RF are originated as a result of such post-translational modifications [1]. From the above-mentioned RA markers only synthesis of anti-CarP is a result of chemical protein modification. The synthesis of anti-PADI4 may facilitate the production of citrullinated proteins and contribute to the formation of ACPA. All of the above markers appear before RA onset [2].

**Objectives:** The aim of our study is to discover the potential utility of using additional markers (anti-CarP and anti-PADI4) in RA diagnosis. These markers may be useful in RA diagnosis. The positivity for ACPA/anti-CarP is even higher than ACPA/RF. This might be caused by the similarity of the origins of ACPA and RF (enzymatic citrullination), while anti-CarP origin is different (chemical carbylation). It is known that anti-CarP appears years before RA onset and might be used as a potential biomarker for pre-RA diagnosis. We didn’t confirm the usefulness of anti-PADI4 as RA biomarker.

**Methods:** This is a single-center retrospective cohort study using routine clinical data. We performed a database search of our RA population for the presence of rheumatoid factor (RF) and/or anti-CCP antibodies (ACPA) from 2011 to 2017. Radiographs were assessed independently by two investigators for the presence of severely destructive unilateral wrist arthritis. Discrepancies were resolved by discussion. Epidemiological data including age, gender, disease duration, occupation, dexterity and smoking status were recorded. Patients with psoriasis, a family history of psoriasis or posttraumatic osteoarthritis were excluded. Past and current treatments were recorded. Conventional radiographs of the hands were scored using the modified Sharp score, magnetic resonance images were examined if available.

**Results:** We identified 1247 patients with either positive RF, ACPA, or both. After exclusion of non-RA diagnoses and radiograph review, 17 eligible patients were included in the study. Of these, 7 were excluded because of incomplete clinical data. All of the remaining ten patients were female (100%). Median age was 58.1 years (33-70), median disease duration was 15.5 years (1-22). Seven patients were right-handed, one was left-handed, in two patients, dexterity was not known. Six patients were smokers, two patients were non-smokers, in two patients, smoking status was not known. Median ACPA levels were 134.6 AU/mL (normal range <5), median RF 54.2 AU/mL (NR <16). All but two patients were positive for both antibodies; in three patients, ACPA were only mildly elevated (6, 11, and 14, respectively). 6/7 (75%) patients with severe destruction were smokers. In 5/7 (71.4%) right-handed patients, destruction occurred in the dominant wrist. RA activity was in 2/7 (28.5%) right-