ISCD
THE INTERNATIONAL SOCIETY FOR CLINICAL DENSITOMETRY

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Dear ISCD Member:

You may have heard about the study "Bone Density Testing Interval and Transition to Osteoporosis in Older Women" (Gourlay et. al., NEJM, Jan 19, 2012) which analyzed post-menopausal women enrolled in SOF (Study of Osteoporotic Fractures). This study concluded that estimated BMD testing intervals can be as long as 17 years for those with normal BMD or "mild osteopenia" (defined in this article as a T-score of less than -1.0 and greater than -1.5) and 5 years for "moderate osteopenia" (T-score of less than or equal to -1.5 and greater than -2.0). The article has generated a great deal of interest in the lay press and medical wire services.

An unfortunate media spin is that this study proves that DXA testing is being over used in postmenopausal women. There is concern that this will lead to complacency on the part of individuals for both initial DXA testing and follow up studies at a time when screening rates in the Medicare population remain inappropriately low at 13% per year. Insurance coverage for follow up DXA studies and a legislative agenda that seeks to ensure adequate DXA reimbursement could also be threatened.

A number of responses to the article have already appeared in the media including comments from Drs. Felicia Cosman and Jeffery Curtis. ISCD has also fielded a number of calls from concerned members as well as other sister societies.

We felt that a rapid response to ISCD members would be appropriate to assist you in talking with your patients, local media and/or insurers. The Scientific Advisory Committee (SAC) of ISCD will be asked to draft a more detailed response to the question of testing intervals, which will appear on the ISCD web site at a later date.

To briefly review the NEJM report and its limitations:

- The study population consists of post-menopausal women ≥ 67 yrs of age. Certainly, women who reach that age with normal or mildly low BMD are unlikely to have rapid bone loss as they are many years out from menopause. The study does not address testing intervals in recently post-menopausal women where rates of bone loss are much more rapid, or women with additional illnesses or requiring medications that adversely affect bone in whom more frequent testing may be appropriate.
- The importance of fracture risk assessment, as part of BMD measurement must be emphasized. It is clear that singular focus upon BMD (without inclusion of other clinical risk factors as is being done with FRAX and other fracture risk calculators) will not recognize many patients as being at increased fracture risk.
- In this regard, the NEJM study evaluated only clinical vertebral fractures. Unappreciated vertebral compression fractures are not uncommon in patients with densitometric osteopenia. Since a sizable percentage of postmenopausal women (14-30%) have morphometric vertebral body compression fracture in the setting of densitometric osteopenia (and thus have clinical osteoporosis), many of these patients would not have been identified in this study and simply carried as "osteopenia" with lengthy intervals between DXA testing.
- The NEJM study did not utilize FRAX to identify osteopenic patients at high risk for fracture. Although they include some of the risk factors as covariates, they were not weighted as in FRAX. In fact, in their analysis they found that some covariates such as fracture after age 50, current smoking, use of steroids, and RA did not predict transition to a T-score of <-2.5 thus implying that they should not influence testing intervals.

- Additionally, this study did not consider women with low spine BMD. As low lumbar spine BMD is associated with increased fracture risk, clinicians must consider this site in making recommendations to minimize fracture risk.
- The authors imply that DXA testing is over utilized: *"Recent controversy over the harms of excessive screening for other chronic diseases reinforces the importance of developing a rational screening program for osteoporosis that is based on the best available evidence rather than on health care marketing, advocacy, and public beliefs that have encouraged over testing and overtreatment in the United States."* Regarding osteoporosis testing, this is clearly not the case. In fact, recent data compiled by Alison King and Donna Fiorentino, in a study of Medicare part B claims data for 2002-2008, demonstrate that over a 7-year period, 47.9% of female beneficiaries did not have a single DXA study and 25.4% were tested only once. (Health Affairs doi: 10.1377/hlthaff.2011.0233). A copy of this study can be found on the ISCD web site, which is linked here: http://www.iscd.org/Visitors/positions/Advocacy.cfm

The positive point to take from the NEJM study is that for elderly women with normal or minimally low bone mass, rapid bone loss over the next several years is unlikely unless additional medical conditions intervene. The study does not address BMD testing frequency intervals in younger post-menopausal women or men regardless of their baseline bone density.

Sincerely,

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