

CESM biopsy: initial clinical experience

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CESM biopsy is a new breast interventional technique developed for suspicious breast lesions detected on CESM and occulted with mammogram or ultrasound. First experience started in October 2019 in Gustave Roussy, Villejuif, France. CESM biopsy may be compared to MRI guided breast biopsy.

First, a CESM must have been performed at least 48 hours before the biopsy, to detect suspicious lesions, occult with second look ultrasound or mammogram.

The patient is then recalled for the biopsy and installed on the bed, in a sit or side position, same as tomosynthesis-guided biopsy. After a CESM scout view, and decompression of the breast during injection, a pair of stereotactic views in CESM mode are acquired on the area of the suspicious lesion, 2' after injection. When the suspicious contrast uptake is visible, image targeting is similar to a normal stereotactic targeting to acquire the x, y and z coordinates. Vacuum-assisted biopsy is performed with 6 to 12 samples; a titanium clip is inserted at the end of the procedure. Duration of the procedure is approximately 15', much shorter in comparison with MR guided breast biopsy. Many other advantages are noted in comparison with MR breast biopsy: patient comfort is improved, no MRI room occupation, reduced cost of the procedure and anxiety of the patient...

In conclusion, this new biopsy technique completes the tools to manage suspicious breast lesions and may replace MR guided breast MRI in a close future. Training is fast for radiologists used to CESM and stereotactic breast biopsy.

Contrast Enhanced Spectral Mammography (CESM) - Guided Biopsy

Dr. Anat Kornecki, MD

Contrast Enhanced Spectral Mammography (CESM) is a diagnostic imaging tool with cancer detection rate which approaches that of MRI. For enhancing lesions seen on CEM and not seen on routine mammography or ultrasound, biopsy is typically performed with breast MRI, which can be more time-consuming, uncomfortable, costly or contraindicated for some patients.

A new interventional technique, allows to perform CESM guided breast biopsy exam with the standard stereotactic biopsy device. The first case North America was performed in June 12, 2020 at the division of Breast Imaging at Western University as a research study in collaboration with GE Healthcare.

This presentation will describe our center experience and will highlight the clinical implications, benefits and disadvantages of this novel technology.