unnecessary samples. However, it should be pointed out that three out of our 16 hematologic cases had the HFE mutations related to HH.

One important question remains to be answered. Is transferrin saturation as good a screening test in Southern Europe as it is in Northern Europe? In this regard, a number of studies have demonstrated a lower prevalence of the C282Y HFE mutation in these areas (from 0.5 to 3%). Moreover, a number of potentially confounding pathologies are more frequent in our countries (hepatitis C virus infection, thalassemia, alcoholism, etc.).

In conclusion, in tertiary level medicine, additional criteria (e.g., hepatitis C virus infection, alcoholism, hematologic disorders, transfusions) together with a positive iron overload screening test are necessary to isolate HH from other pathologies.

Key words
Hereditary hemochromatosis, HFE, iron.

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Cytoplasmic overexpression of p53 and p21rams in megaloblastic anemia

In this study, we describe, for the first time, cytoplasmic overexpression of p53 and p21rams proteins in megaloblastic anemia (MA). Nuclear p53 expression and mutations of p53 and N, H, and K-ras genes were absent. These results suggest that wild-type p53 protein might induce apoptosis in MA and help maintain genetic stability in this disease.

Sir,

We found overexpression of p53 and p21rams proteins in a patient with megaloblastic anemia (MA). We studied the expression of p53 and p21rams in bone marrow cytospins from this patient with MA and in 6 normal control samples from bone marrow donors. The levels of these proteins were assessed by the alkaline phosphatase-anti-alkaline phosphatase procedure (APAAP) with monoclonal antibodies PAb 1801 (p53) and Y13-259 (p21rams) (Oncogene Science – Calcibiochem). The patient was a 41-year old man with anemia. Laboratory data showed red blood cells 2.54 ×1012/L, hemoglobin 7.8 g/dL, hematocrit 21.6%, mean corpuscular volume 85 fL, reticulocyte count 1.3%, white blood cells 11.5×109/L, platelets 414×109/L, serum folate 3.73 ng/mL (normal 3-17 ng/mL), serum B12 <100 pg/mL (normal 300-1,000 pg/mL), and serum lactate dehydrogenase 5,954 U/L (normal 150-450 U/L). Bone marrow aspirate revealed typical megaloblastic morphology. A diagnosis of heterozygous α-thalassemia was also confirmed by Southern blotting. We found that p53 protein was highly expressed (+++ intensity) in the cytoplasm of all bone marrow cells in the cytospin (Figure 1), while p21rams was only moderately overexpressed (++ intensity). No expression was observed in the nucleus. All the control samples exhibited very low levels of p53 and p21rams expression. Six months after successful treatment with folate and vitamin B12, the patient's p53 and p21rams expression was similar to that of controls. Additionally, polymerase chain reaction (PCR)-single-strand conformation polymorphism (SSCP) analysis of the patient's bone marrow sample was negative for mutations in codons 12, 13 and 61 of N-, K-, and H-ras genes as well as in exons 2-11 of the p53 gene.

The patient showed an unusually high expression of wild-type p53 protein (wt-p53) in the cytoplasm of all bone marrow cells at diagnosis as demonstrated by the absence of p53 mutation, while normal bone marrow controls exhibited weak cytoplasmic p53 expression. Nuclear p53 expression was absent. As in our controls, small amounts of p53 were found by SSCP analysis of the patient's bone marrow sample but these were negative for mutations in codons 12, 13, and 61 of N-, K-, and H-ras genes as well as in exons 2-11 of the p53 gene.

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damage caused by uracil misincorporation into DNA, in agreement with a report that high levels of wt-p53 are associated with an increased rate of apoptosis in late-stage erythroblasts in folate deficiency states. We suggest, therefore, that p53 is one of the main mediators which induces apoptosis in MA and helps to maintain genetic stability in this disease. On the other hand, the overexpression of p21ras may reflect the activation of this signal transducer in part by elevated levels of erythropoietin determined by the anemia or other hematopoietic growth factors known to stimulate this signaling pathway.

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Key words
p53, p21ras, megaloblastic anemia.

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References

Acute monocytic leukemia in the adult presenting with associated extramedullary gastric infiltration and ascites

Involvement of the stomach in acute myelogenous leukemia has been rarely described. We report a case of an adult patient with acute monocytic leukemia who presented with an abdominal mass and ascites due to massive intramural involvement. Leukemic gastric infiltration in the adult leading to a tumoral presentation and melena has, to our knowledge, not been previously reported.

Sir,
Acute monocytic leukemia (AMoL), referred to as M5 in the FAB classification, is the morphologic subtype of acute myelogenous leukemia (AML) that most frequently presents with extramedullary involvement, including liver, spleen, lymph nodes, gingiva, skin, eyes, larynx, lung, bladder, meninges and the central nervous system. Involvement of the gastrointestinal tract is rare, the mouth, rectum and anal canal being the most affected sites. By contrast, leukemic infiltration of the stomach has been rarely described, and when it has, mainly in children. We report a case of an adult patient with AMoL who presented with an abdominal mass, ascites and melena due to massive intramural gastric infiltration.

A 32-year old woman was referred to our department with a 1-month history of constitutional symptoms, abdominal pain and melena, with a normal blood smear. There was no relevant past medical history. Examination upon admission revealed pallor, ascites and an epigastric mass, without palpable lymphadenopathy, hepatomegaly or splenomegaly. Examination of ascitic fluid revealed an exudate containing abundant monocytic blasts. Laboratory tests showed a hemoglobin of 99 g/L, MCV 88 fL, WBC $15.7 \times 10^9$/L (1% eosinophils, 28% neutrophils, 35% lymphocytes, 13% monocytes, 23% blast cells) and a platelet count of 84×10^9/L. Prothrombin and partial thromboplastin times were normal. Biochemistry data were unremarkable except for LDH 16 mkat/L (normal 3.9-6.7), albumin 36 g/L (normal 39-50), total proteins 59 g/L (normal 64-80) and β2-microglobulin 3.7 mg/L (normal 0.8-2.4).

Bone marrow examination revealed a blast population making up more than 50% of the cellular marrow components. The blast cells had an immature monocytic appearance and a diagnosis of acute monocytic leukemia (FAB M5a) was made. Blast cells were positive for non-specific esterase and negative for peroxi-