condition, whether or not they have symptoms of UTI. The development of renal scarring in children with VUR may then be prevented using prophylactic antibiotic treatment or early ureteric reimplantation.

Original article Ataei N *et al.* (2004) Screening for vesicoureteral reflux and renal scars in siblings of children with known reflux. *Pediatr Nephrol* **19:** 1127–1131

End-fire ultrasound probes in prostate cancer diagnosis

Transrectal ultrasound-guided biopsy is a widely accepted procedure in prostate cancer diagnosis, although little is known about the effects on the detection rate of different types of ultrasound equipment. Paul *et al.* hypothesized that end-fire ultrasound probes, which facilitate sampling in the most lateral part of the peripheral zone, would be superior to side-fire probes in the detection of smaller tumors. Their retrospective study comparing these two types of probe has recently been published.

A total of 2,625 patients underwent a first-time, systematic sextant biopsy using the Kretz Combisone side-fire probe, the Bruel & Kjaer Medical side-fire probe or the ATL HDI end-fire probe. The side-fire probes limited the prostate biopsy to a sagittal axis, whereas the end-fire probe allowed sampling in any section.

The overall prostate cancer detection rate (35.2%) was similar using all three probes. In a subgroup of patients with a PSA level of 4–10 ng/ml, however, the detection rate using the end-fire probe (31.3%) was statistically significantly higher than with either of the side-fire probes ($P = 0.01$). This was also the case in a further subgroup of patients with nonpalpable cancer.

In summary, the end-fire probe provided a higher prostate cancer detection rate in two patient subgroups, compared with the side-fire probes. The authors suggest that this was due to improved visualization of the lateral peripheral zone, in which most peripheral zone tumors occur.

Original article Paul R *et al.* (2004) Influence of transrectal ultrasound probe on prostate cancer detection in transrectal ultrasound-guided sextant biopsy of prostate. *Urology* **64:** 532–536

Measuring urinary tract stones by computed tomography

The determination of urinary tract stone size is an important step in planning appropriate treatment. Although the introduction of computed tomography (CT) has improved the accuracy of such measurements, standard axial CT images may not allow precise estimations in the craniocaudal plane. Nadler *et al.* have investigated the use of coronal imaging as an additional approach.

The team reviewed CT images from 102 patients (151 stones) who had undergone routine abdominal imaging over a 9-month period. Axial images were used to measure the length and width of each stone. Measurement of craniocaudal length and width was then carried out using reconstructed, contiguous coronal images. Finally, the total area of each stone was calculated using both the axial and coronal images.

Significant differences were found between the axial and coronal measurements of stone size. The mean greatest stone dimension on axial imaging was 4.87 mm, compared with 6.51 mm on coronal imaging ($P < 0.0001$). Axial imaging also underestimated the mean stone area and overestimated craniocaudal length by comparison with the coronal measurements.

Concluding that axial imaging does not allow accurate measurement of stone dimensions, the authors recommend the addition of routine coronal imaging in this setting.

Original article Nadler RB *et al.* (2004) Coronal imaging to assess urinary tract stone size. *J Urol* **172:** 962–964

Advanced refractory prostate cancer: new treatment trial

Men with metastatic, androgen-independent prostate cancer have a median survival of 1 year or less. Current treatment with mito-xantrone plus prednisone or hydrocortisone palliates bone pain in some patients, but no available therapies prolong survival. Phase I and II studies have shown improved survival in patients receiving docetaxel plus estramustine; Petrylak and colleagues have investigated this in a randomized, phase III trial.

A total of 770 men with metastatic, hormone-independent prostate cancer were prospectively enrolled in the study. Of 674 eligible patients, half were assigned to receive docetaxel plus

estramustine and half to receive mitoxantrone plus prednisone. Overall survival was compared in the two treatment groups during a median follow-up of 32 months.

The median overall survival was significantly longer in patients treated with docetaxel plus estramustine compared with those in the mitoxantrone plus prednisone group (17.5 months vs 15.6 months, $P = 0.02$). The median time to progression was also significantly longer in the docetaxel plus estramustine group, and post-treatment declines in serum PSA levels of ≥50% were more common in these patients. Pain relief was similar in both treatment groups. Adverse events (grade 3 or 4 neutropenic fevers, nausea and vomiting, and cardiovascular events) were significantly more frequent, however, in the docetaxel plus estramustine group than in the mitoxantrone plus prednisone group.

The authors conclude that docetaxel plus estramustine treatment moderately increased survival in these patients, but that this must be balanced against the increased rate of adverse events.

Original article Petrylak DP *et al.* (2004) Docetaxel and estramustine compared with mitoxantrone and prednisone for advanced refractory prostate cancer. *N Engl J Med* **351:** 1513–1520

Reduced postoperative chemotherapy for Wilms' tumor

High rates of recurrence-free and overall survival have been achieved for Wilms' tumor, so the emphasis of current research is on reducing treatment-related toxicity. Results from the SIOP 93-01 trial indicate that post-operative chemotherapy can be shortened—potentially reducing the risk of side-effects—without compromising effectiveness.

This international non-inferiority study compared 2-year event-free survival in 410 children with stage I intermediate-risk or anaplastic Wilms' tumor. After preoperative chemotherapy and surgery, the patients received four doses of vincristine plus one course of dactinomycin. They were then randomized to the standard treatment of two further courses of the same chemotherapy ($n = 210$) or no further chemotherapy ($n = 200$).

At 2 years' follow-up, there had been 18 recurrences in the standard treatment group, compared with 22 in the children receiving shorter duration of treatment. Event-free survival—91.4% and 88.8% for the two groups, respectively—was not significantly different between the two groups. Five-year overall survival was approximately 95% in both groups.

The authors conclude that a shortened postoperative chemotherapy regimen is feasible in children with stage I intermediate-risk or anaplastic Wilms' tumor. This approach could reduce the burden of treatment in terms of acute and late side-effects, inconvenience for patients and parents, and health costs.

Original article de Kraker J *et al.* (2004) Reduction of postoperative chemotherapy in children with stage I intermediate-risk and anaplastic Wilms' tumour (SIOP 93-01 trial): a randomised controlled trial. *Lancet* **364:** 1229–1235

GLOSSARY

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