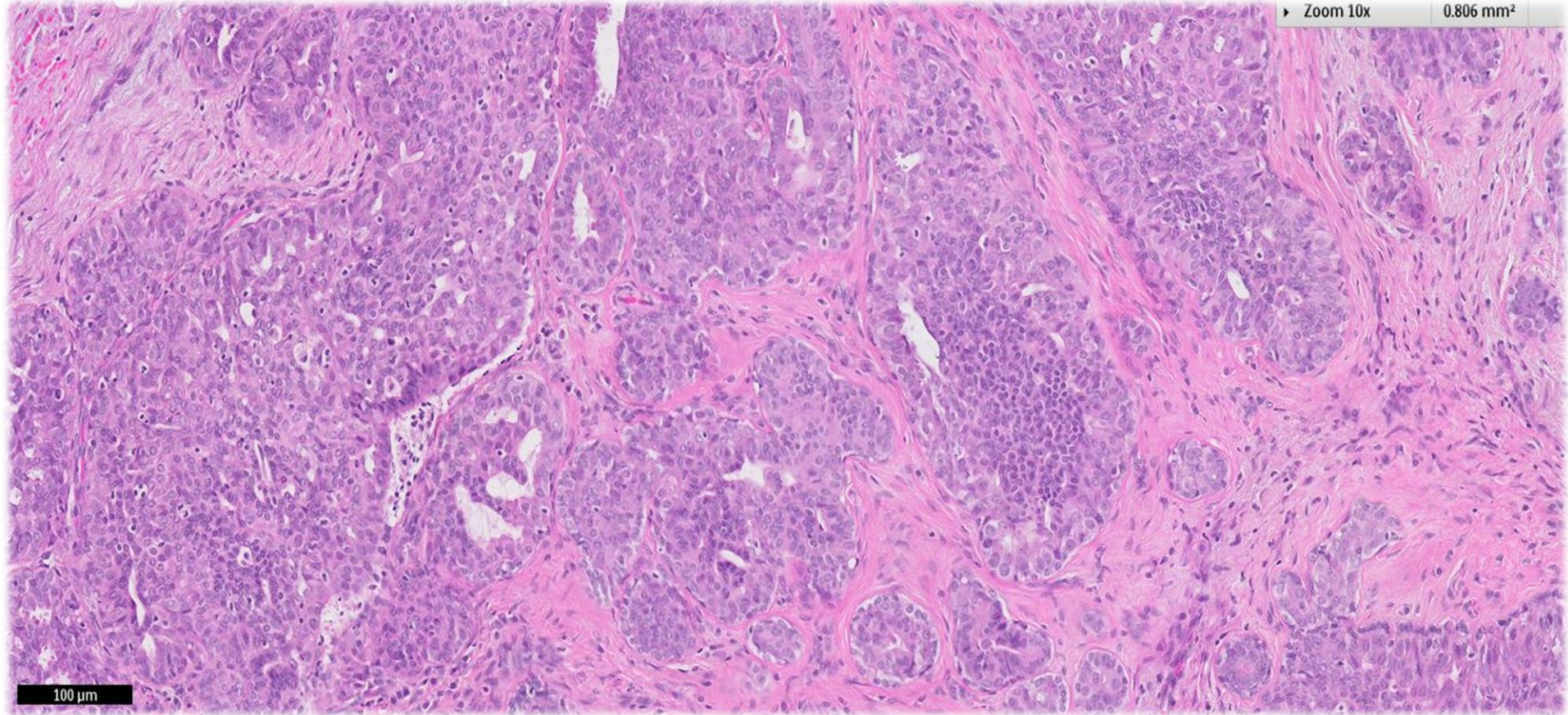
3.224 mm²



200 μm

▶ Zoom 10x

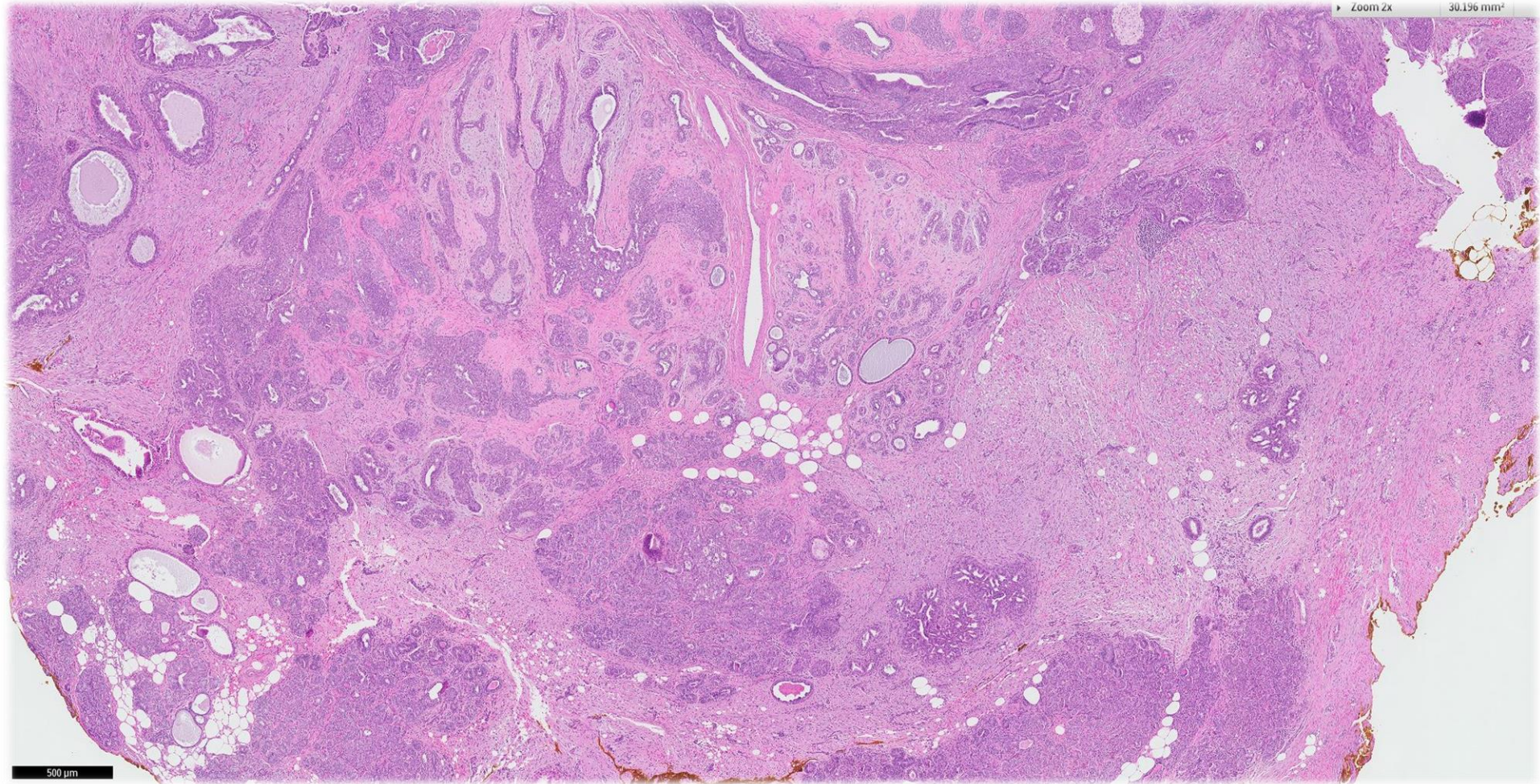
0.806 mm²

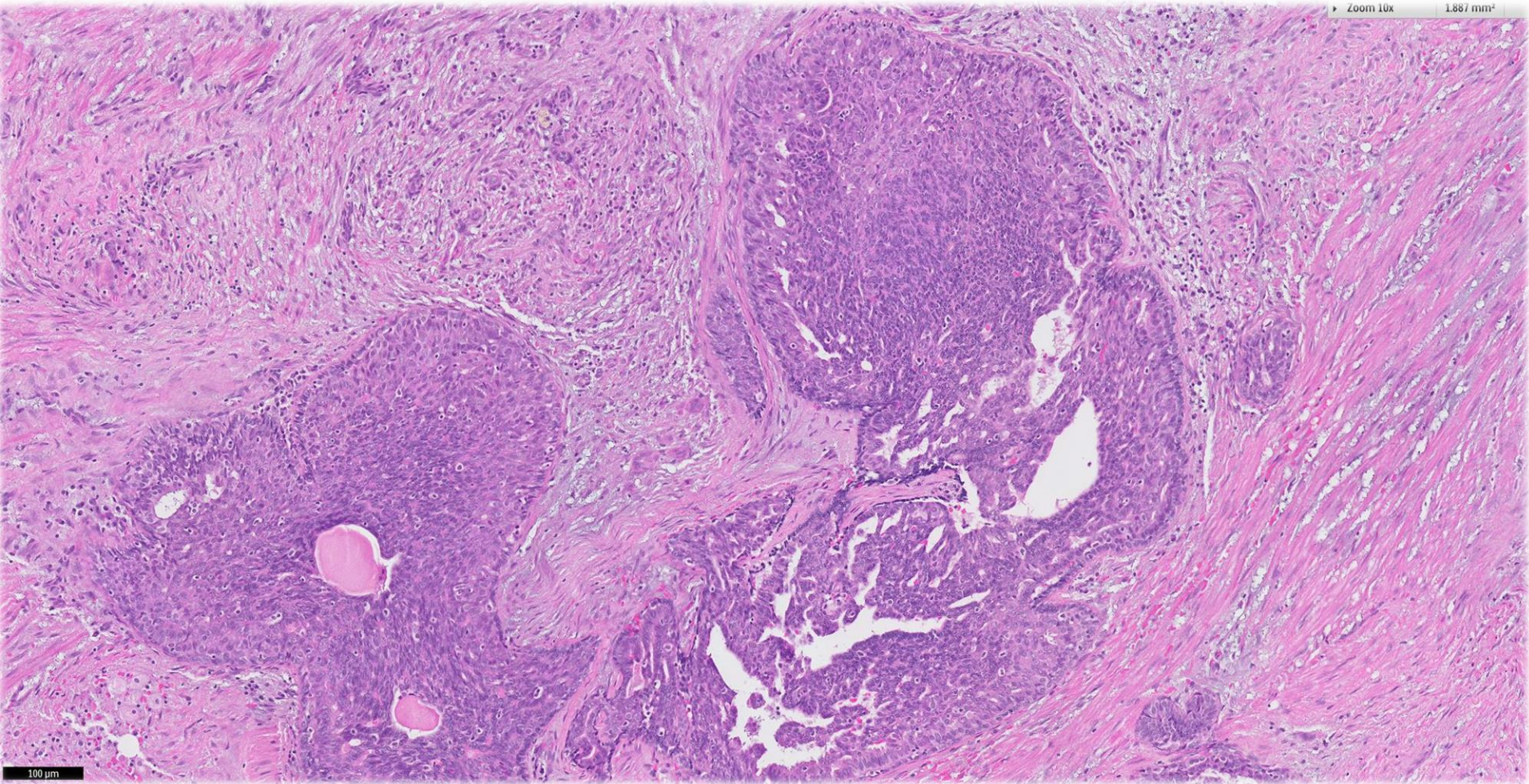


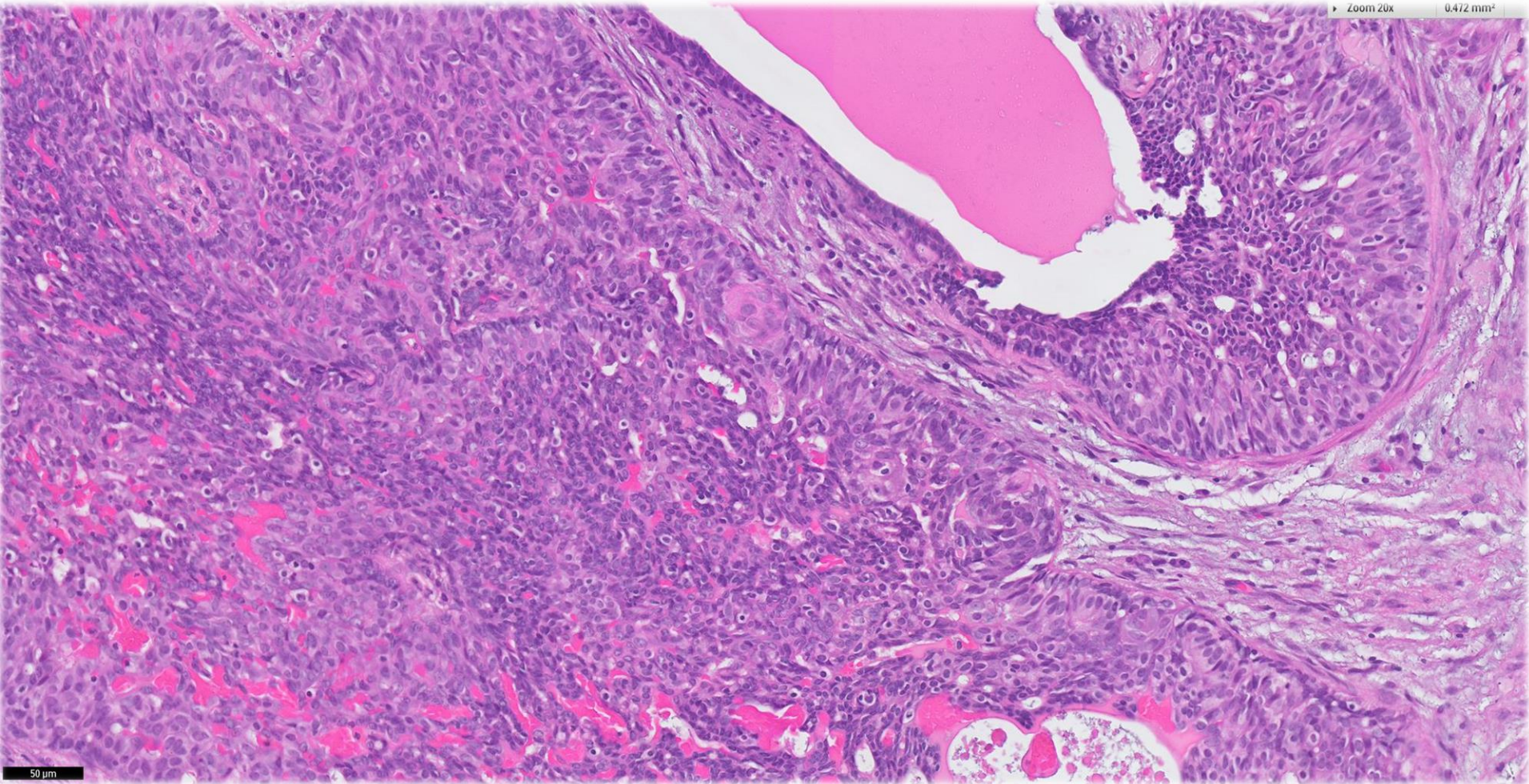
100 μm

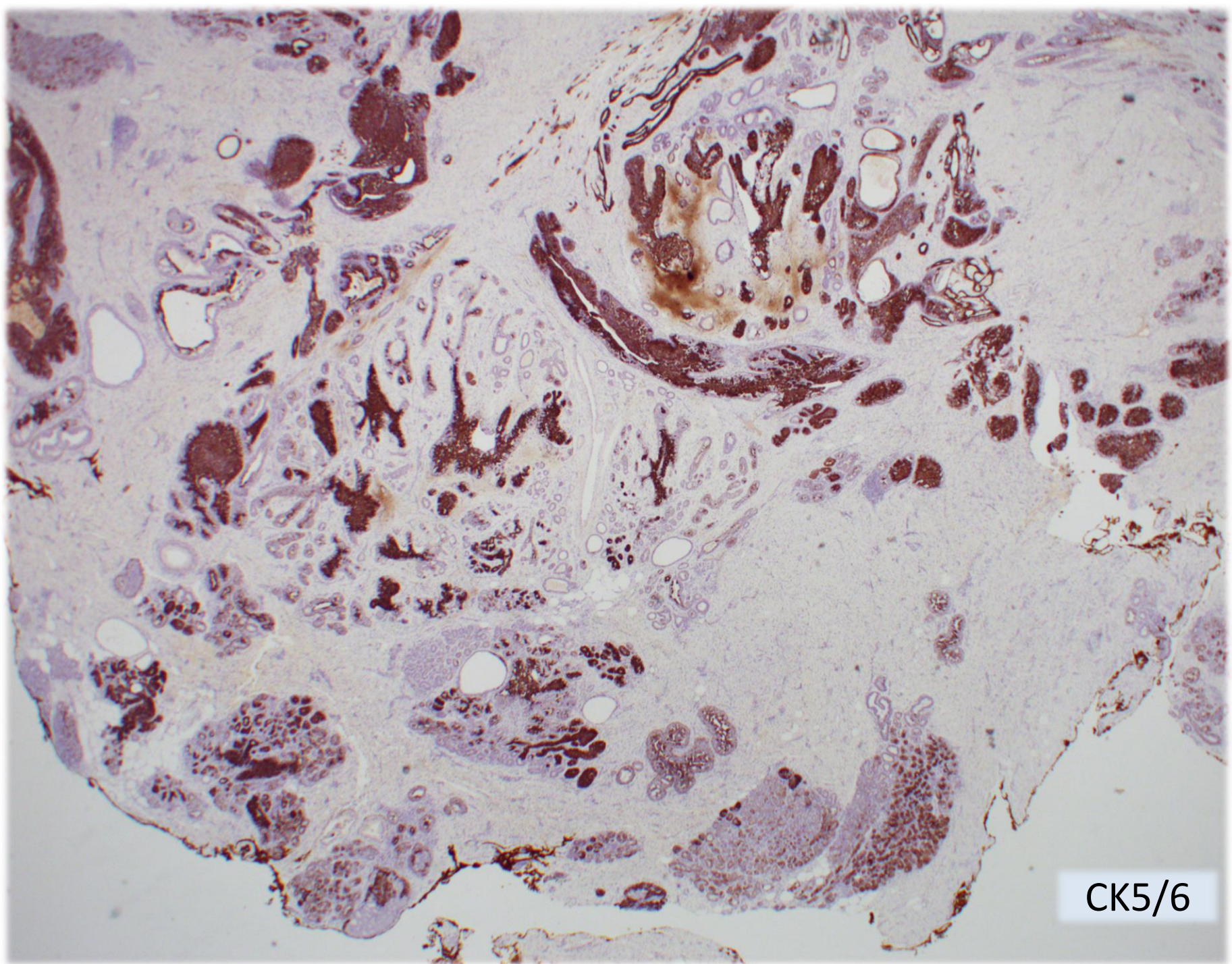
View from Level 7 Diagnostics Tower Academia



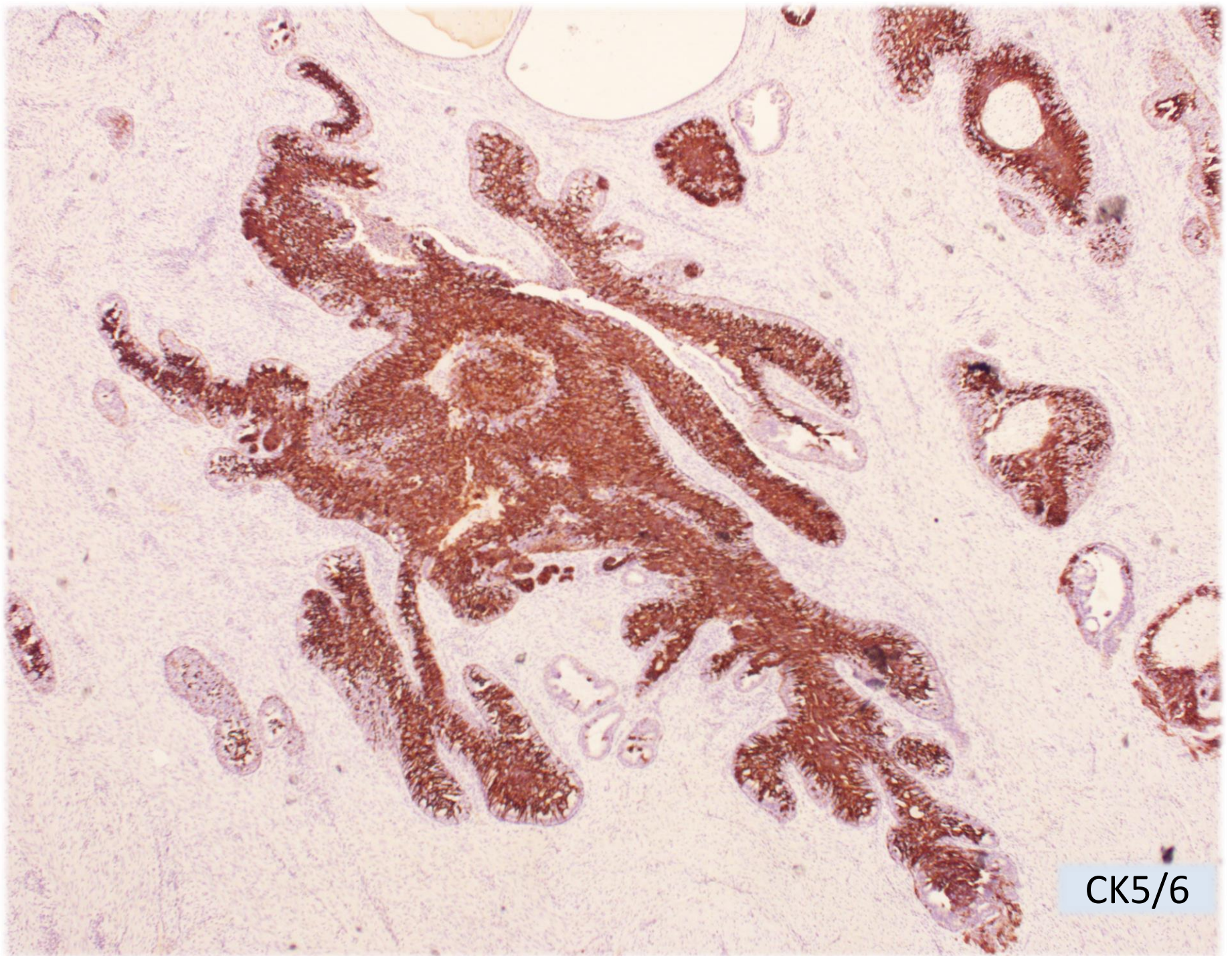




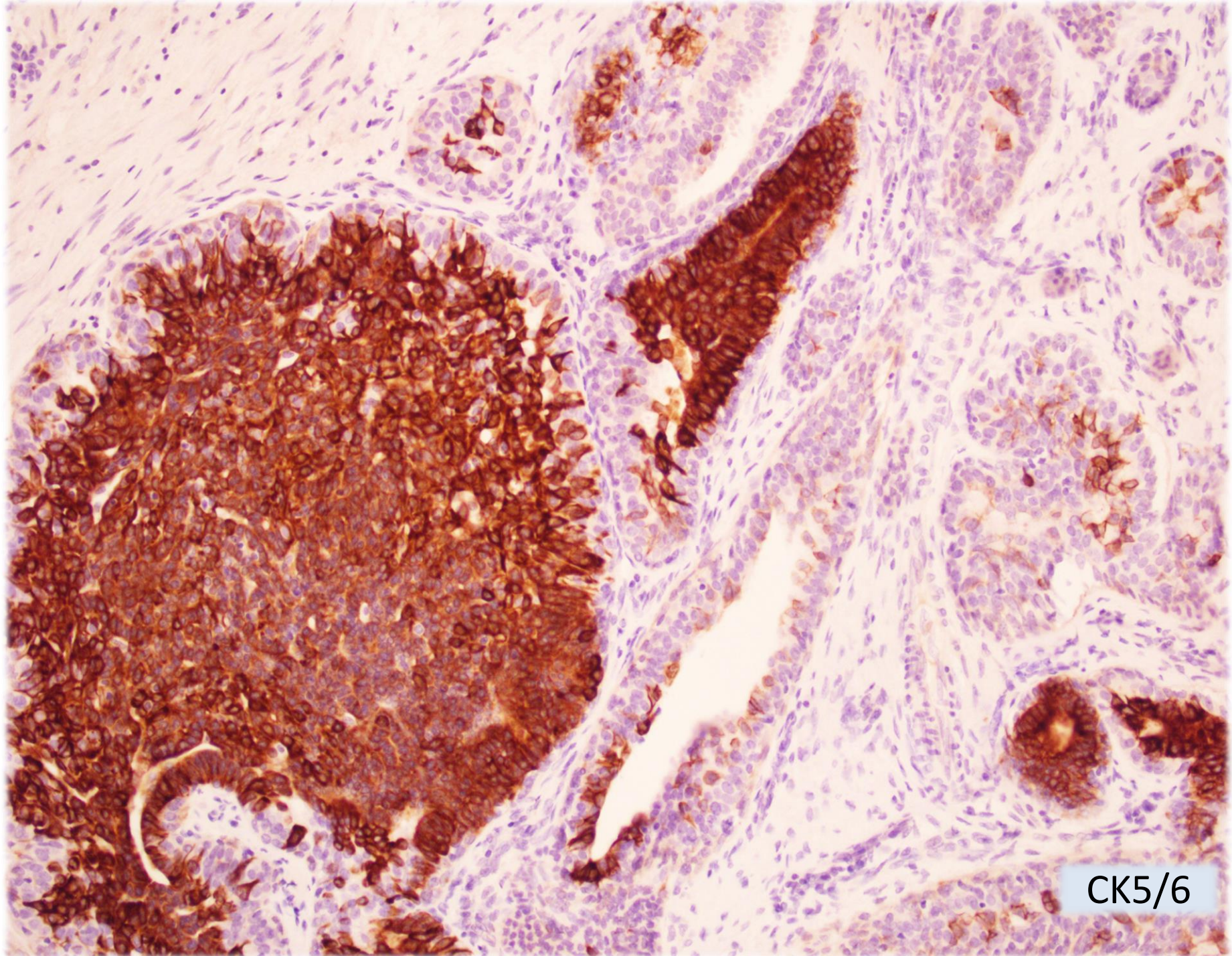




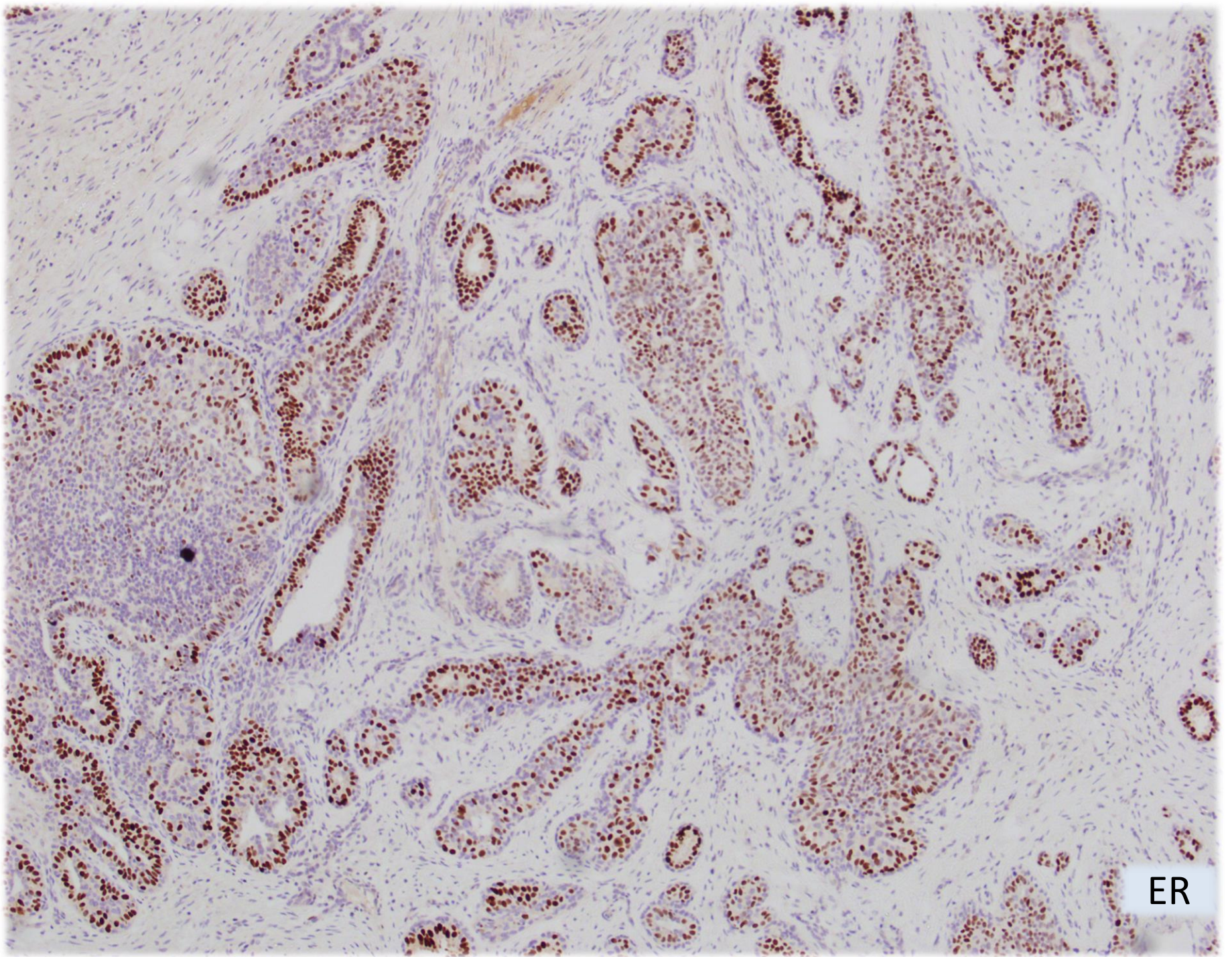
CK5/6



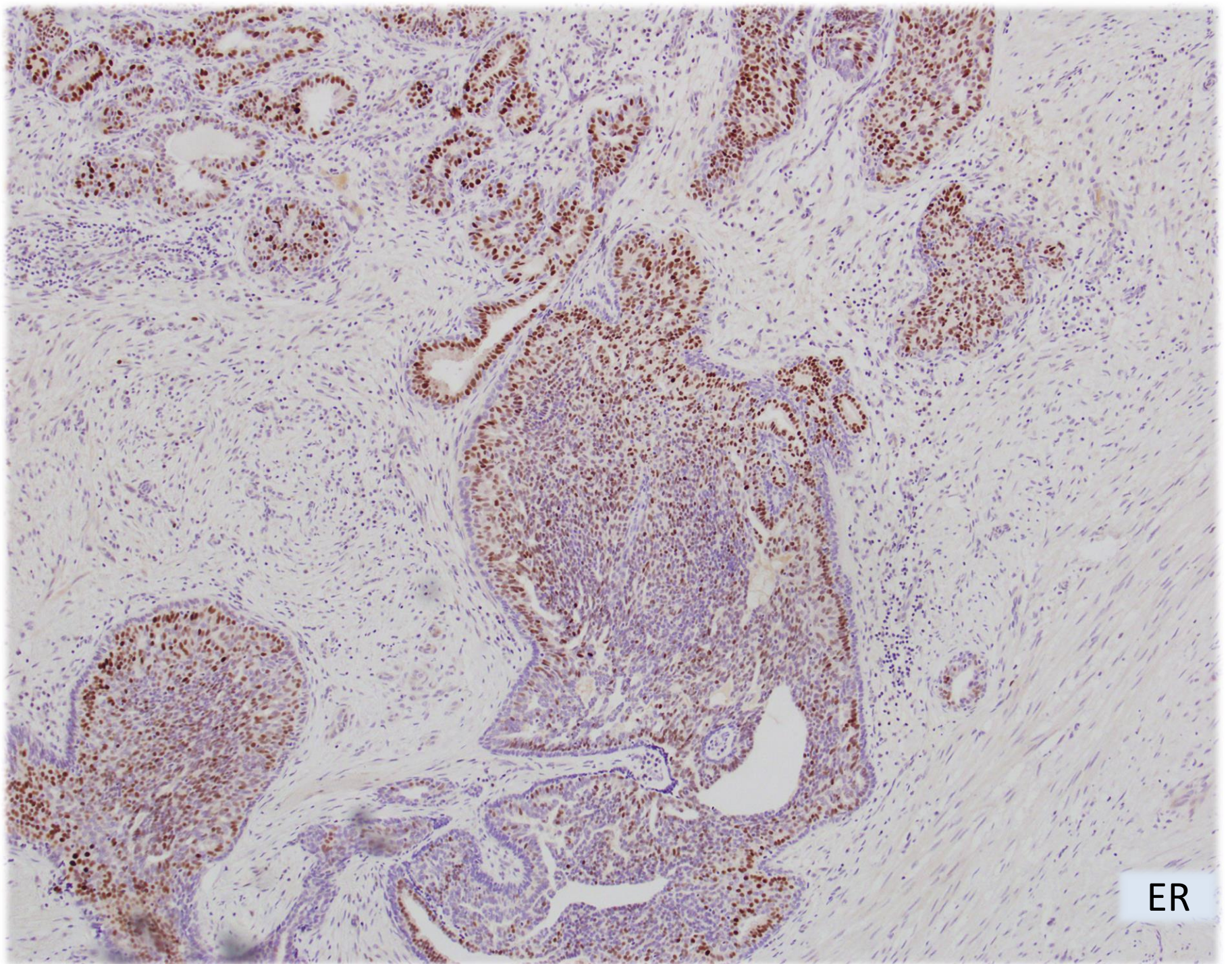
CK5/6



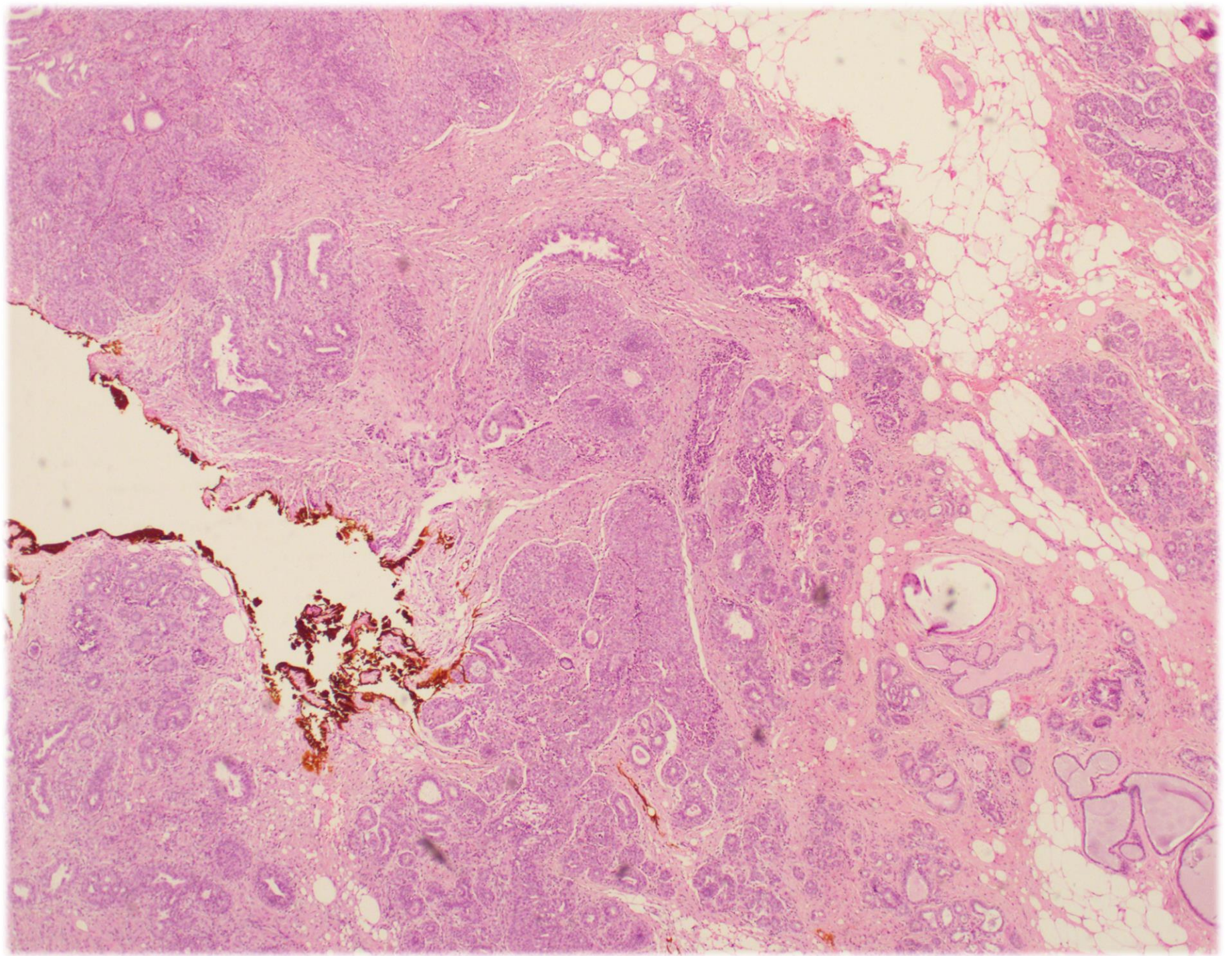
CK5/6

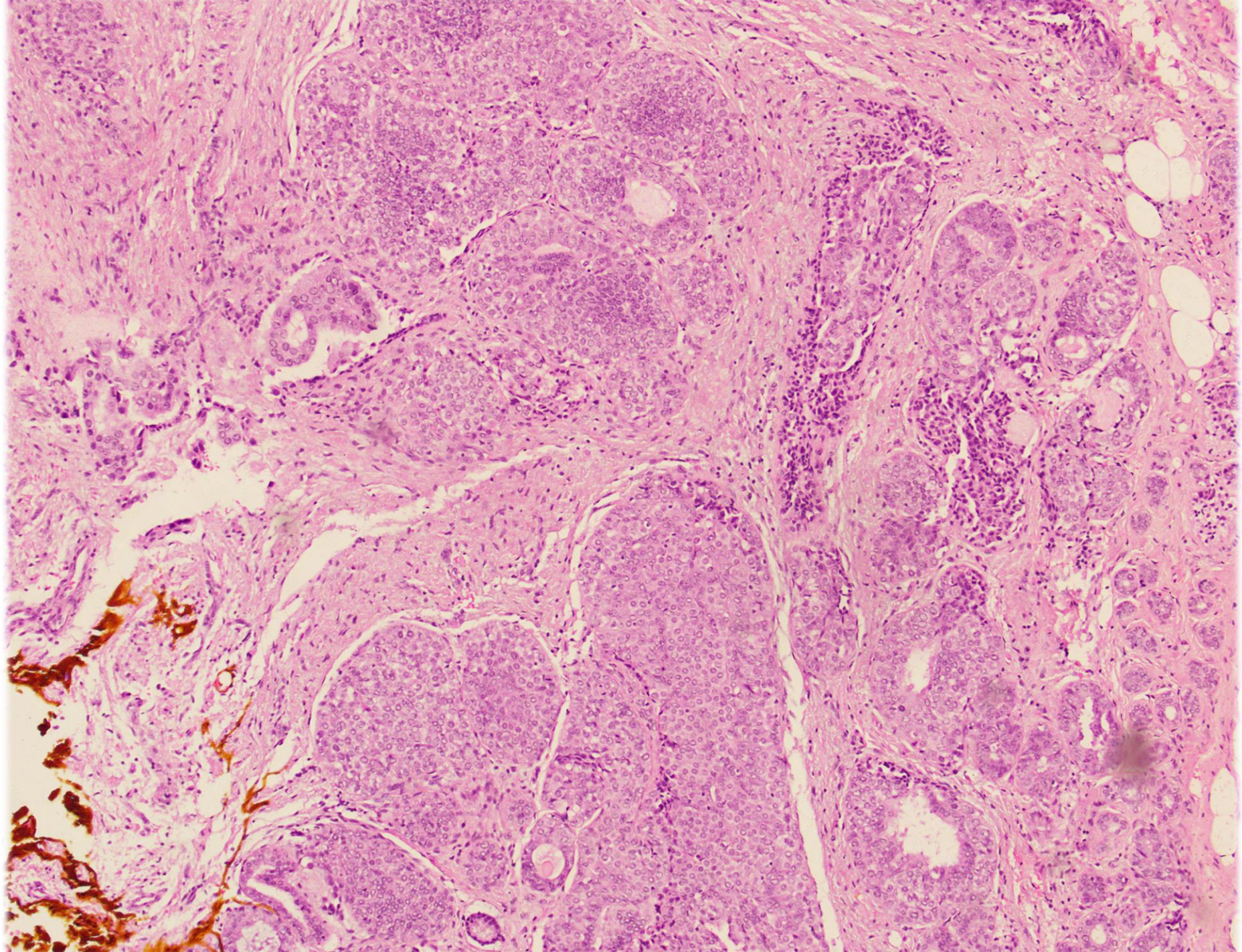


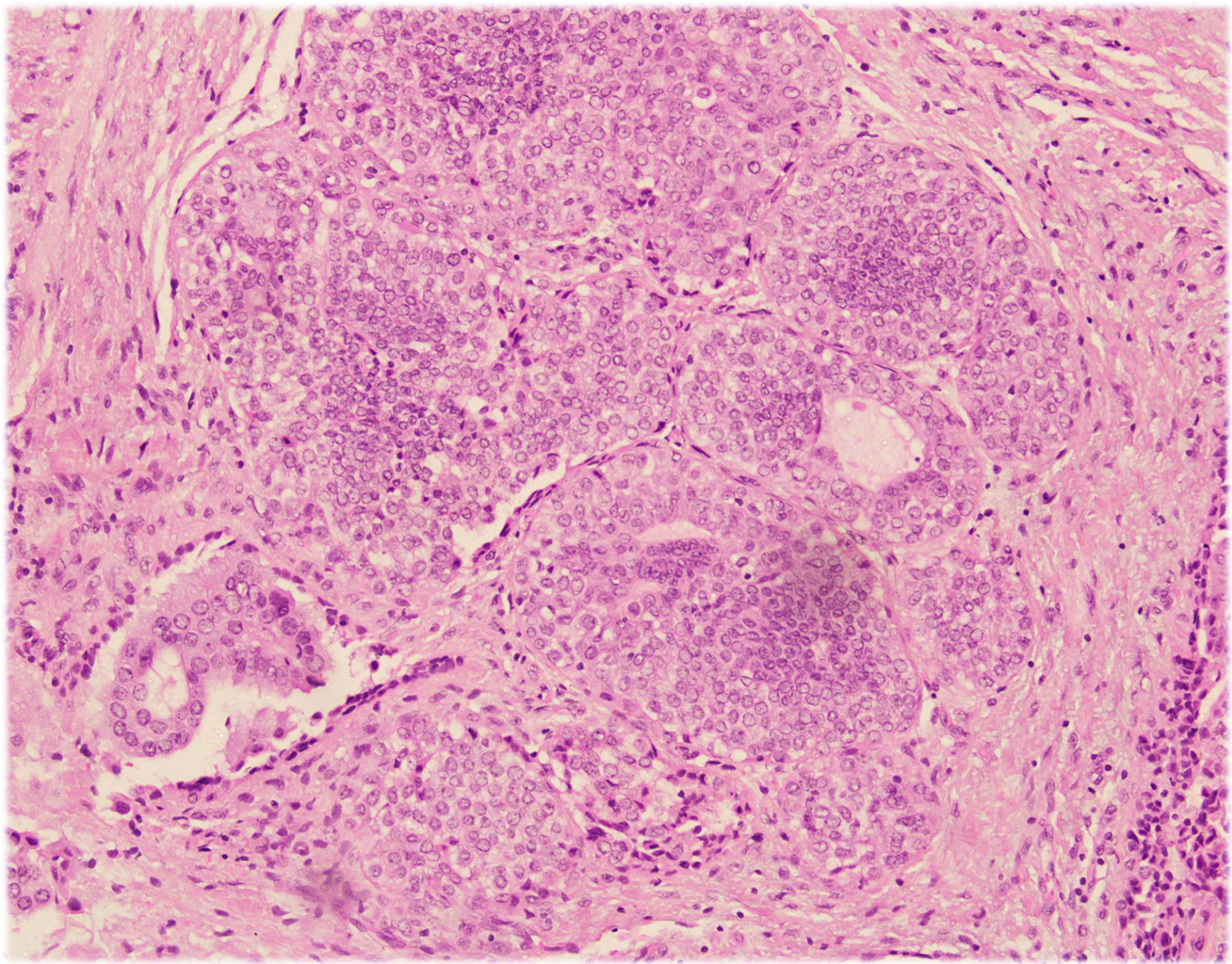
ER

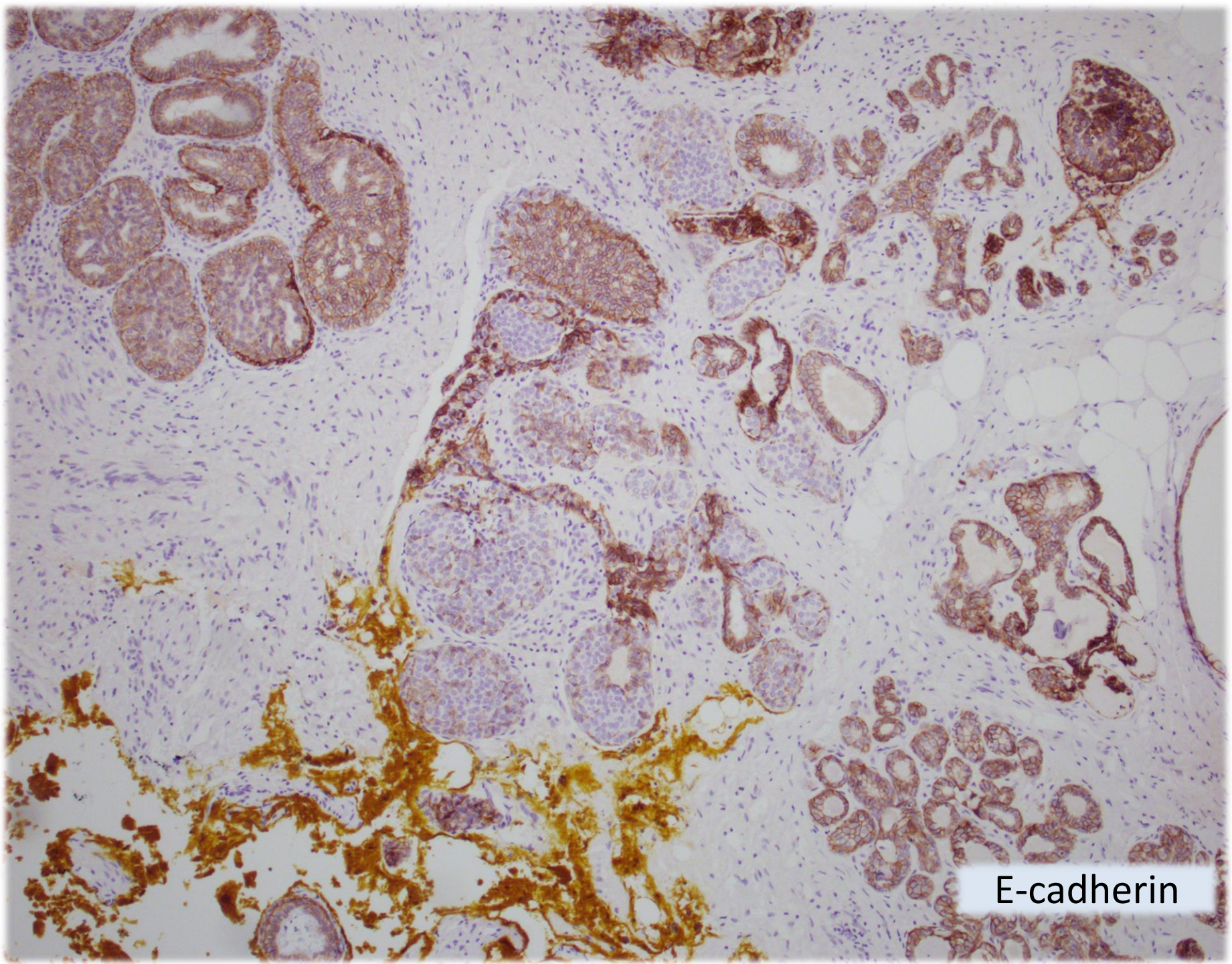


ER

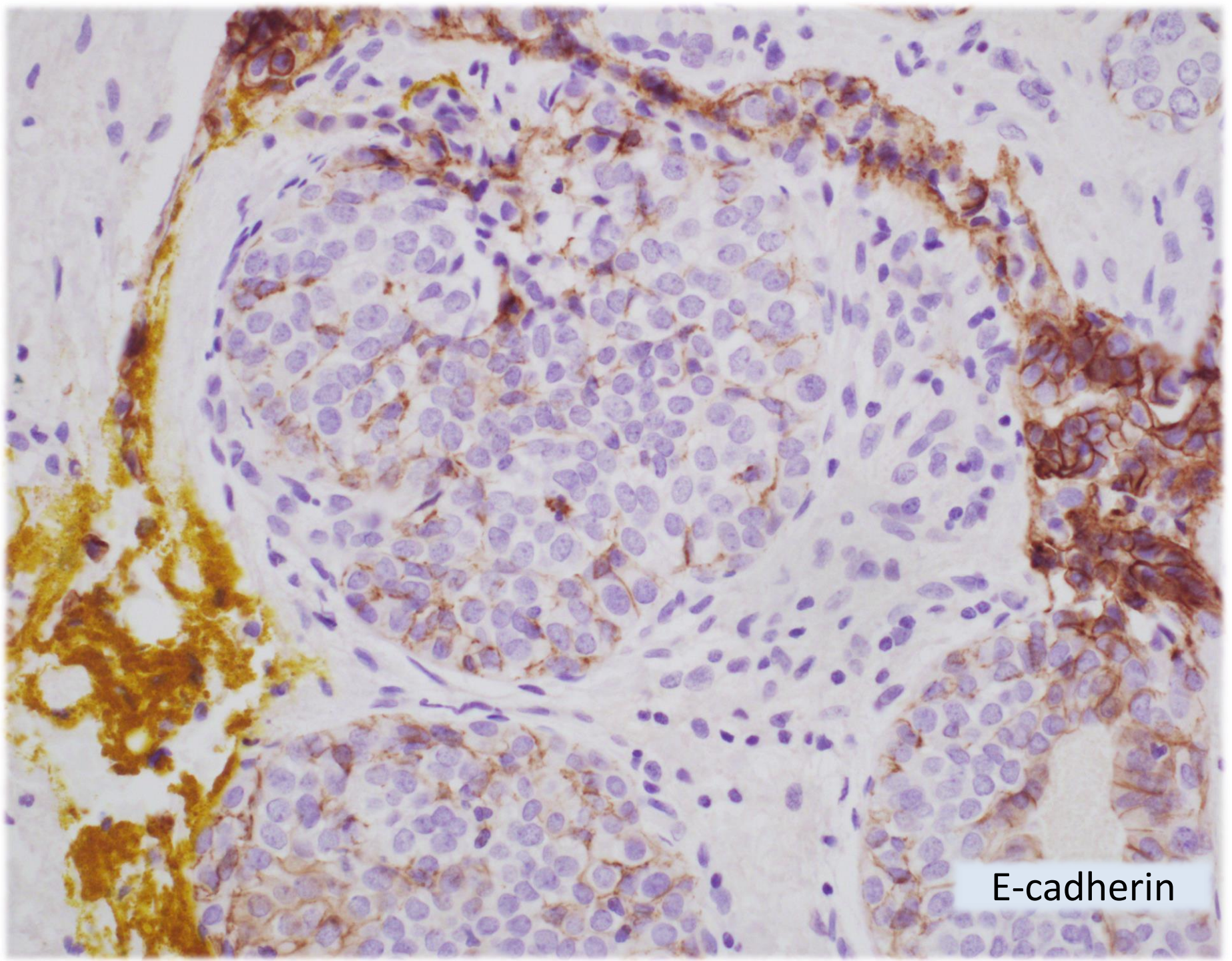








E-cadherin



E-cadherin

Diagnosis

- Fibroepithelial neoplasm, suggestive of borderline phyllodes tumour with florid usual ductal hyperplasia.
- Lobular carcinoma in situ (not in the submitted slide).



Phyllodes tumours and epithelial changes

- Usual ductal hyperplasia
- Atypical ductal hyperplasia
- Lobular neoplasia ~
 - Atypical lobular hyperplasia
 - Lobular carcinoma in situ
- Ductal carcinoma in situ
- Invasive carcinoma

Table 11
Clinicopathologic Features of 335 Phyllodes Tumors Correlated With Grade or Classification*

Feature	Benign	Borderline	Malignant	P
Mean age (y)	39.32	45.37	46.84	<.001†
Mean tumor size (mm)	43.48	80.80	91.65	<.001†
Gross margins				<.001†
Well circumscribed (n = 278)	222 (79.9)	39 (14.0)	17 (6.1)	
Poorly circumscribed (n = 20)	5 (25)	5 (25)	10 (50)	
Not mentioned (n = 37)	23 (62)	10 (27)	4 (11)	
Cystic degeneration				<.001†
Absent (n = 286)	225 (78.7)	42 (14.7)	19 (6.6)	
Present (n = 48)	24 (50)	12 (25)	12 (25)	
Not mentioned (n = 1)	1 (100)	0 (0)	0 (0)	
Gross necrosis				<.001†
Absent (n = 321)	247 (76.9)	49 (15.3)	25 (7.8)	
Present (n = 13)	3 (23)	4 (31)	6 (46)	
Not mentioned (n = 1)	0 (0)	1 (100)	0 (0)	
Gross hemorrhage				<.001†
Absent (n = 296)	232 (78.4)	40 (13.5)	24 (8.1)	
Present (n = 38)	18 (47)	13 (34)	7 (18)	
Not mentioned (n = 1)	0 (0)	1 (100)	0 (0)	
Microscopic myxoid change				.408
Epithelial hyperplasia				.046†
Absent (n = 87)	64 (74)	9 (10)	14 (16)	
Mild (n = 122)	98 (80.3)	17 (13.9)	7 (5.7)	
Moderate (n = 94)	66 (70)	21 (22.3)	7 (7)	
Severe (n = 31)	22 (71)	7 (23)	2 (6)	
None (n = 254)	211 (83.1)	35 (13.8)	8 (3.1)	
Infarction (n = 68)	39 (57)	18 (26)	11 (16)	
Tumor necrosis (n = 13)	0 (0)	1 (8)	12 (92)	
Epithelial hyperplasia				.046†
Absent (n = 87)	64 (74)	9 (10)	14 (16)	
Mild (n = 122)	98 (80.3)	17 (13.9)	7 (5.7)	
Moderate (n = 94)	66 (70)	21 (22.3)	7 (7)	
Severe (n = 31)	22 (71)	7 (23)	2 (6)	
Surgical procedure				<.001†
Excisional biopsy (n = 272)	224 (82.4)	36 (13.2)	12 (4.4)	
Wide excision (n = 39)	22 (56)	10 (26)	7 (18)	
Mastectomy (n = 23)	4 (17)	8 (35)	11 (48)	
Unknown (n = 1)	0 (0)	0 (0)	1 (100)	
Margin status				.003†
Focal involvement (n = 186)	146 (78.5)	28 (15.1)	12 (6.5)	
Diffuse involvement (n = 9)	4 (44)	5 (56)	0 (0)	
Complete excision (n = 139)	99 (71.2)	21 (15.1)	19 (13.7)	

hpf, high-power fields; PASH, pseudoangiomatous stromal hyperplasia.

* Data are given as number (percentage) unless otherwise indicated. For 2 categories (epithelial hyperplasia and margin status), data are given for 334 cases.

† Statistically significant result.

Phyllodes tumours and epithelial hyperplasia

- Role of the epithelium in phyllodes tumours is uncertain.
- Epithelial-stromal cross-talk is believed to occur in breast fibroepithelial lesions, including fibroadenomas and phyllodes tumours.

Likewise, epithelial hyperplasia diminished with worsening tumor grade, an observation noted previously by Pietruszka and Barnes.¹² Epithelial-stromal interactions in phyllodes tumors have been discussed by Sawhney et al²² and Sawyer et al.^{23,24} In the earlier study, Sawhney et al²² noted that mitotic activity tended to occur close to the epithelial elements, suggesting that stromal growth was dependent on the epithelium, whereas Sawyer et al²³ found distinct molecular alterations in the epithelial and stromal components of phyllodes tumors that indicated both elements likely participated in the neoplastic process, with further evidence of a relationship lent by an association between stromal nuclear β -catenin with epithelial Wnt5a expression.²⁴ It was believed that

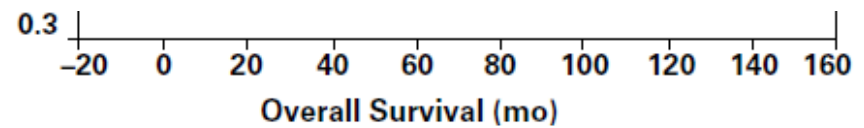


Figure 1 Overall survival stratified according to phyllodes tumor grade. Women with benign phyllodes tumor survived longer than those with malignant lesions ($P < .01$). No deaths occurred among the borderline cases.

progression to malignancy in phyllodes tumors occurred with independence of the stroma from the epithelium. The inverse correlation between epithelial hyperplasia and phyllodes tumor grade in our study suggests that actively proliferating epithelium

