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Prognostic significance of the sequential detection of circulating melanoma cells by RT-PCR in high-risk melanoma patients receiving adjuvant interferon.

Gogas H, Kefala G, Bafaloukos D, Frangia K, Polyzos A, Pectasides D, Tsoutsos D, Panagiotou P, Ioannovich J, Loukopoulos D.

Source

Research Laboratory of 1st Department of Medicine, University of Athens; Aghiou Thoma 17, Goudi, Athens 11 527, Greece. hgogas@hol.gr

Abstract

The purpose of this study was to address the prognostic significance of circulating melanoma cells by reverse transcriptase-polymerase chain reaction in the peripheral blood of stage IIB and III melanoma patients on high-dose adjuvant interferon at multiple sequential time points from initiation of treatment. Tyrosinase mRNA in peripheral blood from these patients was assayed by reverse transcriptase polymerase chain reaction prior to initiation of adjuvant interferon, at completion of 1 month of intravenous interferon and at 3 monthly intervals until progression. Four hundred and eighteen blood samples from 60 melanoma patients were analysed. The median follow-up time calculated from the time of inclusion in the study was 23 months (range 2-38 months). Tyrosinase mRNA in blood was detected in 42 (70%) of 60 patients: 16 (76%) of 21 stage IIB patients and 26 (66%) of 39 stage III patients. The presence of tyrosinase mRNA in blood was correlated with a shorter disease-free survival (P : 0.03) and in multivariante analysis was an independent prognostic factor for relapse. Patients who seroconverted to a negative reverse-transcriptase-polymerase chain reaction after induction treatment had a significantly lower probability of recurrence. The presence of circulating melanoma cells is a marker of a high relapse risk and shorter disease-free survival whether detected postoperatively or during follow-up. Tyrosinase mRNA amplification by reverse-transcriptase-polymerase chain reaction may be a useful tool for monitoring the efficacy of adjuvant treatment in stage IIB and III melanoma patients.

Comment in

- Value of tyrosinase RNA detection by an RT-PCR method in melanoma prognosis. [Br J Cancer. 2003]