Improved dose distribution and conformality

Less dose to critical organs such as skin, lung, heart, chest wall, etc.

Convenient to use

US FDA 510(k) registered

The Best Double-Balloon Breast Brachytherapy Applicator utilizes an outer balloon to expand within and shape the resection cavity, and an inner balloon which expands independently of the outer balloon. This allows physicians to position 4 treatment catheters within the outer balloon, optimizing both dose conformality and homogeneity.
Abstract

Today, in addition to interstitial brachytherapy, two devices are commercially available for Accelerated Partial Breast Irradiation (APBI). The first one is a balloon design that offers multiple treatment catheters at fixed distance from the central catheter which limits the ability of dose avoidance from critical structures like skin and lung. The second design utilizes the treatment catheters as a scaffolding device which expands and shapes the resection cavity. Since the catheters are in direct contact with tissue, radiation doses on contact are extremely high and therefore not optimal. Here, we describe an Avoidance Double Balloon Breast Brachytherapy Device that optimizes radiation dose delivery by shaping the resection cavity with an outer balloon and allowing an inner balloon to position the treatment catheters significantly away from the central axis of the balloon.

Dosimetric Goals for Double Balloon

Develop a single entry, multi-catheter system which will be:
- Easy to implant (Contura, Savi)
- Easy to plan (Contura, Savi)
- Have the freedom to conform dose (multi-catheter interstitial)

Material and Methods

- CT scan 2 sizes – Small and Large
- Fuse double balloon applicator scan with Contura and Savi patient with same seroma volume
- Compare dosimetric quantities

CONCLUSION

- With a multi-catheter system design, Double Balloon has the capability of conforming avoidance of dose to ROI
- Initial results in patients confirm the dosimetry conclusions