Dense breast on screening mammography: utility and futility of additional ultrasound

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Introduction
High breast density decreases the sensitivity of mammography. Regardless of masking effect, it is also a stronger predictor for breast cancer than most other risk factors, including family history. Up to 50% of women have dense breast (categories c+d)(Fig1).

The relative risk is 2.1 to 2.3 in women with extremely dense breast (category d). There is little consensus on the potential need of additional measures. Breast Ultrasound (US) may be proposed as an adjunctive test, as it is non-invasive and non-irradiating.

Since 2012, our program for breast cancer screening propose to realise an additional US to the women with category d breasts. An evaluation of the data of the first year showed that less 50% of the women act upon the recommendation. In spite of the low compliance, 3 supplementary cancers were found. Since, no more evaluation was performed.

Results
Results are summarized on Figures 2 to 5.

Discussion and Conclusion

From the recommendation, 7 cancers hidden on mammography were identified in 4 years, with a rate of detection of 5.7% (between 4.4 to 7.7% in literature). The recall rate for supplemental investigations was 9.6% (13.9% in literature) and the biopsy rate was 4.1% (5.9% in literature). The positive predictive value of biopsies was 13.7% (between 3.2 to 7.5% in literature).

The participation rate was 60.3%. However compliance may be increased: better communication between the screening mammogram, radiologists and gynecologists, clearer information, easier organization of US and financial participation.

The radiologists of the screening program identified only 2.4% of women with extremely dense breasts (10% in literature). There is a risk of leave out cancers.