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Bcl2 and p53 protein expression in metastatic carcinoma of unknown primary origin: biological and clinical implications. A Hellenic Co-operative Oncology Group study.

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Source

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Abstract

We have previously shown that metastatic carcinomas of unknown primary site overexpress several tumor markers as well as the products of the oncogenes c-myc, ras and c-erbB2. We analyzed the tissue expression of the protein products of the apoptosis modulation genes p53 and bcl-2 in 47 CUP cases. Formalin-fixed, paraffin embedded tumor specimens were stained with commercially available antibodies to p53 (DO7) and bcl-2 after antigen retrieval by the microwave method. Staining was evaluated by intensity (1+ to 3+), percentage of positive cells (1-100%), and the 'intensity times percentage' product defined as the immunoreactivity index with values ranging from 0 to 300. Immunoreactivity index values higher than 150 were considered to characterize protein over-expression. Expression of p53 was identified in 70.2% of tumors while 53% of them showed a high immunoreactivity index. Bcl-2 expression was detected in 65% of tumors and overexpressed in 40%. Overexpression of both proteins was detected in 20% of tumors. The detection of either protein was not associated with any of the major clinicopathological variables studied. Nevertheless, a trend towards a more favourable response to platin based chemotherapy was seen in the cases that showed a strong expression of both proteins, when analysed by immunoreactivity index and percentage of positive cells. We conclude that CUP overexpress at a high percentage the p53 and the bcl2 proteins. The observed weak association of strong expression of these proteins with response to platin-based chemotherapy deserves further evaluation in the CUP setting.