# of cell proliferation and death and oncogene expression in cutaneous malignant melanoma.

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Abstract:

Ninety-six cutaneous melanomas (CMs) were investigated aiming at finding differences, if any, among the main four clinicopathological types, for Bcl-2, c-myc and p53 protein expression, and for tumor cell proliferation and death indices. Proliferation was assessed by calculating the mitotic index (MI, number of mitoses) and the MIB1 labelling index (M-LI, number of MIB1+ nuclei), and tumor cell death by calculating the apoptotic index (AI, number of apoptoses) among 1000 tumor cells. CMs were subdivided into thin (<1 mm) and intermediate thickness (1-4 mm) tumors. Bcl-2 expression did not significantly change among different types. c-myc Expression decreased especially in thicker superficial spreading (SSM) and lentigo maligna melanoma (LMM) types. p53 Expression was higher in nodular melanoma (NM) and in acral lentiginous melanoma(ALM), which also showed the highest degrees of proliferation. AI was significantly higher in thin rather than in intermediate thickness SSMs, LMMs and ALMs (8.4 vs. 2; 6.1 vs. 2.3, and 5.8 vs. 3.6, respectively). AI was low in thin (1.7) and intermediate thickness (1.9) NMs, which also showed high MI (3.9 and 4.5, respectively), and M-LI (16.7 and 2.9, respectively). Thin and intermediate thickness ALMs also showed high MI and M-LI (4.1 vs. 5.2 and 11.3 vs. 14.6, respectively). Bcl-2 is among genes which inhibit apoptotic death, whereas c-myc and p-53 genes promote this process. In CMs, no relation was found between Bcl-2 expression, MI, PI, and AI. All SSMs, LMMs, and ALMs with a high AI showed a high c-myc expression and were negative for p53. c-myc, Although highly expressed, did not promote a significant apoptotic death in NM type. Bc12, c-myc, and p53 were not equally expressed nor equally related to tumor cell turnover in all CMs, suggesting their different influence on the various types and stages, and the role of other factors in CM growth control.