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Letter to the Editor

Reducing unnecessary biopsies while detecting significant prostate cancer including cribriform growth with the ERSPC Rotterdam risk calculator and 4Kscore

We reviewed with interest the recent article by Verbeek et al. "Reducing unnecessary biopsies while detecting significant prostate cancer including cribriform growth with the ERSPC Rotterdam risk calculator and 4Kscore" [1]. The authors report on the potential for prostate biopsy reduction based upon the Rotterdam Prostate Cancer Risk Calculator (RPCRC) compared to the 4Kscore Test.

This is a retrospective analysis of men who received a sextant (6 core) prostate biopsy between 1993 and 2000, a practice abandoned in favor of more comprehensive and therefore more sensitive and accurate biopsy techniques. This resulted in only 8% of all biopsied men being classified with clinically significant cancer. The 4Kscore Test has been prospectively validated in contemporary cohorts with a minimum of 10 core prostate biopsies and all men with GG2 or higher were considered high-grade, resulting in 23% and 36% of men being diagnosed with high-grade cancer [2,3].

The RPCRC also utilizes a transrectal ultrasound (TRUS) volume measurement that was retrospectively categorized into 1 of 3 volume groups. The authors made the assumption that prostate volume determined by TRUS is equivalent to a volume categorization made using a DRE examination. Since there is no proven validity to substituting a TRUS measurement of prostate volume for a DRE estimate, it is not possible to assess what the actual RPCRC accuracy is in clinical practice. In addition, a true cost comparison of the 2 tests must include the cost of TRUS and at least 1 clinical visit in the total cost of using the RPCRC.

There was also no calibration plot for the RPCRC calculator, since unlike the 4Kscore, it does not give a predicted probability of high-grade disease. The authors report calibration for a "combined model" that was developed and tested on the data set, but there was no evidence demonstrating the RPCRC model is calibrated to a contemporary at-risk population or men of African descent.

Without assessing the accuracy of RPCRC in a contemporary cohort and evaluating the cost savings that include all clinical costs, equivalency with the 4Kscore Test cannot be assumed. We therefore believe that the conclusions of the paper are not substantiated by the data presented.

Conflicts of interest

The authors declare no conflicts of interest.

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