Blood samples were then collected and analyzed for arylamine–hemoglobin adducts of nine different ethyl- and dimethylanilines. The levels of these adducts in the blood relate to exposures up to several months previously.

Levels of all the arylamine–hemoglobin adducts tested were higher in bladder cancer patients than in the control subjects, and most of the differences were statistically significant. Regression analysis showed that three of the compounds—2,6-DMA, 3,5-DMA and 3-ethylaniline—were independent predictors of risk of bladder cancer. This was also the case when nonsmokers were considered separately: those in the highest quartiles had a threefold to fivefold higher risk of bladder cancer than those with lower levels of the adducts.

Other than cigarette smoking and use of some permanent hair dyes, the routes of exposure to arylamines are unknown. Since several of these compounds have been implicated in the development of bladder cancer even in nonsmokers, Gan *et al.* propose that it is now important to trace their environmental sources.

Original article Gan J *et al.* (2004) Alkylaniline–hemoglobin adducts and risk of non–smoking-related bladder cancer. *J Natl Cancer Inst* **96:** 1425–1431

Long-term treatment with dutasteride in BPH

Dutasteride has been investigated as a treatment for men with benign prostatic hyperplasia (BPH). The drug suppresses serum dihydrotestosterone (DHT) by selectively inhibiting both type 1 and type 2 5α-reductase isoenzymes. Prostate volume is reduced as a consequence, and other symptoms of BPH are improved. Debruyne *et al.* have recently reported long-term safety and efficacy results for dutasteride in this setting.

The new data were pooled from a 2-year open-label extension period that followed three randomized, phase III trials comparing dutasteride with placebo. A total of 2,340 men were included in the extension phase, all of whom received dutasteride 0.5 mg daily. In the preceding double-blind periods, patients had received dutasteride ($n = 1,188$; group D/D) or placebo ($n = 1,152$; group P/D) for 2 years.

A reduction in total prostate volume was seen in both study groups during the open-label phase, along with improvements in disease symptoms and urinary flow. Patients in the D/D group showed the greater improvement. The incidence of acute urinary retention and BPH-related surgery was low in both groups. Sexual adverse events tended to become less frequent with continued treatment, although a low incidence of gynecomastia persisted throughout the study.

In conclusion, the improvements in BPH disease measures seen in the phase III trials appeared to continue during long-term therapy, and Debruyne *et al.* note that the drug was well tolerated.

Original article Debruyne F *et al.* (2004) Efficacy and safety of long-term treatment with the dual 5α-reductase inhibitor dutasteride in men with symptomatic benign prostatic hyperplasia. *Eur Urol* **46:** 488–495

Long-term physiotherapy for female stress urinary incontinence

Conservative therapy is widely considered an appropriate first-line treatment for women with stress urinary incontinence, although few randomized controlled trials have been conducted in this area. A new study from Finland has compared clinic-based and home-based programs designed to improve the function of the pelvic floor muscles.

The 5-year study included 33 women with stress urinary incontinence. Those who lived more than 40 km from the hospital were allocated to home-based treatment ($n = 17$), which consisted of active pelvic floor muscle exercises and training with a vaginal ball. The remaining patients ($n = 16$) carried out a similar program and also received weekly electrical stimulation treatment at the outpatient clinic. All patients were instructed how to identify their pelvic floor muscles and were taught with biofeedback how to contract them.

Response to treatment was assessed using the urinary incontinence severity score (UISS) questionnaire, a 1-hour pad test and by measuring pelvic floor muscle strength. Both groups showed significant improvements at 4 months, 12 months and 5 years. The overall rate of cure or improvement in symptoms was 64%, with no significant difference between the groups.