

## **Sociodemographic, Disease, and Medication Profile of RA Patients under 65 years Compared with 65 Years or Older at Registry Enrollment: Results from The Ontario Best Practices Research Initiative (OBRI)**

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**Objectives:** Age is an important factor that can affect disease course, physical function and treat to target strategy for patients with rheumatoid arthritis (RA). We aimed to describe socio-demographic, disease and medication profile of patients with RA in the Ontario Best Practices Research Initiative (OBRI) by their assigned age group at time of their enrollment.

**Methods:** RA patients enrolled in the OBRI between 1st Jan 2008 and 31st Dec 2019 were included. Patients were allocated into two age groups, under 65 years and 65 years or older. Descriptive analysis was used to compare socio-demographic characteristics, disease activity, patient report outcomes (PROs), comorbidity, and antirheumatic medication profile. We calculated the standardized difference as the difference in means or proportions divided by the standard error. A significant difference between the two groups was defined as an absolute value  $\geq 0.10$ .

**Results:** A total of 3,734 patients were included; 2562 (68.5%) were under 65 years old and 1172 (31.5%) were 65 years or older. Socio-demographic profile: Patients under 65 years were significantly more likely to be female (79.7 vs. 73.5%), non-caucasian (14.4 vs. 7.4%), current smokers (18.8 vs 9.3%) and have post-secondary education (62.6 vs. 44.6%), and more likely to have private health insurance (75 vs. 49%) and report English as their spoken language (7.0 vs 9.8%).

Disease activity and PROs profile: Patients under 65 years were significantly more likely to be antiCCP positive (63.0 vs. 57.5%), report higher PtGA (mean: 4.8 vs. 4.5), higher global pain (mean 4.8 vs. 4.4), higher fatigue score (mean 5.0 vs. 4.6), and lower HAQ-DI (mean 1.1 vs. 1.2).

In terms of comorbidity, patients under 65 years had significantly lower proportions of hypertension, cardiovascular disease, diabetes mellitus, lung disease, gastrointestinal disease and malignancy. However, interestingly this group of patients had a higher proportion of depression (17.8% vs 13.3%).

Antirheumatic medication profile: At enrollment, patients under 65 years were significantly more likely to have used prior bDMARDs (31.4 vs.26.1%), and were more likely to be starting a new bDMARD (17.1 vs. 12.8%), or csDMARDs (38.6 vs. 35.6%).

**Conclusion:** In this real world descriptive study, we found that disease activity measures were similar in patients under 65 years compared to those 65 years or older. However, socio-demographics, PROs, comorbidity, and antirheumatic medication profiles were different between two groups. These differences should be taken into account for any clinical decision toward outcome improvement in patients.