

SKIN CANCER (OTHER THAN MELANOMA)

## SONIC HEDGEHOG EXPRESSION ANALYTIC IN AGGRESSIVE AND NON AGGRESSIVE BASAL CELL CARCINOMA: AS A BIOMARKER

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**Introduction:** Basal cell carcinoma (BCC) is a cutaneous non melanoma cancer usually found in Caucasian. In Asia, especially Indonesia, the incidence of BCC was increased every year. The role of biomarkers to determine its growth is still unclear, but previous studies have shown an increase of Sonic Hedgehog (SHH) expression in BCC with immunohistochemistry (IHC) examination. Increased of SHH expression results in development of BCC

**Objective:** The aim of this study is to determine the expression of SHH in aggressiveness of BCC

**Material and Methods:** This was a retrospective analytic observational study of laboratory from skin biopsies of 35 primary BCC patients from August 2017 - August 2018 at outpatients clinic DV at Sriwijaya University. Gender, age and occupational data of BCC patients were taken, then we examined the clinico-histopathologic to determine the aggressiveness of BCC and to determine SHH expression with IHC

**Results:** There was no correlation between age ( $p=0.489$ ), gender ( $p=0.407$ ) and the occupation related to sunlight exposure ( $p=0.318$ ) with aggressiveness of clinico-histopathologic features ( $p=0.318$ ). We found the aggressive type of clinical features such as nodulo-pigmented (10 patients; 28,6%) and nodulo-ulcerative (5 patients; 14,3%) were linear with aggressive type of histopathologic feature, nodular BCC (15 patients; 42.8%) showed non-aggressive in histopathologic feature. There was a significant correlation, respectively between clinical features with histopathologic ( $p=0.02$ ) and histopathologic



features with aggressiveness of BCC ( $p=0.000$ ). We found a statistically significant ( $p=0.000$ ) correlation of SHH expression with aggressiveness BCC. There were moderate and strong SHH expression ( $> 7$  times) in aggressive BCC than non-aggressive BCC

Conclusions: There is a strong correlation between SHH expression with clinico-histopathologic features of BCC. The increase of SHH can be used as a diagnostic tool to determine the aggressiveness of BCC and further study is needed to use SHH as a treatment target for BCC

