Perhaps it is better to think of screening as a way to initially triage patients for decisions relative to follow-up.

**EXPERT COMMENTARY**

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The optimal screening interval for bone density assessment in menopausal women is an extremely complicated but important issue because osteoporosis and fragility fracture are a major health concern. There are nearly 2 million osteoporotic fractures each year, accounting for 432,000 hospital admissions, 25 million office visits, and an increased risk of disability and death, all at a cost of up to $18 billion.¹

There is no question that determination of bone mass (achieved through bone mineral density [BMD] testing by dual energy x-ray absorptiometry [DXA] and reported as T scores) will diagnose osteopenia and osteoporosis, correlate with fracture risk (the lower the bone mass, the higher the incidence of fracture), and monitor changes in bone mass over time.

Medicare allows for BMD testing every 23 months, and that has become standard for many clinicians.

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**Details of the trial**
Gourlay and colleagues studied nearly 5,000 basically healthy women, the youngest of whom was 67 years of age. Women who had osteoporosis and who were taking medication for fracture reduction were excluded, as were women who had a history of pre-existing fracture.

The researchers concluded that the better the initial bone-density score at age 67, the longer it would take for a woman to develop osteoporosis. For instance, if a woman older than 67 years had a T score of -1.00 or better, it would take her 16.8 years (95% confidence interval [CI], 11.5 to 24.6) to reach osteoporosis. In contrast, a woman with a T score of -2.00 would reach osteoporosis in only 1.1 years. Current estrogen use was found to be significantly associated with higher BMD and a longer testing interval, although the authors did not recommend modifying the screening interval on the basis of estrogen use.

These findings certainly call into question the notion that all patients should be screened for osteoporosis every 23 months. Perhaps it is better to think of screening as a way to initially triage patients for decisions relative to follow-up.

**Limitations and considerations**
Some extremely important observations must be made:

1. The article by Gourlay and colleagues created tremendous media attention, most of which implied that there is too much screening with DXA scans. Nothing can be further from the truth. Only 13% of women older than age 65 are actually getting a baseline DXA scan.²
2. The data in this report apply only to white women older than 67 years who have no pre-existing fracture and are not taking any medications for osteoporosis. Extrapolation to younger women or other groups is not valid.
3. We should not be interested in the development of an arbitrary T score for bone mass but rather the determination of whether a particular patient has a level of fracture risk that warrants pharmacologic intervention.

**What is FRAX?**

**The Fracture Risk Assessment (FRAX®) Tool** has been developed by the World Health Organization (WHO). It is based on individual patient models that integrate the risks associated with clinical factors as well as bone mineral density at the femoral neck. FRAX models have been developed from studying population-based cohorts from Europe, North America, Asia, and Australia.

FRAX algorithms give the 10-year probability of hip fracture and of a major osteoporotic fracture (clinical spine, forearm, hip, or shoulder fracture).


**Reference**

These observations support use of a model like FRAX (see “What is FRAX?”), which can be used annually even without an updated DXA of the hip. FRAX is much more appropriate than DXA testing every 23 months and should become the clinical standard of care.

Remember, there are more fragility fractures in nonosteoporotic women than in osteoporotic women. The risk (incidence per 10,000 women) is greater in osteoporotic women, but the absolute number in the population is greater in women who have not yet reached that threshold.

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**References**