age, disease duration, comorbidities, family history of a rheumatic disease, ANA, treatment agents and disease activity and quality of life assessment tools.

Results: A total of 863 RA male patients were studied with a mean age of 53.9±12.5 years and a mean disease duration 7.3±5.5 years. 652 (75.6%) had positive RF and 624 (72.3%) had positive ACPA. 431 (50%) had at least one comorbidity. 640 (74.2%) were on conventional disease modifying agents (cDMARDs) and 223 (25.8%) were on biologic therapy. 183 (21.2%) were smokers. After adjustment of other factors, logistic regression showed that smokers were significantly different than non-smokers in terms of a positive ACPA ($\beta=1.051$, $p<0.001$, odds=4.019) and a positive RF ($\beta=-0.804$, $p=0.019$, odds=2.517). **Conclusion:** Smokers have a higher risk of expressing a positive RF and a positive ACPA in a male population. Smoking should be considered as a possible risk factor for RA and efforts should be done to educate the population to cease smoking to possibly lower that risk.

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AB0177

RHEUMATOID ARTHRITIS SAUDI DATABASE (RASD): A SINGLE CENTER EXPERIENCE

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Background: National Registries are essential to direct current practice and design appropriate management strategies¹. Rheumatoid arthritis (RA) registries in the middle east and north Africa remain scarcely represented².

Objectives: Our objective is to describe the Saudi RA population and to compare the findings to internationally reported data.

Methods: This is a cross sectional, analytical study that was conducted at Doctor Soliman Fakeeh Hospital (DSFH). The study ran from December of 2014 and concluded in December of 2018 using a pool of 433 patients. Inclusion criteria included adults older than 18 years of age who fulfilled the 2010 American College of Rheumatology criteria for diagnosis of RA³. Data were collected from patients and entered in a specially designed program for this registry. They included main demographic details, lag times to final disease diagnosis. Disease Activity Score-28-C Reactive Protein (DAS-28-CRP) was calculated on presentation and on subsequent visits with intervals ranging from three to six months between them. Multiple regression model was used to assess the predictors of disease activity. We charted the lines of medications given, including conventional and biologic disease modifying antirheumatic drugs (DMARDs), following treat to target strategies⁴.

Results: Out of 430 patients, 76.68% were female, while only 23.32% were male and the mean age was found to be 49.26 years with SD±11.

At initial presentation, 45.5% had demonstrated active disease (moderate or high disease activity) based on DAS-28-CRP scores while 54.5% were in remission or low disease activity. Out of the total number of clinic visitors, 330 had regular follow ups for more than 1 year while 103 patients were either irregularly visiting the rheumatology clinic or had lost follow up. The remission rates after 1 year had increased to 79.7% (263 patients), while 9.7% (32 patients) had low disease activity and no patients had sustained high disease activity at the end of follow up. It was also found that the female gender, higher Health Assessment Questionnaire-Disability Index (HAQ-DI) and a longer lag1/lag2 period were

associated with higher disease activity in our population. Biologic medications had been used by 129 patients (29.7%) while conventional DMARDs were given to 304 patients (70.3%).

Conclusion: We described a population of RA patients in a single center in SA. We detected higher remission rates at one year of follow up. This could be attributed to many factors, including good referral systems and treat to target strategies with easier access to biologic medications.

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AB0178

PERIARTICULAR OSTEOPHYTE FORMATION PROTECTS AGAINST TOTAL KNEE ARTHROPLASTY IN RHEUMATOID ARTHRITIS PATIENTS WITH ADVANCED JOINT DAMAGE

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Background: New medications including biologics and aggressive treatment strategies can halt the inflammatory and destructive disease processes in patients with rheumatoid arthritis (RA), and in some cases repair damaged joints. In the process of damaged joint repair, periarticular osteophyte formation might be detected radiographically (1). However, little is known about the clinical and functional role of osteophyte formation in RA joints. Total joint arthroplasty, a common procedure for treating damaged large joints, can serve as a surrogate for the long-term outcome of large joint destruction in patients with RA.

Objectives: To determine the influence of periarticular osteophyte formation on the incidence of total knee arthroplasty (TKA) in patients with RA.

Methods: This retrospective longitudinal study used data from a registry of patients with RA starting biologics. A flow chart summarizing the study design is shown in Figure 1. A total of 130 symptomatic (tender and/or swollen) knee joints in 80 patients were studied with a median follow-up of 12 years. All data were analyzed using the knee joint as the statistical unit of analysis. The cumulative incidences of TKA were estimated using Kaplan-Meier curves, and compared according to the presence or absence of osteophyte on plain anteroposterior radiograph [osteophyte (+/-)] and the extent of advanced joint damage as defined by Larsen's grading system (0-II vs. III-V).

Results: Baseline characteristics of all subjects included in this study are shown in Table 1. A total of 42 knees underwent TKA during the follow-up period. There was no significant difference in the cumulative incidence of TKA between the osteophyte (+) and osteophyte (-) groups (31% vs. 34% at 10 years, $P=0.718$) (Fig. 2A). The cumulative incidence of TKA was significantly higher for the Larsen grade III-V group compared to the Larsen grade 0-II group (56% vs. 10% at 10 years, $P<0.001$) (Fig. 2B). While no significant difference was observed in the cumulative incidence of TKA between the osteophyte (+) and osteophyte (-) groups in the Larsen grade 0-II group (9% vs. 10% at 10 years, $P=0.774$) (Fig. 2C), the cumulative incidence of TKA was significantly lower for the osteophyte (+) group compared to the osteophyte (-) group in the Larsen grade III-V group (38% vs. 74% at 10 years, $P=0.010$) (Fig. 2D). Multivariate analysis using Cox proportional hazards models revealed that older age [hazard ratio (HR): 1.04