

# P07 BONE MINERAL DENSITY ACCORDING TO ANSWER IOF'S ONE-MINUTE OSTEOPOROSIS RISK TEST

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**This research aimed** at evaluating the bone mineral density according to answer IOF's one-minute osteoporosis risk test.

**Materials and methods.** The study included two stages. Test was translated into Ukrainian. At the first stage, structural-functional state of bone was evaluated by means of an ultrasound bone densitometer ("Achilles+"). We've examined 147 postmenopausal women aged 50-69 years (mean age 59,8 ±0,7). The speed of sound (SOS, m/s), broadband ultrasound attenuation (BUA, dB/MHz) and "Stiffness" index (SI,%) were measured.

**Results.** Parameters of ultrasound densitometry at patients who have answered positively on II (Have you broken a bone after a minor bump or fall), III (Have you ever taken

corticosteroid tablets for more than 3 consecutive months) and IV (Have you lost more than 3 cm in height) questions, were significantly less in comparison with the patients who have answered negatively. SI at patients with the positive answer to the on II the question has made  $74,0 \pm 1,7\%$ , with negative –  $81,2 \pm 1,3\%$ ,  $p = 0,002$ ; on III –  $67,1 \pm 3,9\%$  and  $79,9 \pm 1,1\%$ ,  $p = 0,0013$ ; on IV –  $71,6 \pm 1,7\%$  and  $82 \pm 1,2\%$ ,  $p < 0,00001$ . Rate of osteoporosis depending on the positive answer to the following questions has been made: to the on II question –  $46,67\%$ , to the on III –  $81,82\%$ , to the on IV –  $58,1\%$ . At the second stage of BMD, T and Z-score of the spine, femoral neck were determined by DXA using a densitometer Prodigy (GE Medical systems). We've examined 73 postmenopausal women aged 50-69 years (mean age  $63,9 \pm 0,9$ ). Significant correlation between the answer to the on II a question and BMD spine ( $r = -0,29$ ;  $p = 0,012$ ) and BMD femoral neck ( $r = -0,32$ ;  $p = 0,005$ ); between the answer to the on IV a question and BMD spine ( $r = 0,29$ ;  $p = 0,047$ ) was found.

**Conclusion.** Application of IOF's one-minute osteoporosis risk test gives an opportunity to determine structural-functional changes of bone.