GLOSSARY

NZB/W F1 MOUSE MODEL

A murine model of systemic lupus erythematosus with similar clinical, immunopathological and genetic features to the human disease

anti-cyclic-citrullinated peptide (anti-CCP) antibodies show a marked, progressive fall in patients with established RA given 3 months of treatment with etanercept plus DMARDs.

The patients had previously been unsuccessfully treated with methotrexate and at least one other DMARD. They were randomly allocated 3:4 to either continued treatment with DMARDs (controls, $n=38$), or to 25 mg twice weekly etanercept plus DMARDs ($n=52$). Serum samples obtained at monthly intervals were assayed for RF and anti-CCP. Serum levels of both markers declined only in the etanercept group (anti-CCP antibody declined by 31.3% and RF by 36.0%, on average, in patients who were positive for these factors at baseline). Disease activity scores also improved considerably in the etanercept group, compared with controls.

A larger-scale trial with longer follow-up would show whether these improvements are sustained. The authors suggest that the presence of established RA might be an important factor in the effect of etanercept on anti-CCP antibody levels, and speculate that other effects, on apoptosis of synovial monocytes/macrophages, and cytokine secretion by peripheral-blood mononuclear cells, might also be involved.

Caroline Barranco

Original article Chen HA *et al.* (2006) The effect of etanercept on anti-cyclic citrullinated peptide antibodies and rheumatoid factor in patients with rheumatoid arthritis. *Ann Rheum Dis* 65: 35–39

Serum markers linked with risk of developing osteoarthritis

Diagnosis of osteoarthritis currently relies on radiographic imaging of already-damaged joints. There is a need for biomarkers that can predict onset or progression of osteoarthritis, to identify individuals at risk and allow earlier initiation of treatment. Cartilage oligomeric matrix protein (COMP) and crosslinked N-telopeptides of type I collagen (NTX) are two promising serum biomarkers, which Kelman *et al.* report to be modestly associated with risk of developing radiographic hip osteoarthritis, but not with disease progression.

Study participants were female, white, and were randomly selected from the large, US population-based Study of Osteoporotic Fractures cohort (aged ≥ 65 years at study entry). Women with baseline serum COMP in

the highest quartile were 65% more likely to develop radiographic hip osteoarthritis over 8 years of follow-up, compared with women in the lowest three quartiles. Women with baseline serum NTX in the highest quartile also showed a trend towards increased risk of developing radiographic hip osteoarthritis. The authors note that study participants had much less progression of disease than was reported for clinic-based cohorts; this could be why a trend towards an increased risk of progression in women with the highest serum COMP levels did not reach statistical significance.

The authors speculate that antiresorptive agents might alter the progression of osteoarthritis, if given in early-stage disease. Additional work to correlate change in the serum markers of cartilage and bone breakdown might allow better medications for osteoarthritis to be designed.

Caroline Barranco

Original article Kelman A *et al.* (2006) Association of higher levels of serum cartilage oligomeric matrix protein and N-telopeptide crosslinks with the development of radiographic hip osteoarthritis in elderly women. *Arthritis Rheum* 54: 236–243

Chinese antirheumatic remedy for the treatment of SLE

A recent study has shown that an ethyl acetate extract of the Chinese antirheumatic remedy *Tripterygium wilfordii* Hook F (TwHF) effectively controls and reduces immune nephritis in the NZB/W F1 MOUSE MODEL of systemic lupus erythematosus (SLE). Previous murine studies testing TwHF in SLE had limitations, including lack of a standard preparation of TwHF, treatment initiation before onset of autoimmune disease, and lack of use of the NZB/W F1 mouse model.

In this study, 48 NZB/W F1 mice aged 28 weeks with substantial proteinuria were randomly assigned to receive oral formulations containing either 18.25 mg/kg or 36.50 mg/kg of standard ethyl acetate extract of TwHF, or no active ingredient, for 14 weeks. At the end of treatment, blinded observers recorded pathological changes and undertook immunohistologic examination of kidneys and spleens.

Proteinuria improved or did not worsen in most of the mice in the TwHF groups, and was substantially lower than in the no-TwHF group, indicating a therapeutic effect on established lupus nephritis. Kidney pathology showed that mice treated with TwHF had less-severe kidney