Objectives: To assess the prevalence of OP in Spanish postmenopausal patients diagnosed with BC and treated with AI using BMD values obtained from a local cohort for T-Score calculation.

Methods: We performed a cross-sectional study with postmenopausal women diagnosed with BC and treated with AI attended in our hospital between August 2011 and December 2014. We estimated BMD for LS and FN using dual X-Ray absorptiometry. The prevalence of OP in our cohort was assessed using BMD reference values from the Spanish cohort of Diaz-Curiel², which included a group of 2442 healthy patients from both genres stratified by age, and compared it with OP prevalence obtained using clinical practice reference values applied in our country (NHANES III/Hologic).

Results: A total of 54 patients were included. The mean age at diagnosis was 61.50±6.50 years. The AI used in both groups was letrozole. For LS we didn't find statistically significant differences between both groups. For FN we found 13 patients (24%) with OP according to NHANES/Hologic, and 8 patients (14.8%) according to Diaz-Curiel values. These values are summarised in the table.

Abstract AB0998 – Table 1

	(NHANES/ Hologic)	Number of patients (%)	(Diaz Curiel cohort)	Number of patients (%)	p-value
Lumbar spine (L2-L4)	Normal	10 (18.6%)	Normal	10 (18.6%)	0.110
	Osteopenia	16 (29.6%)	Osteopenia	15 (27.7%)	
	Osteoporosis	28 (51.8%)	Osteoporosis	29 (53.7%)	
	Mean T-score=	-2.16	Mean T-score=	-2.28	
Femoral neck	Normal	17 (32%)	Normal	15 (27.8%)	0.018*
	Osteopenia	24 (44%)	Osteopenia	31 (57.4%)	
	Osteoporosis	13 (24%)	Osteoporosis	8 (14.8%)	
	Mean T-score=	-1.77	Mean T-score=	-1.57	

Conclusions: In our study, we observe statistically significant differences in osteoporosis prevalence for FN, and around 10% of patients could be reclassified using our local BMD values, which highlights the relevance of the use of BMD values obtained from local population for T-score calculation.

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AB0999 OPPORTUNISTIC SCREENING FOR OSTEOPOROSIS USING THORACO-ABDOMINO-PELVIC COMPUTED TOMOGRAPHY FOR ASSESSMENT OF VERTEBRAL DENSITY IN RHEUMATOID ARTHRITIS PATIENTS

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Background: Screening for osteoporosis is crucial in rheumatoid arthritis (RA) patients. Computed tomography (CT) attenuation assessment has been proved to be of interest in general population for detection of osteoporosis.

Objectives: To assess the value of thoraco-abdomino-pelvic CT-derived bone mineral density (BMD) in L1, compared with dual energy X-ray absorptiometry (DXA) for osteoporosis screening in rheumatoid arthritis patients.

Methods: Consecutive RA patients who underwent a CT-scan and a DXA within a two-year period are retrospectively included. CT sagittal images are evaluated from T4 to L5 for vertebral fractures according to Genant classification. CT attenuation values (in Hounsfield units [HU]) of trabecular bone in L1 are measured on axial images and compared to DXA results.

Results: One hundred and five patients (mean age 61.1 years (±9.5), 78.1% women) were included. Twenty-eight patients (26.7%) have DXA-defined osteoporosis and 32 (30%) have osteoporotic fractures (vertebral and/or non-vertebral). According to CT assessment, mean (SD) vertebral L1 attenuation is 142.2 HU (±18.5). The diagnostic performance for vertebral CT-attenuation measurement was good, with an AUC of 0.67 for predicting osteoporotic fractures and of 0.69 for predicting vertebral fractures. Among 31 patients with osteoporotic fractures, 23

(74%) patients are categorised as osteoporotic with L1 CT-attenuation of 135 HU or less, whereas only 13 patients (42%) with DXA.

Conclusions: This technique offers a combined opportunistic screening for osteoporosis by assessing both vertebral fractures and bone density on routine CT-scans. This seems of particular interest in RA patients who are at high risk for osteoporosis.

Disclosure of Interest: None declared

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AB1000 ASSOCIATION OF SERUM URIC ACID LEVEL WITH BONE MINERAL DENSITY AND OSTEOPOROSIS IN POSTMENOPAUSAL WOMEN WITH RHEUMATOID ARTHRITIS

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Background: Previous studies have reported that higher serum uric acid (SUA) levels are associated with higher bone mineral density (BMD) in men and postmenopausal women, and lower risk of fragility fracture in men. However, whether this association is also present in patients with rheumatoid arthritis (RA) has not yet been investigated.

Objectives: To examine the association of SUA levels with BMD and osteoporosis in postmenopausal women with RA.

Methods: We retrospectively evaluated 447 postmenopausal female RA patients (mean age 61.1 years) who underwent measurement of L1–4, femoral neck, and total hip BMD using dual energy X-ray absorptiometry, in addition to SUA levels at a university rheumatology centre in South Korea between 2004 and 2017. Osteoporosis was defined as a T-score of ≤−2.5 according to the World Health Organization classification.

Results: The median (interquartile range) SUA level was 4 (3.3–4.8) mg/dL. The mean (±SD) L1–4, femoral neck, and total hip BMD were 0.93±0.16 g/cm², 0.75±0.12 g/cm², and 0.81±0.12 g/cm², respectively, and the frequencies of osteoporosis in the spine, hip, and either site were 25.6%, 15.9%, and 32.5%, respectively. SUA levels were positively correlated with L1–4 ($p=0.102$, $p=0.032$), femoral neck ($p=0.123$, $p=0.01$), and total hip BMD values ($p=0.146$, $p=0.002$) and body mass index ($p=0.231$, $p<0.001$), and negatively correlated with glomerular filtration rate ($p=-0.363$, $p<0.001$) in Spearman correlation analysis. In multivariable linear regression models adjusted for confounding factors, SUA levels showed a significant positive association with femoral neck BMD ($\beta=0.0099$, $p=0.015$) and total hip BMD ($\beta=0.0118$, $p=0.01$) but not with L1–4 BMD ($\beta=0.0086$, $p=0.159$) as shown in table 1. In addition, multivariable logistic analysis revealed that the third (OR=0.44, $p=0.038$) and fourth SUA quartiles (OR=0.37, $p=0.021$) were associated with lower risk of hip osteoporosis, as compared with the first SUA quartile. However, this association was not observed in lumbar spine osteoporosis.

Abstract AB1000 – Table 1. Linear regression models evaluating the association between serum uric acid levels and bone mineral density in postmenopausal women with rheumatoid arthritis

Independent variables	Dependent variables	Univariable model		Multivariable model	
		Unstandardized β (SE)	p-value	*Unstandardized β (SE)	p-value
Serum uric acid, mg/dL	Femoral neck BMD	0.0125 (0.0045)	0.006	0.0099 (0.004)	0.015
Serum uric acid, mg/dL	Total hip BMD	0.0138 (0.0048)	0.004	0.0118 (0.0045)	0.01
Serum uric acid, mg/dL	L1–4 BMD	0.0127 (0.0063)	0.044	0.0086 (0.0061)	0.159

*Estimated using stepwise multivariable linear regression models adjusting for age, BMI, DAS28-ESR, cumulative GCs dose, disease duration and eGFR

Conclusions: Higher SUA levels were associated with a reduced risk of low BMD and osteoporosis at hip in postmenopausal women with RA, but no significant association between SUA levels and lumbar spine BMD was found. Our data suggests that uric acid may act as a protective factor against hip bone loss in RA patients.

Disclosure of Interest: None declared

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