

# Morphology and flow cytometry of non-hemopoietic bone marrow metastases

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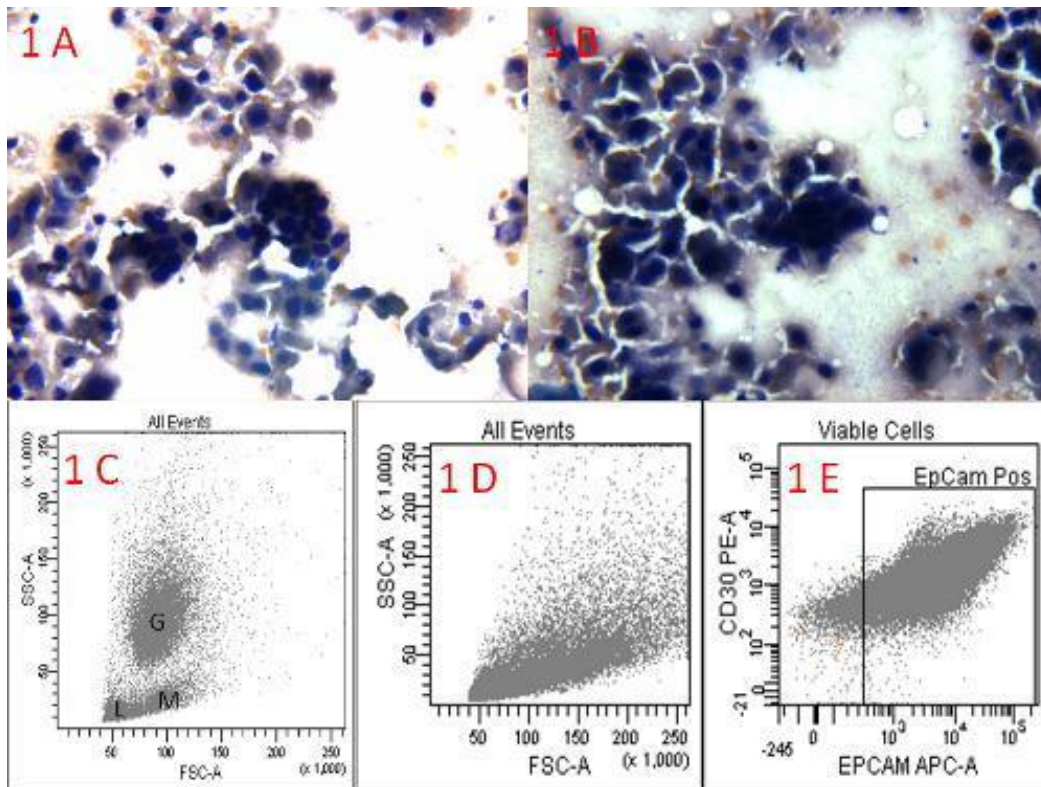


Figure 1

A 46 year old male presented with Hb 102 g/l, WBC count  $10.7 \times 10^9/l$ , platelet count  $136 \times 10^9/l$  and a peripheral blood film of leucoerythroblastic picture.

Flow cytometry scattergram (FSC vs. SSC plot) of his bone marrow aspirate showed events that were distributed over the whole plot with no distinct clusters of cells and no clear definition of normal populations (Image 1D). The non-hemopoietic nature of these events was demonstrated by being positive for the Epithelial Cell Adhesion Molecule (EpCAM) which is a pan-epithelial differentiation antigen that is expressed on almost all carcinomas (Image 1E).

Non-hemopoietic bone marrow metastases are also associated with the lack of expression of the pan-leucocyte marker CD45 and do not express B, T or myeloid markers.

The bone marrow aspirate morphology and the flow cytometry findings clearly show the replacement of normal hemopoietic tissue with aggregates of different sizes of non-hemopoietic cells (Images 1A & 1B).

Flow cytometry scattergram showing the characteristic populations of normal bone marrow aspirate is presented for comparison (Image 1C).