measure. The granularity of the comorbidities was insufficient, as many registers coded, for example, diabetes mellitus without any extra information.

Registry	ATTRA	BIOBADASER	BSRBR-RA	RABBIT	SCQM
Country	Czechia	Spain	United Kingdom	Germany	Switzerland
Number of Participants	2334	3012	25179	13652	10281
Gender					
Female	1808 (77%)	2372 (79%)	18995 (75%)	10191 (75%)	7584 (74%)
Male	526 (23%)	640 (21%)	6184 (25%)	3461 (25%)	2697 (26%)
Age at observation start date	59 (52, 66)	56 (47, 63)	58 (49, 66)	58 (50, 67)	57 (47, 66)
First observation start date	Feb-2002	Oct-1999	Oct-2001	Aug-2006	March-1995
Number of comorbidities	1 (1, 2)	1 (0, 2)	1 (0, 2)	2 (1, 3)	2 (1, 4)
Disorder of cardiovascular system	1609 (69%)	208 (7%)	2239 (9%)	6330 (46%)	3969 (39%)
Diabetes mellitus	331 (14%)	273 (9%)	1770 (7%)	1591 (12%)	792 (8%)
Depressive Disorder	165 (7%)	0	4971 (20%)	1023 (7%)	1337 (13%)
Disorder of respiratory system	215 (9%)	209 (7%)	4125 (16%)	1282 (9%)	1630 (16%)

Conclusion: This is the first analysis of data from the newly mapped OMOP CDM across five European registers. Through mapping the registers into a CDM, and using the same script, the ability to undertake collaborative analysis without sharing patient level data outside of the country can be realised. Due to differences in study design and data capture, there needs to be a focus on harmonising the coding and analysing of the comorbidities and drugs across registries.

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Bone & Joints

OP0106 THE ASSOCIATIONS BETWEEN BARIATRIC SURGERY AND HIP OR KNEE ARTHROPLASTY, AND HIP OR KNEE OSTEOARTHRITIS: A COHORT STUDY FROM SWEDISH NATIONWIDE HEALTHCARE REGISTRIES

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Background: Osteoarthritis (OA) is a slowly developing chronic joint disease mainly characterized by joint pain which may lead to physical disability. OA in weight bearing joints, such as the hip and knee, was suggested to be susceptible to high body weight. In end-stage disease, hip and knee OA are often treated with arthroplasty. The impact of weight loss among obese patients on hip and knee arthroplasty has not been assessed to date.

Objectives: To assess the association between bariatric surgery and hip or knee arthroplasty. As a secondary aim, we assessed the association between bariatric surgery and hip or knee OA in a secondary care setting.

Methods: We performed a propensity score (PS)-matched cohort study using data from Swedish nationwide healthcare registries (patient registry [secondary care], causes of death registry, prescribed drug registry). Patients aged 18-79 years who underwent bariatric surgery between 2006 and 2019 were matched to up to 2 obese bariatric surgery free patients (called unexposed patients) based on their PS. PS-matching was carried out in risk set sampling to reduce selection bias, within 4 sequential cohort entry blocks to account for time trend biases. The primary outcome was hip or knee arthroplasty. The secondary outcome was a diagnosis of hip or knee OA in secondary care. We excluded patients with differential indications for

arthroplasty or OA (e.g. rheumatoid arthritis, septic arthritis). After a 1-year run-in period, patients were followed in an "as-treated" approach until the outcome or censoring due to onset of an exclusion criterion, change of exposure status, or end of study period. We applied Cox proportional hazard regression to calculate hazard ratios (HR) with 95% confidence intervals (CIs) of hip or knee arthroplasty, and separately of hip or knee OA, among bariatric surgery patients when compared to obese unexposed patients. Additionally, we performed analyses in subgroups of age, sex, joint location, bariatric surgery type, and by duration of follow-up.

Results: A total of 39 392 bariatric surgery patients were PS-matched to 61 085 obese unexposed patients. The study population had a mean age of 42 years, a mean follow-up of 6.5 years, and 72.5% of patients were women. We observed 1138 and 1108 hip or knee arthroplasties among bariatric surgery and obese unexposed patients, respectively. We observed an overall increased risk of hip or knee arthroplasty among bariatric surgery patients (HR of 1.43, 95% CI 1.32-1.55), compared to obese unexposed patients. The risk for knee arthroplasty was higher than that for hip arthroplasty among bariatric surgery patients (HR of 1.58, 95% CI 1.42-1.76, and HR of 1.21, 95% CI 1.06-1.39, respectively). Patients who underwent combined mal-absorptive and restrictive bariatric surgery yielded highest risks of hip or knee arthroplasty (HR of 3.58, 95% CI 1.34-9.54). Risks of hip or knee arthroplasty decreased with duration of follow-up (highest risks 1-3 years post-bariatric surgery, HR of 1.79, 95% CI 1.56-2.07). In secondary analyses, risks of secondary care hip or knee OA were decreased among bariatric surgery versus obese unexposed patients (HR of 0.84, 95% CI 0.79-0.90). We observed lower risks for knee OA (HR of 0.82, 95% CI 0.76-0.88) than for hip OA (HR of 0.90, 95% CI 0.79-1.01) and observed lowest risks of hip or knee OA in early follow-up (1-3 years post-bariatric surgery) with a HR of 0.79, 95% CI 0.71-0.88, stable thereafter at a HR of 0.87, 95% CI 0.78-0.97.

Conclusion: Our results suggest that substantial weight loss among obese patients is associated with decreased risks of secondary care hip and knee OA. Increased risks of hip and knee arthroplasty after bariatric surgery are likely the result of increased operability of patients who have lost a substantial amount of excess body weight. Stronger associations for the knee than for the hip in both arthroplasty and OA are consistent with existing literature suggesting a stronger impact of body weight on knee than on hip joints.

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OP0107 CLINICAL EFFICACY OF ROMOSUZUMAB IN PATIENTS WITH RHEUMATOID ARTHRITIS FOR 12 MONTHS

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Background: Romosozumab (ROMO), a monoclonal antibody that binds sclerostin, increases bone formation and decreases bone resorption. And although it is a novel therapeutic agent for osteoporosis, which has shown high effects of increasing bone density and inhibiting fragile fracture in overseas clinical trials. However the clinical efficacy for rheumatoid arthritis complicated with osteoporosis (RA-OP) is unknown.

Objectives: To evaluate the clinical efficacy of ROMO in patients with RA-OP for 12 months.

Methods: RA patients diagnosed according to the 2010 ACR/EULAR criteria. All patients met at least one of the following criteria were eligible; a bone mineral density T score of -2.5 or less at the lumbar spine or total hip and either one or more moderate or severe vertebral fractures or two or more mild vertebral fractures. All patients were initiated ROMO from between March and December, 2019. The total number of patients was 13 cases. The ROMO dose was 210mg at once every 1 months. In all cases native or activated vitamin D has been used. We reviewed the results for 12 months about the increase and decrease of bone mineral density (BMD) of lumbar spine (LS) and total hip (TH) by DEXA and bone turnover markers, intact n-terminal propeptide type I procollagen (PINP) and tartrate-resistant acid phosphatase form 5b (TRACP-5b).

Results: The gender was all female. The mean age was 73.2 ± 7.6; disease duration was 20.5 ± 16.9 years; the body mass index was 19.7 ± 3.0 and the FRAX was 40.5 ± 16.2. Clinical findings related to RA-OP at baseline were as follows; CRP 1.29 ± 1.66; DAS-CRP 3.43 ± 0.96; HAQ 1.59 ± 0.97 and, bone turnover markers and bone mineral density at baseline were as follows; PINP 58.1 ± 33.5; TRACP-5b 438 ± 216; LS-BMD and T-score 0.81 ± 0.15g/cm² and -2.63 ± 1.05 and TH-BMD 0.54 ± 0.08g/cm² and -3.22 ± 0.64g/cm². The rate of increased PINP from baseline to 1, 3, 6 and 12 months were each 114.3 ± 90.6% at 1 month, 131.6 ± 134.3% at 3 month, 122.6 ± 174.3% at 6 month and 80.4 ± 181.6% at 12 month and decreased TRACP-5b were -10.7 ± 20.8% at 1 month, 7.9 ± 36.9% at 3 month, 25.5 ± 64.6% at 6 month and 32.5