# Hemepath Case 31: 19-Year-Old Male

## HISTORY

A 19-year-old male, an exchange student from Africa, presents with multiple bilateral painless and mobile enlarged cervical lymph nodes.  He reports a fever for the past week and weight loss of 2 pounds during this time.

## CBC

| | |
|---|---|
| Hgb (g/L) | Low |
| MCV | N |
| WBC | High |
| Plt | N |

## OTHER LABORATORY FINDINGS

| | |
|---|---|
| ESR | High |
| γ-Globulin | High, non-clonal |

## DESCRIPTION OF SLIDE

**Lymph Node Biopsy**
The lymph node biopsy shows massive expansion of the sinuses.  Emperipolesis – wandering of blood cells through the cytoplasm of large histiocytes – is also seen (see circles).

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## MORPHOLOGICAL DIAGNOSIS

Sinus histiocytosis with massive lymphadenopathy

## DISCUSSION

Sinus histiocytosis with massive lymphadenopathy, also known as Rosai-Dorfman disease, is a benign, mostly self-limited, polyclonal disorder.  Although the etiology is still unconfirmed, researchers have suggested stimulation of the immune system by an infectious antigen as a possible cause.  Patients typically present with massive bilateral

cervical lymphadenopathy, along with laboratory findings of anemia, hypergammaglobulinemia, and an elevated erythrocyte sedimentation rate (ESR).

Lymph node biopsy reveals distension of the medullary sinuses by phagocytic histiocytes.  These histiocytes contain leukocytes (lymphocytes, neutrophils, plasma cells) and erythrocytes in their cytoplasm; this characteristic finding is known as emperipolesis.  Additionally, the histiocytes are positive for S100 protein and CD68 by immunohistochemical analysis.  Few eosinophils, if any, are present.