The use of a combination of variables along with the PCA3 assay in better defining the 'low risk' patient: a message from Pretoria to Kyoto

Dr Ahmed Adam, MBBCh, Dip PEC(SA), Department of Urology, University of Pretoria, Pretoria, South Africa

The PCA 3 assay has recently been shown to be of benefit in guiding initial prostate biopsy decisions[1,2], and has also been externally validated into risk nomograms which can be used to assist clinicians with risk stratification when a decision to biopsy is being contemplated.[3] In view of the above, I am firstly writing to commend Ochiai *et al.*[4] for a concise review on the first study which assessed the PCA3 assay in a Japanese setting. Their report has been received with great interest in our region.

Their cohort of 105 men, with a positive biopsy incidence of 36%, revealed an impressive performance of the PCA3 assay (AUC of 0.8507).[4] Ochiai *et al*. report a significant proportion of patients (n=67/105) who were not proven to have cancer on histology. They further mention that 23 biopsies could have been avoided, if a PCA3 assay threshold of 10 was applied, since prostate cancer had not been observed in men with a PCA3 score less than 10.[4]

We have performed a comparable review of the PCA3 assay on a similar sample size in a South African setting.[5] To share our experiences, I propose that the availability of the following additional information would even further benefit your readership;

Ochiai *et al*. should specify at which combination threshold values for the PCA3 assay and prostate-specific antigen (PSA) level, and/or a normal digital rectal examination (DRE) finding was cancer not identified.

In our cohort, in men with both a PCA3 assay score <60 and a PSA level <4 ng/ml (n=17/105), a positive yield for cancer on histology was excluded in all cases.[5]

In addition, we found that a PCA3 assay score <60 combined with a normal DRE (irrespective of the PSA level), only revealed cancer on histology in five of 35 men in our setting.

Finally, a PCA3 score <60 associated with a PSA level <4 ng/ml and a normal DRE (n=14) also excluded the presence of cancer on histology amongst all South African men in this subset.

Therefore, readers will find the above combined threshold values beneficial in better defining the 'low risk' patient in a Japanese context.

References:

1. de la Taille A, Irani J, Graefen M *et al.* Clinical evaluation of the PCA3 assay in guiding initial biopsy decisions. J. Urol. Published online: 15 April 2011; DOI: 10.1016/j.juro.2011.01.075
2. Schilling D, de Reijke T, Tombal B, de la Taille A, Hennenlotter J, Stenzl A. The Prostate Cancer gene 3 assay: indications for use in clinical practice. BJU Int. 2009;105: 452-455.

3. Auprich M, Haese A, Walz J *et al.* External validation of Urinary PCA3-Based nomograms to individually predict prostate biopsy outcome Eur. Urol. 2010;58: 727-732.
4. Ochiai A, Okikhara K, Kamoi K *et al.* Prostate cancer gene 3 urine assay for prostate cancer in Japanese men undergoing prostate biopsy. Int. J. Urol. 2011;18: 200-205.
5. Adam A, Engelbrecht MJ, Bornman MS, Manda SO, Moshokoa E, Feilat RA. The role of the PCA3 assay in predicting prostate biopsy outcome in a South African setting. BJU. Int. Published online: 20 April 2011; DOI: 10.1111/j.1464-410X.2011.10202.x