The decrease in female hormones may lead to a higher risk of osteoporosis and heart disease. The main objective of our study was to evaluate the long term action of raloxifene and its action after the transition to another antiresorptive therapy.

Design and patients. A group of 112 postmenopausal was selected from the hospital database. These patients had osteoporosis and were treated with raloxifene (60 mg/day) during an average of 36 months. Of these women, 83 continued with raloxifene (group A) and 29 were changed to ibandronic acid (150 mg/monthly), this was the transition group (group B).

Measurements. Bone remodelling markers were assessed in each group after 15 months of treatment. We also measured lipid profile and insulin resistance.

Results. There was a decrease in the parameters of resorption in the group A. The CTX decreased by 17.6 % (0.455 vs. 0.387 basal raloxifene, p=0.009 ), and the NTX decreased by 46% (68.72 vs. 47.18 basal raloxifene, p= 0.0019 ). In the group B, the CTX decreased by 44% (0.364 vs. 0.160 basal ibandronate, p=0.001 ) with respect to the initial values, after therapy with raloxifene. After comparing the two groups at 15 months we observed higher reduction of the bone resorption in favour of the group treated with ibandronic acid: the CTX (0.387 vs. 0.160 raloxifene ibandronate, p=0.001).

Lipid measures including total cholesterol, LDL-cholesterol and HDL-cholesterol did not change significantly during the treatment period. On the other hand, differences were observed in the carbohydrate profile: there was an increase in insulin resistance after 15 months with ibandronic acid (HOMA-ir 1.88 vs. 2.36 ,p=0.002 ).

Conclusions. Respect to long-term effects, Raloxifene showed an inhibitory action on bone resorption and may decrease insulin resistance in postmenopausal osteoporotic women.