Editorial comment

The authors evaluated the value of the percentage free PSA (% fPSA) in 105 Nigerian patients with a palpably benign prostate gland and intermediate total PSA levels (4.0–10 ng/mL) for detecting prostate cancer. The prostate biopsy was taken using a digitally directed six-core technique and correlated with the % fPSA level. Prostate cancer was detected in 14 patients (13%) and all of them had a % fPSA of <40%. However, six of the patients had a % fPSA level of <40% had no cancer. The authors concluded that the best threshold for % fPSA in the studied population was <40%, with a sensitivity of 100%, specificity of 93.4% and a positive predictive value of 70%.

This is different from the value reported previously of a threshold of ≤25% fPSA for patients with PSA levels of 4.0–10.0 ng/mL and where a TRUS biopsy was used, and more extended biopsy protocols adopted. Digitally directed transrectal biopsies are no longer the standard, as the exact path of the needle, the exact site of the biopsy and the depth of penetration cannot be guaranteed except under TRUS guidance. In addition, suspicious areas on ultrasonography should be biopsied separately, and these sites increase the detection rate of cancer. No data were provided about prostate size, which might affect the cancer detection rate as long as the number of biopsies is similar in all cases. All these factors might be responsible for the lower cancer detection rate and the higher % fPSA indicated. However, data from this report might be helpful for urologists practising in such regions where the facility for TRUS biopsy is not available.

Ahmed Elabbady

Urology Department, University of Alexandria, Egypt

E-mail address: ahmedelabbady61@hotmail.com

Reply

The aim of the study was to determine a threshold value for % fPSA for prostate biopsy in African patients with an intermediate total PSA level, and to compare this threshold with that of <25% obtained from Caucasian patients [1]. The digitally directed biopsy was chosen because it was the only available method for biopsy in this population, as TRUS was not available, and hence the need for this comparison. However, the threshold % fPSA value in this study was quite close to that recorded by Fowler et al. [2] in a study involving a significant percentage of African-American patients, using TRUS guidance, thereby suggesting that the lower threshold might not be suitable for a black population, where the burden of the disease is quite high.

The results for prostate volume obtained using transabdominal ultrasonography are as stated in the Results and discussion sections [3]. Unlike with standard TRUS, an accurate measurement of prostate volume for further analysis of volume was not possible because transabdominal scans of the prostate were used. Moreover,
Catalona et al. [1] in their large multicentre study found no significant difference when the % fPSA was correlated with various prostate volume ranges, and so a single threshold value, irrespective of prostate volume, was recommended in that study.

References

[1] Catalona WJ, Partin AW, Slawin KM, Brawer MK, Flanigan RC, Patel A, et al. Use of the percentage of free prostate-specific antigen to enhance differentiation of prostate cancer from benign prostatic disease: a prospective multicenter clinical trial. *JAMA* 1998;279:1542–7.

[2] Fowler Jr JE, Sanders J, Bigler SA, Rigdon J, Kilambi NK, Land S. A percent free prostate specific antigen and cancer detection in black and white men with total prostate specific antigen 2.5 to 9.9 ng/ml. *J Urol* 2000;163:1467–70.

[3] Ezenwa EV, Tijani KH, Jeje EA, Oyetunji SO, Ogunjimi MA, Ojewola RW, et al. The value of percentage free prostate-specific antigen (PSA) in the detection of prostate cancer among patients with intermediate levels of total PSA (4.0–10.0 ng/mL) in Nigeria. *Arab J Urol* 2012 (Epub ahead of print).

Ekene V. Ezenwa
Division of Surgery,
*Lagos University Teaching Hospital*
*Lagos, Nigeria*