Anti-diabetic treatment as an additional factor in a FRAX based evaluation of osteoporotic fracture risk

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Background

The present study is designed to assess the incidence of osteoporotic fractures and the associated risk factors and particularly those used to predict the 10-year fracture risk in FRAX score based on data gathered in general practitioner's records of rural Greece.

Patients and methods

We conducted a retrospective analysis of all patients with osteoporosis presented between October 2013 and December 2014. Data from medical records including gender, age, previous history of low energy fractures (spine, and distal radius), past medical history, and medication use with specific reference to treatment with bisphosphonates and glucocorticoids were obtained. Patients with metabolic bone disease other than osteoporosis were excluded from the final analysis.
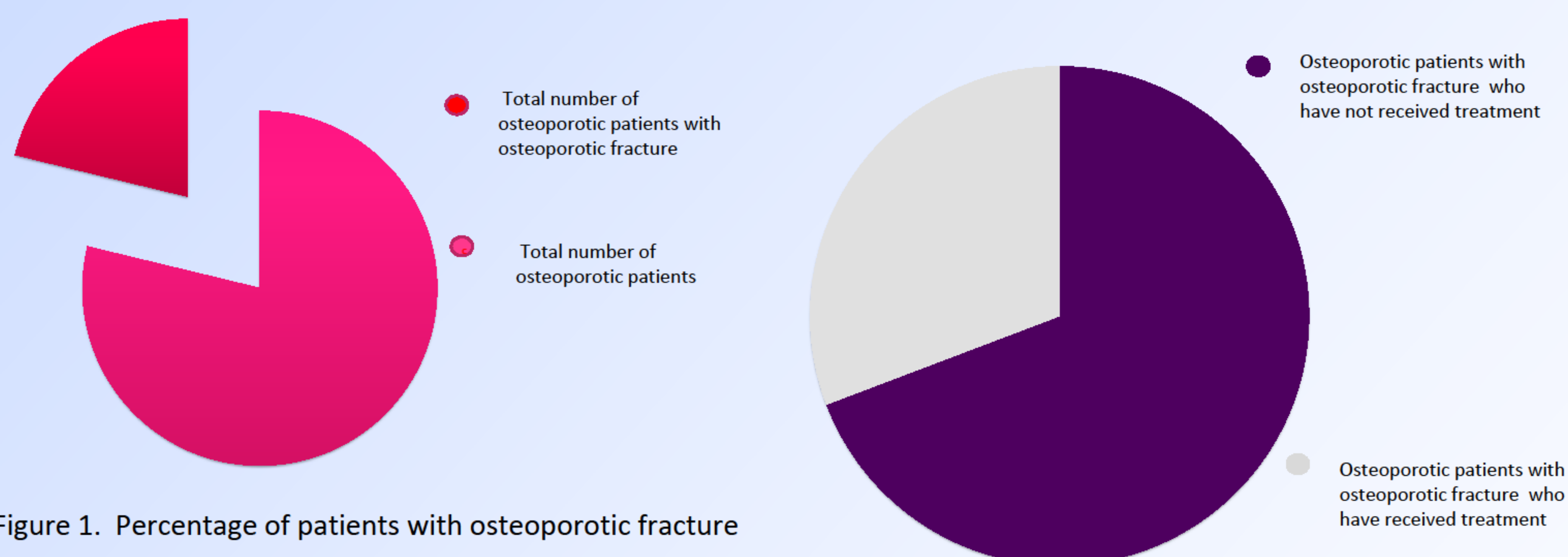
Results

One hundred and sixty seven patients (127 women and 40 men) aged between 44 and 90 years old were included in the final analysis. Twenty seven per cent of the study population (n=45) had sustained a low energy fracture (Figure 1.) and only 43% of them had received anti-osteoporosis treatment (Figure 2.). Regarding concomitant medications only anti-diabetic treatment was significantly associated with the presence of osteoporotic fracture (F=4,260, p=0.042), and had a considerable effect on the 10-year risk of major osteoporotic and hip fractures in drug-naïve patients.

- Total number of osteoporotic patients with osteoporotic fracture
- Total number of osteoporotic patients

Figure 1. Percentage of patients with osteoporotic fracture

- Osteoporotic patients with osteoporotic fracture who have not received treatment
- Osteoporotic patients with osteoporotic fracture who have received treatment
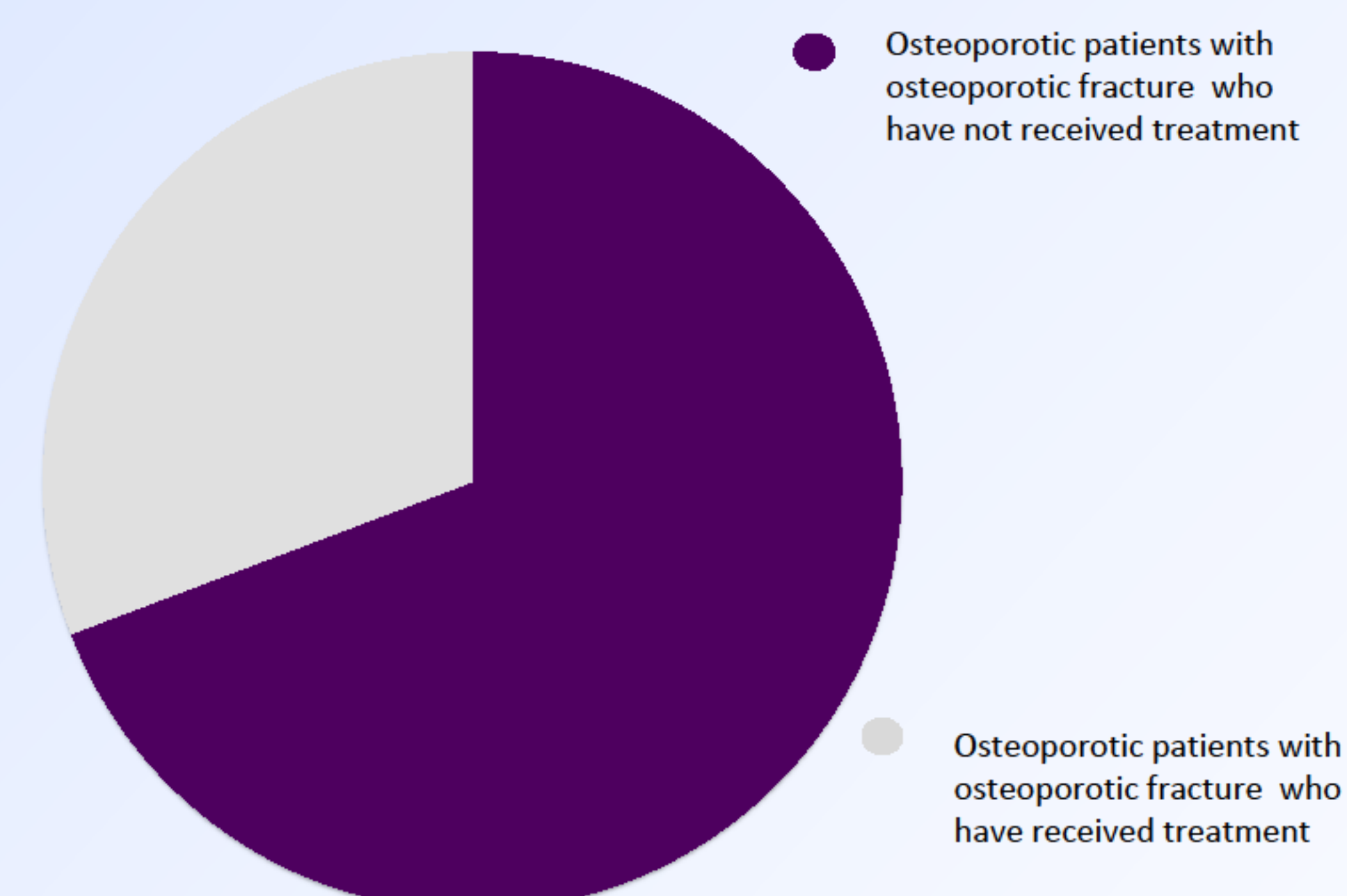
Figure 2. Percentage of patients with osteoporotic Fracture that have received treatment

Conclusion

Anti-diabetic treatment should be taken into consideration when evaluating fracture risk in osteoporotic patients.