0.0001 and \( r = 0.728 \), \( p < 0.0001 \), respectively). ACRA and RP positive patients did not have higher FRAX scores (including or not BMA). Patients with erosive disease had a higher 10-year probability of major fracture evaluated by FRAX when it included BMD (\( p = 0.041 \)).

Conclusion: It is very important to accurately assess the risk of osteoporotic fractures in RA patients to treat them properly. The authors highlight the high number of patients who are not receiving treatment according to FRAX categorization. In spite of the correlation between estimated fracture risk by FRAX with and without BMD, there is a discordance in fracture risk categorization, as one fifth of patients of lower risk were reclassified as high risk. For the RA population treated with bDMARDs, our findings raise the need to request a DXA not only for patients classified as having an intermediate risk of fracture, but also for low-risk patients.

Disclosure of Interests: Maria Rato: None declared, Filipe Pinheiro: None declared, Salomé Garcia: None declared, Bruno Miguel Fernandes: None declared, Sara Ganho: None declared, Rita Gao: None declared, Miguel Benardes Speakers bureau: Abbvie, Amgen, Biogen, Eli-Lilly, Glaxo-Smith-Kline, Pfizer, Janssen, Novartis, Alexandra Bernardo: None declared, Lucia Costa: None declared

DOI: 10.1136/annrheumdis-2020-eular.3354

**SAT0483 SAFETY OF INTRAVENOUS IBANDRONIC ACID IN CHRONIC KIDNEY DISEASE: A REAL WORLD EXPERIENCE**

J. Southern1, M. Chakravorty1, *L. H. Lee*1. Royal Derby Hospital, Derby, United Kingdom

Background: Common forms of intravenous bisphosphonate used at the Royal Derby Hospital are zoledronic acid and ibandronic acid for a variety of indications. In the treatment of osteoporosis, zoledronic acid is preferred due to its convenience of once-yearly dosing compared to ibandronic acid which is given three-monthly. Zoledronic acid is contraindicated in patients with an estimated glomerular filtration rate (eGFR) of less than 35 due to nephrotoxicity concerns. Ibandronic acid, however, is generally offered with an eGFR of 30 or over and is perceived to be a safer choice in more advanced chronic kidney disease. The potential of extending the use of ibandronic acid to patients with lower eGFR is being explored. However, there is a paucity of real world data and this study will therefore seek to affirm the safety profile in those on treatment.

Objectives: Establish the safety profile of IV ibandronic acid with regards to worsening renal function or significant hypocalcaemia injury in the context of reduced renal clearance.

Methods: The details of patients receiving IV ibandronic acid at Royal Derby Hospital were retrieved from the osteoporosis department register in September 2019. Data was collected anonymously from records using the electronic prescribing and pathology hospital database, together with electronic letters. The first three pre-infusion serum adjusted calcium levels, vitamin D, creatinine and eGFR were recorded. In addition, results from initiation to present were screened for any episodes of hypocalcaemia, acute kidney injury (AKI) or significant decline in renal function.

Results: Treatment duration ranged from 6 months to 6 years. Female: male ratio was 9:1 and the average age was 75 years (range 50-90). Baseline eGFR ranged from 27 to over 60; 3 patients had eGFR<60, 2 had eGFR 27 while remaining patients (75%) had eGFR 30-59. All patients received a standard 3mg infusion on each occasion. The most common rationale cited for ibandronic acid choice as opposed to zoledronic acid was reduced creatinine clearance or eGFR. Three patients (15%) developed one or more episodes of mild hypocalcaemia (lowest 2.01 mmol/l). No episodes of hypocalcaemia were identified in the first three pre-infusion levels. Four patients (25%) had a decline in eGFR by more than 5ml/min/1.73m² but there was no definitive causal link with ibandronic acid and was most commonly felt to be related to their underlying renal disease. Three patients (15%) had at least one episode of AKI since commencing treatment, each explained by an intercurrent illness. Serum Vitamin D levels were measured pre-infusion in 92% of cases.

Conclusion: This study reaffirms the safety profile of IV ibandronic acid use in renal failure as low as CKD Stage 3b (30ml/min/1.73m²). No episodes of AKI or sustained decline in renal function were causally linked to ibandronic acid.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.840

**SAT0484 TRABECULAR BONE SCORE IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS**

A. Casabella1, S. Paolino1, E. Alessandrini1, V. Smith1, B. Ruarco2, C. Pizzoni2, A. Sulli1, M. Cutolo1. Genova, Research Laboratory and Academic Division of Rheumatology, Department of Internal Medicine, University of Genova, IRCCS San Martino Polyclinic Hospital, Genova, Italy; 2Ghent, Department of Rheumatology, Ghent University Hospital, Department of Internal Medicine, Ghent University/University for Molecular Immunology and Inflammation, VIB Inflammation Research Center (IRC); Ghent Belgium, Ghent, Belgium; 3Parma, Cardinal Ferrari Center, S. Stefano Rehabilitation, Fontanellato-Parma, Italy, Parma, Italy

Background: Systemic lupus erythematosus (SLE) patients shown an increased risk of low bone mass as a result of multifactorial events: physical inactivity, persistant inflammation, low vitamin D levels (photosensitivity) and glucocorticoid treatment. Trabecular Bone Score (TBS), is an index extracted from the dual-energy X-ray absorptiometry (DXA) that provides an indirect measurement of bone axial microarchitecture and allows to get information about bone quality in several rheumatic diseases (1-4).

Objectives: The aims of this study were to examine the prevalence and risk factors for low bone mineral density (BMD) (osteoporosis or osteopenia) in female patients affected by SLE and to compare with matched healthy subjects (CNT). Methods: 70 female patients (mean age 41±20 years) affected by SLE and 65 age-matched CNT (mean age 46±7 years) were enrolled. Bone Mineral Density (BMD, g/cm2) of the lumbar spine (L1-L4) was analyzed using a DXA scan (GE; Lunar Prodigy). Lumbar spine TBS was derived for each spine DXA examination using the TBS index (TBS iSight Medimaps).

Results: The mean BMD±SD was 0.47±0.57 g/cm2 at the lumbar spine and 0.78 ± 0.22 g/cm2 at the hip in SLE patients. The prevalence of osteoporosis was 40.0% and was 19.4% of osteoporosis in SLE patients. Most of SLE patients (40.0%) had experienced a bone loss that was significantly higher when compared with control group (\( p < 0.001 \)). Lumbar spine TBS score was found significantly lower in SLE patients compared with CNT (0.687±0.675 vs. 1.294±0.809 \( p < 0.001 \), respectively) and of 0.47±0.94 times lower than expected from the concomitant reference BMD value.

Conclusion: The study shows that the further TBS analysis, independently from the concomitant BMD value, is significantly lower then expected in SLE patients. The detection of the TBS, together with the BMD, may offer a more reliable indication of the real whole bone condition in chronic and systemic inflammatory rheumatic diseases, such as SLE.

References:

Disclosure of Interests: Andrea Casabella: None declared, Sabrina Paolino: None declared, Elisa Alessandrini: None declared, Vanessa Smith Grant/research support from: The affiliated company received grants from Research Foundation - Flanders (FWO), Belgian Fund for Scientific Research in Rheumatic diseases (FWRO), Boehringer Ingelheim Pharma GmbH & Co and Janssen-Cilag NV, Consultant of: Boehringer-Ingelheim Pharma GmbH & Co and Janssen-Cilag NV; Ghent, Department of Inflammation Research Center (IRC); Ghent Belgium, Ghent, Belgium; 3Parma, Cardinal Ferrari Center, S. Stefano Rehabilitation, Fontanellato-Parma, Italy, Parma, Italy

DOI: 10.1136/annrheumdis-2020-eular.4180

**SAT0485 PERCENTAGE BODY FAT HAS A STRONGER ASSOCIATION WITH BONE MINERAL DENSITY AT THE HIP AND SPINE COMPARED TO BODY MASS INDEX**

C. Thurstoni1, R. Tribbick2, J. Kerns1, F. Dondelinger1, M. Bukhari1,2,3. 1Lancaster University, Lancaster Medical School, Lancaster, United Kingdom; 2Lancaster University, CHICAS, Lancaster, United Kingdom; 3University Hospitals of Morecambe Bay NHS Foundation Trust, Lancaster, United Kingdom

Background: A decreased body mass index (BMI) is associated with poorer bone health, a decreased bone mineral density (BMD), and an increased fracture risk. A recent cross-sectional (CXS) study has shown that the waist:hip ratio is a more robust measurement for CVS outcomes than BMI (1). Waist:hip ratio has never been evaluated as an outcome measure for bone health. Dual-energy x-ray absorptiometry (DEXA) has the capacity to measure average percentage fat in the L1-L4 region and at the hip, and directly relates to the measurement of waist:hip ratio.

Objectives: To evaluate the relationship between BMI and average percent fat in patients referred for DEXA scans.

Methods: We analysed data routinely collected from patients referred for DEXA between 2004 and 2010 at the Royal Lancaster Infirmary in the North of England. Data collected for these patients included DEXA scans