[2004] [SAT0380] THE OST RISK TOOL PERFORMS CONSISTENTLY FOR IDENTIFYING WOMEN AT RISK OF OSTEOPOROSIS ACROSS POPULATIONS

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Background: Patients with osteoporosis, defined by low bone mineral density (BMD; T-scores≤-2.5) are at increased risk of hip and other fractures. Currently, most women with osteoporosis remain undiagnosed. The Osteoporosis Self-assessment Tool (OST), an index based on age and weight, was developed to identify women at increased risk of osteoporosis to undergo further evaluation with definitive bone mineral density (BMD) testing. The method was originally developed in postmenopausal Asian women (1), and was subsequently modified and validated in Caucasian women.**Objectives:** To review and summarize the performance of the OST in identifying postmenopausal Caucasian women at increased risk of osteoporosis across various populations.**Methods:** Publications that reported results for OST were identified and summarized. Age and weight are the two most influential determinants of BMD; OST is calculated as: [(weight in kg – age) X 0.2, truncated to an integer]. The resulting value is used to classify women as low (OST >1), moderate (OST -3 to 1), and high (OST <-3) risk for osteoporosis.**Results:** Four publications reported results for OST in seven populations. Using OST to stratify risk levels, the prevalence of osteoporosis increased progressively from the low risk group to the high risk group (Table). In the high risk groups, approximately one in every two women has osteoporosis, and the proportion is about one in every four or five women in the moderate risk groups. Thus, in the women classified as moderate or high risk by OST, the yield is sufficient to justify measuring BMD. The low risk group had a very low proportion of women with osteoporosis; BMD measurements would not be recommended unless prior fracture, corticosteroid use, or other major risk factors were present. The prevalence of osteoporosis in the three risk categories in these validation samples is similar to that reported in the original development population of Asian women (61%, 15%, and 3% in the original high, moderate, and low risk groups, respectively.)

Prevalence of Osteoporosis by OST Risk Level (%)

Cohort	Number of Subjects	Low Risk	Moderate Risk	High Risk
New Zealand (2)	1351	4.4	12.7	47.8
US Clinic (3)	1102	4	18	58
FIT (3)	28833	4	23	57
Rotterdam (3)	3374	4	22	57
Netherlands (3)	4204	7	23	50
Belgium (4)	4035	6	22	60
University Hosp. (5)	644	4	17	58

ld]Conclusion: OST performed consistently across different populations of women, and identifies large differences in risk for osteoporosis. These results suggest that a simple tool like OST could significantly improve the clinical identification of patients with osteoporosis by helping to target BMD measurements for patients who are most likely to have osteoporosis.**References:** 1. Koh et al. Osteoporos Int 2001;12:699-7052. Sen et al. Osteoporos Int 2002; 13(s3): S383. Geusens et al. Mayo Clin Proc 2002; 77: 629-374. Richy et al. QJM 2004; 97: 39-465. Cadarette et al. Osteoporos Int (online jan 17, 2004)

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