RESEARCH HIGHLIGHTS

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IN BRIEF

RHEUMATOID ARTHRITIS

The lung as a site for anti-CCP generation?

In a study of patients with rheumatoid arthritis (RA) and first degree relatives (FDRs) of patients with RA, 70% (14 of 20) and 25% (17 of 67), respectively, tested positive for anti-cyclic citrullinated peptide (anti-CCP) antibodies in their sputum, including some FDRs who were seronegative. In FDRs, elevated sputum levels of anti-CCP antibodies were associated with elevated numbers of macrophages and neutrophils and increased levels of neutrophil extracellular traps in the sputum.

ORIGINAL ARTICLE Demoruelle, M. K. *et al.* Anti-citrullinated protein antibodies are associated with neutrophil extracellular traps in the sputum in relatives of rheumatoid arthritis patients. *Arthritis Rheumatol.* <u>http://dx.doi.org/10.1002/art.40066</u> (2017)

VASCULITIS SYNDROMES

Shared genetic risk for Behçet disease and Crohn's disease

Genotyping analysis of a Turkish cohort of 1,900 patients with Behçet disease and 1,779 controls, in addition to two replication cohorts, adds *ADO–EGR2*, *RIPK2*, *LACC1*, and *IRF8* to the list of known suspectibility loci shared by Behçet disease and Crohn's disease. A number of immune-related loci, such as *IL1A–IL1B* and *FUT2*, were also associated with Behçet disease, implicating the host response to microbial exposure in susceptibility to Behçet disease.

ORIGINAL ARTICLE Takeuchi, M. et al. Dense genotyping of immune-related loci implicates host responses to microbial exposure in Behçet's disease susceptibility. Nat. Genet. <u>http://dx.doi.org/10.1038/ng.3786</u> (2017)

RHEUMATOID ARTHRITIS

Sirukumab effective in patients refractory to anti-TNF therapy

In the phase III SIRROUND-T study, treatment with the IL-6-specific antibody sirukumab was well tolerated and showed clinical efficacy in patients with RA refractory to anti-TNF therapy. At week 16, 40% (117 of 292) of patients treated with 50 mg sirukumab every 4 weeks and 45% (132 of 292) of patients treated with 100 mg sirukumab every 2 weeks achieved the primary outcome of \geq 20% improvement according to ACR criteria (ACR20 response), compared with 24% (71 of 294) of patients treated with placebo. Adverse event incidences were similar across groups, with the most common being injection-site erythema.

ORIGINAL ARTICLE Aletaha, D. et al. Efficacy and safety of sirukumab in patients with active rheumatoid arthritis refractory to anti-TNF therapy (SIRROUND-T): a randomised, double-blind, placebo-controlled, parallel-group, multinational, phase 3 study. Lancet http://dx.doi.org/10.1016/S0140-6736(17)30401-4 (2017)

RHEUMATOID ARTHRITIS

Baricitinib more effective than adalimumab

Treatment with baricitinib, an orally administered inhibitor of Janus kinases 1 and 2, improved clinical features in patients with active RA and an inadequate response to methotrexate, and was more effective than adalimumab or placebo. 70% of patients treated with 4mg baricitinib daily achieved an ACR20 response by week 12, compared with 61% of those treated with 40mg adalimumab every other week and 40% of the placebo group. Baricitinib treatment also improved radiographic progression of joint damage, and was associated with reduced neutrophil counts and increased levels of creatinine and LDL cholesterol.

ORIGINAL ARTICLE Taylor, P. C. et al. Baricitinib versus placebo or adalimumab in rheumatoid arthritis. N. Engl. J. Med. <u>http://dx.doi.org/10.1056/NEJMoa1608345</u> (2017)