Background: High titers of cyclic citrullinated peptide antibodies (anti-CCP) are predictive of poor prognosis in the treatment of rheumatoid arthritis (RA). The 2010 ACR/EULAR classification criteria for early RA assign a high point value to cases having highly positive anti-CCP titers. Previous reports have claimed that osteoarthritic damage is more severe and advanced in RA patients who test positive for anti-CCP than in their negative counterparts.

Objectives: To retrospectively investigate whether anti-CCP titers were associated with the extent of osteoarthritic damage in RA patients treated at our institution.

Methods: Data were analyzed for 422 RA patients who received biologic agents due to resistance to methotrexate or other conventional antirheumatic drugs. Associations were explored between joint replacement history—i.e. total knee replacement (TKR), total hip replacement (THR), or lack thereof—and anti-CCP positivity rates and titers.

Results: The sample consisted of 90 men and 332 women. On average, patients were put on biologics at 58.6 years of age (range: 22–85), and had a disease duration of 9.3 years. The first biologic agent chosen was infliximab (IFX) in 154 cases, etanercept (ETN) in 76, adalimumab (ADA) in 61, tocilizumab (TCZ) in 70, abatacept (ABT) in 41, golimumab (GLM) in 18, and certolizumab pegol (CZP) in 2. In total, 331/422 patients (78.4%) tested positive for anti-CCP. TKR was performed in 46 cases (M:F ratio: 7:39, mean age: 64.7 y, mean disease duration: 9.3 y), of which 46 were positive for anti-CCP (100%). THR was performed in 18 cases (M:F ratio: 2:16, mean age: 62.3 y, mean disease duration: 18.5 y), of which 17 were positive for anti-CCP (94.4%). The mean anti-CCP titer among all positive patients (n=331) was 152.9 IU/ml. This value was significantly higher in positive patients (n=331) was 152.9 IU/ml. This value was significantly higher in positive patients (n=331) than in their negative counterparts.

Conclusion: Higher anti-CCP positivity rates and titers were positive for anti-CCP than in their negative counterparts. The opinion about the severity and prognosis of rheumatoid arthritis (RA) with late onset balanced between more favorable and more severe over various periods of rheumatology development. We studied this group of patients according to the Russian RA Patient Register OREL.