Once again, thank you for your hard work to get the initial data and continued follow-up datasheets. We are pleased to announce that an abstract submitted to the American Brachytherapy Society (ABS) annual meeting in San Diego , April 14th – 16th, 2011, has been selected for an oral presentation. The talk will be given on Saturday, April 16th at ~ 12noon in the breast section.

Title: ***Comparison of Target Breast Volume Treated for Accelerated Partial Breast Irradiation (APBI) Devices***

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Purpose/Objective(s): The Strut Adjusted Volume Implant, SAVI, is a multi-catheter, single entry brachytherapy device for APBI designed for adaptability to anatomic constraints. There are four sizes with 6, 8, or 10 peripheral struts available for source dwell positions providing excellent dosing flexibility. Since the sizes were designed to fit multiple cavity sizes, a study was undertaken to evaluate the amount of target breast tissue treated with each device, and compare that to published data for other available devices.

Material/Methods: A retrospective review of 294 patients treated at five centers was undertaken to evaluate the size of the treated target breast tissue. Mean sizes and ranges of the PTV-eval (1 cm expansion of the cavity excluding the cavity volume, 5 mm below the skin, and chest wall) were evaluated for each SAVI size. The data was further subdivided into patients with no normal tissue restrictions on the PTV-eval, and those with chestwall and/or skin restrictions.

Results: A symmetrical expansion of 1 cm from the 6, 8 and 10 SAVI gives ideal PTV-evals of approximately 59, 74, and 110 cc. In this patient population, the 6 mini, 6, 8, and 10 strut device treated a mean and standard deviation (with range in parentheses) of 42.1 ± 8.7 cc (20.5-55 cc), 58 ± 15.3 cc (38.3-97.9 cc), 83.3 ± 26.7 cc (20.6-138.9 cc), and 125.9 ± 34.9 cc (53.5-212.9 cc). Review of the data confirms that proximity to the skin, chestwall, or both can reduce the PTV-eval. Published data on the Contura catheter demonstrates a mean PTV-eval of 89.7 cc (71.9-108.9 cc) and 94.9 ± 12 cc (74.4-119.8 cc) for the Mammosite. Of the patients treated with the 6 mini or 6 SAVI with skin or chestwall data (235 of the 249 patients), 49.2% had the PTV-eval reduced secondary to either proximity of skin or chestwall. Of all patients treated, 54% had skin bridges less

than 7 mm, 43% less than 5 mm, and 30% less than 3 mm. Dosimetry for the entire cohort demonstrated a V90% (volume receiving 90% of the dose) of 96% and V200 (volume of tissue receiving 200% of the dose) of 7.0cc.

	Avg. Vol. (cc)	STDEV (cc)	Min. Vol. (cc)	Max. Vol. (cc)
6 mini	42.1	8.7	20.5	55
6	58	15.3	38.3	97.9
8	83.3	26.7	20.6	138.9
10	125.9	34.9	53.5	212.9

Conclusion: As expected, the size of the PTV-eval increases with size of SAVI catheter device. In this study, the 8 and 10 strut device treat an equivalent PTV-eval size well within the ranges published for MammoSite and Contura. The 6 mini and 6 devices, while treating less normal tissue, were usually chosen secondary to normal tissue proximity restrictions, limiting the amount of target tissue necessary. In fact, many of these patients would not be eligible for balloon brachytherapy only based on skin proximity of < 5 mm and < 3 mm, disregarding chestwall proximity.

Best Regards,

Dan Scanderbeg and Catheryn Yashar