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European Association of Urology

Letter to the Editor

Re: Peter K.-F. Chiu, Chi-Fai Ng, Axel Semjonow, et al. A Multicentre Evaluation of the Role of the Prostate Health Index (PHI) in Regions with Differing Prevalence of Prostate Cancer: Adjustment of PHI Reference Ranges is Needed for European and Asian Settings. Eur Urol 2019;75:558–61

We congratulate Chiu and colleagues [1] on their important research recently published in *European Urology*. The authors compare for the first time the performance of the Prostate Health Index (PHI) test in detecting prostate cancer (PC) in a prospective multicenter study including 2499 men comprising cohorts of Caucasian and Asian men. The study confirms previous findings including our own data that PHI is more effective than prostate-specific antigen (PSA) density, percentage free PSA, or PSA alone in predicting PC [2–4].

Interestingly, the authors report that use of the PHI test can avoid more biopsies among Asian men (56%) than in the Caucasian study population (40%). Therefore, they propose that population-specific PHI reference ranges and cutoff values should be identified.

From our point of view, the present study underlines the ethnic difference in PC incidence which means that reference values and cutoffs for tumor markers have to be evaluated in various ethnic populations. However, in our opinion some open issues remain in this study that require further discussion:

In their comparison, the European cohort included 503 patients while the Asian population comprised 1149 patients, so there was an imbalance between the two groups that could potentially have influenced the study outcomes. In addition, the authors reported that men in the European cohort had a fourfold higher risk of (high-grade) PC compared to the Asian men [1]. It would be interesting to know if there was any information about Asian patients who moved to Europe or vice versa.

As the authors discuss, there were no data available on how many biopsy cores were positive or on the percentage cancer positivity in a core. In our opinion this would be important information since Gleason score 6 PC has to be diagnosed and ultimately actively treated (surgery, external beam radiation therapy, brachytherapy) when more than two cores and >50% of cores are cancerous. Our own study group was recently able to demonstrate in a prospective multicenter study including a European patient cohort that PHI might be an accurate marker of tumor progression for patients on active surveillance [4].

Lastly, we think that the impact of multiparametric magnetic resonance imaging (MRI) and consequently the importance of MRI-guided biopsies is underestimated in this study. According to the current European Association of Urology guidelines, MRI should be performed before re-biopsy for men with an initial negative biopsy. Thus, we propose that MRI findings, as well as patient age, should be added to the PHI test for PC risk calculation.

Conflicts of interest: The authors have nothing to disclose.

References

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