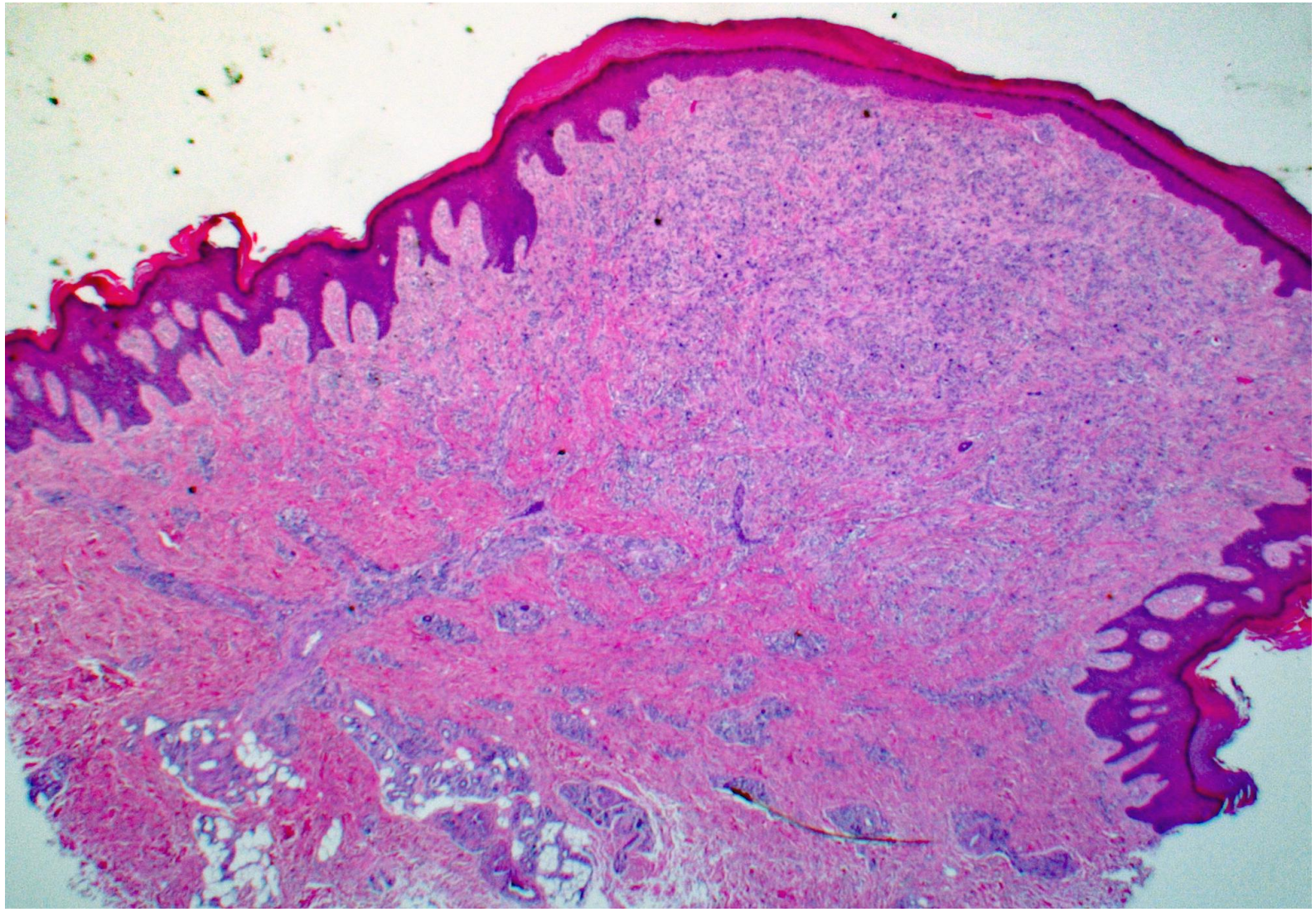
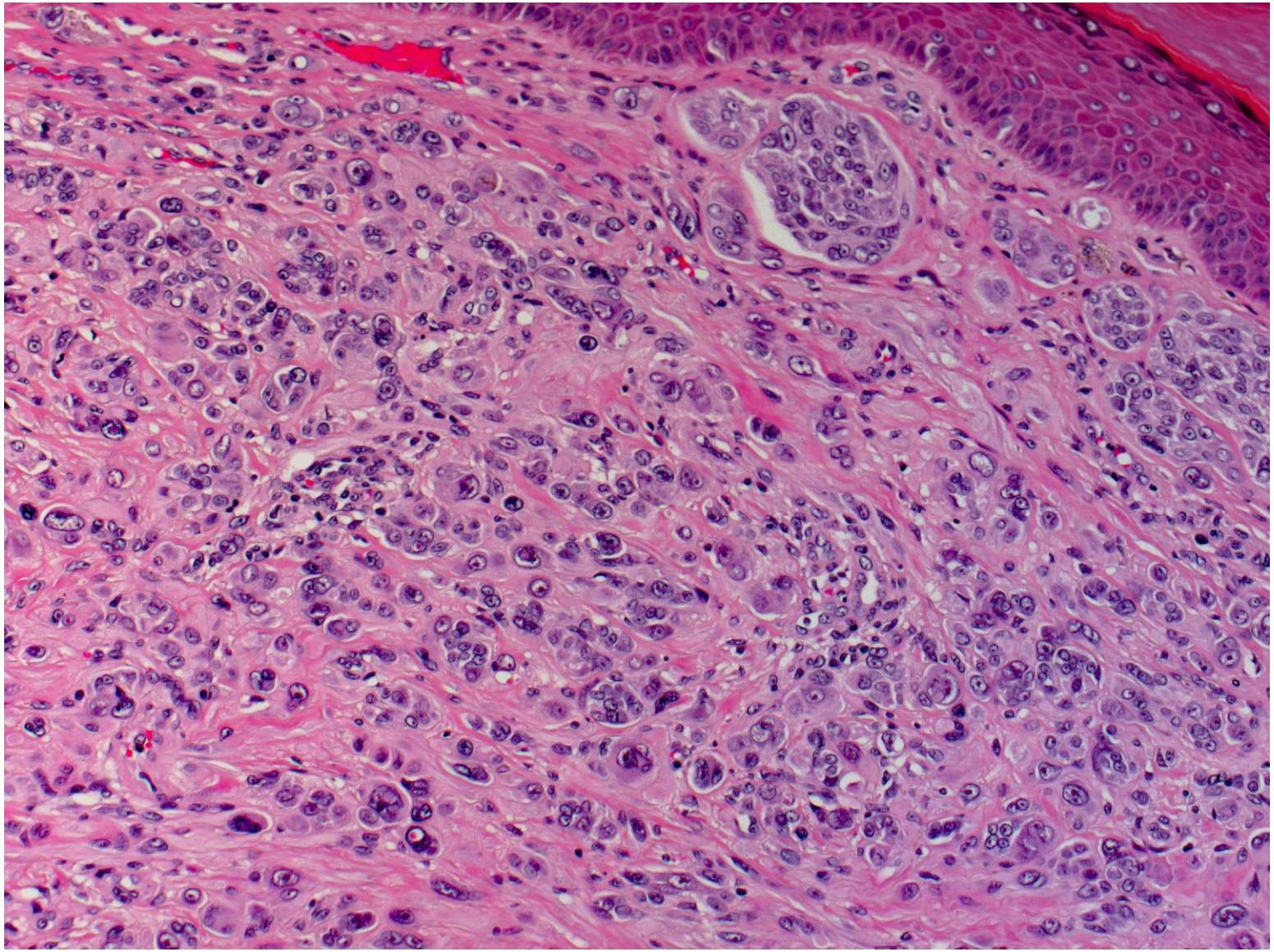
Spitz nevus, intradermal type

Spitz nevus (previously called as juvenile melanoma) is a benign and poorly pigmented melanocytic tumor, composed of large spindled and epithelioid melanocytes. It primarily affects children and young adults. Females are affected more commonly than males. Junctional activity is often associated. Melanocytes are large, spindled or epitheliod, and contain abundant pale or ground-glass cytoplasm and finely dispersed melanin pigment if present. Nuclear pleomorphism may occur, while mitoses are rare or absent. Intranuclear cytoplasmic inclusions can be observed. The Spitz nevus cells are immunoreactive for S-100 protein, MART1/Melan A, SOX10 and p16. Ki-67 labeling index is <5%.

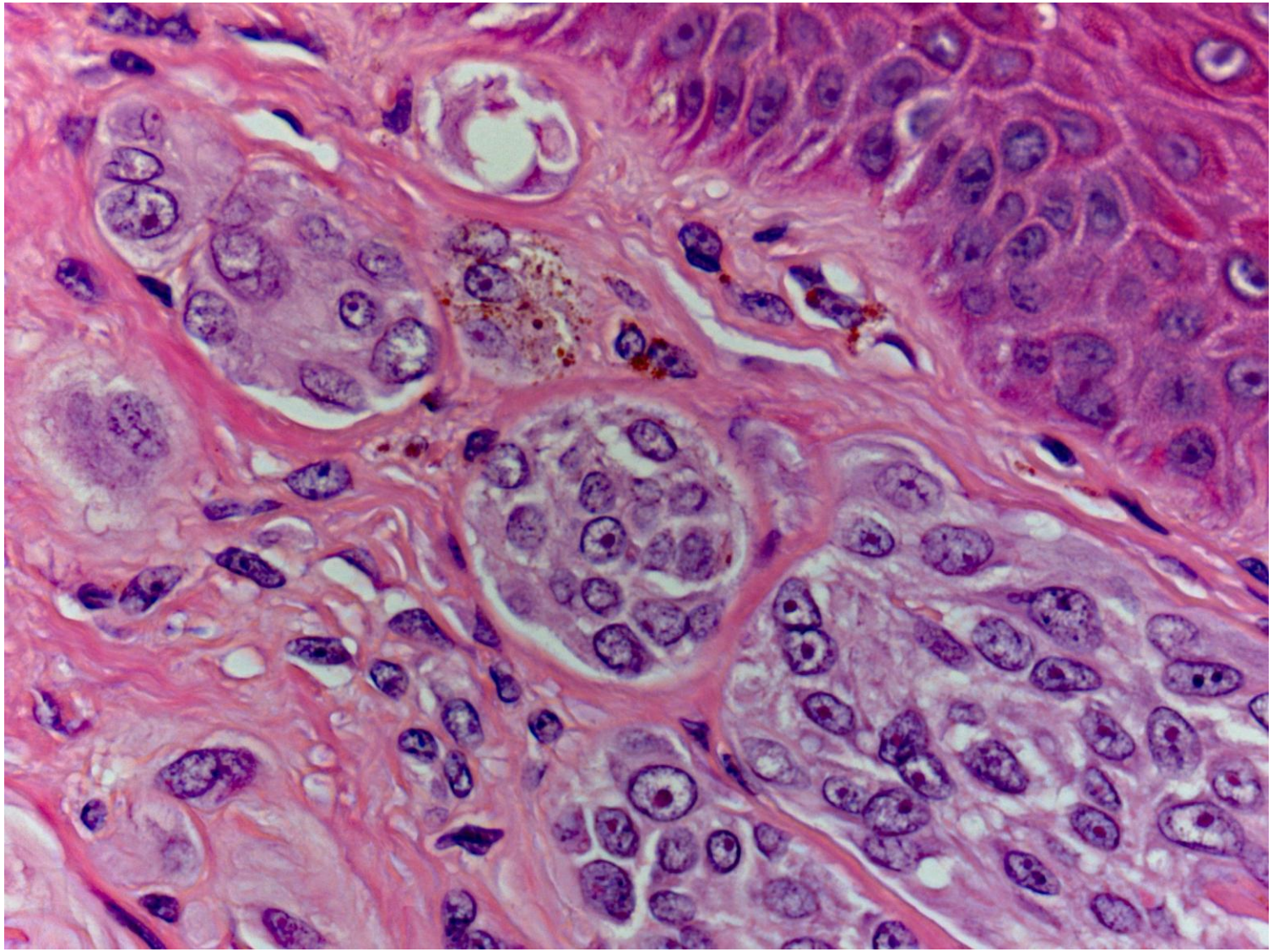
Ref.: Wiedemeyer K. Spitz nevus. PathologyOutlines.com website. 2025. https://www.pathologyoutlines.com/topic/skintumormelanocyticspitz.html



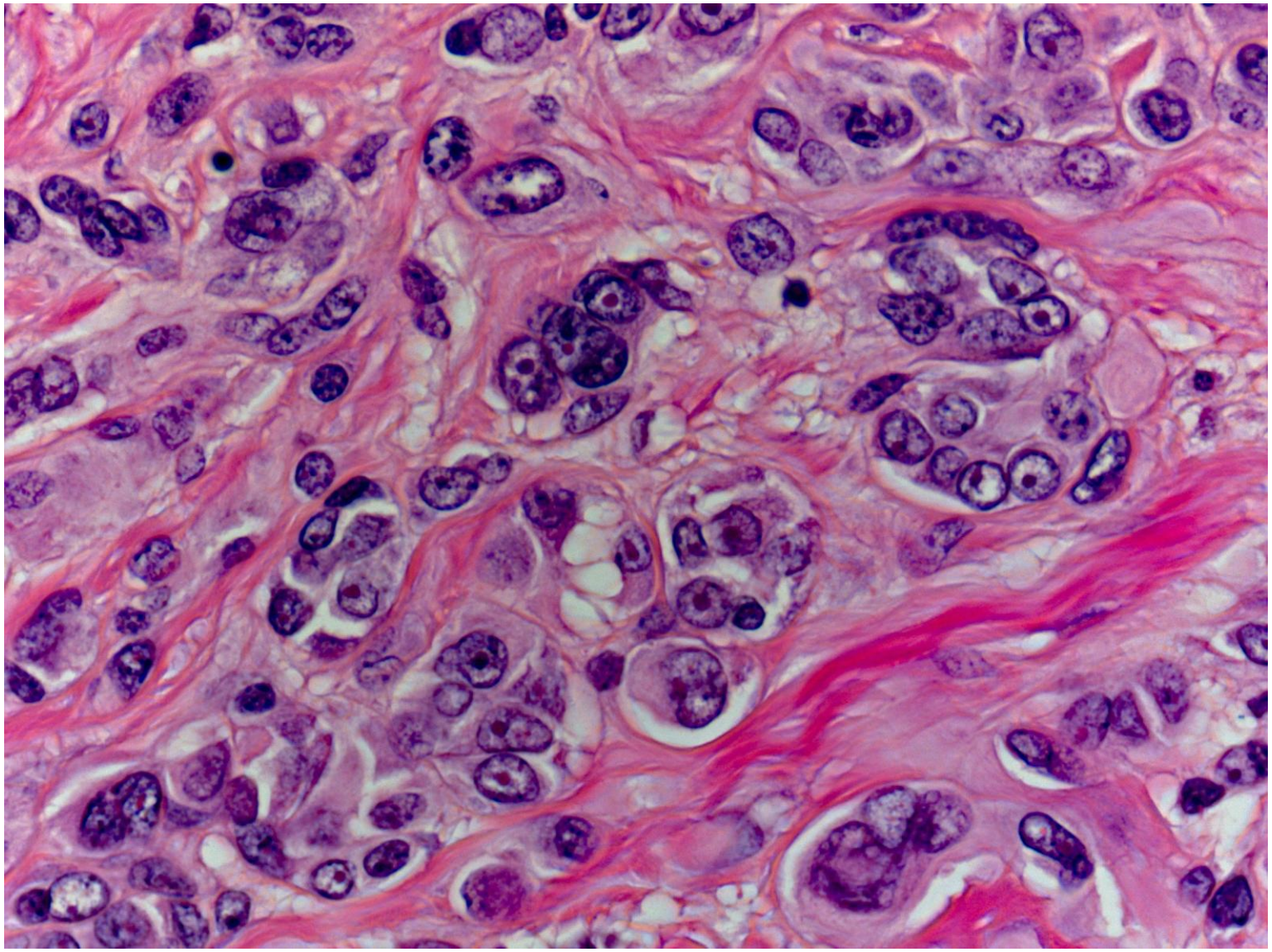
Spitz nevus, intradermal type, seen on the leg of a 32 y-o female patient.
A 5 mm-sized poorly pigmented elevated lesion is observed (H&E-1).



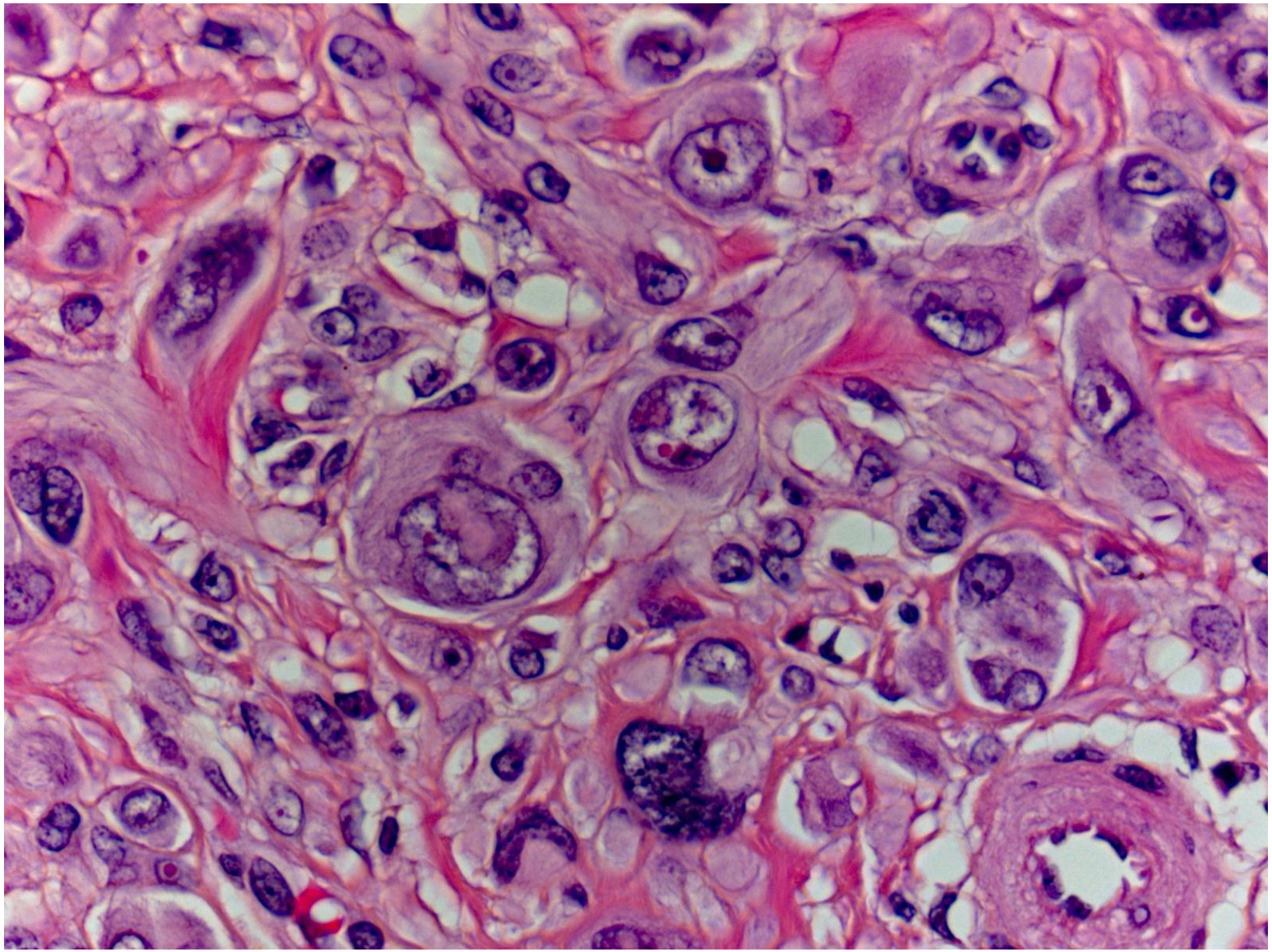
Spitz nevus, intradermal type, seen on the leg of a 32 y-o female patient. The epithelioid nevus cells show nuclear pleomorphism. Melanin formation is minimal. No junctional activity is discerned (H&E-2).



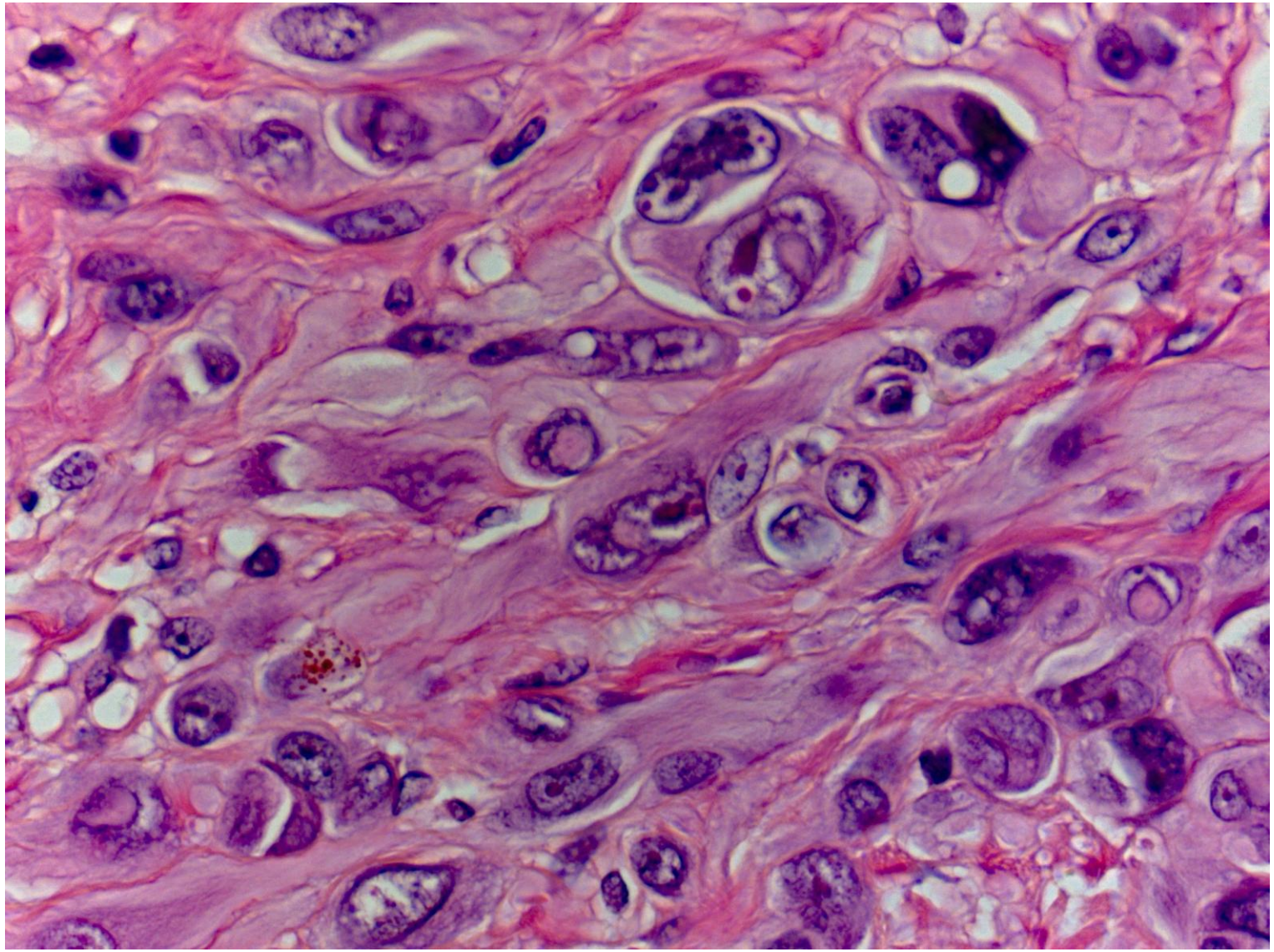
Spitz nevus, intradermal type, seen on the leg of a 32 y-o female patient. The pleomorphic epithelioid nevus cells with prominent nucleoli show nest formation. Melanin formation is focally noted. No junctional activity is discerned (H&E-3).



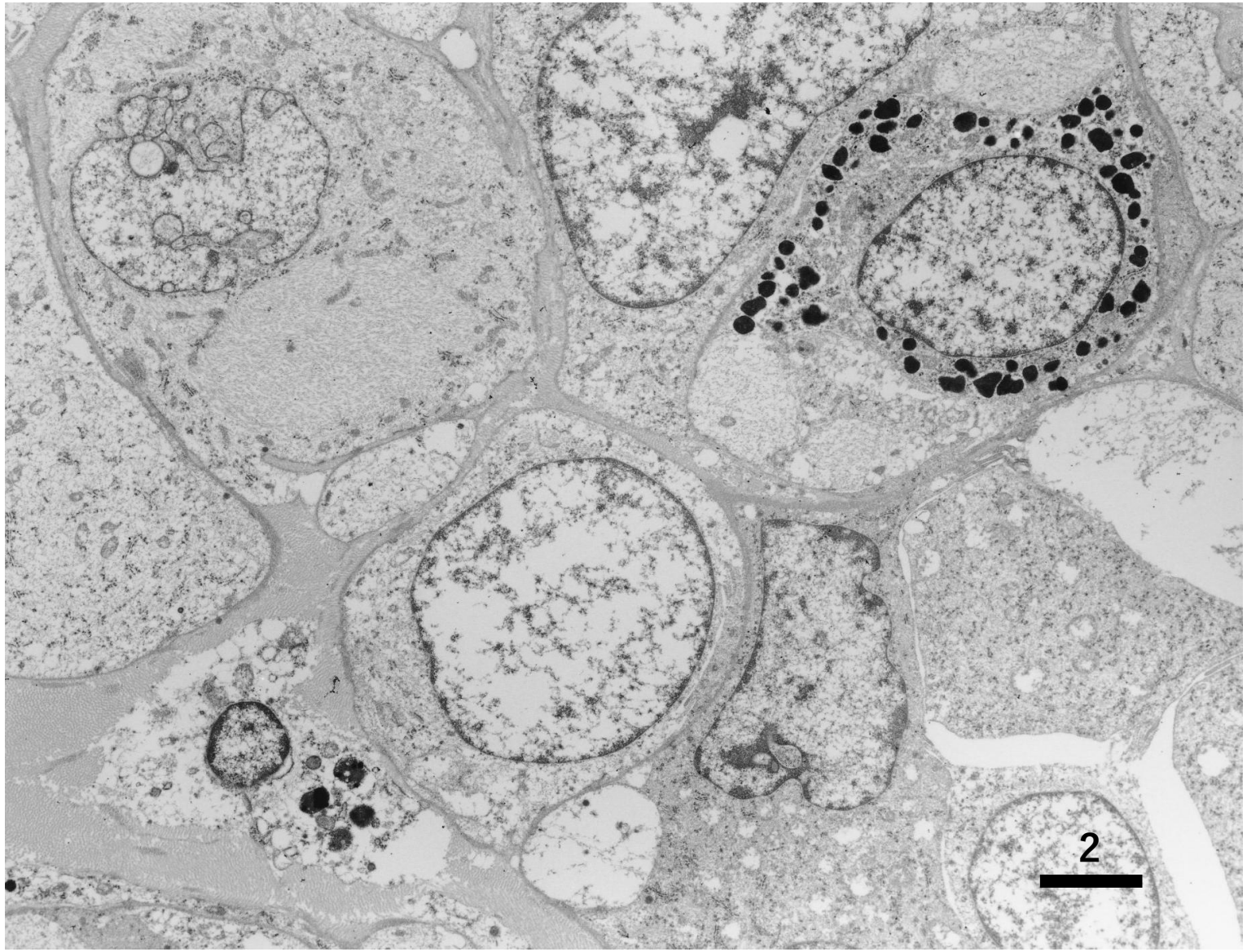
Spitz nevus, intradermal type, seen on the leg of a 32 y-o female patient. The epithelioid nevus cells show nuclear pleomorphism and intranuclear cytoplasmic inclusions. Melanin formation is minimal (H&E-4).



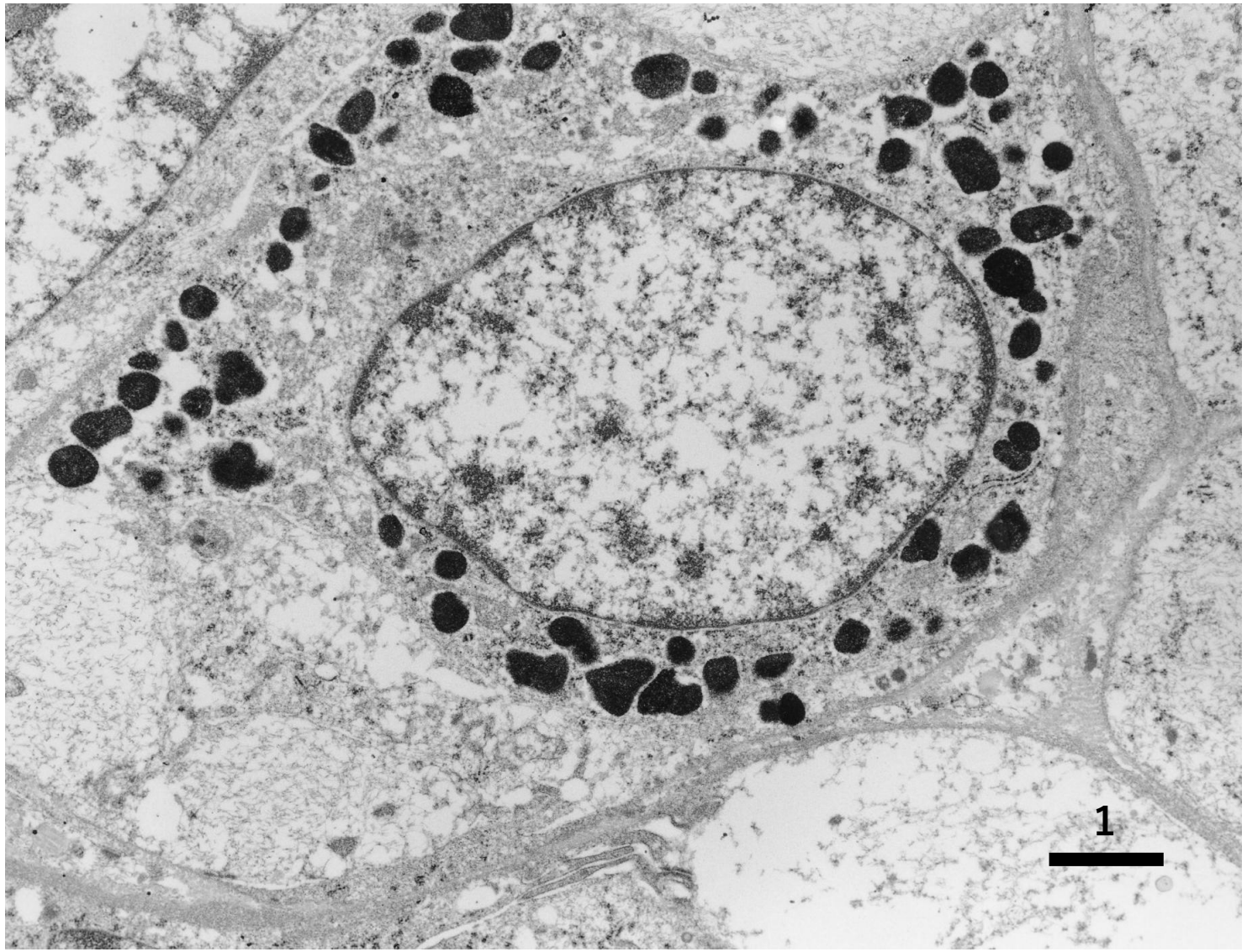
Spitz nevus, intradermal type, seen on the leg of a 32 y-o female patient. The epithelioid nevus cells show nuclear pleomorphism with prominent nucleoli, and intranuclear cytoplasmic inclusions are also noted. The cytoplasm is filamentous and eosinophilic (H&E-5).



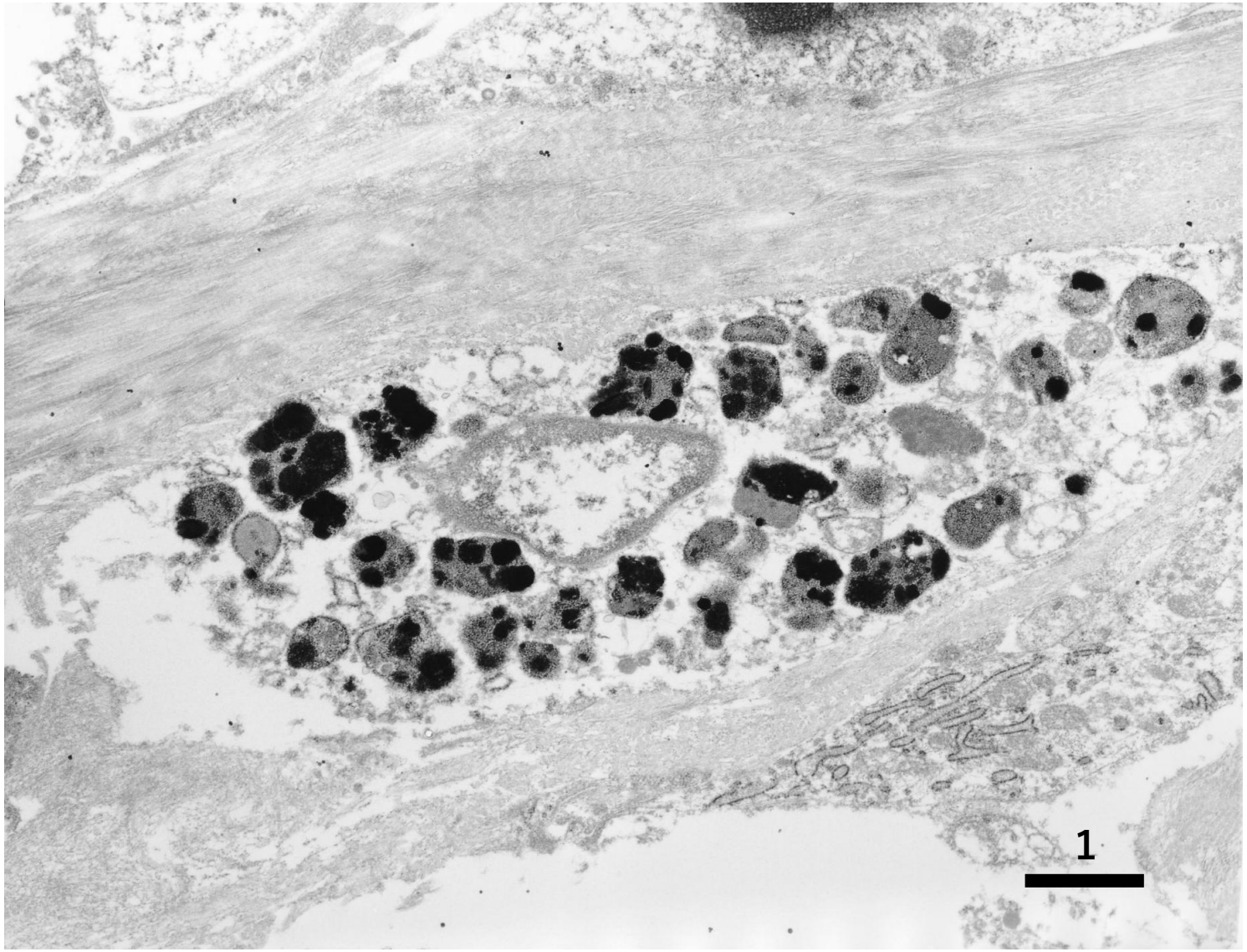
Spitz nevus, intradermal type, seen on the leg of a 32 y-o female patient. The epithelioid nevus cells show nuclear pleomorphism with prominent nucleoli, and intranuclear cytoplasmic inclusions are also noted. The cytoplasm is filamentous and eosinophilic. The nevus cells are focally melanotic (H&E-6).



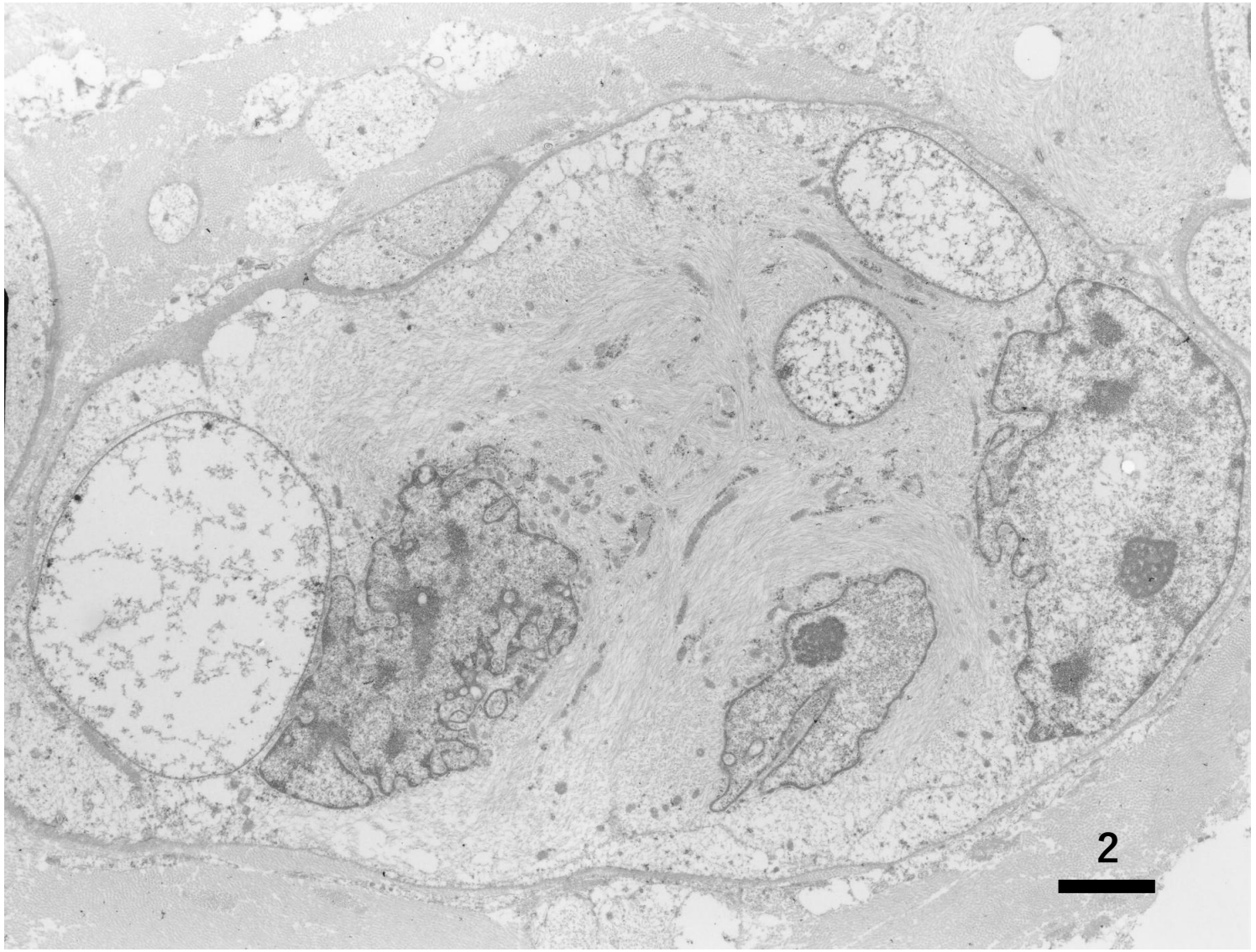
Ultrastructure of Spitz nevus, intradermal type, seen on the leg of a 32 y-o female patient. The nevus cells with round nuclei focally contain melanin granules. The cytoplasm is filamentous with vimentin inclusion body formation (TEM-1 using a block dug from formalin-fixed, paraffin-embedded specimen).



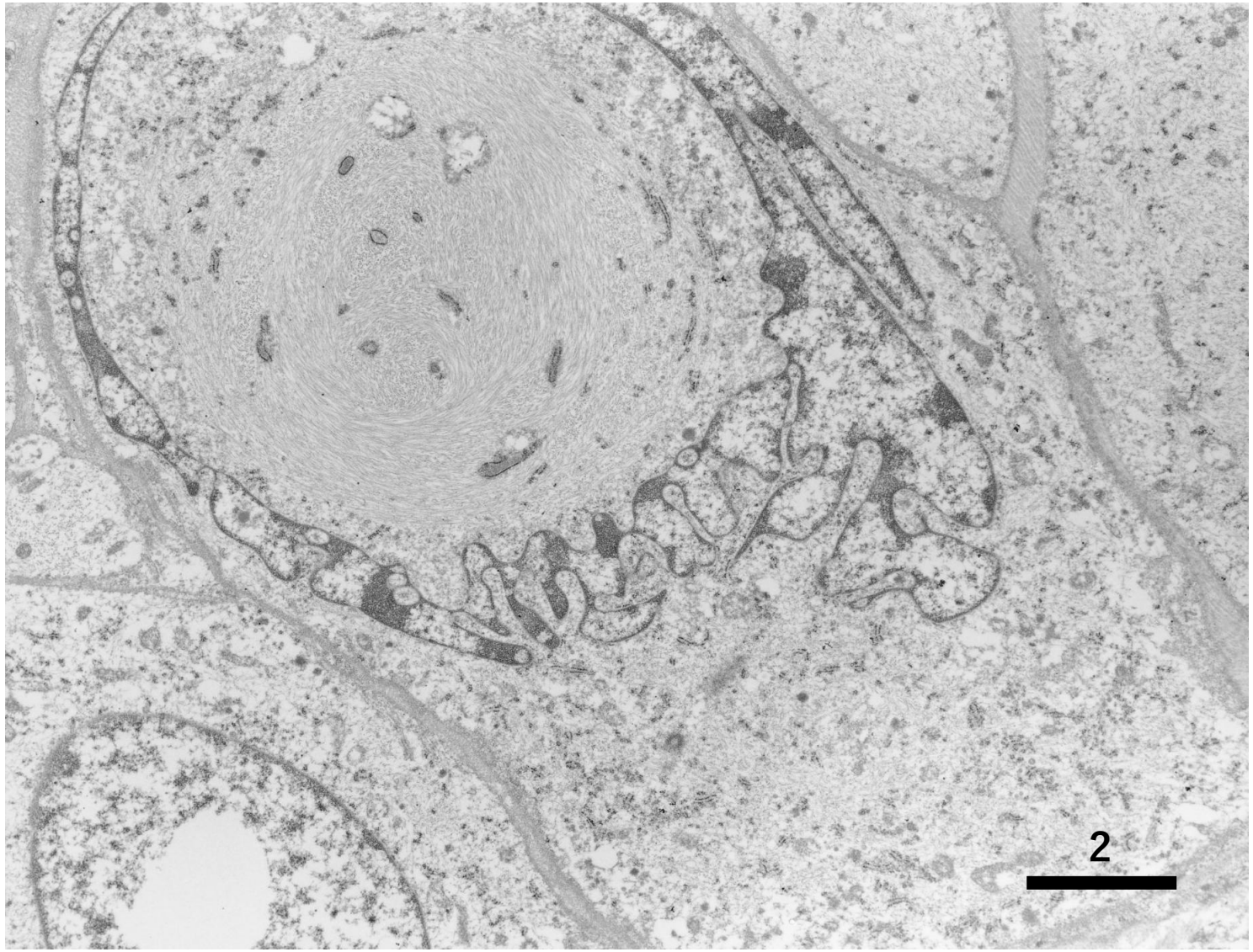
Ultrastructure of Spitz nevus, intradermal type, seen on the leg of a 32 y-o female patient. The nevus cells with round nuclei focally contain melanin granules. The cytoplasm is filamentous (TEM-2 using a block dug from formalin-fixed, paraffin-embedded specimen).



Ultrastructure of Spitz nevus, intradermal type, seen on the leg of a 32 y-o female patient. A melanophage in the stroma phagocytizes melanin pigments in lysosomal granules (TEM-3 using a block dug from formalin-fixed, paraffin-embedded specimen).

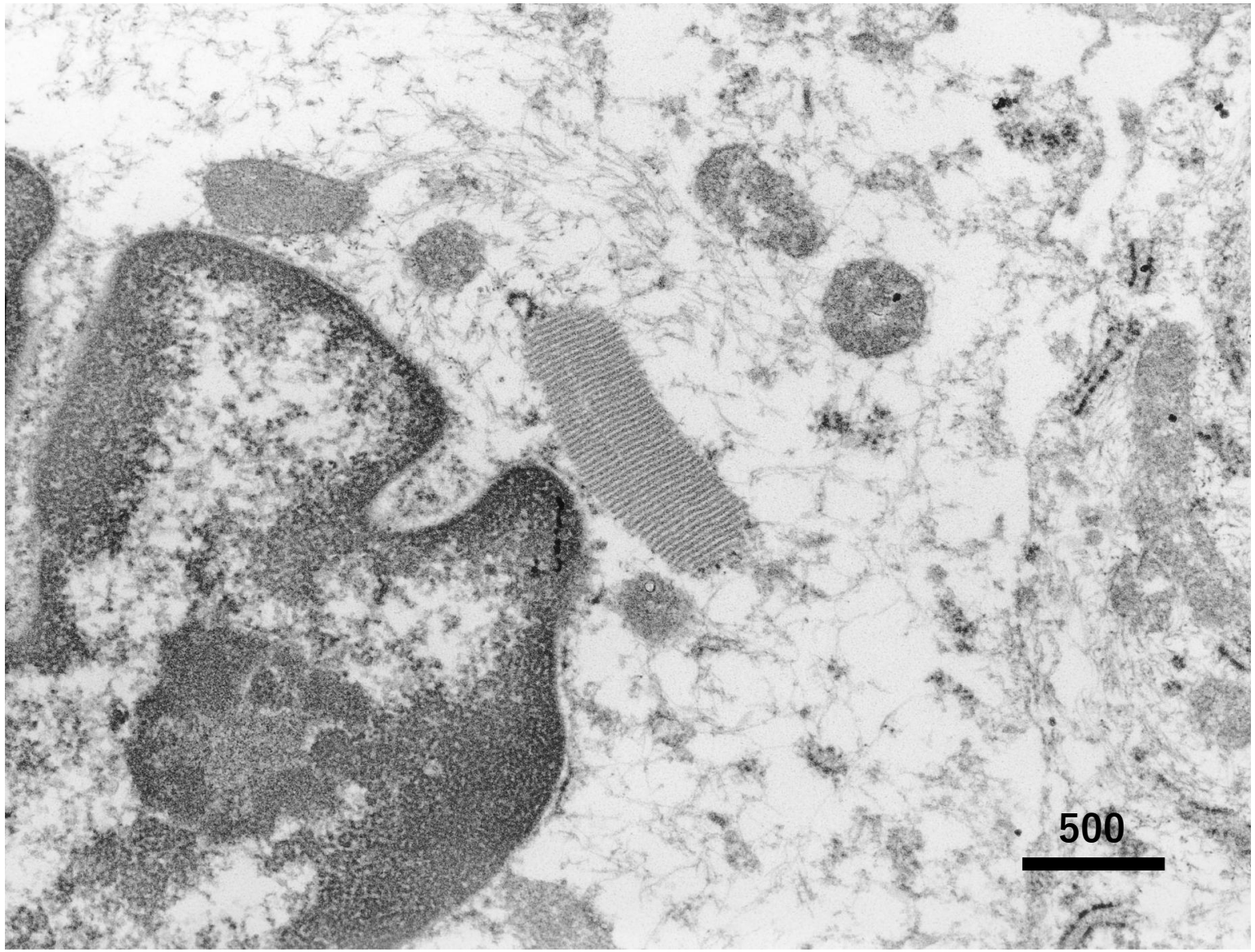


Ultrastructure of Spitz nevus, intradermal type, seen on the leg of a 32 y-o female patient. The multinucleated nevus cell with prominent nucleoli is rich in intermediate filaments in the cytoplasm. Membrane-bound cytoplasmic inclusions containing amorphous material are observed (TEM-4 using a block dug from formalin-fixed, paraffin-embedded specimen).

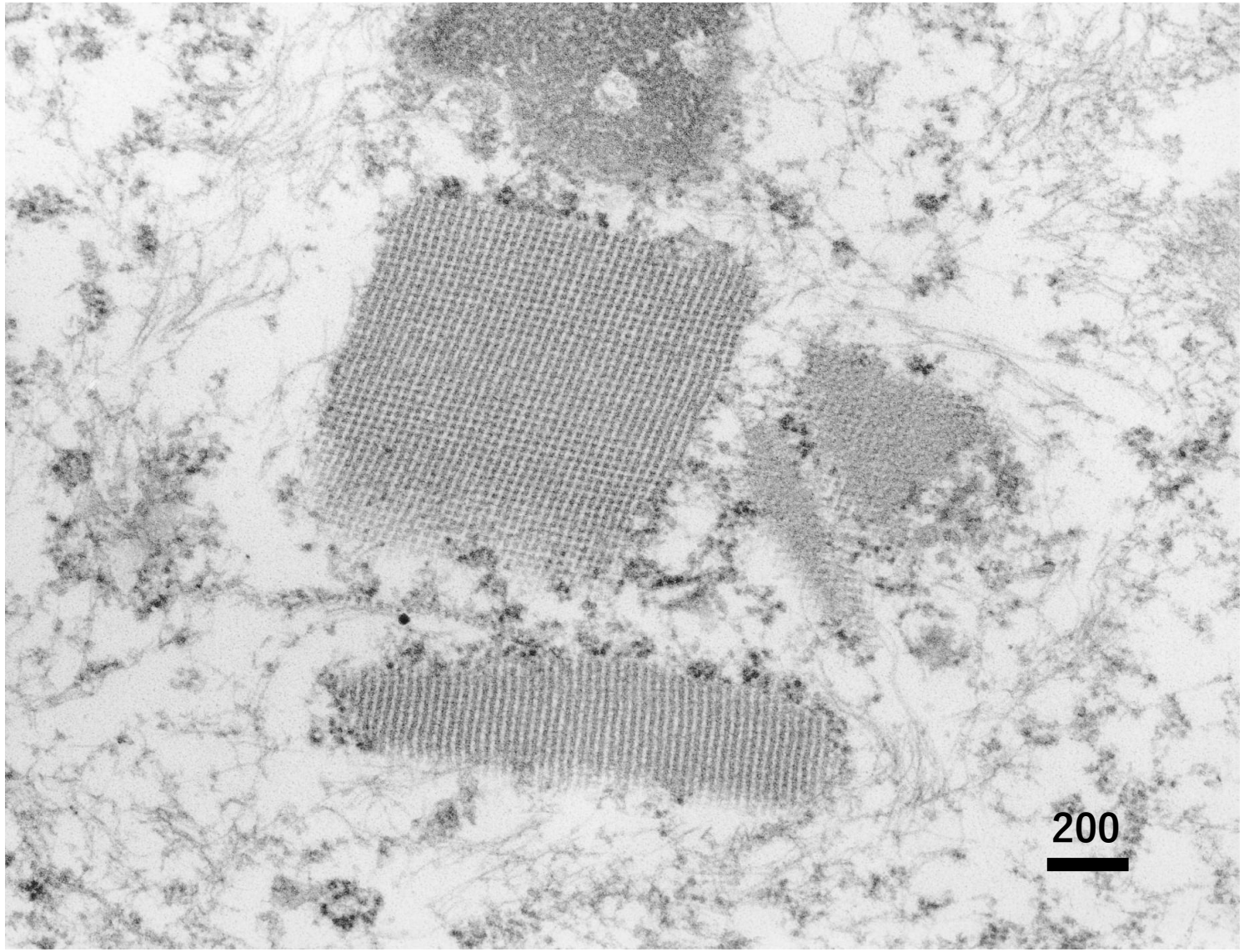


Ultrastructure of Spitz nevus, intradermal type, seen on the leg of a 32 y-o female patient. The nevus cell with an irregular-shaped nucleus is rich in intermediate filaments. A globular cytoplasmic vimentin inclusion is noted (TEM-5 using a block dug from formalin-fixed, paraffin-embedded specimen).

Ultrastructure of Spitz nevus, intradermal type, seen on the leg of a 32 y-o female patient. The nevus cell shows intranuclear cytoplasmic inclusions. The cytoplasm is filamentous (TEM-6 using a block dug from formalin-fixed, paraffin-embedded specimen).



Ultrastructure of Spitz nevus, intradermal type, seen on the leg of a 32 y-o female patient. The nevus cells with an indented nucleus focally contains rod-shaped and lattice-like crystalloid inclusions in the cytoplasm (TEM-7 using a block dug from formalin-fixed, paraffin-embedded specimen).



Ultrastructure of Spitz nevus, intradermal type, seen on the leg of a 32 y-o female patient. The nevus cells focally contains rod-shaped and lattice-like crystalloid inclusions in the cytoplasm (TEM-8 using a block dug from formalin-fixed, paraffin-embedded specimen).