Bone mineral density (BMD) in women with Turner syndrome (TS) from the DSD-LIFE cohort, an epidemiological study

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Aim
• Determine BMD in adult TS from DSD life from paediatric cohort,
• Analyze various factors related to the trabecular (lumbar spine = LS) and cortical bone (femoral neck = FN) mineralization

Means
Age: 30.15 ± 11.1 yrs.
Height :152.4 ± 6.9 cm,
Gynaecological Age:14.7 ±10 yrs
Weight :59.1 ± 13.6 kg
BMI : 25.5 ± 5.6 kg/m²

Results
113 patients with TS
Germany n: 34, Netherlands n:41, Poland n:3 France n:39
8.3% patients had History of fracture
10.9% of the cohort presented osteoporosis

The median for BMD
FN : 0.84g/cm² (IQR 0.75 ; 0.92 g/cm² ) - T score: -0.7 SD ( IQR -1.5 ; -0.2 SD)
LS : 1.0 g/cm² (IQR 0.93 ; 1.09g/cm² ) - T score : -0.6 SD (IQR -1.4 ; -0.1 SD)

Comparison tests of means versus theoretical average = 0 (Student’s t-tests): the average of the score differs significantly from 0 (p < 0.001)

Materials and Methods
Cross-sectional clinical outcome study
BMD of the LS and FN expressed in g/cm²; in women’s T scores.
Osteoporosis if T score < -2.5 and Osteopenia between -1 and -2.5 Tsore

Conclusion
The data of this study report a positive efficiency of estrogenic substitution on bone in TS adult and highlights the need to encourage hormonal treatment compliance for those patients