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Expression of MAGE-1, -2 and -3 Genes in Primary and Metastatic Lesions of Human Malignant Melanomas

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Aim. Analysis of the expression of MAGE-1, -2 and -3 genes in melanoma tissue samples. MAGE-1, -2 and -3 genes encode human melanoma antigens recognized by syngeneic cytotoxic lymphocytes. Method. A reverse transcription-polymerase chain reaction (RT-PCR) was used to analyze the expression of MAGE-1, -2 and -3 genes in 15 melanoma samples at various stages of progress. Results. The highest occurrence of gene expression was found in MAGE-1 (8/15, 53%), while MAGE-2 was expressed in 3 (20%), and MAGE-3 in 4 tumors (27%). In two samples, concomitant expression of MAGE-1 and MAGE-3 were found. Concomitant expressions of MAGE-1 and MAGE-3 genes on the one hand, and of MAGE-2 and MAGE-3 genes on the other, were observed in only one case each.

Conclusion. Our results on MAGE-1 gene expression are similar to those found in previous research, whereas the frequencies of MAGE-2 and MAGE-3 genes are lower than the published data.

Key words: chromosomal proteins, gene expression; gene frequency; melanoma; transcription factors