A 14-year-old female domestic shorthair cat was presented to Tehran University Veterinary Teaching Hospital with a 1-week history of persistent fever, anorexia, intermittent vomiting, weight loss (not emaciated) and weakness. Physical examination revealed pale mucous membranes, dehydration and splenomegaly, which were confirmed by abdominal radiography. Laboratory evaluation included a complete blood count (Vet Hema-Screen 18; Hospitex Diagnostics, Italy), serum biochemical profile (Eppendorf EPOS Analyzer 5060, Germany), bone marrow aspiration, faecal flotation test for the detection of parasitic infections (direct flotation method with saturated sugar solution) and an antigen-capture enzyme-linked immunosorbent assay (ELISA) test for FeLV P27 protein (Pet Check FeLV ELISA; Synbiotics, San Diego, California). The following cytochemical stains on blood smears were performed using a kit (Merck, Germany): leukocyte alkaline phosphatase (LAP), Sudan black B (SBB), chloroacetate esterase (CAE) and α-naphthyl butyrate esterase (α-NBE).

Flow cytometric analyses using antibodies against human CD34, CD11b and CD33 (Partec PAS III, Germany) were conducted with EDTA-anticoagulated blood samples from control animals as well as the patient in duplicate to evaluate if there would be any cross reactions with feline antigens. Abnormalities noted in the complete blood count included macrocytosis and non-regenerative anaemia characterised by a packed cell volume of 20% and lack of reticulocytosis. In addition, leukopenia, neutrophilia and marked...