AbstractID: 7079 Title: Beta Testing of an Applicator for Breast Brachytherapy - Initial Clinical Experience

A novel brachytherapy device for breast brachytherapy (The MammoSite™ RTS, Proxima Therapeutics, Inc.) is under trial for FDA approval. This device is an inflatable spherical balloon catheter with a central lumen that may be used with either HDR or LDR brachytherapy sources. It is designed for intracavitary (intralumpectomy cavity) implantation and it is an alternative approach to the traditional multi-plane interstitial implants (15-25 needles). Our team has implanted the spherical device (4 cm diameter) in 5 patients of the group enrolled nationally. Ages ranged from 65 to 84 years.

The purpose of this paper is to discuss our initial clinical experience with this applicator used for Ir-192 HDR brachytherapy. Problems encountered in meeting the national protocol's requirements due to variations in patients' breast size and tissue firmness will be presented along with our solutions and clinical outcome.
CT simulation and 3D treatment planning aspects (BrachyVision 6.0 TPS, Varian Medical Systems Inc.) will be presented along with the results of the acceptance, commissioning and periodic QA tests of the device.

In conclusion, the MammoSite device performs well for brachytherapy treatment for early stage breast cancer patients and offers a method to perform brachytherapy in a reproducible manner. Complications to date have been low with this procedure and patient tolerance has been good.