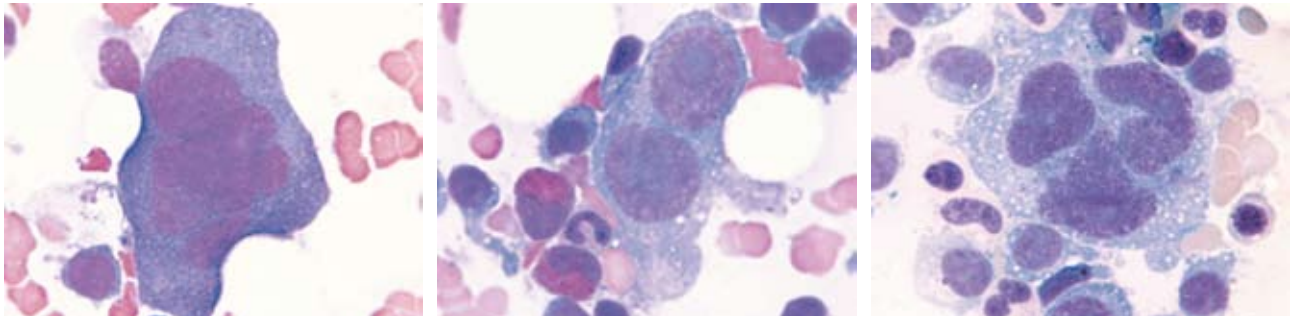


## CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

### Hematology Quiz - Case 2

A 56-year-old man was admitted to our hospital because of back pain, headache, visual disturbances, and gum bleeding during the last 5 days. On physical examination the patient was pale and sleepy, while several ecchymoses were seen in his arms. His heart, lungs, abdomen and lymph nodes were normal. The full blood count showed a normocytic anemia (Hb 9.9 g/dL, MCV 91 fL), thrombocytopenia (platelet count of  $82 \times 10^9/L$ ) and normal white blood cell ( $8.2 \times 10^9/L$ ) and differential counts. Blood biochemistry revealed an elevated serum creatinine (3.2 mg/dL), severe hypercalcemia (16 mg/dL) and hypoalbuminemia (2.9 g/L). Protein electrophoresis and immunoelectrophoresis revealed a monoclonal IgA $\kappa$  peak of 68 g/L. Beta2-microglobulin was also elevated (12.7 mg/L). The chest radiograph, computed tomography of the brain that was performed in the emergency department and radiography of the skull were normal. MRI of the lumbar spine showed diffuse infiltration of the bone marrow by malignant cells and multiple osteolytic lesions.

A few abnormal cells of plasmacytic morphology were found in the peripheral blood. In the bone marrow aspiration smears, numerous large atypical plasma cells with multiple nucleoli, at a proportion of 60% of the total nucleated cell population, were observed (figures 1–3). A trephine marrow biopsy displayed highly pleomorphic cells with coarse clockface-like chromatin and eccentric cytoplasm. Immunophenotypic study showed a moderate expression of CD56, CD45 and CD10 antigen and a dim positivity of CD138 and cytoplasmic lambda



light chain. Karyotyping showed hyperploidy (92, XY) with several numerical and structural abnormalities.

The diagnosis was established and the patient was given a combination of chemotherapy plus high dose dexamethasone. The symptoms improved and the full blood counts were reversed to normal. Patient achieved a partial response and was planned for high dose therapy with autologous stem cell support. Unfortunately, during the 4th course of his treatment the patient died due to septicemia.

#### Comment

*In some cases of multiple myeloma bone marrow contains plasmablasts with a more immature appearance usually containing a central nucleus, fine chromatin network and well visible nucleoli, less cytoplasm (hyperbasophilic) as compared to preplasmacytes and less well visible perinuclear halo. The preplasmacytes as well*

*as the plasmablasts present a cytoplasmic/nuclear asynchrony and numerous abnormalities; patients may often present a uniformity of a cellular subject while frequently they present an adequate heterogeneity of plasmacytic population. At times some large sized immature plasmacytes are present with multiple and numerous nuclei, abnormality of chromatin appearance, polyploidy and cytoplasmic abnormalities, with a very malignant appearance assuming the appearance of anaplastic myeloma (particular value when the plasmacyte percentage is low).*

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*Diagnosis: Anaplastic myeloma*

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