



BREAST BIOPSY IMMOBILIZATION DEVICE FOR MAGNETIC RESONANCE IMAGING

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The Invention

A UW-Madison clinician along with a group of BME students have developed two designs for new tools for breast MRI biopsies. The first utilizes compression controlled by elastic recoil of a memory foam insert. It has multiple size inserts that support a range of breast sizes. To use this hinge design, the patient lies with their sternum or superior lateral part of the breast tissue above the foam-covered hinge with their breast between the leading compression plate and biopsy grid. The hinge contains one degree of freedom serving to create purchase between the breast tissue and biopsy grid, in order to avoid skiving of the breast. As the memory foam expands, it pushes the leading compression plate towards the grid, creating tight compression of breast tissue against the biopsy grid. An alternative design uses an inflatable bladder and a hand-held air pump that causes the bladder to conform to the shape and size of the patient's breast. The Inflatable Bladder offers multiple degrees of freedom due to the nature of the J-shaped bladder, allowing it to cup the entirety of the conical breast volume. The compression against variable sizes of breast tissue allows for a clear purchase against the biopsy grid. This allows for a clear target when the radiologist inserts the biopsy needle. For patients with smaller breast sizes, complete purchase is vital to prevent skiving.

Additional Information

For More Information About the Inventors

- [Lonie Salkowski](#)

Tech Fields

- [Medical Imaging : MRI](#)

For current licensing status, please contact Jeanine Burmania at jeanine@warf.org or 608-960-9846