

Lee E.¹, Antonelli L.², Issa A.¹, James C.¹, Oliveria P.¹, Lau M.¹, Sangar V.¹, Parnham A.¹, Fankhauser C.D.²

¹Christie NHS Foundation Trust, Dept. of Urology, Manchester, United Kingdom, ²University of Lucerne, Dept. of Urology, Lucerne, Switzerland

Introduction & Objectives: Early detection and treatment of local recurrence after penile sparing surgery is crucial as 10% of men with local recurrence develops metastatic disease. An important risk factor for local recurrence represents a positive surgical margin as 90% of men with a positive surgical margin show remaining cancer in subsequent reresections. The risk of local recurrence in men with no penile cancer but the precancerous lesion penile intraepithelial neoplasia (PeIN) in the surgical margin is less well studied and was the aim of this analysis.

Materials & Methods: We performed a retrospective analysis of men with distal penile cancer undergoing penile-sparing surgery. Outcome Measurements and Statistical analysis. Kaplan Meier curves and Log rank test and a multivariable Cox regression adjusted for grade and stage were performed to assess the difference of local recurrence free survival in patients with PeIN positive margins and completely negative margins.

Results: A negative surgical margin was described in 319 men (85%), whereas PeIN in the surgical margin was found in 59 men (15%). Local recurrence was observed 30/319 (9%) of men with a negative surgical margin compared to 11/59 (19%) men with PeIN in the surgical margin. After a median follow up of 2.8 years, patients with PeIN at the margin were more likely to have local recurrence than those with negative margins (log rank p=0.03). Adjusted for T stage and grade, patients with PeIN at the surgical margin had a higher risk to develop a local recurrence than those with a negative surgical margins without PeIN (HR 2.32, p=0.025).

Conclusions: Men with a PeIN-positive surgical margin are twice as likely to experience local recurrence compared to men with a negative surgical margin and should undergo closer surveillance and/or adjuvant treatment.