GLOSSARY

AHLBÄCK CRITERIA
Scheme for grading bone defects resulting from attrition of the articular surfaces (ranging from 0, no attrition; to 3, severe attrition, i.e. loss of >10 mm)

Increased incidence of infection in rheumatoid arthritis patients treated with biologic therapies

Rheumatoid arthritis (RA) patients treated with biologic agents have a higher risk of infection than patients treated with conventional disease-modifying antirheumatic drugs (DMARDs), the German prospective cohort study RABBIT (RA–Observation of Biologic Therapy) has found.

A German national register was established in 2001 to investigate biologic therapy, following observations of serious adverse events from tumor necrosis factor (TNF) inhibitors. In the recent paper by Listing and colleagues, this registry was used to estimate the incidence of serious and nonserious infections 1 year after initiation of biologic therapy.

As patients with RA already have an increased risk of infection compared with the general population, RA patients receiving biologic therapy were compared with RA patients receiving DMARDs. There were 1,529 patients analyzed in the trial, including 512 treated with etanercept, 346 treated with infliximab, 70 treated with anakinra, and 601 treated with conventional DMARDs. Assessments were carried out at baseline and at 3, 6 and 12 months.

Infections were observed in 204 patients. The relative risk of serious adverse events was 2.7–2.8 in the biologic group compared with the DMARD group, and for adverse events in general the relative risk was 3.3–4.1. Although the groups had different predispositions, the investigators estimated that biologic therapy caused two-thirds of the increased incidence of adverse events. This estimate should be further validated by trials that include more patients and more risk factors in the analysis.

Rachel Murphy

Original article Listing J *et al.* (2005) Infections in patients with rheumatoid arthritis treated with biologic agents. *Arthritis Rheum* **52:** 3403–3412

Exercise increases the glycosaminoglycan content of knee cartilage

Individuals with knee osteoarthritis often avoid exercise, in the belief that it might cause further degeneration of their joint cartilage. This belief conflicts with evidence from animal models of osteoarthritis that shows exercise has a protective effect. A Swedish study has shown *in vivo* improvements in cartilage quality, as assessed by delayed gadolinium-enhanced MRI, in individuals at risk of developing knee osteoarthritis who started to exercise regularly.

Roos and Dahlberg evaluated 30 patients aged 35–50 years who had undergone meniscectomy to treat a degenerative tear 3–5 years previously and who, therefore, were at high risk of developing knee osteoarthritis. Patients who self-reported moderate and low levels of exercise before the study were assigned to the exercise ($n = 16$) and no-intervention ($n = 14$) groups, respectively. Patients in the exercise group performed therapist-led, weight-bearing, strengthening exercises, on average three times a week, during the 4-month study period. MRI scans showed no difference in baseline glycosaminoglycan content of knee cartilage between the groups; however, similar scans taken after 4 months showed a statistically significant increase in the glycosaminoglycan content of knee cartilage in individuals in the exercise group ($P = 0.036$). Improvements in pain and knee function were also seen in the exercise group, although there were too few patients to detect statistically significant differences in clinical outcomes.

Increased glycosaminoglycan content of cartilage might improve its viscoelastic properties, say the authors, and could reduce susceptibility to osteoarthritis.

Caroline Barranco

Original article Roos EM and Dahlberg L (2005) Positive effects of moderate exercise on glycosaminoglycan content in knee cartilage: a four-month, randomized, controlled trial in patients at risk of osteoarthritis. *Arthritis Rheum* **52:** 3507–3514

Assessing bone attrition in osteoarthritis of the knee

Low interobserver reliability is an undesirable feature of the only approved scheme for grading bone attrition in osteoarthritis of the knee. Dieppe *et al.* aimed to overcome this limitation by developing templates that delineate the hypothetical normal contours of the knee. These, when overlaid onto conventional radiographs, allow consistent measurement of the extent of subchondral bone loss. The authors scored bone attrition according to the AHLBÄCK CRITERIA.