

Tumor programmed cell death ligand 1 expression correlates with nodal metastasis in patients with cutaneous squamous cell carcinoma of the head and neck

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Background Binding of tumor-expressed programmed cell death ligand 1 (PD-L1) to the programmed cell death 1 (PD-1) surface receptor blocks T-cell activation thereby leading to immune evasion. Tumor PD-L1 expression has been associated with poor outcome in a wide variety of cancers; however, data in cutaneous squamous cell carcinoma (cSCC) are scarce and conflicting.

Objective To investigate the relationship of tumor PD-L1 expression with the clinicopathologic features and prognosis of cSCC. **Methods** PD-L1 expression was analyzed by

immunohistochemistry on paraffin-embedded tissue samples from 100 patients with cSCC.

Cumulative/dynamic receiver operating characteristic curve was used to determine the optimal PD-L1 threshold. Kaplan-Meier estimators and Cox proportional hazards regression models were also used. **Results** On the basis of cumulative/dynamic receiver operating characteristic curves, we defined the cut-off score for PD-L1 expression as $\geq 25\%$ of tumor cells positively stained. PD-L1 expression was a significant risk factor for nodal metastasis with crude and adjusted hazard ratios of 3.39 (1.71-6.65) and 6.54 (2.28-18.78), respectively. **Limitations** This is a retrospective study limited to cSCC of the head and neck. **Conclusion** These findings indicate that tumor PD-L1 expression predicts increased risk for nodal metastasis in patients with cSCC. © 2017 American Academy of

Dermatology, Inc.

cutaneous squamous cell carcinoma

expression

immunohistochemistry

nodal metastasis

PD-L1

prognosis

tumor

programmed death 1 ligand 1

programmed death 1 ligand 1

aged

Article

cancer patient

cancer prognosis

cancer staging

cancer survival

clinical feature

controlled study

female

follow up

head and neck carcinoma

histopathology

human

human tissue

immunohistochemistry

lymph node metastasis

major clinical study

male

overall survival

priority journal

protein expression

retrospective study

risk factor

skin carcinoma

T lymphocyte activation

tissue microarray

tumor differentiation

tumor growth

tumor volume

wide excision

biosynthesis

head and neck tumor

lymph node metastasis

metabolism

pathology

secondary

skin tumor

squamous cell carcinoma

very elderly

Aged

Aged, 80 and over

Antigens, CD274

Carcinoma, Squamous Cell

Female

Head and Neck Neoplasms

Humans

Lymphatic Metastasis

Male

Retrospective Studies

Skin Neoplasms