lithotripsy and 20 patients to ureteroscopic lithotripsy. Compared with shock-wave lithotripsy, ureteroscopic lithotripsy is a more invasive procedure that requires longer hospital stays and results in more-severe postoperative pain. For most patients, therefore, shock-wave lithotripsy is the preferred first-line treatment. The degree of hydronephrosis strongly influenced the success rate of this technique, however; all patients with severe hydronephrosis required auxiliary surgical procedures after shock-wave lithotripsy, to remove residual stone fragments.

Lee *et al.*, therefore, recommend that ureteroscopic lithotripsy should be the first-line treatment for patients with stones of ≥ 15 mm diameter in the setting of severe hydronephrosis.

Caroline Barranco

Original article Lee Y-H *et al.* (2006) Prospective randomized trial comparing shock wave lithotripsy and ureteroscopic lithotripsy for management of large upper third ureteral stones. *Urology* 67: 480–484

Benefits of transrectal ultrasound guidance during laparoscopic radical prostatectomy

Transrectal ultrasound (TRUS) guidance during laparoscopic radical prostatectomy (LRP) can compensate for decreased tactile feedback during laparoscopic surgery compared with the open procedure, suggest US researchers. TRUS permits an individualized, precise dissection that is contoured to the specific prostate anatomy, resulting in reduced incidence of positive surgical margins. As expected, the benefits of TRUS guidance were most evident for hypoechoic lesions with extracapsular extension. Perhaps surprisingly, however, the authors also found that TRUS was of benefit in organ-confined tumors, because it allowed real-time feedback on the position of surgical implements and, therefore, minimized the risk of inadvertent capsulotomy—in particular at the risky posterolateral and apical locations—and provided enhanced imaging of apical, bladder-neck and neurovascular-bundle anatomy. TRUS also provided confirmation of the precise location and extent of biopsy-proven cancer. In several cases, TRUS findings resulted in a wider dissection being undertaken.

Ukimura *et al.* retrospectively compared 217 consecutive men who underwent LRP without TRUS with the subsequent 77 consecutive men who underwent LRP with TRUS guidance.

Although patient numbers in the TRUS group were small, the incidence of positive surgical margins was markedly lower than in men who underwent LRP without TRUS guidance (9% versus 29%, respectively). The authors rule out a learning-curve effect, because there was evidence of a plateau in the incidence of positive surgical margins with LRP before TRUS was introduced. These findings require confirmation in prospective, randomized, multicenter trials, say the authors.

Caroline Barranco

Original article Ukimura O *et al.* (2006) Real-time transrectal ultrasound guidance during laparoscopic radical prostatectomy: impact on surgical margins. *J Urol* 175: 1304–1310

Metastatic bladder cancer: MRI singles out chemotherapy nonresponders early on

MRI can identify metastatic bladder cancer patients who will not respond to chemotherapy after just two treatment cycles, according to a study from The Netherlands.

Chemotherapy represents the only chance of survival for patients with stage IV bladder cancer, but response rates are low, patients suffer significant morbidity, and the financial costs are high. It is, therefore, desirable to identify nonresponders at an early stage.

Schrier *et al.* used MRI to prospectively predict the response to methotrexate, vinblastine, doxorubicin, and cisplatin (MVAC) chemotherapy in 36 patients with advanced bladder cancer. Patients underwent imaging with fast dynamic-contrast-enhanced MRI and unenhanced MRI, before and after two, four, and six cycles of MVAC. The response to therapy was measured by changes in tumor size on unenhanced MRI, while contrast-enhanced MRI had the additional benefit of measuring the extent of angiogenesis, an important predictor of response to therapy.

The ability of these techniques to correctly distinguish responders from nonresponders was compared with histopathology findings. After two MVAC cycles, the sensitivity, specificity, and accuracy were 91%, 93%, and 92% for enhanced MRI and 81%, 50%, and 69% for unenhanced MRI. After four cycles, responders and nonresponders were correctly identified in all cases.

This study shows that fast dynamic-contrast-enhanced MRI provides an accurate and