planes of MCP-II-III and PIP II-III joints. Findings were graded semi-quantitatively from 0 to 3 both in grey scale (effusion) and power Doppler (perfusion). The results of the joint assessment were aggregated in a composite index for grey scale and power Doppler (range 0–54 points). All ultrasound images were graded by two independent raters who were blinded to image acquisition.

**Results:** Volleyball training showed statistically significant effects in the composite index for grey scale and power Doppler scores. There were a change in their composite index with a median change of 1 and a maximum change of 3 points. Subanalysis revealed that changes were related to grey scale exclusively, with no statistical difference in power Doppler scores.

**Conclusions:** The results of our study suggest that mechanical stress on the hands leads to changes in grey scale ultrasound in healthy subjects in at least one joint. However, the composite index for changes in grey scale and power Doppler changed 3 points at the most in one subject over various joints. To add, no changes in power Doppler score were observed. While changes in grey scale ultrasound appear to be minor, power Doppler ultrasound appears to be a more robust method and less prone to environmental factors. Power Doppler appears to be able to discriminate between physiological changes due to mechanical stress and acute arthritis and thus, is highly specific.

**Disclosure of Interest:** None declared

**DOI:** 10.1136/annrheumdis-2018-eular.4486

---

**Abstract AB1180 – Figure 1**

**Conclusions:** The results of our study suggest that mechanical stress on the hands leads to changes in grey scale ultrasound in healthy subjects in at least one joint. However, the composite index for changes in grey scale and power Doppler changed 3 points at the most in one subject over various joints. To add, no changes in power Doppler score were observed. While changes in grey scale ultrasound appear to be minor, power Doppler ultrasound appears to be a more robust method and less prone to environmental factors. Power Doppler appears to be able to discriminate between physiological changes due to mechanical stress and acute arthritis and thus, is highly specific.

**Disclosure of Interest:** None declared

**DOI:** 10.1136/annrheumdis-2018-eular.4486

---

**Abstract AB1181**

**ANTI-RO60 SEROPREVALENCY DETERMINES EPI-TOPE SPECIFICITY OF ANTI-RO60 ANTIBODIES IN PATIENTS WITH AUTOIMMUNE RHEUMATIC AND MALIGNANT DISEASES**

A. Gkoutzourelas1, C. Liaskos1, V. Papadopoulos2, M.G. Mitilinou1, K. Christina1, T. Scheper2, W. Meyer2, D.P. Bogdanos3, C. Papandreou2, L. Sakkas1, K. Christina1

1 Rheumatology and Clinical Immunology, Faculty of Medicine, School of Health Sciences, University of Thessaly, Larissa; 2 Medical Oncology, School of Medicine, Aristotle University of Thessaloniki, Thessaloniki, Greece; 3 Institute of Immunology, EUROIMMUN, Lübeck, Germany

**Background:** Epitope mapping of anti-Ro52 antibodies (abs) has been extensively studied in patients with Sjögren’s syndrome (SjS) and malignant diseases. When epitope mapping was analysed in accordance to the following findings were noted: Abs to Ro52 (aa 1–127), Ro52–1 and Ro52–2 (aa 125–265), Ro52–3 (aa 268–475), Ro52–4 (aa 57–180, partly overlapping Ro52–1 and Ro52–2), and Ro52–5 (aa 181–320, partly overlapping Ro52–2 and Ro52–3) were tested by line-immunoassay. Anti-Ro60 was tested by ELISA.

**Methods:** Testing was performed in sera from 95 anti-Ro52 positive patients with various autoimmune diseases (32 SSC, 20 SjS, 28 SLE) and 15 with malignant diseases (MD). Five recombinant Ro52 fragments (Ro52–1 (aa 1–127), Ro52–2 (aa 125–265), Ro52–3 (aa 268–475), Ro52–4 (aa 57–180, partly overlapping Ro52–1 and Ro52–2), and Ro52–5 (aa 181–320, partly overlapping Ro52–2 and Ro52–3) were tested by line-immunoassay. Anti-Ro60 was tested by ELISA.

**Results:** Overall, reactivity to Ro52–1, Ro52–2, Ro52–3 and Ro52–5 were present in 35.8%, 100%, 0%, 32.6%, 50.5%, respectively. Patients with SLE were present in 33/50 (66%) Ro52pos/Ro60pos compared to 15/45 (33.3%) Ro52pos/Ro60neg patients (p<0.001); antibodies to Ro52–2 were present in all patients; antibodies to Ro52–3 was totally absent; antibodies to Ro52–4 were present in 27/63 (32%) Ro52pos/Ro60pos compared to 8/15 (18%) Ro52pos/Ro60neg patients (p=0.003); antibodies to Ro52–5 were present in 33/50 (66%) Ro52pos/Ro60pos compared to 15/45 (33.3%) Ro52pos/Ro60neg patients (p=0.001). Ro52 epitope recognition did not differ between Ro52pos/Ro60pos and Ro52pos/Ro60neg in patients with SLE, SjS and patients with MD.

**Disclosure of Interest:** None declared

**DOI:** 10.1136/annrheumdis-2018-eular.6760

---

**The Stability of Rheumatoid Factor and Anti-CCP Antibody in Archived Samples of Blood**

J. Yoo1, D. Sheen1, M.-K. Lim1, J. Song2

1 Internal medicine, SCHOOL OF MEDICINE, EULIJU UNIVERSITY; 2 Rheumatology, Sun General Hospital, Daejeon, Korea, Republic of Ireland

**Background:** Recently, there has been an increasing demand for analysing a large amount of specimen at the same time and for stably storing those specimens for clinical research. Therefore, the role of the biobank that collects and preserves the samples for research and supplies them stabilly is very important. Anti-CCP antibody and RF predicated the onset of RA by several years, which indicates that circulimination and the production of anti-CCP and RF autoantibodies are early precocities in RA. In addition, RA patients with anti-CCP antibody had more swollen joints and more severe radiological destruction.

**Objectives:** The purpose of this study is to evaluate the stability of RF and anti-CCP antibody after preserving the remaining samples for a long time and to determine the usefulness of the remaining samples that were kept for future research.

**Methods:** Serum samples used in this study were collected from 50 patients with RA in Eulji university hospital in 2011. The patients had baseline measurement at the time the samples were obtained and had more than one serum aliquots stored for archived samples. At baseline measurement, rheumatoid factor was quantified using with turbid immunoanay and anti-CCP was measured by an ELISA analyzer. all specimens were kept in a freezer where temperature monitoring was carried out for 24 hours to keep the temperature below –70°C. 6 years later, samples were slowly thawed at 4°C and measured by the same method of the baseline measurement.

**Results:** The mean age for 50 patients from which the samples were collected is 51.22 years. It was an average of 6.0 years (range: 5.6–6.1 years) for the samples to be stored at the biobank. We observed a slight decrease in concentration of RF and anti-CCP. There were significantly difference in concentration of RF and anti-CCP (Z=−5.10, p-value<0.001; Z=−3.81, p-value<0.001). The correlation between baseline sample and archived sample is strong (RF: r=0.973, p-value<0.001; anti-CCP: r=0.938, p-value<0.001).

**Conclusions:** This study assessed the stability of RF and anti-CCP antibody in archived samples of blood. Our results showed that serum concentration of RF and anti-CCP antibody remain stable for up to 5 years at −70°C. There was a slight decreased in the level overtime that was correlated with baseline value. These data indicated that the archived human samples in human cohorts could be used to examine for research and could be estimated according to the regression analysis.

**REFERENCES:**


**Acknowledgements:** none

**Disclosure of Interest:** None declared

**DOI:** 10.1136/annrheumdis-2018-eular.1025