

## **Immunohistochemical study of Cox-2 in melanocytic skin lesions**

**Ghareaghaji Zare A, MD, Khodaeiani E, MD, Fakhrjou A, MD, Talghini S, MD, Amirnia M, MD.**

**Dermatology Department, Sina Hospital, Faculty of Medicine, Tabriz University of Medical Sciences**

**Introduction:** It is shown that cyclooxygenase-2 (CoX2) has a role in tumoral pathogenesis in different organs as well as malignant skin tumors like malignant melanoma; however, there are not enough information about COX2 expression in benign melanocytic lesions. In this study we aim to compare COX2 expression in malignant melanoma and benign melanocytic lesions.

**Methods:** In this analytical study, 21 malignant melanoma from all 4 subtypes and 19 benign melanocytic lesions including dysplastic nevus, Spitz nevus and atypical nevus were evaluated for COX2 expression using immunohistochemistry staining and intensity of cell staining (in tumoral cells and inflammatory cells around them).

**Results:** Malignant melanoma compared to benign melanocytic lesions had significantly higher overall staining score ( $p < 0.001$ ). They had also higher percent of COX2 staining and stronger staining of cells. Regarding the COX2 staining between malignant melanoma subtypes, all four subtypes mostly had staining intensity over 60%. Regarding intensity of cell staining, ALM had the most severe staining and LM and NM had mostly moderate staining intensity. With increase in size and depth of tumor, COX2 staining increased. Intensity of cell staining was also higher in cases with tumor depth 2-4 mm.

**Conclusion:** Results of current study are indicative of COX2 in differentiating between malignant melanoma with benign melanocytic lesions. Higher expression of COX2 in malignant melanoma is indicative of higher grades and higher depth of tumor.

**Keywords:** Cyclooxygenase-2; Malignant melanoma, Benign lesion; Immunohistochemistry