and, therefore, they are attractive diagnostic and prognostic markers. Mewar *et al.* initially identified the ferritin heavy-chain polypeptide as a potential target of RA autoantibodies *in vitro*, and then evaluated antiferritin antibody levels in patients with RA and a series of control populations.

The incidence of antiferritin antibodies was significantly higher in individuals with RA than in the control groups: 16.4% ($n=366$) with established RA; 19% ($n=118$) with early RA; 2.1% ($n=94$) with osteoarthritis; 2.1% ($n=97$) with systemic lupus erythematosus; and 2.7% ($n=73$) of healthy blood donors were positive for antiferritin antibodies. Hence antiferritin antibodies, though having a relatively low sensitivity of 17%, were highly specific (>97%) in these patient groups for RA.

The presence of antiferritin antibodies was associated with male sex. Antibody levels were associated with disease severity, but not with disease duration, indicating that they were not simply a consequence of longstanding disease. These findings suggest that antiferritin antibodies might contribute to joint damage, and could potentially be used as diagnostic or prognostic markers of RA. Further studies of antiferritin antibodies in RA are warranted.

Rachel Murphy

Original article Mewar D *et al.* (2005) Antiferritin antibodies discovered by phage display expression cloning are associated with radiographic damage in rheumatoid arthritis. *Arthritis Rheum* 52: 3868–3872

Long-term steroids might not increase lymphoma risk for some patients

Some studies have suggested that long-term steroid use doubles a patient's risk of lymphoma; however, many of the inflammatory conditions currently treated with steroids or other potentially lymphoma-inducing drugs themselves carry an increased lymphoma risk. A new, large, population-based case-control study, using prospectively recorded data from the Swedish Cancer Register, aimed to avoid these confounding factors by examining lymphoma risk in patients with polymyalgia rheumatica (PMR) and giant cell arteritis (GCA), conditions that are uniformly and successfully treated with 1–2 years of steroids as single immunosuppressive therapy.

In all, 42,676 lymphoma cases and 78,487 matched controls were identified. Of these, 153 cases and 345 controls had been hospitalized

with PMR or GCA at least 1 year before diagnosis of the index lymphoma case, corresponding to an unexpected and statistically significant reduction in lymphoma risk of 19% (odds ratio 0.81; 95% CI 0.67–0.98). Lymphoma risk associated with GCA was slightly lower than for PMR.

These results imply that daily oral corticosteroid use, in moderate to high cumulative doses over 1–3 years, is not associated with increased occurrence of lymphoma, say the authors, although it might not be appropriate to generalize these results to all conditions in which steroids are used.

Caroline Barranco

Original article Askling J *et al.* (2005) Do steroids increase lymphoma risk? A case-control study of lymphoma risk in polymyalgia rheumatica/giant cell arteritis. *Ann Rheum Dis* 64: 1765–1768

Oral PPAR γ agonist THR9021 reduces the severity of collagen-induced arthritis

Peroxisome proliferative-activated receptor (PPAR) γ agonists are used to treat diabetes, but are known to have anti-inflammatory and immunomodulatory effects that are being evaluated in a range of inflammatory conditions. Tomita *et al.* have shown that oral THR9021, a novel PPAR γ agonist, reduces the severity of collagen-induced arthritis (CIA) in mice, via inhibition of proinflammatory cytokine production, T-cell proliferation, and osteoclastogenesis.

Treatment with oral THR9021 started on day 21 after induction of CIA. Treated and control mice with CIA were harvested on day 42; THR9021 delayed the onset and greatly reduced the severity of arthritis compared with controls. Treated mice had markedly reduced spleen-cell proliferation and markedly reduced production of the proinflammatory cytokines tumor necrosis factor, interleukin-1 β and interferon γ at both local and systemic levels, compared with controls. Levels of these cytokines approached those in mice without CIA. THR9021 inhibited the differentiation of osteoclasts and suppressed production of MCP-1, a cytokine responsible for monocyte recruitment and macrophage activation; this might be the most important of its effects, say the authors.

Interestingly, these beneficial effects were seen at a dose 10 times lower than that used