


PENILE CANCER

Prognostic value of PD-L1 status

A new study found that programmed cell death 1 ligand 1 (PD-L1) is expressed in 48% of primary penile carcinomas and is associated with negative high-risk human papilloma virus (hrHPV) status. The data also show that PD-L1 expression pattern (marginal or diffuse) might be a prognostic marker of lymph node status and survival.

In this report, which was recently published in *The Journal of Urology*, researchers evaluated PD-L1 expression in 200 tumour samples from a well defined cohort of men with primary invasive penile carcinoma. Immunohistochemistry staining, excluding cytoplasmic staining, was scored positive or negative according to different cut-off values. At a 1% cut-off level, 96 samples (48%) were positive for PD-L1 expression. Of these tumours, 59 specimens expressed the marker predominantly at the stroma–tumour interface (marginal expression) and 36 specimens had PD-L1 expression throughout

the tumour (diffuse expression). Status of hrHPV had previously been assessed using PCR; overall, 75.2% of tumours were negative for hrHPV and more hrHPV⁻ samples were PD-L1⁺ ($P=0.03$).

Univariable analysis of PD-L1 status and clinical parameters revealed that, among PD-L1⁺ tumours, diffuse expression was associated with positive lymph node status at staging and poor disease-specific survival (both $P<0.01$). In multivariable analysis, when comparing PD-L1⁺ with PD-L1⁻ tumours, marginal and diffuse expression pattern was independently associated with negative lymph node status (OR 0.4) and with poor survival (HR 2.58), respectively. In samples from men with negative hrHPV status, these values were more pronounced (OR 0.25 and HR 3.92, respectively).

Adding to previous data, these results further show that many penile carcinomas express PD-L1. In addition, PD-L1 expression pattern might be prognostic for lymph node status and survival.

Clemens Thoma

ORIGINAL ARTICLE Ottenhof, S. R. et al. Expression of programmed death ligand 1 (PD-L1) in penile cancer is of prognostic value and associated with HPV status. *J. Urol.* <http://dx.doi.org/10.1016/j.juro.2016.09.088> (2016)