



DERMATOLOGICAL SURGERY

## RISK FACTORS OF RECURRENCE AND VALIDITY OF STAGING SYSTEMS IN CUTANEOUS SQUAMOUS CELL CARCINOMA AFTER MOHS MICROGRAPHIC SURGERY; RETROSPECTIVE REVIEW OF 237 PATIENTS

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**Importance:** Most studies regarding risk factors for recurrence after Mohs micrographic surgery (MMS) in cutaneous squamous cell carcinoma (cSCC) are from Western countries.

**Objective:** To investigate clinical risk factors for recurrence and validate staging systems in Asian cSCC patients treated by MMS.

**Materials and Methods :** This retrospective study reviewed cSCC patients treated by MMS in a single-tertiary referral center from 2000 to 2017. Correlations among various clinical factors and recurrence were analyzed by logistic and Cox regression analyses and predictive powers for recurrence of four staging systems for cSCC (AJCC 7th, AJCC 8th, BWH, Breuninger) were validated.

**Results:** A total of 241 patients were reviewed and 237 patients were included in the analysis. Among 237 patients, 36 patients showed recurrence (21 patients with local recurrence and 15 patients with distant metastasis). In these patients, factors such as history of organ transplantation ( $p=0.048$ ), comorbidity of diabetes ( $p=0.026$ ), history of other malignancies ( $p=0.023$ ) and poorly differentiated histopathology of cSCC ( $p=0.024$ ) correlated with recurrence. History of trauma on the cSCC site ( $p=0.035$ ) and poor differentiation ( $p=0.019$ ) were related with higher local recurrence. Poor differentiation ( $p=0.001$ ) correlated with higher risk of distant metastasis. Among four staging systems, AJCC 8th staging system showed the highest predictive value.

**Conclusion:** Poor differentiation histology, solid organ transplantation recipient, comorbidity





of diabetes mellitus, history of other malignancy and trauma history on the site of cSCC were high-risk factors for recurrence and AJCC 8th staging system is the most predictable system for predicting recurrence in Asian cSCC patients treated by MMS.

