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Perspective

## Osteoporotic fracture predictors in postmenopausal women

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### Statistics

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### Abstract

More than 200 million women are affected by osteoporosis globally, with postmenopausal women being more vulnerable to the disease's severe side effects, such as osteoporotic fractures. Preventive methods have not yet received as much attention as symptomatic therapy has. In order to address this, we conducted a meta-analysis to determine possible predictors of osteoporotic fractures in postmenopausal women. The ultimate purpose of this was to identify high-risk individuals and investigate prospective therapy strategies. We may endeavor to lessen the burden of osteoporosis-related fractures in this vulnerable group by concentrating on preventative measures and identifying high-risk people.

Keywords: Osteoporosis, HRQoL, BMTs

## INTRODUCTION

According to epidemiologic research, 11% of the world's population is over 60, and that number is expected to increase to 22% by the year 2050 [1]. Osteoporosis affects a significant fraction of the elderly and is associated with a number of health risks, including increased morbidity, financial strain on families, and a reduction in Health-Related Quality of Life (HRQoL). The lifetime risk of any form of clinically significant fracture is around 40%, which is comparable to the risk of cardiovascular disease [2]. Due to the thousands of fractures that occur each year, osteoporosis is a significant public health issue that is linked to death, functional impairment, and high healthcare expenditures [3,4]. Additionally, it is anticipated that the aging population will make osteoporotic fractures more common. More than 200 million women worldwide suffer from osteoporosis. Osteoporosis and its severe consequences, such as osteoporotic fractures, are especially dangerous for postmenopausal women [5]. According to estimates, about one-third of women over 50 are at risk for osteoporotic fracture [6-8]. According

to earlier research, estrogen levels had a preventive effect in preventing osteoporotic fractures and were favorably connected with Bone Mineral Density (BMD). Despite the fact that estrogen has showed beneficial effects on BMD, substantial treatment studies have not yet convincingly established that it can lower the incidence of fracture in women who already have osteoporosis. Accurately identifying those who are at high risk for osteoporotic fractures is one of the most important prevention techniques. Age was one of the most significant risk factors for the development of fragility fractures, according to the previous study. The key to controlling them, including the use of medications to treat osteoporosis, is prevention [9]. Alendronate, risedronate, zoledronate, and denosumab were shown to be helpful in improving bone density in the spine and lowering vertebral fractures in patients using corticosteroids, according to findings from a Bayesian network meta-analysis. Hip BMD increased in response to alendronate, zoledronate, and denosumab. Alendronate enhanced femoral neck and hip BMDs and decreased the frequency of new fractures.

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