

Editorial Comment

The incorporation of combined MRI/MRSI and multiparametric MRI in the active surveillance program is still investigational. The possible application of these techniques is based on the fact that volumetric and metabolic data correlates with tumor aggressiveness (1).

Recently study has been shown that combined MR imaging and MR spectroscopic imaging findings and Ki-67 (a proliferation marker), pAkt (a serine-threonine kinase), and androgen receptor values correlated with each other and with clinically insignificant and significant prostate cancers (2). In another study, MRI/MRSI models performed better than the clinical models for predicting the probability of insignificant prostate cancer (3). In the study by Fradet et al., patients presenting a hypointense focal area on T2-weighted image, suspicious for cancer at the time of diagnosis, had a greater risk of the Gleason score being upgraded at subsequent biopsy than did patients without such a lesion. Interesting is that MR spectroscopic imaging which is more specific for tumor characterization, than conventional T2-weighted images, was not useful to predict cancer progression. We agree with the authors that after appropriate validation, the MRI and MRI/MRSI models might help in counseling patients who are considering choosing deferred therapy.

References

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PATHOLOGY

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Optimizing performance and interpretation of prostate biopsy: a critical analysis of the literature

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Context: The number and location of biopsy cores and the interpretation of prostate biopsy in different clinical settings remain the subjects of continuing debate.

Objective: Our aim was to review the current evidence regarding the performance and interpretation of initial, repeat, and saturation prostatic biopsy.

Evidence Acquisition: A comprehensive Medline search was performed using the Medical Subject Heading search terms prostate biopsy, prostate cancer, detection, transrectal ultrasound (TRUS), nomogram, and diagnosis. Results were restricted to the English language, with preference given to those published within the last 3 yr.

Evidence Synthesis: At initial biopsy, a minimum of 10 but not > 18 systematic cores are recommended, with 14-18 cores in glands $\geq 50\text{cm}^3$. Biopsies should be directed laterally, and transition zone (TZ) cores are not recommended in the initial biopsy setting. Further biopsy sets, either as an extended repeat or as a saturation biopsy (≥ 20 cores) including the TZ, are warranted in young and fit men with a persistent suspicion of prostate cancer. An immediate repeat biopsy is not indicated for prior high-grade prostatic intraepithelial neoplasia diagnosis given an adequate extended initial biopsy. Conversely, biopsies with atypical glands that are suspicious but not diagnostic of cancer should be repeated within 3-6 mo. Overall recommendations for further biopsy sets (a third set or more) cannot be made. Transrectal ultrasound-guided systematic biopsies represent the standard-of-care method of prostate sampling. However, transperineal biopsies are an up-to-standard alternative.

Conclusions: The optimal prostatic biopsy regimen should be based on the individualized clinical setting of the patient and should follow the minimum standard requirements reported in this paper.

Editorial Comment

The article is from a selected group of uropathologists giving several recommendations for optimizing performance and interpretation of prostate biopsies. The highlights are:

- a) At initial biopsy, a minimum of 10 but not more than 18 systematic cores;
- b) In cases of glands equal or larger than 50 cm^3 , 14-18 cores;
- c) Transition zone cores are not recommended in the initial biopsy setting;
- d) An immediate repeat biopsy is not indicated for prior high-grade intraepithelial neoplasia (HGPIN) given an adequate extended initial biopsy;
- e) Biopsies with atypical glands that are suspicious but not diagnostic of cancer should be repeated within 3-6 months.

Note that the authors do not use the term ASAP but “suspicious but not diagnostic of cancer”. The term ASAP for “atypical small acinar proliferation” was coined by Iczkowski et al. in 1997 (1), however is not recommended by uropathologists. In a consensus meeting in 2004 sponsored by the World Health Organization (2), the committee members recommended designating ASAP as either suspicious or highly suspicious for cancer. The reasons for this include the equation by some urologists of the term ASAP with HGPIN, and because all of the atypical foci are not always “small” acinar but may include glands with a larger diameter (such as pseudo-hyperplastic pattern of cancer or adenocarcinoma with ductal features).

References

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