

excision, the testes were weighed by the examining pathologist. The median testicular weight in patients who had received LHRH agonist therapy was less than half of that in the control group (7.0 g [range 0.5 to 22.0] vs 15.0 g [range 4.0 to 44.0] respectively,  $P < 0.0001$ ).

Issa *et al.* conclude that testicular weight and cosmetic outcome are substantially compromised by medical castration with LHRH agonists, and they recommend that patients are fully informed of this when considering their options for hormone ablation. Among other advantages, surgical castration offers significant cost savings and avoids the problem of noncompliance. The authors also note that manufacturers of LHRH agonists must provide adequate information about testicular atrophy in drug packet inserts.

**Original article** Issa MM *et al.* (2004) The fate of the medically castrated testis: expectation versus reality. *J Urol* 172: 1042–1044

### Salvage surgery in prostate cancer: assessment of rectal wall invasion

Extensive pelvic surgery, including total pelvic exenteration (TPE) or cystoprostatectomy, is used as a palliative treatment in some patients with locally advanced prostate cancer. The success of this approach relies on the accurate assessment of the extent of invasion into the bladder or rectum. It is not clear, however, which imaging modality is the most appropriate. In a recent study, Leibovici *et al.* have compared two common methods—transrectal ultrasound (TRUS) and magnetic resonance imaging (MRI)—in the detection of rectal wall involvement.

This retrospective study included 40 men who had undergone TPE ( $n = 16$ ) or cystoprostatectomy ( $n = 24$ ) as salvage therapy for locally advanced prostate cancer. The patients were assessed preoperatively using TRUS, MRI or both. The sensitivity and specificity of the two methods were calculated with reference to histologic findings, positive surgical margins or recurrence of disease in the rectal wall during a median follow-up of 18.6 months.

Although MRI had specificity of 100% for the detection of rectal wall involvement, its sensitivity was low at 55% and so this method is associated with a risk of false-negative

results. In contrast, TRUS was highly sensitive (93%) and fairly specific (87%), with an overall accuracy of 89%.

**Original article** Leibovici D *et al.* (2005) Transrectal ultrasound versus magnetic resonance imaging for detection of rectal wall invasion by prostate cancer. *Prostate* 62: 101–104

### Antioxidant supplements—is there a benefit in gastrointestinal cancer prevention?

Although diets rich in fruit and vegetables have been linked to a lower cancer incidence, the role of antioxidant supplements in cancer prevention is controversial. A recent analysis by Bjelakovic and colleagues from the Cochrane Hepato-Biliary Group indicates that common dietary supplements do not offer protection against gastrointestinal cancer and might, in fact, increase overall mortality.

The authors combined the results of 14 randomized trials comparing  $\beta$ -carotene, vitamins A, C and E and selenium (alone or in various combinations) with placebo, in a total of over 170,000 participants. The trials ranged from small ( $n = 226$ ) to large ( $n = 39,876$ ); 7 of the 14 trials were of high methodological quality. In each case, daily antioxidant supplements or placebo had been given orally for 1–12 years.

Overall, there was no significant difference between the placebo and supplements groups in the incidence of esophageal, gastric, colorectal, pancreatic or liver cancers. A possible exception was selenium, which was associated with a lower incidence of hepatocellular carcinoma, albeit in mostly low-quality trials.

In a fixed-effect model based on six of the high-quality trials, a small but statistically significant increase in mortality was shown. In particular,  $\beta$ -carotene, in combination with either vitamin A or vitamin E, was linked with an elevated mortality risk. Using a random-effects model, no significant increase in mortality was shown. The findings should be considered preliminary since the study covered only a proportion of all trials reporting mortality as an outcome. Furthermore, supplement doses in excess of recommended levels may be a factor in increased mortality.

**Original article** Bjelakovic G *et al.* (2004) Antioxidant supplements for prevention of gastrointestinal cancers: a systematic review and meta-analysis. *Lancet* 364: 1219–1228