

# **APPLICATION THE IOF'S ONE-MINUTE OSTEOPOROSIS RISK TEST IN SCREENING OF STRUCTURAL-FUNCTIONAL [...]**

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**APPLICATION THE IOF'S ONE-MINUTE OSTEOPOROSIS RISK TEST IN SCREENING OF STRUCTURAL-FUNCTIONAL CHANGE OF BONE IN POSTMENOPAUSAL WOMEN**

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Background

This research was aimed at proving validity of IOF's One-Minute Osteoporosis Risk Test and evaluating the relation between structural-functional state of bone according to the ultrasound densitometry and results of IOF's One-Minute Osteoporosis Risk Test for postmenopausal women.

Materials and methods

We've examined 147 postmenopausal women aged 50-69 years (mean age 59,8 ±0,7). Structural-functional state of bone was evaluated by means of an ultrasound bone densitometer ("Achilles+"). The speed of sound (SOS, m/s), broadband

ultrasound attenuation (BUA, dB/MHz) and a calculated "Stiffness" index (SI, %), T and Z-range were measured. IOF's One-Minute Osteoporosis Risk Test was translated into Ukrainian.

## Results

Significant correlation was found between positive answer to question 2 ("Have you broken a bone after a minor bump or fall?") and SOS ( $r = -0,17$ ;  $p = 0,042$ ), BUA ( $r = -0,28$ ;  $p = 0,0005$ ), SI ( $r = -0,25$ ;  $p = 0,002$ ), Z-range ( $r = -0,26$ ;  $p = 0,015$ ); between positive answer to question 3 ("Have you taken corticosteroid tablets for more than 3 months") and SOS ( $r = -0,16$ ;  $p = 0,047$ ), BUA ( $r = -0,29$ ;  $p = 0,0003$ ), SI ( $r = -0,21$ ;  $p < 0,000001$ ), and between positive answer to question 4 ("Have you lost more than 3 cm (just over 1 inch) in height?") and the following indexes of structural-functional state of bone: SOS ( $r = -0,32$ ;  $p < 0,00001$ ), BUA ( $r = -0,27$ ;  $p = 0,00096$ ), SI ( $r = -0,36$ ;  $p < 0,000001$ ), Z-range ( $r = -0,27$ ;  $p = 0,0015$ ).

## Conclusion

Application of IOF's One-Minute Osteoporosis Risk Test gives an opportunity to determine structural-functional changes of bone. Among the test questions, the most reliable and informative as for postmenopausal women proved to be questions 2 ("Have you broken a bone after a minor bump or fall"), 3 ("Have you taken corticosteroid tablets for more than 3 months") and 4 ("Have you lost more than 3 cm (just over 1 inch) in height?").