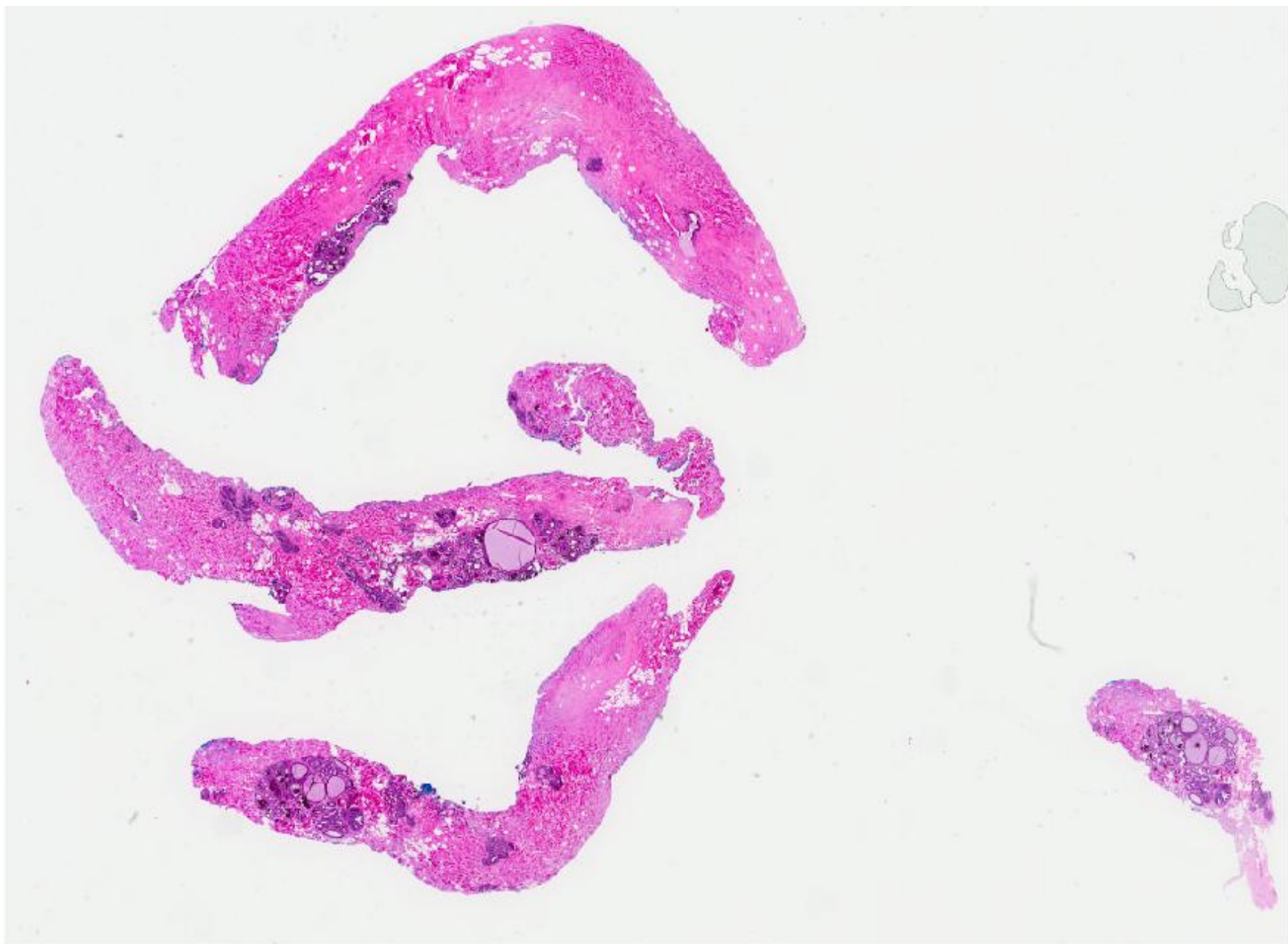
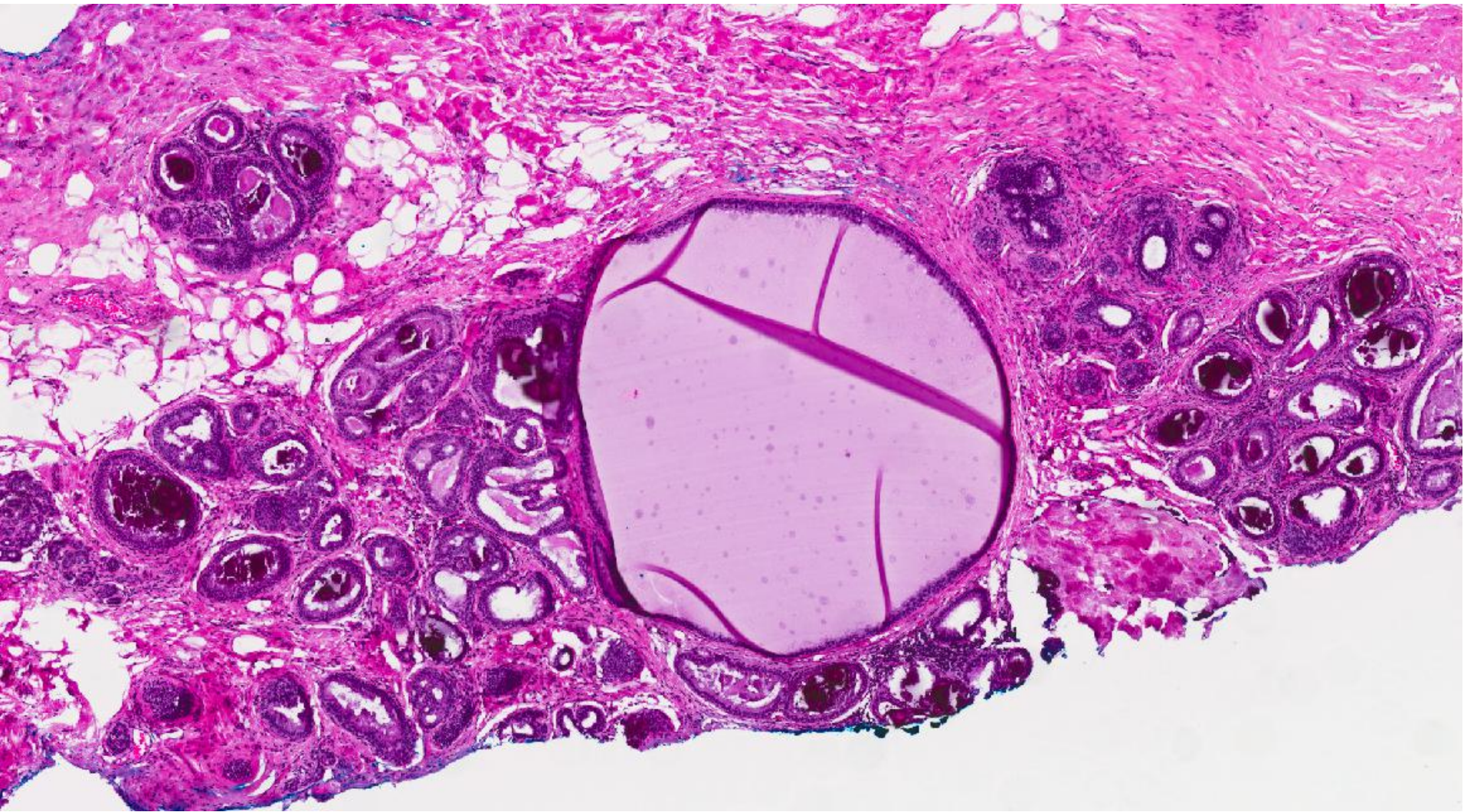


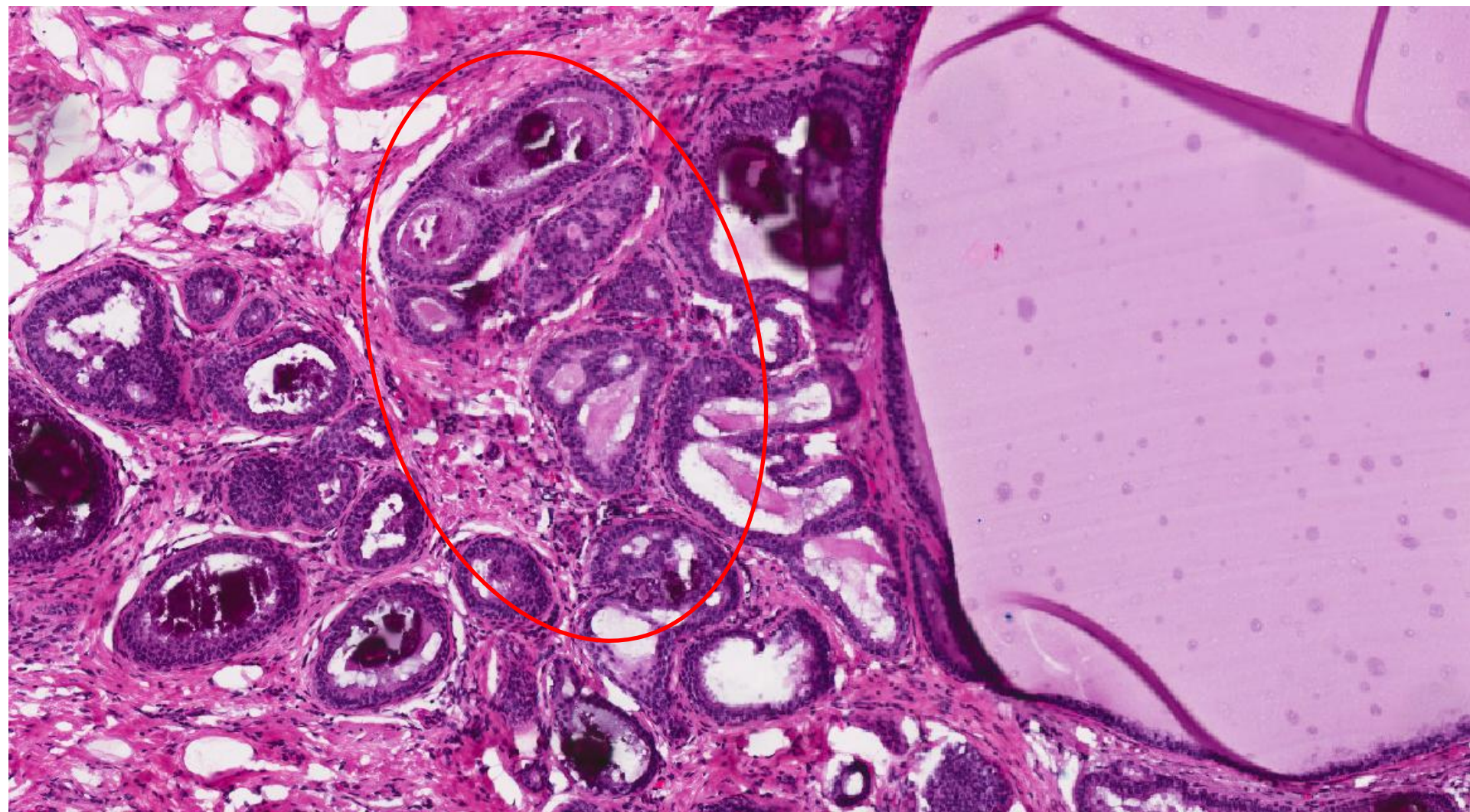
Case 31

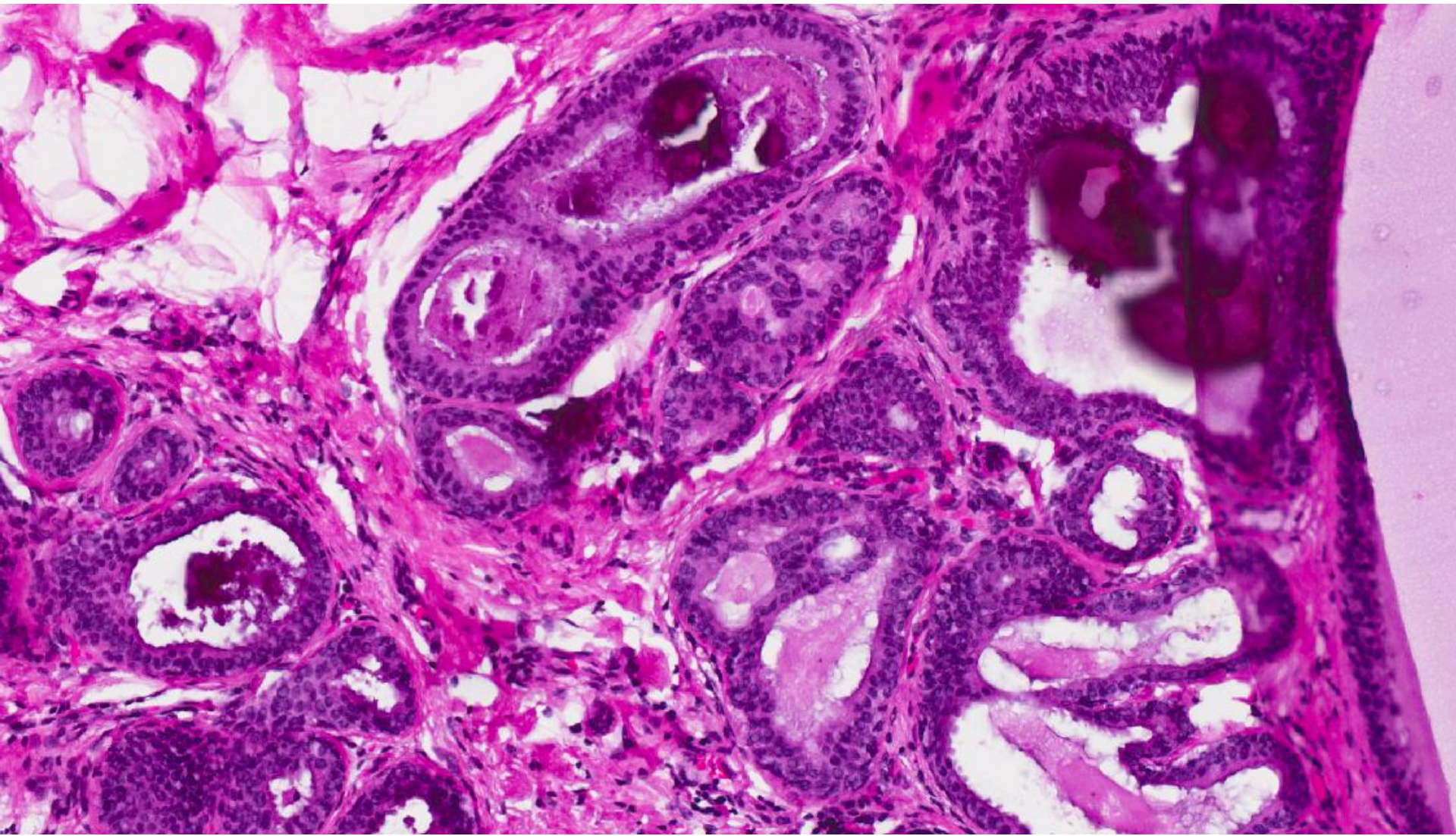
42 year old lady with left breast upper central microcalcifications on mammography.

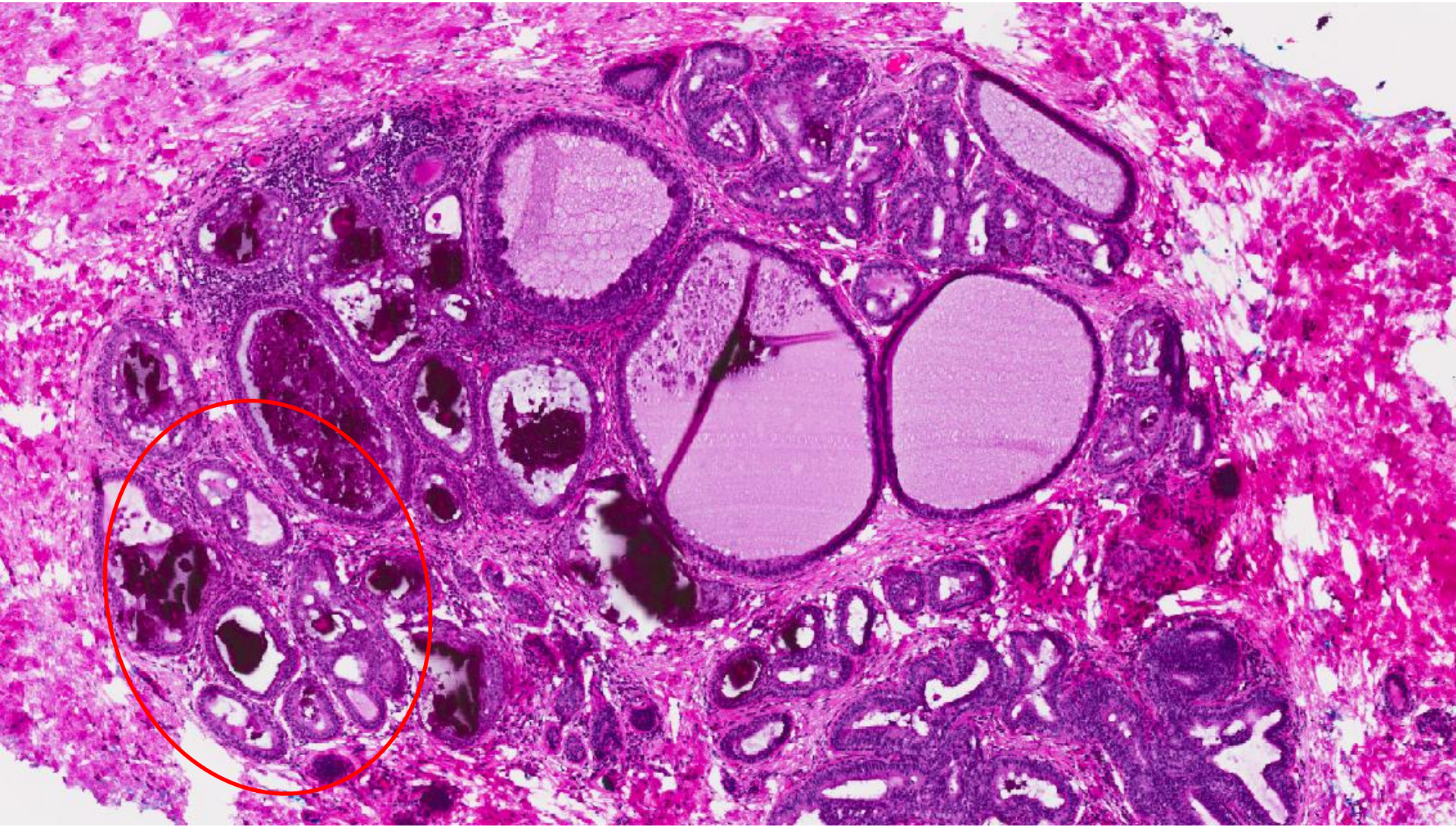
Stereotactic mammotome biopsies performed.

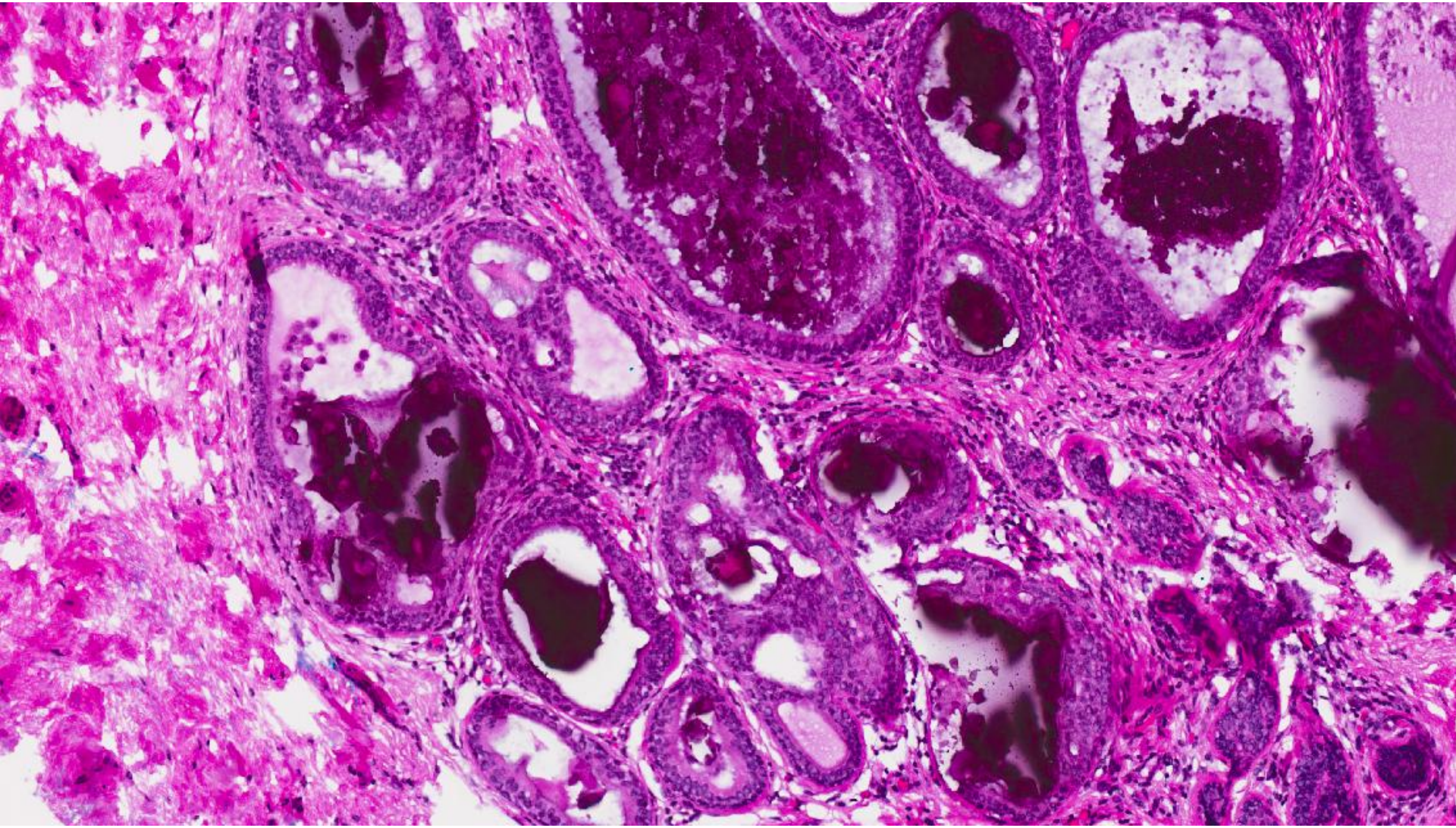


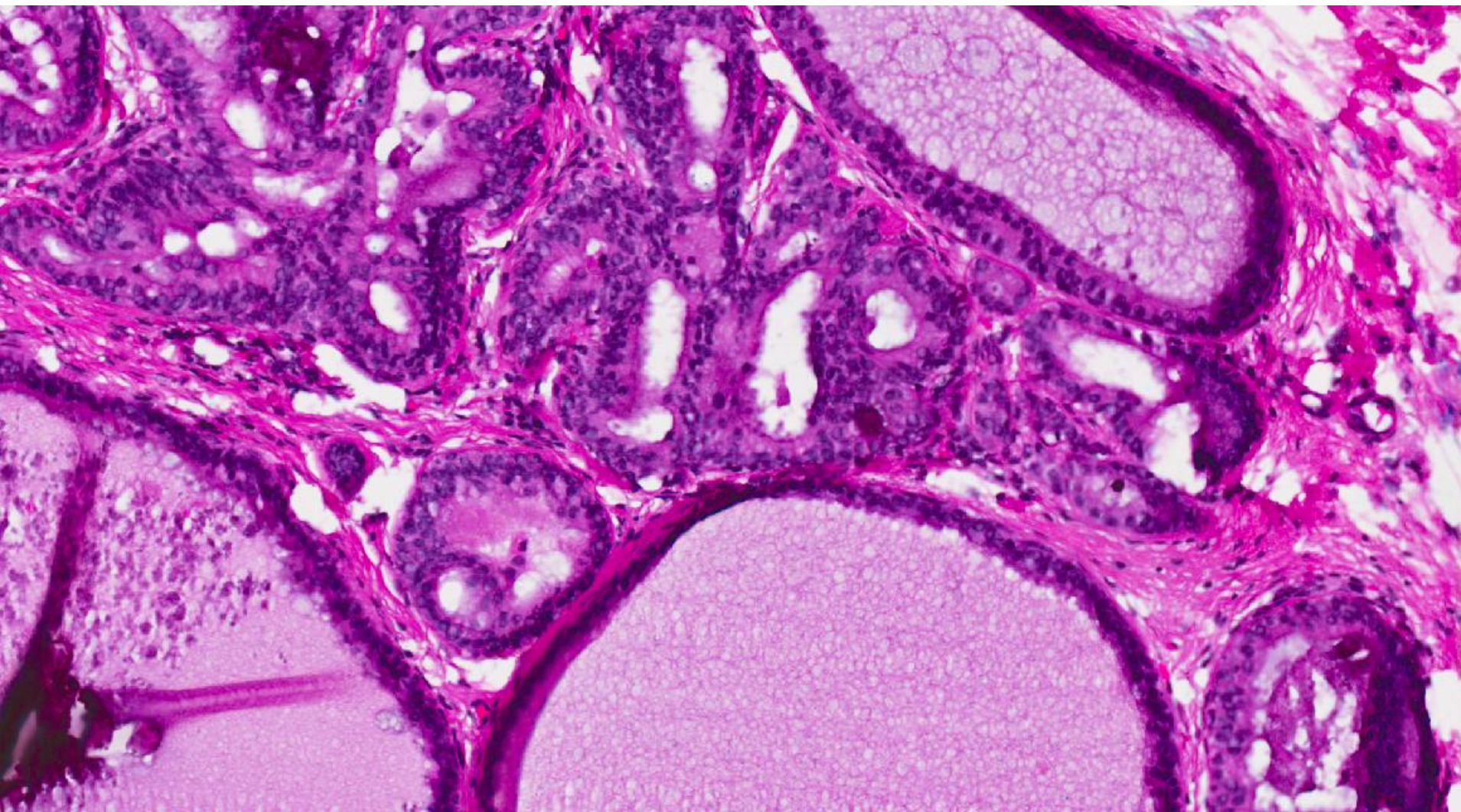


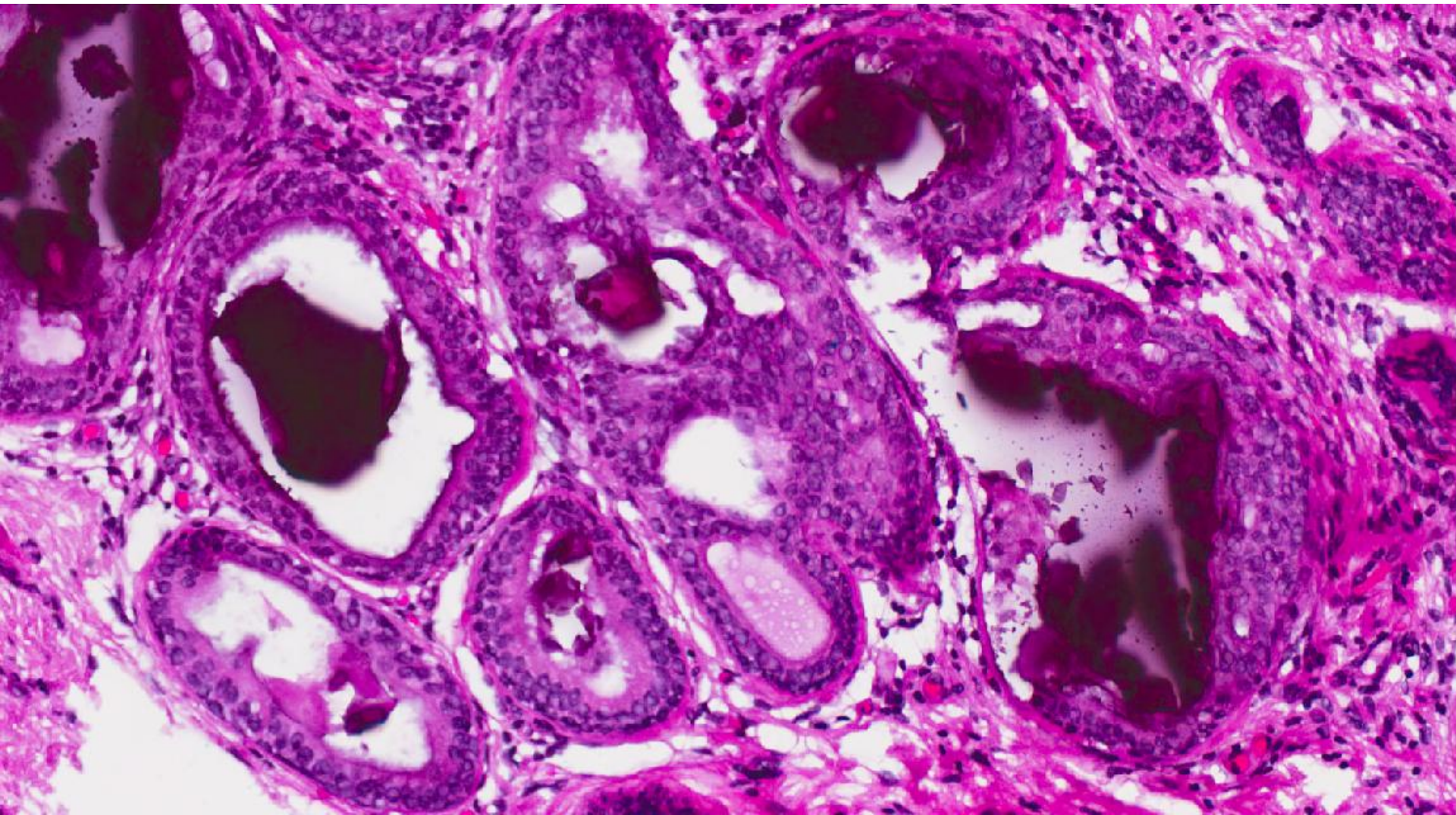


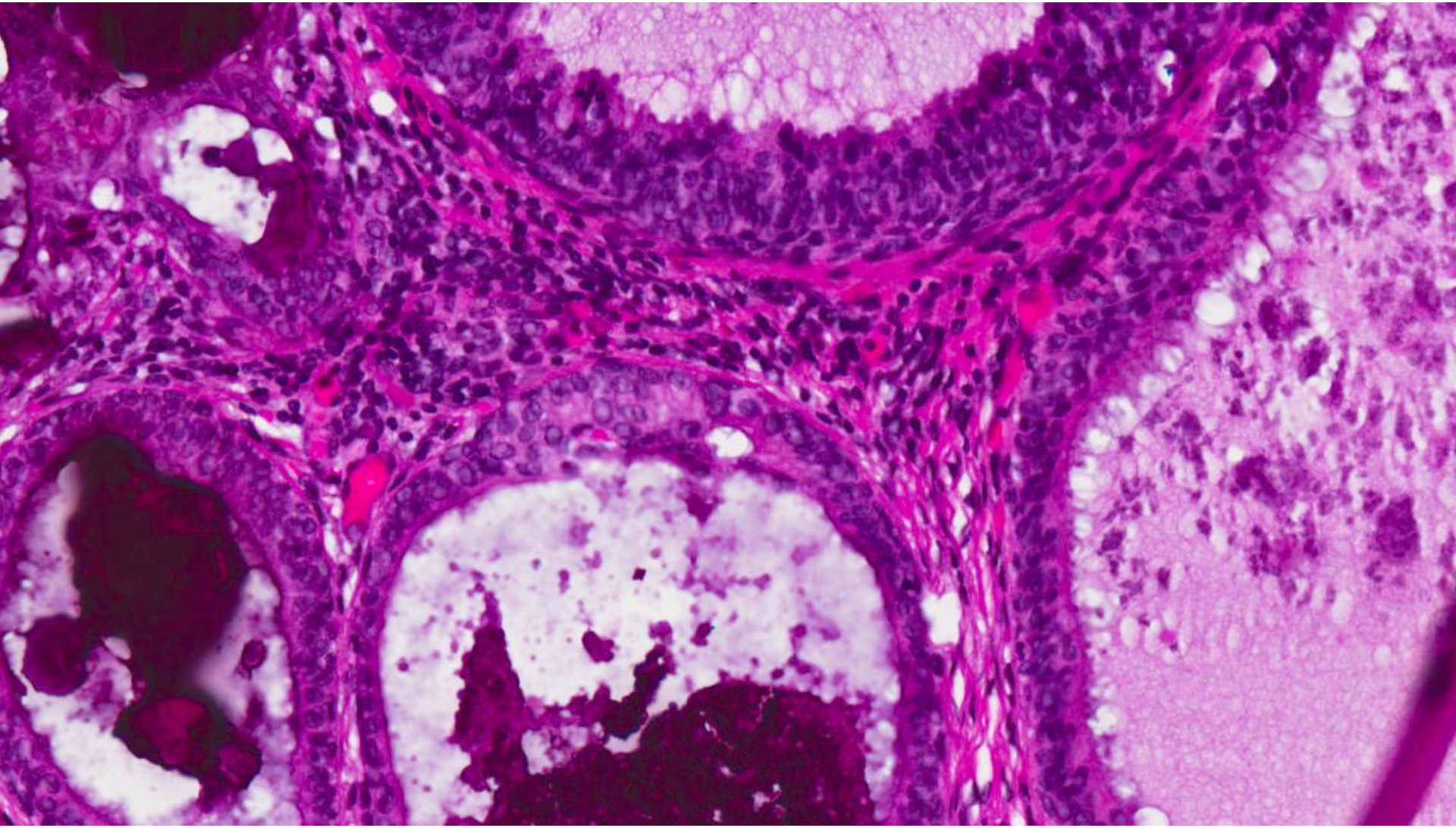


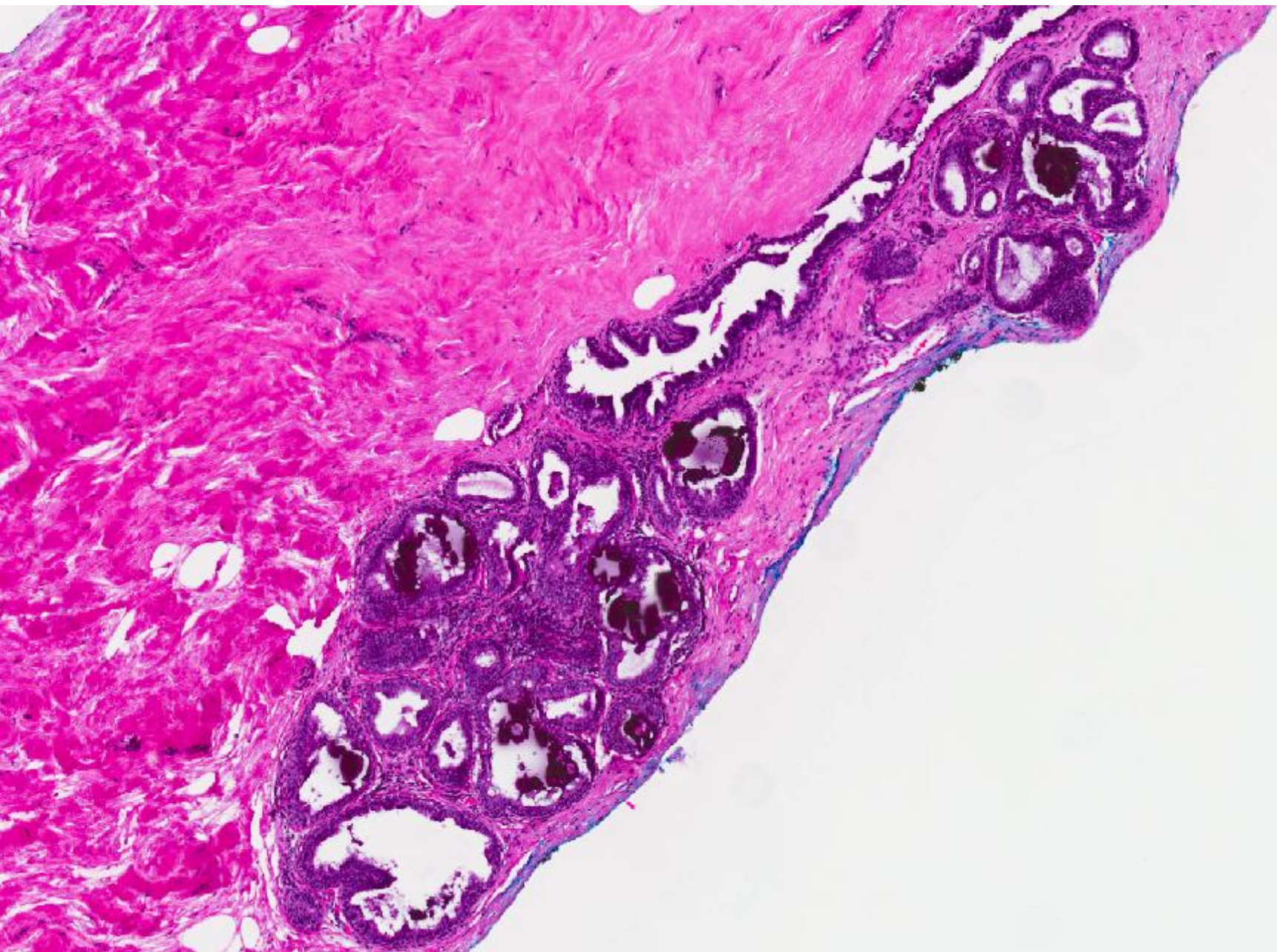


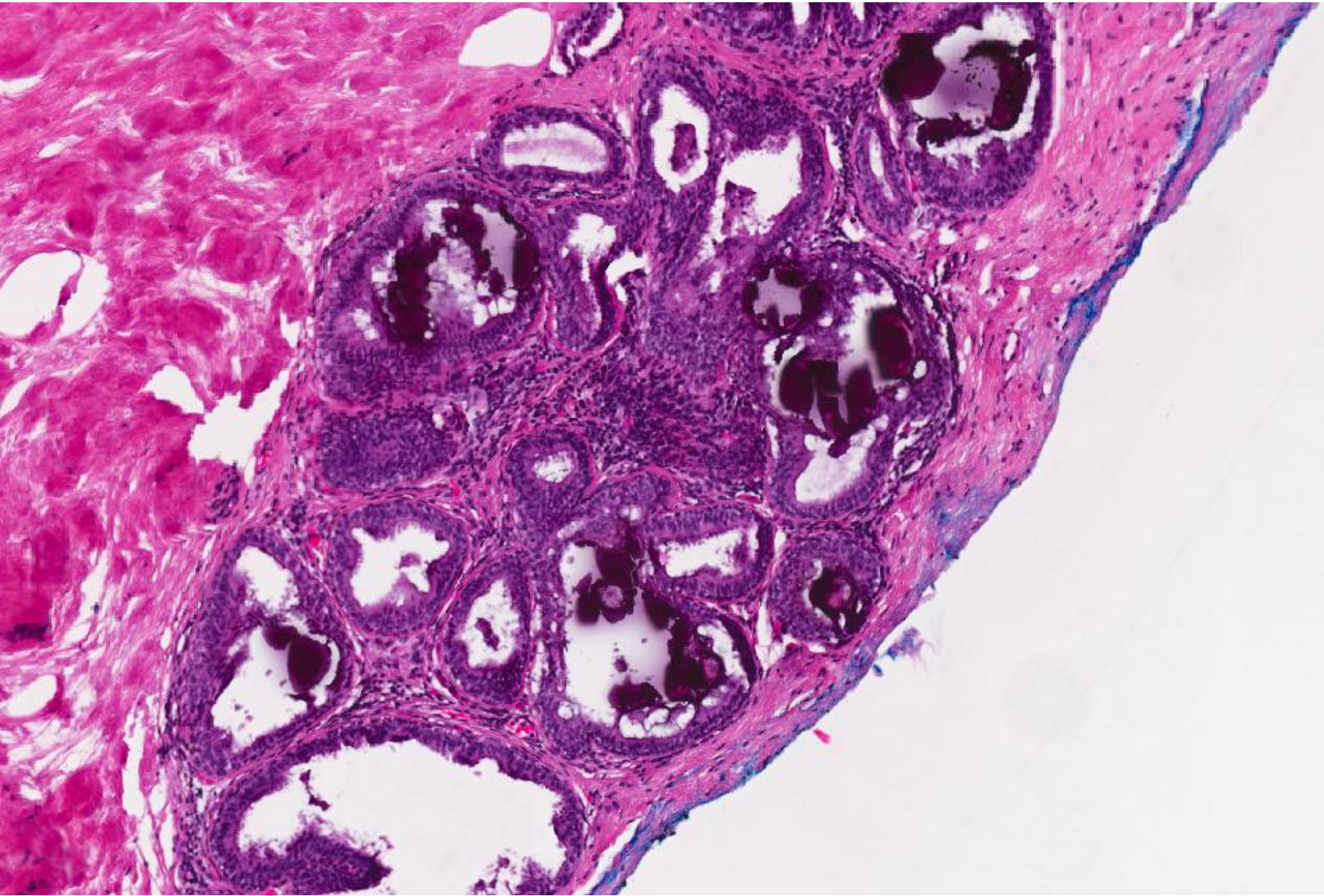


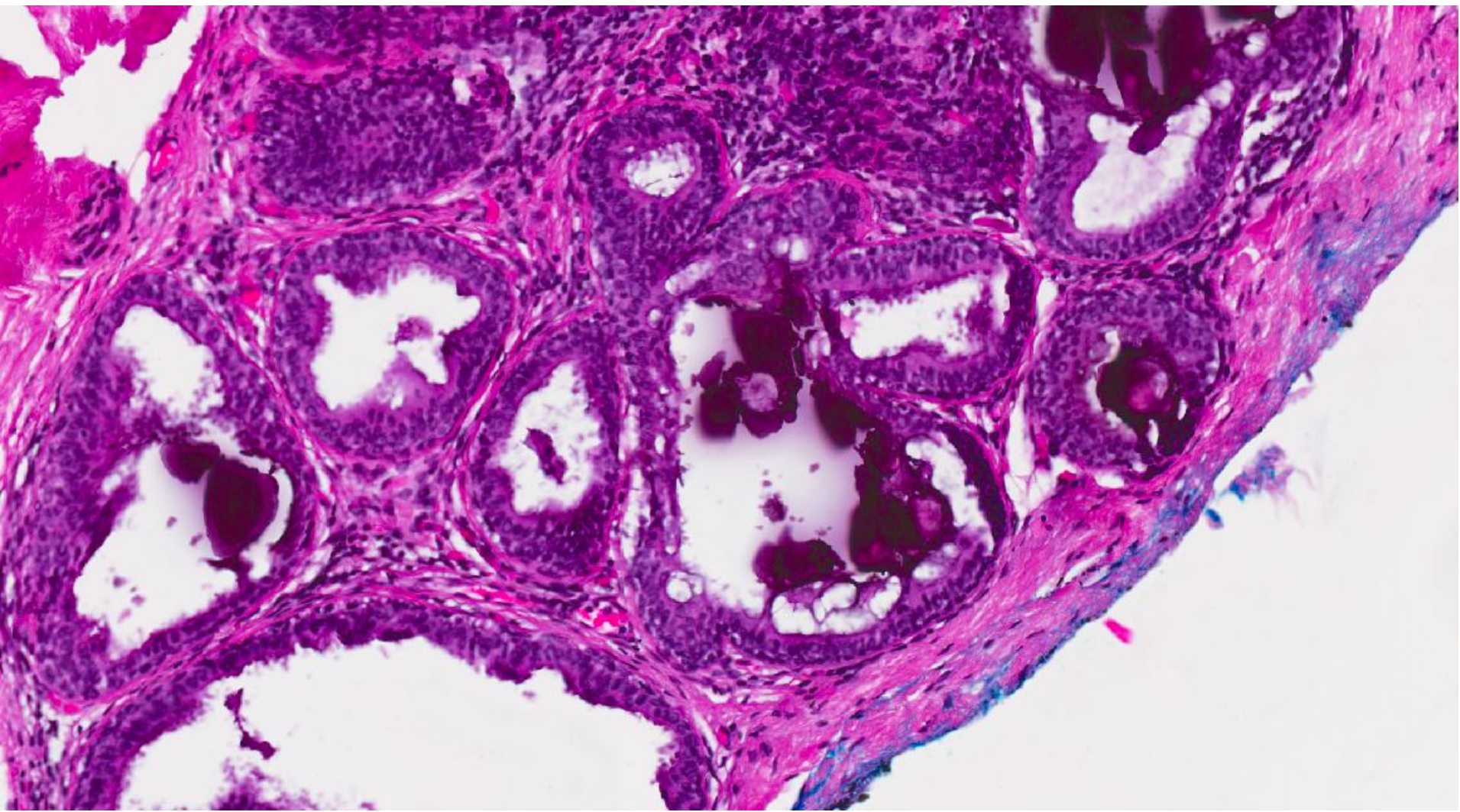












Diagnosis

- Fibrocystic change with calcifications.
- Columnar cell change - ? Flat epithelial atypia.
- Atypical ductal hyperplasia.

Flat epithelial atypia

- Characterized by replacement of native epithelial cells of the TDLUs by one to four layers of cells that lack polarity.
- Nuclei are round and uniform and have inconspicuous nucleoli, similar to nuclei of low-grade DCIS.
- Strong association and co-existence with lobular neoplasia (lobular carcinoma *in situ* and atypical lobular hyperplasia), ADH, low grade DCIS and low grade invasive carcinomas including tubular carcinoma.

Flat epithelial atypia

- Breast cancer risk associated with FEA appears to be substantially lower than the risk associated with established forms of atypical hyperplasia (ADH and ALH).
- Despite “atypia” in the name, FEA should not be regarded as equivalent to ADH or ALH with regard to cancer risk assessment or patient management.
- Up to 30% of patients with FEA on core needle biopsy have a worse lesion on excision, but study designs limited.
- Radiological-pathological correlation needed.

Atypical ductal hyperplasia

- Atypical epithelial hyperplasia on core biopsy.
- Open excision often recommended.
- Studies debate whether surgical excision is always needed:
 - > 2 foci of ADH.
 - Micropapillary pattern.
 - Remnant calcifications.

(Wagoner et al. Am J Clin Pathol. 2009;131:112-21)

ADH Underestimates with 11-Gauge Vacuum-Assisted Breast Biopsy Device

Source and Year	ADH Underestimates (%)	Surgical Excision Diagnosis	
		DCIS	Invasive
Liberman et al (21), 1998	1/10 (10)	1	0
Brem et al (8), 1999	4/16 (25)	2	2
Adrales et al (23), 2000	9/62 (15)	7	2
Philpotts et al (10), 2000	6/26 (23)	5	1
Jackman et al (25), 2002	22/104 (21)	19	3
Pandelidis et al (27), 2003	5/35 (14)	4	1
Winchester et al (28), 2003	11/65 (17)	6	5
Kettritz et al (29), 2004	32/135 (24)	NA	
Ho et al. The Breast, 2008	14/61 (23)	14	0
Total	104/514 (20)	48	8

Underestimation of malignancy of atypical ductal hyperplasia diagnosed on 11-gauge stereotactically guided mammotome breast biopsy:

An Asian breast screen experience

- 70 of 741 (9.4%) of core biopsies performed between Jan 2002 to Dec 2004 revealed ADH.
- 61 calcific lesions with biopsy diagnosed ADH were correlated with surgical excision findings:
 - DCIS in 14 (23%) cases.
 - No association between morphology, extent of calcifications, number of cores sampled with underestimation of malignancy ($P = 0.503, 0.709, 0.551$ respectively).
 - In the absence of residual calcifications, the frequency of underestimation of carcinoma still occurred in 17%.

Ho et al. The Breast 2008.