COMMENTARY

Comment to ‘’Results of Expanded Use of PCA3 Score in a Spanish Population with Suspicion of Prostate Cancer’’

Comentario a «Resultados del uso expandido del PCA3 score en una población española con sospecha de cáncer de próstata»

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The decision to perform a prostate biopsy is mainly based on the serum of the prostate-specific antigen (PSA) and the results of the digital rectal examination (DRE). Due to the low specificity of PSA for diagnosing prostate cancer (PCa), the possibility that men with elevated PSA value present a negative biopsy is considerable. About 75% of men with a PSA level of 2.5–10 ng/ml will have a negative first biopsy.\textsuperscript{1,2} For fear of overlooking PCa, many of these men undergo one or repeated biopsies, of which 10–35% will be positive. However, a prostate biopsy is not only expensive, but it can also cause pain, discomfort and complications\textsuperscript{3,4} that result in hospitalization in 4.1% of men and urosepsis in 1.2%.\textsuperscript{5} Recent studies have shown that the gene 3 test for prostate cancer (PCA3) PROGENSA\textsuperscript{TM} can help guide biopsy decisions and prevent unnecessary biopsies.\textsuperscript{6-10} In daily clinical practice, the PCA3 test is increasingly used for this purpose. This single-center study of Spanish men undergoing a first (n = 91) or repeated (n = 150) biopsy due to elevated PSA value and/or suspected DRE\textsuperscript{11} confirms a high rate of information in clinical practice (99.6%) and the great accuracy of the PCA3 PROGENSA test diagnosis to predict the result of the biopsy, as it is proved in these previous studies.\textsuperscript{5-10} The diagnostic accuracy of PCA3 was superior to that of the total PSA,\textsuperscript{11} which has also been demonstrated previously.\textsuperscript{5-10} The authors discuss that the PCA3 may be more appropriate to guide the decisions of the first biopsies, since in their study, the diagnostic accuracy of PCA3 was better for the prediction of the outcome of the first biopsy (area under the curve of the receptor operative characteristic [AUC ROC]: 0.703) than that of the repeated biopsy (AUC ROC: 0.683). However, it is questionable whether these differences are clinically relevant. A multicenter study conducted in the U.S. on 570 men showed similar AUC ROC to predict the outcome of the first biopsy (0.703, n = 277) or the repeated biopsy (0.684, n = 280) and concluded that the PCA3 test has comparable accuracy when applied before a first or repeated biopsy.\textsuperscript{8} Furthermore, the authors of this Spanish study discuss that the diagnostic accuracy is better in men with previous negative biopsy than in those with ≥1 previous biopsies. It can be questioned again whether the observed differences are clinically relevant. Haese et al.\textsuperscript{6} demonstrated in a European multicenter study on 463 men that the AUC ROC of the PCA3 test was comparable in men with 1 or 2 previous negative biopsies. The mean/median PCA3 was similar in both groups (p = 0.3622). The sensitivity and specificity of the PCA3 Score (cut-off point of 35) in men with 1 vs. 2 previous negative biopsies was also comparable with 46% vs. 50% sensitivity and 73% vs. 70% specificity. It should be noted that while the AUC ROC values to predict the results of the first and repeated biopsy in the Spanish population are in line with those cited in previous studies, the sensitivity values are much higher and the specificity ones much lower. This may be due to the fact that this is a single-center study with a relatively low number of patients undergoing first (n = 91) or repeated biopsy (n = 150) and potential differences in the clinical characteristics of the study population compared with patients in other studies (which could not be verified because the information on the characteristics of the patients was absent in the article).

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We can conclude that the results of this Spanish study performed at a single center confirm that the PCA3 test has a high diagnostic accuracy in predicting the outcome of the biopsy. The PCA3 Score, in combination with traditional tools such as PSA, can help guide decisions on first or repeated biopsy to avoid unnecessary biopsies.

References