treated patients) was divided into 5 groups (each with 8 patients), who received Calcium (1 g/day) and vitamin D (5600 IU/week). The patients, respectively, taking alendronate (70 mg/week), risedronate (35 mg/week), ibandronate (150 mg/month) and strontium ranelate (2 g/day) and in the last group only vitamin D and calcium. After 18 months was evaluated again BMD at the spine and femur. **Results:** We observed a slight increase in femoral T-score from baseline (-2.3 ± 0.8 at baseline and -2.1 ± 0.7 at the end of treatment; $p = 0.07$, Wilcoxon test), more significant at the lumbar spine (baseline = -3.3 ± 0.9 and -2.7 ± 1.2 at the end of treatment; $p < 0.001$, Wilcoxon test). Osteocalcin values were increased (ANOVA, $p < 0.001$), 4.4 times from baseline at 6th month, 5.4 and 3.1, respectively, at 12th and 18th months (Bonferroni, $p < 0.001$). β-CTX levels showed an increase of 2.5 times from baseline at month 6th, 2.6 and 1.8, respectively at 12th and 18th months ($p < 0.001$). After 18 months of therapy with other bisphosphonates, strontium ranelate and calcium and vitamin D further significant increases were evidenced in t-scores after ibandronate ($+0.9$, 95% CI: $+0.2$, $+1.5$, $p < 0.05$), ranelate ($+0.8$, 95% CI: $+0.4$, $+1.3$, $p < 0.05$), risendronate ($+1.6$, 95% CI: $+1.0$, $+2.3$, $p < 0.05$). Analysis of variance showed a significant difference ($p = 0.008$) between risendronate and Vit D. **Conclusions:** Our data confirm efficacy of PTH 1–84 treatment, that showed increase in lumbar and the femur T-score after 18 months, as well as by increase in β-CTX and osteocalcin, markers of osteoanabolic activities. These results suggest that in severe osteoporosis the treatment of choice would include a first cycle of 18 months with PTH 1–84, followed by a subsequent cycle of therapy with antiresorptive drugs or ranelate strontium.

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PP321

Improvement of quality of life during treatment with anabolic therapy: Results of a multicenter study

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Abstract: Introduction: This multi-center non-interventional study was carried out to evaluate adherence to parathyroid hormone therapy and the effect of treatment on Quality of Life (QoL) in a typical Italian population with severe osteoporosis eligible to anabolic treatment. **Materials and methods:** 204 female patients (median age: 72.6 ± 8.3 years) with severe post-menopausal osteoporosis, eligible to treatment with PTH according to summary of product characteristics and Italian reimbursement criteria for osteoporosis drugs (Nota 79 AIFA), have been enrolled in this study between January 2008 and April 2009 (Last Patient Out: October 2010). In the study protocol, 6 visits were planned (baseline and after 1, 3, 6, 12 and 18 months of therapy); in each visit, the patients were requested to fill the QUALEFFO-41 and EQ5D (with VAS) questionnaires, to evaluate the effect of the treatment on QoL of patients. Here we report the results obtained during the 18 months of treatment and also the adherence to therapy. **Results:** Drop-out cumulative percentage at the end of the study was 28.4% (58/204). The adherence to therapy, defined as number of patients reporting that the treatment was ongoing at the end of each visit, was around 90% in all visits. Treatment compliance (patient taking the drug as prescribed by clinician) was around 85% during the entire study period. The impact of treatment with PTH on QoL of patients resulted in significant improvements from baseline in both QUALEFFO-41 and VAS at all visits. At the end of the study, the QUALEFFO-41 score was improved by 6.3 points (-11.5%, $p < 0.0001$) from baseline, and VAS score showed an increase of +10.1 points ($p < 0.0001$ +20.2%) from baseline. **Conclusions:** Our present data confirm that parathyroid hormone therapy is associated with a significant improvement of QoL in patients. Therapy adherence was high (around to 90% during all the study period).

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PP322

Italian multicenter study on efficacy and safety of anabolic therapy in a cohort of patients with severe post-menopausal osteoporosis

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Abstract: Introduction: Efficacy and safety of daily treatment with parathyroid hormone were evaluated in a typical Italian population with severe post-menopausal osteoporosis eligible to anabolic treatment (Nota 79 AIFA). **Materials and methods:** 204 ambulatory female patients (median age: 72.6 ± 8.3 years; height: 155.3 ± 6.5 cm; weight: 61.1 ± 11.9 Kg) with severe post-menopausal osteoporosis have been enrolled in this study accordingly to summary of product characteristics and Italian reimbursement criteria for osteoporosis drugs (Nota 79 AIFA), between January 2008 and April 2009 (Last Patient Out: October 2010). 146 (71.57%) out of these patients completed the study.6 visits were planned in the study protocol: baseline and after 1, 3, 6, 12 and 18 months of therapy. In a subgroup of patients BMD was also evaluated at baseline and at the end of the study. Moreover, every clinical fracture event was captured. Hypercalcaemia was arbitrarily defined as a serum calcium value ≥ 10.7 mg/dl. **Results:** During the study, a significant improvement of median T-score was observed, at lumbar spine (baseline: -2.79 ± 1.31; 18 months: -2.45 ± 1.23, $p = 0.0001$, $N = 53$), at total femur (baseline: -2.40 ± 1.02; 18 months: -2.27 ± 0.96; $p = 0.0368$; $N = 55$) and at femur neck (baseline: -2.64 ± 0.86; 18 months: -2.48 ± 0.90; $p = 0.0205$, $N = 61$). 24 new clinical fractures (in 21 patients) were recorded; 11 out of them were vertebral and 3 femoral. A similar incidence of fractures was reported in previous studies carried out in similar populations. Hypercalcaemia was more frequently detected in the first months of treatment (14.3% at 3rd month) and comparable to that registered in the PATH study with PTH 1–84; hypercalcaemia was considerably reduced in the late treatment phase (4.43% after 12 month, 1.82% after 18 months). Only in one patient the hypercalcaemia determined treatment discontinuation. **Conclusions:** Data obtained from this study confirm efficacy and safety of parathyroid hormone therapy for severe post-menopausal osteoporosis treatment.

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PP323

Myricetin suppress LPS-induced MMP expression in human gingival fibroblasts and inhibit osteoclastogenesis by downregulating nfatc1 in RANKL-induced raw 264.7 cells

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Abstract: Periodontitis is a group of inflammatory diseases that affect connective tissue attachments and the supporting bone that surround the teeth. Gingival fibroblasts induce overexpression of matrix metalloproteinase (MMP), which is involved in inflammatory progression in periodontitis. Osteoclasts are responsible for skeletal modeling and remodeling but may also destroy bone in several bone diseases, including osteoporosis and periodontitis. This study examined the anti-destructive effects of myricetin on human gingival fibroblasts (HGF) under lipopolysaccharide (LPS) induced inflammatory conditions and the osteoclastogenetic effect of myricetin on the receptor activator of NF-kB ligand (RANKL) induced RAW264.7 cells. The effects of myricetin on