Purpose: Tamoxifen in adjuvant treatment of breast cancer may induce side uterine disease due to estrogen agonist effects on endometrium. Gynecological follow-up of such women is hence mandatory to detect preclinical endometrial lesions. In this study, the prevalence of cavitary lesions in tamoxifen patients is described; a cut-off of sonographic endometrial thickness to refer patients to hysteroscopy is also calculated.

Materials and Methods: Analysis of 51 consecutive breast cancer tamoxifen-exposed patients referred from February 2008 to February 2013 for gynecological follow-up. All women underwent Transvaginal ultrasound scan of uterus and ovaries, hysteroscopy, and pathology on biopsy samples.

Results: TV scan showed a mean endometrial thickness of 7.16 ± 2.09mm (range 4.1-12mm). Macroscopy at hysteroscopy showed atrophy, cystic atrophy, endometrial polyp, hyperplasia with no atipia and fibroid in 27.5%, 19.6%, 31.4%, 13.7%, and 7.8% of patients respectively. Pathology on biopsy samples detected atrophy, cystic atrophy, endometrial polyp, hyperplasia with no atipia, fibroid and uterine adenomiosis in 13.7%, 35.3%, 33.3%, 7.8%, 7.8%, and 2% of patients respectively. The agreement between macroscopy and pathology on biotical specimen is as high as 0.882 Weighted Kappa (ES 0.066, 95% CI 0.753-1000). ROC curves showed endometrial thickness to be very likely increased both at macroscopic evaluation at hysteroscopy (AUC 0.933; sensitivity 96.2%, specificity 92.0%) and at TV scan (cut off 6.6mm, AUC=0.832, 95% CI: 0.701-0.922; sensitivity 80.77%, specificity 76%; p<=0.0001).

Conclusions: Adjuvant Tamoxifen in postmenopausal women may lead to endometrial changes. Such lesions are effectively diagnosed by office histeroscopy. Based on our results, an endometrial sonographic thickness of 6.6 mm is the most accurate cut-off to select patients who need further evaluation by hysteroscopy and biopsy.