

# Quantification of Dendritic Cells and Osteoclasts in the Bone Marrow of Patients with Monoclonal Gammopathy

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R�sum� en anglais	<p>The purpose of this study was to find histological clues for reliable differentiation between monoclonal gammopathy of undetermined significance (MGUS) and myeloma when clinical parameters are controversial. Differential appearance of dendritic cells and osteoclasts, two cell types developing from the monocytic lineage upon distinct cytokine activation profile, might be a useful approach. Bone and bone-marrow biopsies performed in 105 patients were studied using histomorphometry after identification of osteoclasts (by histochemical identification of tartrate resistant acid phosphatase) and dendritic cells (by immunohistochemical detection of the S-100 protein). Patients were classified by the World Health Organization criteria but histopathological criteria were more adapted to identify MGUS (53 cases), myeloma (46), B-cell lymphoma (six) since six myeloma were not correctly classified. Histomorphometry was compared to 15 control cases. The number of marrow dendritic cell was significantly increased with B-cell lymphoma &gt;MGUS &gt;myeloma &gt; controls. Dendritic cell were often mixed with lymphoma cells. Myeloma had increased bone resorption with a high osteoclast number and moderate increase in dendritic cells. B-cell lymphomas had a considerable increase in dendritic cell but presented mononucleated osteoclasts. These findings can help in the classification of MGUS in the early stages of the disease and could help to propose preventive treatments.</p>
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