

period, even as prevalence and parasitic burden decreased as a result of chemotherapy; the scores for girls, however, were not quite as good as those for boys, probably because menstrual blood was a confounder. The method was diagnostically superior to patient-reported blood in the urine and pain upon urination.

The authors recommend Hemastix® for use in future control programs because it is rapid, cost-effective, and its ease of use could increase screening coverage.

Original article French MD (2007) School-based control of urinary schistosomiasis on Zanzibar, Tanzania: monitoring micro-haematuria with reagent strips as a rapid urological assessment. *J Pediatr Urol* 3: 364–368

COX-2 overexpression might predict treatment failure in patients with prostate cancer

Cyclo-oxygenase-2 (COX-2) is overexpressed in some types of human cancer, including prostate cancer, and the overexpression of COX-2 might also be involved in tumor resistance to chemotherapy and radiation therapy. Khor and colleagues analyzed data from the Radiation Therapy Oncology Group (RTOG) 92-02 trial to identify the association between COX-2 and prostate cancer outcomes.

The study population included 586 patients (median age 70 years, range 43–88 years) with locally advanced (T2c–T4) prostate cancer who were randomly assigned to receive either long-term (28 months; $n=316$) or short-term (4 months; $n=270$) neoadjuvant, concurrent and adjuvant androgen deprivation therapy (ADT) plus external-beam radiation therapy. Tissue samples, obtained from either transurethral resection or needle-core biopsy, were analyzed for COX-2 staining intensity.

On univariate analysis, increased COX-2 staining intensity independently predicted distant metastasis (hazard ratio [HR] 1.181, $P=0.0004$), biochemical failure (for both the ASTRO definition [HR 1.073, $P=0.008$] and Phoenix definition [HR 1.073, $P=0.014$]), and any failure (defined as “a first event from ASTRO biochemical failure, local failure, distant metastasis, or cause-specific mortality”; HR 1.068, $P=0.011$). COX-2 overexpression seemed to be most predictive of outcomes in patients who underwent short-term ADT.

The authors conclude that COX-2 staining intensity could be used to select patients who might benefit from long-term ADT rather than short-term ADT. Furthermore, the authors suggest that COX-2 inhibitors might improve patient response to radiation therapy, with or without ADT.

Original article Khor LY *et al.* (2007) COX-2 expression predicts prostate-cancer outcome: analysis of data from the RTOG 92-02 trial. *Lancet Oncol* 8: 912–920

Cystectomy or conservative therapy for patients with high-risk, T1G3 bladder cancer?

The optimum treatment for high-risk T1G3 bladder cancer is controversial. Cystectomy might offer a better probability of cure than conservative therapy, but could also be associated with worse post-treatment quality-of-life (e.g. poor sexual function). Kulkarni *et al.* performed a validated decision analysis that compared the outcomes of both treatment approaches.

Published outcome probability data were used to estimate the life expectancy and quality-adjusted life expectancy (QALE; i.e. the number of years with good quality-of-life) of patients who undergo either immediate nerve-sparing cystectomy with orthotopic neobladder creation or initial conservative therapy with intravesical bacillus Calmette–Guérin. The base case was defined as a 60-year-old male with no comorbidity, good potency and newly diagnosed high-risk T1G3 transitional cell carcinoma of the bladder.

Compared with conservative management, immediate cystectomy yielded a higher mean life expectancy (14.3 years versus 13.6 years) and QALE (12.32 years versus 11.97 years) when the model was applied to the base case. Additional comorbidities and increased age reduced the benefit of immediate cystectomy: in terms of life-expectancy, conservative treatment was the preferred option above the age of 70 years; in terms of QALE, conservative treatment was preferred above the age of 65 years. In patients with significant concerns about post-cystectomy adverse effects (i.e. sexual and/or gastrointestinal dysfunction), conservative treatment yielded the best QALE.

The authors conclude that immediate cystectomy seems to result in a longer life expectancy and QALE than conservative management;

however, the treatment decision should be considered in light of the patient's age, comorbidity and wishes regarding post-treatment health status.

Original article Kulkarni GS *et al.* (2007) Optimal management of high-risk T1G3 bladder cancer: a decision analysis. *PLoS Med* 4: e284

Stress implicated in the etiology of benign prostatic hyperplasia

The excessive growth of prostate tissue and increased contractility that occurs in benign prostatic hyperplasia (BPH) causes uncomfortable lower urinary tract symptoms. BPH arises because of subtle dysfunctions in the sympathetic nervous system and the hypothalamic–pituitary–gonadal axis, both of which are highly susceptible to psychological factors.

Ullrich *et al.* examined the relationship between psychological stress and BPH using measured responses to a standardized laboratory stress test in a group of 83 men who had been diagnosed with BPH. All were asked to perform a standardized laboratory stress task; changes in blood pressure, testosterone and cortisol levels were measured during the task. The degree of physiological response was then examined for potential correlation with the severity of BPH disease. This was assessed by measurements of prostate volume, postvoid residual urine volume, urine flow rate, self-reported lower urinary tract symptoms, and impact and bother scores.

Analysis revealed that increased diastolic blood pressure reactivity was associated with more-severe BPH symptoms, including a greater transition zone volume, a greater total prostate gland volume, greater postvoid residual urine volume, more-severe lower urinary tract symptoms and greater impact scores. Increased cortisol reactivity was associated with elevated bother and impact scores.

The authors conclude that higher physiological responses in a standardized laboratory stress test in men with BPH are associated with more-severe BPH disease. They suggest that this is further evidence that stress could be involved in the etiology of prostatic hyperplasia.

Original article Ullrich PM *et al.* (2007) Physiologic reactivity to a laboratory stress task among men with benign prostatic hyperplasia. *Urology* 70: 487–492

Early treatment of urinary tract infection prevents renal involvement

Early treatment of pyelonephritis has been suggested to limit the extent of subsequent renal damage, although this effect has not been demonstrated in prospective clinical trials and remains controversial. In a recent study, Doganis and colleagues investigated the correlation of renal scintigraphy findings with the time interval between the onset of fever and the initiation of antibiotic therapy in 278 infants (aged ≤ 12 months) hospitalized with a first urinary tract infection.

Antibiotic therapy was initiated a median of 2 days after the onset of fever (range 1–8 days). Overall, renal inflammatory changes were seen in 57% of the infants, with bilateral defects observed in 13% of these. The prevalence of renal defects increased with increasing time between fever onset and treatment initiation; defects were seen in 41% of infants treated within the first day of infection, and 59%, 68% and 75% of the infants treated on days two, three, and four or later, respectively ($P < 0.0005$ for trend). In total, 76 patients had an abnormal scan in the acute phase of infection and underwent renal scintigraphy a second time (at a median of 6.5 months after fever onset). In these infants the frequency of renal scarring did not differ between those treated in the first 24 hours, and those treated later (46% vs 54%), suggesting that while early antibiotic therapy can reduce the likelihood of renal involvement, it does not reduce the likelihood of developing renal scarring once acute pyelonephritis has occurred.

Original article Doganis D *et al.* (2007) Does early treatment of urinary tract infection prevent renal damage? *Pediatrics* 120: e922–e928

Successful treatment of female SUI with autologous myoblast and fibroblast injection

In female stress urinary incontinence (SUI), resting tone and contractibility of the rhabdosphincter are reduced, leading to incomplete closure of the urethra. Mitterberger and co-workers have evaluated the therapeutic potential of autologous myoblasts and fibroblasts, which have previously shown efficacy in animal