Background: Gynecologists play a pivotal role in the prevention of postmenopausal osteoporosis (PO) and fragility fractures (OF) through identification and treatment of middle-aged women at high risk. Several studies analyzed the influence of some obstetric conditions, such as parity and breastfeeding, that could hasten bone metabolism on the developing of PO evaluating bone mineral density (BMD), but only a few authors examined the association with OF risk. Nowadays results are conflicting. The aim of the present study was to evaluate, in a wide population of climacteric women, the influence of some reproductive and obstetric variables on osteoporotic and OF risk.

Methods: We performed a cross-sectional study on a population of N.466 postmenopausal women, (mean age 63 years, range 45-84 years). We investigated the following parameters: obstetric and gynecologic history, BMD values by Dual-energy X-ray Absorbiometry (DXA) and the individual 10-year fracture risk using FRAX algorithm.

Results and conclusions: Menopause occurred at the mean age of 49.5 and, in 86% of the patients, in a spontaneous way. 89% of women had at least one pregnancy at term and, among them, 63% breastfed for more than 3 months. The mean age of the first pregnancy was 24 years. Prevalence of PO was 41% (34% spine and 17% femoral neck). Age and low BMI resulted important risk factors for PO, as widely documented in literature. Furthermore, a positive and significant influence of reproductive age length on BMD values in the subsample of women under the age of 65. Between BMD values, fracture risk and obstetric variables such as parity, the age of the first pregnancy and breastfeeding, no significant influence emerged. Noteworthy osteoporotic and OF risk were positively and significantly correlated with the number of pregnancy, if it was greater than 2.