

## The Ultrastructure of Inflammatory Cells

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### **Abstract**

It should be straightforward for experienced Pathologists and electron microscopists to distinguish between common or garden: erythrocytes, lymphocytes, plasma cells, monocytes, macrophages, neutrophils, eosinophils and platelets in a biopsy (whether intra or extra-capillary). However, no-one starts off experienced, so showing and describing how these cells appear by microscopy – not just TEM – is valuable. Images of these cells can be found in hematology textbooks, normal histology textbooks and Rhodin's Histology (mainly EM) textbook.

Identifying other inflammatory cells can be more challenging. For example, distinguishing between: basophils and immature intracapillary mast cells, the various mast cells granules, recognising various plasma cell Russell bodies for what they are, distinguishing between resting or activated lymphocytes, recognising large granular lymphocytes, dendritic cells and megakaryocyte naked nuclei - which are rarely found in EM textbooks.

One should also be able to recognise sickle cells and erythrocytes with Howell-Jolly bodies or malarial parasites. Some EM textbooks will include images of these.