

# OSTEOSCOOP

News on current events in osteoporosis and rheumatology

## European guidance for the diagnosis and management of osteoporosis in postmenopausal women – Therapeutic interventions and monitoring

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Osteoporosis is defined as a systemic skeletal disease characterized by low bone mass and microarchitectural deterioration of bone tissue, with a consequent increase in bone fragility and susceptibility to fracture. Although the diagnosis of the disease relies on the quantitative assessment of bone mineral density (BMD), which is a major determinant of bone strength, the clinical significance of osteoporosis lies in the fractures that arise.

Therapeutic interventions aim at reducing the fracture risk [1]. The most commonly used agents in Europe are raloxifene, the bisphosphonates alendronate, ibandronate, and risedronate, agents derived from parathyroid hormone, and strontium ranelate. Until recently, hormone replacement treatment was also widely used. They have all been shown to reduce the risk of vertebral fracture. Some have been shown to also reduce the risk of non-vertebral fractures, in some cases specifically fractures at the hip.

Monitoring of treatment efficacy relies on densitometry (BMD) and biochemical markers of bone turnover. For bone-forming agents, increases in BMD account for approximately one third of the vertebral fracture risk reduction with teriparatide. Preliminary data suggest that a larger proportion (up to 74%) of the antifracture efficacy of strontium ranelate might be explained by changes in total hip or femoral neck BMD. In patients treated with bone-forming agents, monitoring BMD appears to be of greater value than in patients treated with antiresorptives.

The ESCEO guidance summarizes the antifracture efficacy of the most frequently used treatments for postmenopausal osteoporosis. Strontium ranelate appears to have the broadest range of antifracture efficacy at both vertebral and nonvertebral levels in patients with osteoporosis (with or without prior vertebral fracture).

1. Kanis JA et al. *Osteoporos Int*. 2008;19:399-428.

### European guidance for the diagnosis and management of osteoporosis in postmenopausal women - Therapeutic interventions and monitoring

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Antifracture efficacy of the most frequently used treatments for postmenopausal osteoporosis when given with calcium and vitamin D, as derived from randomised controlled trials

	Effect on vertebral fracture risk		Effect on non-vertebral fracture risk	
	Osteoporosis	Established osteoporosis <sup>a</sup>	Osteoporosis	Established osteoporosis <sup>a</sup>
Alendronate	+	+	NA	+ (including hip)
Risedronate	+	+	NA	+ (including hip)
Ibandronate	NA	+	NA	+ <sup>b</sup>
Zoledronic acid	+	+	NA	NA (+) <sup>c</sup>
HRT	+	+	+	+
Raloxifene	+	+	NA	NA
Teriparatide/PTH	NA	+	NA	+
Strontium ranelate	+	+	+ (including hip)	+ (including hip)

NA, no evidence available  
+ effective drug  
<sup>a</sup> Women with a prior vertebral fracture  
<sup>b</sup> In subsets of patients only (post hoc analysis)  
<sup>c</sup> Mixed group of patients with or without prevalent vertebral fractures

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Treatment of postmenopausal osteoporosis to reduce the risk of hip and vertebral fractures

