

# E-Posters

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## Breast Cancer Screening in Infertile Patients Undergoing In-vitro Fertilization Treatment

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**Introduction:** The fact that the development of breast cancer is linked to repeated or sustained exposure to high blood estrogen levels has raised obvious concern that reproductive hormones particularly estrogen, might increase the risk of breast cancer development. A significant but short-term elevation in circulating estrogen, with estrogen levels in an IVF cycle peaking at 4,000 pg/mL, compared with 300 pg/mL in a normal menstrual cycle, along with accompanying changes in other reproductive hormones, increase the concern over breast cancer in IVF patients.

**Body** A recent report published by Stewart LM (FertilSteril. 2012) on a large Western Australian study, comprising data from 21,025 women and spanning 20 years revealed that women who initiated their 1st IVF attempt in their mid-twenties were approximately one-and-a-half times more likely to develop breast cancer than were controls , who underwent other (non-IVF) forms of fertility treatment. The American College of Obstetricians and Gynecologists recommend that women be offered annual screening for breast cancer starting at age 40; the American Cancer Society endorses mammograms starting at the same age. However, women who have risk factors that increase the chance of breast cancer should undergo earlier screening, especially if they are planning to undergo fertility treatment. Other risk factors used in the modified GAIL MODEL are: current age, age at menarche ,age at the first live birth or nulliparity, number of previous benign breast biopsies, atypical hyperplasia in a previous breast biopsy ,race and a positive family history. A guideline for breast screening is provided as follow:

**Breast Self-Examination:**

Monthly self-examination for all women more than 20 ,Appropriate education should be provided , Discovered masses should be examined by health professionals

**Mamography:**A baseline mamography for all women aged 35-39 ,every 2years for those aged 40-49 ,per 1 year for women more than 50

**Physical Examination:** Annual examination by health professionals for all women more than 25 ,High risk women need to be assessed per 6 months ,Discovered masses should be evaluated by imaging modalities

**Conclusion:** Most major medical organizations recommended starting routine mammography ) MMG (for women at age 40 . MMG is not a stand-alone procedure and physical findings must be considered along with the radiographic and histological assessment. There are several studies supporting the use of US for breast cancer screening as an adjunct to MMG for high risk women. Breast MRI can be considered in addition to MMG for screening in high risk patient.