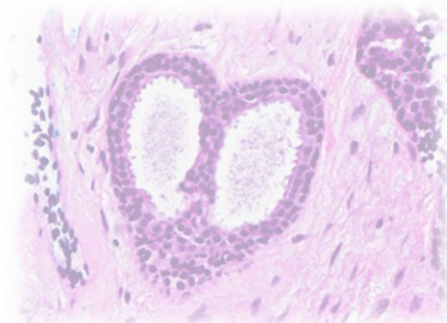
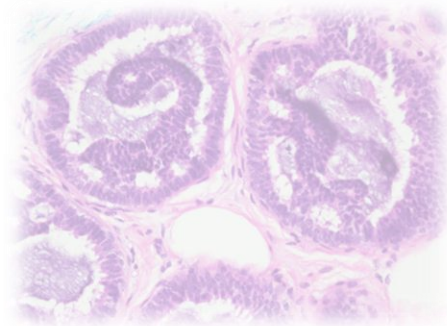
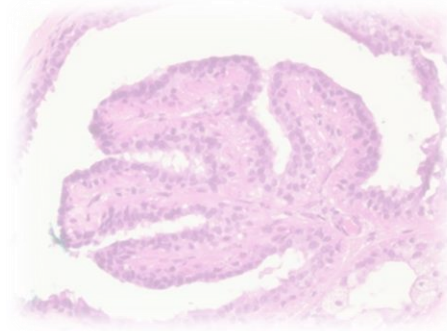
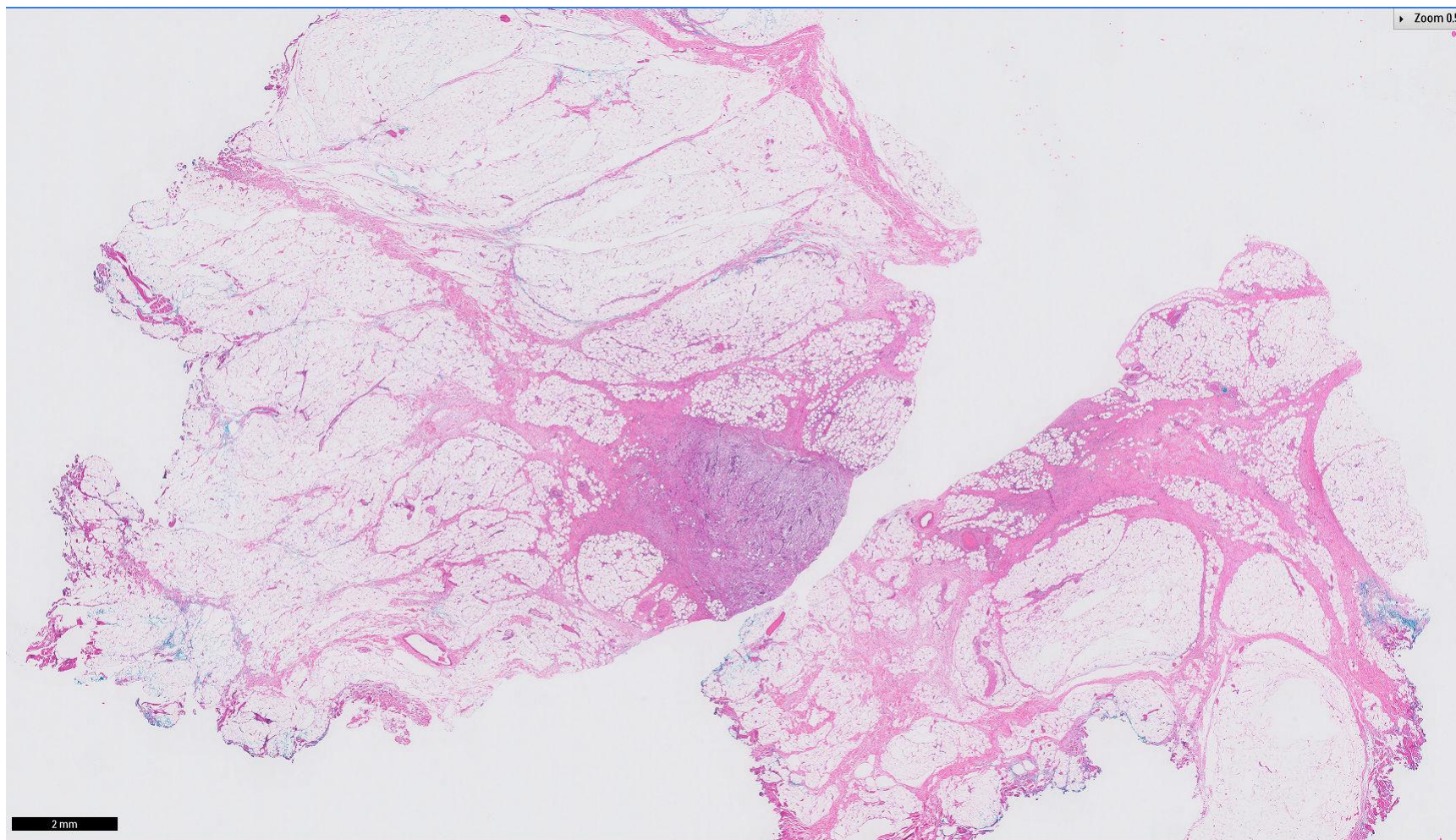
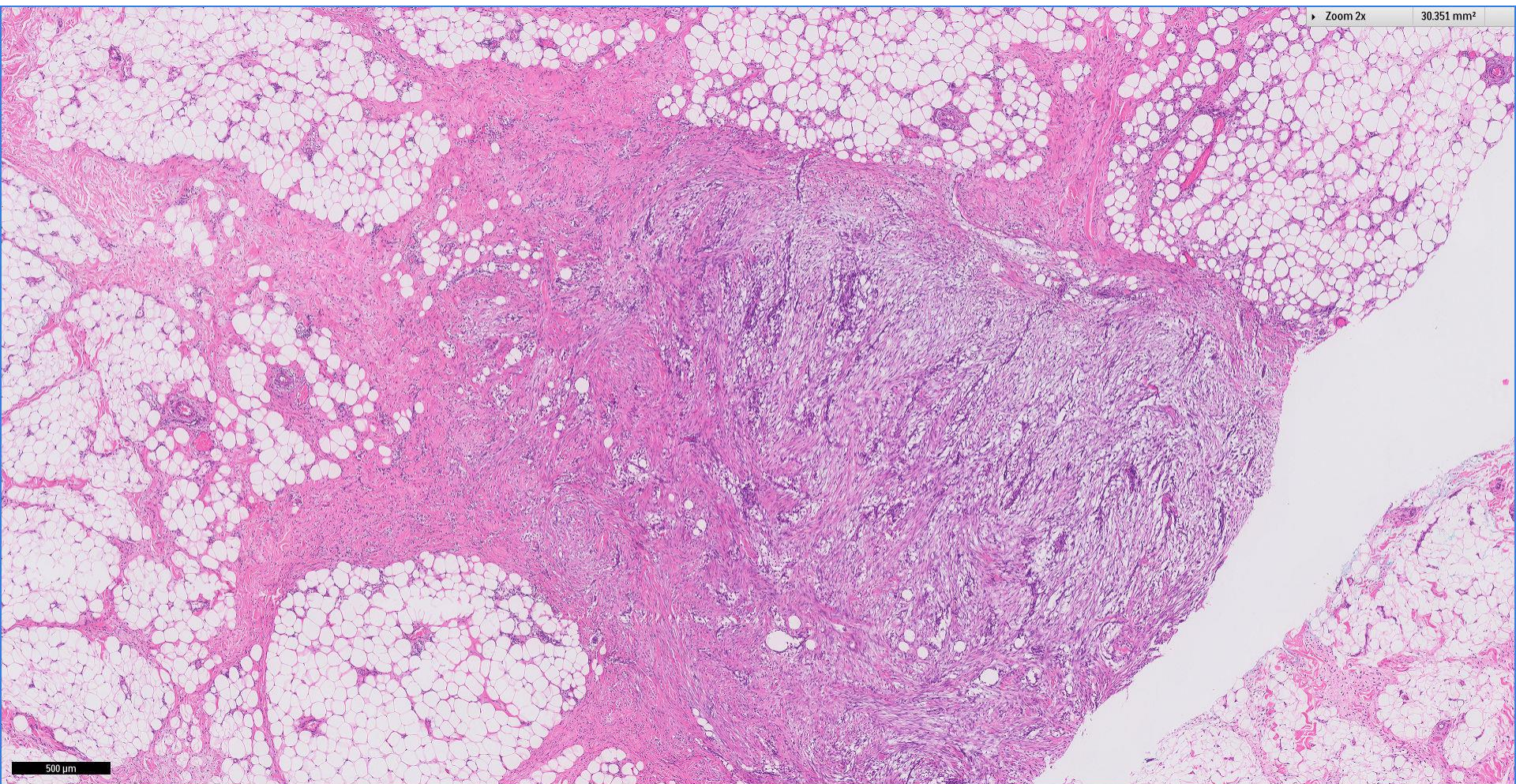


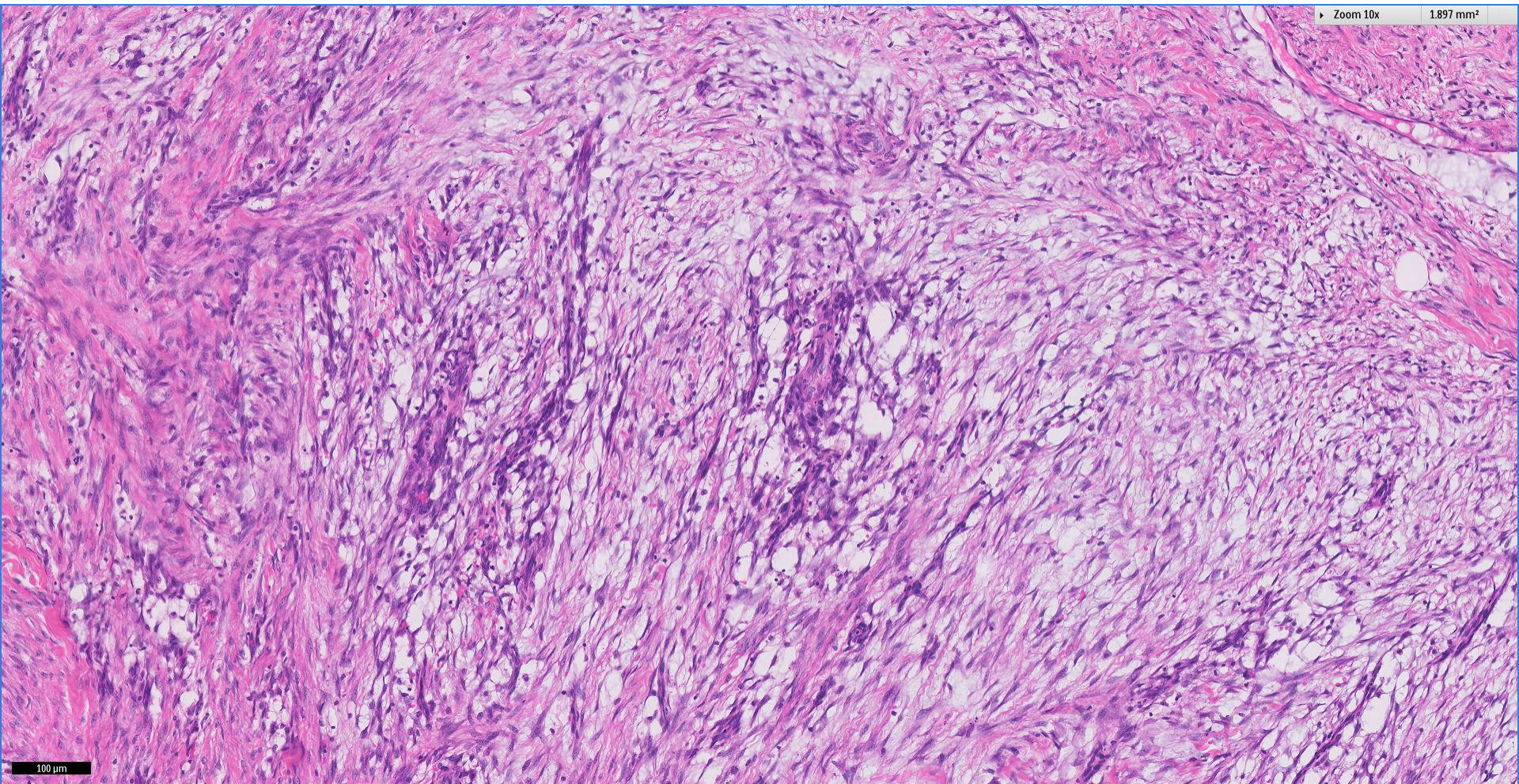
Case 21

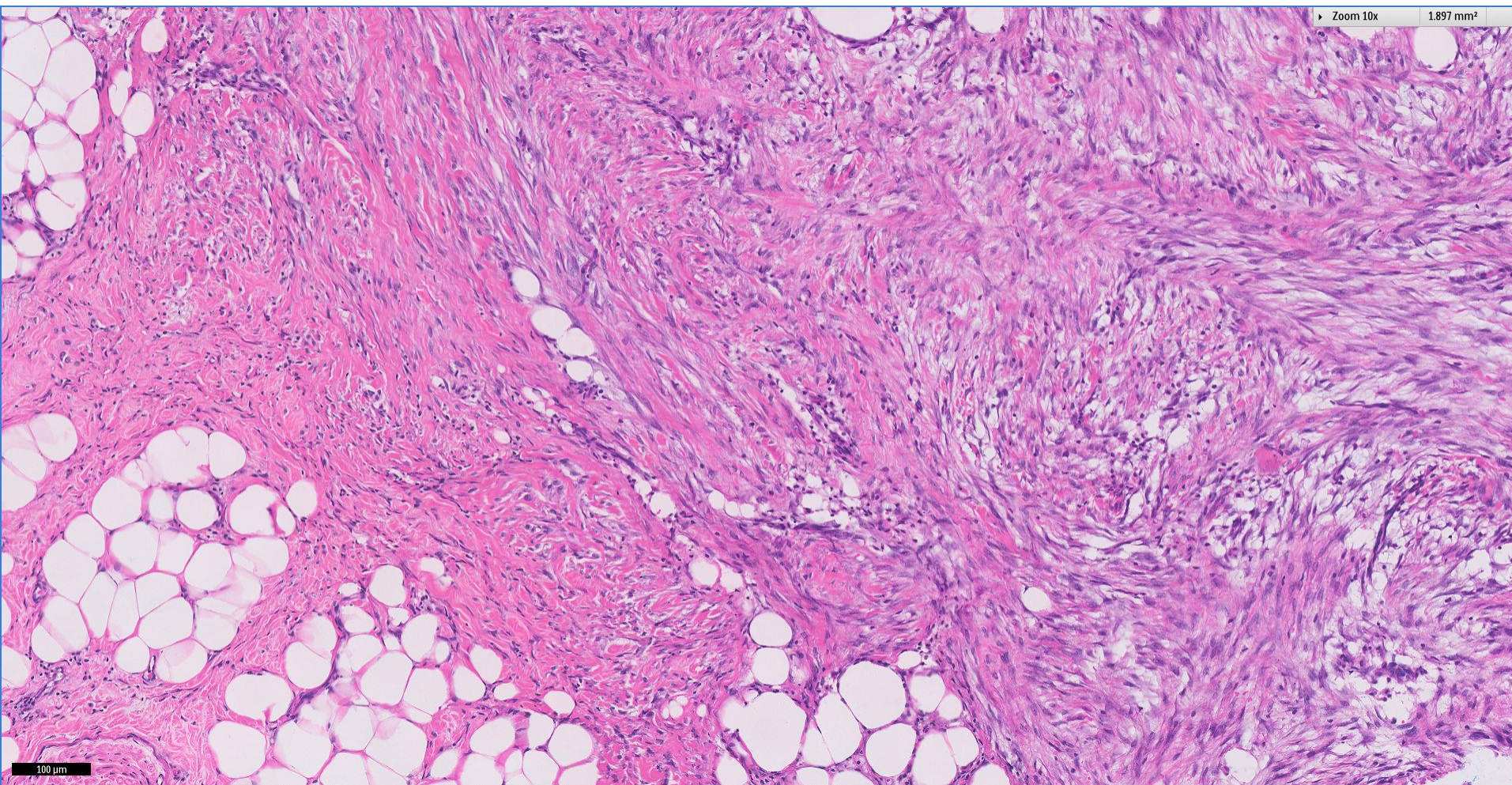
63 year old Indonesian female.
Right breast lump, excision biopsy.

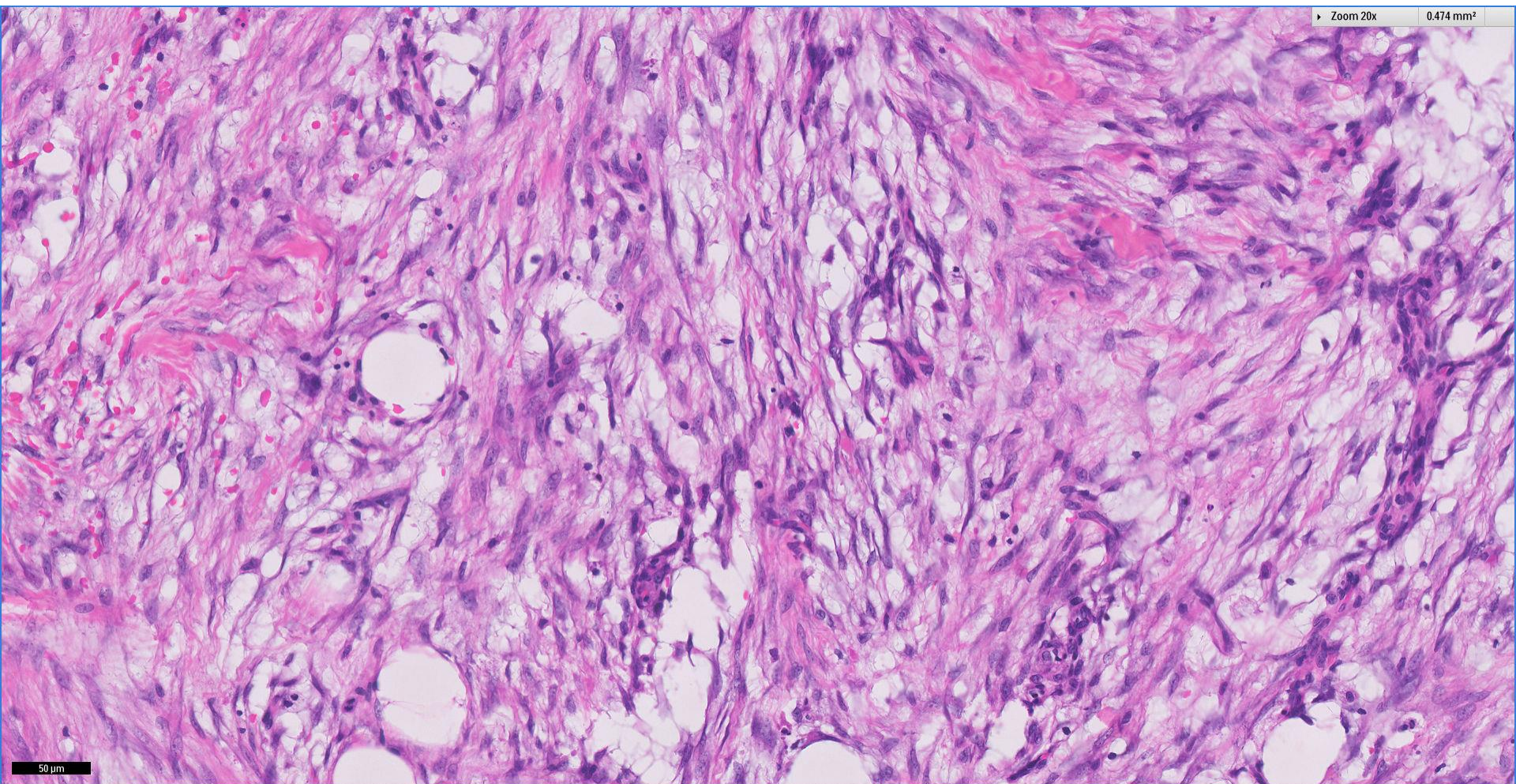




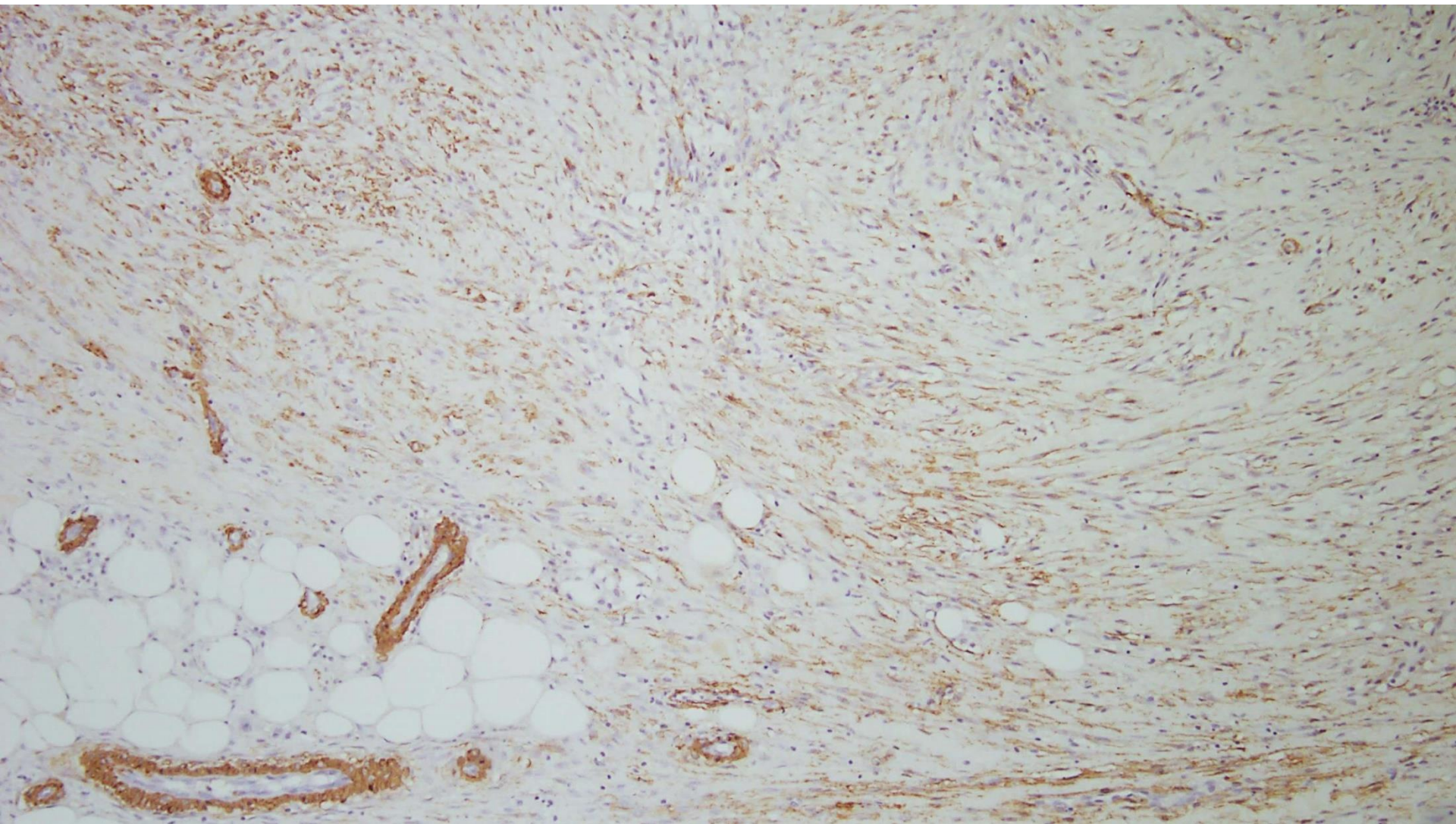






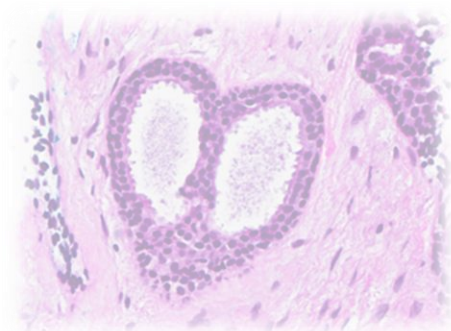
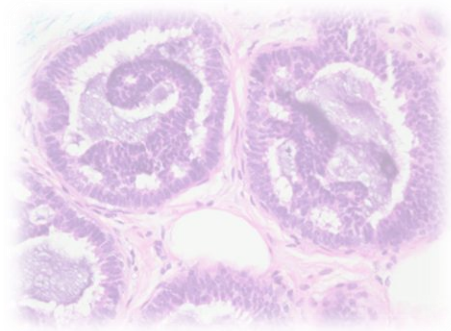
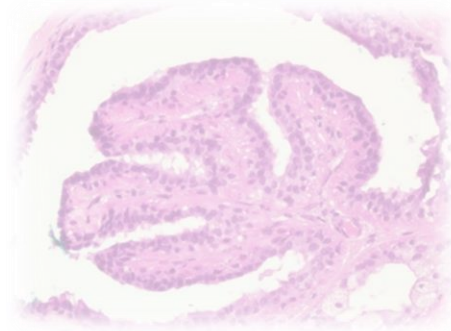


SMA



Diagnosis, case 21

- Right breast lump, excision biopsy:
Nodular fasciitis.



Nodular fasciitis ~ definition

- Self-limited, benign clonal proliferation of fibroblastic/myofibroblastic cells.

WHO 2019

Nodular fasciitis

- **Localisation ~**
 - Subcutis and breast parenchyma.
 - Usually UOQ.
- **Clinical features ~**
 - Rapidly growing mass that may be tender/painful or painless.
 - Typically enlarges over several weeks, then regresses over several months.
 - Most cases are <5cm in diameter, usually 0.6-6cm.
- **Epidemiology ~**
 - Rare.
- **Etiology ~**
 - Unknown.
- **Pathogenesis ~**
 - Fibroblastic/myofibroblastic lineage.
 - May be regarded as a form of transient neoplasia that consistently regresses.

Nodular fasciitis

- **Macroscopic appearance** ~
 - Well circumscribed unencapsulated mass.
 - Gross appearance depends on the proportion of myxoid stroma, collagen and cellularity within the lesion.
- **Histopathology** ~
 - Similar morphology as nodular fasciitis elsewhere.
 - Fibroblasts and myofibroblasts without overt cytological atypia or pleomorphism.
 - Early lesions are more cellular.
 - More mature lesions have more collagen.
 - Mitotic activity can be brisk, but atypical forms are not seen.
 - Feathery tissue culture-like areas are typical.
 - More cellular areas can contain fascicles.
 - Rich and fine vascularity, resembling granulation tissue.
 - Extravasated red blood cells and lymphocytes.
 - Partially infiltrative, without entrapping breast ducts and lobules.
- **Immunohistochemistry** ~
 - SMA positive, focal desmin positive.
 - Negative for cytokeratins, CD34, S100 and nuclear beta-catenin.

Nodular fasciitis

- **Differential diagnosis ~**
 - Metaplastic /spindle cell carcinoma.
 - Stromal component of phyllodes tumours.
 - Fibromatosis.
 - Pseudoangiomatous stromal hyperplasia.
 - Myofibroblastic tumours.
 - Reactive postbiopsy spindle cell nodules.
 - Myxoid sarcomas.
- **Adequate sampling to confirm absence of epithelial component, with negative keratin staining, is important in distinguishing from metaplastic carcinoma.**
- **Cytology ~**
 - Variable, depending on the age, cellular composition and sampling of the lesion.
 - Spindle cells, extravasated rbc, lymphocytes.
 - Myxoid material, collagen clumps, blood.
- **Diagnostic molecular pathology ~**
 - Nodular fasciitis of soft tissues harbours t(17;22)(p13;q13) in 85% of cases.
 - *USP6* rearrangement in breast nodular fasciitis on FISH.

Nodular fasciitis

- **Essential and desirable diagnostic criteria ~**
 - Essential ~ fibroblastic/myofibroblastic proliferation without substantial atypia, admixed collagen and/or myxoid stroma with fine vasculature; no entrapment of ducts and lobules; no epithelial/biphasic component.
 - Desirable ~ rapid growth (weeks), small size (< 5cm), USP6 gene rearrangement.
- **Prognosis and prediction ~**
 - Complete surgical excision is curative.
 - Spontaneous regression can occur.
 - Local recurrence is very infrequent even with positive margins.

Thank You