Results: Participants comprised 172 HI and 119 RA, after excluding those who dropped out (HI, n=21; RA, n=19) or underwent implant surgery (HI, n=12; RA, n=60). Height and weight reduced significantly over 7 years ($p<0.001$ each) in both groups (table 1). The Δ BMDs of RA were -2.6% (whole body), -3.6% (lower limb), and 1.8% (lumbar spine), compared to -2.0% , -2.7% , and 0.6% , respectively, for HI. No significant differences in BMD for the whole body or lower limb were seen during 7 years, while BMD of the lumbar spine was significantly increased in both groups ($p<0.0001$). No significant differences between groups were identified. In patients with RA, DAS28ESR improved significantly over 7 years ($p=0.008$; table 1) and Δ BMD of the lumbar spine correlated significantly with cumulative period of treatment for osteoporosis ($r=0.341$, $p<0.001$). The cumulative period of osteoporosis treatment was identified as a regulatory factor for increasing BMD of the lumbar spine (odds ratio: 1.36; $p=0.003$) adjusted by age and sex (table 2). However, cumulative period of biologics, change of glucocorticoid and DAS28ESR were not detected as factors affecting BMD by logistic regression analysis.

Abstract AB1008 – Table 1. Changes in characteristics over 7 years

Parameter	Total population (n=291)	Healthy individuals (n=172)	Patients with RA (n=119)	P value
Age 2010	56.6 $\pm$ 12.7	57.1 $\pm$ 12.3	55.9 $\pm$ 13.3	0.431
Height 2010 (cm)	157.3 $\pm$ 7.8	157.9 $\pm$ 7.1	156.4 $\pm$ 8.7	0.107
Height 2017 (cm)	156.1 $\pm$ 8.1	156.8 $\pm$ 7.3	155.2 $\pm$ 9.1	0.107
Body weight 2010 (kg)	56.1 $\pm$ 10.0	56.5 $\pm$ 10.3	55.6 $\pm$ 9.7	0.418
Body weight 2017 (kg)	55.1 $\pm$ 10.4	55.8 $\pm$ 10.7	54.0 $\pm$ 9.9	0.145
DAS28 ESR 2010	-	-	3.17 $\pm$ 1.27	-
DAS28 ESR 2017	-	-	2.86 $\pm$ 1.24	-

Abstract AB1008 – Table 2. Factors associated with increased BMD of the lumbar spine in patients with RA

Factor	Odds ratio	95% CI	P value
Period of osteoporosis treatment	1.36	1.11–1.66	0.003
Period of biologics	1.02	0.92–1.13	0.683
Change of glucocorticoid	1.01	0.83–1.23	0.933
Change of DAS28ESR	1.04	0.76–1.44	0.798

Conclusions: BMD of the whole body and lower limb tended to decrease slightly over 7 years in both groups. However, BMD of the lumbar spine increased significantly. Continued osteoporosis treatment is important for increasing BMD at the lumbar spine in patients with RA.

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AB1009 CONCORDANCE BETWEEN VERTEBRAL FRACTURE ASSESSMENT AND CONVENTIONAL RADIOGRAPHY IN DETECTION OF VERTEBRAL FRACTURE

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Background: Vertebral fractures (VFs) are considered as severe fractures, but often asymptomatic. The VFA (Vertebral Fracture Assessment) performed at the same time as the bone mineral density (BMD) measure, allows the detection of these fractures. Nevertheless, standard radiography remains the reference technique in the diagnosis of VFs.

Objectives: Our objective is to compare the contribution of VFA and the standard thoraco-lumbar spine X-ray in the diagnosis of VFs in patients at risk.

Methods: This is a cross sectional study, including women referred in rheumatology department for measure of bone mineral density (BMD). During the same exam, we practiced a vertebral fracture assessment (VFA) image. An X-Ray of dorsal and lumbar spine was done. The interpretation of the two methods was to diagnose asymptomatic vertebral fractures (VFs) which are defined according to Genant's semi-quantitative classification.

Results: The mean age of our patients (31 patients) was 61.3 $\pm$ 11.3 years^{38–82} with an average body mass index (BMI) of 27.65 $\pm$ 4.8 Kg/m²; [17.8–40.1]. According to the WHO classification, 17 women (54.8%) had osteoporosis, 10 (32.3%) had osteopenia and 4 (12.9%) had normal BMD. The indications for VFA practice were: age over 60 years with T score $\leq$ -2 SD, historical height loss $\geq$ 4 cm, a

history of VF, a long-term corticosteroid therapy, and aromatase inhibitors therapy in 25.8%, 12.9%, 6.5%, 45.2% and 9.7% respectively.

VFA objectified 15 VFs in 6 women (19.4%) which were grade 1, 2 and 3 in respectively 2, 5 and 8 vertebrae. However plain X ray showed 21 VFs in 10 women (32.2%) which were grade 1, 2 and 3 in respectively 5, 7 and 9 vertebrae. The concordance between the two methods was found in 87.1% of cases, with a coefficient of Cohen (kappa) at 0.76 (strong agreement). A significant correlation ($p=0.000$) was found between the two methods concerning the detection of VFs grade II and III.

Conclusions: Our study proved the good agreement between the VFA and the standard X-ray in the detection of VFs. This shows the sensitivity of this technique which has the advantages of low cost and less irradiation.

Disclosure of Interest: None declared

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AB1010 RISK OF INFECTION IN PATIENTS WITH RHEUMATOID ARTHRITIS TAKING DENOSUMAB CONCURRENT WITH BIOLOGIC THERAPY

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Background: Apart from Denosumab effects on bone, there are some promising data on its inhibitory effect on structural damages in patients with Rheumatoid Arthritis (RA).¹ Despite some clinical concerns on its potential harm for increasing risk of infections, Denosumab is officially approved for the treatment of postmenopausal osteoporosis. Still there are even greater debates on its use and predisposing patients to infection in cases receiving immunosuppressive therapy.² Considering the importance of infection in such cases, lack of sufficient convincing safety data has prevented, at least in part, the current guidelines to recommend Denosumab in treatment of osteoporosis in patients on immunosuppressive agents.³

Objectives: We aimed to compare the infection risk in patients with RA taking biologic Disease Modifying Anti Rheumatic Drugs (bDMARDs) alone or concurrent with Denosumab.

Methods: Using records from the files covering January 2013 to May 2016, a retrospective comparative study was performed on two groups of postmenopausal RA patients, group A including 40 patients receiving Denosumab+bDMARDs (Etanercept, Rituximab, Adalimumab), and group B consisting of 44 patients receiving bDMARDs alone. Patients were included if the current therapeutic regimen was used for at least one year. All patients were also on a daily dose of prednisolone (2.5–7.5 mg) and folic acid, and a weekly dose of Methotrexate. Occurrence of serious bacterial or viral infections was extracted from recorded files of the patients' routine visits.

Results: The mean age of the patients was 63.1 $\pm$ 12 years and 62.6 $\pm$ 11.7 years in group A and B, respectively ($p=0.42$). The mean disease duration was 7.2 $\pm$ 1.9 years and 7.1 $\pm$ 1.6 years in group A and B, respectively ($p=0.39$). The mean duration of biologic use was 15.4 $\pm$ 3.2 months and 15.8 $\pm$ 4.6 months in group A and B, respectively ($p=0.28$). Type 2 diabetes mellitus was present in four and five patients of group A and group B, respectively ($p=0.35$). In total, four infections occurred in our study groups, two in each group ($p=0.94$). In group A, the first one was an osteomyelitis of the first metatarsal bone in a diabetic patient receiving Etanercept+Denosumab. The second one was a herpes zoster infection in a patient receiving Adalimumab+Denosumab. In group B two cases of herpes zoster were recorded in two patients receiving Adalimumab.

Conclusions: This study showed that the potential infection risk of concurrent use of Denosumab and bDMARDs was not significantly different from using bDMARDs alone. Based on this finding, Denosumab seems safe in the treatment of osteoporosis in RA patients receiving bDMARDs.

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