Patient demographic

SF ACPA pool, n=25
Median age 60, 57% females, median disease duration 8 years, all RF-positive, 60% having erosions, 58% treated with disease modifying anti rheumatic drugs (DMARD), 56% treated with biological agents

PB ACPA pool, n=35
Median age 60, 57% females, median disease duration 8 years, 60% having erosions, 58% treated with disease modifying anti rheumatic drugs (DMARD), 56% treated with biological agents.
None of the patients donating PB was donating SF.

OC cell cultures, n=6
Median age 57, 83% females, median disease duration 6 years, all RF-positive, 50% having erosions, all treated with DMARDs, 33% treated with biological agents.
None of these patients donated blood or synovial fluid for ACPA purification.

Synovial fibroblasts cultures, n=2
Median disease duration 23 years, both men, one RF positive, one RF negative, one with erosions and one without erosions, one treated with DMRD and one with biological therapy.
None of these 2 patients donated blood or synovial fluid for ACPA purification.

Micro-CT analysis

The scanning was conducted at 50kV/480μA with a 0.2mm aluminum filter. The exposure time was 900ms. The x-ray projections were obtained at 0.4° intervals with a scanning angular rotation of 180°. The projection images were reconstructed into 3-dimensional images using NRecon software (version 1.6.9.8; Bruker) and analyzed using CTVox software (version 2.7.0; Bruker). Trabecular bone in tibia located 644μm from the proximal growth plate and extending 100,5μm was analysed regarding BMD and 3D analysis and a volume of cortical bone in tibia measuring 617μm in length, located in the distal tibia was measured for TMD, using CTAnalyzer software (version 1.14.4.1; Bruker).

Synovial fibroblasts cultures

Synovial tissues were minced and explants were maintained in DMEM supplemented with 10% heat inactivated FCS (PAA Laboratories, Linz, Austria), 100 U/ml penicillin, 100 μg/ml streptomycin and HEPES (Life Technologies, Paisely, Scotland, UK) (complete DMEM) in a tissue culture incubator at 37°C with 5% CO_2 content. After one to two weeks of culture the tissue specimens and non-adherent cells were discarded and cells were trypsinized with Trypsin-EDTA (Gibco, Scotland, UK) and subcultured by trypsination three to four weeks after initial explantation (at 80% confluence). All SF were used for experiments between passages 3 to 8.