Aim: To compare breast density between two mammograms in premature ovarian failure (POF). Breast density is a risk factor for breast cancer.

METHODS: A cohort study evaluated 56 women with POF. For uniformity, only secondary amenorrhea was included. Two mammograms performed with an interval of at least two years were analyzed. Mammogram films were digitized and images were assessed by computer-assisted method, resulting in the variable that represents the fibroglandular percentage of the breast (percentage of mammographic density - PMD). We evaluated: age at menarche, age at the onset of POF, years of POF, length of HT (estradiol+NETA or conjugated estrogen+ medroxiprogesterone), body mass index (BMI), pregnancy and age at the time each mammogram was performed.

RESULTS: The age at the diagnosis of POF was 32.35±5.95 years. Menarche occurred at 12.68±1.68 years. In the first mammogram (M1), age was 37.58±3.72 years, BMI was 26.79±4.86, and years of POF was 5.25±4.61 years. HT had been used for 2.71±3.12 years. In the second mammogram (M2), age was 43.23±4.98 years, BMI was 27.6±5.39, years of POF was 10.5±5.11 years. HT had been used for 7.25±4.6 years. The mean time between both mammograms was 5.25±3 years, and PMD reduced from 27.78±21.04 to 17.53±15.71% (p = 0.007) between them. Comparing PMD in women using HT with those not taking HT, no significant difference was observed. In both moments, the multiparous had reduced PMD from nulliparous women (p<0.05). Using Spearman correlation, the variables BMI (R= -0.44; p=0.0007), years of POF (R= -0.33; p=0.01), pregnancy (R= -0.27; p=0.04) was negatively correlated with PMD.

CONCLUSION: Breast density in young women with POF suffers a decrease in a period of 5 years, regardless of HT use. Further studies may elucidate how these results will be correlated with decision-making in clinical therapeutics and the risk of breast cancer in POF.