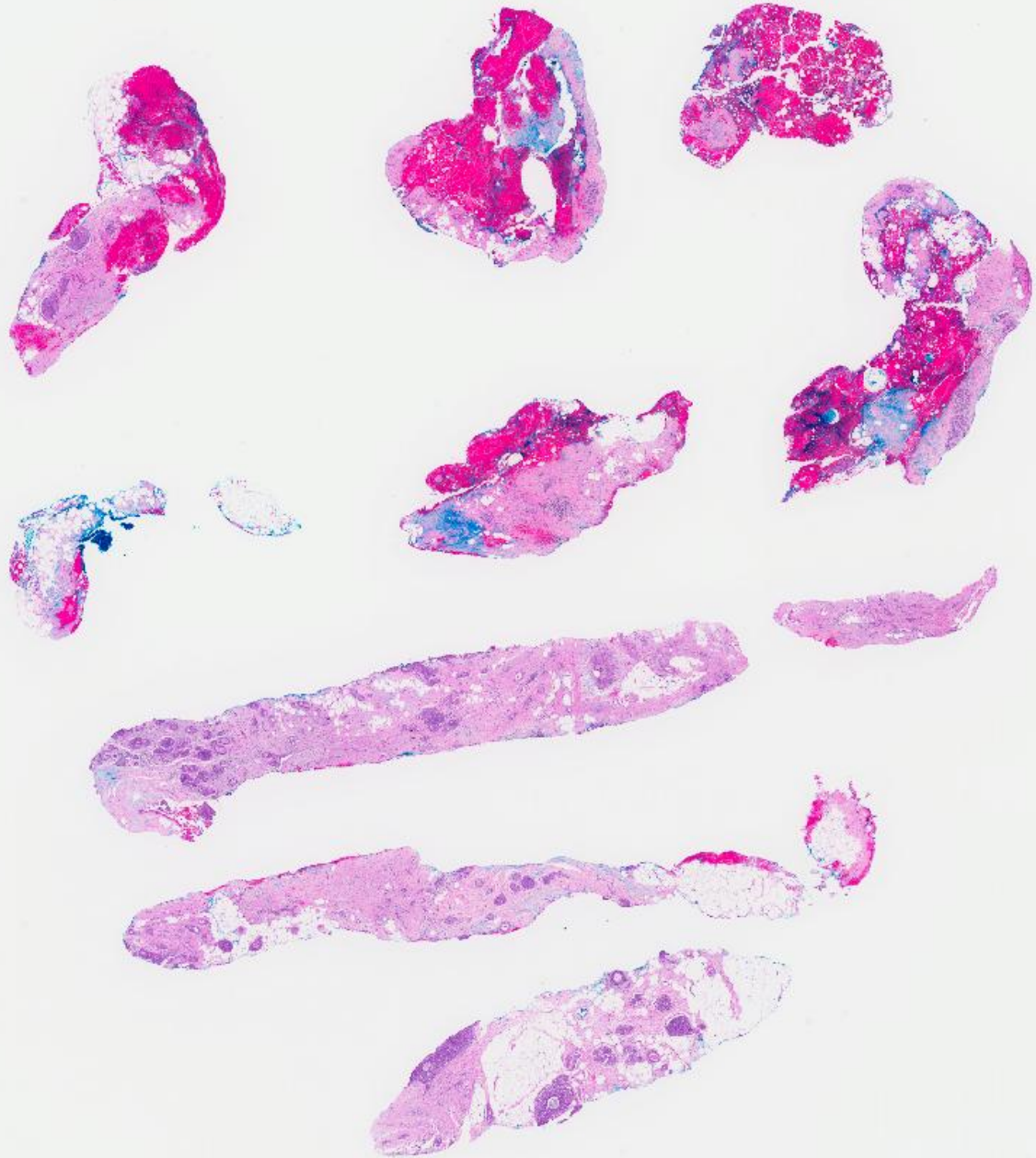


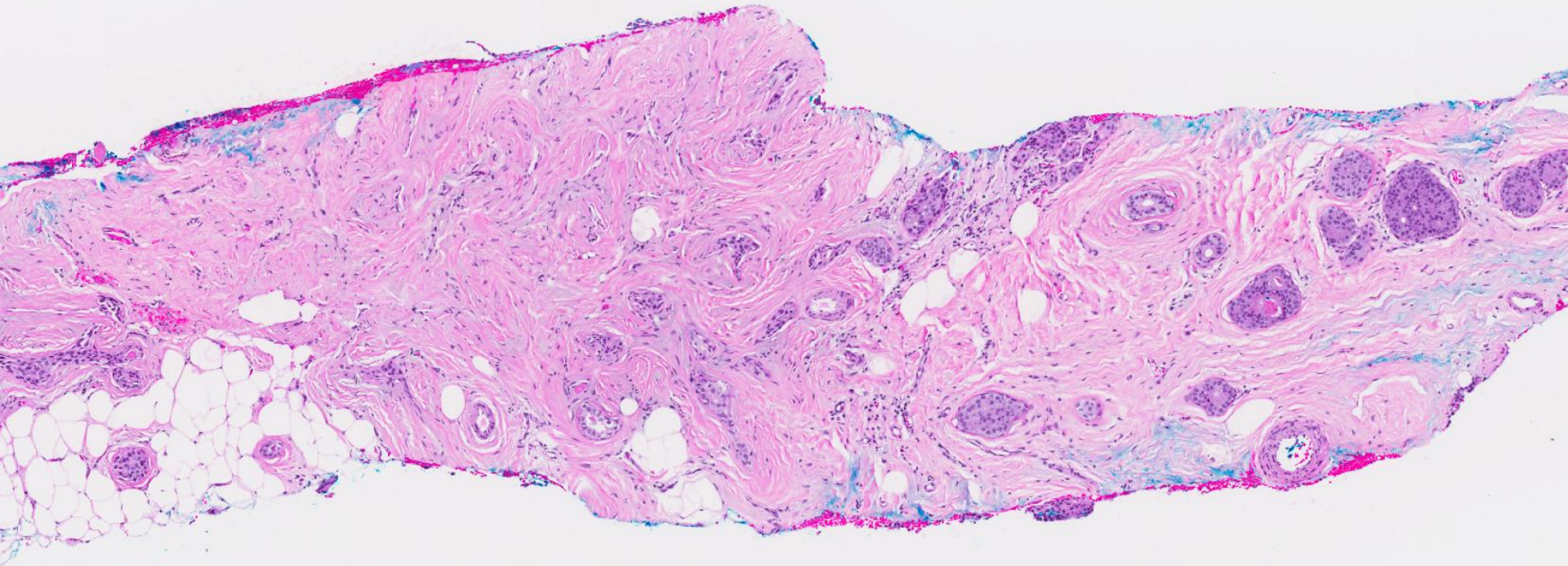
# Case 10

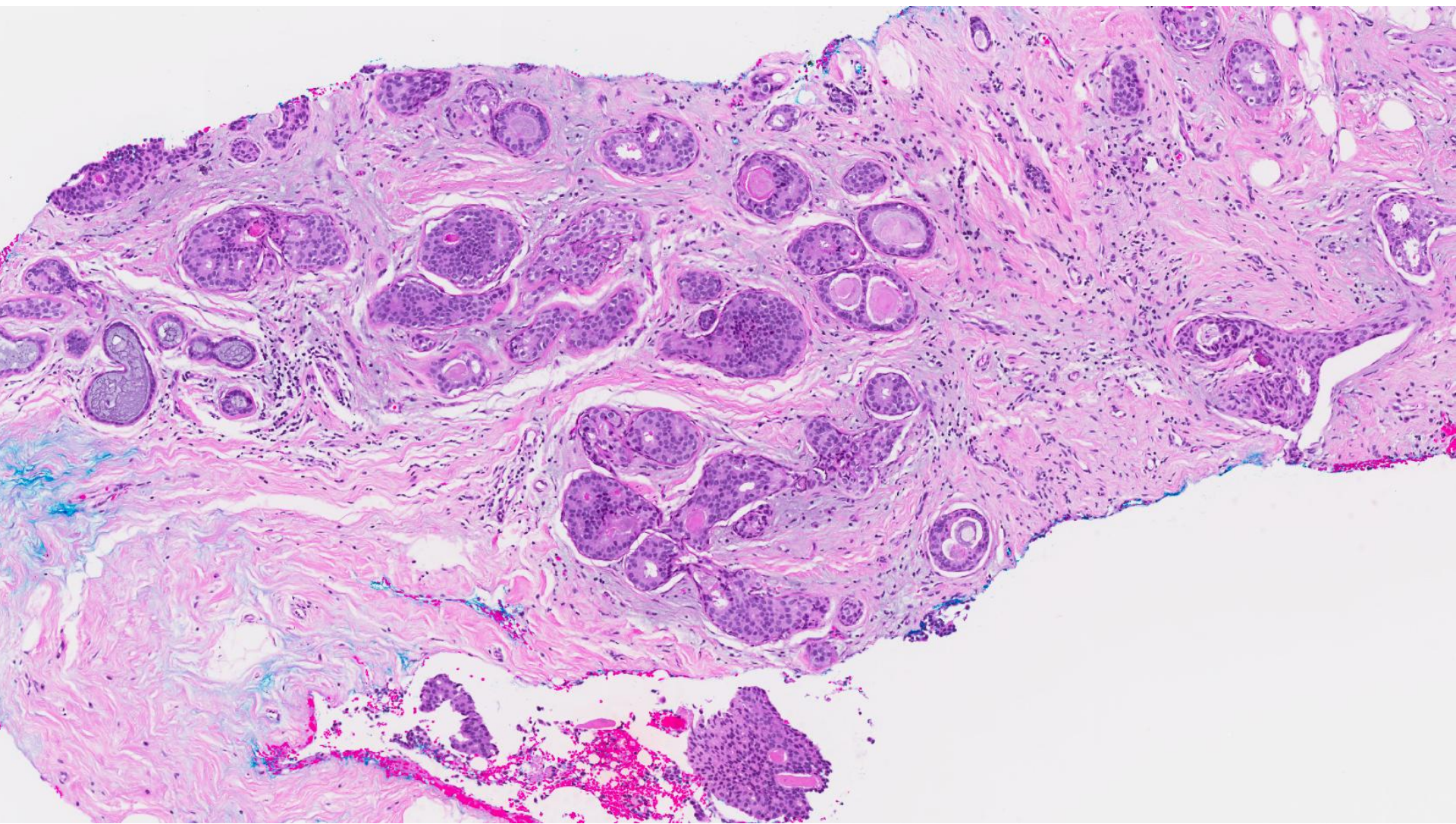
46 year old Malay lady.

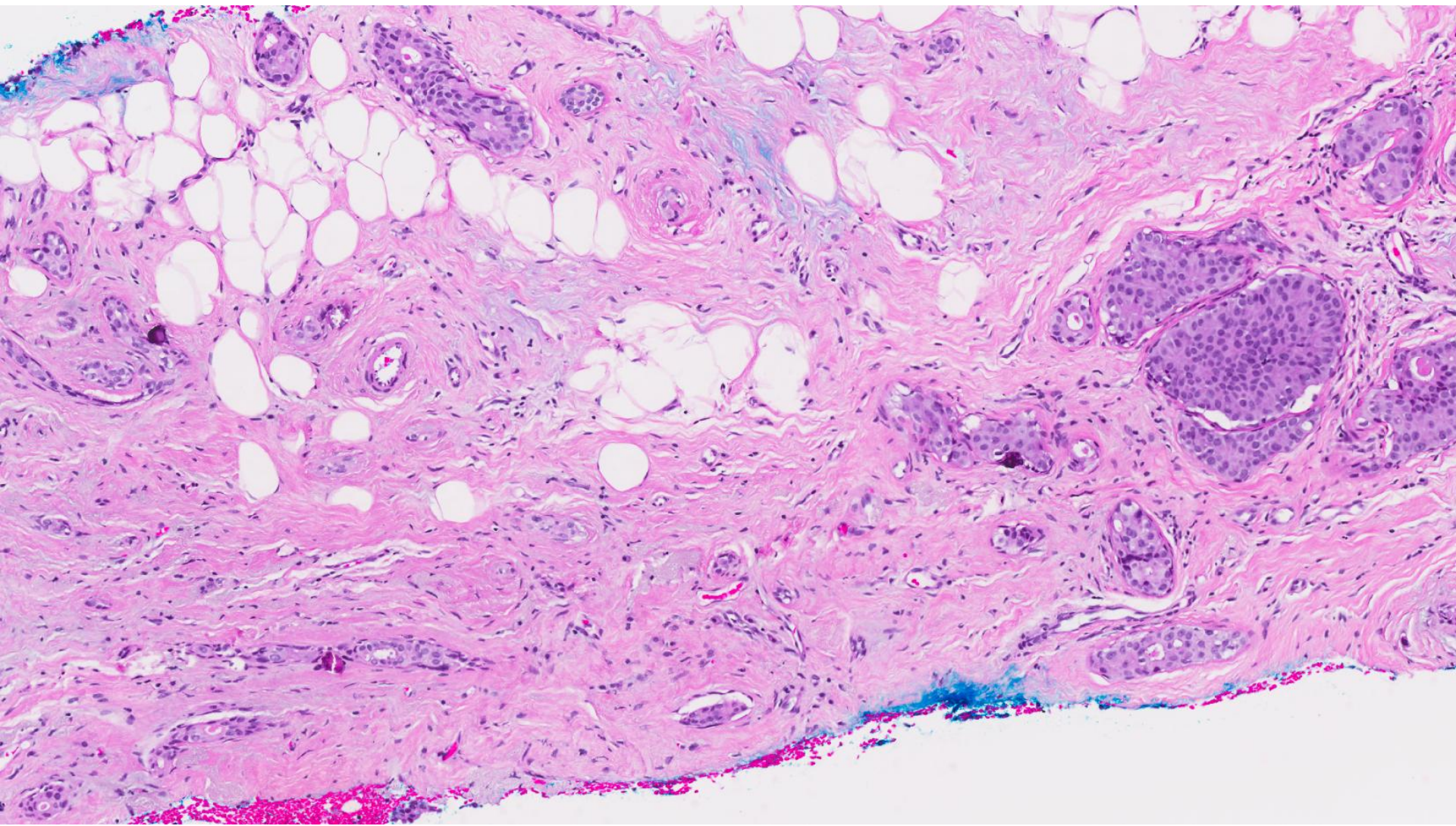
Breast screening mammography detected a  
left retroareolar breast distortion.

Stereotactic trucut biopsy performed.

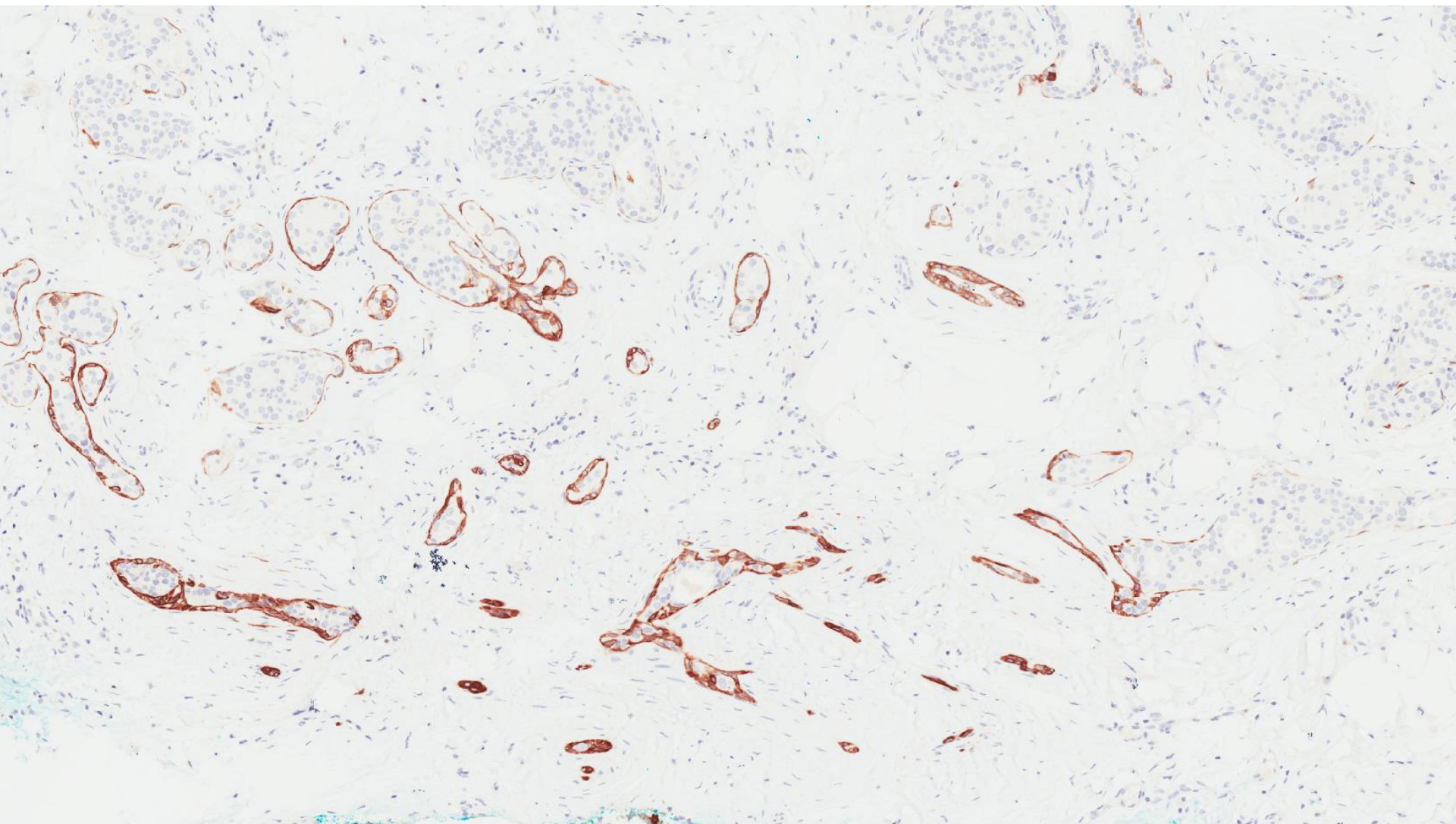




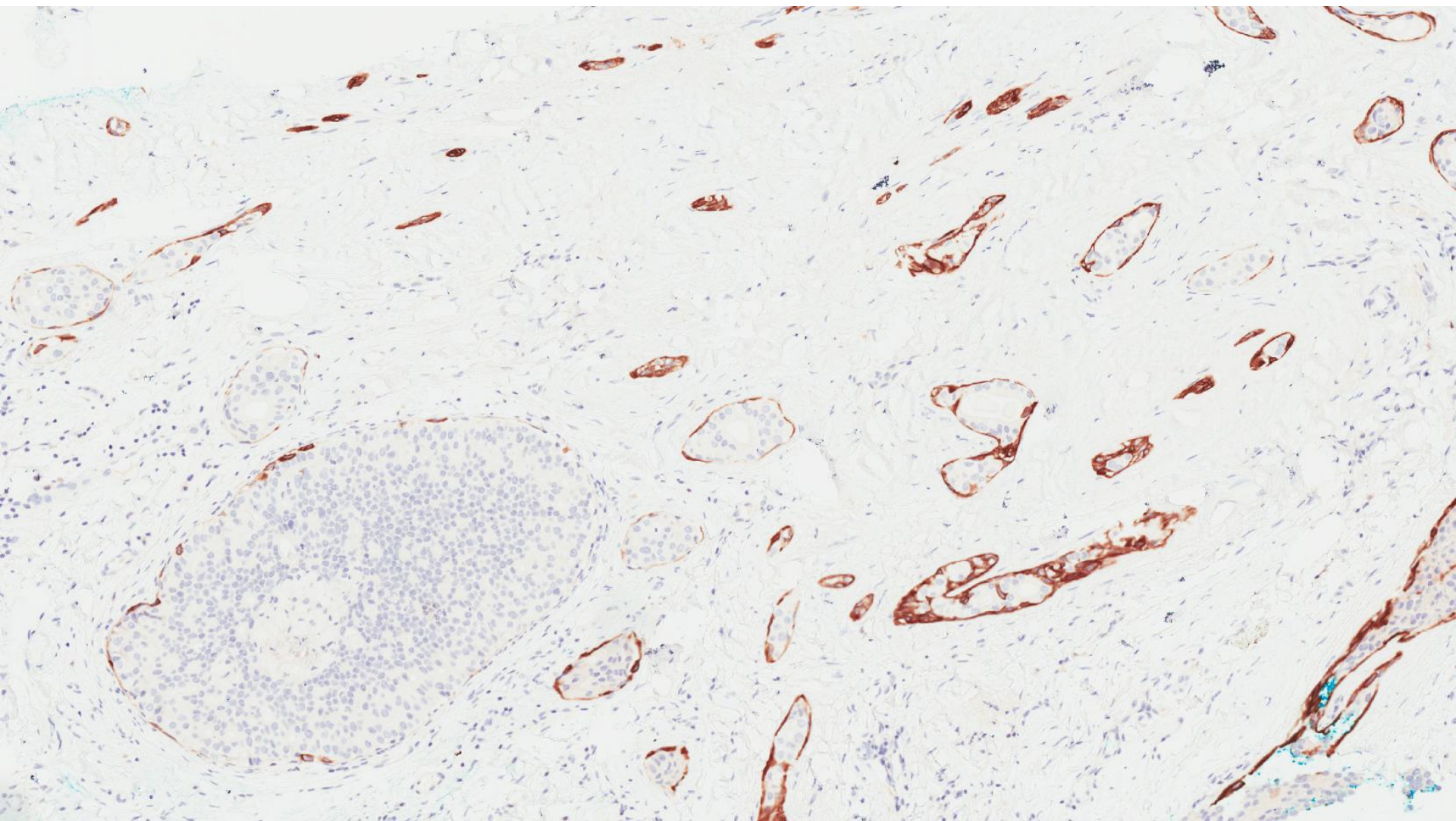




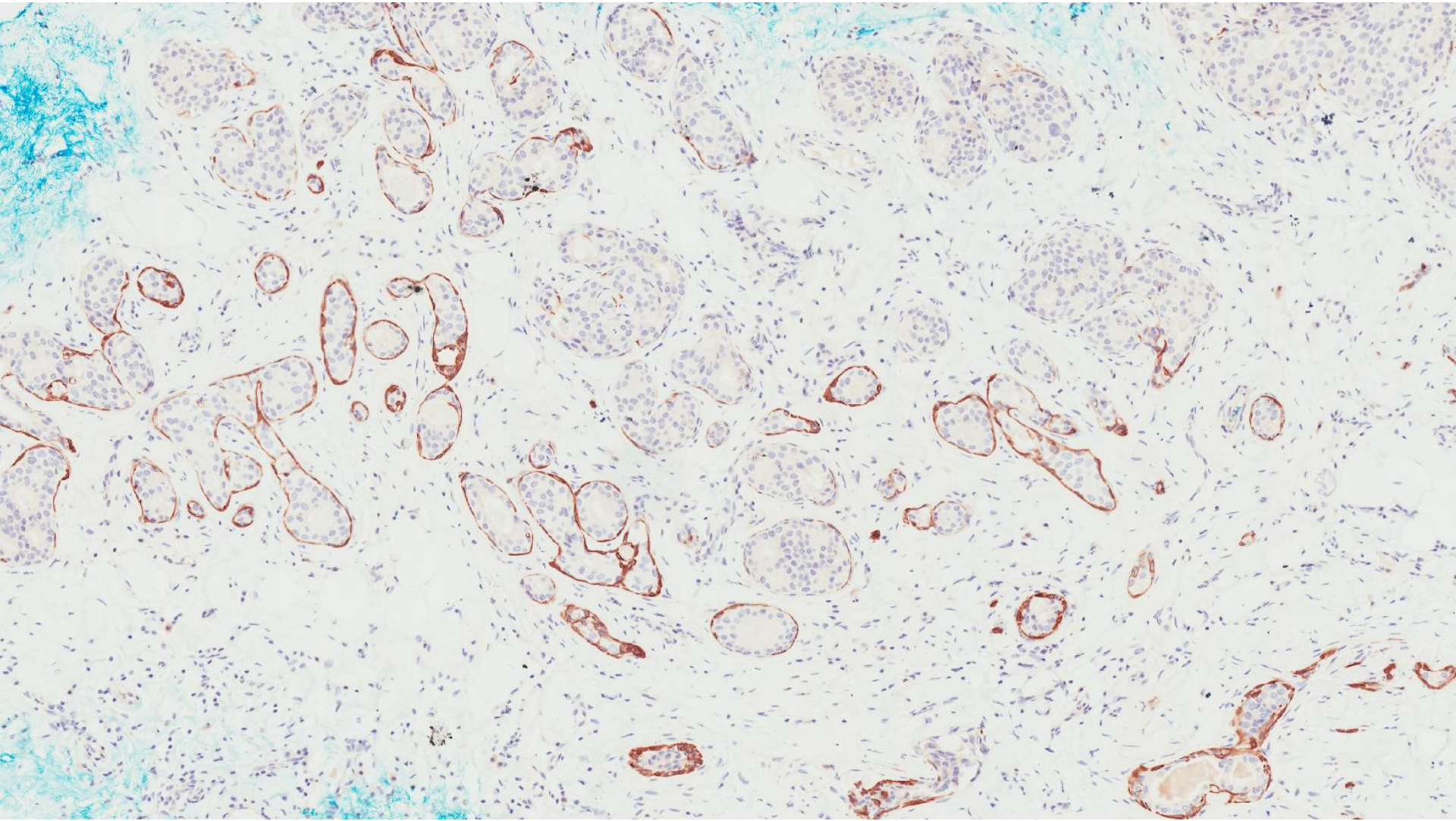
CK 5/6



CK 5/6

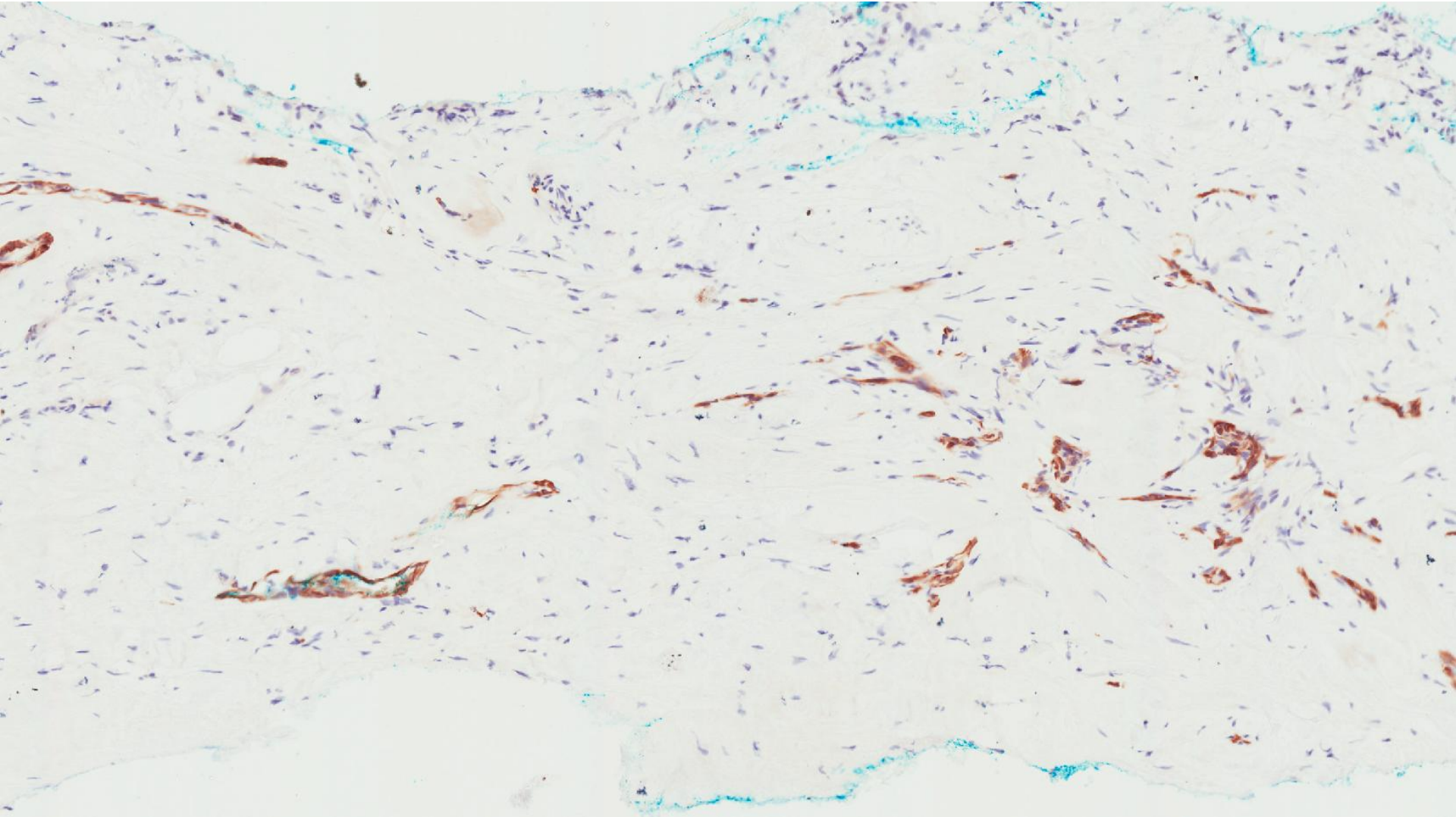


CK 14

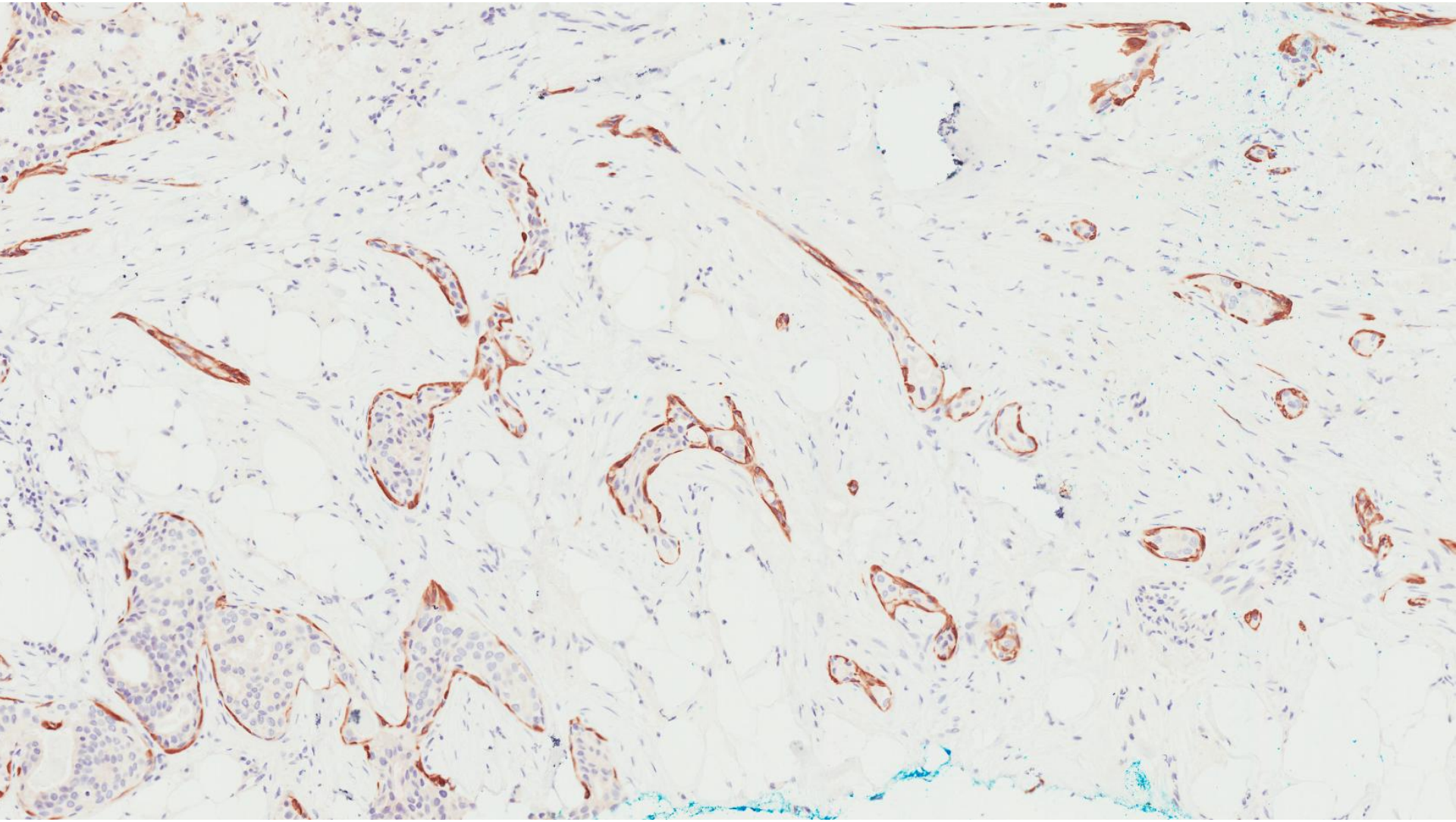




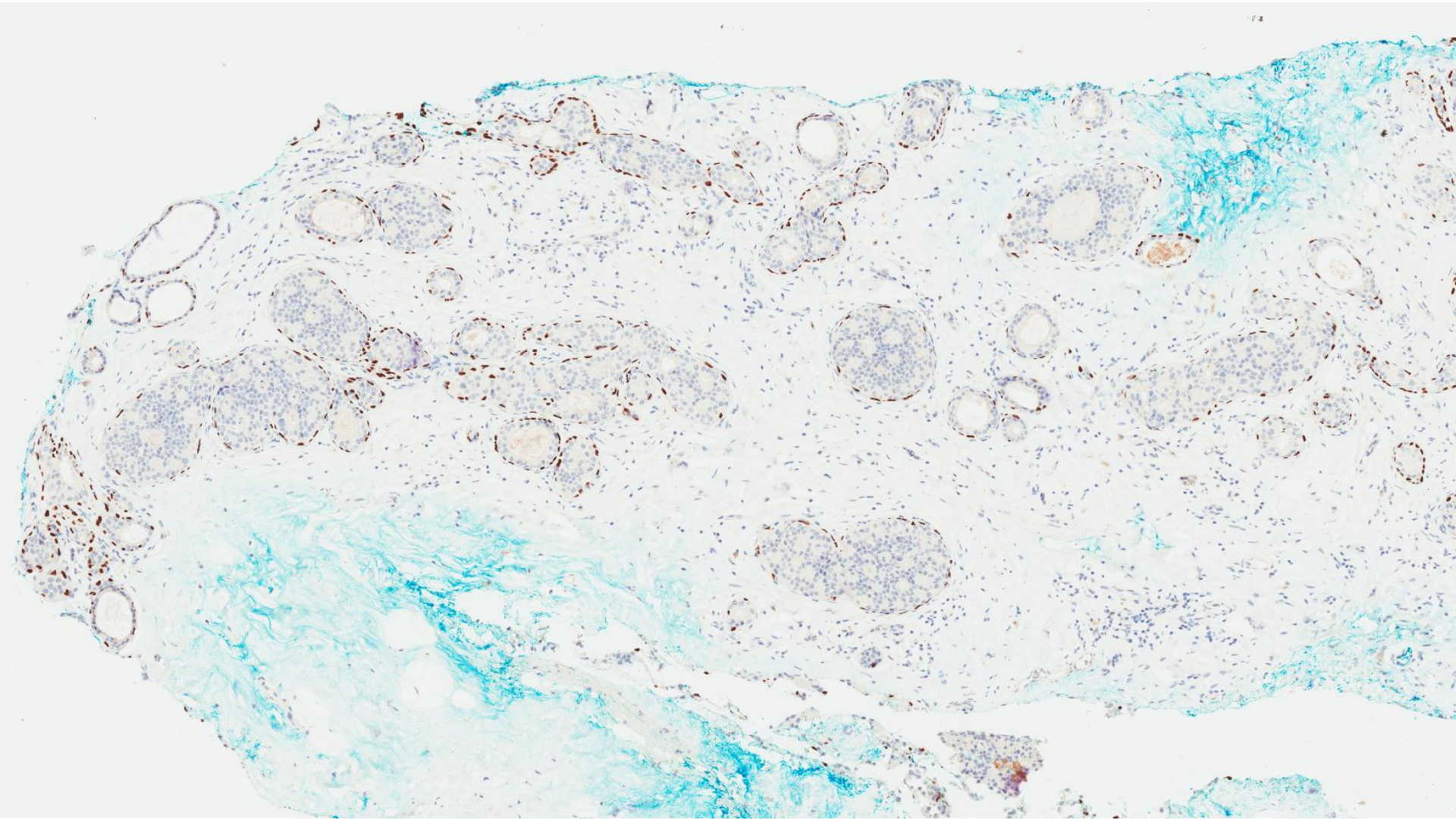
CK 14



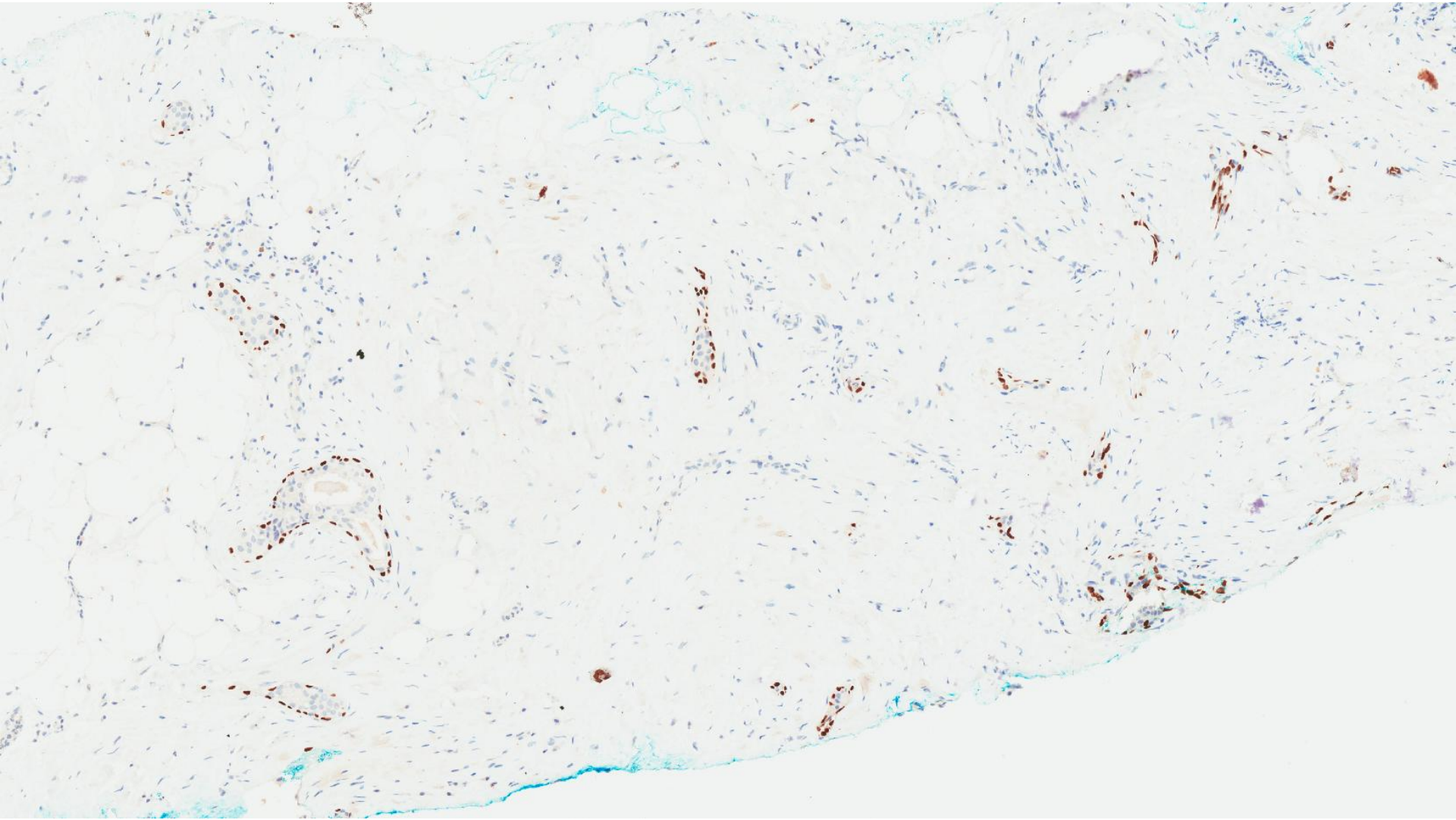
CK 14



p63



p63



# Diagnosis

Ductal carcinoma in situ, low and intermediate nuclear grade, involving a radial sclerosing lesion

# Ductal carcinoma in situ on core biopsy

- Underdiagnosis of invasion in 15% to 20% of cases.

# Literature

- Breast J. 2011 May-Jun;17(3):223-9.
- Predictors of invasion and axillary lymph node metastasis in patients with a core biopsy diagnosis of ductal carcinoma in situ: an analysis of 255 cases.
- Retrospective analysis of 255 patients with DCIS who had subsequent excision.
- Clinical, radiologic, and pathologic findings were correlated with risk of invasion and sentinel lymph node (SLN) metastasis.
- Of 255 patients with DCIS, 199 had definitive surgery and 52 (26%) had invasive ductal carcinoma (IDC) on final excision.
- ***Extent of abnormal microcalcification on mammography, presence of a radiologic/palpable mass and solid type of DCIS were significantly associated with invasion on final excision.***

# Literature

- Asian J Surg. 2010 Apr;33(2):76-82.
- Predictors of invasive breast cancer in ductal carcinoma in situ initially diagnosed by core biopsy.
- Records of 95 consecutive patients diagnosed with pure DCIS from 100 core biopsies from January 2005 to August 2007 were retrospectively reviewed.
- The clinical, radiological and pathological characteristics of these 100 cases were correlated with the presence of invasion or microinvasion on excision.
- ***Factors that are associated with invasive or microinvasive foci on excisional histology are:***
  - ***size of target lesion on radiography  $\geq$  20 mm.***
  - ***$\leq$  10 cores obtained.***



# Literature

- Mod Pathol. 2010 May;23(5):737-42.
- Predictors of invasion in needle core biopsies of the breast with ductal carcinoma in situ.
- A cohort of 157 cases with needle core biopsy diagnosed with DCISs (including 109 histologically proven DCISs, and 48 cases with invasion upon excision) were evaluated for the numbers of positive and total cores, the percentage of positivity, lobular cancerization, tumor nuclear grade, necrosis, calcification, predominant histological pattern, lymphocytic infiltrate and excisional tumor size.
- ***A higher positive core percentage, papillary pattern and less cancerization of lobules in the cores and larger excisional tumor size were associated with a higher chance of invasion.***
- Calcification, necrosis and nuclear grade were not significant invasion predictors.

# Literature

- Breast J. 2007 May-Jun;13(3):251-7.
- Predictors of residual invasive disease after core needle biopsy diagnosis of ductal carcinoma in situ.
- 254 patients over an 8-year period from 1994 to 2002 with a diagnosis of DCIS alone by CNB were retrospectively reviewed.
- Radiographic, pathologic, and surgical features of the cohort were compared using univariate and multivariate analysis.
- 21 out of 254 patients (8%) with DCIS by CNB were upstaged to invasive cancer following surgical excision.
- Significant inverse relationship between the number of core biopsies and the incidence of upstaging ( $p < 0.006$ ) in that ***patients with fewer core samples were more likely to be upstaged at surgical pathology.***
- No relationship was noted between the size of the core samples and the likelihood of upstaging ( $p > 0.4$ ).
- ***Comedonecrosis by CNB significantly increased the likelihood of upstaging*** ( $p < 0.001$ ).

# Literature

- Br J Surg. 2007 Aug;94(8):952-6.
- Risk of invasion and axillary lymph node metastasis in ductal carcinoma in situ diagnosed by core-needle biopsy.
- 171 women with 172 DCIS lesions diagnosed by core-needle biopsy were analysed.
- Invasive breast cancer was found in the surgical specimens from 45 tumours (26%).
- ***Risk factors for invasion:***
  - ***Palpable lesion***
  - ***Presence of a mass on mammography***
  - ***Intermediate or poorly differentiated tumour grade***

# Literature

- Cancer. 2006 Oct 15;107(8):1760-8.
- Predictors of invasion in patients with core-needle biopsy-diagnosed ductal carcinoma in situ and recommendations for a selective approach to sentinel lymph node biopsy in ductal carcinoma in situ.
- Retrospectively evaluated 200 consecutive patients with CNB-diagnosed DCIS who underwent final excision at their institution between May 1, 2002 and June 30, 2005.
- Demographic data, the size and type of lesion on imaging studies, histologic features of DCIS on CNB, the number of cores taken, and the number of cores involved by DCIS were correlated with invasion on excision and SLN biopsy outcome.
- Forty-one of 200 patients (21%) had invasive carcinoma diagnosed on final excision.
- ***Parameters that correlated with invasion were a mass lesion, lesion size >1.5 cm, high nuclear grade, and the presence of lobular cancerization on CNB.***

# Literature

- Arch Pathol Lab Med. 2002 Jan;126(1):39-41.
- Predicting invasion in the excision specimen from breast core needle biopsy specimens with only ductal carcinoma in situ.
- The results of all breast core needle biopsies with a diagnosis of ductal carcinoma in situ during a 50-month period were reviewed.
- A variety of histologic features were identified and correlated with the presence of invasion at excision.
- Of 3026 cases, 152 (5%) were diagnosed as ductal carcinoma in situ; excisional biopsies were available for 91 (60%) of these 152 cases, and 17 (19%) showed invasive tumor.
- Neither the radiographic findings, presence of comedonecrosis, comedo histology, lobular extension, size of the largest focus, nor aggregate size was significantly associated with an increased incidence of invasion (all  $P > .05$ ).
- ***Patients with comedo ductal carcinoma in situ with a cribriform/papillary pattern or tumor involving more than 4 mm with lobular extension in breast core needle specimens are at increased risk for invasion at excision.***