Hodgkin's Lymphoma

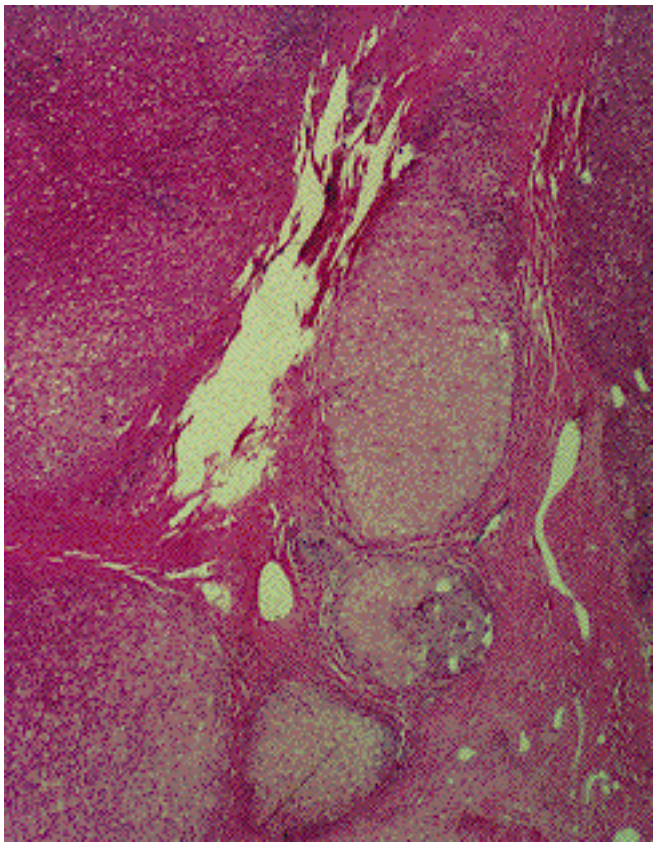
Hodgkin's disease, a malignant neoplasm of the lymphoreticular system, unlike other lymphomas, contains a number of different cell types including lymphocytes, plasma cells, histiocytes, eosinophils and the so-called Reed-Sternberg cell, a cell necessary to the diagnosis. Thus while most lymphomas are monomorphic, Hodgkin's disease is not.

There are four histologic subtypes of Hodgkin's disease. The lymphocyte predominant pattern of the disease provides sheets of lymphocytes (structurally normal) and a few Reed-Sternberg cells. If Reed-Sternberg cells are not found the disease is easy to confuse with non-Hodgkin's lymphoma.

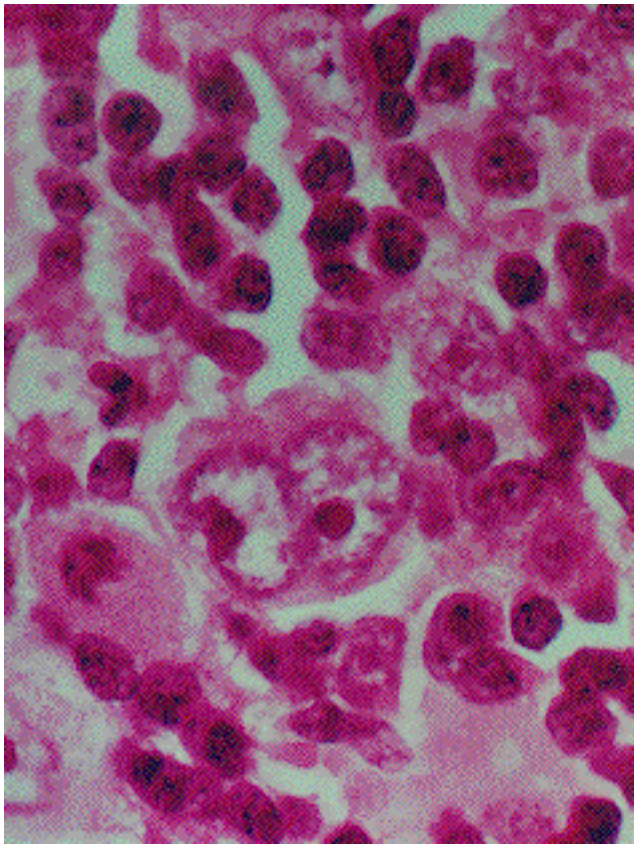
In the mixed cellularity type lymphocytes and histiocytes are evenly distributed and occasional eosinophils, neutrophils and fibroblasts occur. Reed-Sternberg cells must also be present for accurate diagnosis. Lymphocyte-depleted Hodgkin's disease shows sparse lymphocytes with sheets of large pleomorphic cells some of which can be identified as Reed-Sternberg cells. The nodular sclerosing type has broad irregular bands of collage separating nodules of tumor tissue. In this type, the lacunar cell, a variant of the Reed-Sternberg cell, may suffice for diagnosis. The Reed-Sternberg cell is a large binucleate cell, and each has a prominent eosinophilic nucleus often with a clear halo about the nucleolus creating "owl eyes."

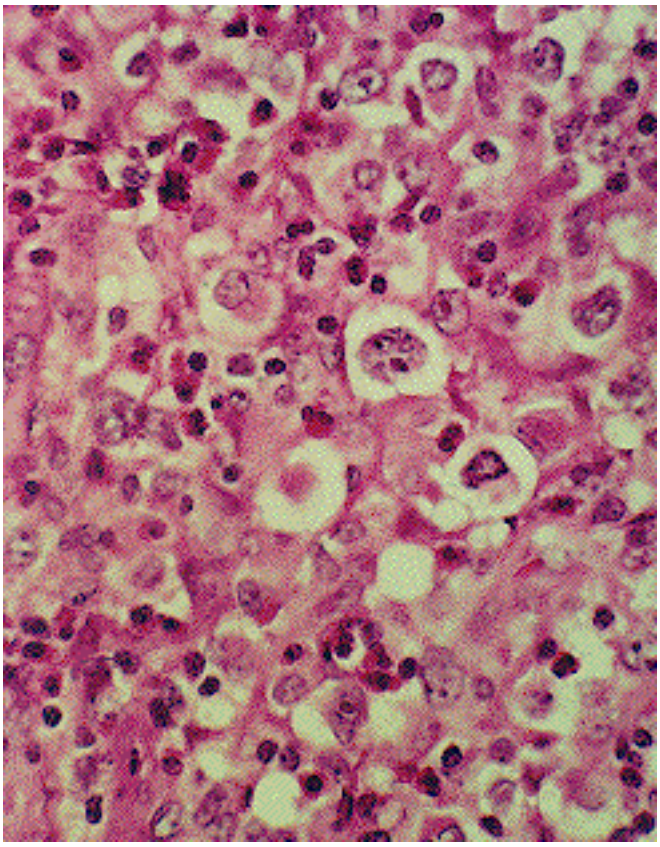
All types typically first cause lymphadenopathy and later involvement of spleen, bone marrow and liver. Necrosis is a common feature of Hodgkin's disease. The architecture of an involved node is partially or completely replaced by tumor.

Hodgkin's lymphoma, nodular sclerosis type — bands of collagen separate nodules of tumor.

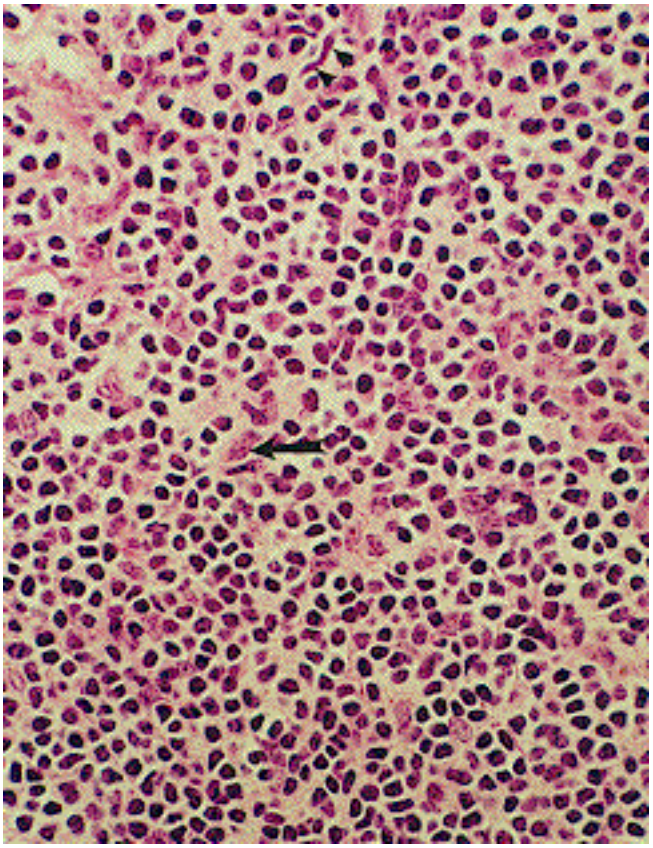


Hodgkin's lymphoma, nodular sclerosis type, showing a Reed-Sternberg cell, a necessity to the diagnosis of Hodgkin's disease. Note the large nucleated cell with "mirror image" appearance. The clear halos about the nucleoli give an "owl-eye" appearance. Sometimes, perhaps due to the cut, a similar cell with only one nucleus is seen. Some authors refer to these as Hodgkin's cells.



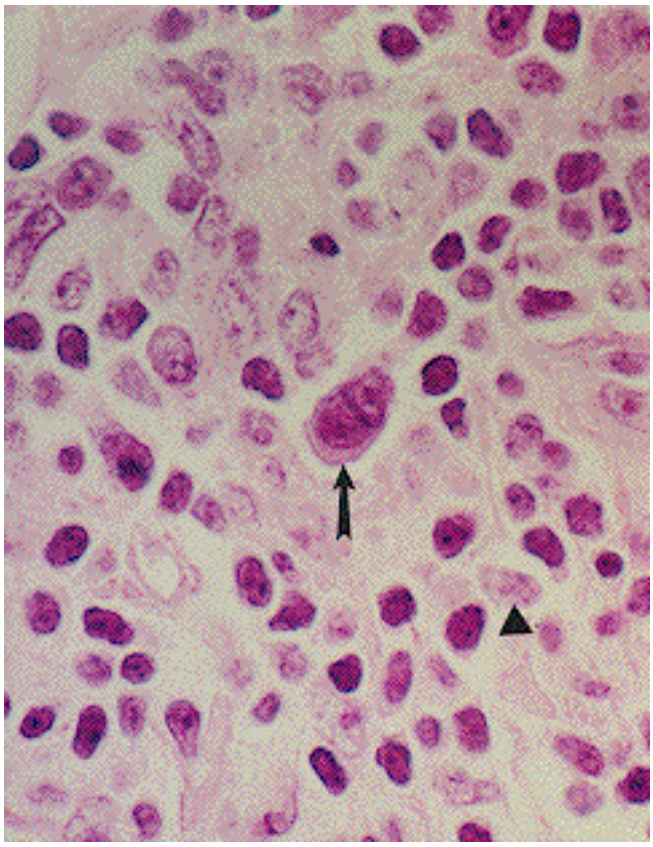


Hodgkin's lymphoma. Note prominent nucleoli and open chromatin pattern.

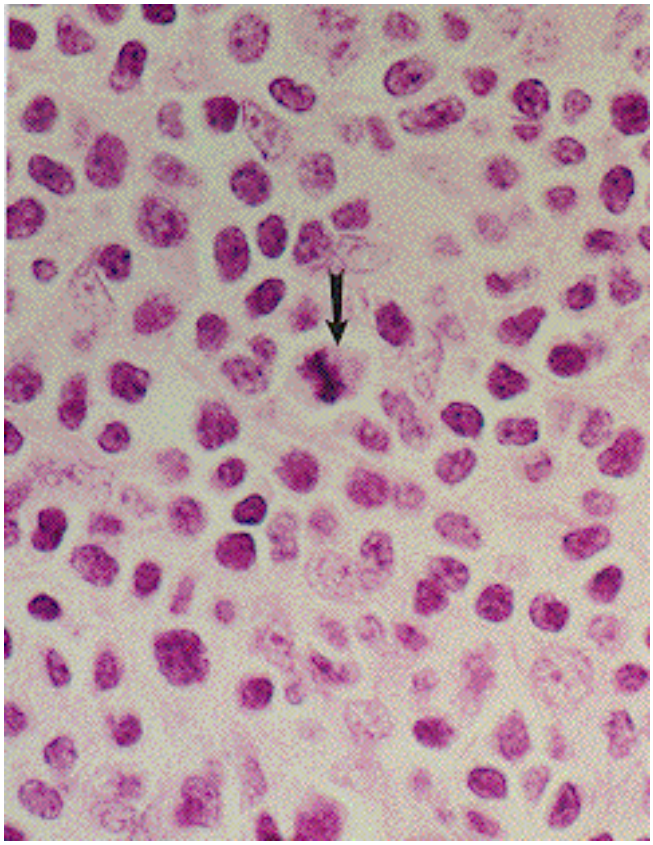


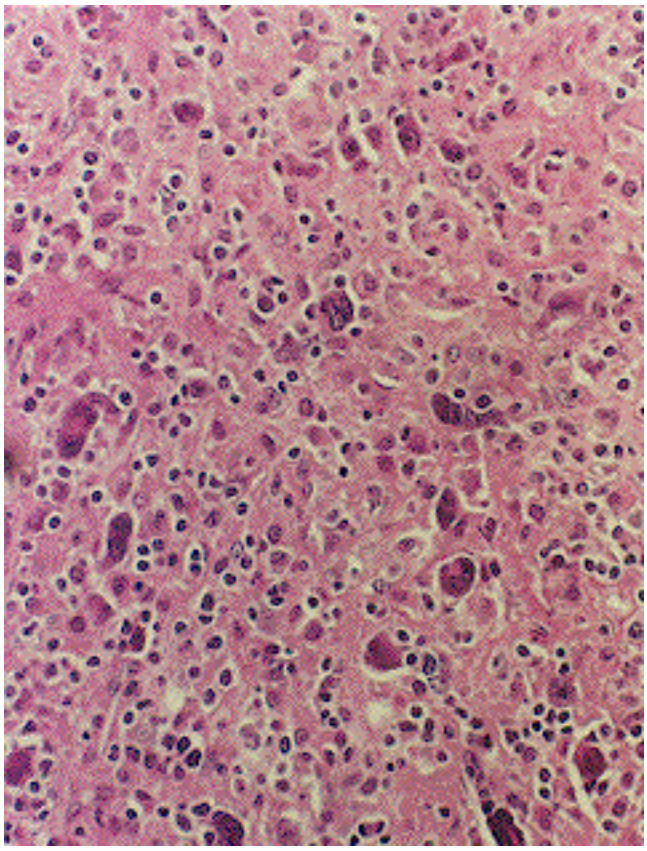
Hodgkin's lymphoma, mixed cellularity type — note lymphocytes and large histiocytes (arrow).

Hodgkin's disease, mixed cellularity type, with Reed-Sternberg cell (arrow). Triangle indicates histiocyte. Dark round cells are lymphocytes.



Hodgkin's disease, mitotic figure (arrow).





Hodgkin's disease, nodular sclerosing type; large cells are mononuclear variants of Reed-Sternberg cell.

Clinical Aspects

In Hodgkin's disease painless lymphadenopathy arises in one node or a chain of nodes and spreads to contiguous nodes. Fever is common in patients with disseminated disease. Diagnosis is dependent on biopsy. After staging, treatment is with chemotherapy and irradiation therapy.