different anti-osteoporotic drugs on fracture. In sensitivity analyses we generated 1:1 matched cohorts of patients with prescription of bisphosphonates, denosumab, teriparatide or without any pharmacological prescription at baseline and 1:1 matched cohort based on the T-score variation over the time (increase in T-score vs decrease or stability in T-score values).

Results: Data from 50,862 women were available. Among these, 3,574 individuals had at least 2 consecutive visits. The crude fracture rate was 9.1/9/1,000 person-year for non-treated patients. The crude fracture rate in bisphosphonate users was 72.1/1,000 person-year, in denosumab users was 58.2/1,000 person-year and in teriparatide users was 19.3/1,000 person-year. Overall, we found that bisphosphonates were associated with a 30% lower risk of fracture compared to no treatment (aHR 0.70, 95% CI 0.50-0.98), denosumab and teriparatide were associated with 60% and 90% lower risk of fracture, respectively (aHR 0.43, 95% CI 0.24-0.75 and aHR 0.09, 95% CI 0.01-0.70). Bisphosphonate use was associated with a lower risk of fracture only after one year of treatment. In Figure 1 are presented the Kaplan-Meier curves free from fragility fracture after propensity score matching.

Conclusion: In conclusion, we found that all anti-osteoporotic medications effectively reduced the risk of fracture in the real-life. Bisphosphonate's effect on fracture risk was apparent only after the first year of treatment. Our findings do not support the use of bisphosphonates in patients at imminent risk of fracture.

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