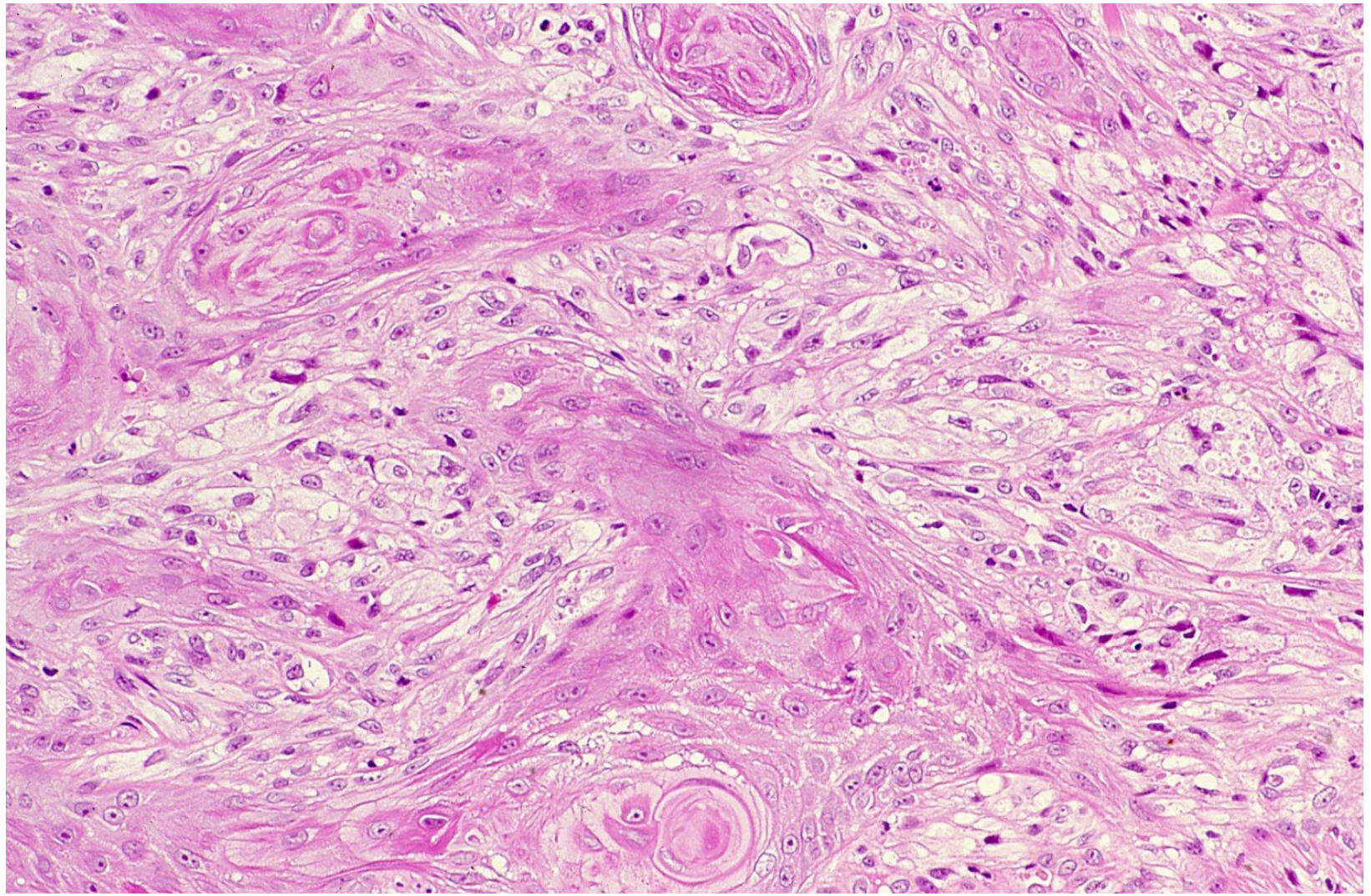
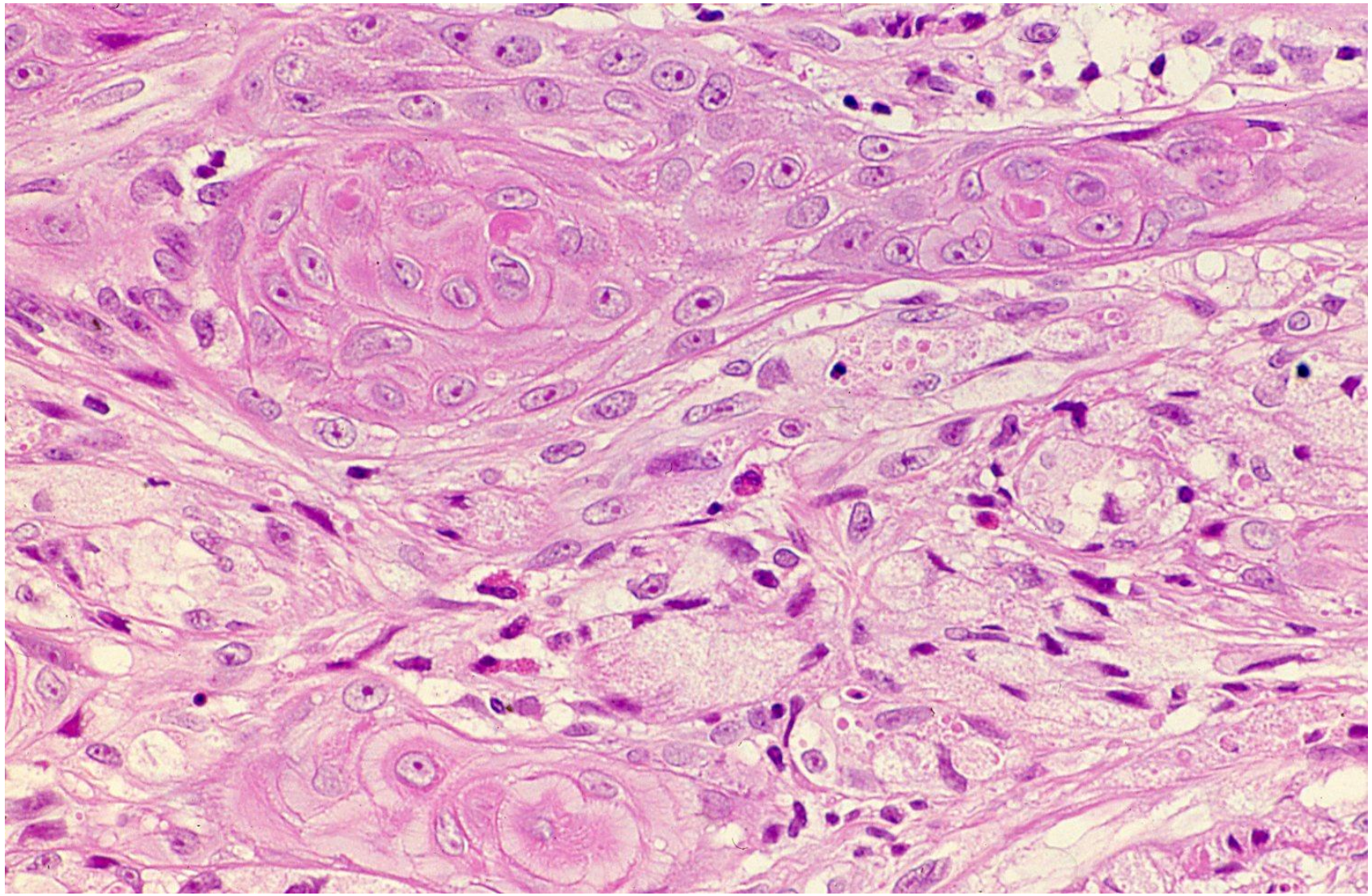
Granular cell tumor

Granular cell tumor, occurring in the dermis or in the squamous mucosa, is composed of cohesive tumor cells with abundant granular cytoplasm and Schwannian differentiation (S100+, SOX10+). The granules in this benign mesenchymal tumor are PAS-reactive. It may show an infiltrative configuration occasionally with subcutaneous involvement, and the epidermis often reveals pseudocarcinomatous hyperplasia. Ultrastructurally, the granules belong to activated lysosomes phagocytizing electron-dense materials.

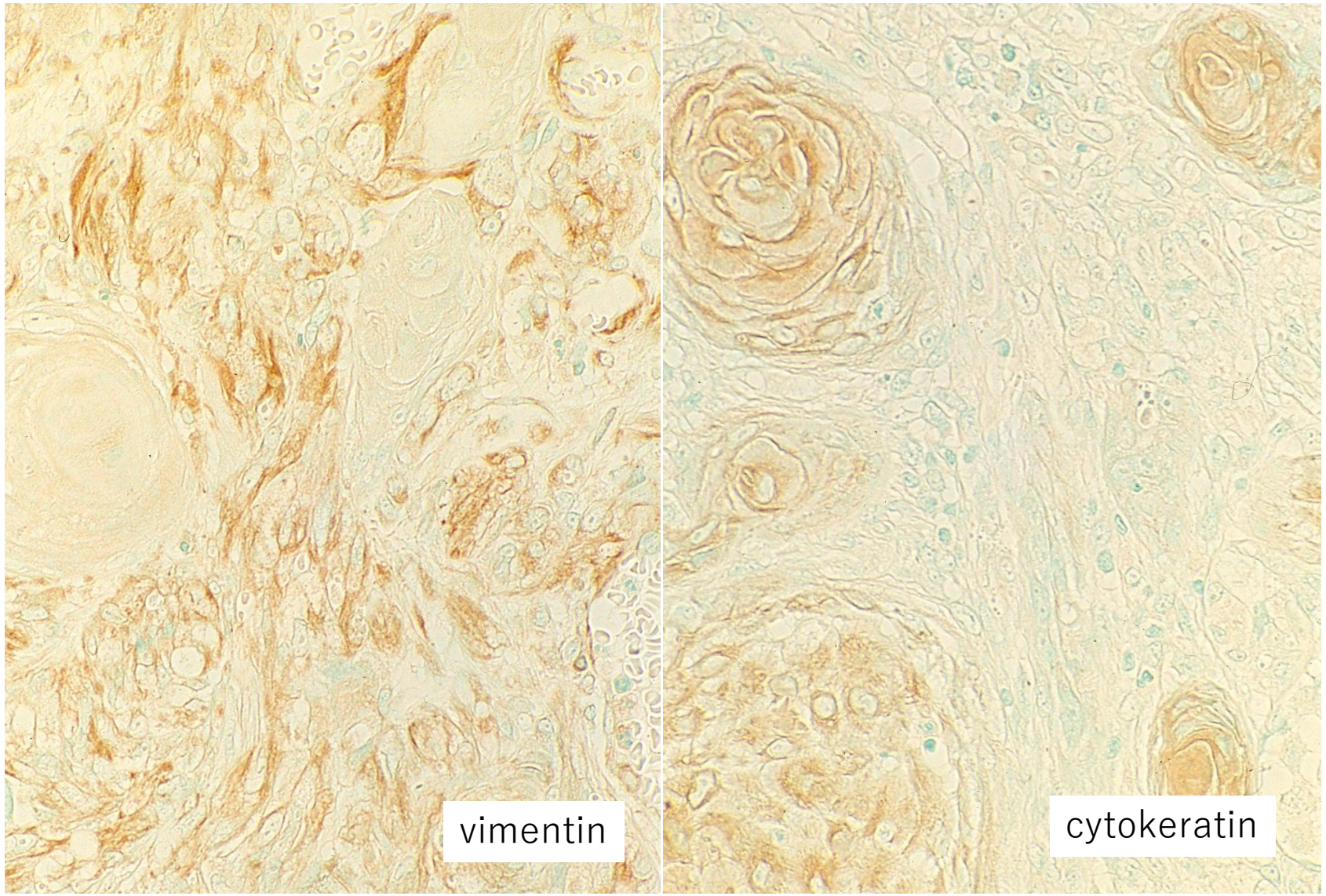
Ref.: Cohen J, LeBoit P. Granular cell tumor. PathologyOutlines.com website. 2025. https://www.pathologyoutlines.com/topic/skintumornonmelanocyticgct.html



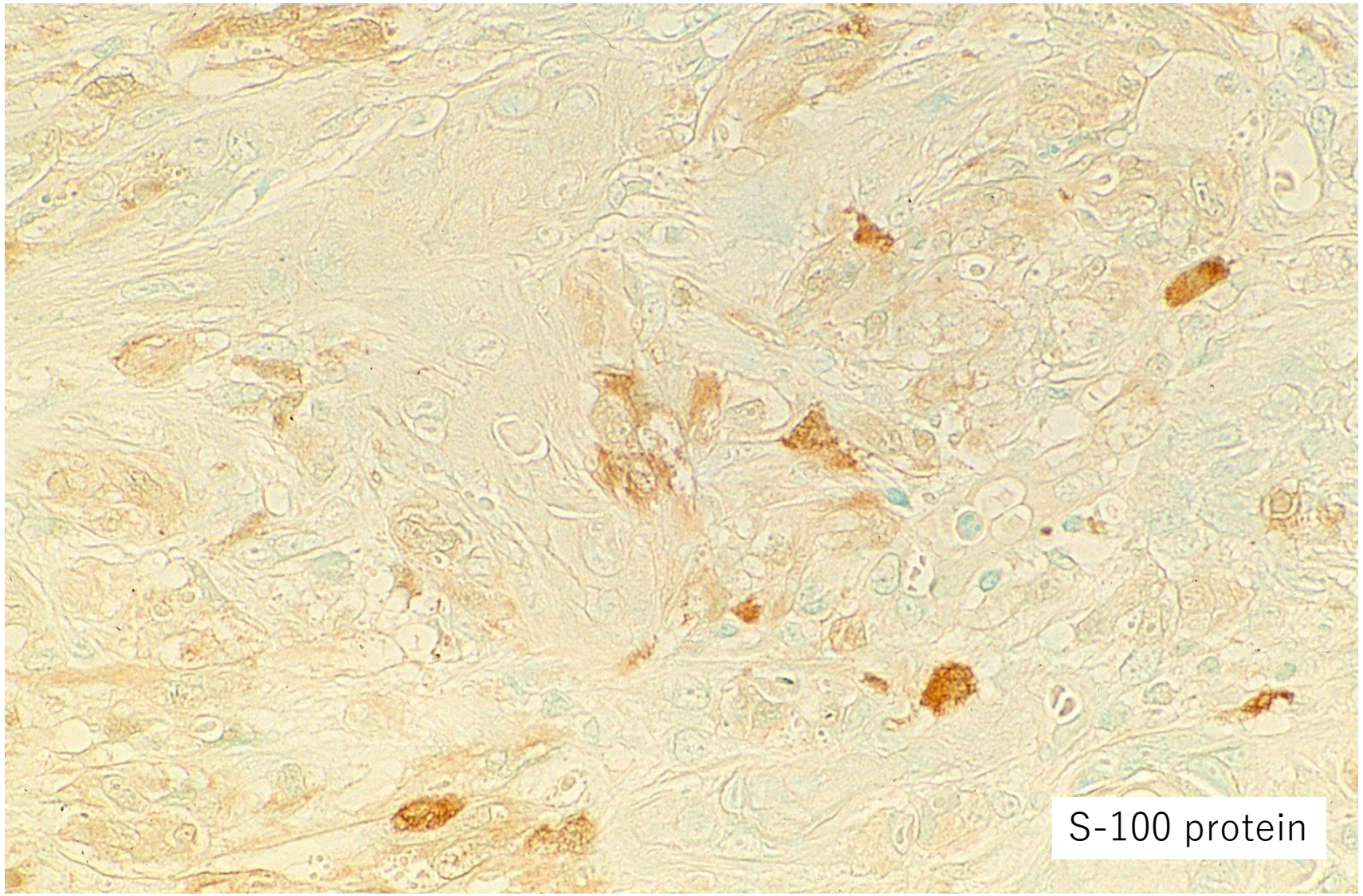
Granular cell tumor of the lip seen in a 48 y-o female patient. Intradermal growth of the tumor cells is associated with pseudocarcinomatous hyperplasia of the squamous epithelial cells. The cytoplasmic granularity is evident (H&E-1).



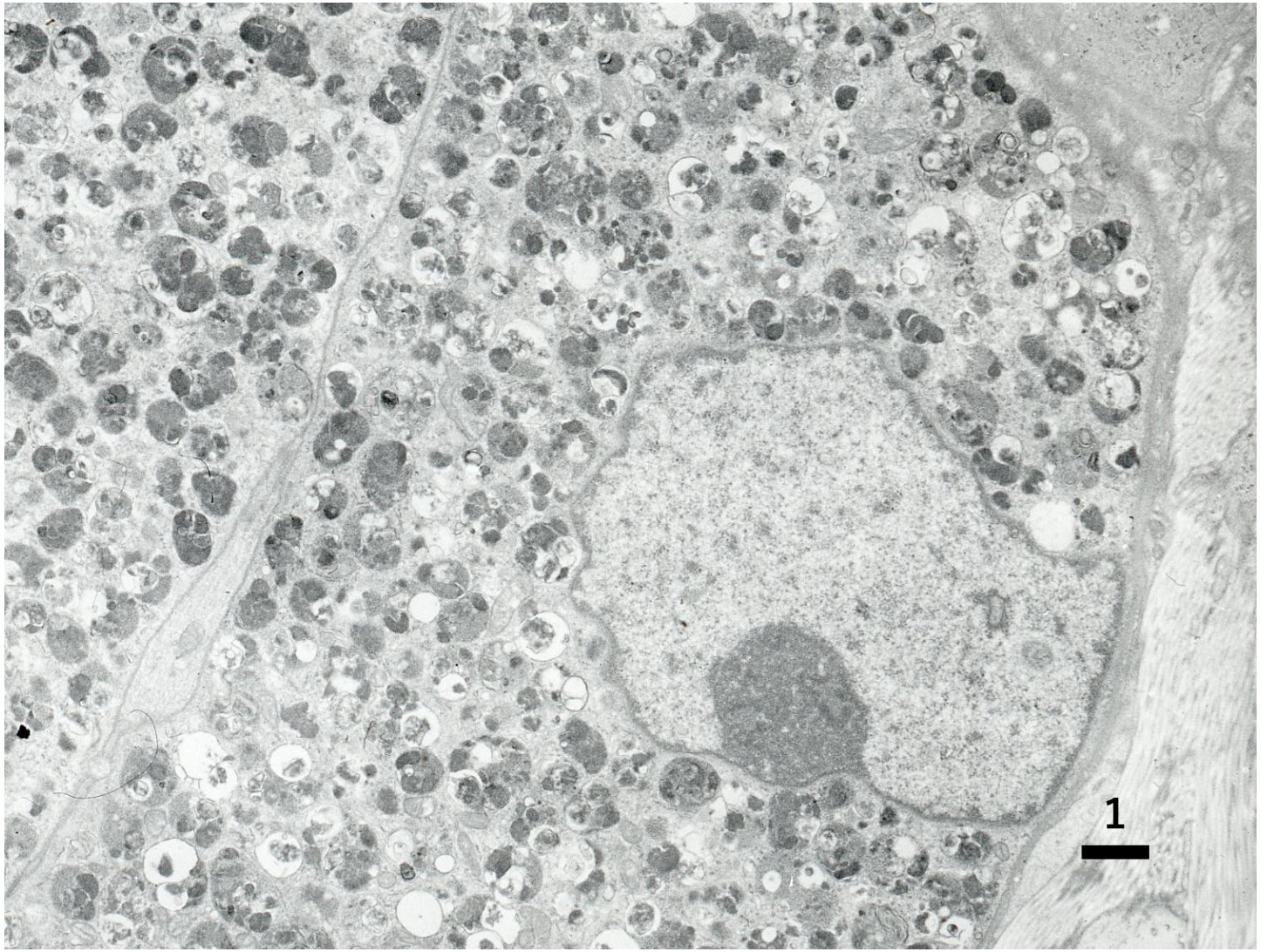
Granular cell tumor of the lip seen in a 48 y-o female patient. Intradermal growth of the tumor cells is associated with pseudocarcinomatous hyperplasia of the squamous epithelial cells. The cytoplasmic granularity is evident (H&E-2).



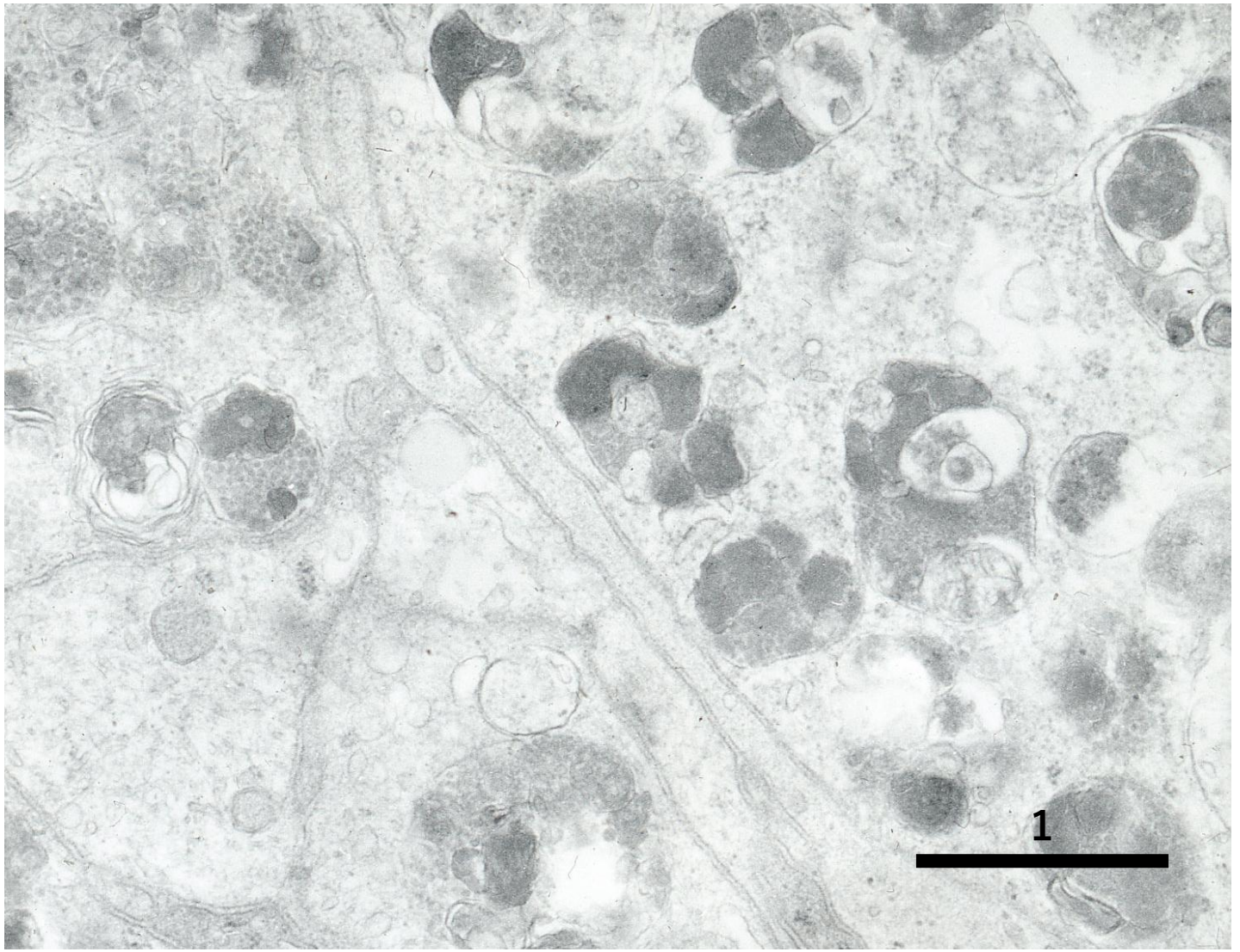
Granular cell tumor of the lip seen in a 48 y-o female patient. The tumor cells are immunoreactive for vimentin (left), while cytokeratin is expressed in the pseudoinvasive keratinocytes (right) (immunostaining for vimentin and cytokeratin).



Granular cell tumor of the lip seen in a 48 y-o female patient. The tumor cells are immunoreactive for S-100 protein (immunostaining for S-100 protein).



Ultrastructure of granular cell tumor of the lip seen in a 48 y-o female patient. The cytoplasm of the tumor cells is impacted with activated lysosomes phagocytizing electron-dense granular substances (TEM-1).



Ultrastructure of granular cell tumor of the lip seen in a 48 y-o female patient. The cytoplasm of the tumor cells is impacted with activated lysosomes phagocytizing electron-dense granular substances (TEM-2).