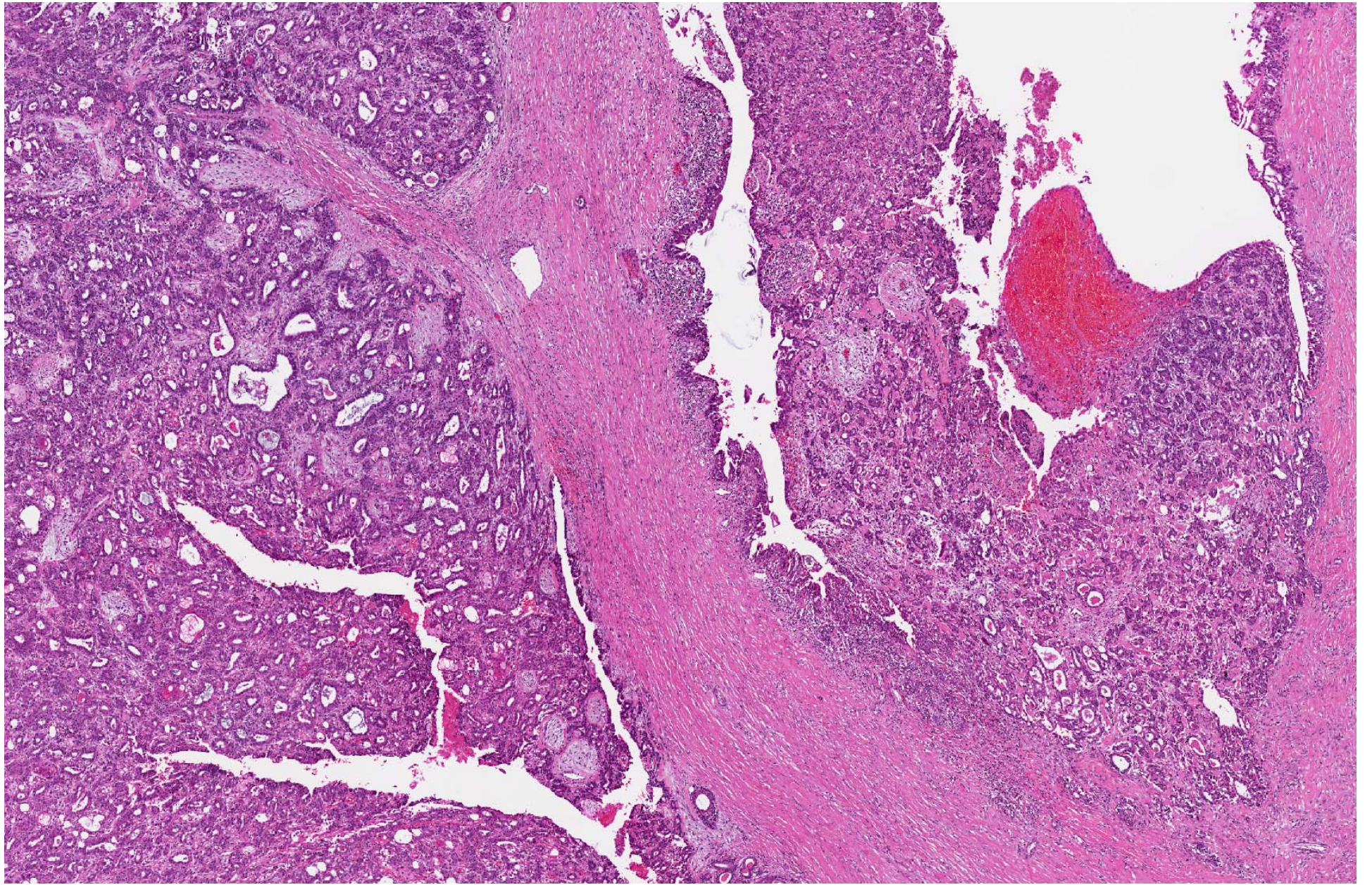
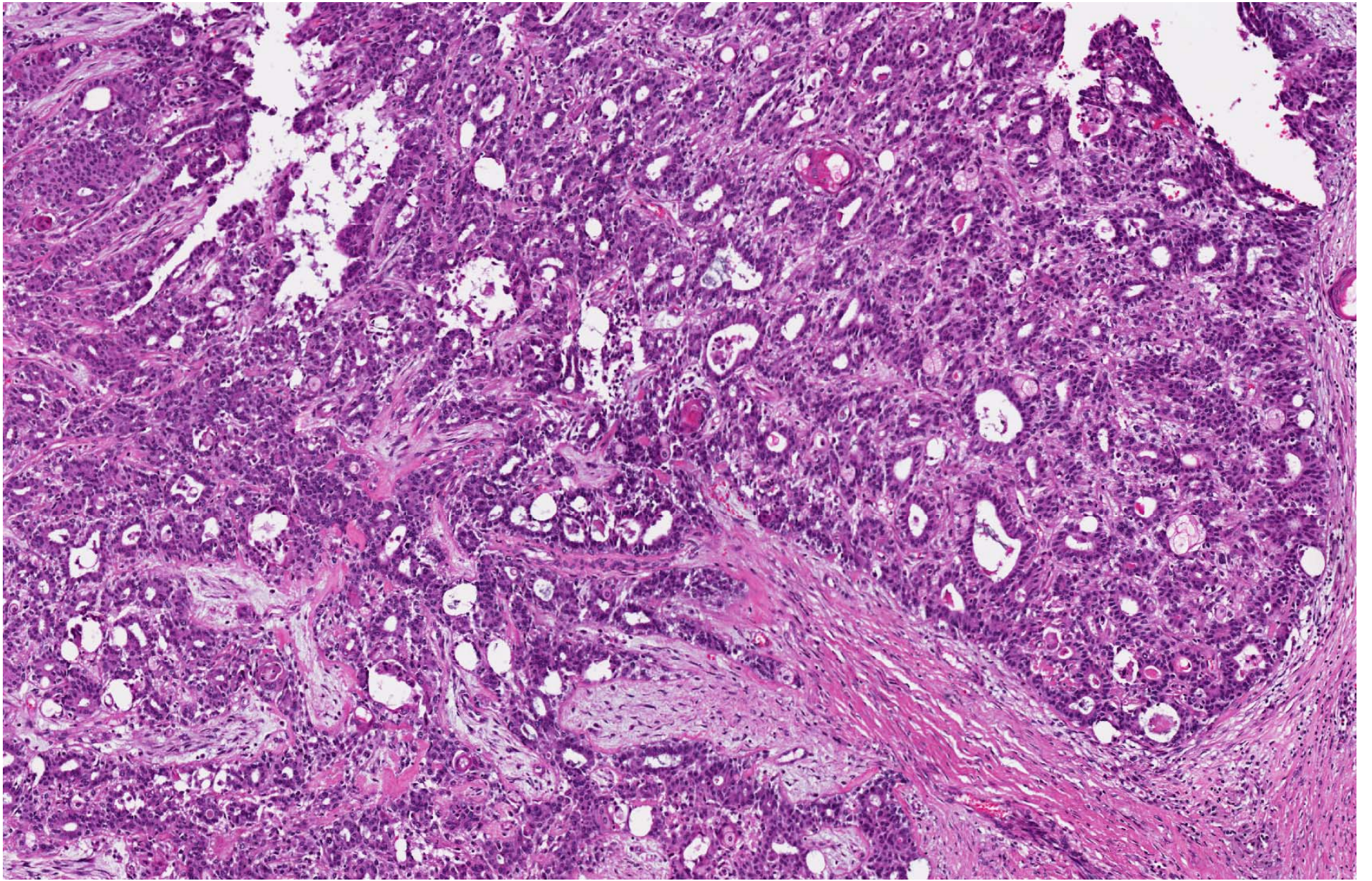


- Set A.2
- 86 year old female with an 8cm mass in the central region of the right breast, underwent simple mastectomy.

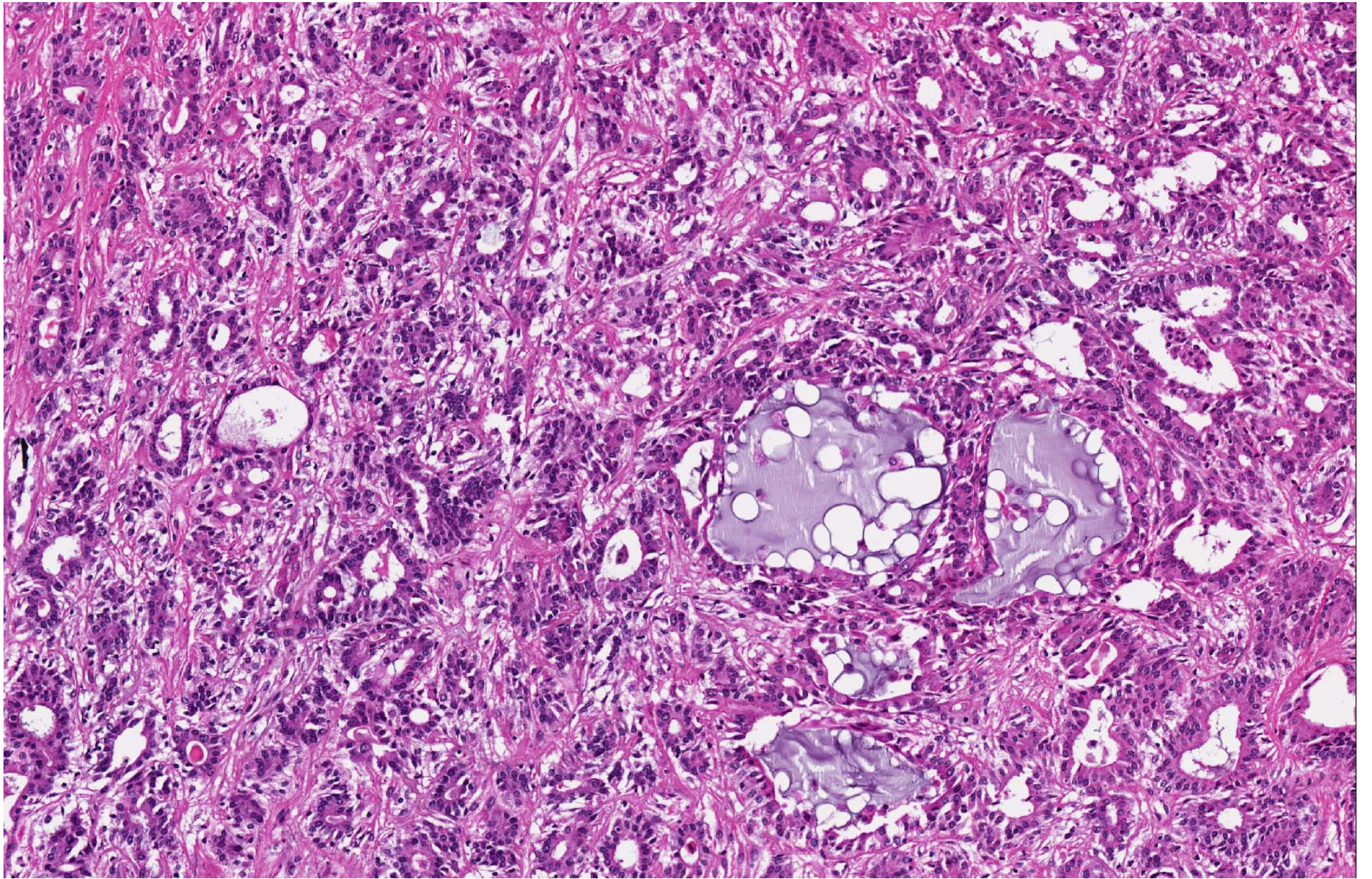




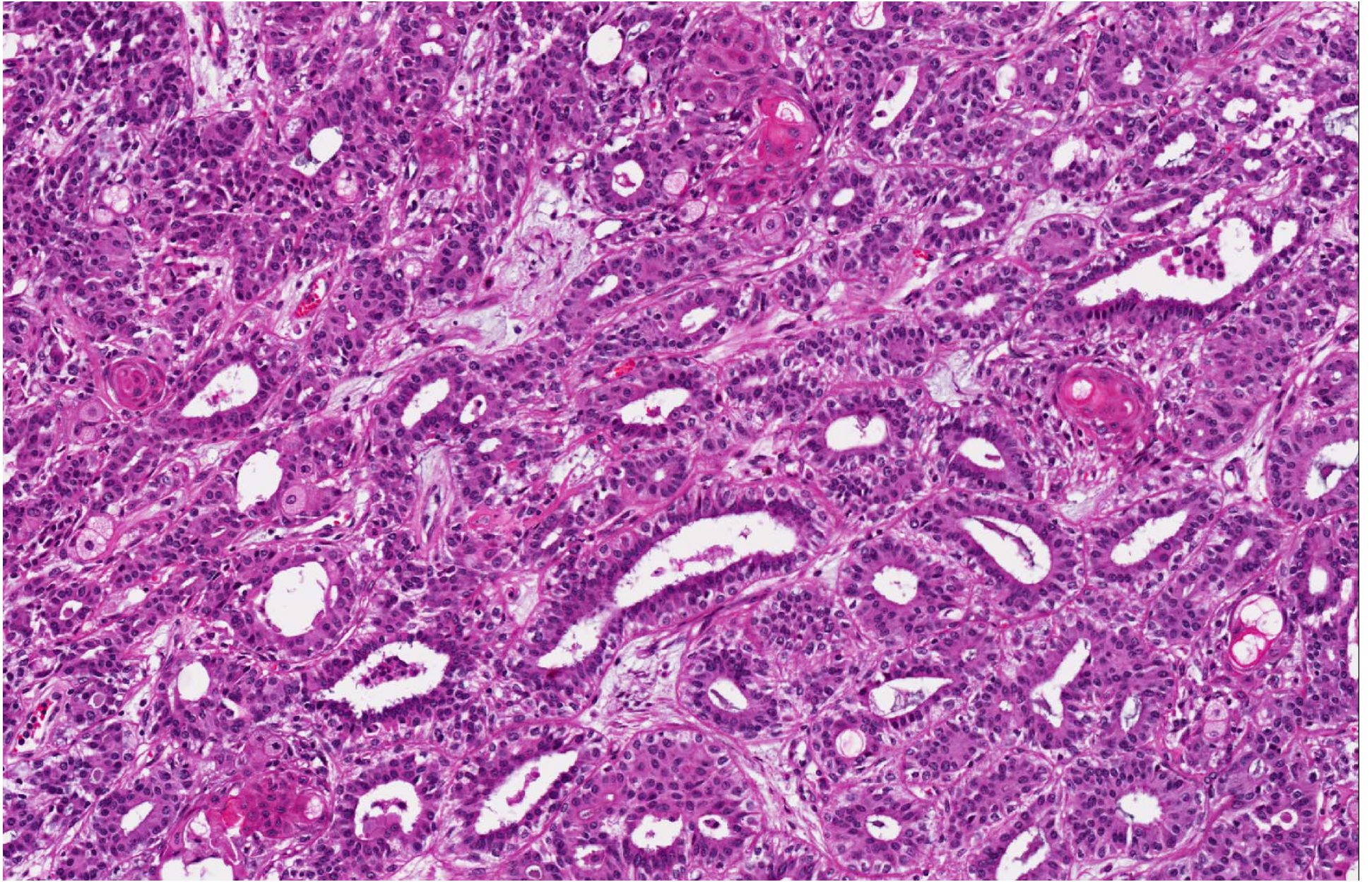




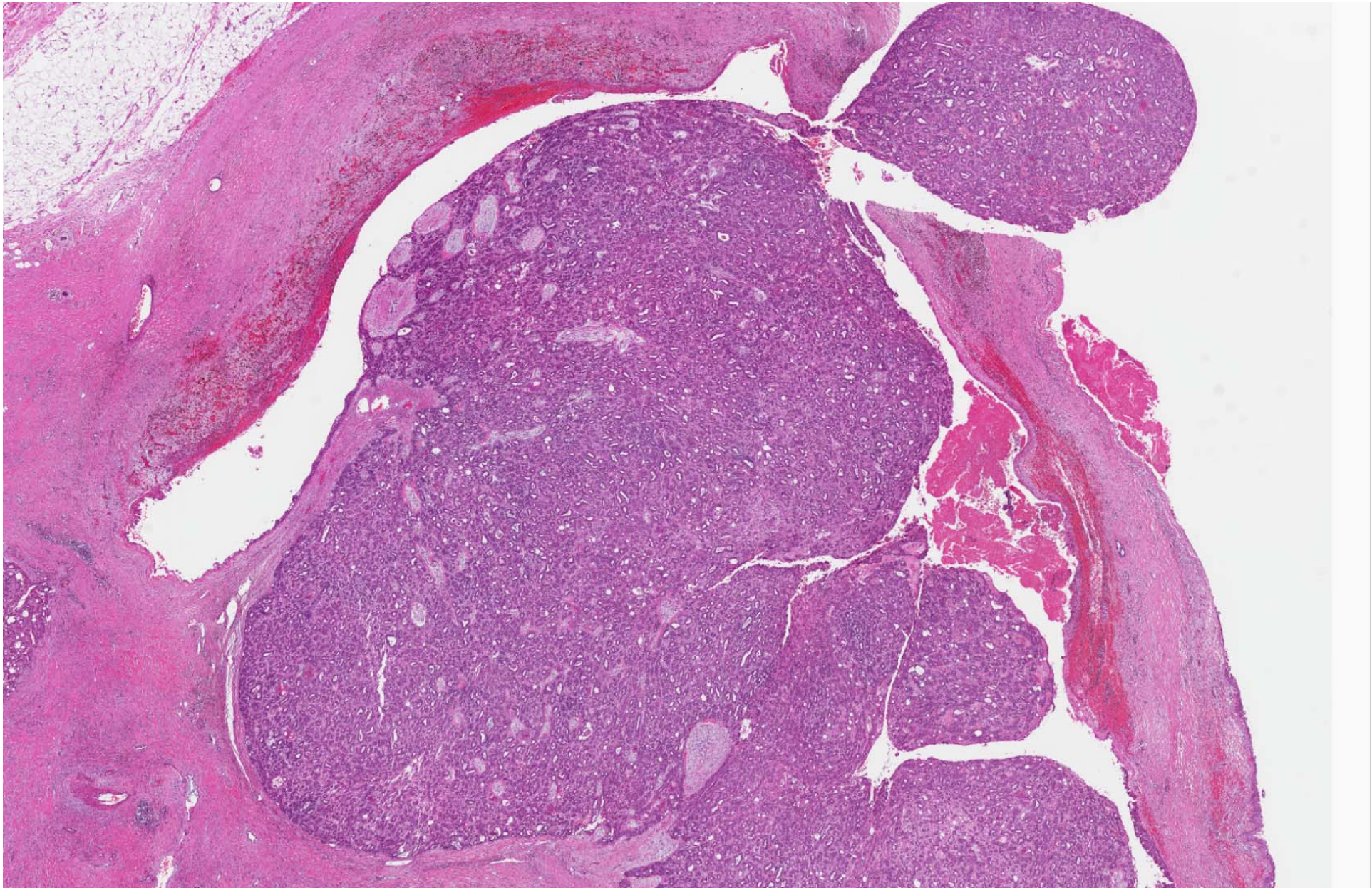




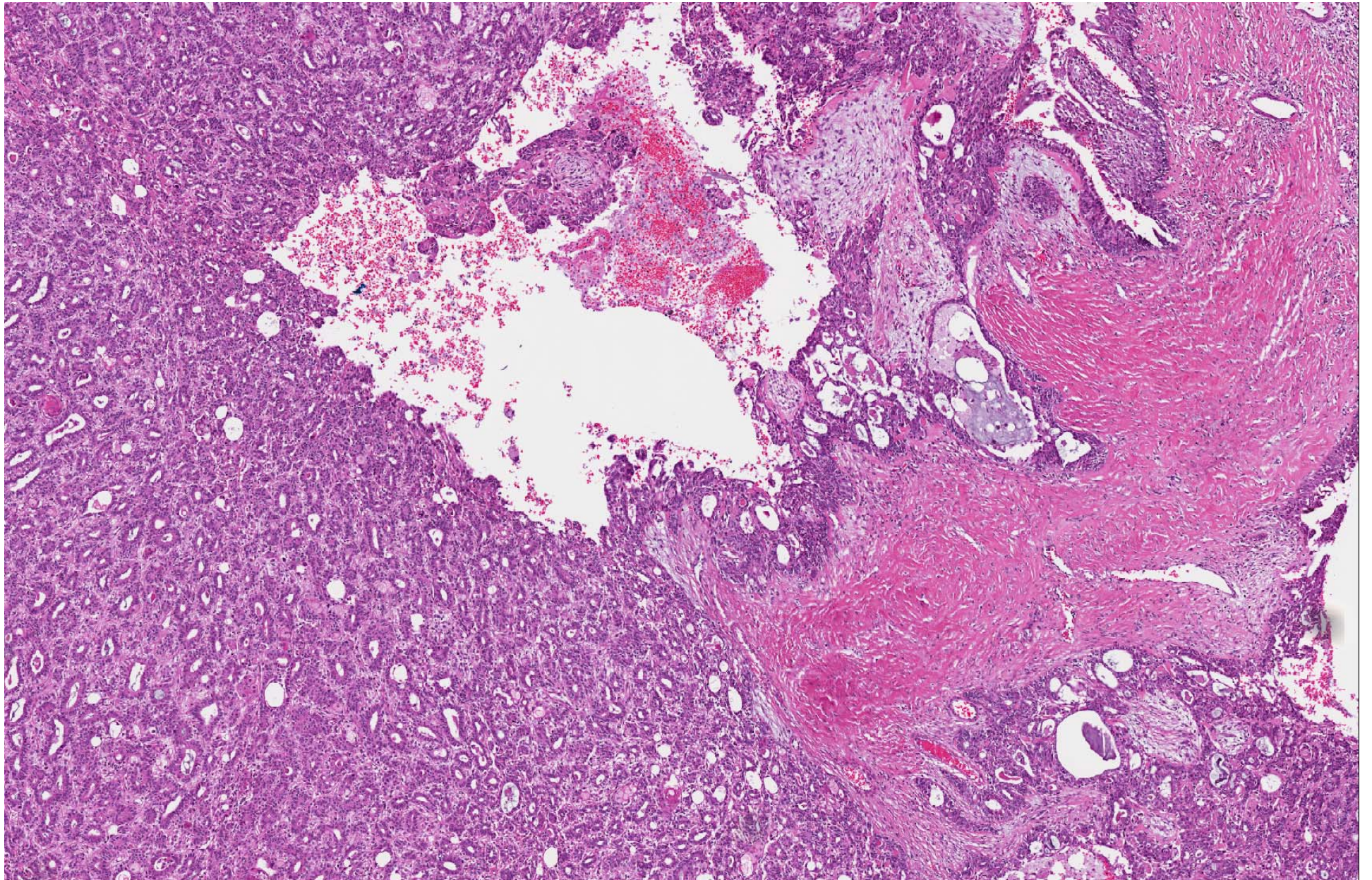




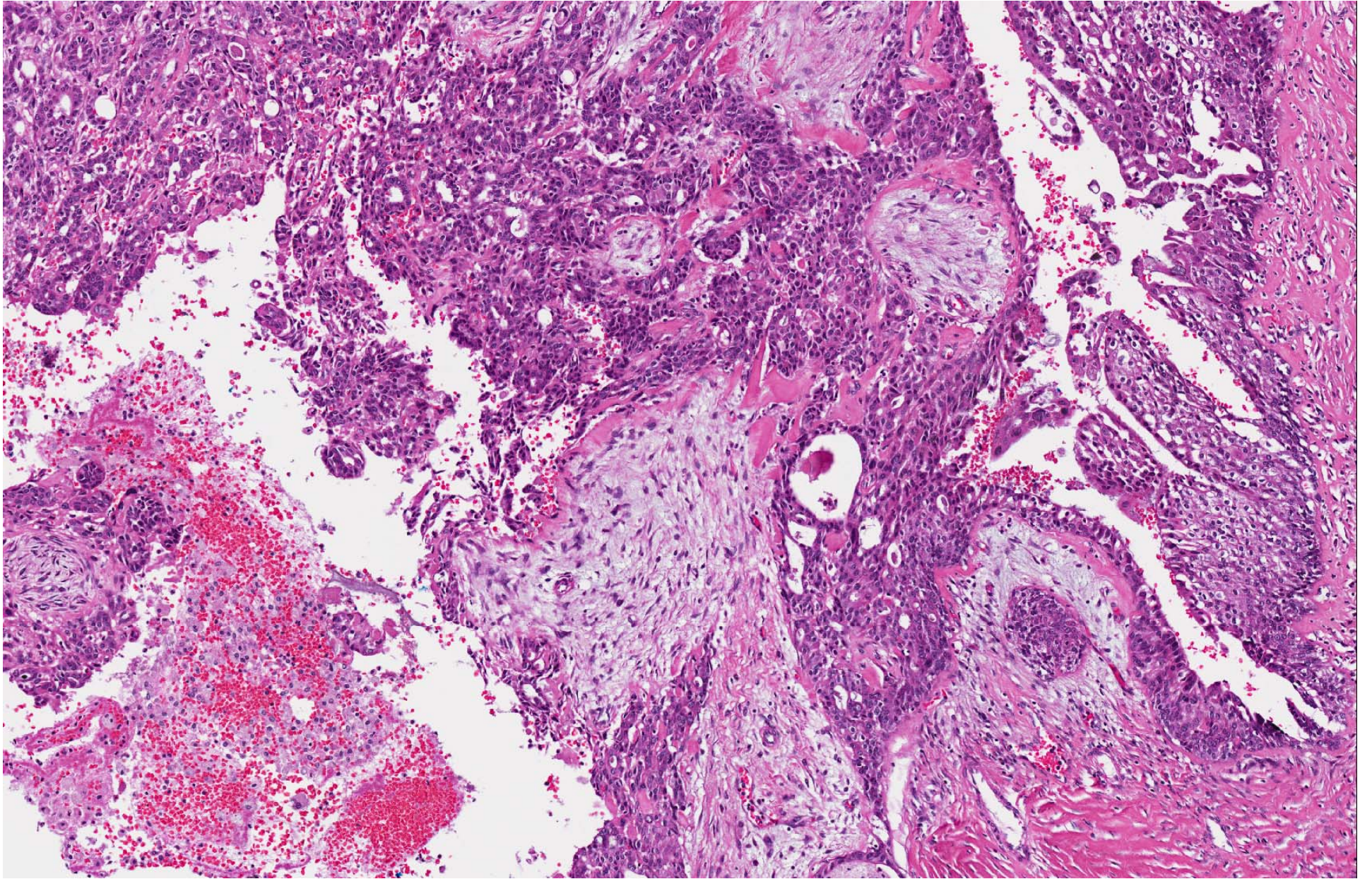




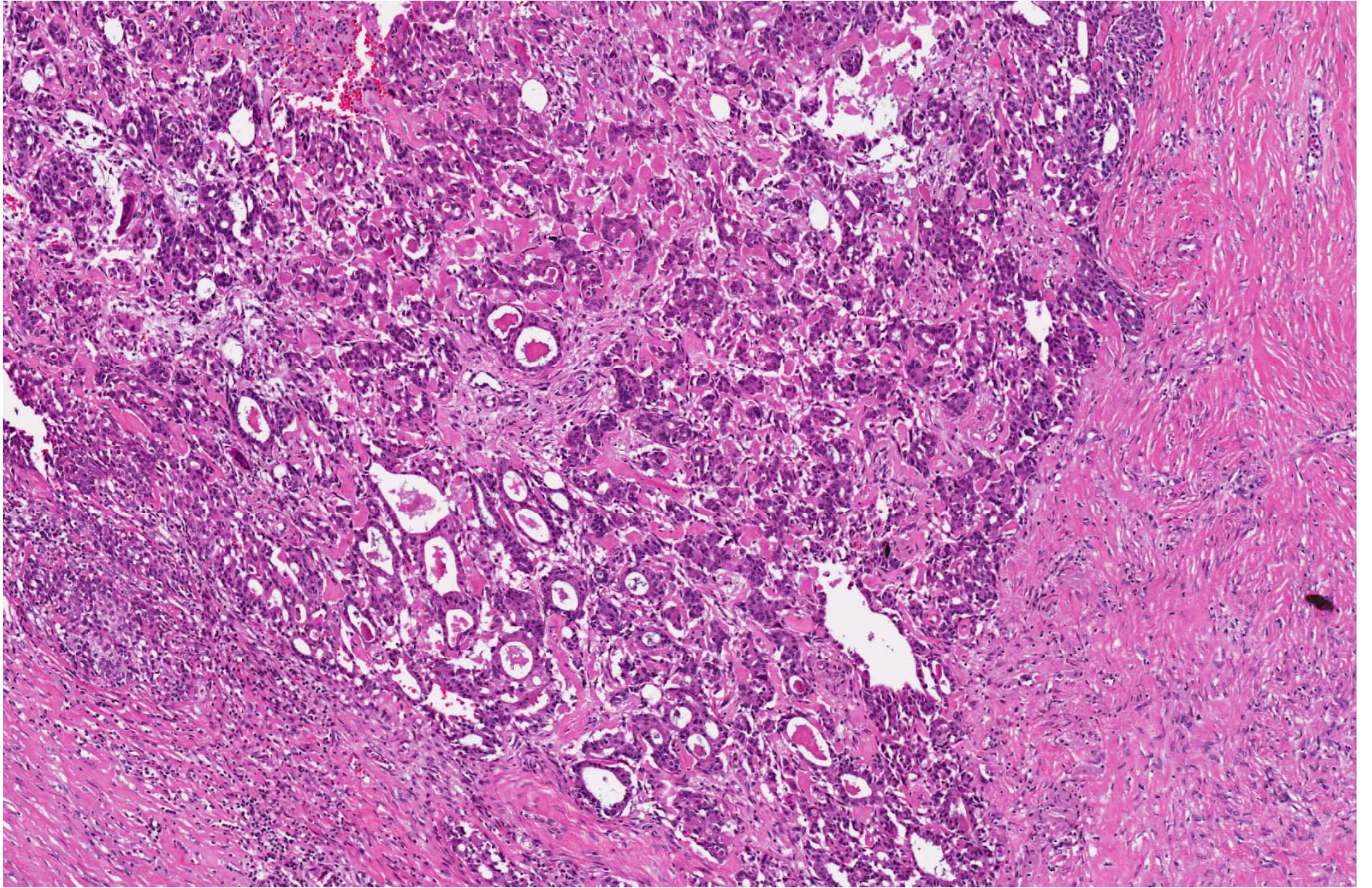




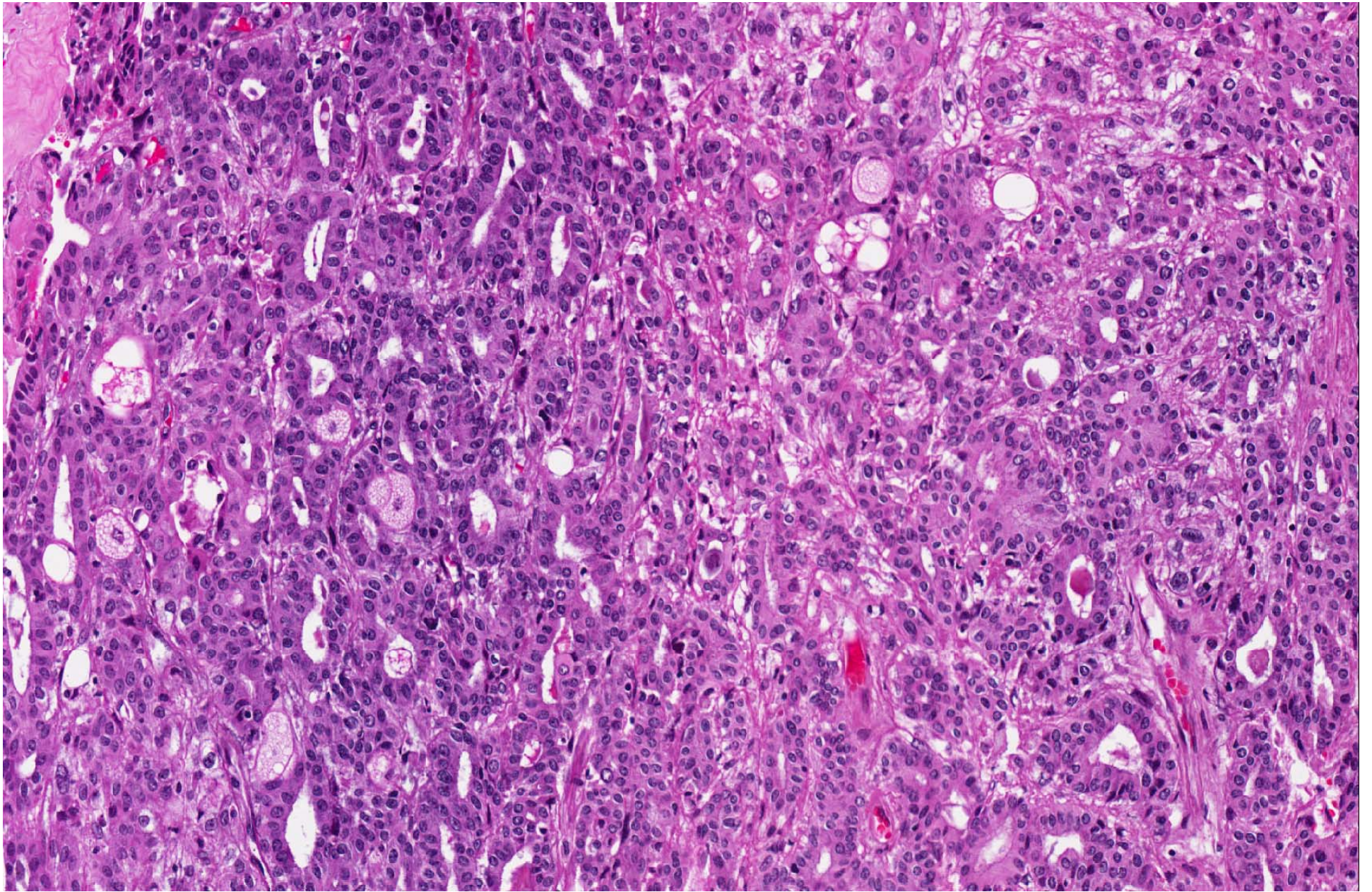




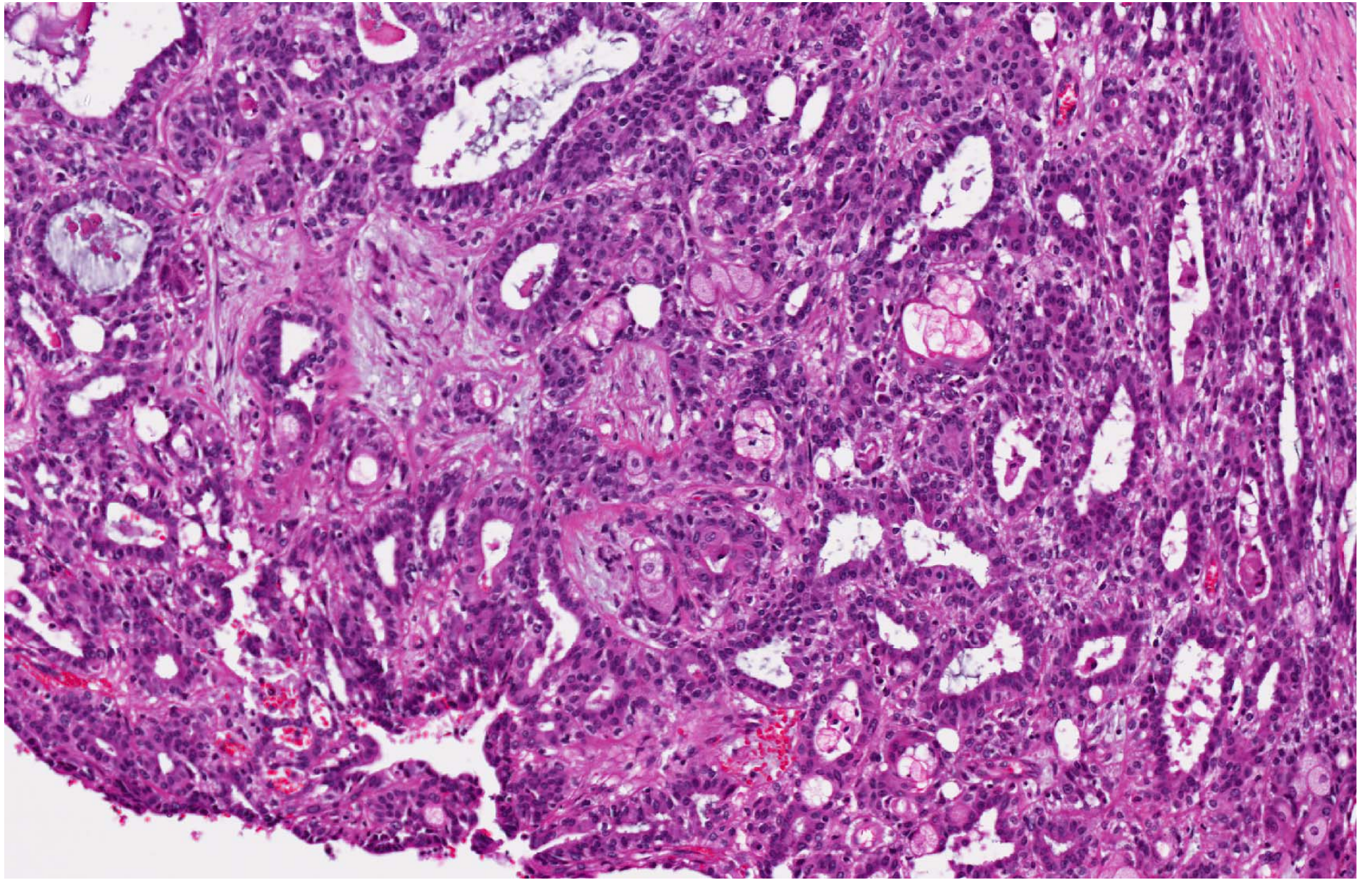




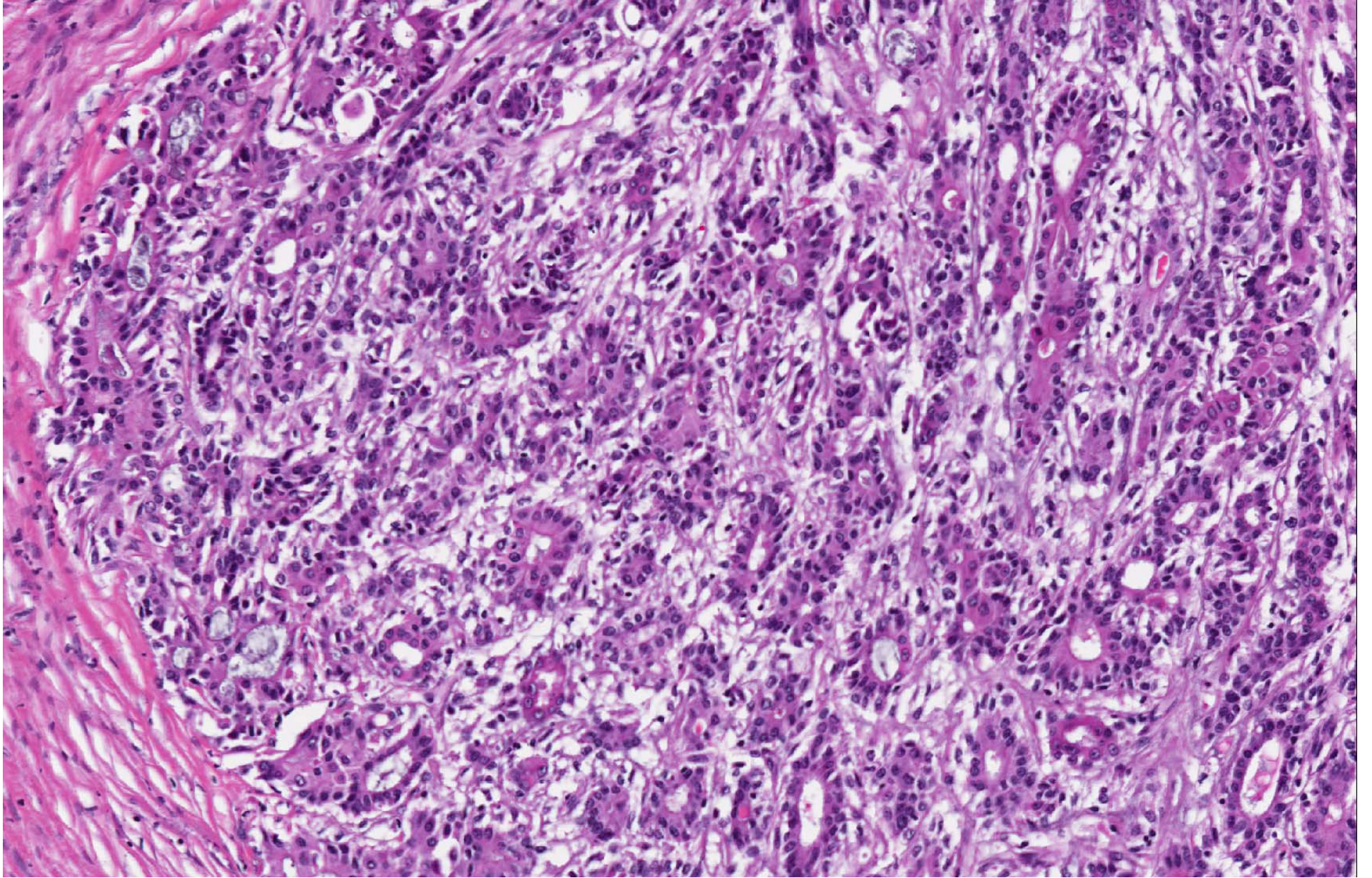














- Adenomyoepithelioma with squamous and sebaceous metaplasia.



# Adenomyoepithelioma

- Uncommon tumour.
- Proliferation of both epithelial and myoepithelial elements.
- 1<sup>st</sup> described by Hamperl in 1970.



# Adenomyoepithelioma

- Women aged 27 to 82 years.
- Solitary, unilateral, painless peripheral breast mass; occasionally central/areolar.
- Nipple discharge, pain, tenderness infrequent.
- Sometimes cystic.



# Adenomyoepithelioma

- Variants of intraductal papilloma.
- Patterns:
  - Spindle cell, tubular and lobulated variants (Tavassoli, AJSP 1991; 15: 554-568)
- Most are circumscribed and nodular.
- Round or ovoid glands lined by cuboidal epithelial cells with polygonal or spindled myoepithelial cells at the periphery.
- Epithelial cells show scant darkly stained cytoplasm and hyperchromatic nuclei.
- Myoepithelial cells with clear cytoplasm.



## Adenomyoepithelioma: *prediction of recurrence*

- Tubular variant of adenomyoepithelioma.
- Ill-defined boundaries with lesional tubules extending into and blending with adjacent normal ducts.
- Multiple satellite lesions leading to incomplete excision.
- Concurrent carcinoma arising within the lesion.



# Adenomyoepithelioma: *malignancy*

- Background of adenomyoepithelioma:
  - Myoepithelial carcinoma.
  - Epithelial carcinoma.
  - Malignant epithelial and myoepithelial components.
  - Sarcoma.
  - Carcinosarcoma.



# Adenomyoepithelioma: *malignancy*

- Histologic evidence of malignant behavior:
  - Mitotic activity.
  - Cellular pleomorphism.
  - Necrosis.
  - Stromal invasion at the periphery
- Cases with local recurrence, metastases and fatal outcome have been reported.



# Special Studies

- Cytokeratin and EMA highlight the cytoplasm and luminal surface of the glandular cells.
- Myoepithelial cells show variable staining with S-100 and anti-actin antibodies.
- ER and PR variable.
- Ultrastructural features of myoepithelial cells include : desmosomes, interdigitating cell processes, keratin and actin cytofilaments and distinct basal lamina.



# Adenomyoepithelioma

- The myoepithelial cell
  - Thought to be derived from ectoderm; they form part of the microanatomy of the breast.
  - Contributes to the morphologic similarities between tumors of the breast, salivary glands and skin appendage.
  - Myoepithelial neoplasms generally uncommon.
- Antibodies to the myoepithelial cell
  - SMA, p63, SMMHC, calponin, caldesmon, S100, CD10, maspin, CK5/6, CK14.



# Differential Diagnoses

- Intraductal papilloma.
- Adenosis tumor/Nodular adenosis.
- Nipple adenoma.
- Tubular adenoma.



# Learning points

- Papillary configuration of adenomyoepithelioma as one of the patterns.
- Recognition of biphasic nature.
- Metaplastic changes - sebaceous and squamous metaplasia.
- Pseudoinvasion.