P064 The use of Tweak-Fn14 as a non-invasive biomarker panel for prostate cancer

EUR Urol Suppl 2019;18(11):e3489

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Introduction & Objectives: Conventional clinical biomarkers cannot accurately differentiate indolent from aggressive prostate cancer (PCa) patients. We investigated a set of circulating biomarkers to help to prognosticate PCa aggressiveness.

Materials & Methods: We collected biofluid samples (plasma / serum / semen / urine-post-prostatic stimulation) from 97 patients that have undergone radical prostatectomy. sTWEAK, sFn14, sCD163, sCXCL5 and sCCL7 were quantify by ELISAs in the collected biofluids. The expression of the following genes: KLK2, KLK3, Fn14, CD163, CXCR2, CCR3 were quantified by real-time PCR. We used univariate comparisons and ROC curve to assess the predictive ability of biomarkers, clinical and metabolic variables.

Results: Levels of sTWEAK in semen and total PSA in serum were significant higher in patients with less aggressive tumours (Gleason Group I and II) compared with those of more aggressive tumours (Gleason Group III,IV and V). ROC curves combining both, serum total PSA levels and sTWEAK levels in semen, allowed 81.1 % AUC the differentiation of tumour aggressivity as classified by Gleason criteria.

Conclusions: TWEAK levels combined with PSA levels represents a non-invasive biomarker panel with high negative predictive value. It may be used to classify of PCa aggressiveness and may become another tool for defining patients' right treatment. .