



MELANOMA AND MELANOCYTIC NAEVI

EZH2 PROTEIN EXPRESSION CAN IMPROVE THE PROGNOSTIC STAGING ON MELANOMA PATIENTS

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Background: In melanoma, EZH2 elevated expression is associated with poor survival and more serious clinical stage. Nevertheless, primary melanomas without distant metastases (stage I-III) having high levels of EZH2 developed metastases (stage IV) earlier than EZH2 low-expressing stage I-III patients.

Objective: Our goal was to investigate whether EZH2 expression can help the pathologist to assess better the stage of patients.

Materials and Methods: Biopsies were performed and processed following routine histopathological procedures. Forty-six formalin fixed paraffin-embedded blocks (FFPE) were obtained for both histology and immunohistochemical staining. To evaluate the intensity of EZH2 protein expression we established a score based on 4 different positivity levels; score 0 (<5%), score 1 (5-25%), score 2 (25-50%) score 3 (>50%). Samples having score values equal to 0 or 1, were classified as low expression (LE), while sample equal to 2 and 3, were assessed as high expression (HE).

Results: A total of 78 melanoma patients were classified after analyses: A) 29 not clearly metastatic (stage IIC) and B) 49 metastatic (stage IV) patients. The demographic characteristic of both groups are very close to each other. Not significant differences were observed comparing mean age and gender. Indeed, not significant differences were observed for EZH2 protein expression comparing group A vs group B, looking at the mean score values (47.59 vs 43.06; $p=0.4787$). Nevertheless, we also observed the same distributions of patients comparing HE of EZH2, splitting the patients by the mean score value (72.41% vs 73.47%; $p=1.000$) and by the absolute score values (55.17% vs 48.98%; $p=0.8160$).

Conclusions: Our data suggest that high levels of EZH2 are sometimes present even in melanoma patients with lower clinical stage. EZH2 protein evaluation could be used to





better assess metastatic potential after excision of the primary tumor in order to stratify melanoma patients, correctly.

