PROSTATE CANCER

Frozen section analysis—is it of value when performing radical prostatectomy?

Pelvic lymph node (PLN) dissection performed during radical prostatectomy can be used to predict disease progression. Detection of PLN metastases increases the assigned tumor stage, therefore impacting selection of postoperative therapy. Many surgeons feel that surgery is not the best option for men with node-positive prostate cancer, and will not proceed with radical prostatectomy if malignancy is found in the PLNs. Recent studies have shown, however, that patients with metastatic disease may still derive benefit from having their prostate removed.

“...the effectiveness of frozen section analysis for detection of [lymph node] micrometastases is questionable”

PLNs excised at the time of planned prostatectomy are often assessed intraoperatively using frozen section analysis. To determine the accuracy of this technique for detection of PLN metastases, Song and colleagues evaluated data from 349 men. The number of lymph nodes sampled during surgery ranged from one (in 65% of patients) to

three or more (11%). In total, 28 cases of metastatic carcinoma were eventually detected, 11 of which were identified during frozen section analysis—this intraoperative technique failed to detect the other 17 cases. All of the false-negative samples contained metastases smaller than 5 mm. Surgery was aborted in 8 of the 11 true positive cases detected by frozen section analysis, and continued in 3. The sensitivity of frozen section analysis was 36%, with a false-negative rate of 64%; sensitivity was not affected by the number of PLNs sampled.

Song *et al.* conclude that the accuracy of frozen section analysis depends on the size of the PLN metastasis. Their data show the method to be highly sensitive (almost 100%) for detection of large metastases, but poorly sensitive (10%) for detection of metastases smaller than 5 mm. Overall, the sensitivity of frozen section analysis has decreased in the past three decades. The authors hypothesize that this is due to earlier diagnosis of prostate cancer, associated with fewer and smaller metastatic foci.

So, is frozen section analysis of PLNs during radical prostatectomy necessary or even advisable? Criteria used to select patients for frozen section analysis are highly variable, even within institutions.

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Further, the effectiveness of frozen section analysis for detection of PLN micrometastases is questionable. Song and colleagues recommend that routine frozen section analysis of PLNs should only be performed if the following two-step approach is taken—an initial stringent gross examination, followed by confirmatory frozen section analysis only when the PLN appears highly likely to harbor a sizeable metastasis.

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Original article Song, J. *et al.* Intraoperative frozen section assessment of pelvic lymph nodes during radical prostatectomy is of limited value. *BJU Int.* doi:10.1111/j.1464-410X.2010.09402.x