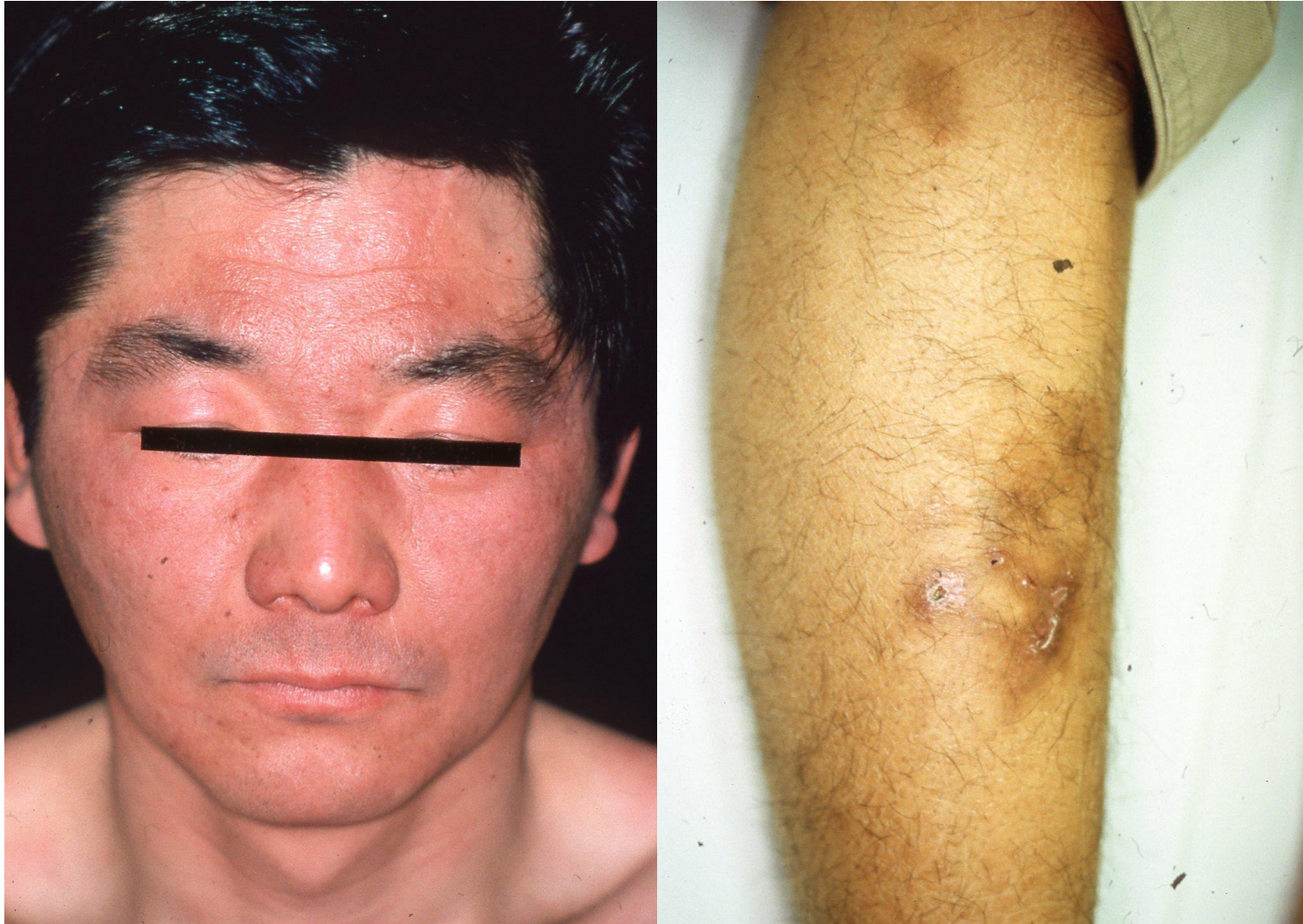


# Lepromatous leprosy

Lepromatous leprosy is a form of leprosy characterized by extensive macular skin lesions. Due to suppression of Th1 cell functions (cell mediated immune response), the mycobacteria are not eradicated, and macrophages actively engulf the bacteria to be recognized as foamy cells. In other words, a large number of *Mycobacterium leprae* are found in the lesions, because of the lack of epithelioid cell reactions. Lepromatous leprosy is also called as multibacillary leprosy.

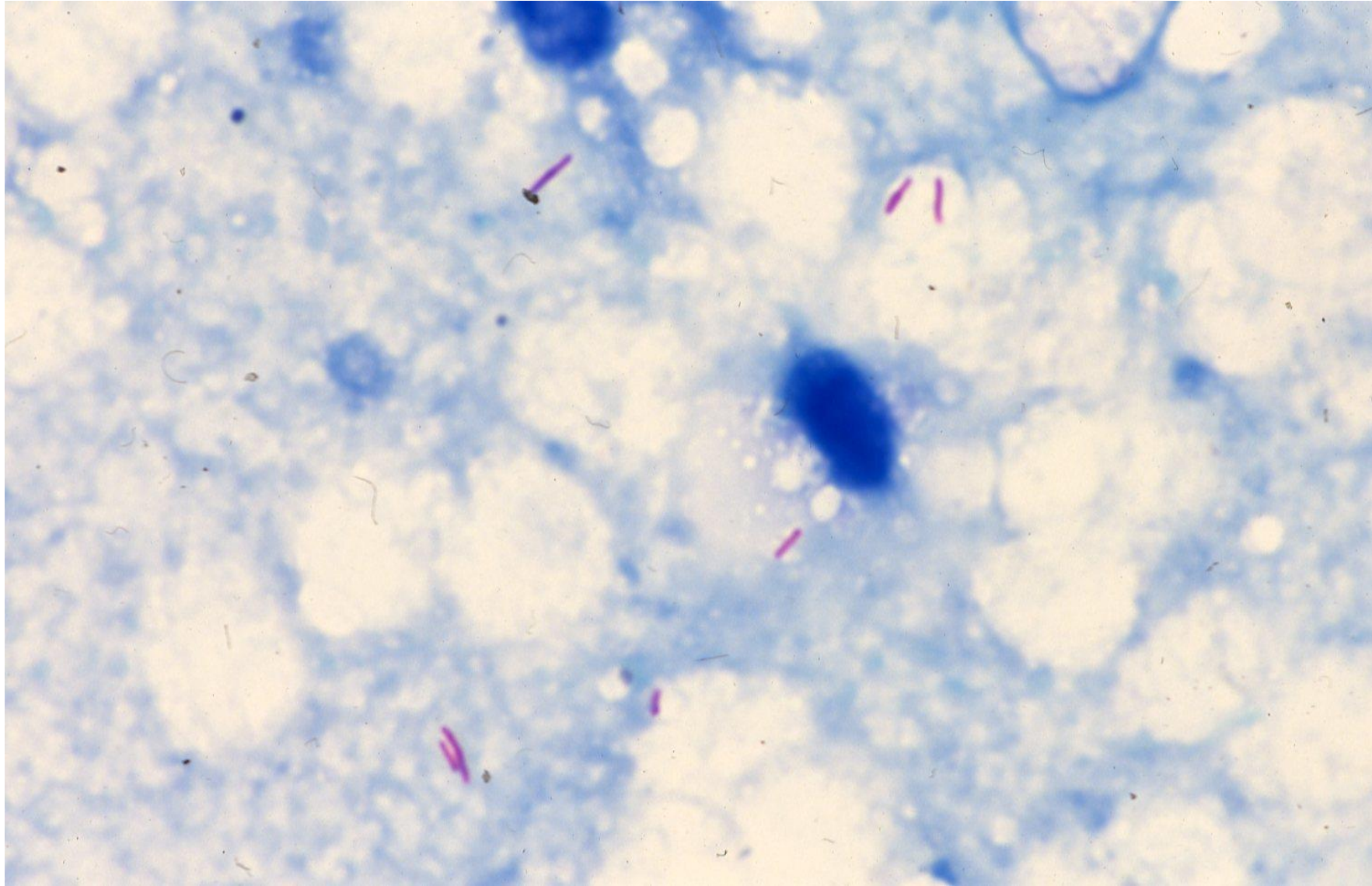


Gross appearance of skin lesions of lepromatous leprosy. Ill-defined infiltration is noted.



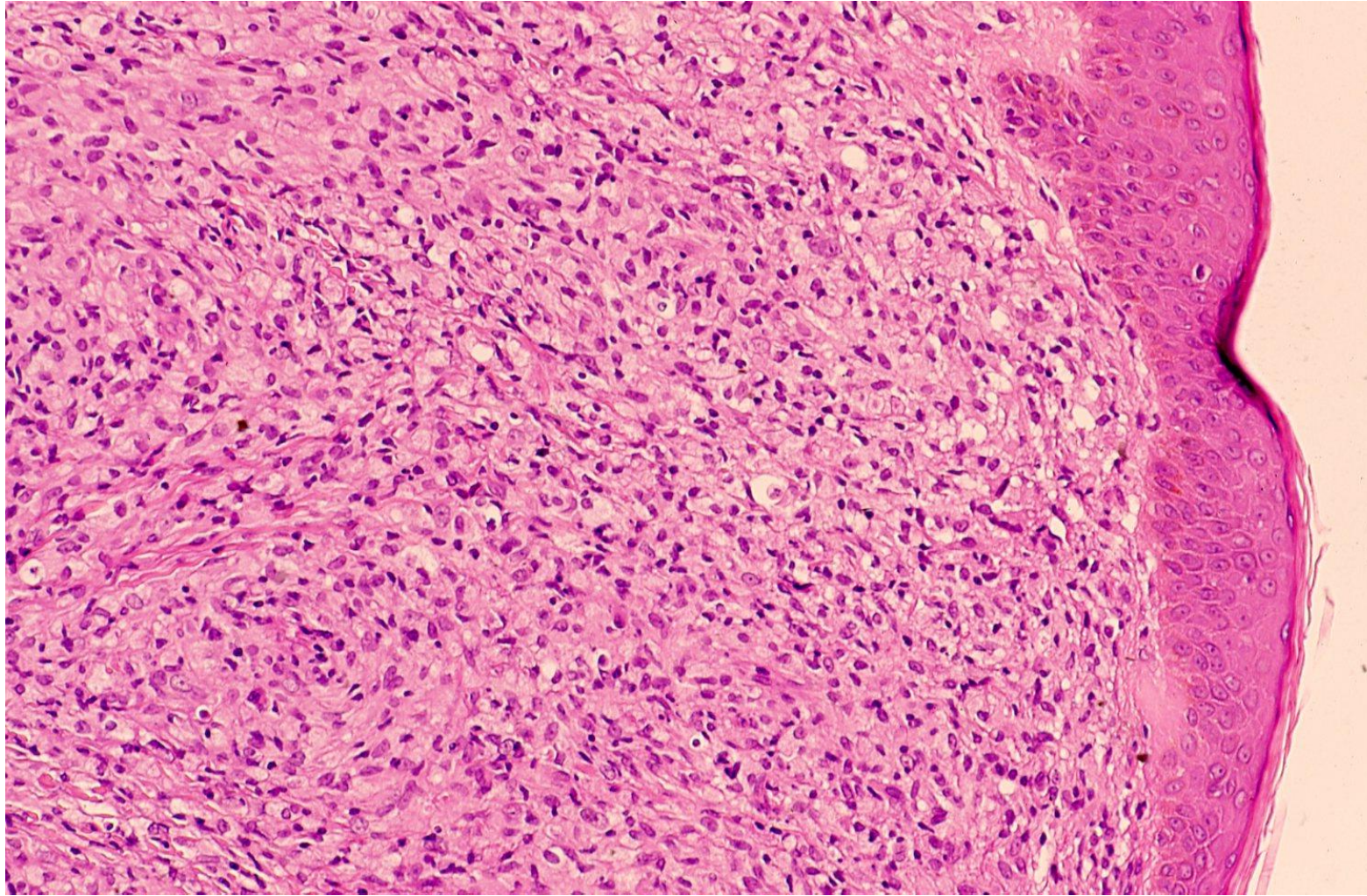


Mycobacterial test for lepromatous leprosy. Because of numbness, local anesthesia is not necessary.



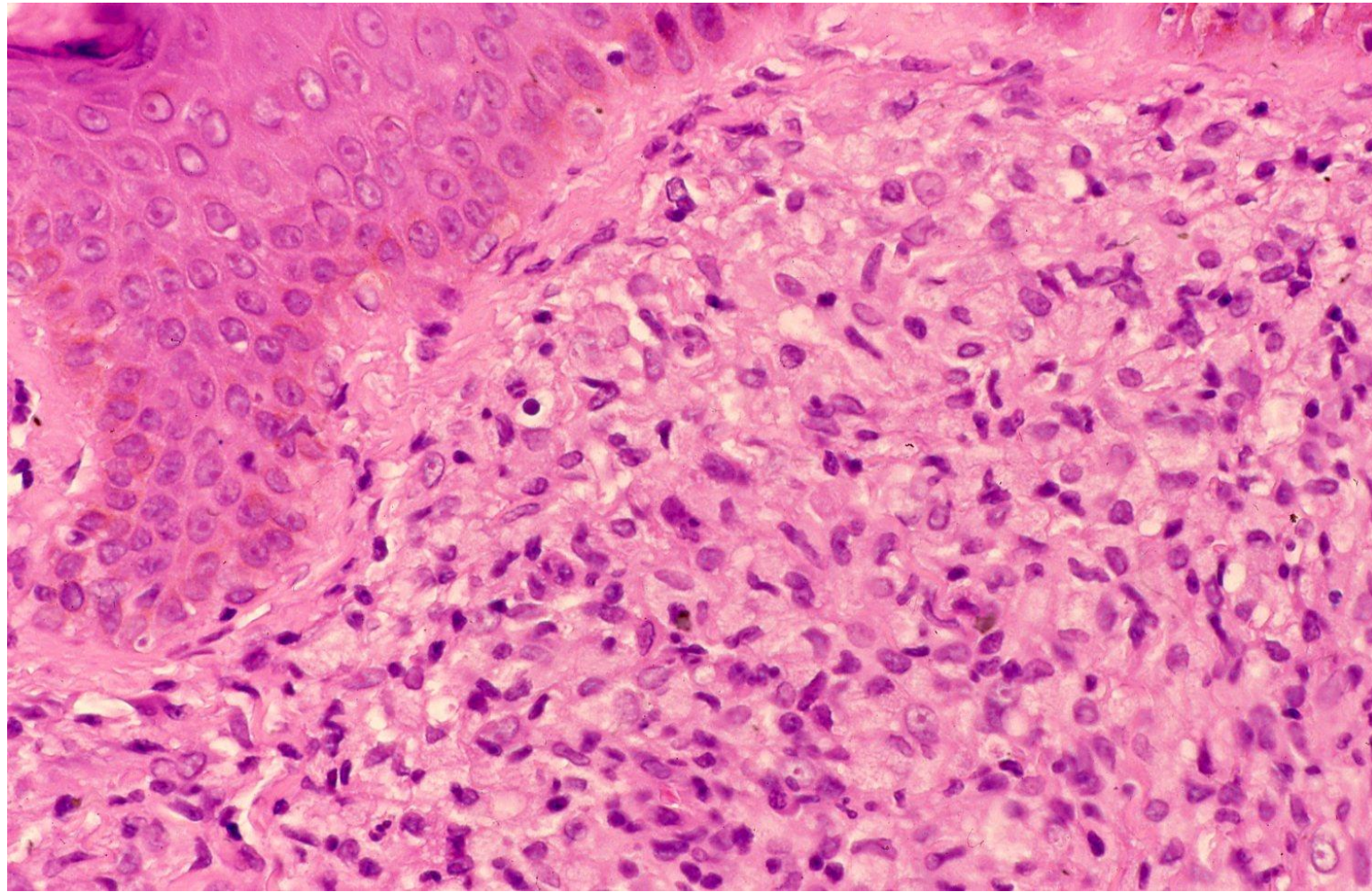
Mycobacterial test for lepromatous leprosy (multibacillary leprosy). Smear preparation of the skin reveals the presence of acid-fast bacilli. Ziehl-Neelsen staining





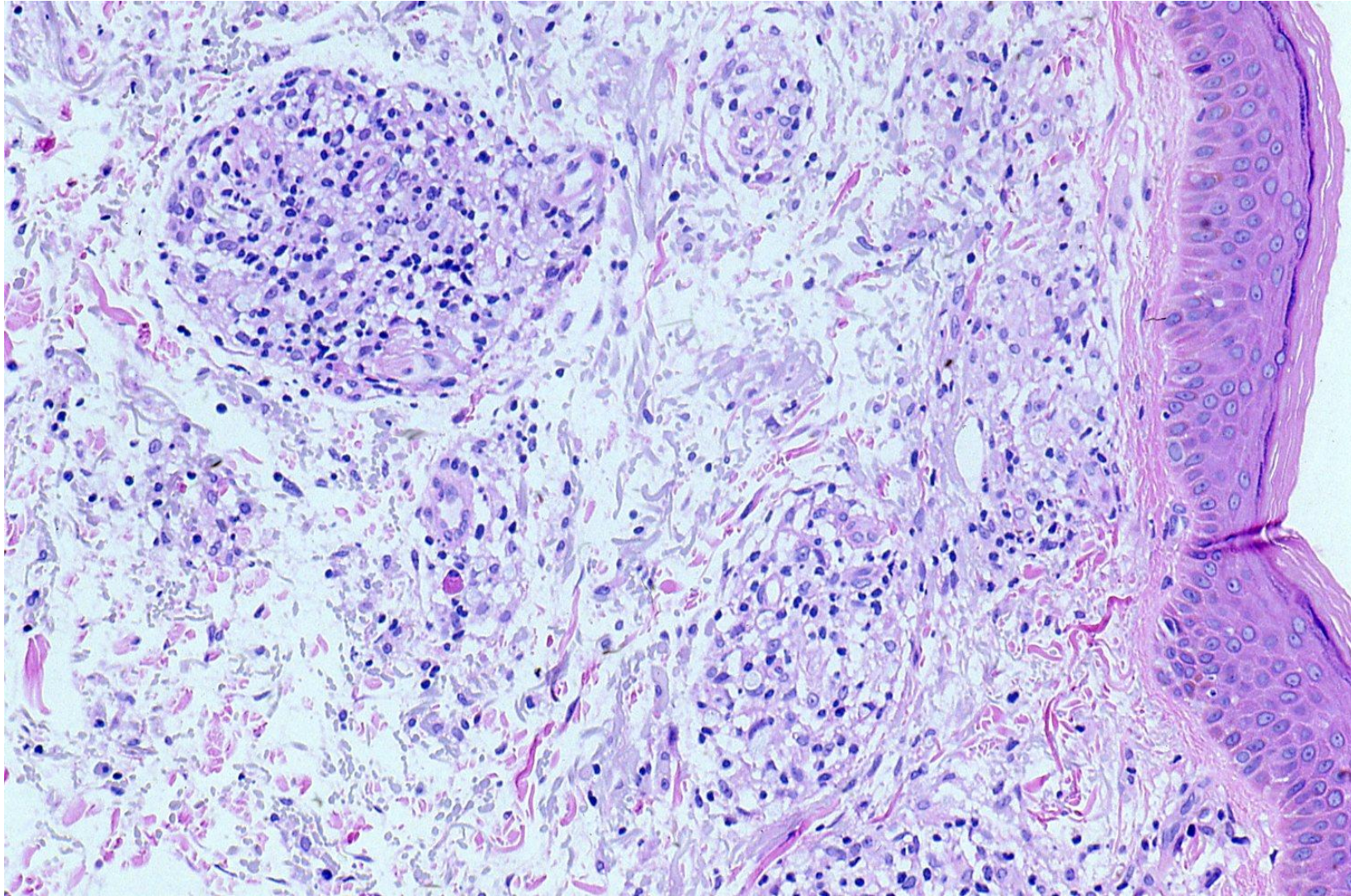
Skin biopsy of lepromatous leprosy. Xanthomatous cells accumulate in the dermis. The lesion is seen just beneath the epidermis (involving the papillary dermis). Distinction from dermal xanthogranulomatous lesions is needed. H&E-1





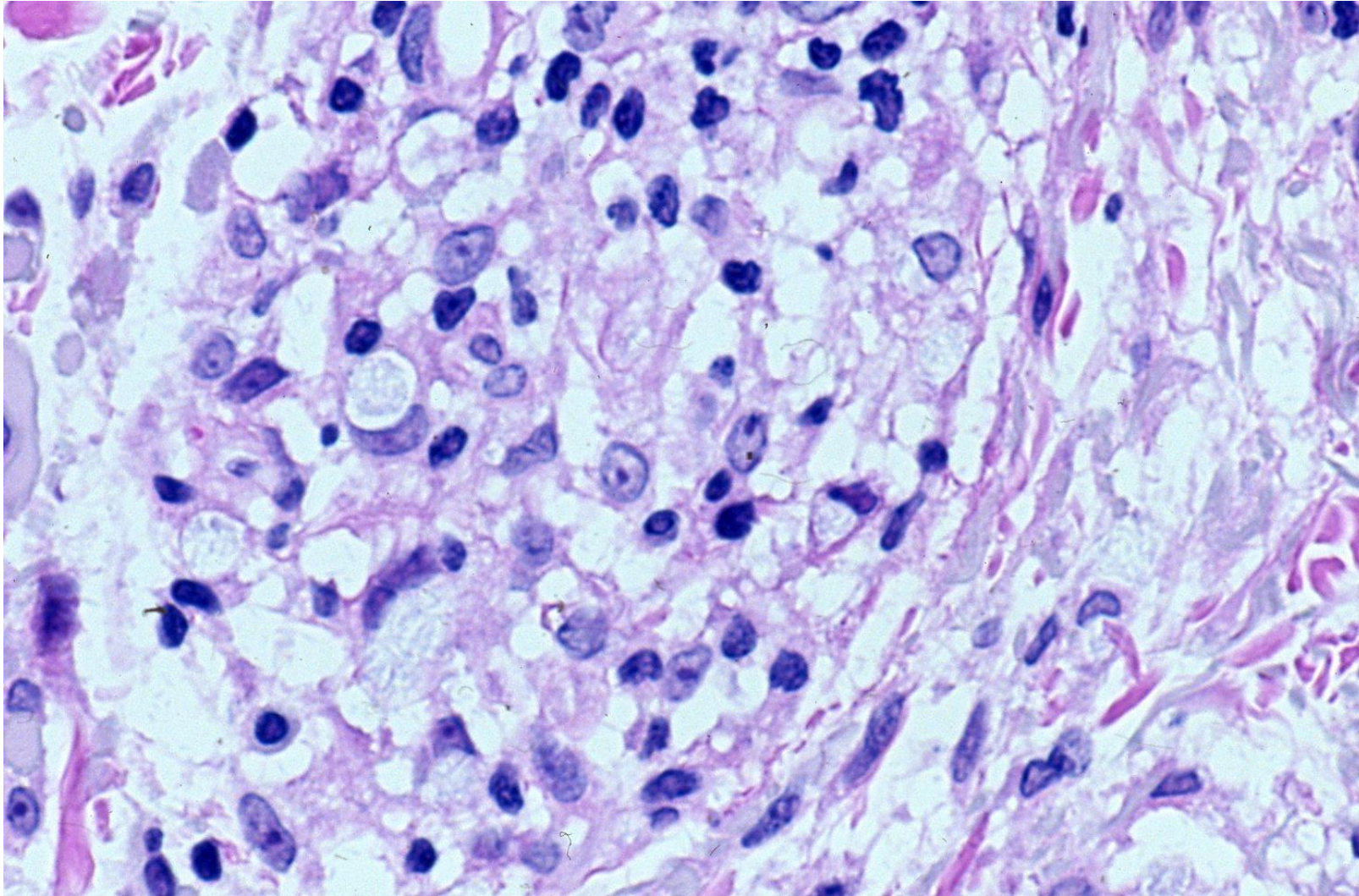
Skin biopsy of lepromatous leprosy. Xanthomatous cells accumulate in the dermis. The lesion is seen just beneath the epidermis (involving the papillary dermis). Distinction from dermal xanthogranulomatous lesions is needed. H&E-2





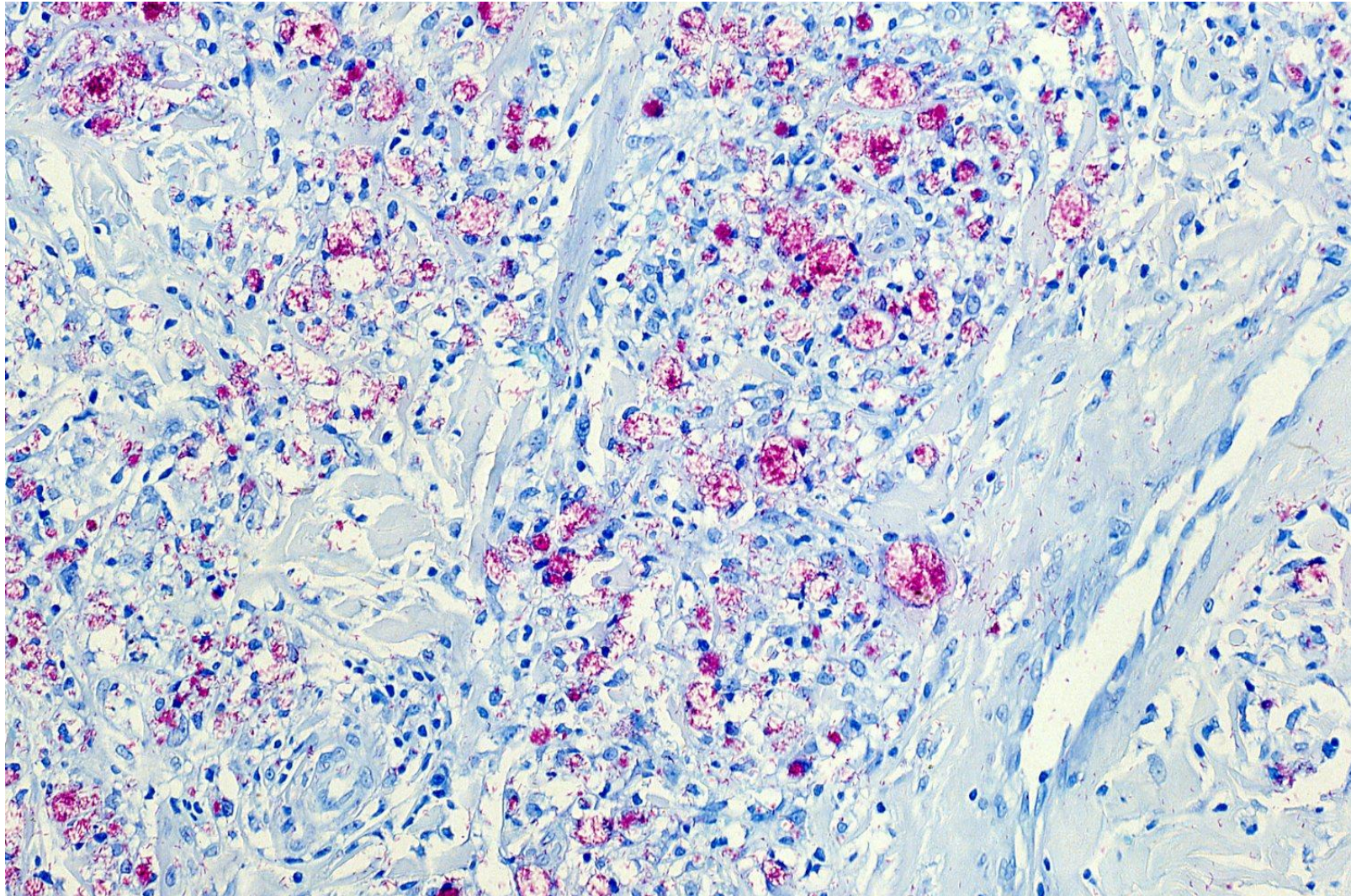
Skin biopsy of lepromatous leprosy (another case). Xanthomatous lesions are scattered in the dermis. Distinction from dermal xanthogranulomatous lesions is needed. H&E-3





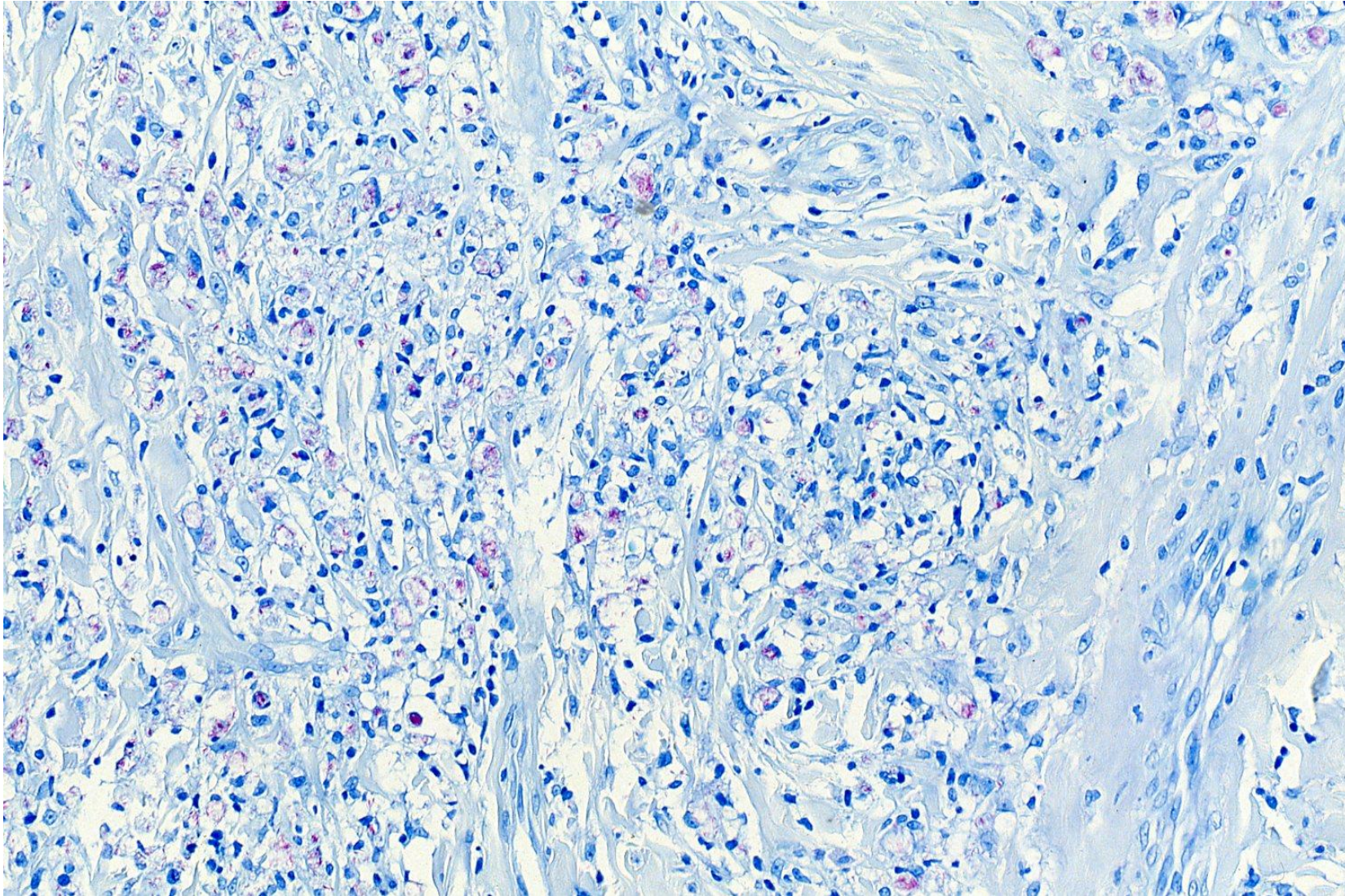
Skin biopsy of lepromatous leprosy (another case). Xanthomatous lesions are scattered in the dermis. High-powered view demonstrates “globi” (intracytoplasmic accumulation of Mycobacteria). H&E-4





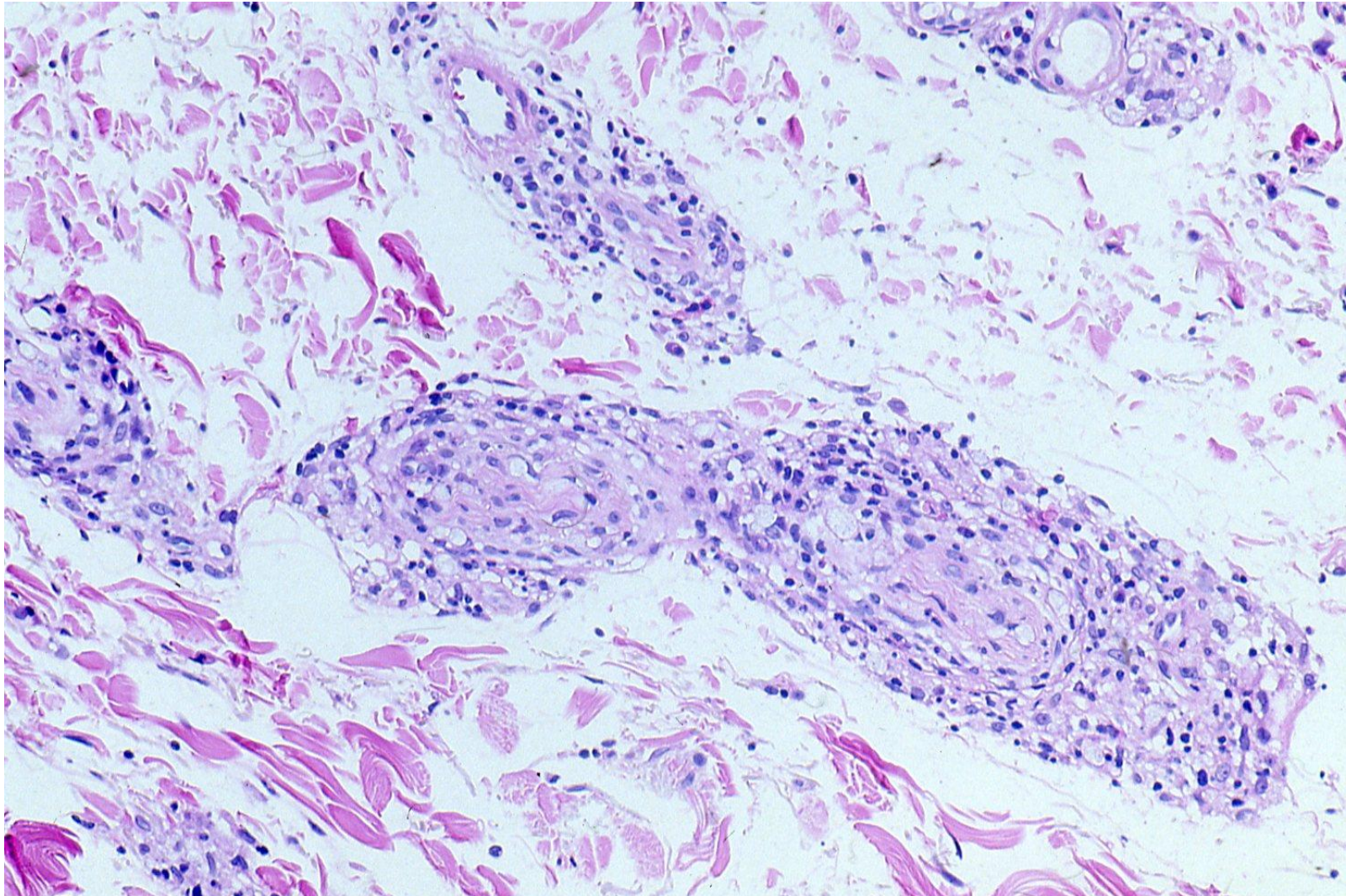
Skin biopsy of lepromatous leprosy (acid-fast staining, Fite method). Numbers of acid-fast bacilli are demonstrated in the leproma. Note the globi in the cytoplasm of foamy macrophages. Mild deparaffinization using oil xylene (peanut oil: xylene = 1:1) is important. Ziehl-Neelsen (Fite) staining





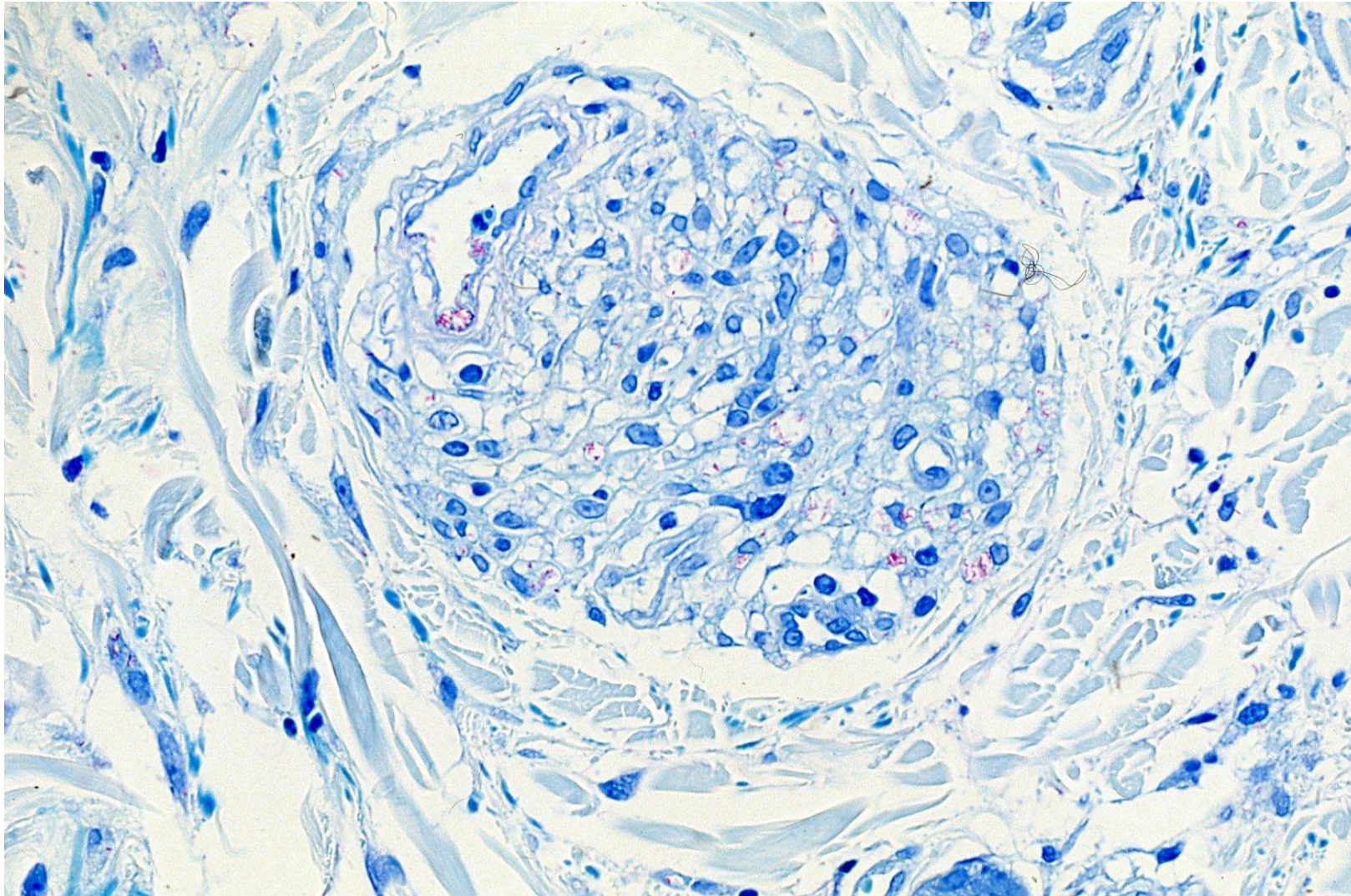
Skin biopsy of lepromatous leprosy (acid-fast staining, conventional method). The number of acid-fast bacilli is apparently much fewer than that of the Fite's modification. Conventional Ziehl-Neelsen staining





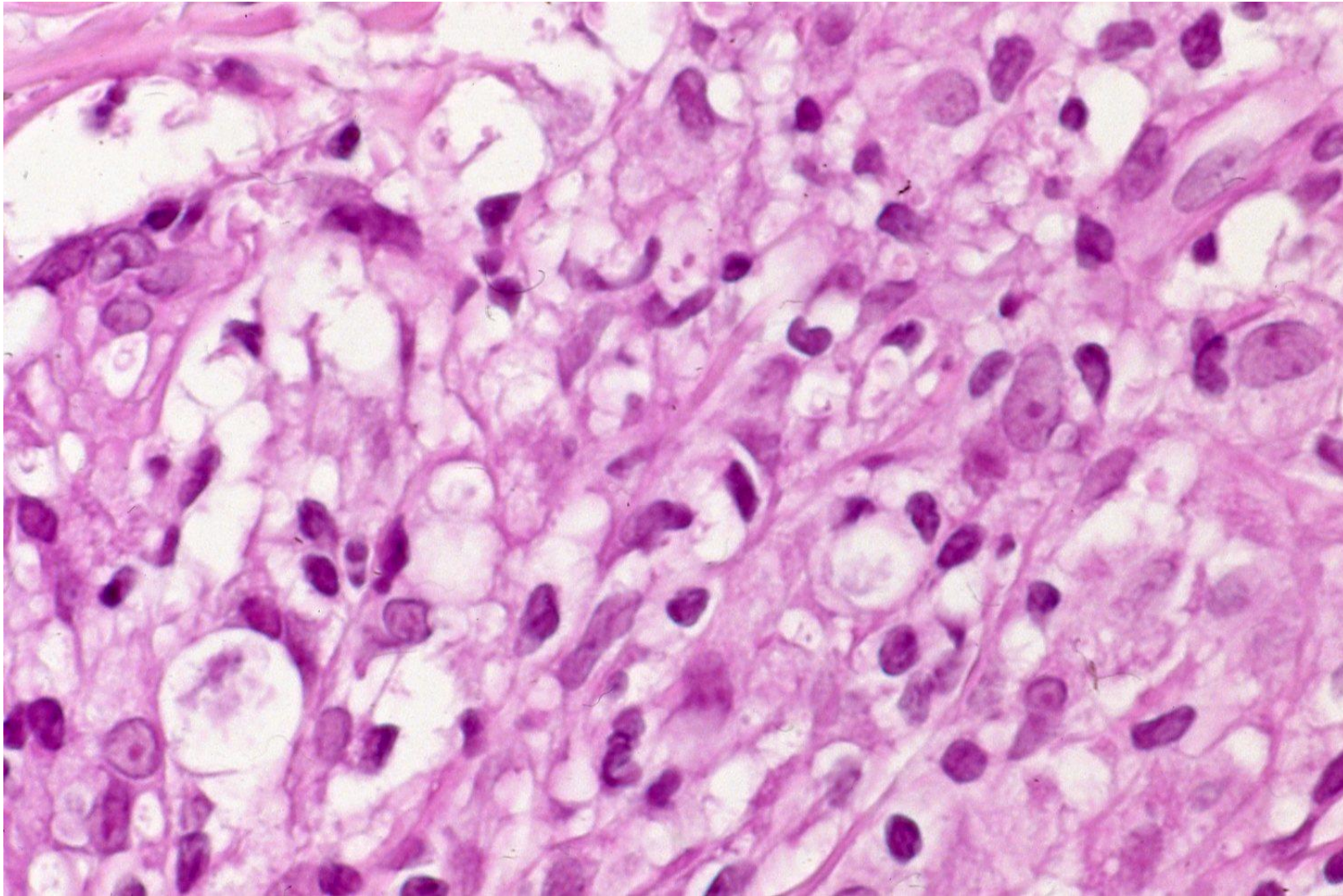
Skin biopsy of lepromatous leprosy. A xanthomatous lesion involving the peripheral nerve fascicle is noted. This makes a key picture distinguishing from other xanthogranulomatous skin lesions. H&E-5





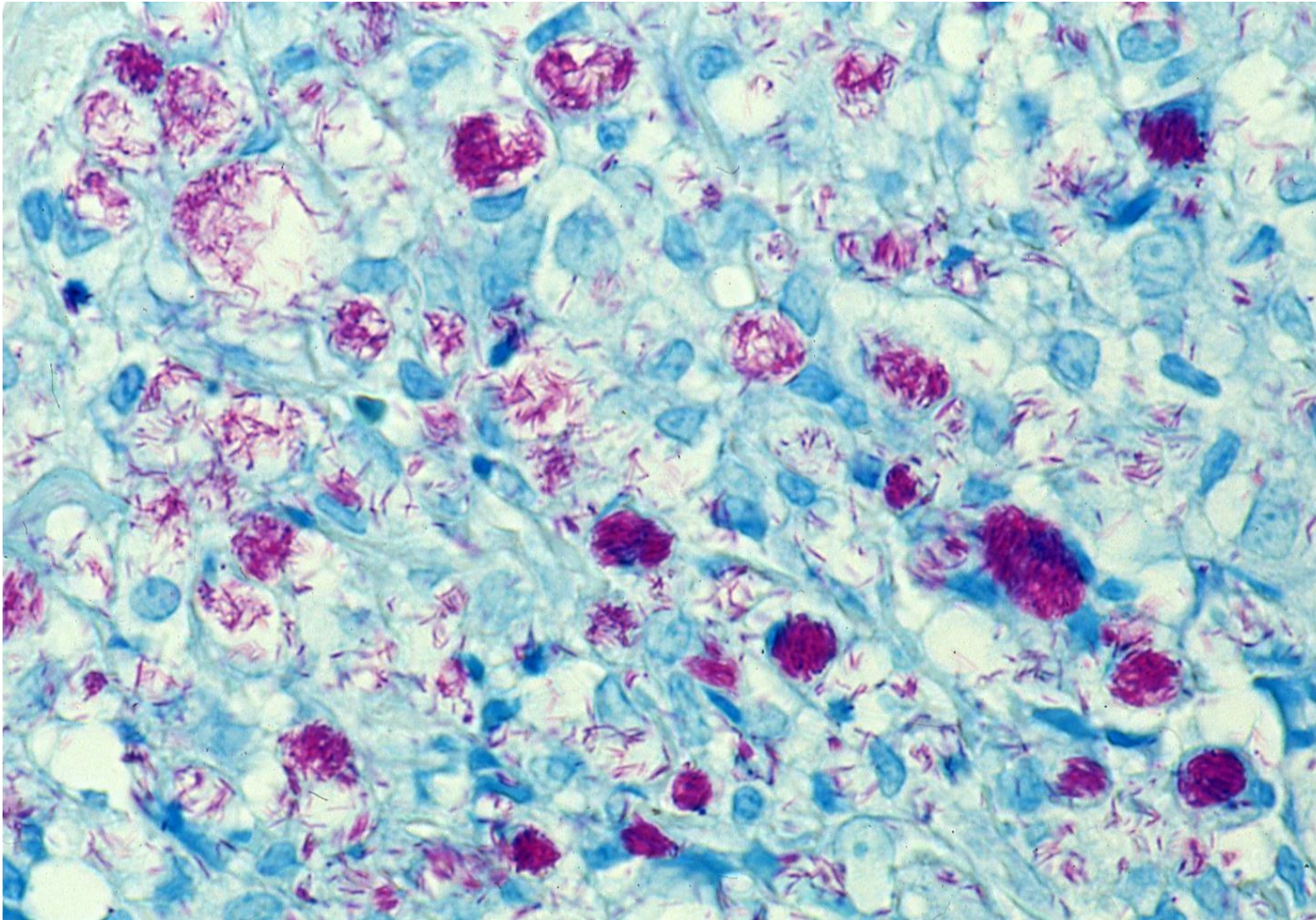
Skin biopsy of lepromatous leprosy. A xanthomatous lesion involving the peripheral nerve fascicle is noted. Acid-fast bacilli are discernible in the lesion. Ziehl-Neelsen (Fite method)





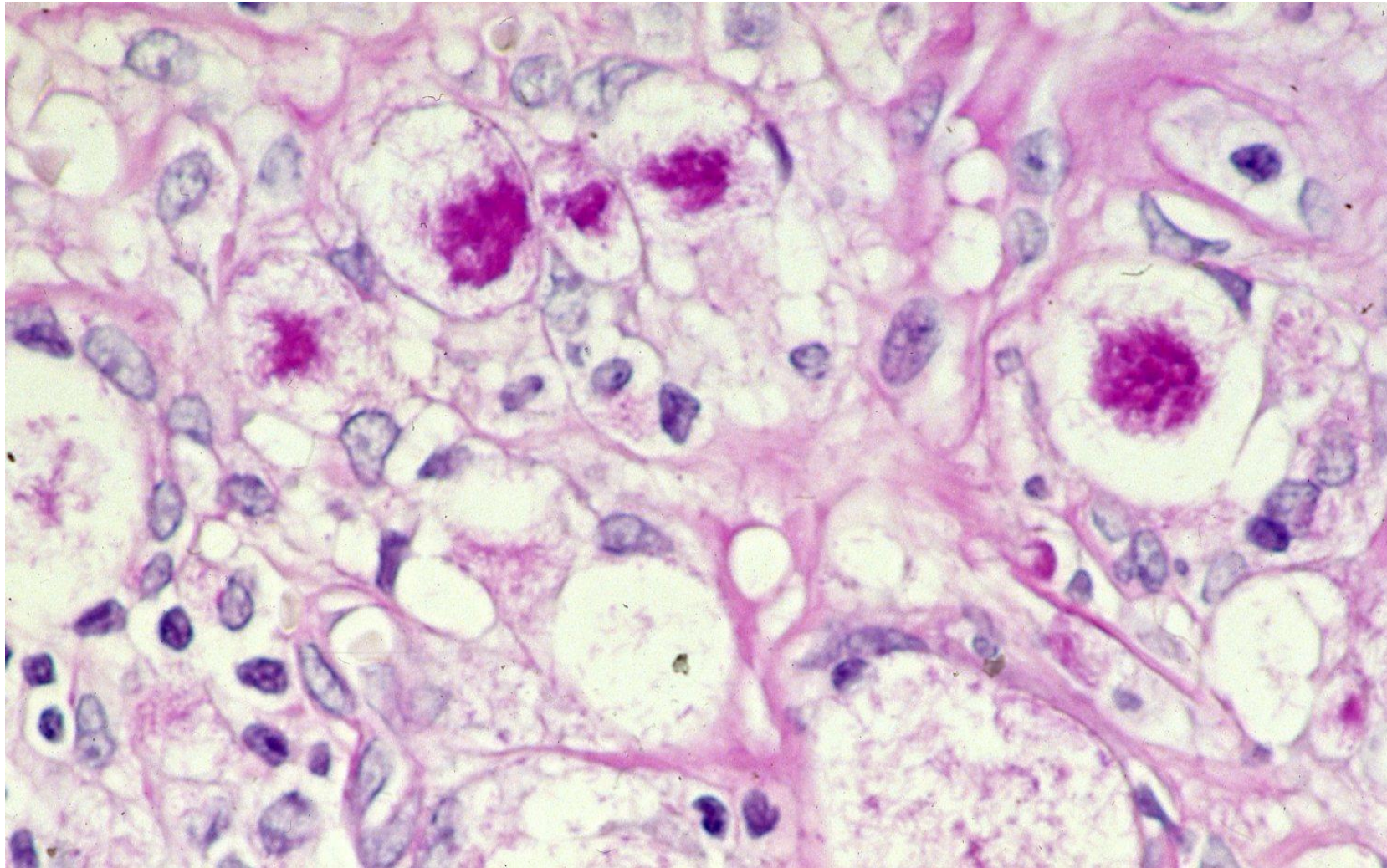
Skin biopsy of lepromatous leprosy. High-powered view of the xanthomatous lesion demonstrates "globs" (intracytoplasmic accumulation of Mycobacteria). H&E-6





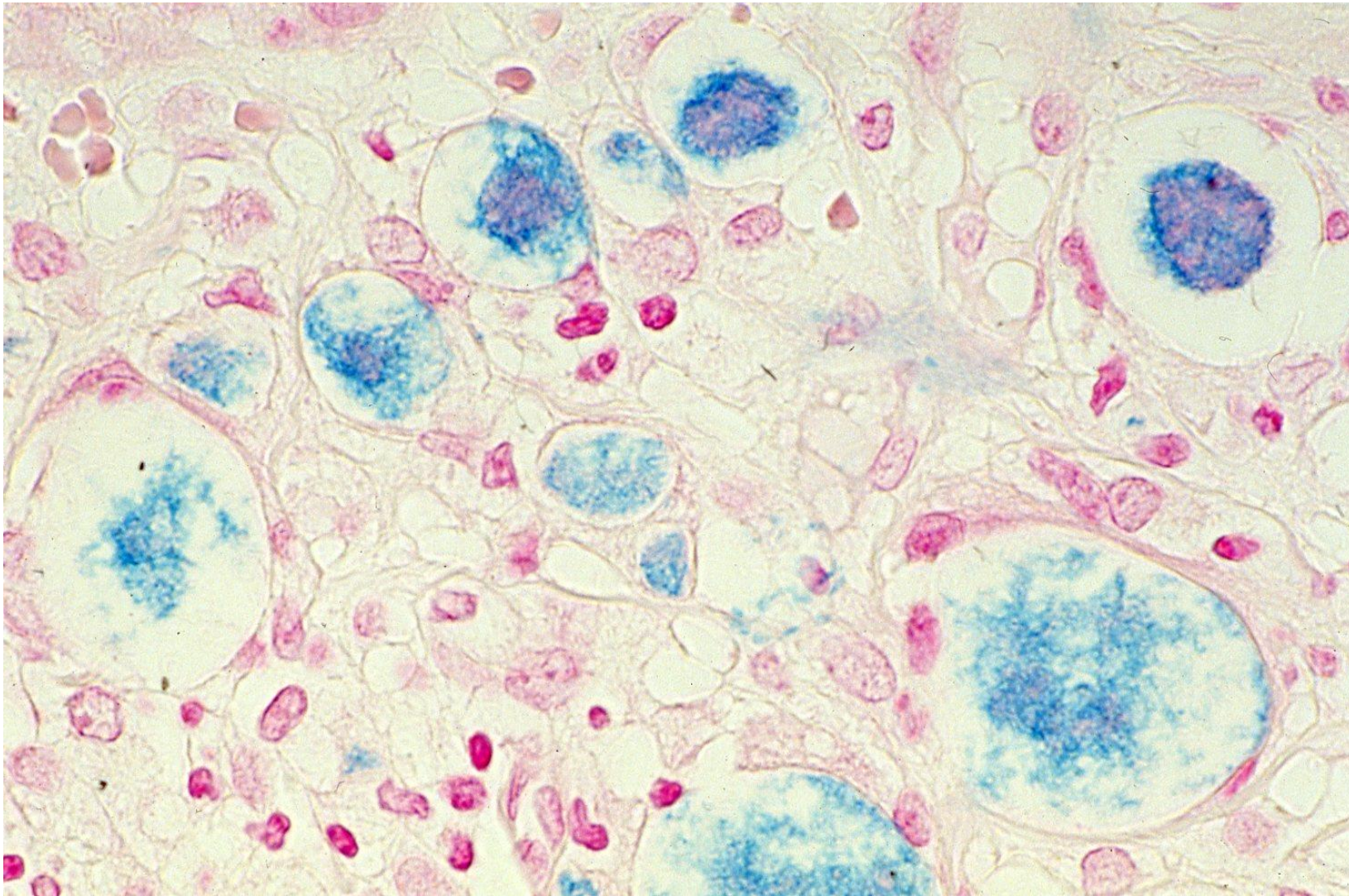
Skin biopsy of lepromatous leprosy. High-powered view of the xanthomatous lesion demonstrates acid-fast "globi" (intracytoplasmic accumulation of Mycobacteria). Ziehl-Neelsen (Fite method)





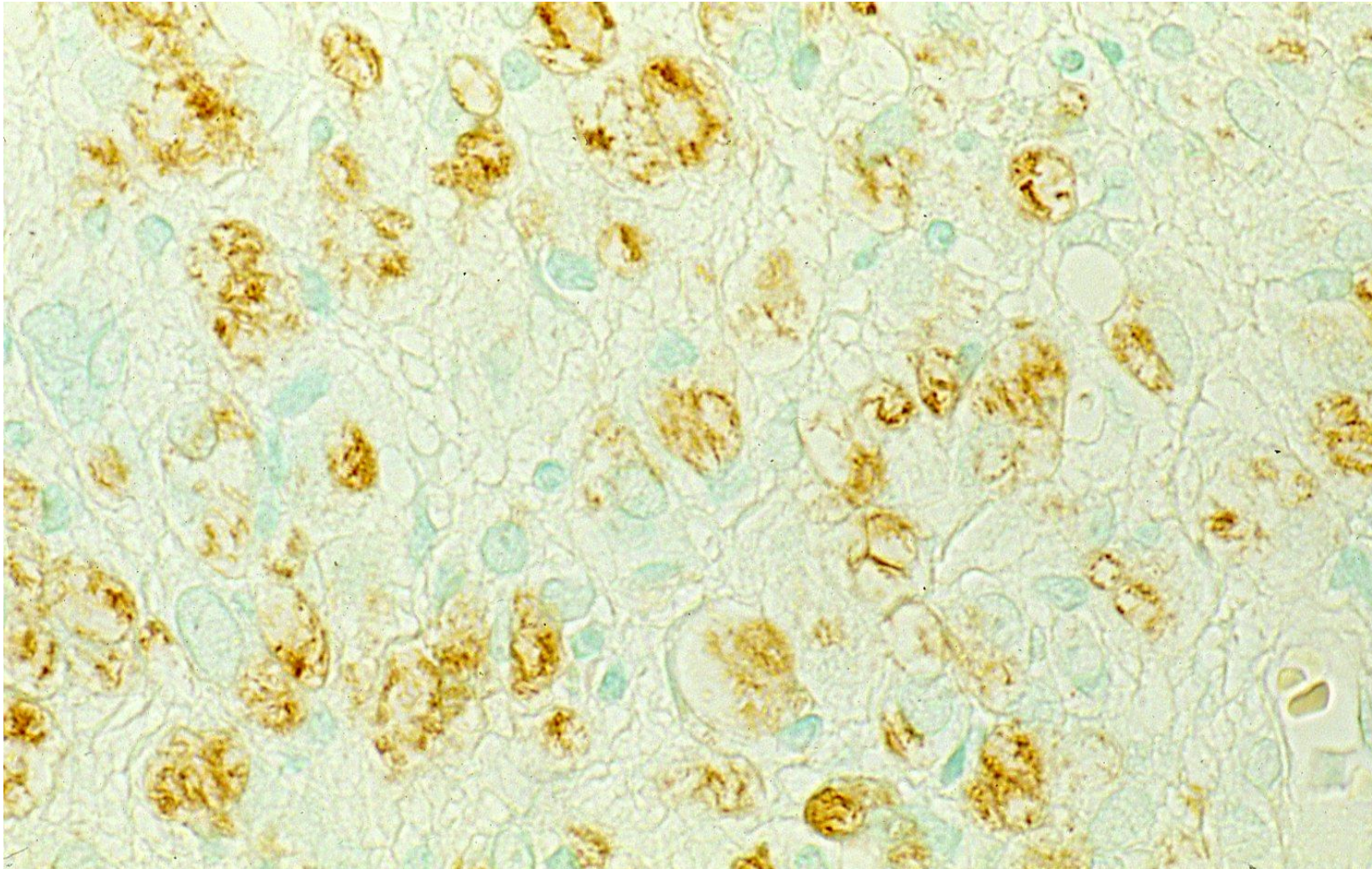
Skin biopsy of lepromatous leprosy. High-powered view of the xanthomatous lesion demonstrates PAS-positive “globi” (intracytoplasmic accumulation of Mycobacteria). PAS staining





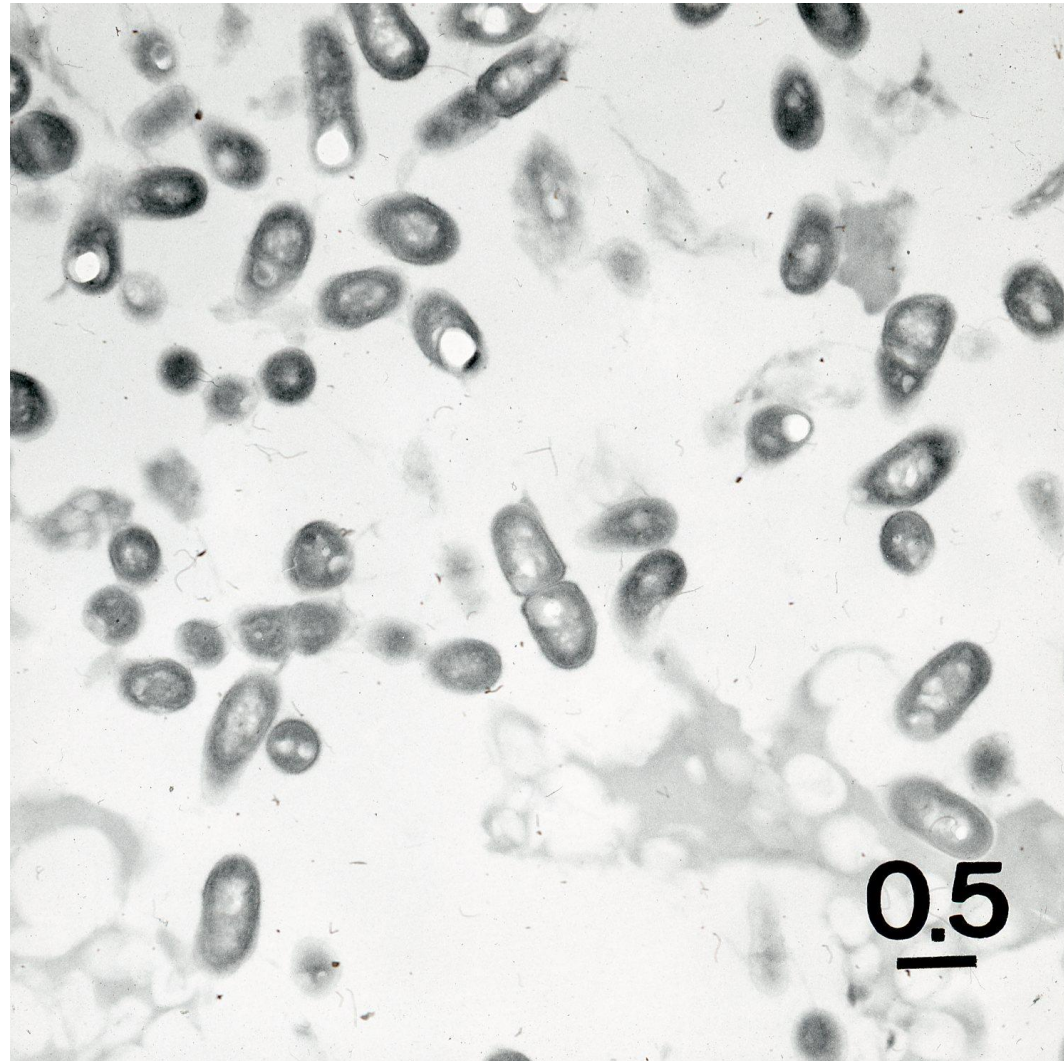
Skin biopsy of lepromatous leprosy. High-powered view of the xanthomatous lesion demonstrates colloidal iron-positive “globi” (intracytoplasmic accumulation of Mycobacteria). The globi are hyaluronic acid-rich. Colloidal iron staining





Skin biopsy of lepromatous leprosy. High-powered view of the xanthomatous lesion demonstrates BCG Ag-immunoreactive "globi" (intracytoplasmic accumulation of Mycobacteria). Immunostaining for BCG Ag





Skin biopsy of lepromatous leprosy. Immunoelectron microscopy (pre-embedding method using a paraffin section) demonstrates BCG Ag-immunoreactive acid-fast bacilli in the cytoplasm of leproma cells. Immunoelectron microscopy for BCG Ag