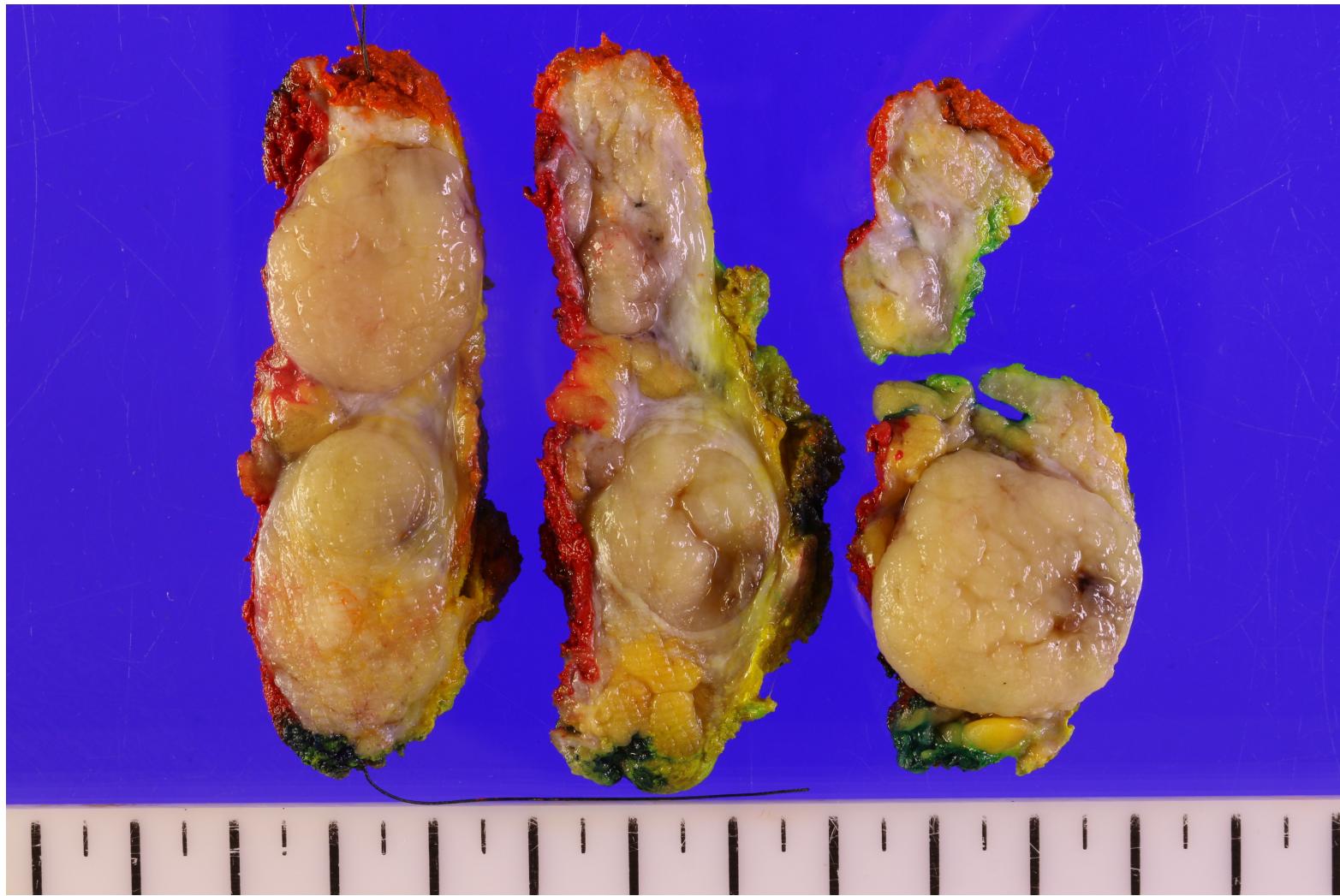


# Pathology

## Case study

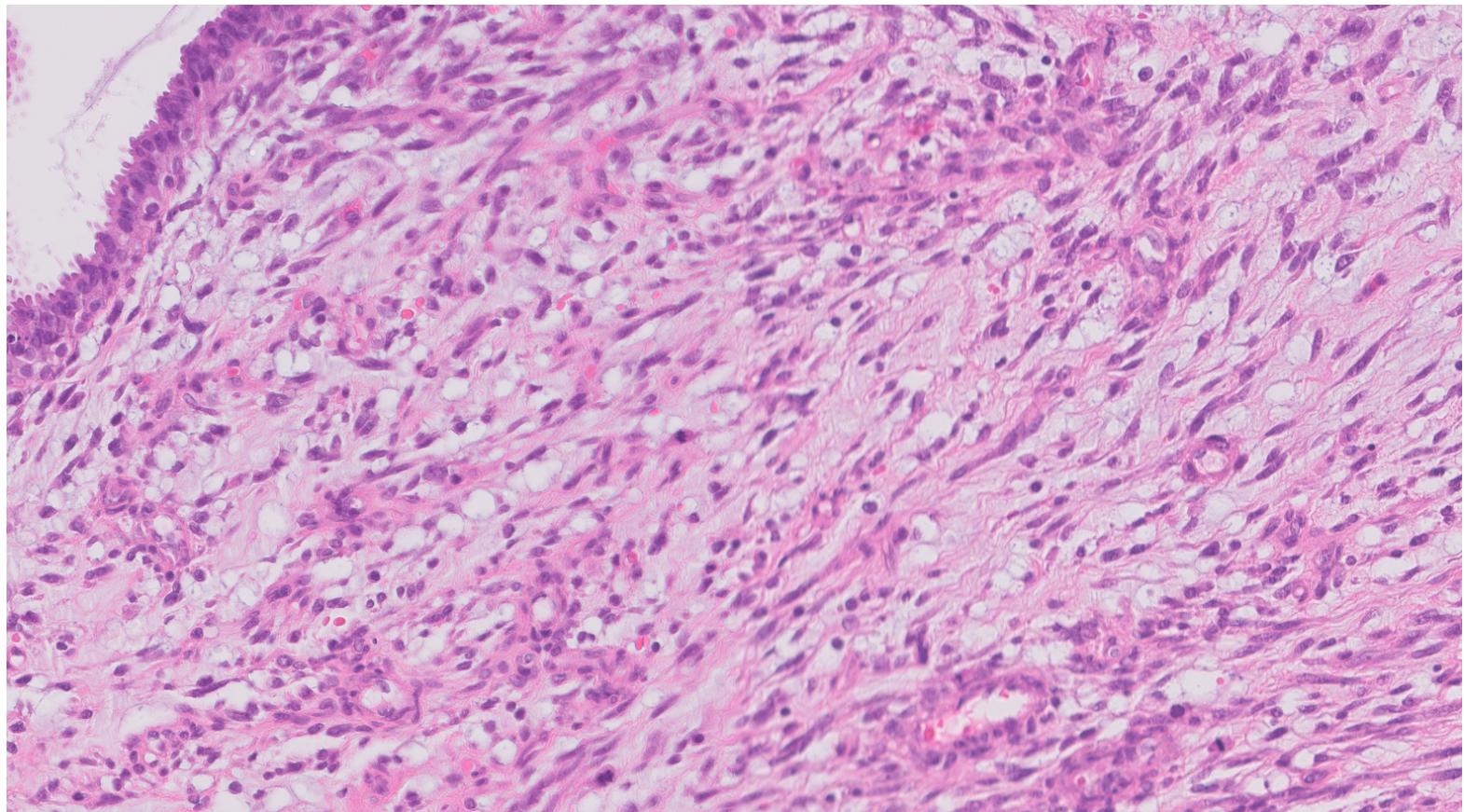
Jun Kang

# Case 1





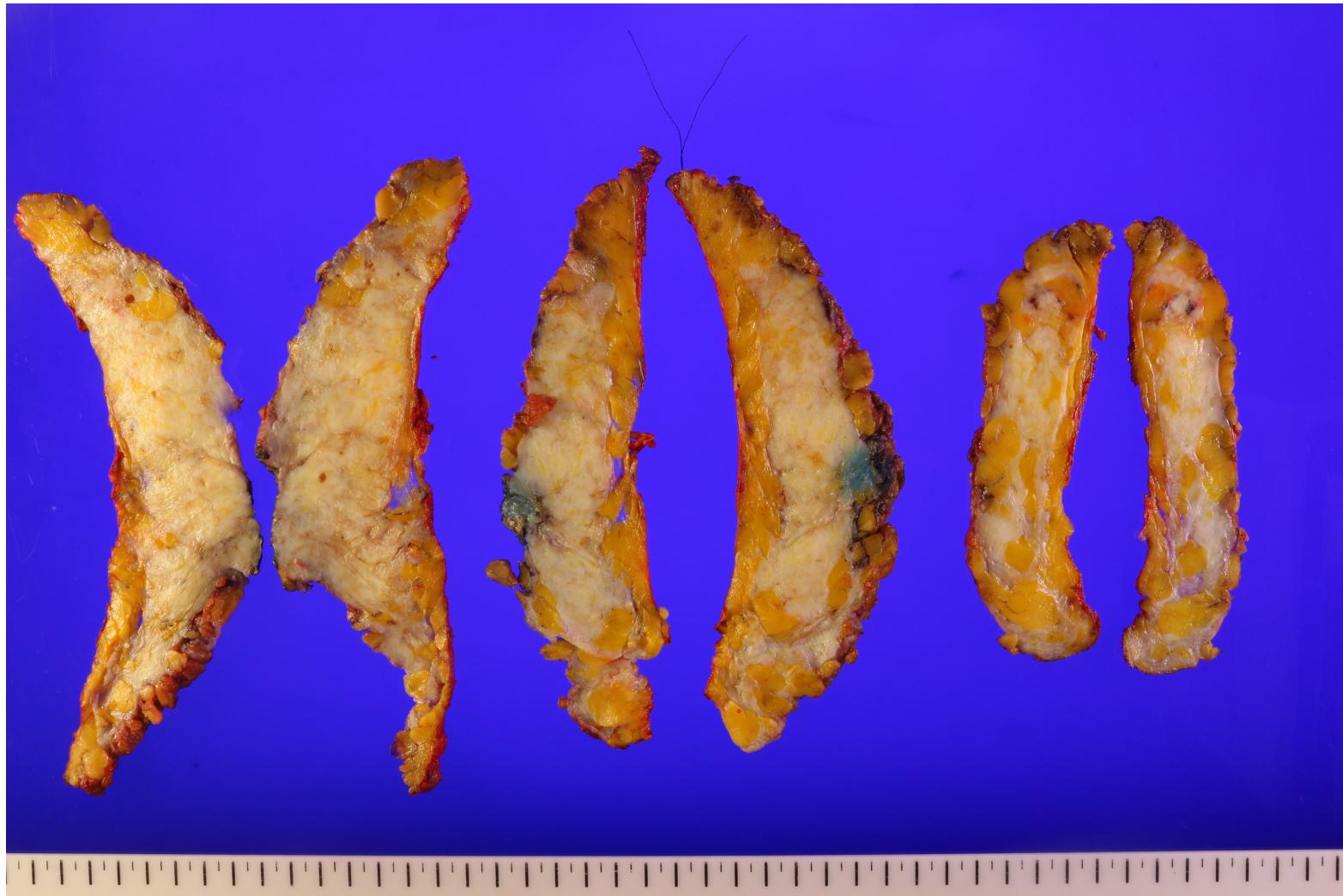


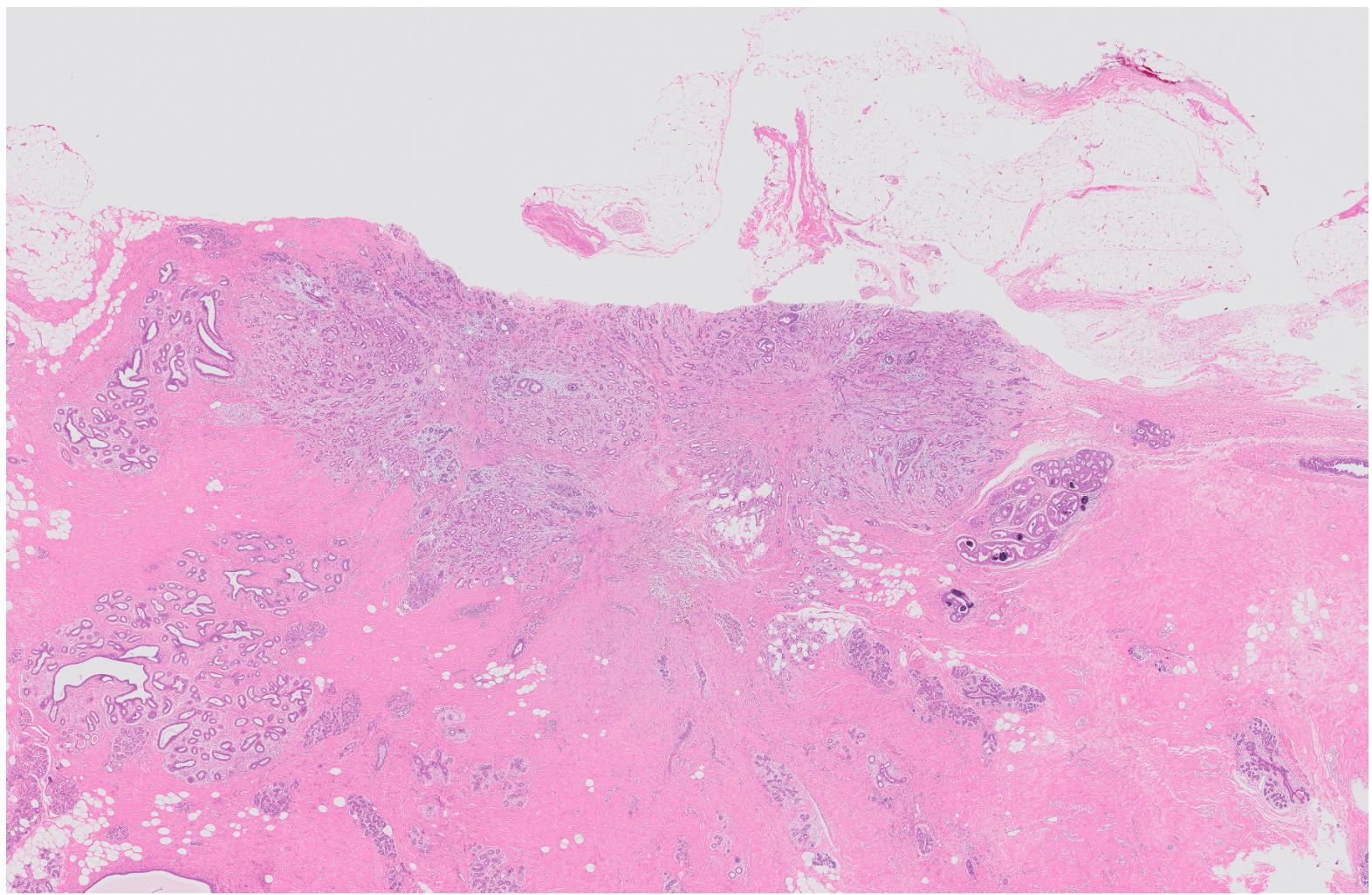


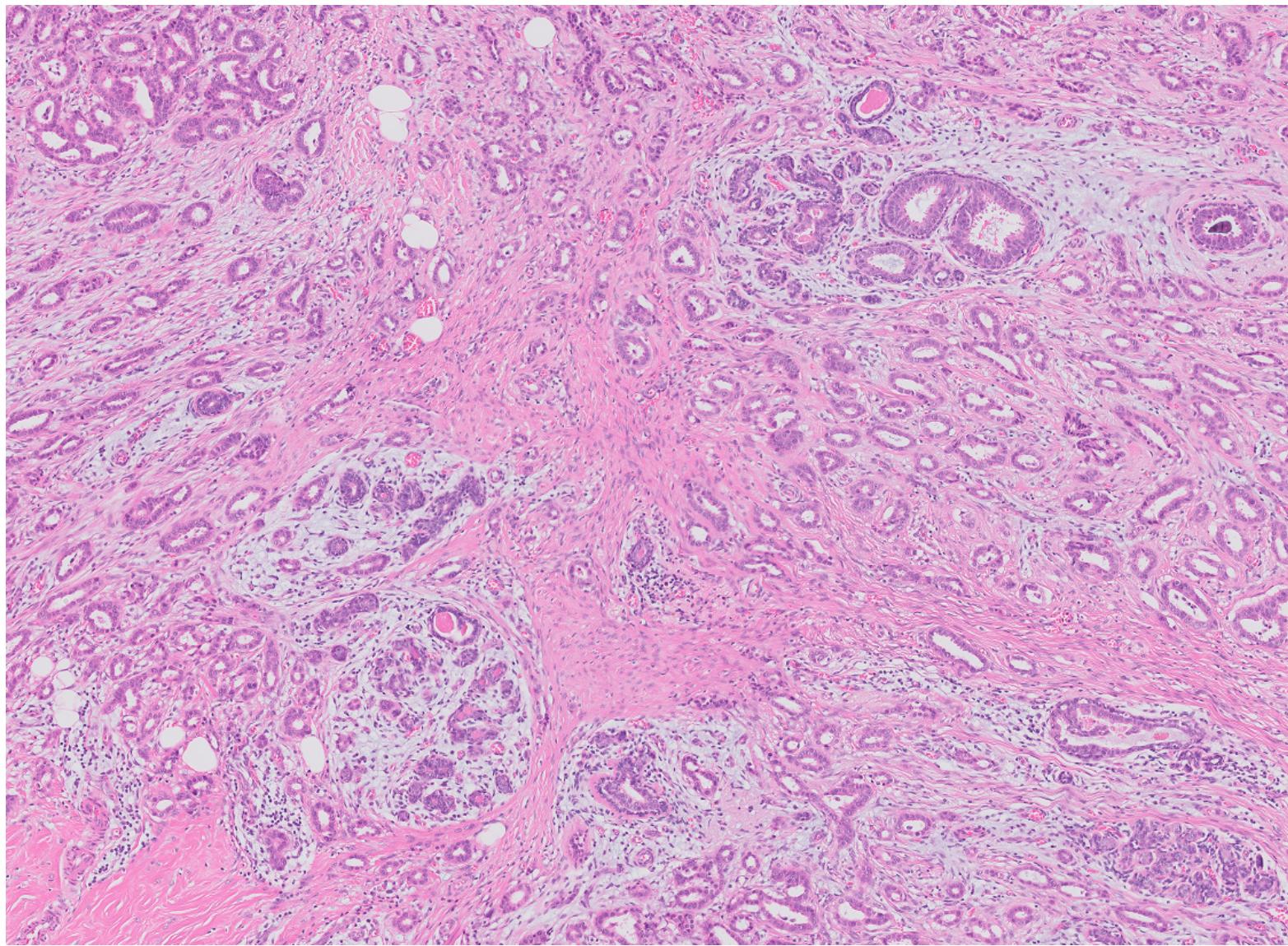
## Fibroepithelial lesion (WHO 5th edition)

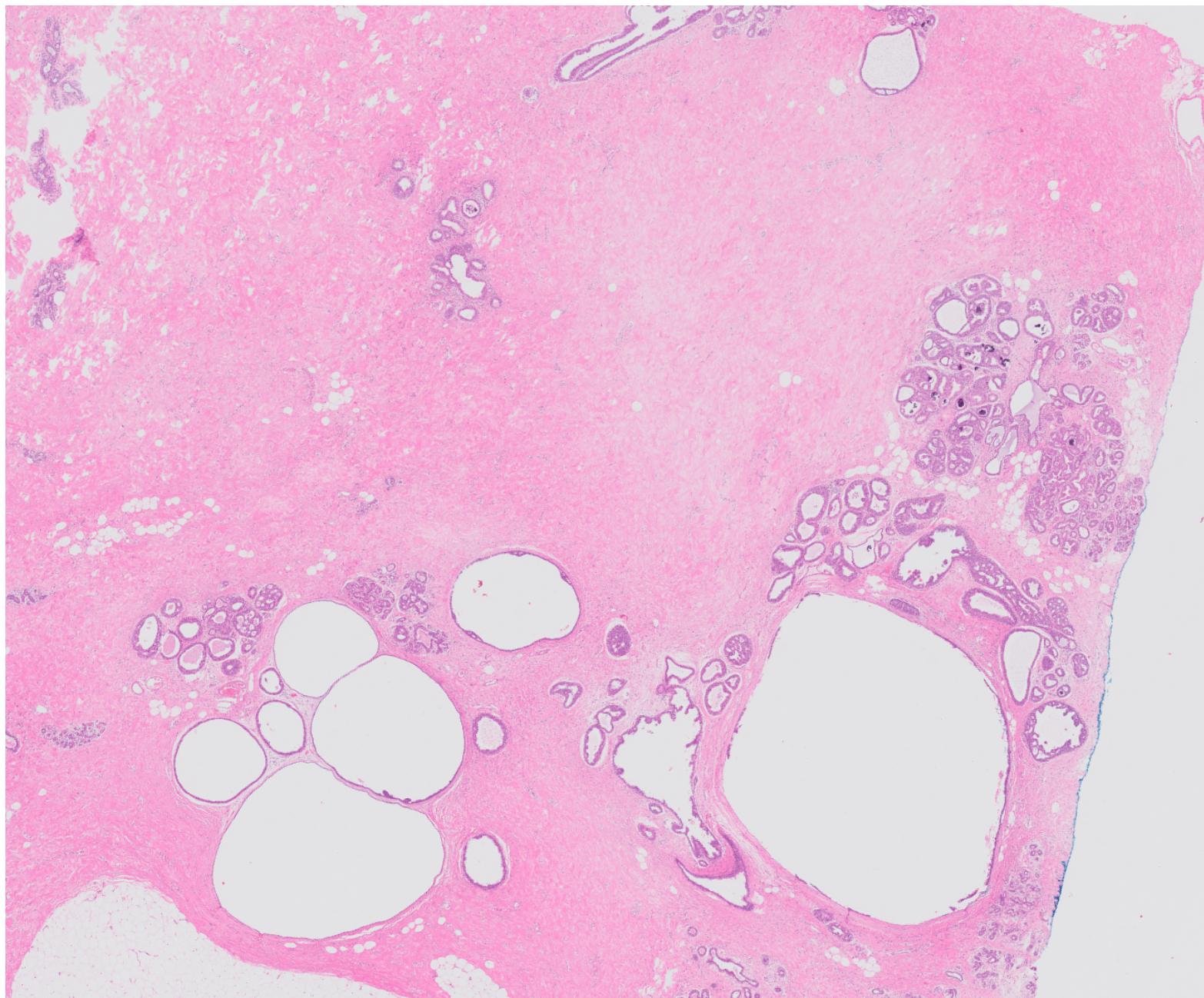
Histological feature	Fibroadenoma	Phyllodes tumours		
		Benign	Borderline	Malignant*
Tumour border	Well defined	Well defined	Well defined, may be focally permeative	Permeative
Stromal cellularity	Variable, scant to uncommonly cellular, usually uniform	Cellular, usually mild, may be non-uniform or diffuse	Cellular, usually moderate, may be non-uniform or diffuse	Cellular, usually marked and diffuse
Stromal atypia	None	Mild or none	Mild or moderate	Marked
Mitotic activity	Usually none, rarely low	Usually low: < 2.5 mitoses/mm <sup>2</sup> (< 5 per 10 HPFs)	Usually frequent: 2.5 to < 5 mitoses/mm <sup>2</sup> (5–9 per 10 HPFs)	Usually abundant: ≥ 5 mitoses/mm <sup>2</sup> (≥ 10 per 10 HPFs)
Stromal overgrowth	Absent	Absent	Absent (or very focal)	Often present
Malignant heterologous elements	Absent	Absent	Absent	May be present
Distribution relative to all breast tumours	Common	Uncommon	Rare	Rare
Relative proportion of all phyllodes tumours	n/a	60–75%	15–26%	8–20%

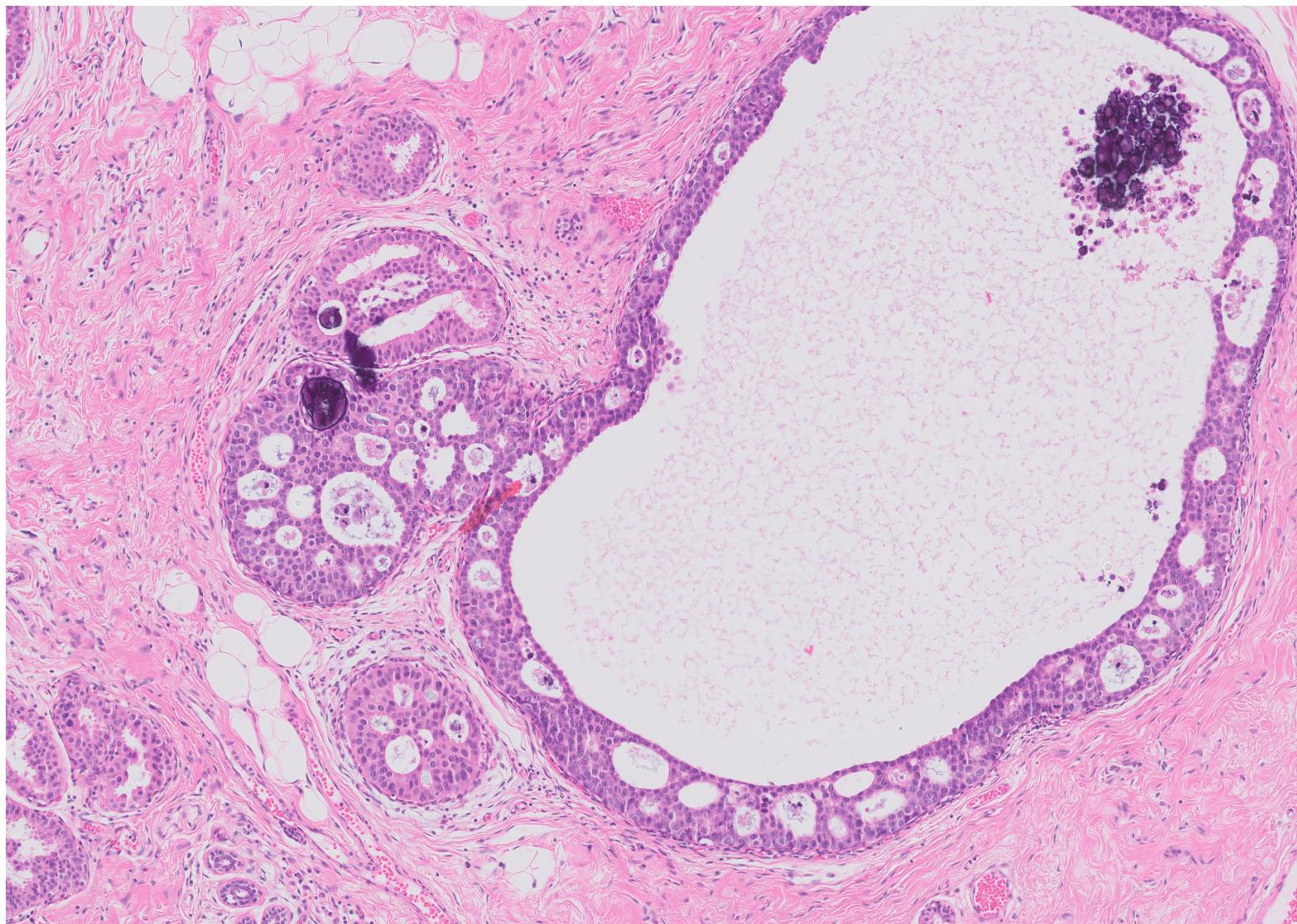
# Case 2



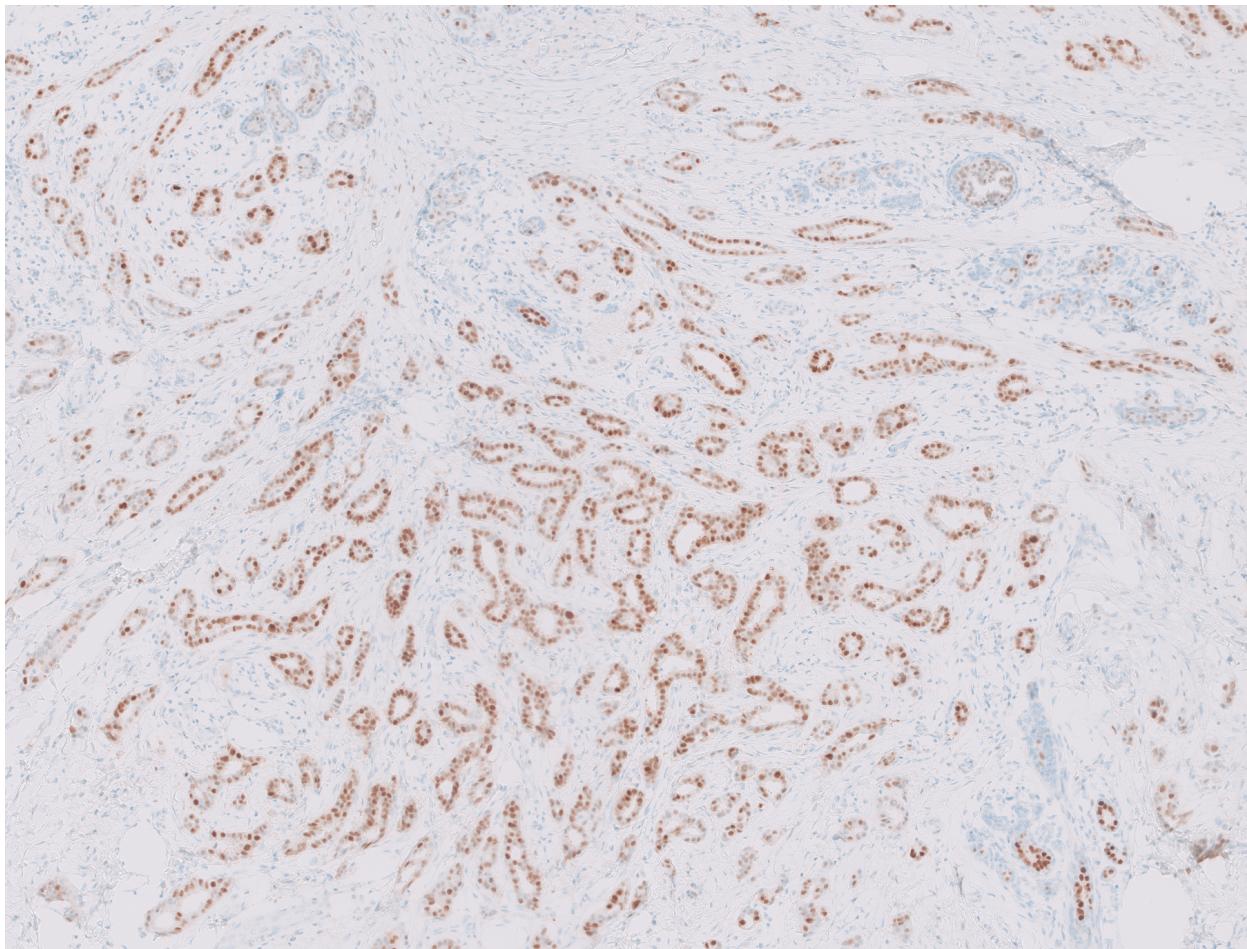




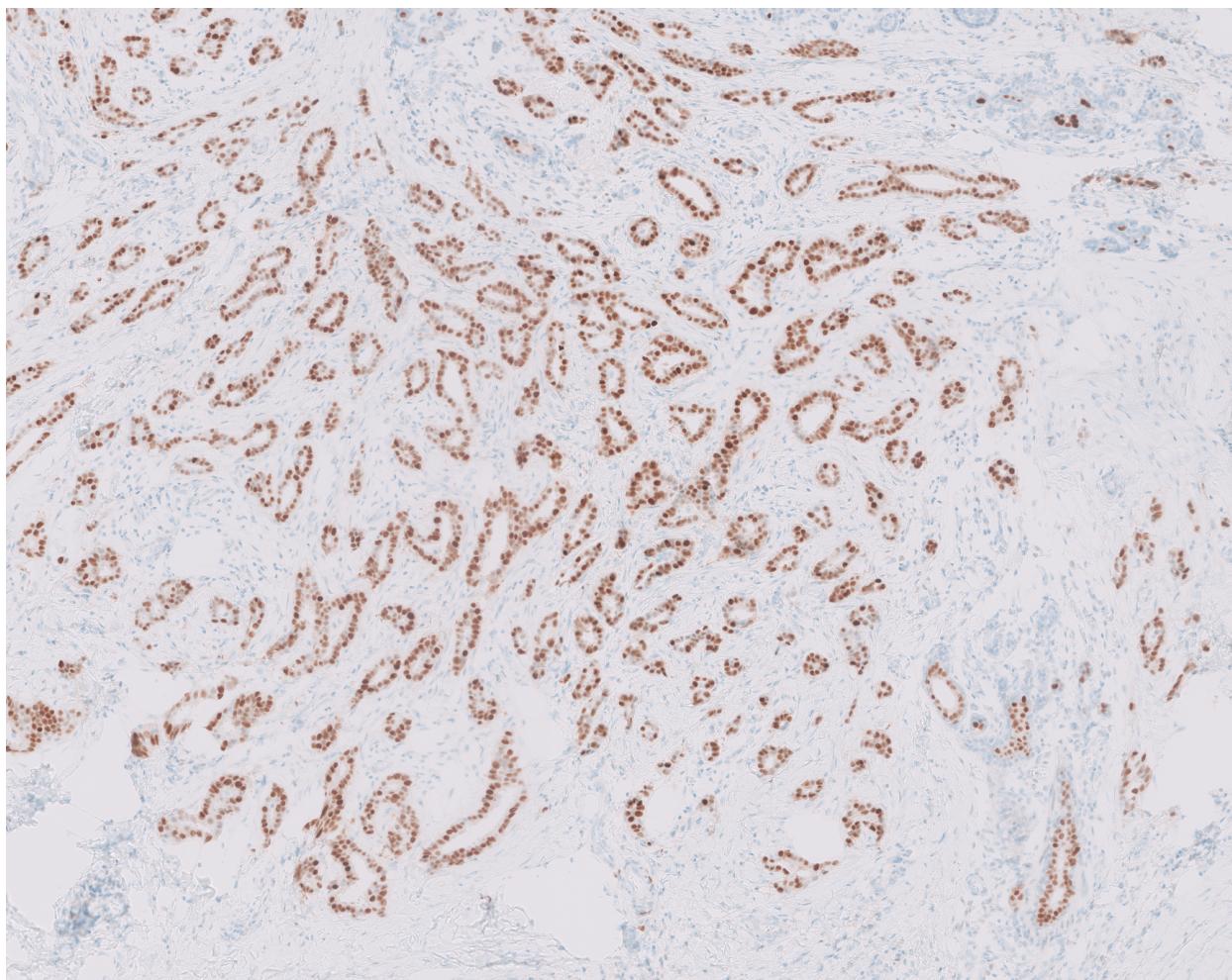




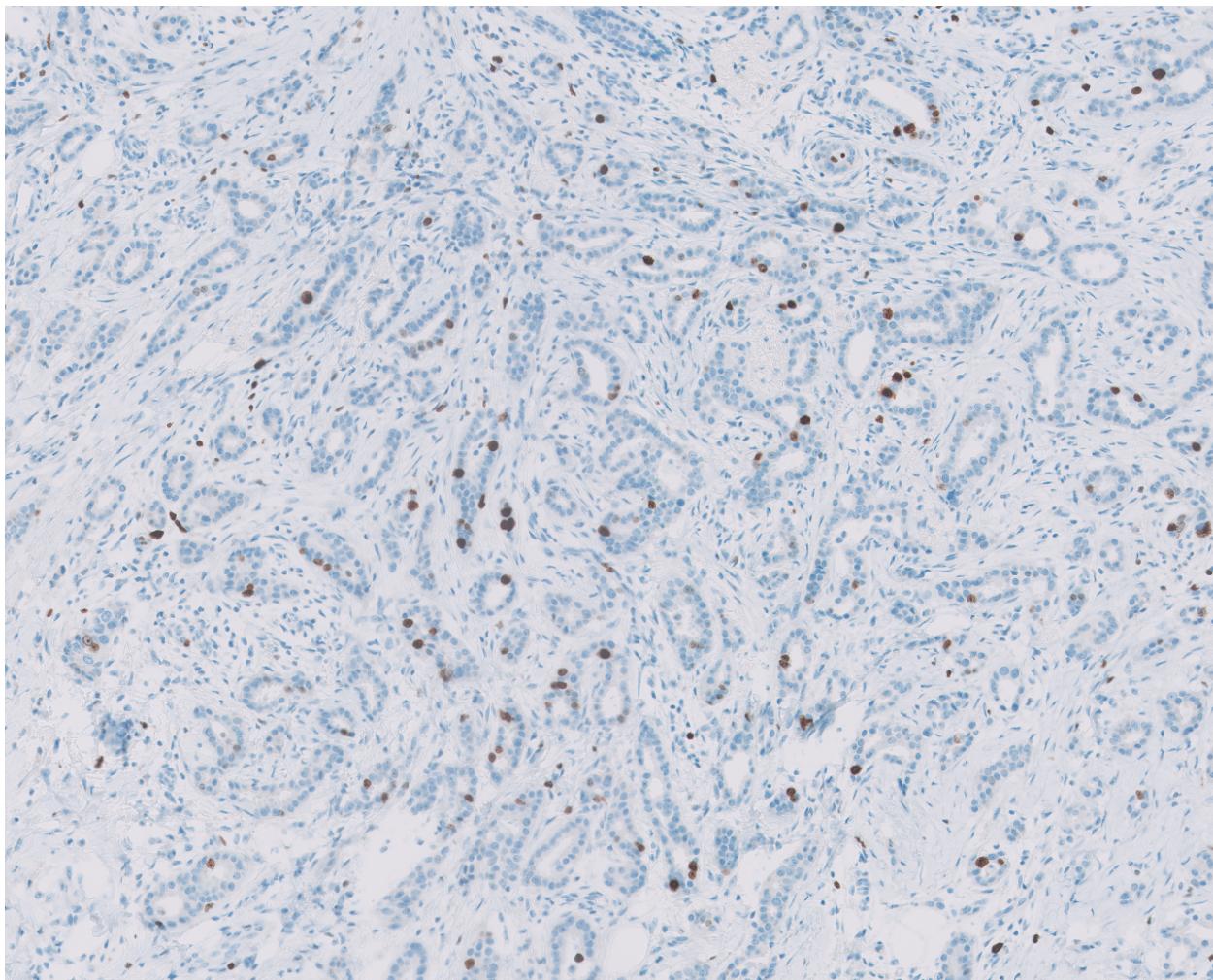
# Estrogen receptor (ER)



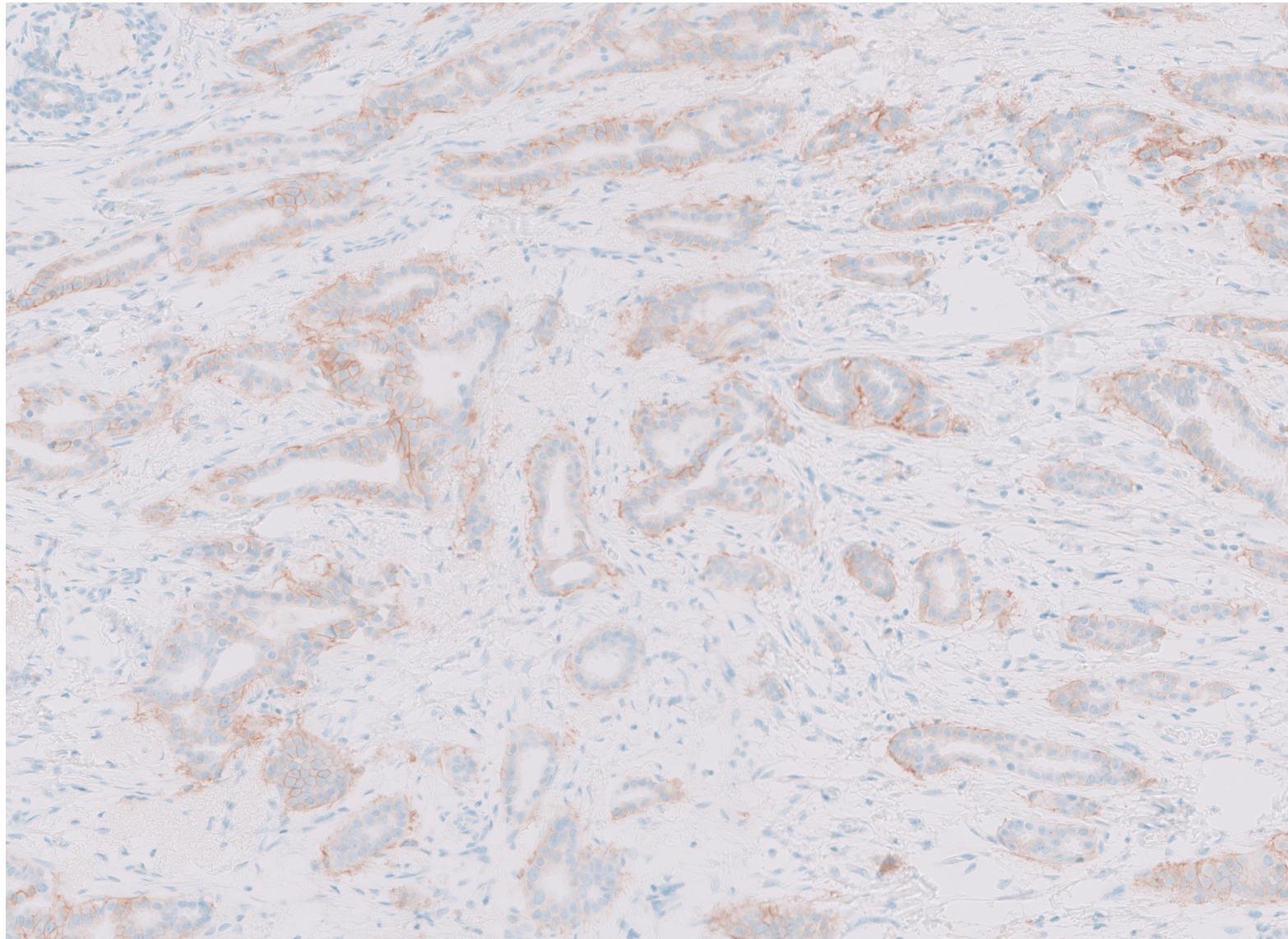
# Progesteron receptor (PR)



# Ki-67



## **erbB2 (HER2)**



# 13th St Gallen International Breast Cancer Conference (2013) Expert Panel

Intrinsic subtype	Clinico-pathologic surrogate definition
Luminal A	<p>'Luminal A-like'</p> <p><i>all of:</i></p> <ul style="list-style-type: none"> <li>ER and PgR positive</li> <li>HER2 negative</li> <li>Ki-67 'low'<sup>a</sup></li> </ul> <p>Recurrence risk 'low' based on multi-gene-expression assay (if available)<sup>b</sup></p>
Luminal B	<p>'Luminal B-like (HER2 negative)'</p> <ul style="list-style-type: none"> <li>ER positive</li> <li>HER2 negative</li> <li>and <i>at least one of:</i></li> <li>Ki-67 'high'</li> <li>PgR 'negative or low'</li> </ul> <p>Recurrence risk 'high' based on multi-gene-expression assay (if available)<sup>b</sup></p> <p>'Luminal B-like (HER2 positive)'  <ul style="list-style-type: none"> <li>ER positive</li> <li>HER2 over-expressed or amplified</li> <li>Any Ki-67</li> <li>Any PgR</li> </ul> </p>
Erb-B2 overexpression	<p>'HER2 positive (non-luminal)'  <ul style="list-style-type: none"> <li>HER2 over-expressed or amplified</li> <li>ER and PgR absent</li> </ul> </p>
'Basal-like'	<p>'Triple negative (ductal)'  <ul style="list-style-type: none"> <li>ER and PgR absent</li> <li>HER2 negative</li> </ul> </p>