Abstract SAT0080 – Figure 1. Earlier Use of High Doses of poMTX and scMTX in 2nd Time Period Resulted in More Reaching RA Treatment Targets

Conclusions: This 10 year Canadian prospective study of classifiable/probable RA patients, who were assessed for 1 year suggests that earlier, more intensified treatment promoted in practice recommendations were implemented and resulted in lower disease activity with a greater proportion of patients reaching targets of LDA and/or REM, although 25%–30% of patients still did not achieve LDA or REM by 12 M.

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SAT0081 **CHANGES IN INCIDENCE OF SHOULDER, ELBOW, WRIST AND FINGER REPLACEMENT SURGERY AMONG RHEUMATOID ARTHRITIS PATIENTS FOLLOWING THE INTRODUCTION OF BIOLOGICAL DMARDS: AN INTERRUPTED TIME SERIES ANALYSIS USING DANISH HEALTH CARE REGISTERS**

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Background: We have previously shown that the incidence rate of total knee replacements started to decrease among rheumatoid arthritis (RA) patients following the introduction of biological (b) DMARDs, but less is known on the impact of bDMARDs on the need for joint replacements (JR) of the upper limbs.

Objectives: To investigate the association between bDMARD introduction for the treatment of patients with RA on the trends of upper limb JR among newly diagnosed RA patients compared with a matched general population cohort (GPC) in Denmark.

Methods: Nationwide register-based interrupted time-series analysis using the Danish National Patient Register and Civil Registration System. **Study populations:** incident RA patients diagnosed at a rheumatology or general internal medicine clinic/department from 1996–2010. **Intervention:** introduction of bDMARDs

Abstract SAT0081 – Table 1. Changes in 5-year incidence rate of upper limb joint replacements (JR) in incident rheumatoid arthritis (RA) patients following introduction of biological DMARDs in 2002 compared with secular trends in a matched general population cohort (GPC).

Cohort	N	Mean age at start of follow-up	Females, n (%)	n JR	PYRS	Baseline incidence rate/1000 pyrs	Δ per year* 1996–2001	Δ in level 2003	Δ per year* 2003–2015	Absolute/relative Δ at midpoint in bDMARD era (mid-2006) compared with counterfactual value
RA	26 458	58.9 years	18 691 (71%)	295	1 23 814	2.65 (2.27–3.04)	-	-	-0.10 (-0.21+0.01)	-0.44 (-0.49 to -0.39)/-17%
GPC	2 57 505	58.4 years	1 82 192 (71%)	377	1,152,052	0.11 (0.04–0.17)	0.03 (0.02–0.03)	-	0.03 (0.02–0.03)	No change

in Denmark in 2002. **Comparison:** Each RA patient was matched on age, sex and municipality with up to 10 non-RA individuals (GPC). **Outcome:** Composite outcome of first shoulder, elbow, wrist, or finger replacement surgery (JR). **Statistical analyses:** 5 year age- and sex-standardised incidence rates of JR calculated for incident RA patients diagnosed biannually compared with GPCs. Outcome trends in the pre-bDMARD era (1996–2001) were compared with those in the bDMARD era (2003–2015) with a 1 year lag period in 2002.

Results: From 1996 to 2010, 26 458 incident RA patients were identified and compared with 257,505 GPCs (Table). The JR incidence rate was stable among RA patients in 1996–2001, but started to decrease from 2003 and onwards. Among GPCs, the incidence rate increased throughout the study period. Stepwise backward elimination to produce most parsimonious model: p-entry <0.05 and p-exit >0.2.

* Δ per year based on biannual data. Abbreviations: pyrs, person years

Conclusions: Following the introduction of bDMARDs, the incidence rate of upper limb JR started to decrease among RA patients, whereas the incidence rate steadily increased from 1996–2015 among matched GPCs. The baseline incidence rate was 7-fold higher among RA patients than GPCs, but the absolute need for upper limb JR was low in both groups.

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SAT0082 **OSTEOPONTINE AND OSTEOPROTEGRINE AS MARKERS OF ALTERED PRECLINICAL BONE METABOLISM IN RHEUMATOID FIRST DEGREE RELATIVES**

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Background: First degree relatives (FDR) of RA are known to have increased risk of developing the disease. The detection of altered bone metabolism in FDR could be a predictor of the preclinical phase of the disease.

Objectives: To study osteopontine (OPN) and osteoprotegrine (OPG) in FDR of RA patients as markers of altered bone metabolism in relation to clinical manifestations, inflammatory and RA seromarkers.