

these patients. Van Hogezaand *et al.*'s study, therefore, aimed to identify which factors were most predictive of skeletal pathology in these patients.

Overall, 146 patients with Crohn's disease who attended outpatient clinics at the Leiden University Medical Center, The Netherlands, were studied over a 1-year period. Their mean duration of disease was 20 years. In total, 37 patients had disease localized to the ileum, 26 to the colon, and 83 to both the ileum and colon. In addition, 96 patients had previously undergone intestinal resection, most frequently of the ileum.

Although nearly half of the patients were found to have reduced BMD, only 38 patients had osteoporosis of the lumbar spine, femoral neck, or both. The prevalence of fracture was also low. The most important risk factor for osteoporosis was ileum resection, followed by age. In contrast to previous studies, there was no association between current or past use of glucocorticoids and increased risk of either osteoporosis or fracture. No relationship was observed between duration of Crohn's disease and BMD in this cohort.

The authors strongly recommend BMD screening for all patients with Crohn's disease who have undergone ileum resection; they suggest that this will allow the early initiation of bone-protective treatment in those patients identified to be most at risk of osteoporosis.

**Original article** van Hogezaand RA *et al.* (2006) Ileum resection is the most predictive factor for osteoporosis in patients with Crohn's disease. *Osteoporos Int* 17: 535–542

### Extensive lymph-node dissection improves survival in patients with gastric cancer

A single-center, randomized controlled trial conducted by researchers from Taiwan has shown that patients with gastric cancer who undergo extensive, D3 lymph-node dissection have higher survival rates than those who receive limited, D1 lymph-node dissection.

The study by Wu *et al.* randomized 221 patients with gastric adenocarcinoma to receive gastrectomy with either a D1 or D3 dissection at Taipei Veterans General Hospital. Each procedure was carried out by one of three surgeons, all of whom had received extensive training and had experience of at least 25 D3 dissections.

After a median follow-up of 94.5 months, 5-year disease-free survival was 59.5% in patients who underwent D3 surgery, compared with 53.6% in the D1 group ( $P=0.041$ ). Hazard analysis revealed that patients randomized to D3 surgery were almost 50% less likely to die within 5 years than those assigned to D1 surgery. After 5 years, disease had recurred in 50.6% of patients in the D1 group, compared with 40.3% in the D3 group, but the difference was not statistically significant. Multivariate analysis showed that D1 surgery was associated with poor survival, as were nodal disease, tumors occupying the whole stomach, and type III or IV tumor appearance by Borrmann's classification. The authors conclude that D3 lymph-node dissection improves both overall and disease-free survival in patients with gastric cancer, but emphasize that, to minimize morbidity, the procedure should be performed only by well-trained, experienced surgeons.

**Original article** Wu C-W *et al.* (2006) Nodal dissection for patients with gastric cancer: a randomised controlled trial. *Lancet Oncol* 7: 309–315

### Meta-analysis supports use of polysaccharide K in adjuvant therapy for colorectal cancer

The reported benefits of combining an immunotherapeutic agent with adjuvant chemotherapy are twofold: synergistic action, and reduction of chemotherapy-related immunosuppression. polysaccharide k (PSK) is an immunotherapeutic agent with recognized antitumor action. The efficacy of PSK in combination with adjuvant chemotherapy in patients with curatively resected colorectal cancer is controversial, but a meta-analysis by Sakamoto and co-workers has now shown that PSK confers a survival benefit in this setting.

The authors searched MEDLINE for studies of PSK immunochemotherapy in patients with colorectal cancer published in English or Japanese since 1980. Papers were selected based on study type, clinical-trial design, method of randomization, treatment regimen, and completeness of data. A total of three studies were included in the final analysis. These trials compared immunochemotherapy (PSK plus oral fluorinated pyrimidines) with chemotherapy alone in a total of 1,094 patients with resected colorectal cancer. The 5-year overall survival