Sequential osteoporosis treatment involves the design of a particular strategy whereby a drug is used during a time period long enough to reap its benefits with minimum risk and maximum adherence. Later on, it will be feasible to switch to other drugs that meet the same requirements. It is necessary to keep in mind the adverse effects caused by the prolonged use of some drugs, the level of risk undertaken for fracture prevention and the data from clinical trials that support its use, such as its efficacy given the age of the patient. Pharmacological treatment should not be static and could change over the lifetime of the patient so as to adapt to the clinical and metabolic needs appropriate for each moment.

In theory, treatment should be aimed at the physiopathology of rapid bone mass loss during the first years of menopause, which is produced by the increase in secondary bone resorption and the decrease in estrogens. The most appropriate drugs are hormone replacement therapy in symptomatic women and SERMs in asymptomatic ones. Other possibilities would be hormone replacement therapy for 2 or 3 years, and SERMs afterwards (if there are not any menopausal symptoms), or the combination of an estrogen with a SERM (TSEC) (if there are any menopausal symptoms). Later on, there is a period of increased resorption and diminished bone formation, coinciding with more than 10 years of menopause and a greater risk for hip fracture, where drugs such as bisphosphonates, denosumab or strontium ranelate (severe osteoporosis) have shown their effectiveness. Finally, in cases of very high risk for fracture, anabolic treatments as PTH might be indicated. Probably, anabolic treatments followed by antiresorptives drugs will be a nice strategy.

In conclusion, we have therapies that significantly reduce fracture risk in patients with osteoporosis. To decide what treatment we need to tailor, considering individual patient characteristics, treatment profile and long treatment.