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## **Abstracts of the ECTS 2022 Congress**

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European Calcified Tissue Society.

**P219****There is an association between Varus proximal femoral geometry and Atypical Femoral Fractures in postmenopausal women under chronic Bisphosphonate treatment?**

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**Background:** Bisphosphonates (BPs) are the first-line treatment of osteoporosis post-menopausal women. There is increasing evidence associating atypical femoral fractures (AFFs) with prolonged exposure to BPs therapy. The cause of these fractures is unknown and likely multifactorial.

**Purpose:** To evaluate the hypothesis that patients with AFFs under prolonged BPs therapy were associated to a varus proximal femoral geometry.

**Methods:** We retrospectively studied osteoporotic women, aged 50 or older, who were under BPs therapy. Women under BP treatment with AFF (group A) were compared with women under BP treatment without fractures on the inferior limb (group B). The femoral neck-shaft angle was measured on the radiographs of both groups.

**Results:** A total of twenty-three osteoporotic menopausal women under BPs therapy were included: eleven in group A and twelve in group B. The mean neck-shaft angle of the women in group A differed significantly from group B ( $p < 0.05$ ). Side-to-side comparison in patients with a unilateral pathologic involvement and an asymptomatic contralateral lower limb did not demonstrate any significant difference between the neck-shaft angles in the two limbs.

**Conclusion:** Patients on chronic bisphosphonate therapy who presented with AFF had more varus proximal femoral geometry than those who took bisphosphonates without sustaining a lower limb fracture. Varus proximal femoral geometry may help to better identify patients at risk for fracture after long-term bisphosphonate use.

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**P269****The European registry for rare bone and mineral conditions (EuRR-Bone): results of a survey on osteogenesis imperfecta and fibrous dysplasia McCune-Albright syndrome**

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**Introduction:** EuRR-Bone offers an electronic reporting system (e-REC) that captures the occurrence of rare conditions within reference networks such as ERN BOND and Endo-ERN. Secondary surveys following the reported cases in e-REC collect a brief amount of data for understanding the clinical presentation of the reported condition. Osteogenesis Imperfecta (OI) and Fibrous Dysplasia/McCune-Albright Syndrome (FD/MAS) are two rare conditions that require expert care but the extent of variation in care delivery across expert centres is unclear.

**Methods:** Between May 2020 and May 2021, 80 FD/MAS and 76 OI cases were reported in e-REC. Reporters were invited to complete a secure online questionnaire. The questionnaire was completed in 123/156 cases (68%) by 12 centres from eight countries.

**Results:** The median age at presentation for FD/MAS was 20 years (range, 0, 72) and 3 years (range 0, 47) for OI. History, clinical findings and imaging were collected in the diagnosis of both conditions. Of 58 confirmed cases of FD/MAS 8 (14%) had genetic testing; 30/31 confirmed cases of OI had genetic testing (97%). Of 58 FD/MAS cases, endocrinopathies were tested in 38 (65%), Gonadotropin-Independent precocious puberty was the commonest pathology (24%) followed by GH excess and Hyperprolactinemia (both 8%). Mobility was assessed in 16/31 (51%) OI cases, using clinical data in 43%, and a 6-minute walk test in 25%. Cardiovascular morbidity was investigated in 17/31 (52%) OI cases, pulmonary problems were reported in 1/31 (3%). Quality of life was assessed in 41% of FD/MAS cases (5/25 pediatric and 20/33 adult cases) and 32% of OI cases (10/30 pediatric patients). Validated questionnaires (e.g.EQ5D, BPI) were used only in FD/MAS patients.

**Conclusion:** Although the clinical care of OI and FD/MAS at expert centres is variable, there are some outcomes that are collected routinely by the majority and may represent the core dataset that should be used as a minimum to unify data collection across centres.

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**P259****Tumor induced osteomalacia: a systematic review and individual patient's data analysis**

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