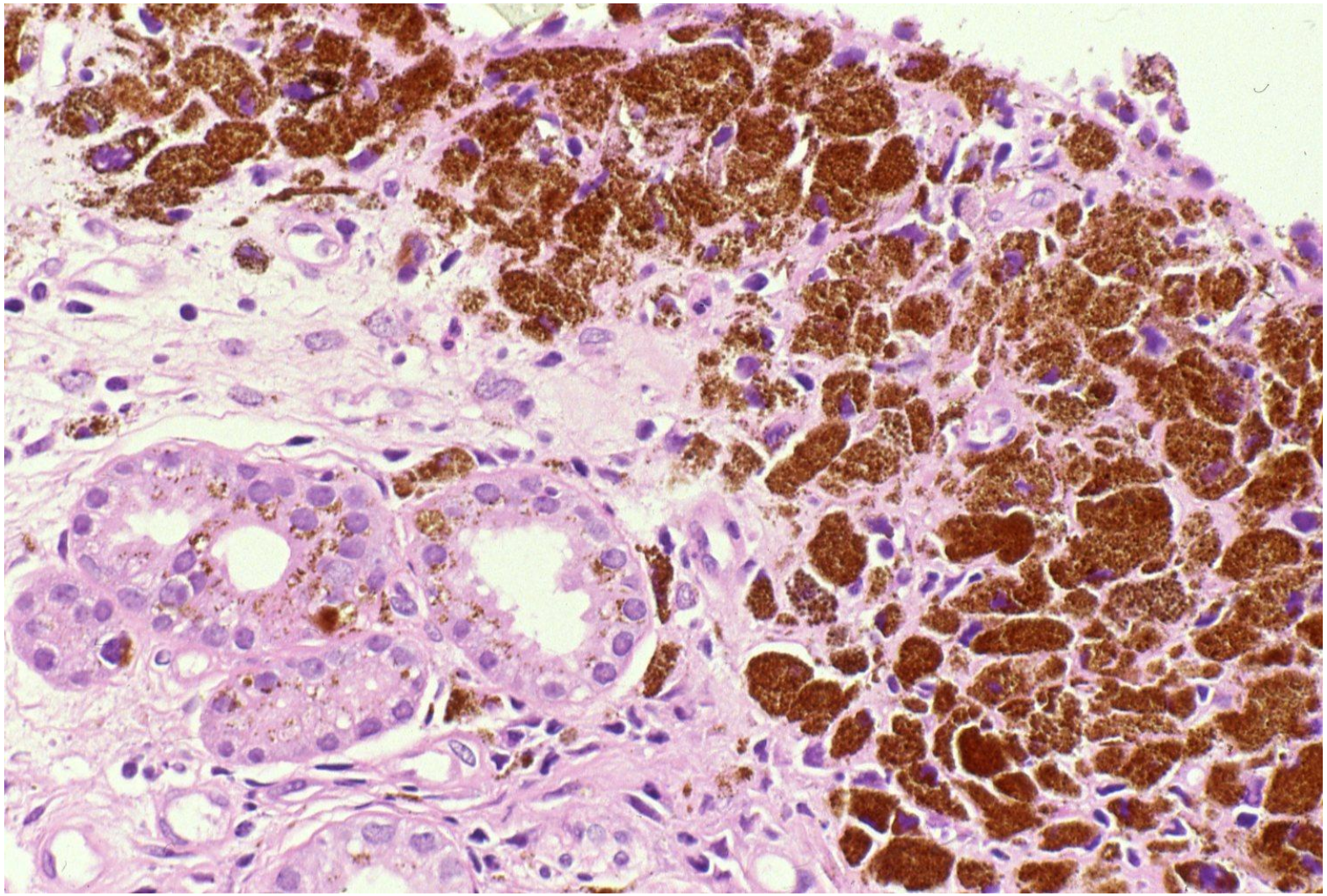
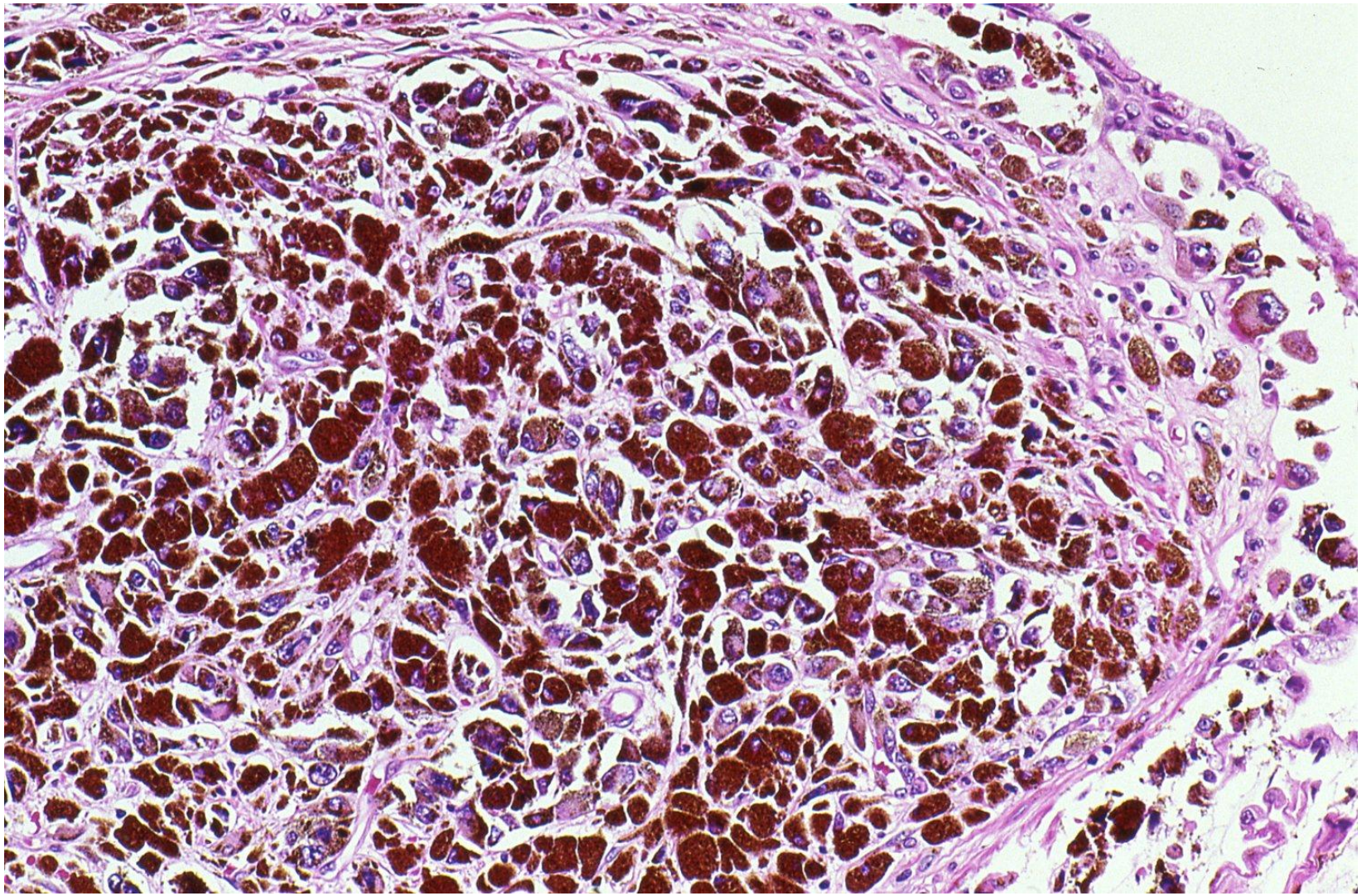
Malignant melanoma of the nasal cavity

Malignant melanoma of the nasal cavity is more aggressive and microscopically more anaplastic than the cutaneous counterpart. The prognosis is poor. Primary malignant melanoma of nasal cavity arise from melanocytes distributed in the nasal mucosa. Main symptoms include unilateral nasal obstruction and nasal bleeding. Cytology and biopsy should be done for the definite diagnosis. The tumor is usually heavily pigmented, but amelanotic melanoma may be encountered. S-100 protein and HMB45 are useful markers to establish the diagnosis.

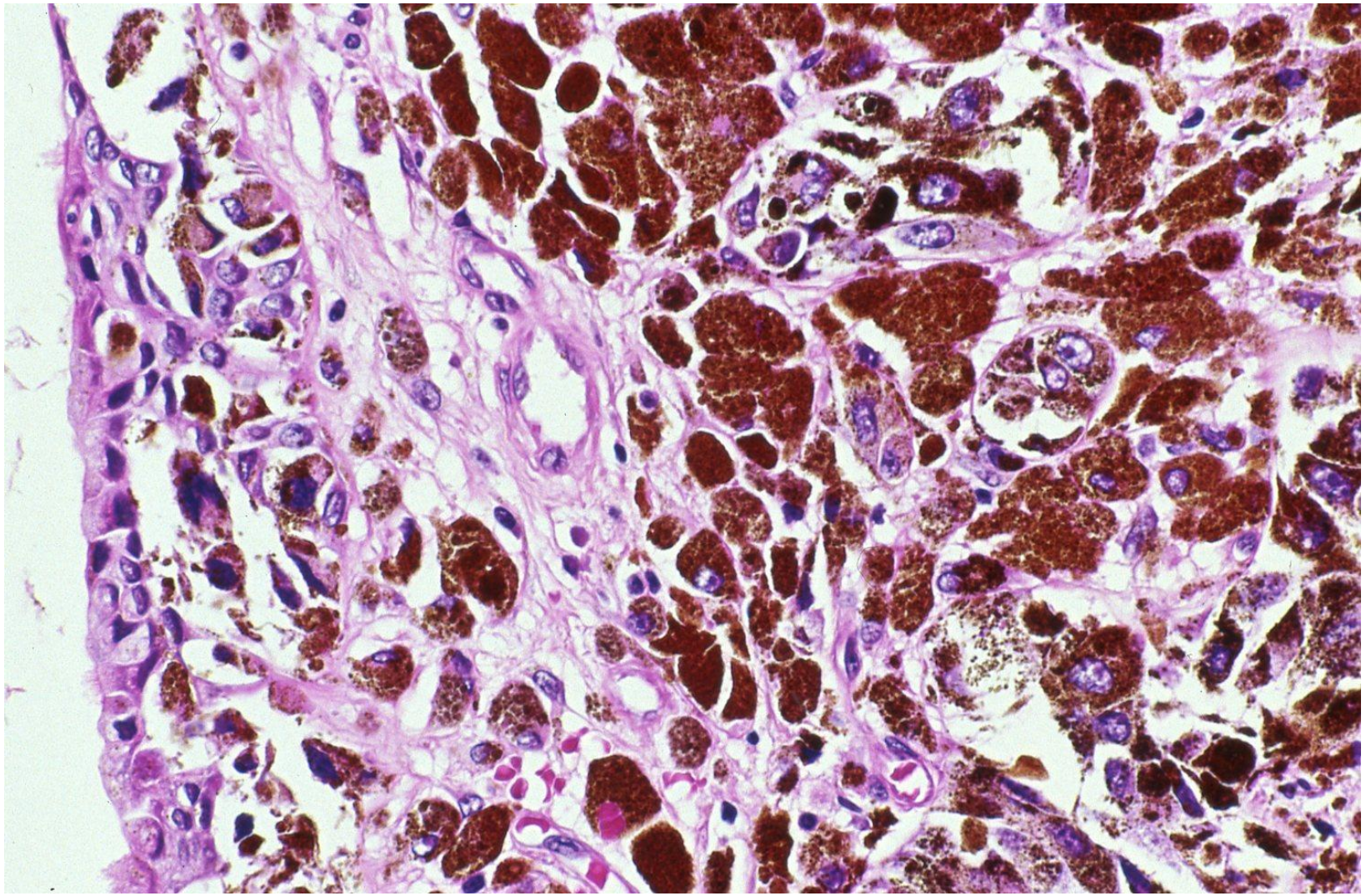
Ref.: Bhartiya R, Prasad KM. Malignant melanoma of nasal cavity. A case report. J Clin Diagn Res 2015; 9(12): ED21-22. doi: 10.7860/JCDR/2015/17009.6995



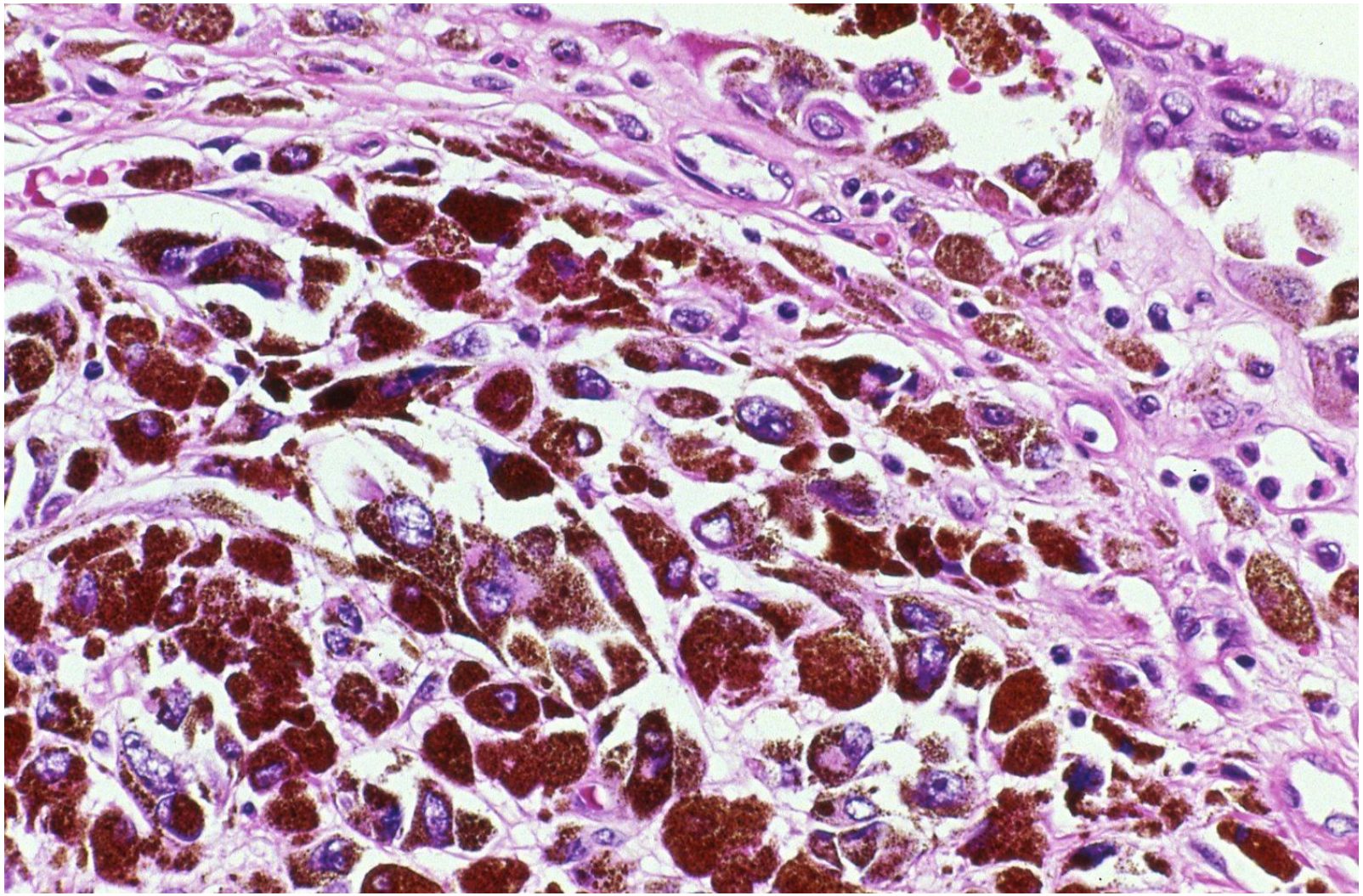
Malignant melanoma of the nasal cavity seen in a 63 y-o female patient. The nasal mucosa is heavily pigmented. Clusters of melanophages are noted. The nasal gland is also focally pigmented (H&E-1).



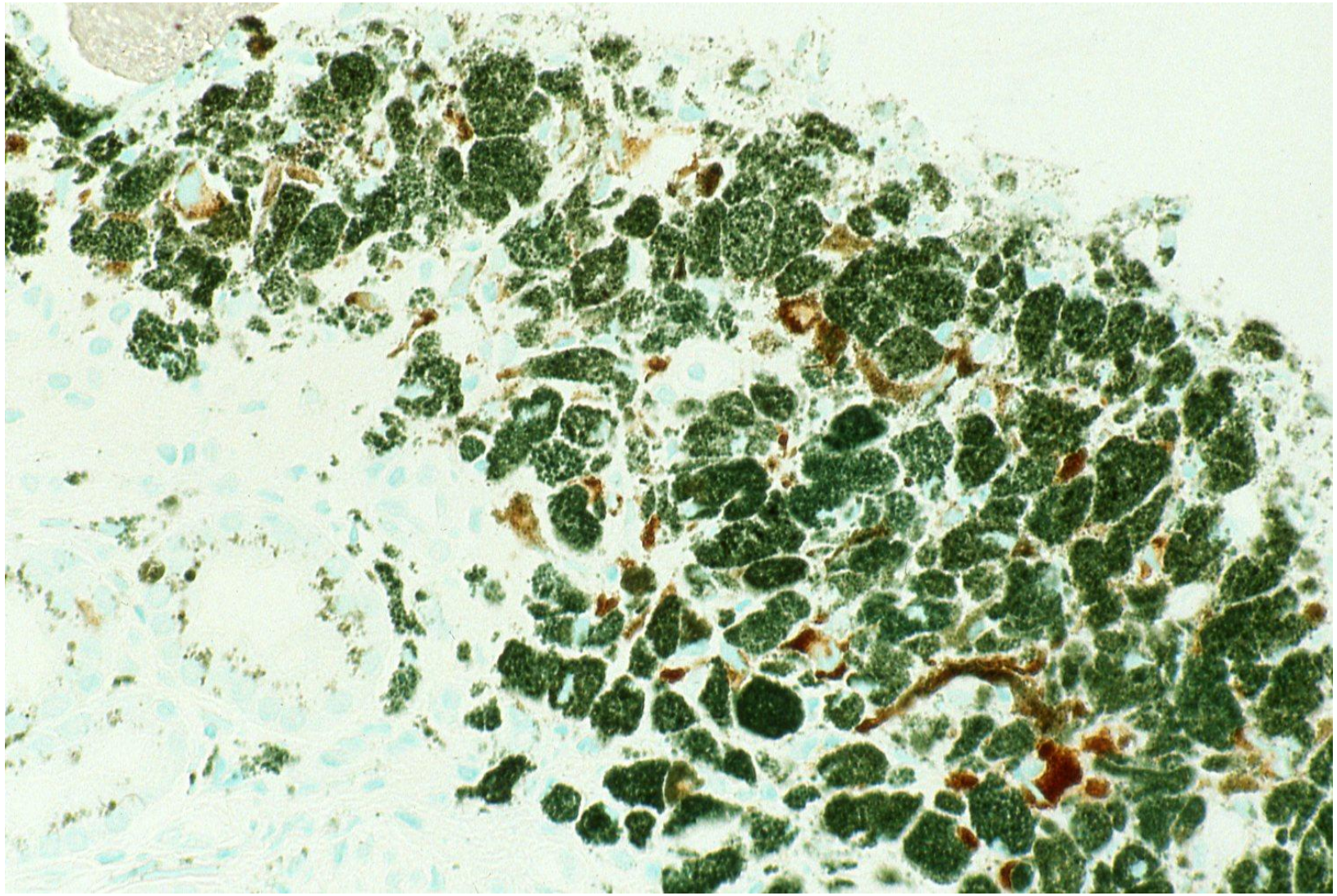
Malignant melanoma of the nasal cavity seen in a 63 y-o female patient. The nasal mucosa is heavily pigmented. Among the clustered melanophages, large atypical cells are intermingled (H&E-2).



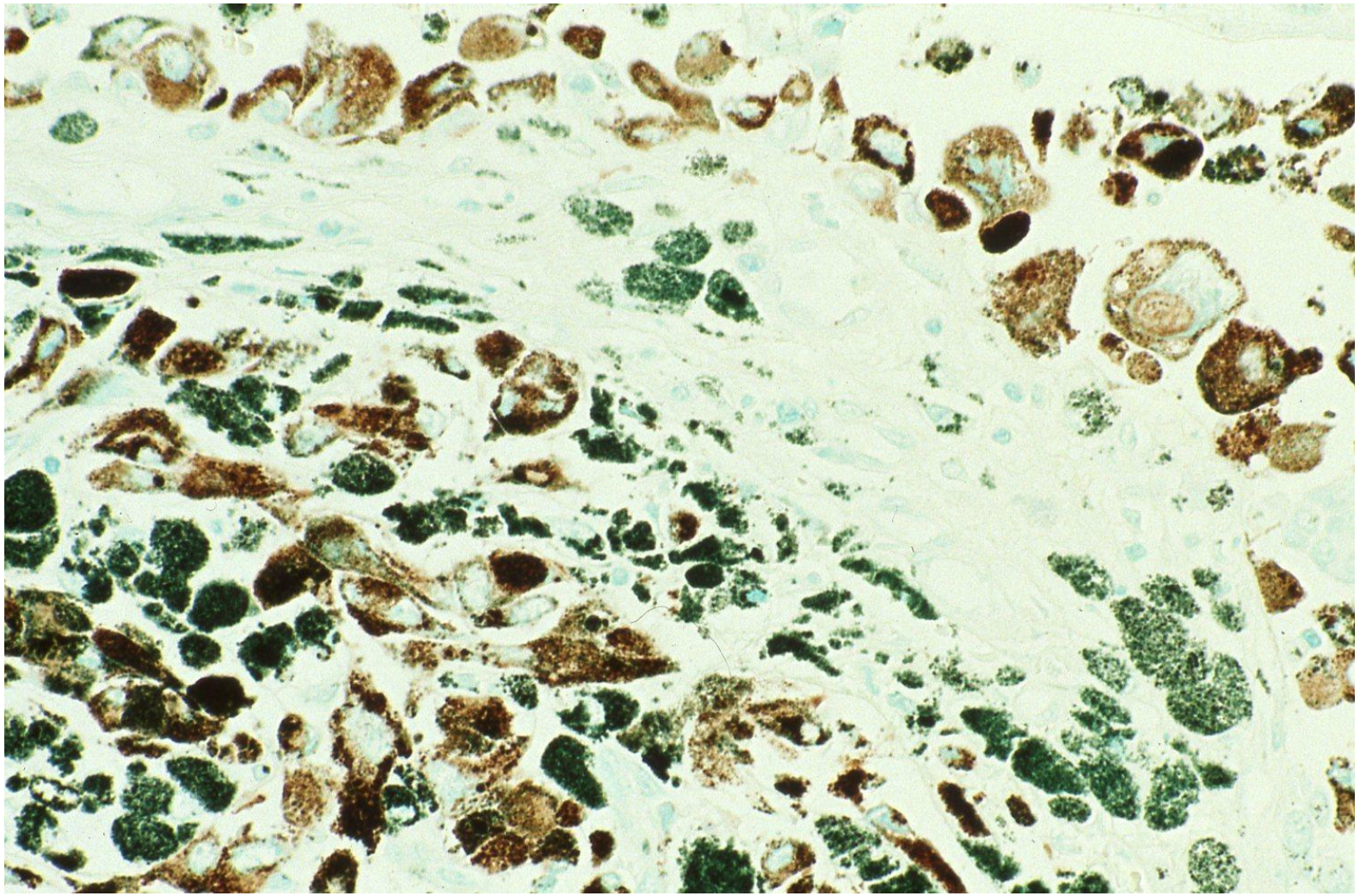
Malignant melanoma of the nasal cavity seen in a 63 y-o female patient. The nasal mucosa is heavily pigmented. Among the clustered melanophages, large atypical cells with melanin formation are intermingled (H&E-3).



Malignant melanoma of the nasal cavity seen in a 63 y-o female patient.
The nasal mucosa is heavily pigmented. Among the clustered melanophages, large atypical cells with melanin formation are intermingled (H&E-4).



Malignant melanoma of the nasal cavity seen in a 63 y-o female patient. The nasal mucosa is heavily pigmented. Among the clustered melanophages with metachromatic (green-colored) melanin pigment, HBM45-immunoreactive spindled atypical cells are detected. Counterstaining with methylgreen is quite useful for visualizing brown-colored DAB products (immunostaining for HMB45 with methylgreen counterstaining).



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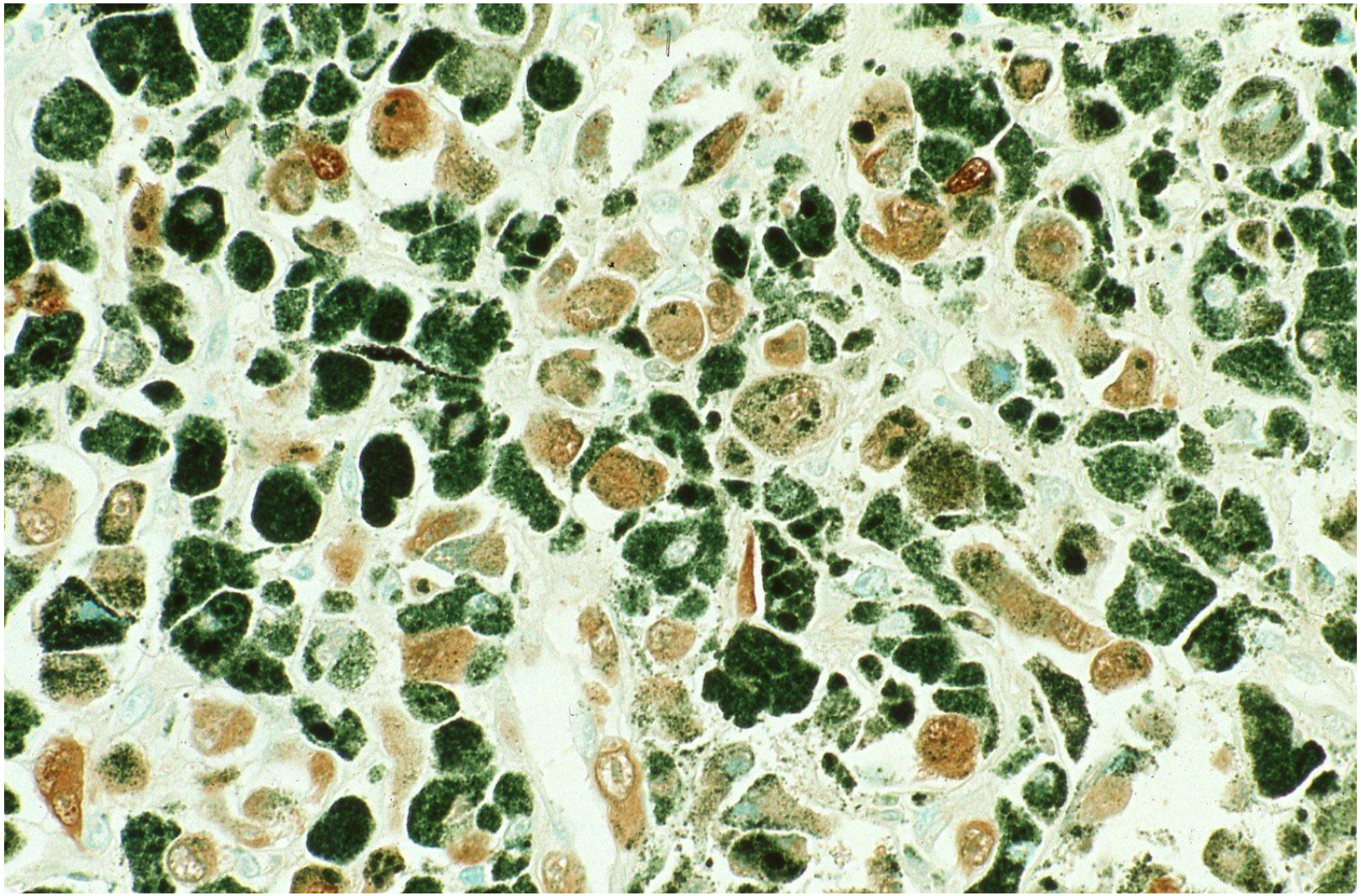

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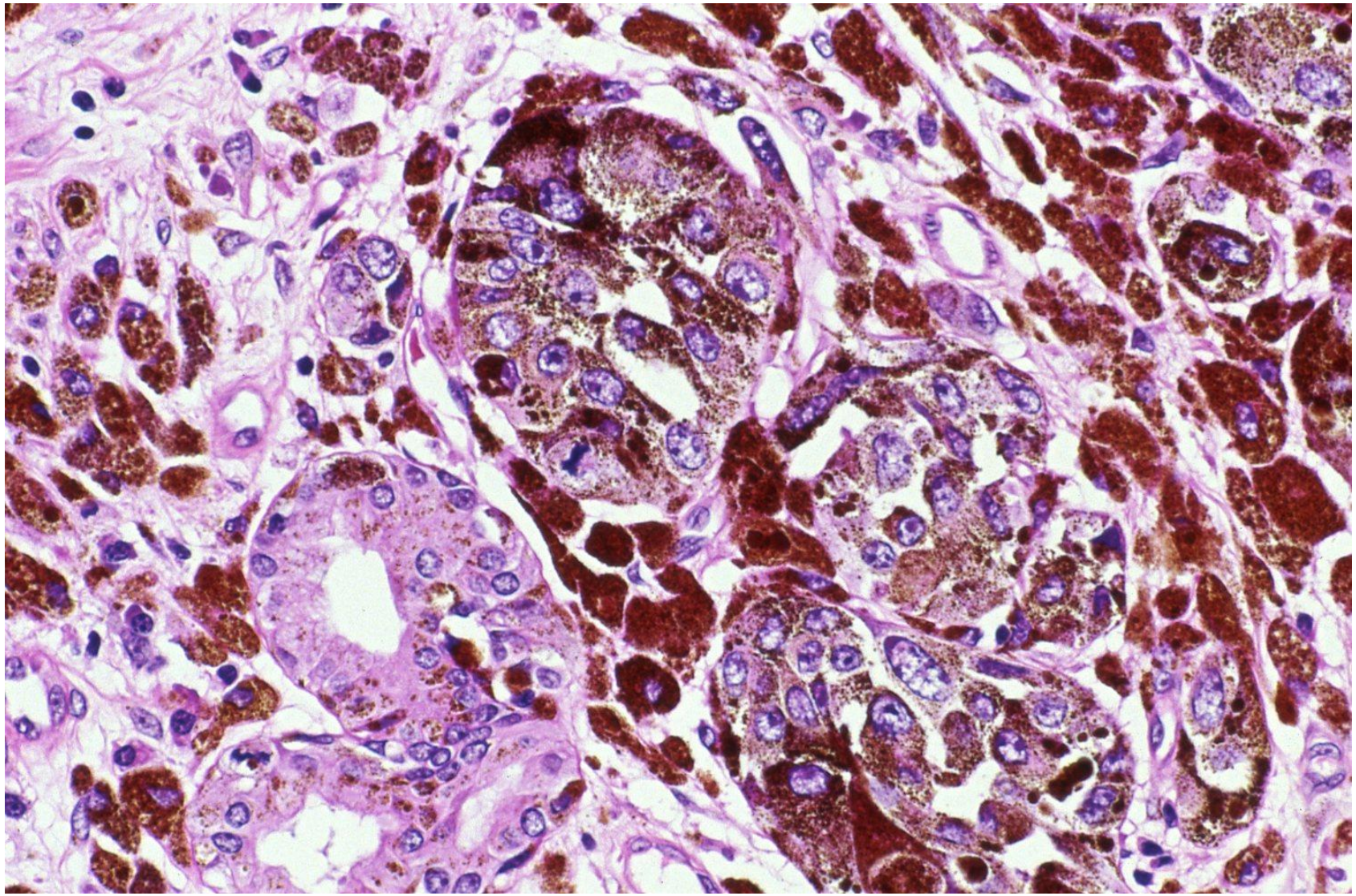
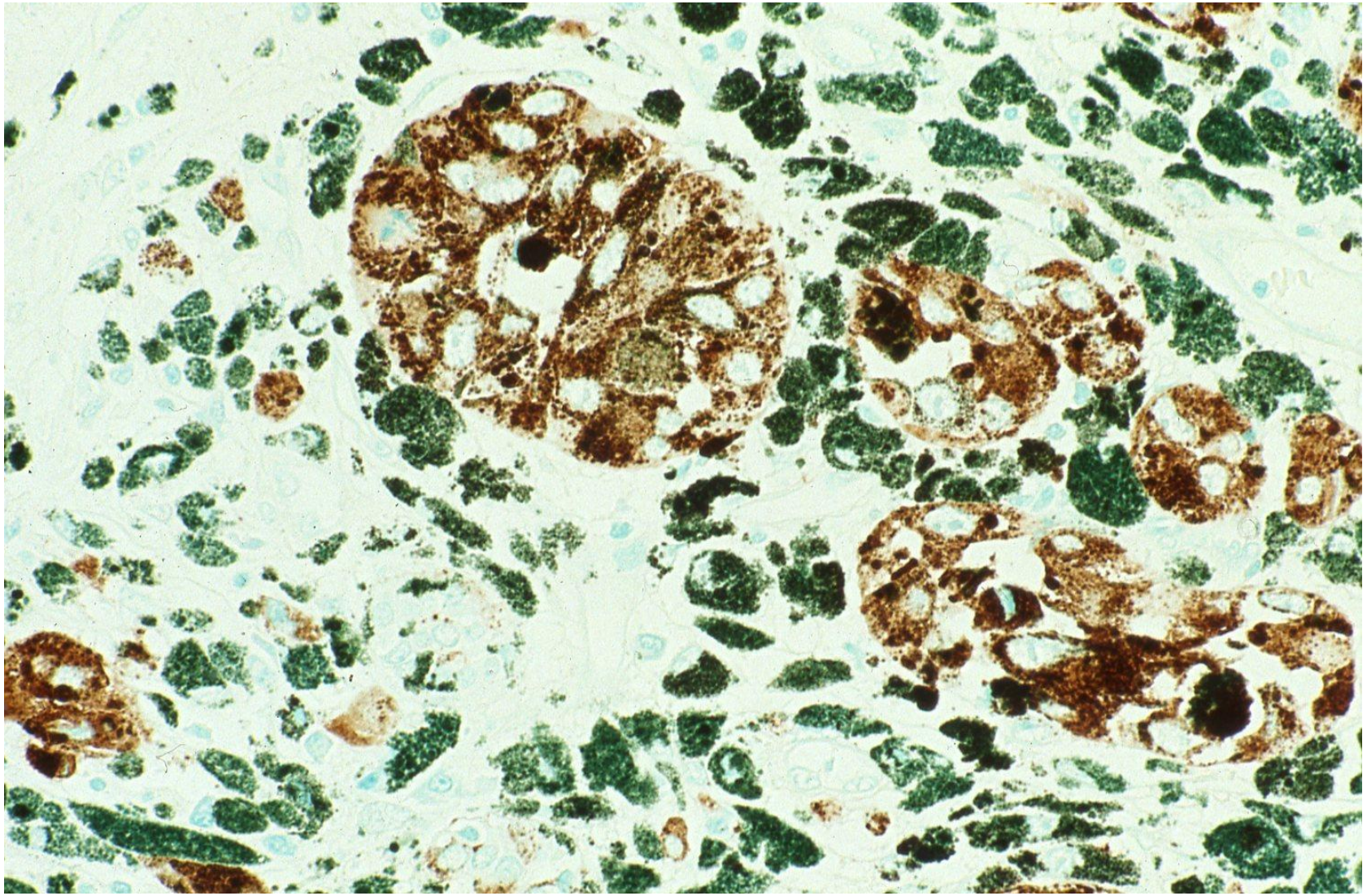
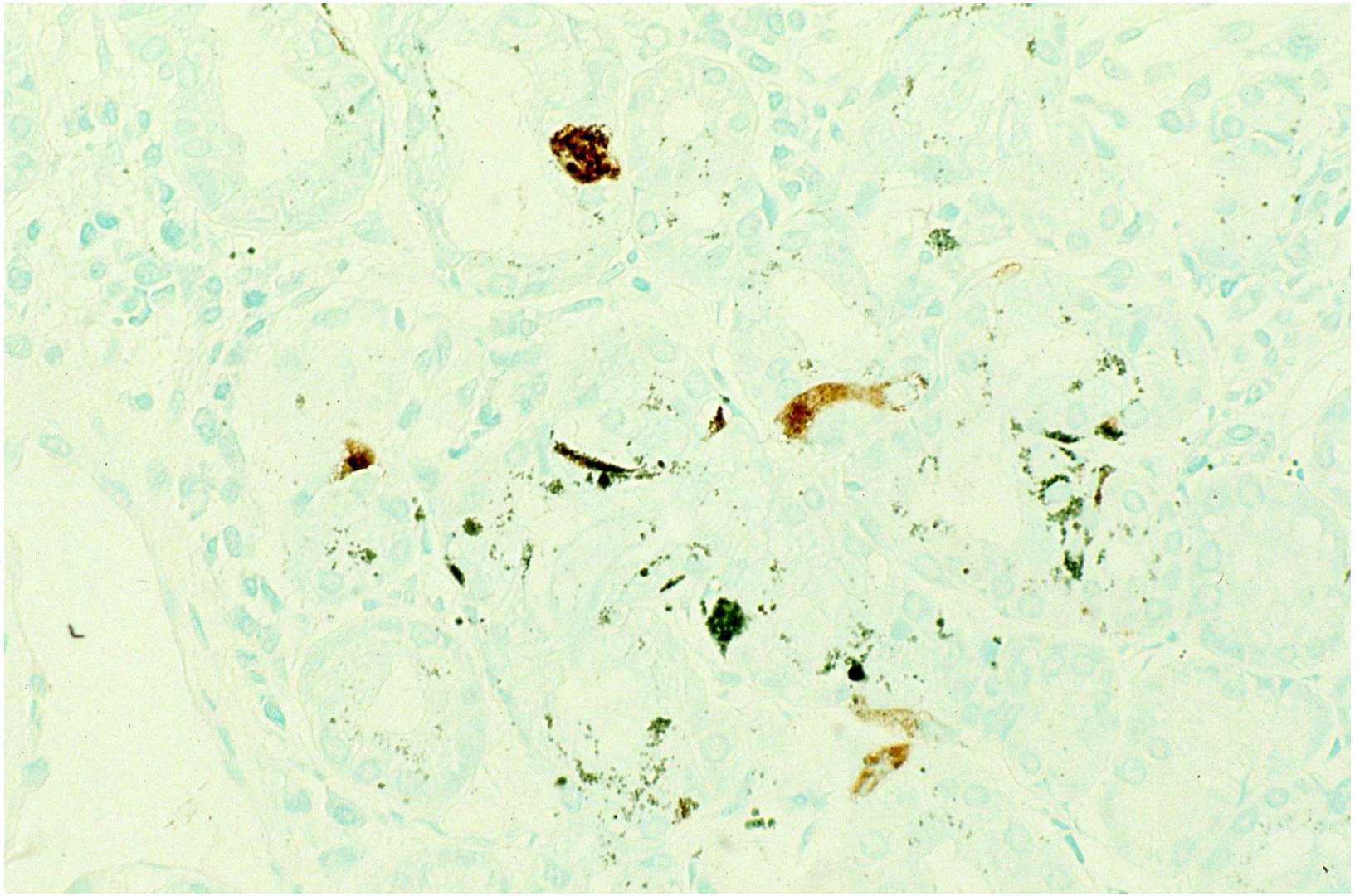


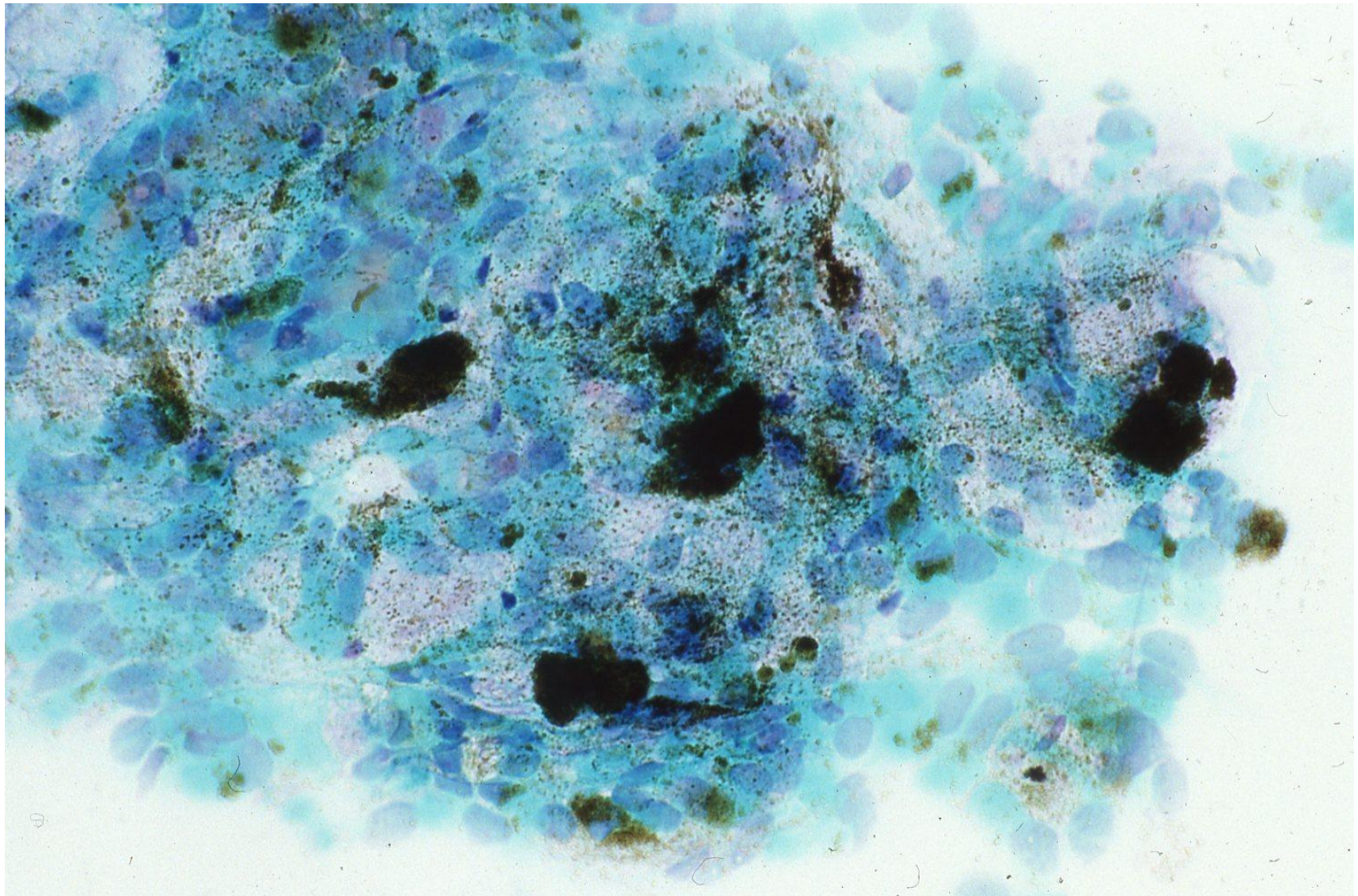
Malignant melanoma of the nasal cavity seen in a 63 y-o female patient. The nasal mucosa is heavily pigmented. The nasal glands are involved by highly atypical melanoma cells. Benign glandular columnar cells also contain melanin pigments. Melanophages are clustered in the stroma (H&E-5).



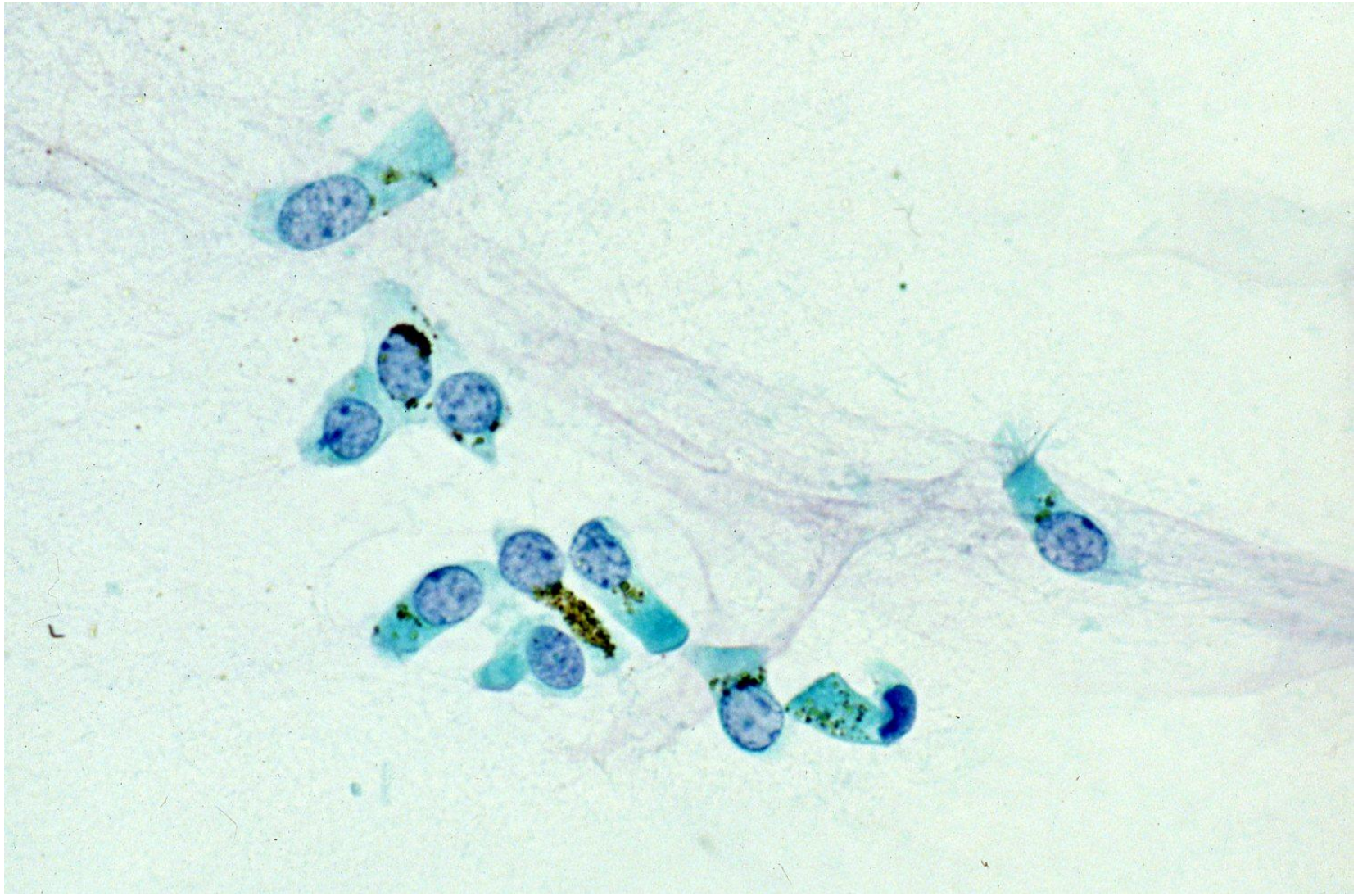
Malignant melanoma of the nasal cavity seen in a 63 y-o female patient. The nasal glands are involved by HMB45-immunoreactive atypical melanoma cells. In the stroma, numbers of melanophages with metachromatic (green-colored) melanin pigment are seen, in addition to scattered HMB45+ melanoma cells (immunostaining for HBM45 with methylgreen counterstaining).



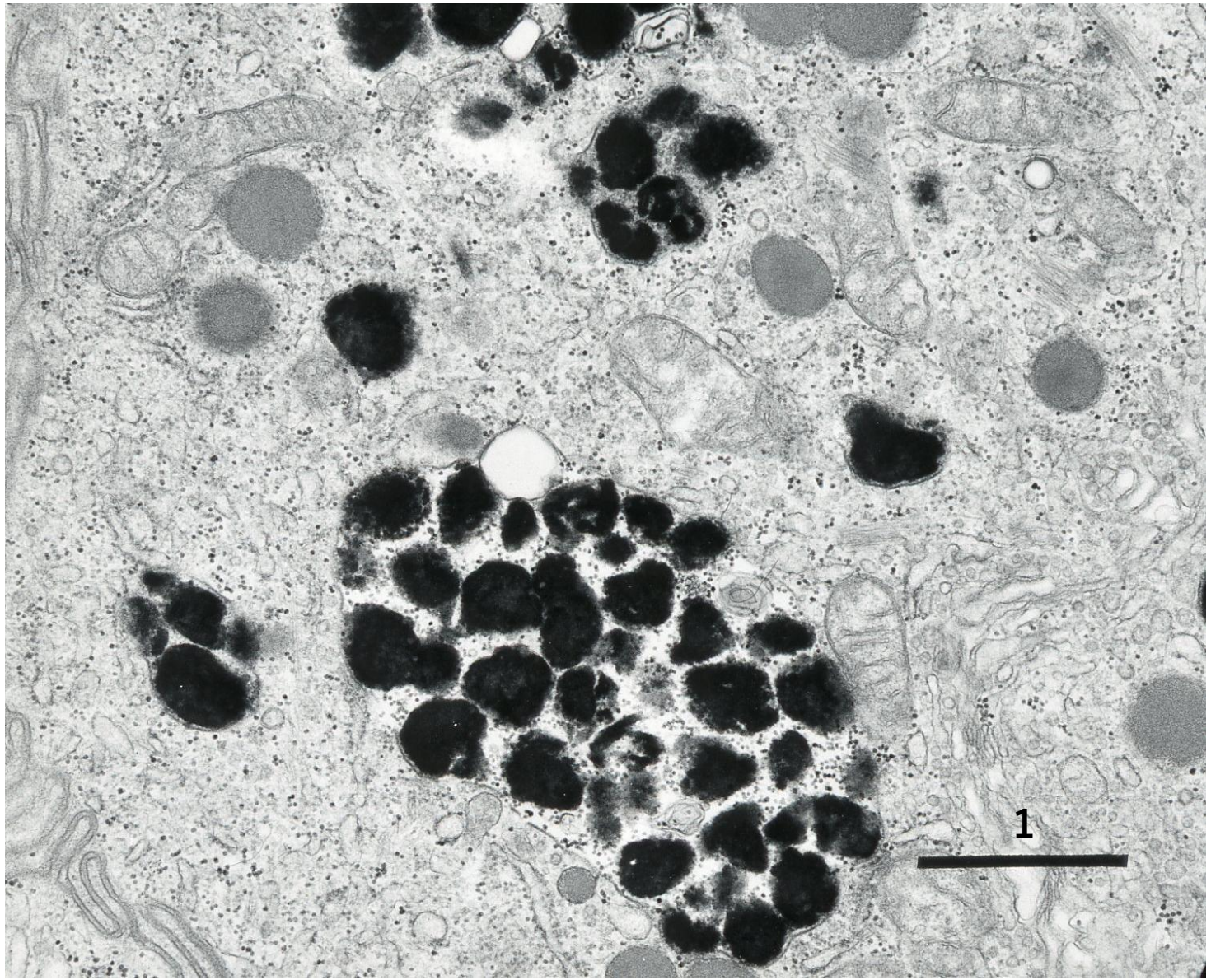
Malignant melanoma of the nasal cavity seen in a 63 y-o female patient. In this area, the nasal glands are focally involved by HMB45-immunoreactive atypical melanoma cells. Metachromatic (green-colored) melanin pigment is also deposited in the cytoplasm of the columnar cells (immunostaining for HBM45 with methylgreen counterstaining).



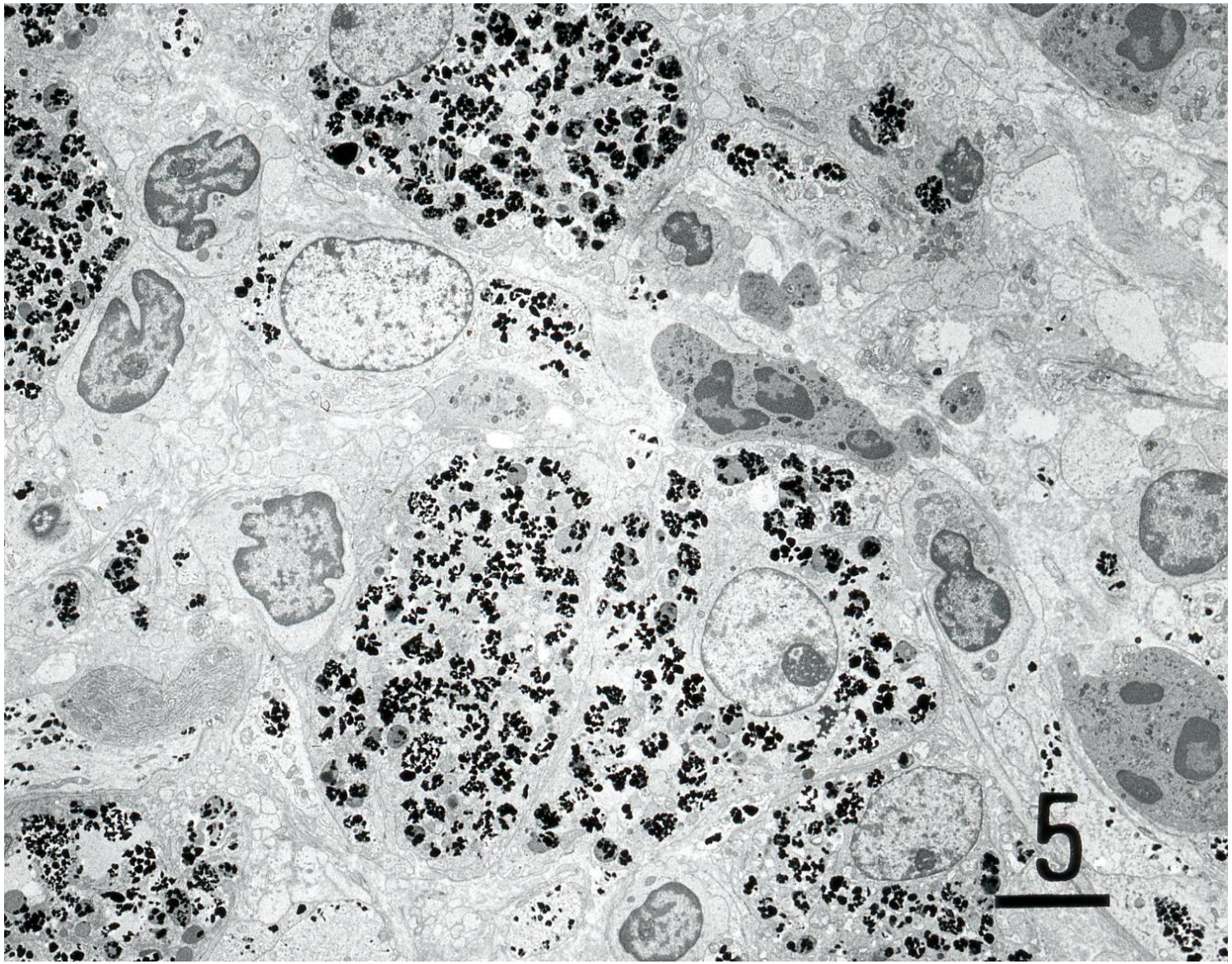
Malignant melanoma of the nasal cavity seen in a 63 y-o female patient. The brushing cytology reveals clustered epithelial cells with melanin deposition. Heavily pigmented melanophages are scattered (brushing cytology with Papanicolaou staining).



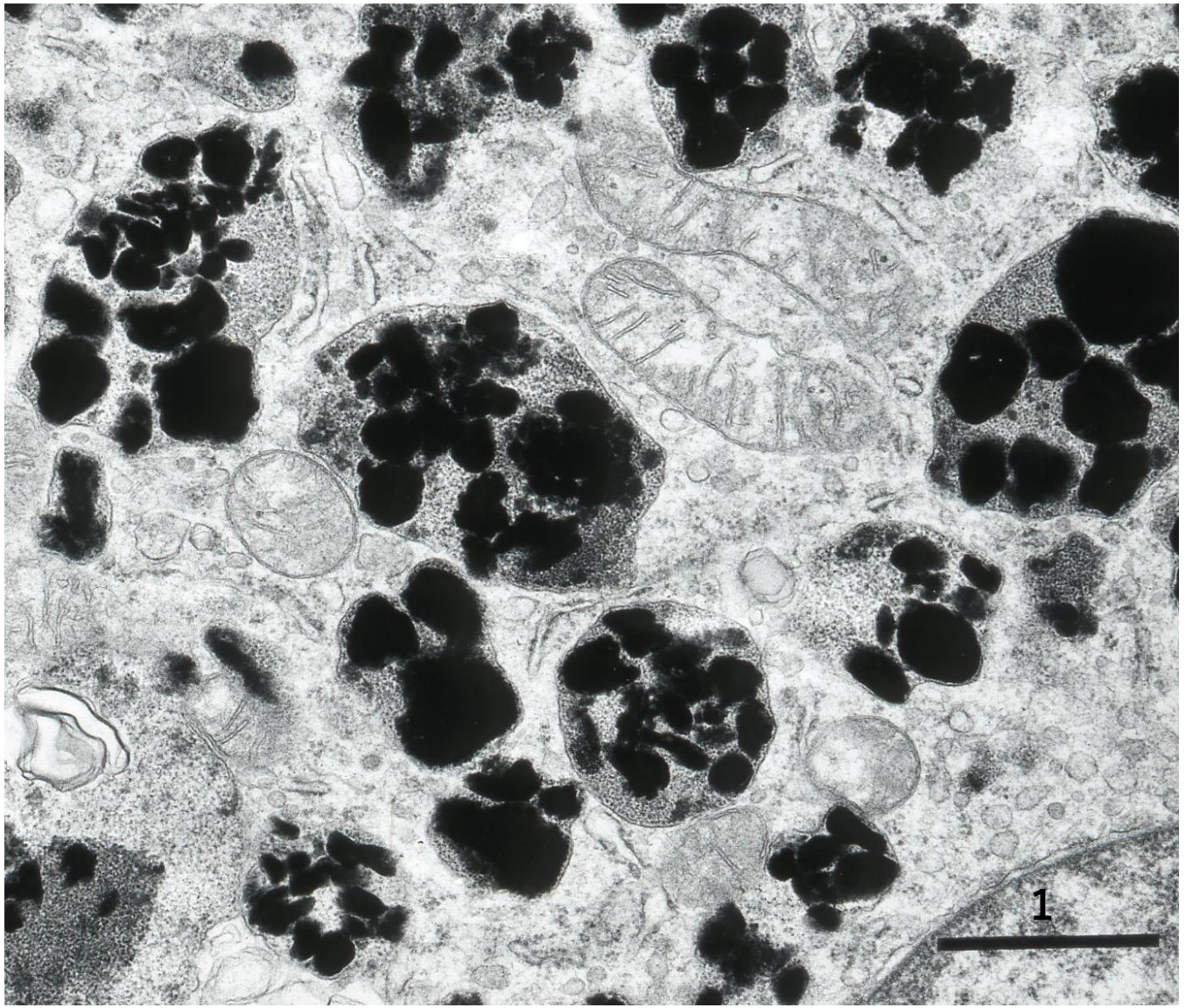
Malignant melanoma of the nasal cavity seen in a 63 y-o female patient. The brushing cytology reveals melanin deposition in the cytoplasm of benign columnar cells (brushing cytology with Papanicolaou staining).



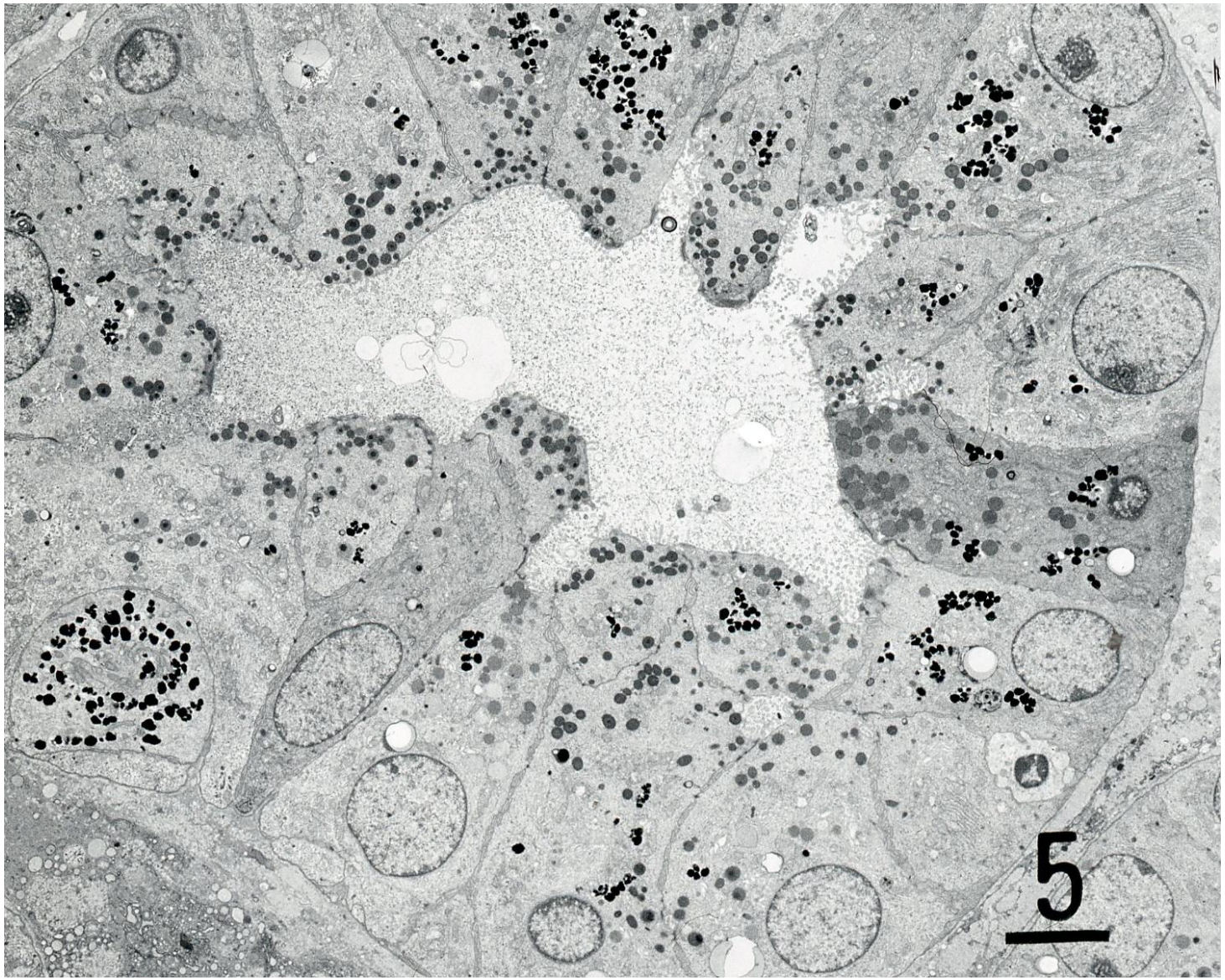
Ultrastructure of malignant melanoma of the nasal cavity seen in a 63 y-o female patient. In the cytoplasm of the melanoma cells, electron-dense (heavily pigmented) melanosomes are observed (TEM-1).



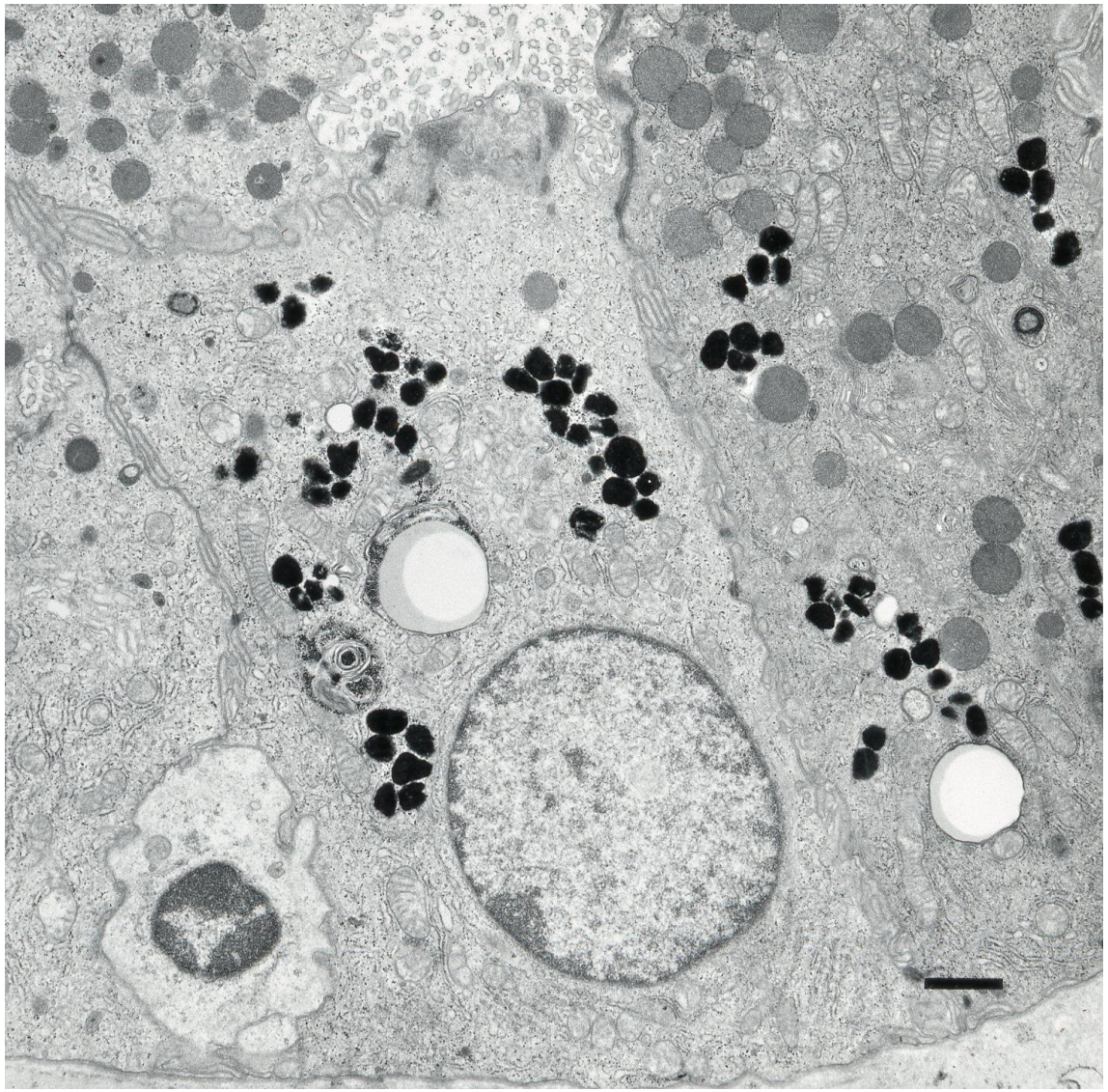
Ultrastructure of malignant melanoma of the nasal cavity seen in a 63 y-o female patient. In the stroma, melanophages are clustered (TEM-2).



Ultrastructure of malignant melanoma of the nasal cavity seen in a 63 y-o female patient. The melanophage phagocytizes melanosomes in activated lysosomes (TEM-3).



Ultrastructure of malignant melanoma of the nasal cavity seen in a 63 y-o female patient. The nasal gland benign columnar epithelial cells contain melanosomes mainly in the apical cytoplasm (TEM-4).



Ultrastructure of malignant melanoma of the nasal cavity seen in a 63 y-o female patient. The nasal gland columnar epithelial cells contain melanosomes mainly in the apical cytoplasm. An intraepithelial lymphocyte is observed (TEM-5).