

## GIANT CELLS

Giant cells are of many different types and occur under different conditions and assume different configurations. They are formed by fusion of macrophages and are common in granulomatous inflammation especially in infections such as tuberculosis, syphilis, and those produced by fungi. Reaction to exogenous substances such as suture and talc and to endogenous substances such as keratin, fat, and cholesterol crystals also commonly cause the development of giant cells.

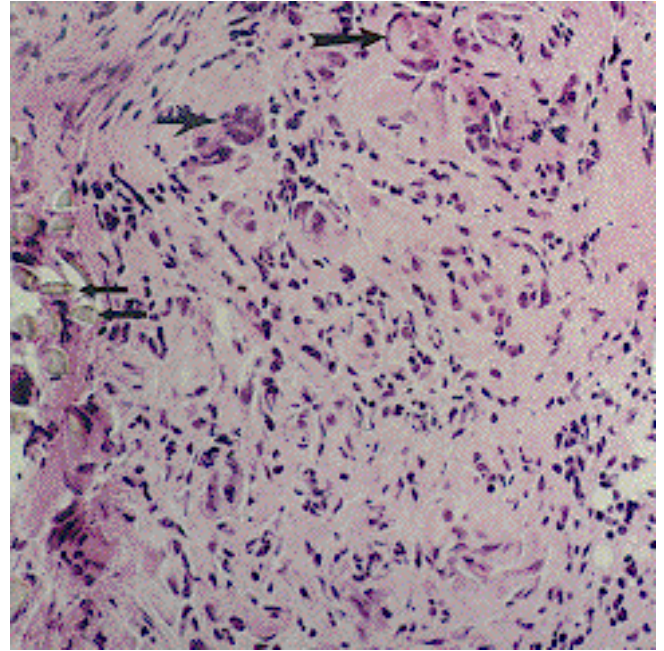
The Langhans giant cell has a number of dark nuclei peripherally arranged about an abundant cytoplasm. It is a hallmark of tuberculous granulation tissue and of sarcoidosis and also of other less common diseases such as leprosy.

The foreign body giant cell (a fusion of macrophages) has its numerous nuclei scattered randomly in the cytoplasm and may be found next to the particular foreign body that produced the granulomatous reaction.

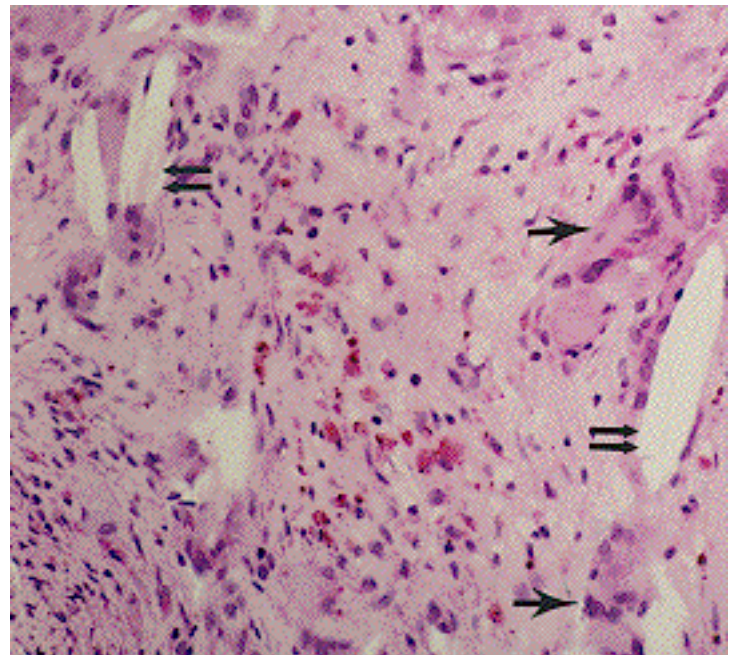
The Reed-Sternberg tumor giant cell is distinctive and considered essential to the diagnosis of Hodgkin's disease, although this cell alone is not enough for that diagnosis and other criteria are also needed. It is a large cell, usually binucleate or bilobed, so that the two halves appear as mirror images, or there may be multiple nuclei. Two large nucleoli appear in the nucleus surrounded by clear cytoplasm producing an "owls-eye" shape.

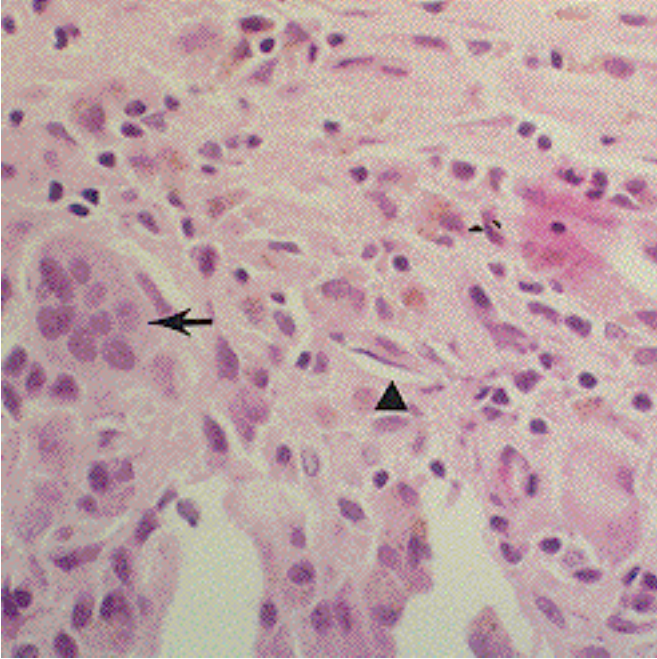
Giant cell granuloma is considered nonneoplastic. Earlier, it was called "giant cell" reparative granuloma," a misnomer, or even "giant cell lesion." These granulomas occur in the jaws and have giant cells as their characteristic microscopic feature, with a background of ovoid to spindle-shaped mesenchymal cells. Sometimes foci of osteoid tissue are present.

Foreign body giant cells, (large arrows) as part of a granuloma formed in response to suture material (double arrows).

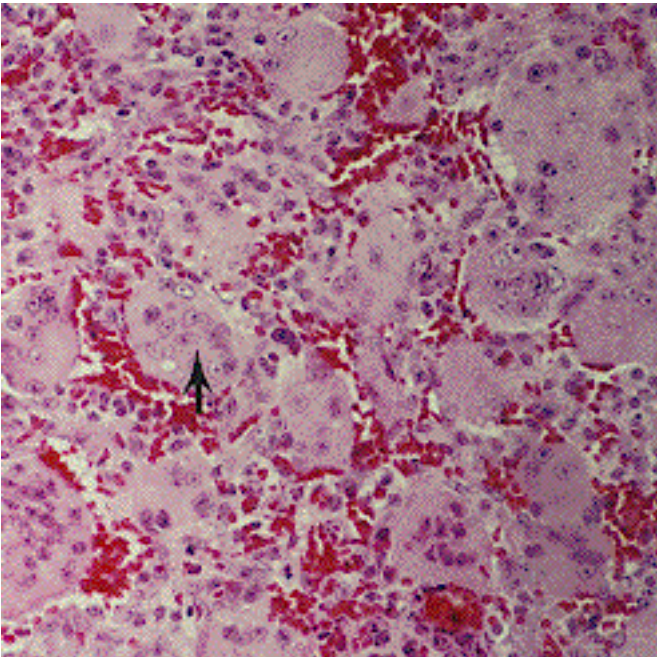


Foreign body giant cells, (single arrows) engulfing cholesterol crystals (double arrows) in patient with cholesteatoma.



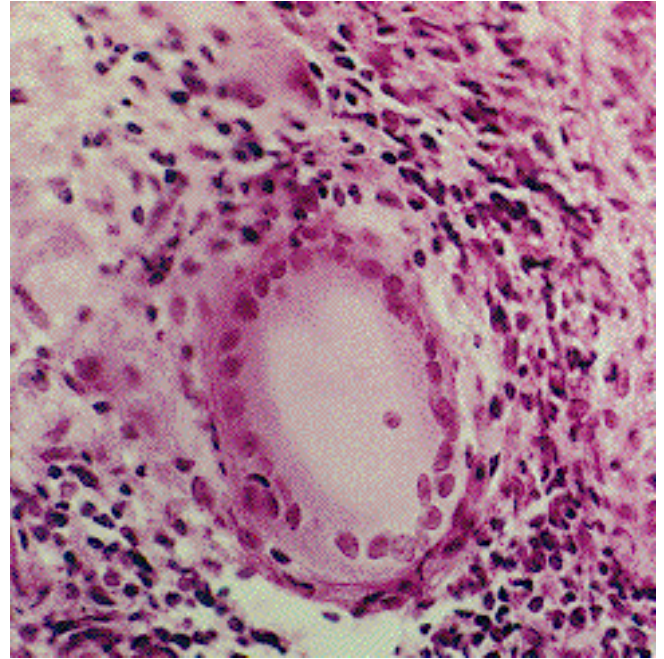


Foreign body giant cell (arrow), in which the particular foreign body (triangle) is not identified.

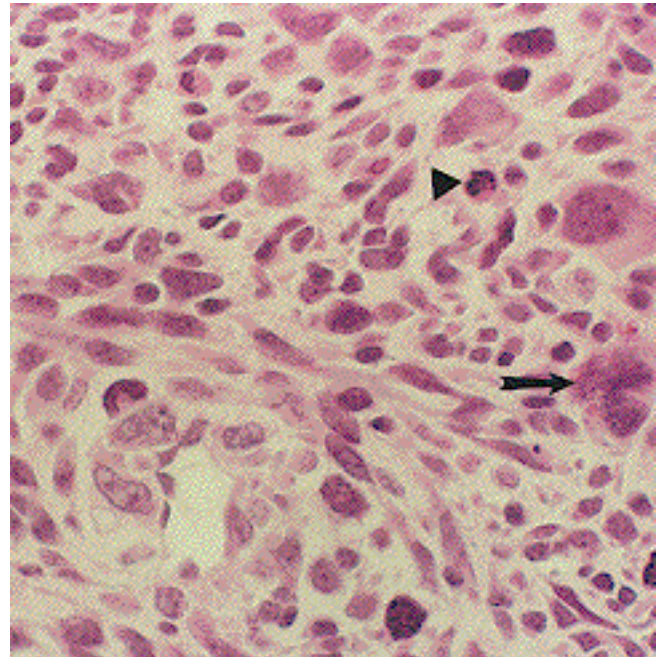


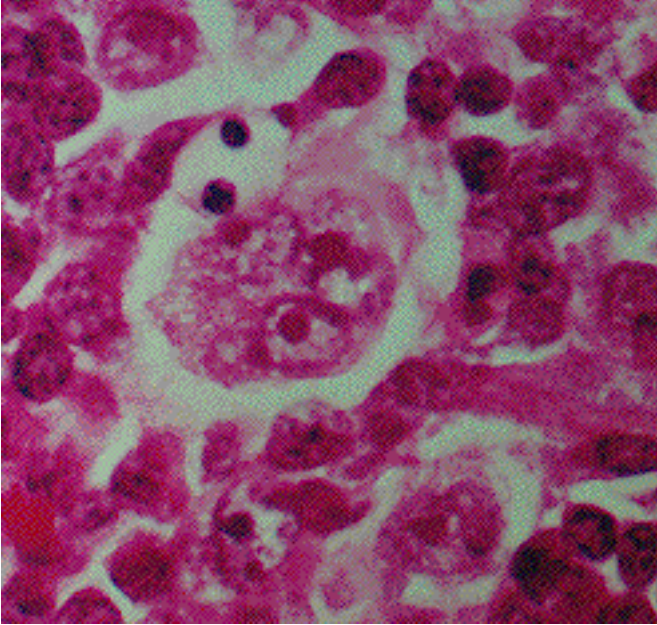
Giant cell tumor, maxillary sinus, at times indistinguishable from giant cell tumor of long bones, sometimes called giant cell granulomas or even giant cell "lesions" — thus a non-committal term. Earlier, the term giant cell "reparative" granuloma was used.

Langhans giant cell, in patient with sarcoid. Peripherally arranged nuclei surround an abundant cytoplasm. The dark cells adjacent to the giant cell are lymphocytes and more distally are pale epithelial cells (modified macrophages). Similar giant cells are seen in tuberculosis and other diseases.

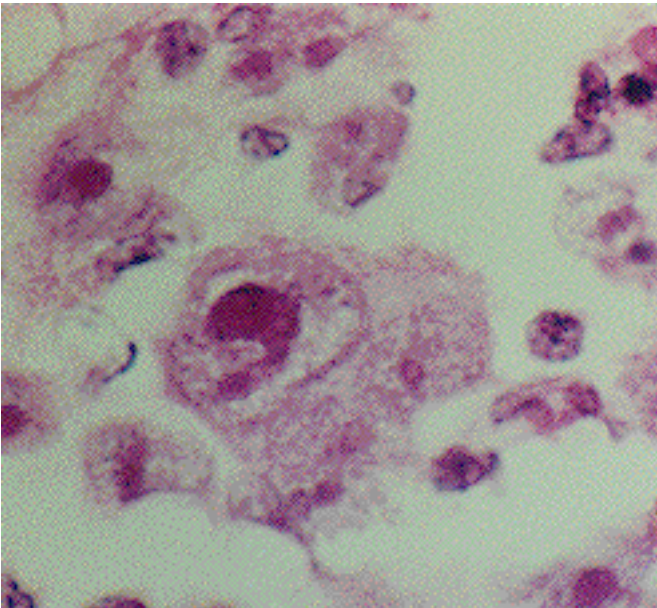


Tumor giant cells (arrow) osteogenic sarcoma. Other cells show marked pleomorphism and hyperchromicity. Mitosis (triangle).





Reed Sternberg giant cell, Hodgkin's disease, high power; shows inclusion-like nucleoli with a clear halo about them giving an owl's eye appearance. Nucleoli are eosinophilic.



Giant cell of Hodgkin's disease, high power. This is a mononuclear Reed-Sternberg variant sometimes called a "Hodgkin" cell with a large vesicular nucleus and large acidophilic nucleolus.