The core of the matter: Using pathology instead of ultrasound to measure prostate volume

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I read the article by Sfoungaristos and colleagues[1] with great interest. The authors reported that prostate-specific antigen (PSA) density represents a strong predictor for Gleason score upgrade after radical prostatectomy. I have some points of concern with this study.

Firstly, the prostate volumes of the patients were calculated with transrectal ultrasound. I think that using the pathology weight could be more objective than ultrasound imaging. Newton and colleagues reported that prostate size was inversely associated with high-grade cancer at final pathology.[2] Small prostate volume was associated with positive surgical margin, extraprostatic extension and pathological Gleason 7 score. Patients' prostate volumes were not mentioned in this study.

Secondly, the number of positive cores with prostate cancer affects the final pathology. The authors reported that tumour volume in a single positive core disease might be insignificant in that indolent tumors are associated with lower positive surgical margins.[3] While Ahn and colleagues reported that upgrading of the Gleason score was significantly higher in single positive core patients than multiple positive cores, Epstein and colleagues reported that upgraded patients had more positive cores than the others.[4] Epstein and colleagues also reported that the other factors for upgrading were age (older), high PSA levels, greater maximum percentage involvement of a given core and a small prostate. The authors did not state the number of positive cores and percentage involvement of cores in this study.

Finally, some studies demonstrate that extended prostate biopsies ($\geq$10 or >12 cores) are associated with less upgrading than sextant biopsies.[4] Sfoungaristos and colleagues reported that upgrading rates were 43.1% in $\leq$12 cores and 42.6% in >12 cores without any significance.[1]

Competing interests: Dr. Çalışkan declares no competing financial or personal interests.

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