A systematic review and economic evaluation of alendronate, etidronate, risedronate, raloxifene and teriparatide for the prevention and treatment of postmenopausal osteoporosis

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Record Status
This is a bibliographic record of a published health technology assessment from a member of INAHTA. No evaluation of the quality of this assessment has been made for the HTA database.

Citation

Authors' objectives
This study aims to establish the clinical effectiveness and cost-effectiveness of selective oestrogen receptor modulators, bisphosphonates and parathyroid hormone (subject to licensing) for the prevention and treatment of osteoporosis and the prevention of osteoporotic fractures in postmenopausal women.

Authors' conclusions
Of the five interventions, only raloxifene appeared to reduce the risk of vertebral fracture in postmenopausal women unselected for low bone mineral density (BMD). However, as the full data have not been made public, there is some uncertainty regarding this result. None of the five interventions has been shown to reduce the risk of non-vertebral fracture in women unselected for low BMD. All of the proposed interventions provided gains in QALYs compared with no treatment in women with sufficient calcium and vitamin D intakes. The size of the QALY gain for each intervention was strongly related to the age of the patient. The estimated costs varied widely for the interventions. These net costs were markedly different by age, with some interventions becoming cost-saving at higher age ranges in patients with a prior fracture. Areas for future research include: the evidence base for the efficacy of fracture prevention in the very elderly, reanalysis of raloxifene using a dedicated breast cancer and CHD model, and more trials considering the cost-effectiveness of teriparatide.

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