THE ENDOCRINE SOCIETY

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# The Endocrine Society Recommends Individualization of Bone Mineral Density Testing Frequency in Women Over the Age of 67

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In January 2011, the United States Preventive Services Task Force (USPSTF) published recommendations on screening for osteoporosis. In summary, the USPSTF recommended screening for osteoporosis in women aged 65 years or older and in younger women whose fracture risk is equal to or greater than that of a 65 year old Caucasian woman who has no additional risk factors. But the USPSTF recommendations did not address when a woman should be re-screened if her first bone density test shows normal or only slightly diminished bone density (osteopenia). In other words, what are the chances that a woman who does not have osteoporosis today will go on to develop osteoporosis in the future?

A study published in the *New England Journal of Medicine* by Margaret Gourlay et al (N Engl J Med 2012; 366:225-233) suggests that some older women may not need frequent bone density tests, if they have normal bone mineral density (BMD) or mild osteopenia. The study prospectively followed 4957 women, 67 years of age or older, with normal BMD (T-score at the femoral neck and total hip, −1.00 or better) or osteopenia (T-score, −1.01 to −2.49) and with no history of hip or clinical vertebral fracture or of treatment for osteoporosis, for up to 15 years.

Results of the study determined that the baseline T-score is the single most important determinant of the dual energy x-ray absorptiometry (DXA) testing interval. During the 15-year follow up period, less than1% of women with normal BMD and only 5% of women with mild osteopenia at their first assessment progressed to develop osteoporosis. The data suggest that it would take 15 years for 10% of women with an initially normal BMD or mild osteopenia to develop osteoporosis. The authors conclude that women 67 years of age or older with a baseline BMD that is normal or with a T-score better than -1.50 could safely defer a repeat DXA test for 15 years, since it is very unlikely those women would go on to develop osteoporosis within that time span. Not surprisingly, those with moderate osteopenia (T-score -1.50 to-1.99) and advanced osteopenia (T-score -2.00 to -2.49) progressed more quickly, with 10% of each group developing osteoporosis after 5 years and 1 year, respectively.

The Endocrine Society would like to emphasize that the ideal timing of repeat DXA testing should be individualized. DXA testing should be done more frequently for those patients with low BMD or those likely to lose bone rapidly over time and less frequently for those with normal or near-normal BMD and who are otherwise healthy. While the Centers for Medicare and Medicaid Services (CMS) covers DXA testing at a 2-year interval, there are clearly individuals who should be screened more frequently (for example, those with moderate or advanced osteopenia, those who just initiated or changed osteoporosis therapy and those on supraphysiologic doses of glucocorticoids).

The Endocrine Society also wants to highlight an additional point made in the study - most women who should have already had their first DXA test had not done so. The Society encourages all women 65 years of age and older to get a baseline screening DXA.

It is important to note that the findings of this study do not apply to women under 67 years of age with modestly reduced BMD or women 67 years of age and older who have osteoporosis, a history of hip fracture or a known vertebral fracture. They also do not apply to those women who are currently taking osteoporosis medications (with the exception of estrogen) who should continue to undergo DXA testing at regular intervals.

Moreover, fracture risk is not simply determined by T-score alone. An individual's BMD and T-score measurement must be assessed in conjunction with other clinical risk factors (as is done with the World Health Organization's Fracture Risk Assessment Tool - FRAX®) to determine if they are candidates for further evaluation and possible treatment of their reduced BMD. It seems likely that many of the women in the study who did not have osteoporosis based on T-score would still have been deemed appropriate for treatment had the FRAX® tool been used.

The Endocrine Society recommends that all women receive a baseline BMD test at 65 years of age and advises that the timing of repeat DXA testing should be individualized based on the patient's likelihood to lose bone mass over time. The Endocrine Society encourages the extension of DXA screening to the 87% of women who currently do not receive this test and wants to ensure that all patients who have osteoporosis or are at high risk for fracture receive appropriate treatment. Patients should talk with their physicians about their BMD measurements and their risk factors for osteopenia or osteoporosis, and determine the appropriate time for a DXA test.

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