Background: Ankylosing spondylitis (AS) is a chronic inflammatory disease that mainly affects the axial skeleton. Bone loss reflected by low bone mineral density (BMD) is a common feature of AS and can already be observed at early stages of the disease. A recent cohort study of 135 AS patients reported 7.2% improvement (BMD) is a common feature of AS and can already be observed at early stages of the disease. A recent cohort study of 135 AS patients reported 7.2% improvement.

Objectives: To assess the effect of 8 years of TNF-α blocking therapy on BMD of the lumbar spine and hip in AS patients.

Methods: Included in this study were consecutive AS outpatients from the Groningen-Leeuwarden Axial SpA (GLAS) cohort who received TNF-α inhibition for at least 8 years. A maximum of one switch to another TNF-α inhibitor was allowed. Patients were excluded when they used bisphosphonates at baseline or during follow-up and disease activity improved significantly during treatment: ASDAS <2.1 at baseline and 2.1 ± 0.9 after 8 years (P < 0.001). At baseline, low BMD at the lumbar spine and hip was present in 34% and 19% of patients, respectively. Both LS-BMD and hip BMD Z-scores were significantly improved during TNF-α blocking therapy at all follow-up visits compared to baseline. Significant improvement compared to the previous time point was found up to and including 4 years for the lumbar spine and up to and including 2 years for the hip. Thereafter, flattening of improvement was observed. Median percentage of improvement in absolute BMD after 8 years of TNF-α blocking therapy compared to baseline was 7.1% (IQR 0.8-13.5) for the lumbar spine and 16% (IQR -3.5-5.5) for the hip (Figure 1).

Conclusion: In AS patients with established disease, both lumbar spine and hip BMD improved significantly at group level during 8 years of TNF-α blocking therapy. This effect was most pronounced in the lumbar spine, which corresponds to the disease process in AS. Main improvements in lumbar spine BMD were observed during the first 4 years of treatment.

References: