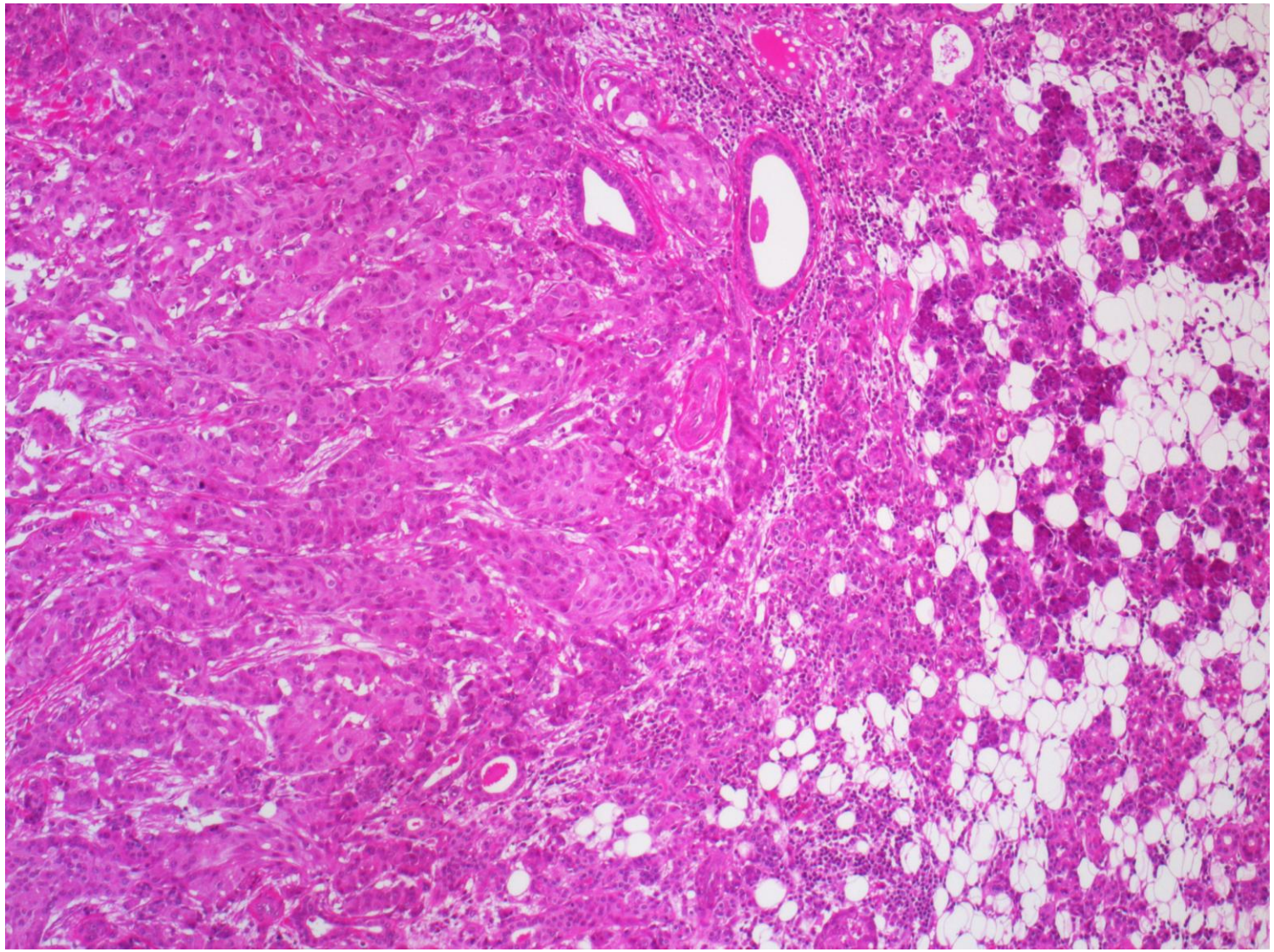
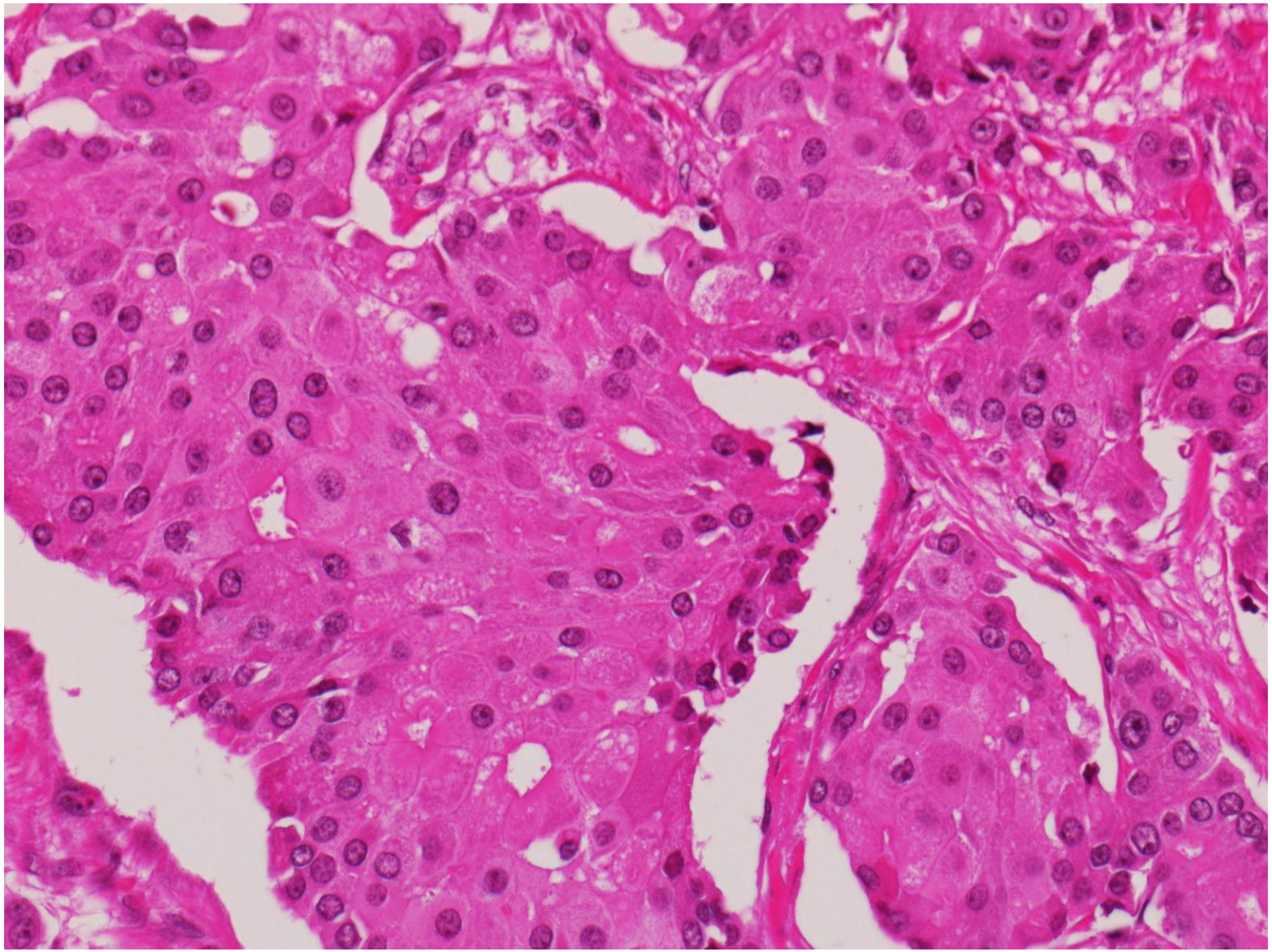
Salivary duct carcinoma, resembling apocrine carcinoma

Salivary duct carcinoma, an aggressive salivary malignancy often diagnosed at an advanced stage, may be found within a benign pleomorphic adenoma. It is often seen in the parotid gland of aged individuals with male predominance. Microscopically, it shows high-grade apocrine/ductal morphology. AR is consistently expressed in the tumor cells. GATA3, GCDFP15, EMA, EGFR and p53 are frequently positive. HER2 overexpression may also be seen. ER and PgR are negative. A representative 78 y-o male case is presented herein.

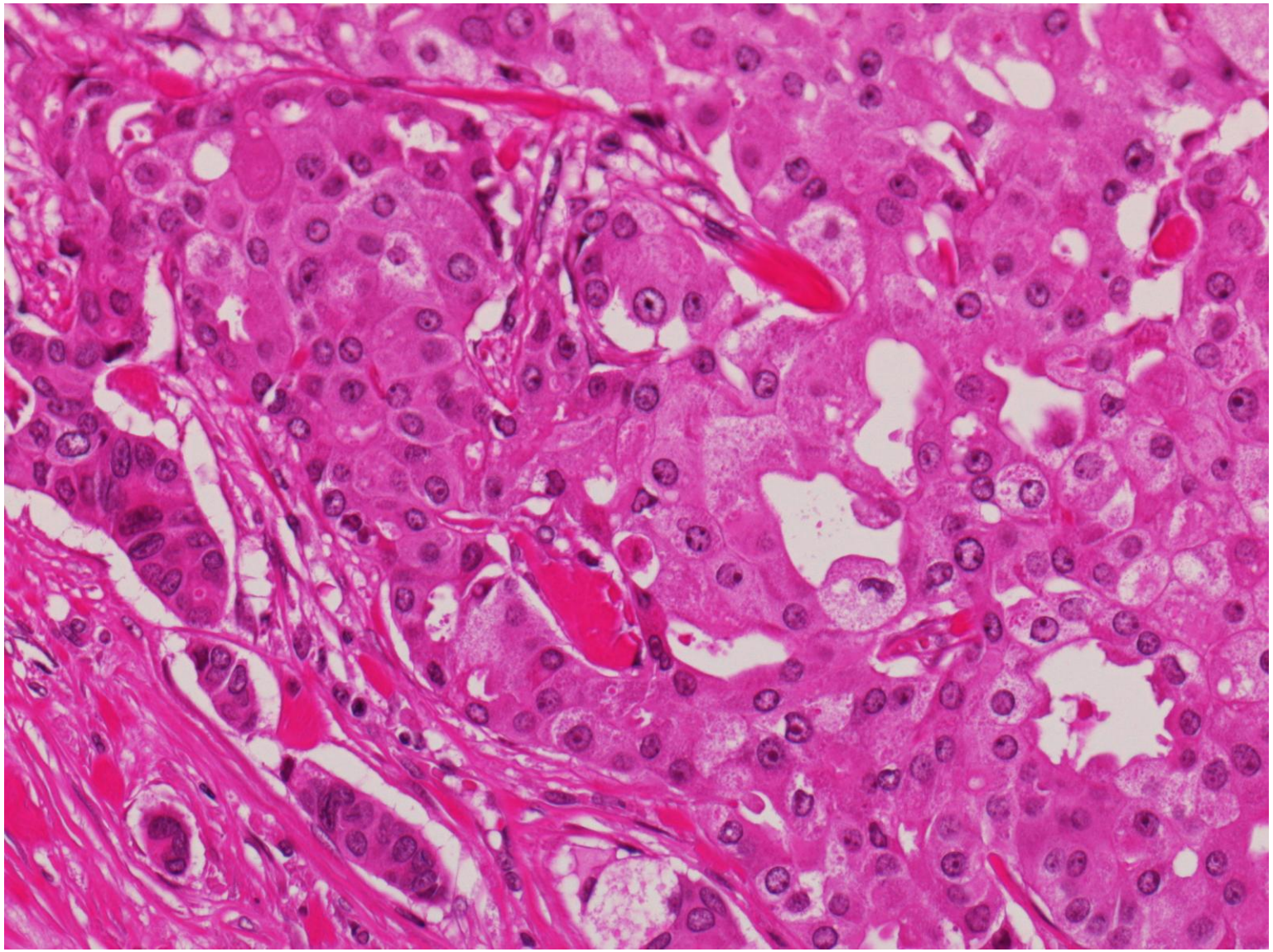
Ref.: Schmitt NC, et al. Salivary duct carcinoma: an aggressive salivary gland malignancy with opportunities for targeted therapy. Oral Oncol 2017; 74: 40-48. doi: 10.1016/j.oraloncology.2017.09.008



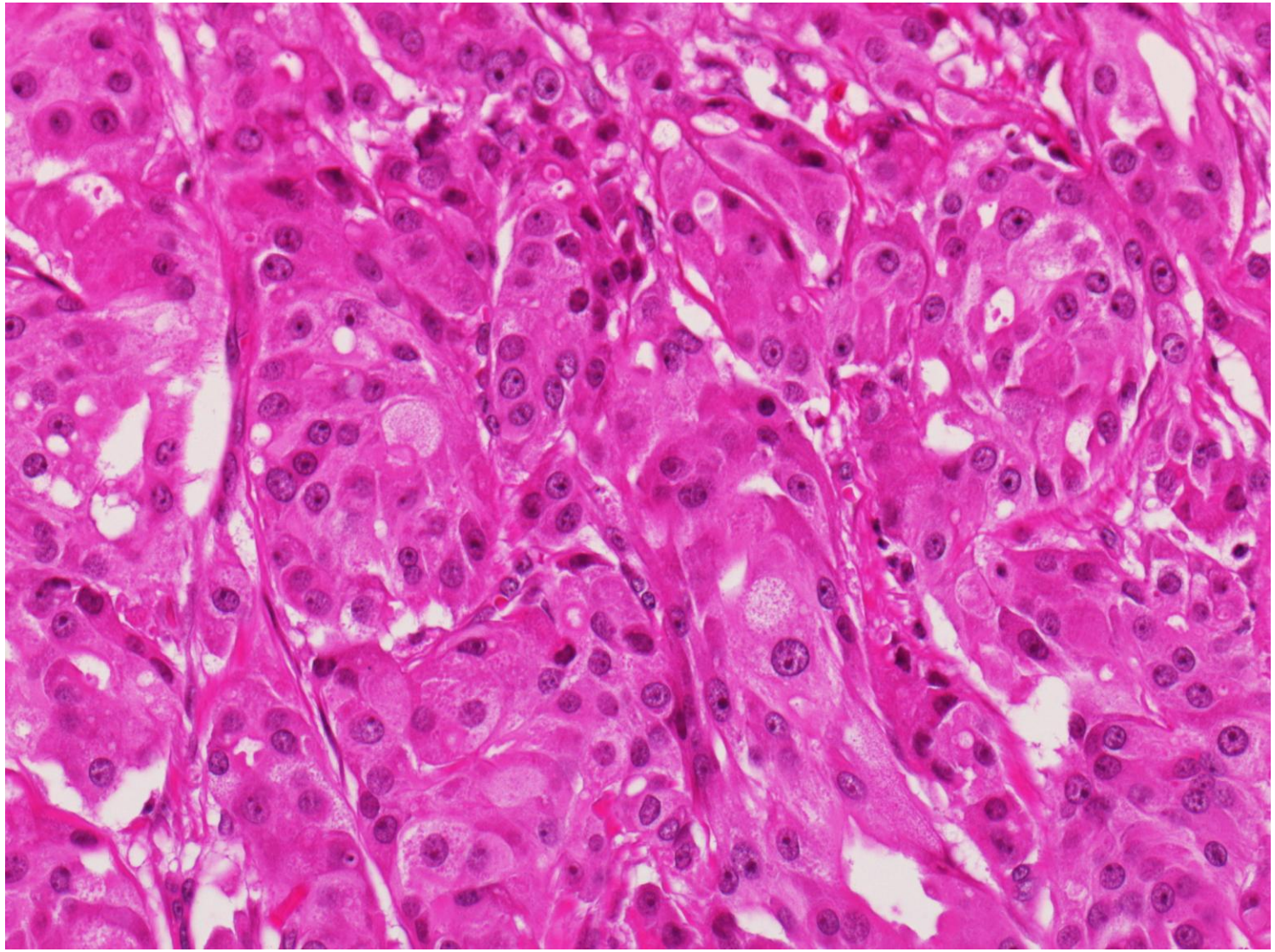
Salivary duct carcinoma of the parotid gland of a 78 y-o male patient with lung metastasis. Solid invasive carcinoma cells are seen adjacent to the non-neoplastic parotid gland (H&E-1).



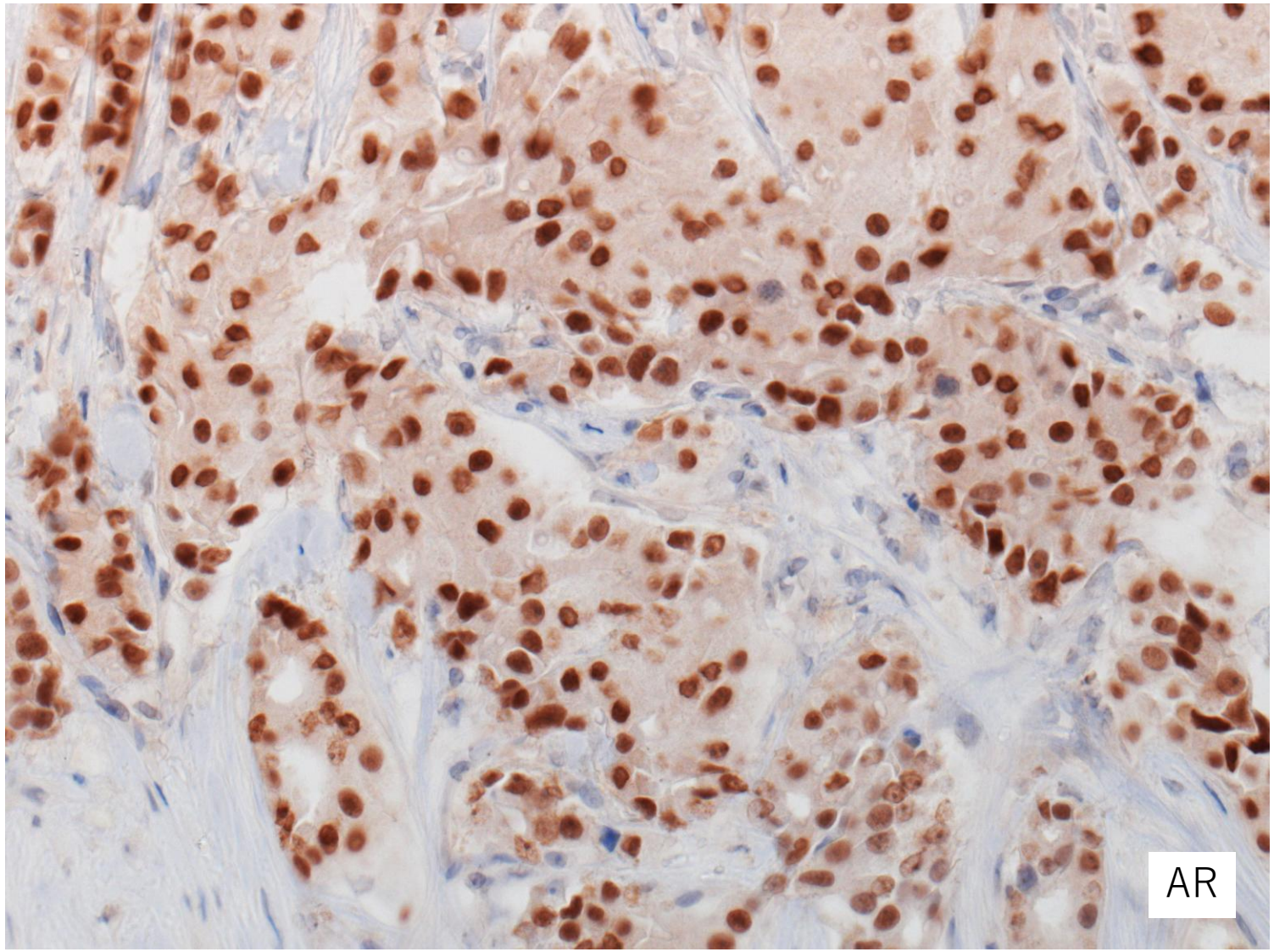
Salivary duct carcinoma of the parotid gland of a 78 y-o male patient with lung metastasis. Solid invasive carcinoma cells possess plump eosinophilic and finely granular cytoplasm, resembling apocrine carcinoma of the breast (H&E-2).



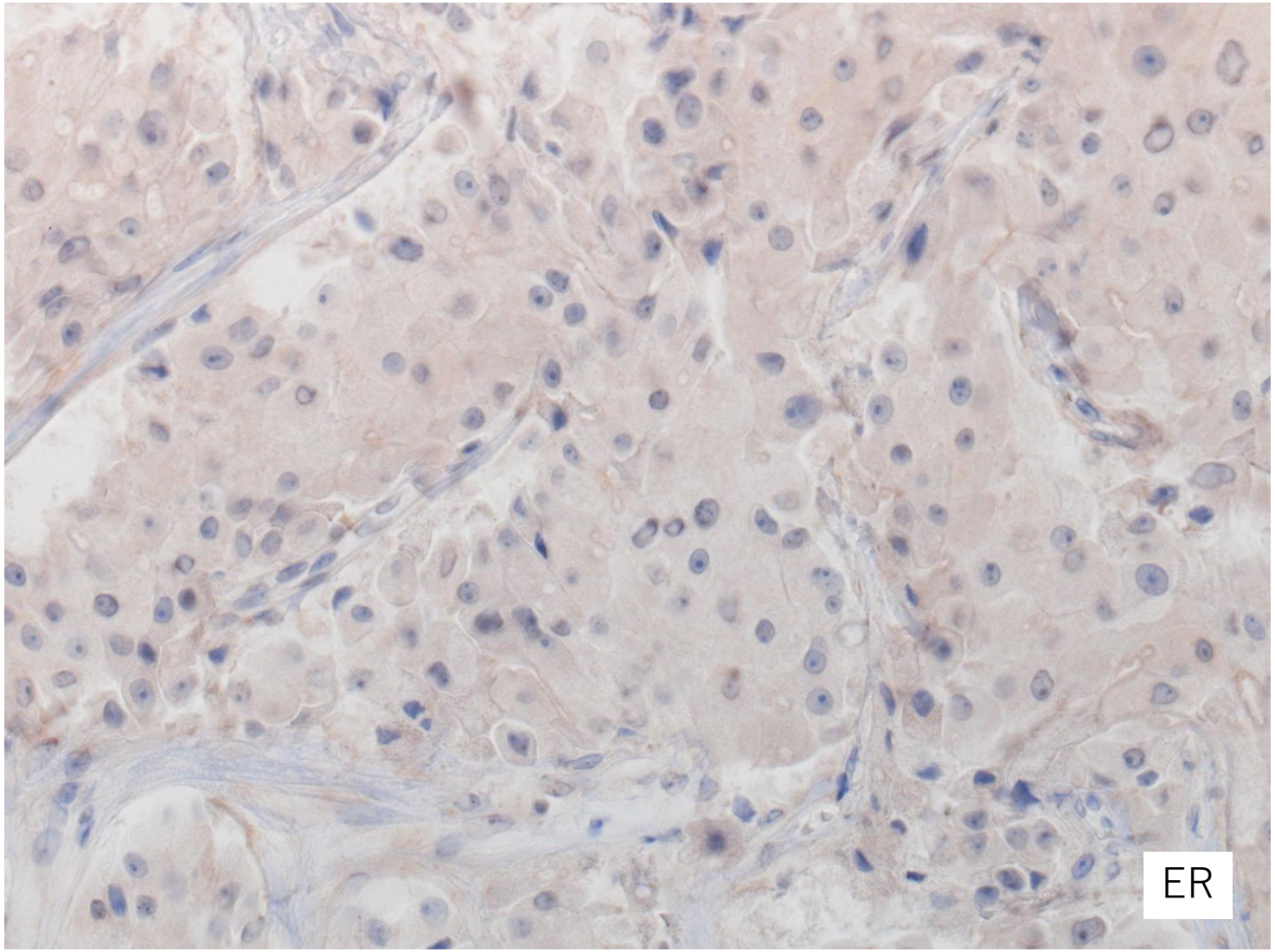
Salivary duct carcinoma of the parotid gland of a 78 y-o male patient with lung metastasis. Solid invasive carcinoma cells possess plump eosinophilic and finely granular cytoplasm, resembling apocrine carcinoma of the breast (H&E-3).



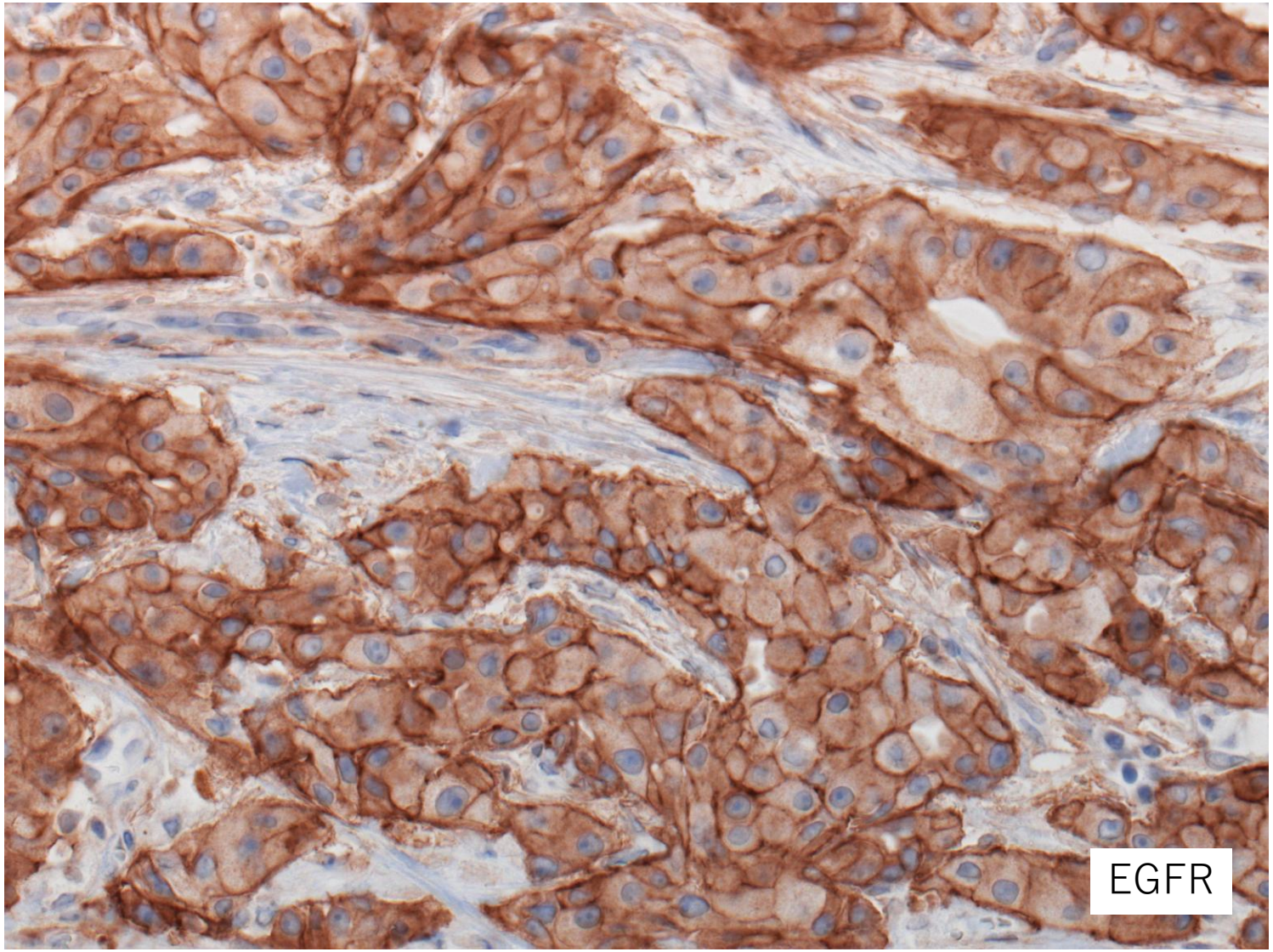
Salivary duct carcinoma of the parotid gland of a 78 y-o male patient with lung metastasis. Solid invasive carcinoma cells possess plump eosinophilic and finely granular cytoplasm, resembling apocrine carcinoma of the breast (H&E-4).



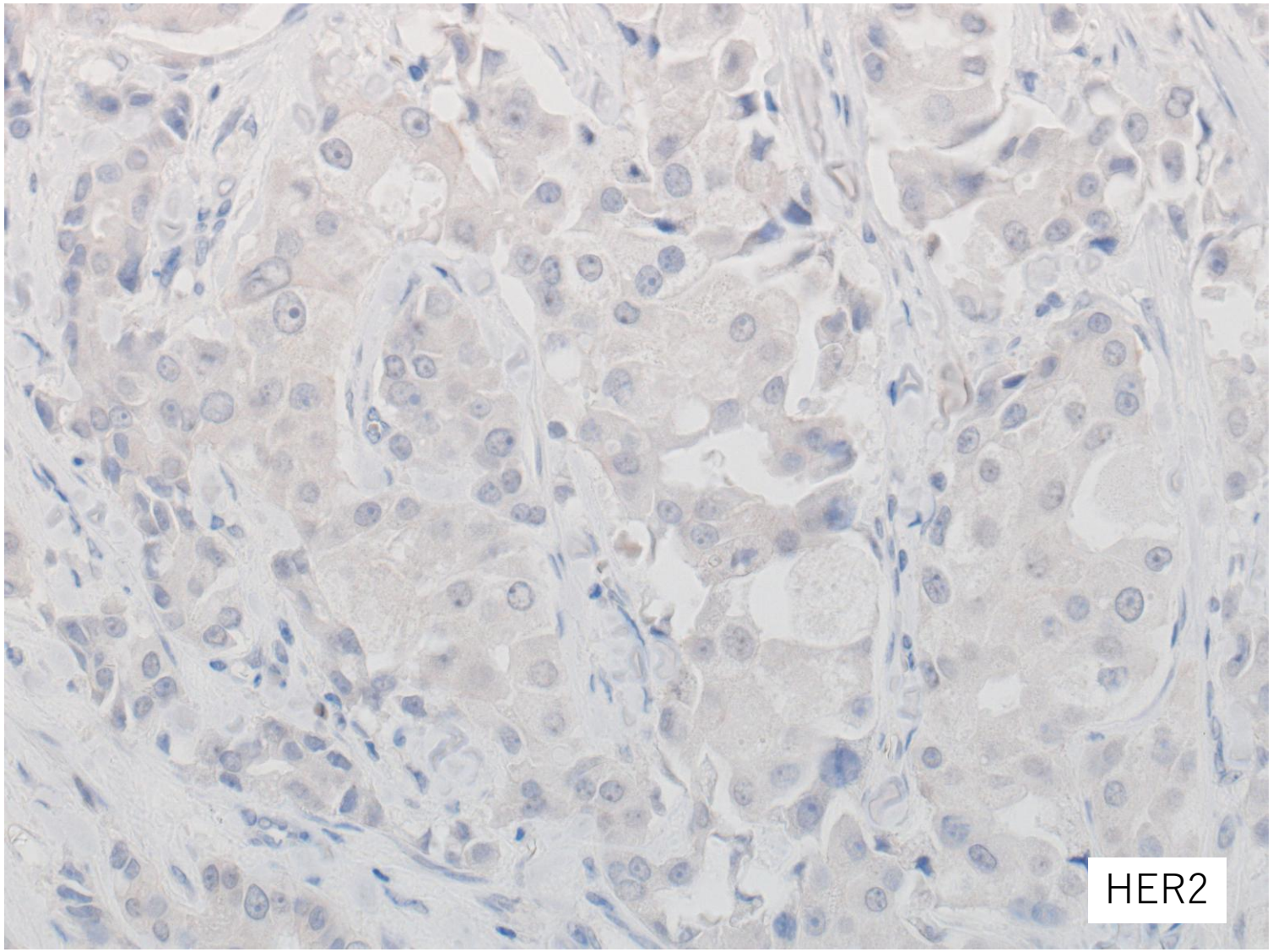
Salivary duct carcinoma of the parotid gland of a 78 y-o male patient with lung metastasis. The cancer cells with plump eosinophilic and finely granular cytoplasm are immunoreactive for AR in the nuclei (immunostaining for AR).



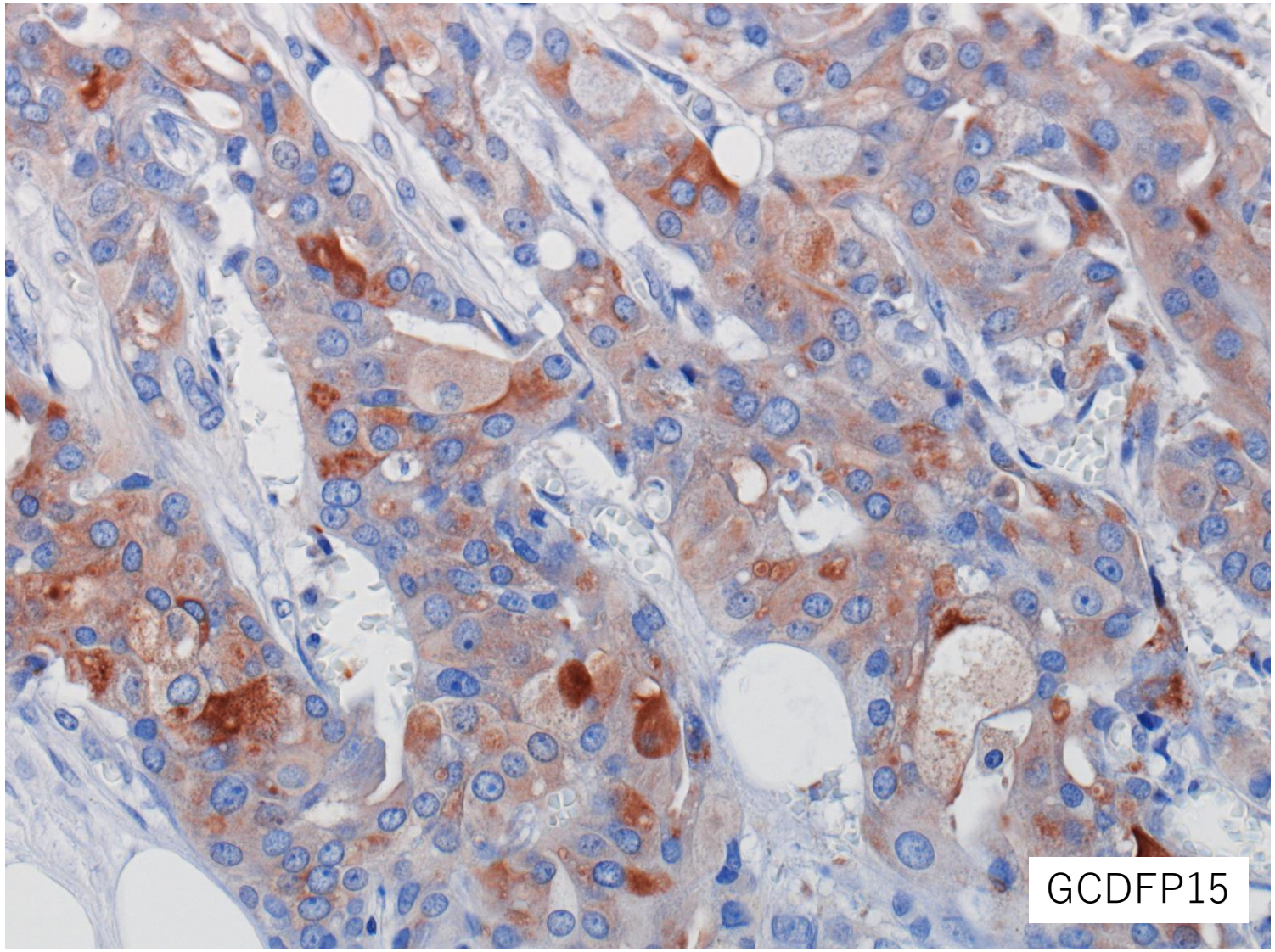
Salivary duct carcinoma of the parotid gland of a 78 y-o male patient with lung metastasis. The cancer cells with plump eosinophilic and finely granular cytoplasm are negative for ER (immunostaining for ER).



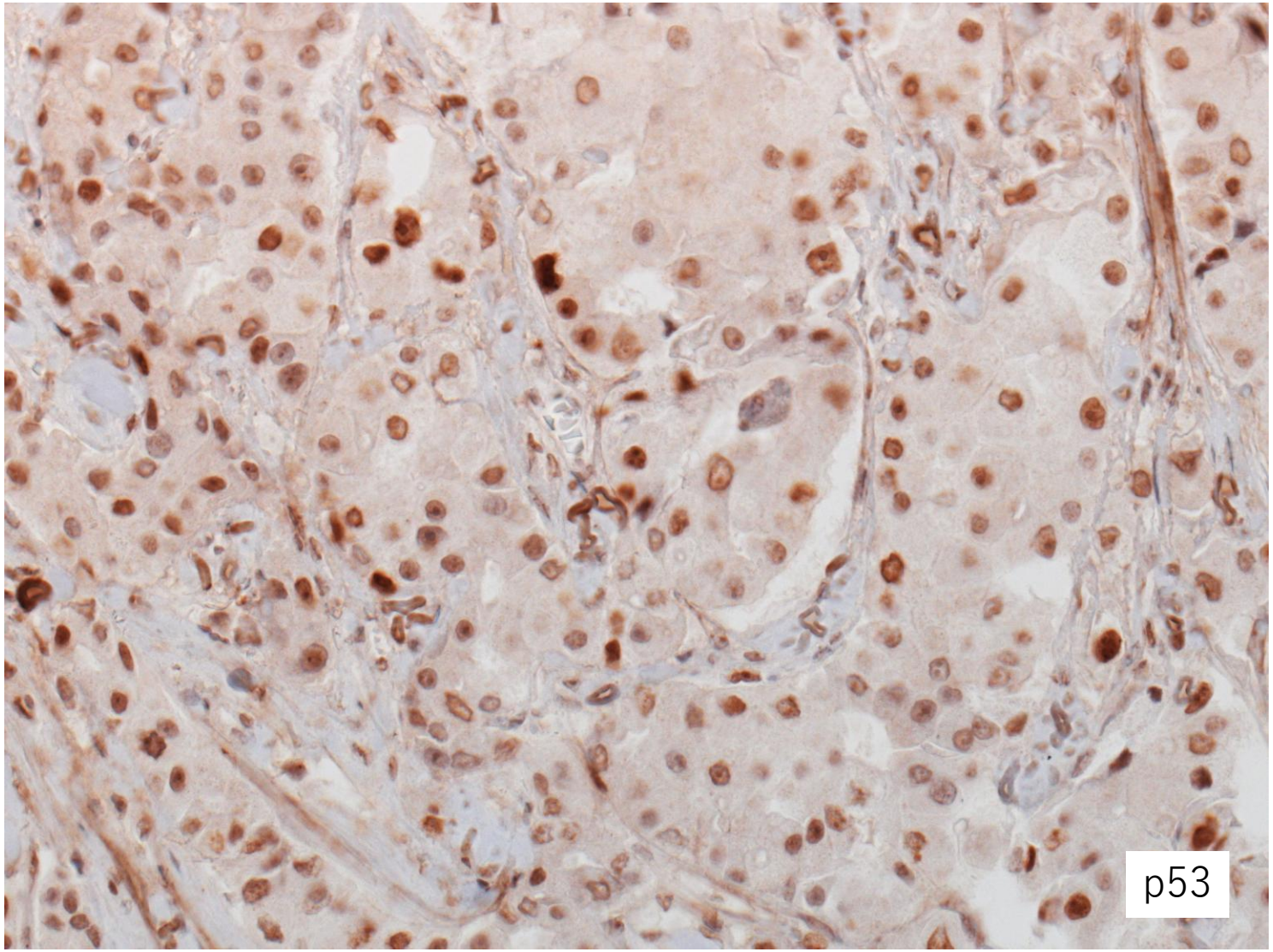
Salivary duct carcinoma of the parotid gland of a 78 y-o male patient with lung metastasis. The cancer cells with plump eosinophilic and finely granular cytoplasm overexpress EGFR on the plasma membrane (immunostaining for EGFR).



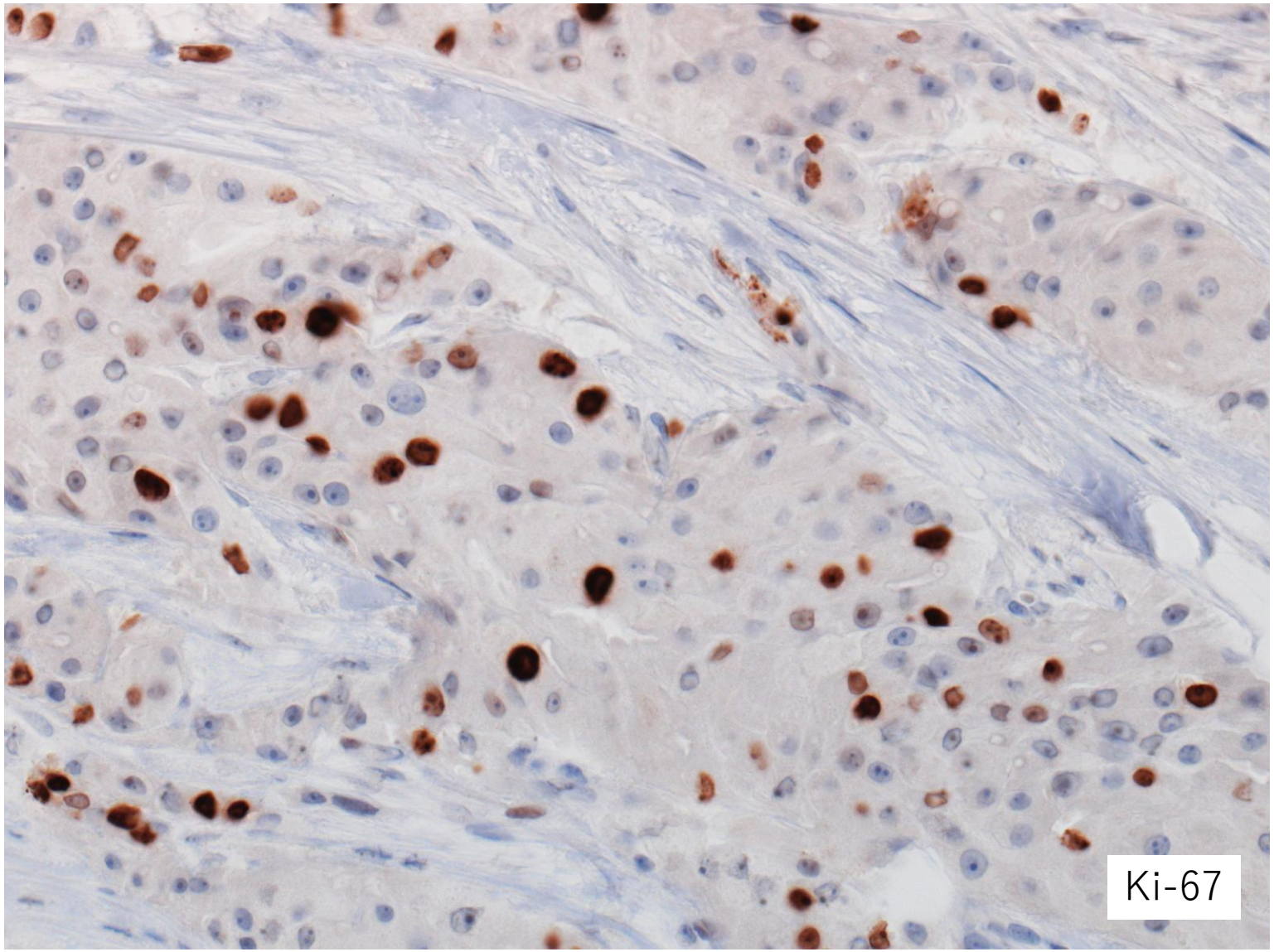
Salivary duct carcinoma of the parotid gland of a 78 y-o male patient with lung metastasis. The cancer cells with plump eosinophilic and finely granular cytoplasm negative for HER2 in the present case. HER2 may be overexpressed in one third of cases (immunostaining for HER2).



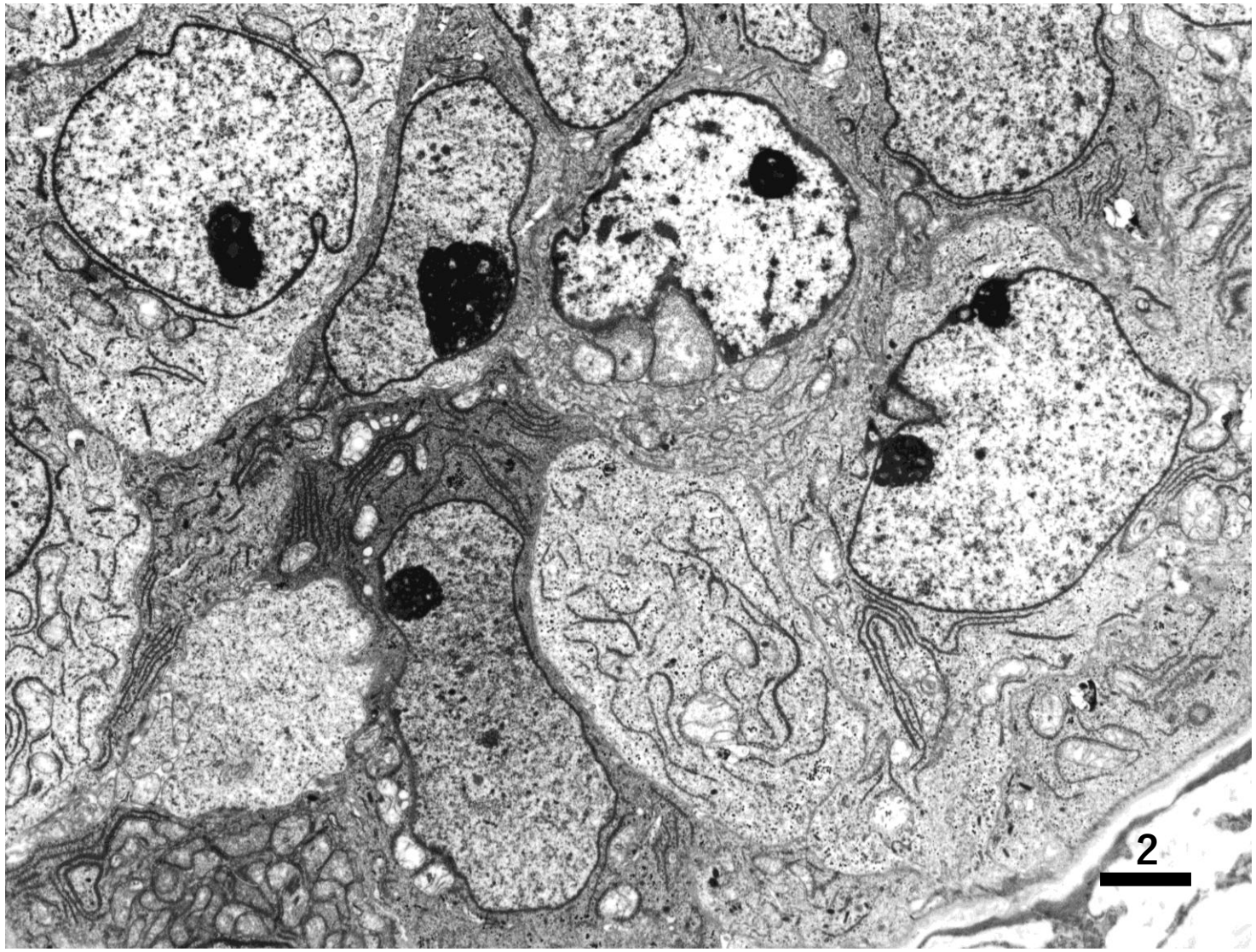
Salivary duct carcinoma of the parotid gland of a 78 y-o male patient with lung metastasis. The cancer cells with plump eosinophilic and finely granular cytoplasm express GCDFP15 in the cytoplasm (immunostaining for GCDGP15).



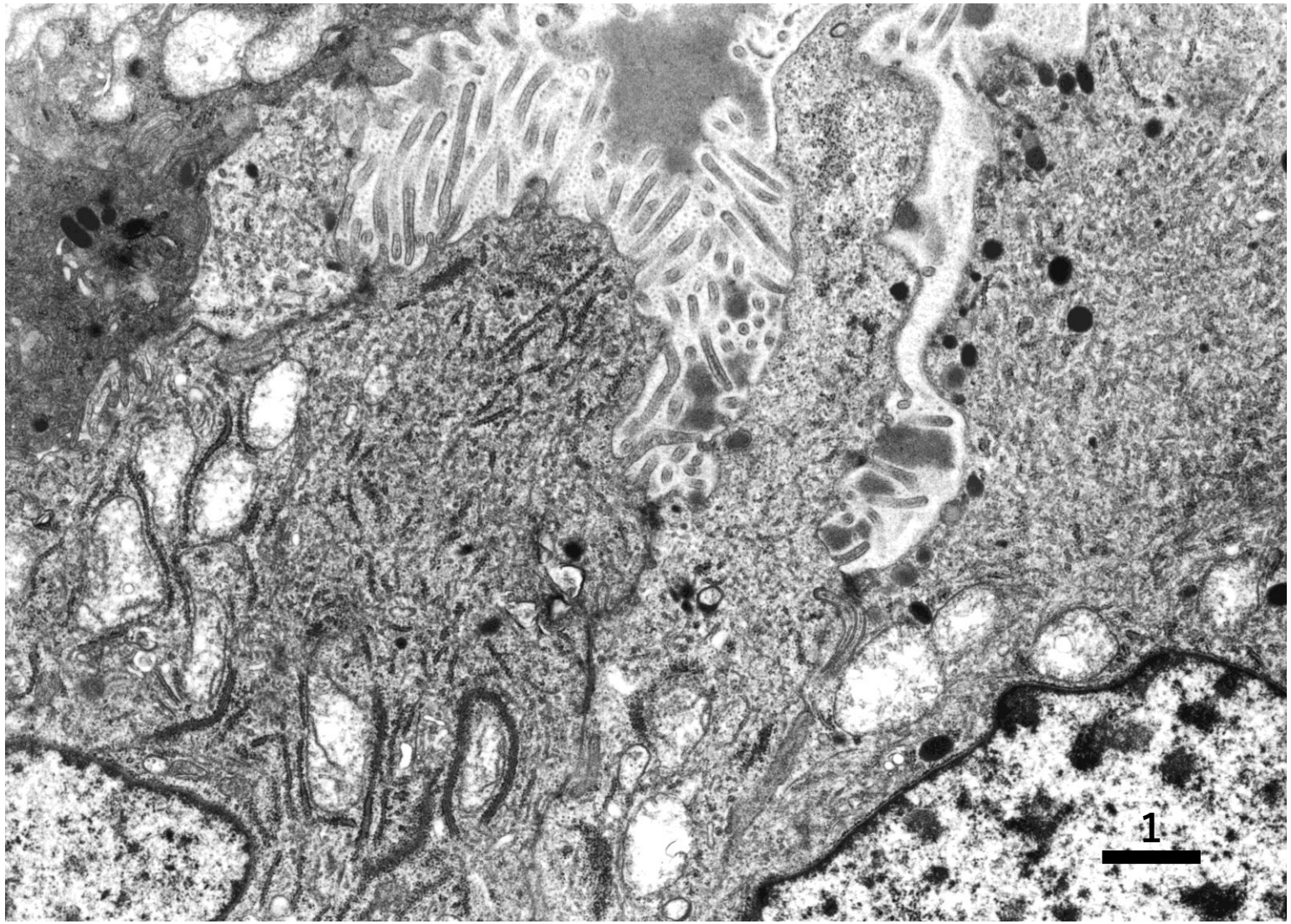
Salivary duct carcinoma of the parotid gland of a 78 y-o male patient with lung metastasis. The cancer cells with plump eosinophilic and finely granular cytoplasm diffusely express p53 in the nuclei as a mutation pattern (immunostaining for p53).



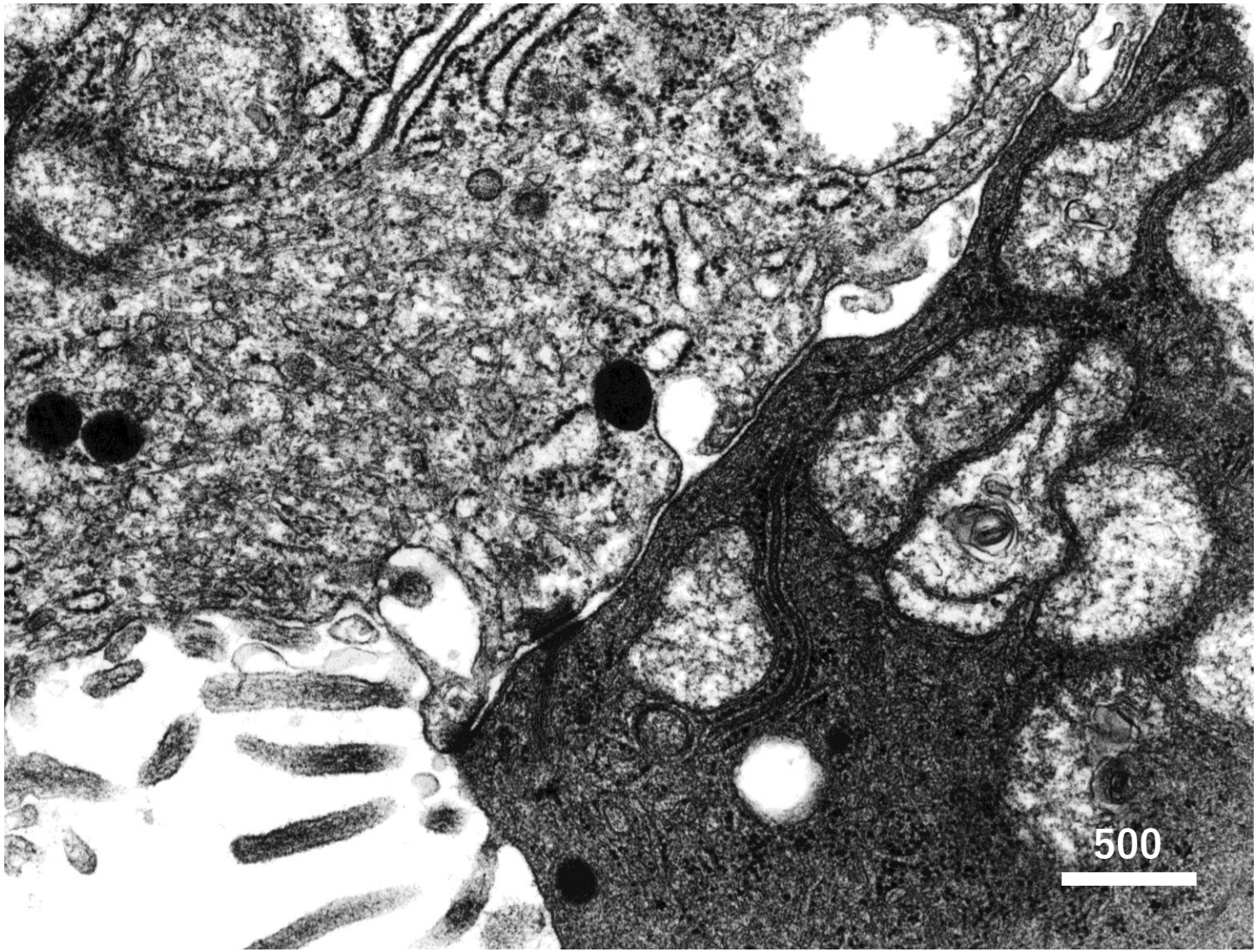
Salivary duct carcinoma of the parotid gland of a 78 y-o male patient with lung metastasis. The cancer cells with plump eosinophilic and finely granular cytoplasm are immunoreactive for Ki-67 with labeling index around 30% (immunostaining for Ki-67).



Ultrastructure of salivary duct carcinoma of the parotid gland of a 78 y-o male patient with lung metastasis. The cancer cells possess round to oval nuclei with dispersed euchromatin and prominent nucleoli. In the plump cytoplasm, rough endoplasmic reticula are scattered (TEM-1).



Ultrastructure of salivary duct carcinoma of the parotid gland of a 78 y-o male patient with lung metastasis. The cancer cells possess microvilli on the apical surface. Apocrine-type electron-dense granules measuring around 200 nm are focally clustered in the apical cytoplasm. Mitochondria and microtubules are scattered in the cytoplasm (TEM-2).



Ultrastructure of salivary duct carcinoma of the parotid gland of a 78 y-o male patient with lung metastasis. The cancer cells possess microvilli on the apical surface. Apocrine-type electron-dense granules measuring around 200 nm are dispersed in the apical cytoplasm (TEM-3).