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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Disclosure of Interest: None declared

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

J. Perrier-Cornet¹, I. CHARY-VALCKENAERE¹, D. LOEUILLE¹, A.Y. OMOROU².
¹Rheumatology, ²INSERM CIC-1433 Clinical Epidemiology, CHU NANCY, NANCY, France

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

J.H. Koh¹, S.-G. Lee¹, H.-N. Lee¹, E. Kim¹, D.H. Sohn², Y. Kim³, G.-T. Kim³.
¹Internal Medicine, Pusan National University School of Medicine, Pusan National University Hospital, Busan; ²Microbiology and Immunology, Pusan National University School of Medicine, Yangsan; ³Internal Medicine, Kosin University College of Medicine, Busan, Korea, Republic of Ireland

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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AB1001

MANAGEMENT OF GLUCOCORTICOID-INDUCED OSTEOPOROSIS IN RHEUMATOID ARTHRITIS: THE EXAMPLE OF THE "RIC NORD DE FRANCE" COHORT

J. Corli¹, G. Baudens², R.-M. Flipo¹, B. Cortet¹, on behalf of RIC-Nord de France.
¹Rheumatology, CHRU Lille, Lille; ²Rheumatology, Valenciennes, Valenciennes, France

Background: Glucocorticoid-induced osteoporosis (GIOP) is the most common cause of secondary osteoporosis. Patients followed for Rheumatoid Arthritis (RA) are particularly exposed to OP and have a greater risk of fracture, which must be prevented. The newest French guidelines for GIOP management were published in 2014 and it is not known yet how they are applied in real life.

Objectives: The objective of our study was to investigate the treatment of glucocorticoid-induced osteoporosis in the Rhumatismes Inflammatoires Chroniques – Nord de France (formerly known as RIC-NPC) network in 2016 for patients with rheumatoid arthritis (RA).

Methods: In this observational study, the patients studied were followed in the RIC network for RA from 2004 until June 2016, had at least one bone mineral density (BMD) assessment and glucocorticoid therapy during follow-up. Demographic characteristics of patients, BMD results, fractures and treatments implemented were collected from network data completed during consultations by practitioners.

Results: 647 patients were enrolled, including 511 women (79%). The average age of patients was 65.5 years (SD=12) with a mean DAS28 of 3.91 (SD=1.44), mean dose of steroid of 7.6 mg (SD=6.6) and a mean duration of treatment of 49 months (SD=53.7). The average T-score at the first BMD assessment was -0.99 at the spine and -1.03 at the total hip. 298 patients received an anti-osteoporotic treatment (46%). Treated patients were older ($p<0.0001$), with lower weight ($p=0.001$) and had a lower T-score at both the spine and the total hip ($p<0.0001$ for both sites). They most often underwent a prior fracture ($p<0.0001$), and an initial T-score less than -1.5 SD ($p<0.0001$).

Conclusions: Our study has the advantage of reflecting the management of GIOP in a "real life" cohort. Almost half of our patients followed for RA who received corticosteroids had received treatment. According to French guidelines the number of patients requiring an anti-osteoporotic treatment should be higher.

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AB1002

DIFFERENCES IN BONE METABOLISM BETWEEN INTERMITTENT AND CONTINUOUS TREATMENT WITH LHRH AGONISTS IN PROSTATE CANCER PATIENTS

K.B. Arevalo^{1,1}, J. Ivorra¹, C. Vera², E. Grau¹, I. Chalmeta¹, L. Gonzalez¹, R. Negueroles¹, C. Alcañiz¹, I. Canovas¹, C. Feced¹, J.J. Frago¹, R. Gonzalez¹, E. Labrador¹, I. Martinez¹, C. Najera¹, J.E. Oller¹, F.M. Ortiz¹, E. Vicens¹, M. De la Rubia¹, D. Hervas³, J.A. Roman¹. ¹Rheumatology Department; ²Urology Department, HUP La Fe; ³Biostatistical Unit, IIS La Fe, Valencia, Spain

Background: Prostate cancer is an hormone dependent neoplasia, therefore androgenic inhibition by LHRH agonists is the mainstay of treatment. There are different treatment regimen options: continuous or intermittent in order to decrease side effects. As for the bone effects, therapy with LHRH agonists increases bone resorption and decreases bone mineral density (BMD) all together increasing the risk of fracture. The influence of the different treatment regimen in bone metabolism has not been studied enough.

Objectives: To evaluate the effect of the LHRH agonists therapy different regimens on bone metabolism in prostate cancer patients, and whether antiresorptive treatment influences the evolution of BMD according to LHRH agonists treatment regimen.

Methods: We recruited patients from the Prostate Cancer Protocol of Osteoporotic Risk Assessment in our institution. The patients were evaluated in a basal visit (month 0) and 6–12–18–24 months after basal evaluation. Data of bone metabolism biomarkers, BMD values, LHRH agonists regimen and antiresorptive treatment was collected. Biostatistical analysis with software R was performed.

Results: We reviewed 69 patients and 52 prostate cancer patients without bone metastasis with 12 months follow up were selected. The mean age at cancer diagnosis was 68.92 (8.44) years old, with a mean Gleason score of 7.¹ 81% of patients had LHRH agonists active treatment, 81% of them were under continuous treatment scheme. 39% of patients initiated antiresorptive therapy, 24% with intermittent LHRH agonists and 76% with continuous LHRH agonists. At the basal evaluation 12% of patients had osteoporosis and the 32% had osteopenia. 43% of patients displayed vitD values under 20 ng/mL.

Antiresorptive treatment influenced lumbar spine, femoral neck and hip BMD values ($p<0.001$). In patients with antiresorptive treatment, LHRH agonists intermittent scheme did not have an independent effect in any locations of BMD. In patients without antiresorptive therapy, intermittent LHRH agonists regimen have a positive effect on BMD in total hip and lumbar spine increasing their values compared to those on continuous LHRH agonists regimen. The effect in lumbar spine depends on the time of the intermittency. LHRH agonist intermittent therapy showed no significant influence on T score values of femoral neck, this effect was independent of antiresorptive therapy. In patients without antiresorptive treatment elevated beta-CTX levels were related to a decrease of BMD values ($p=0.017$). No fractures were reported during the follow up period.

Conclusions: In our patients there is a high prevalence of vitD deficiency. Antiresorptive therapy had a positive effect in the BMD on both LHRH agonists treatment schemes. Patients without antiresorptive treatment under an intermittent LHRH agonists scheme display a better evolution in BMD values compared to those under a continuous scheme. In patients without antiresorptive treatment the evolution of BMD values was related to beta-CTX levels during follow up.

Disclosure of Interest: None declared

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AB1003

USEFULNESS OF DOPPLER ULTRASOUND EXAMINATIONS FOR DETECTING DEEP VENOUS THROMBOSIS DURING THE PERIOPERATIVE PERIOD IN PATIENTS WITH OSTEOPOROTIC FRACTURES OF THE PROXIMAL FEMUR

K. Nakaseko, N. Mayumi. Department of Orthopaedic Surgery and Rheumatology, KUWANA CITY MEDICAL CENTER, Kuwana Mie, Japan

Background: Deep venous thrombosis (DVT) can lead to a venous thromboembolism and increase the risk of a pulmonary thromboembolism (PE). PE is one of the most common causes of death in hospitalised surgical patients.

Although there have been some prospective studies regarding the prevalence of DVT on Doppler ultrasound examinations of the lower extremities, there have not been any prospective studies in which three consecutive Doppler ultrasound examinations were performed to detect DVT during the perioperative period.

The purpose of the present study was to prospectively evaluate the occurrence of DVT in patients with osteoporotic fractures of the proximal femur, based on the results of examinations involving three consecutive ultrasound scans. In addition, the usefulness of the d-dimer level as a predictor of DVT was investigated.

Objectives: This study was a single-centre prospective study. One hundred-five patients (18 males and 87 females) between the ages of 46 and 97 years with osteoporotic fractures of the proximal femur were enrolled. All patients were asymptomatic in terms of their clinical DVT findings.

Methods: Three Doppler ultrasound examinations of the lower extremities were conducted in each case: on admission, one day before surgery, and one week after surgery. The period from admission to surgery ranged from 2 to 8 days (mean: 5.4 days). The d-dimer level was measured at one week after surgery and its relationship with the presence/absence of DVT was evaluated by calculating sensitivity, specificity, positive predictive, and negative predictive values.

Results: DVT was detected in 20 patients (2 patients on admission, 9 patients one day before surgery, and 9 patients one week after surgery). The overall prevalence of DVT in the perioperative period was 19.0% (20/105). As for the characteristics of the patients that did and did not develop DVT, there were no significant differences between the two groups. When the d-dimer cut-off level was set at 4.3 µg/ml, the sensitivity and negative predictive value reached 100%, while the specificity was 16.5%, and the positive predictive value was 22.0%. A receiver operating characteristic (ROC) curve was drawn, and the optimal d-dimer cut-off level was examined. The ROC curve was closest to the upper left corner when the d-dimer cut-off level was 12.2 µg/ml. At that point, the sensitivity, specificity, positive predictive value, and negative predictive value were 55.0%, 69.4%, 28.9%, and 86.8%, respectively.

Abstract AB1003 – Figure 1

Conclusions: In this prospective study, DVT was detected in 2 patients on admission, 9 patients one day before surgery, and 9 patients one week after surgery. As DVT can occur at any moment, performing repeated Doppler ultrasound examinations in the perioperative period is useful for quickly detecting DVT, which can cause PE. As for the d-dimer level, its sensitivity and negative predictive value reached 100% at a cut-off level of 4.3 µg/ml. Therefore, d-dimer assays could be a useful screening tool for DVT and might be a suitable substitute for Doppler ultrasound examinations.

Disclosure of Interest: None declared

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AB1004 OSTEOPOROSIS SCREENING IN A TERTIARY RHEUMATOID ARTHRITIS CLINIC. WHO'S SCREENING NOW?

L. Kyi¹, T. Kovitwanichkanont^{1,2}, D. Wang³, N. Walpole³, S. Raghunath^{1,3}, S. Pignataro¹, S. Morton¹, M. Leech^{1,3}. ¹Rheumatology, Monash Health, Melbourne; ²Sydney School of Public Health, University of Sydney, Sydney; ³Department of Medicine, Monash University, Melbourne, Australia

Background: Osteoporosis is a complication of rheumatoid arthritis (RA) due to inflammatory disease and treatment with glucocorticoids¹. Screening and management of osteoporosis (OP) is shared amongst General Practitioners (GP) together with subspecialists including rheumatologists².

Objectives: To assess the adequacy of osteoporosis screening in a tertiary RA clinic in Melbourne, and to determine where most screening is occurring.

Methods: A cross-sectional study of patients at a tertiary RA clinic was undertaken. Osteoporosis screening, therapy and related factors were evaluated. This was compared to best practice screening ACR/GIOP guidelines.

Results: 116 RA patients, 66% female (median age 58 years) were included. OP screening occurred in 61.2% of patients with 40.5% and 20.7% performed by their rheumatologist and by the GPs respectively. The remainder 38.8% of patients recalled no recent screening.

36.2% of patients were taking prednisolone, while 74% reported prior exposure. 58.6% of patients had prednisolone for over 3 months. Calcium or vitamin D supplementation was noted in 62% of the population. 21.6% reported a history of minimal trauma fracture and alarmingly only 10% reported currently taking anti-resorptive therapy.

47% of patients had a DEXA scan performed within the last 3 years. Of the 53% that did not have a recent DEXA scan, three quarters had indications for osteoporosis screening based on the 2010 ACR/GIOP guidelines. 35 patients had indications based on age, 11 patients based on glucocorticoid exposure and 1 patient based on history of minimal trauma fracture.

Osteoporosis Screening

DEXA Scans

Abstract AB1004 – Figure 1

Conclusions: One third of at-risk patients in this sub-cohort are not screened for osteoporosis. More patients are currently screened for osteoporosis by their rheumatologist than their GPs. Underscreening and treatment of osteoporosis in this clinic could be addressed by clearer GP-rheumatologist shared treatment model.

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AB1005 RELATIONSHIP BETWEEN AUTOIMMUNITY AND OSTEOPOROSIS IN

RHEUMATOID ARTHRITIS

M.C. Carrasco Cubero¹, S.M. Rojas Herrera², J. Malave Calzada², P. Pérez David², I. Braña Abascal², E. Chamizo Carmona². ¹Rheumatology, CHU de Badajoz, Badajoz; ²Rheumatology, Hospital de Mérida, Mérida, Spain

Background: Osteoporosis (OP) is more prevalent in patients with rheumatoid arthritis (RA) than in the general population. Positive anti citrullinated peptide antibody (ACPA) has been related with juxta-articular OP, but their relationship with systemic OP in RA is controversial.

Objectives: To determine if RA autoantibodies (FR and ACPA) are associated with bone mineral density (BMD) in a cohort of patients with established RA diagnosed following the ^{ACR} 1987 criteria.

Methods: Observational study. We analysed the relationship between RF and/or ACPA with the DXA BMD values of the femoral neck (FN) and lumbar spine (LS) (GE LUNAR Prodigy). We perform the analysis using logistic regression, bi and multivariate models, and correlation models. The control variables were sex, body mass, age, duration of RA, prednisone and vitamin D.

Results: We included 294 patients with RA who had all the tests, with a mean age of 63.4 (±10.9) years and duration of RA of 9.8 (±7.9) years. There were 229 (77.9%) women, 229 (77.9%) positive-RF, 196 (66.7%) positive-ACPA, 109 (37.1%) deficient in 25-OH cholecalciferol (<20 ng/ml) and 59 (20.1) smoker patients. They received corticosteroids at low doses 207 (70.4%) and suffered some bone fracture 42 (14.3%) patients. In the BMD, 226 (76.9%) patients had a T-score <-1, of who 86 (27.6%) reached a T-score <-2.5 in LS and/or in FN.

Lumbar OP was associated with the female sex (OR=3.6). The FN T-score (and, to a lesser extent, lumbar T-score), showed a correlation with age ($r=-0.515$, $p<0.01$). No differences were found in the mean values of BMD, T-score y Z-score of FN and LS between positive or negative patients for FR or ACPA (t-student), neither between their possible combinations (one-way ANOVA). Association between positivity of RF, ACPA or their combinations and T-score <-1 (osteopenia) or T-score <-2.5 (OP) in LS or FN were not found. A negative weak correlation was found between the RF and lumbar BMD values (-0.121 , $p=0.04$) and a positive weak correlation between ACPA and FN (0.136 with BMD, 0.131 with T-score and 0.138 with Z-score; $p<0.05$ for all).

	Patients n (%)	BMD FN g/cm ² mean(SD)	BMD LS g/cm ² mean(SD)	T-score <-1 n (%)	T-score <-2.5 n (%)
Total	291	0805 (0,16)	1063 (0,21)	226 ^(76,9)	81 ^(27,6)
FR+	229	0806 (0,15)	1061 (0,21)	175 ^(76,4)	62 ^(27,1)
ACPA+	194	0808 (0,15)	1065 (0,21)	151 ^(77,0)	49 ^(25,0)
FR+y ACPA+	185	0813 (0,14)	1065 (0,22)	143 ^(76,5)	48 ^(25,7)
FR+ ó ACPA+	51	0767 (0,21)	1049 (0,20)	40 ^(78,4)	15 ^(29,4)
FR- y ACPA-	56	0815 (0,16)	1074 (0,18)	43 ^(76,8)	18 ^(32,1)

Conclusions: OP was very common in our RA population, especially in women and elderly. Any association was demonstrated between OP and the presence/titer of autoantibodies (RF and ACPA) and low dose of corticosteroids treatment.

Disclosure of Interest: None declared

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AB1006 BONE STATUS OF PATIENTS TREATED WITH ANTI-AROMATASE: RESULTS AT ONE YEAR

M. Djennane, C. Sedkaoui, F. Bouzar. *Medecine, University of Medicine Mouloud Mammeri, Tizi Ouzou, Algeria*

Background: First cancer in Algeria, first cause of cancer mortality in women. One in 10 women will develop breast cancer in her lifetime. Its incidence is increasing with 55.8/100000 inhabitants. The majority of these cancers are hormone-dependent. The bone loss induced by anti-aromatase (AA) leads to an increase in bone resorption with bone loss 2 to 4 times greater than the physiological loss. Randomised controlled trials (RCTs) including women under AA for 5 years have suggested an increased risk of fracture of 18% to 20% ie 1 in 5 women will experience this risk.

Objectives: The aim of our work is to describe the initial bone status and after one year of follow-up in patients starting an anti-aromatase.

Methods: Three hundred and twenty seven (327) patients were recruited from the oncology department of Tizi Ouzou University Hospital, 292 patients were analysed in the initial phase of the study and only 250 patients were evaluated at one year. Of these patients, 157 non-osteoporosis patients received calcium and vitamin d-related health care and 93 patients were osteoporotic and treated with calcium and vitamin D bisphosphonates. Inclusion criteria: Women with oestrogen receptor breast cancer Treatment with anti-aromatase indicated: a- Immediately after conventional breast treatment b- Tamoxifen relay- Criteria for non-inclusion: Bone metastases

Methods: Clinical evaluation: screener risk factors for osteoporosis and fractures. Biological Evaluation: Calcium, Phosphoremia, 25 Hydroxy Vitamin D. Radiological assessment: chest radiograph (profile) or IVA (vertebral fracture assessment) looking for vertebral fractures Lumbar and femoral bone densitometry (HOLOGIC QDR)

Results: The mean age of the patients is 56.8 ± 7.3 years, mean body mass index is 27.4 ± 2.8 kg/m². 48% of patients received chemotherapy. The anti-aromatases were given as follows: Anastrozole in 64%, Letrozole in 14% and Exemestane in 11%. At baseline assessment n=292, 31.6% of patients had densitometric osteoporosis (T score <-2) in the lumbar spine and 9.5% in the femoral neck. 37 patients have a history of peripheral fracture. Six patients have at least one vertebral fracture. The average level of vitamin D is 15.2 ± 3.5 ng/L. 6 - 29 283 patients or 97% have a deficiency in vit D (<30 ng/L). After one year of follow-up, patients without osteoporosis (n=157), annual bone loss is 1.5% at the lumbar spine and 1.24% at the hip. 16 patients became osteoporotic. Four patients developed a new vertebral fracture. The one-year follow-up result in osteoporotic patients treated with bisphosphonates with calcium and vitamin D (n=93) had stable bone mineral density (0.3% non-significant bone loss). 57% of patients still have vitamin D insufficiency and two patients had a new vertebral fracture.

Conclusions: Antiaromatases lead to an increased risk of osteoporosis. It is important to evaluate the fracture risk of breast cancer patients through a rheumatology consultation to find all the risk factors, to detect frequent calcium and vitamin D deficiencies and to treat osteoporosis.

Disclosure of Interest: None declared

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AB1007 SEASONAL VARIATIONS OF 25-HYDROXYVITAMIN D3 LEVELS AND ITS RELATION TO PARATHYROID HORMONE LEVELS

M.A. Teran Tinedo, P. Cristina. *HOSPITAL RAMON Y CAJAL, MADRID, Spain*

Objectives: To analyse the relationship between 25-hydroxyvitamin-D3 and parathyroid hormone levels and to determine its variation between the different seasons of the year.

Methods: An observational descriptive study was carried out, collecting and analysing 25-hydroxyvitamin-D3 (25OH-D3) and parathyroid hormone (PTH) serum levels of patients from January to December of 2017. The frequencies distribution analysis of both variables was compared and Pearson's correlation coefficient (PCC) was used to analyse linear relationship between them. The results were classified by date in four seasons: winter, spring, summer, and autumn, assessing the mean seasonal oscillations of each variable and calculating correlation in each case. Different levels of 25OH-D3 were evaluated in order to identify differences in the grade of correlation.

Results: Serum samples from 6265 patients were recollected. 59% of the patients had 25OH-D3 levels lower than 25 ng/ml. Pearson's correlation coefficient between both variables was -0.159 ($p<0.01$). The mean values of 25OH-D3 were calculated for each seasonal period, establishing a mean level of 23 ng/ml for winter, 25 ng/ml for spring, 31 ng/ml for summer and 29 ng/ml for autumn. Regarding PTH levels, the mean values for each season were 108 pg/ml, 101 pg/ml, 86 pg/ml and 84 pg/ml from winter to autumn respectively. PTH/Vitamin D correlation was also assessed for each period: Pearson's correlation coefficient during winter was -0.08 ($p<0.01$), for spring -0.249 ($p<0.01$), for summer -0.21 ($p<0.01$) and for autumn -0.19 ($p<0.01$). At last, correlation calculated with deficiency levels of 25OH-D3 (<30 ng/ml) was -0.18 ($p<0.01$), and with levels inferior than 10 ng/ml was -0.12 ($p<0.01$).

Abstract AB1007 – Figure 1

Conclusions: Linear correlation between levels of 25OH-D3 and PTH could not be established in our study, not even using levels classified as vitamin D deficiency. 25OH-D3 levels tended to increase from winter to summer whereas PTH levels decreased inversely during these seasons, without any linear correlation.

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AB1008 COMPARISON OF BONE MINERAL DENSITY BETWEEN RHEUMATOID ARTHRITIS PATIENTS AND HEALTHY INDIVIDUALS OVER SEVEN YEARS FROM THE TOMORROW STUDY

M. Tada¹, K. Inui², Y. Sugioka³, T. Okano², Y. Yamada², K. Mandai², K. Mamoto², T. Koike², H. Nakamura². ¹Orthopaedic Surgery, Osaka City General Hospital; ²Orthopaedic Surgery; ³Center of Senile Degenerative Disorders, Osaka City University Graduate School of Medicine, Osaka, Japan

Background: Despite advances in treatment, rheumatoid arthritis (RA) remains a key cause of secondary osteoporosis and is also a risk factor for fragility fracture. We have previously reported that bone mineral density (BMD) was lower in patients with RA than in healthy individuals (HI) and examined changes in BMD over 3 years¹.

Objectives: To observe BMD changes over 7 years and identify factors that affect BMD changes in patients with RA.

Methods: We analysed data from the TOMORROW study (UMIN000003876), a prospective cohort for patients with RA and age- and sex-matched HI. BMD was measured at three parts (whole body, lower limb, lumbar spine) using dual-energy X-ray absorptiometry (DXA). We compared the percentage change in BMD (%Δ BMD) at the three parts in RA and HI from 2010 to 2017. Factors affecting %Δ BMD in RA were analysed.