

# High-intensity focused ultrasound in breast pathology: non-invasive treatment of benign and malignant\* lesions

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## Rationale

Breast tumors, either benign or malignant, are commonly diagnosed during screening imaging procedures.

Even if surgery is the treatment of choice, other forms of less invasive radical treatment are desirable. High-intensity focused ultrasound (HIFU) is already established as a valid non-invasive technique that ensures tumor ablation in various organs. The publication reports the use of echotherapy (ultrasound-guided HIFU) for the ablation of fibroadenomas.

## Methods

10 patients diagnosed with one or multiple fibroadenomas (12 FA treated in 10 sessions) were treated with ultrasound-guided high intensity focused ultrasound (i.e. echotherapy)

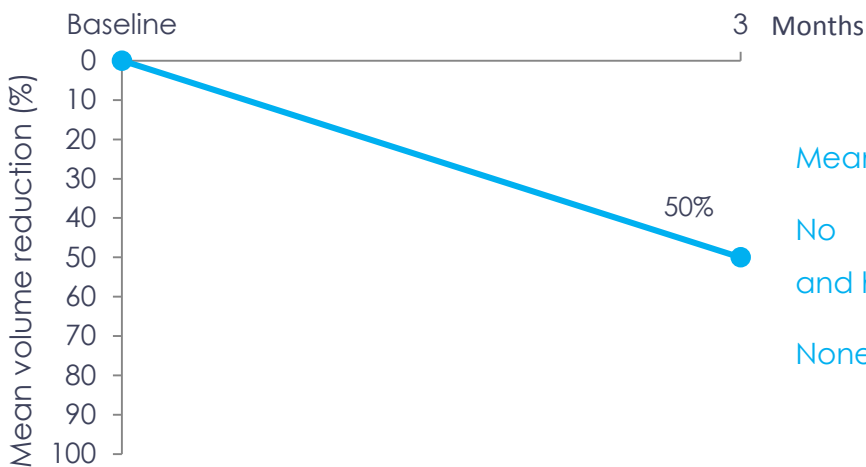
Maximum diameter range : 19mm – 44mm (Median: 26.5)

Mean patient age: 26y [18-34]

Treatment on an outpatient basis and under local anesthesia and mild sedation

## Results

### Mean volume reduction over time (% vs. months)



Mean treatment duration: 57.2 min [40-100]

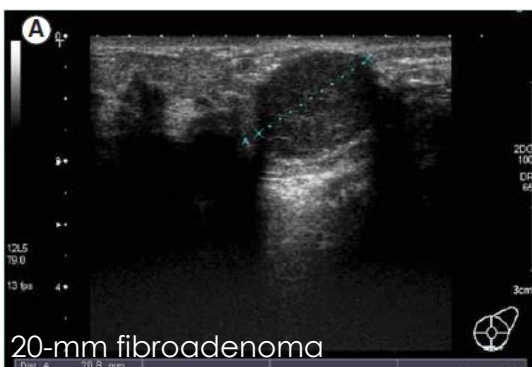
No adverse events but mild swelling and hardness of the treated area

None of the patients reported pain

### US images of a breast fibroadenoma before and 3 months after echotherapy

Before

After



## Conclusion

Echotherapy has a strong potential role for the ablation of benign breast tumors in order to provide a valid noninvasive alternative treatment for breast conservative surgery.

\* The technology developed by Theraclion (i.e. Echotherapy) is only indicated to treat benign breast lesions like fibroadenomas.