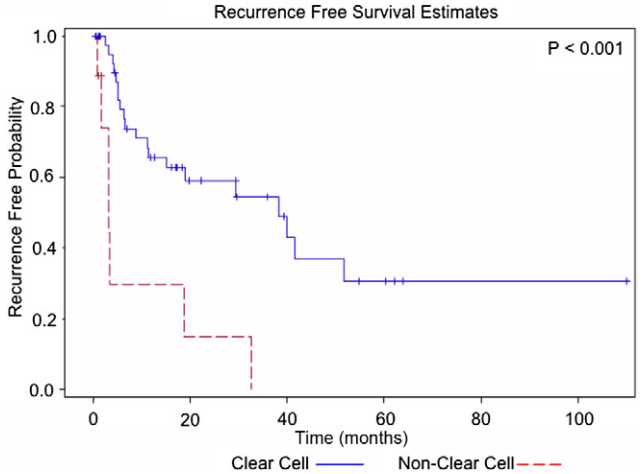
2 or more comorbidities, and level IV thrombus were associated with significantly increased tumor recurrence. On multivariable analysis only non-clear cell pathology was significantly increased risk of recurrence (HR 4.32, p = 0.002). Additionally, non-clear cell pathology was associated with significantly worse median recurrence free survival compared to clear cell pathology (3.3 mo [95% CI 0.9-18.8 mo] vs 38.3 mo [95% CI 11.4-NA], p < 0.001) (Figure).

CONCLUSIONS: Patients undergoing radical nephrectomy with IVC thrombectomy for curative intent with non-clear cell pathology may have increased risk of disease recurrence. Further data is needed to determine optimal treatment and surveillance strategies for this subset of high-risk patients.



Source of Funding: None

Prostate Cancer: Detection & Screening (III)

Moderated Poster Session 71

Tuesday, May 7, 2013 **3:30 PM–5:30 PM**

1924

PSA KINETICS DOES NOT PREDICT PROSTATE CANCER IN MEN SUBJECTED TO PROSTATE BIOPSY

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INTRODUCTION AND OBJECTIVES: PSA velocity (PSAV) and PSA doubling time (PSADT) are the most significant parameters reflecting PSA kinetics. Their clinical usefulness in men at high risk of prostate cancer (PC) due to elevated serum PSA and/or suspicious digital rectal examination (DRE) remain controversial. The objective of this study was to analyse PSAV and PSADT as predictors of PC in men subjected to prostate biopsy (PB) focusing our attention in primary and repeated biopsies.

METHODS: A consecutive group of 528 men referred to PB with at least three available serum PSA determinations was selected. PSAV and PSADT were calculated using the MSKCC device. The median time between first and last PSA determinations was 15 months (5-64). The median age was 67 years (43-84). In 77.1% of men it was the first PB while in 15.1%, 7.4% and 0.4% it was the second, third and fourth PB respectively. The standard number of cores was 10 plus 1 to 8 additional ones according to age and prostate volume, according to a modified Vienna's nomogram. The overall detection rate of PC was 38.1% (44% in first PBs and 19% in repeat ones). Univariate and multivariate analysis were done including also percent free PSA (PFPSA) and PSA density (PSAD) as PC predictive variables.

RESULTS: Overall median PSAV was 1.2 ng/ml/year in men with negative PB and 1.4 ng/ml/year in men with PC, p=0.147. Overall median PSADT was 26.1 months and 26.3 months respectively, p=0.619. Similar results were founded in men subjected to the first PB and the repeat ones. Contrarily PSAD was significantly higher in men with PC, even at time of first PB or repeat ones. PFPSA was significantly lower in men with PC detected only at the time of first PB. Multivariate analysis showed that PSAD (OR 43.14, 95%CI 5.91–315.01, p<0.001) and PFPSA (OR 0.96, 95%CI 0.93-0.99, p<0.047) were the only predictive variables of PC at the time of first PB while only PSAD (OR 9.23, 95%CI 1.08-98.39, p<0.048) was in men scheduled to repeat PB.

CONCLUSIONS: PSA kinetics (PSAV and PSADT) were not useful to increase the specificity of serum PSA in men at high risk of PC due to elevated serum PSA and/or abnormal DRE. In contrast PSAD and PFPSA were of helpful to avoid unnecessary PBs in men scheduled to their first PB while only PSAD in men with repeat PB indication.

Source of Funding: Hospital Vall d'Hebron.

1925

PSA VELOCITY PER PROSTATE VOLUME: A TOOL FOR PROSTATE CANCER DIAGNOSIS

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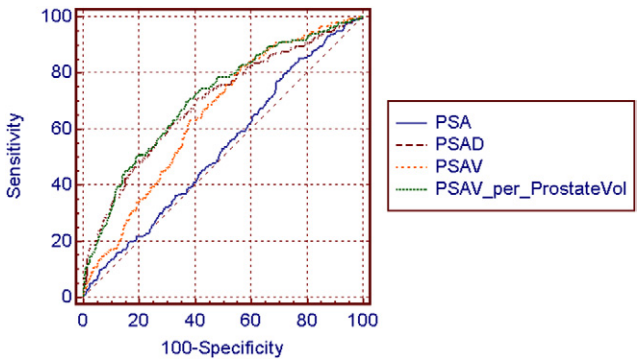
INTRODUCTION AND OBJECTIVES: PSA density and PSA velocity represent different ways to use the PSA test which increase specificity for prostate cancer and aggressive disease. A recent Asian study suggested combining these concepts into a new measurement: PSA velocity per prostate volume. The objective of our study was to validate the utility of PSAV per prostate volume in an external population.

METHODS: From 2001 to 2012, 756 European men underwent 12-core prostate biopsy with at least 2 PSA measurements within 18 months prior to biopsy. We compared the diagnostic performance of PSA velocity (PSAV), PSA density and PSAV per prostate volume (PSAV/prostate volume) to predict prostate biopsy results.

RESULTS: In the study population, the median age was 66 years and median PSA 6.87 prior to biopsy. The median value of PSAV per Prostate Volume was 0.0084 (range -0.53 - 0.16). A total of 245 cancers (31.8%) were detected. Men with prostate cancer had significant higher PSAV, PSAD and PSAV per prostate volume. On the ROC curve, the area under the curves (AUC) were 0.695 for PSAD, 0.652 for PSAV and 0.711 for PSAV per prostate volume. At a value of 0.0005 for PSAV per prostate volume, the sensitivity was 90.2%, specificity was 30.7%, positive predictive value was 38.4% and negative predictive value was 86.7%.

CONCLUSIONS: The results of the present study suggest that PSAV per prostate volume may be useful for prostate cancer diagnosis. At the ROC analyses, the AUC of PSAV per prostate volume was better than that of PSA and PSA velocity.



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