multicentre clinical study, REMS T-score values were highly correlated with Dual-energy X-ray absorptiometry (DXA) T-scores [1].

Objectives: To determine the predictive value in term of fragility fracture risk reduction of the REMS T-score compared to DXA T-score in a representative female population.

Methods: We enrolled 1370 women (30-90 y, BMI ≤ 35 kg/m²) from 2013 to 2017. We performed in all patients both DXA and REMS lumbar scans. All analyses were performed under the strictest adherence to the corresponding guidelines. All patients underwent a follow-up lasting up to 5 years to assess the incidence of fragility fractures. Patients were stratified in two groups: patients who suffered a fragility fracture during the follow-up period (Group X) and those who did not (Group Y). Through an iterative process, the two groups were then age-matched with an enrolment proportion of 1:2. The finally obtained groups were identified as Group A (with incident fractures) and Group B (without incident fractures). The performance of REMS T-score in discriminating between Group A and Group B was quantitatively assessed and compared with DXA.

Results: Fragility fractures incidence was 14.0% (192 out of 1370 patients, mean follow-up 3.6 ± 0.8 years). Group A included 180 patients (mean age 67.2 ± 7.2 years) and Group B included 360 patients (mean age 67.3 ± 3.5 y). Group A and Group B did not show significant differences with respect to height ($p=0.41$), weight ($p=0.68$) and BMI ($p=0.32$). As expected we found significant differences in REMS T-score (-2.68 ± 1.28 in Group A vs -2.03 ± 1.23 in Group B, $p<0.001$) and DXA T-score (-2.52 ± 1.20 in Group A vs -2.08 ± 1.17 in Group B, $p<0.001$). REMS T-score ≤ -2.5 identified Group A patients with sensitivity = 65% and specificity = 58% (OR=2.6). DXA T-score identified Group A patients with sensitivity = 57% and specificity = 57% (OR=1.7).

Conclusion: REMS T-score resulted an effective predictor for the risk of incident fragility fractures in a representative population-based sample of female subjects. Reported OR values showed also that REMS had a better performance than DXA in the considered population, showing higher values for both sensitivity and specificity in the identification of fragile patients.

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Osteoporosis

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PREDICTION OF INCIDENT FRAGILITY FRACTURES THROUGH RADIOFREQUENCY ECHOGRAPHIC MULTI SPECTROMETRY(REMS)

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Background: Radiofrequency Echographic Multi Spectrometry (REMS) is an innovative non-ionizing technique used for diagnosing osteoporosis at lumbar spine and femoral neck sites. In accordance with the results of a

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RISK FACTORS ASSOCIATED WITH THE DEVELOPMENT OF FRACTURES IN GLUCOCORTICOID TREATED PATIENTS. THE ROLE OF HYPOGONADISM

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Background: Glucocorticoid-induced osteoporosis (GIOP) is a common form of secondary osteoporosis (OP). Fractures in GIOP frequently occur with higher bone mineral density (BMD) than expected and typically at treatment initiation, complicating the identification of patients at risk for fracture.

Objectives: Identify risk factors associated with fragility fracture development in GC-treated patients.