



Measurement template for tissue expander and implant placement in reconstructive and aesthetic surgery

Unmet Need

Of the 140,000 breast reconstruction procedures performed annually in the United States, with 72% of cases being involve tissue expansion. Tissue expanders are temporary breast implants that contain tabs or anchors are used to secure the device to both the chest muscle and wall. Each type of tissue expander has different tab measurements and locations. Due to sterile procedures in reconstructive surgery, the tissue expander device is not implanted into the breast defect until proper placement is established. Currently there is no guiding system available, resulting in variations in accuracy of tabular placement. Therefore, there is a need for a template to guide accurate placement of the tissue expander on the chest wall before final, sterile placement.

Technology

Duke inventors have developed a disposable, sterile, foldable template for tabbed tissue expanders to guide the placement of the implant during surgery. This is intended to be used by surgeons during the tissue expansion part of reconstructive breast operations. Specifically, the template will be customized to each type of tabbed tissue expander commercially sold, and assist in sterile, accurate placement of the tissue expander. This efficacy of this device has been demonstrated on cadaver models using the template for the 11cm FX tissue expander implant.

Other Applications

This technology could also be used in other aspects of reconstructive plastic surgery that require tissue expansion, other than breast operations.

Advantages

- Increased accuracy of implant placement
- Quicker procedures
- Sterile technique
- Higher chance of surgical succes
- Reduced risk of infection

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Meet the Inventors

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Publication(s)

External Link(s)

- [From the lab of Dr. Brett Phillips and the Duke Breast and Plastic Surgery Workgroup](#)

