New CET Prostate Applicator Set Release Promises Streamlined HDR Prostate Brachytherapy.

Veenendaal, The Netherlands, 27 April 1999 - Nucletron proudly announces the release of its new CET Prostate Applicator Set.* This applicator set can be used in combination with Nucletron’s microSelectron-HDR, microSelectron-PDR or microSelectron-LDR/MDR afterloader systems for internal radiation therapy of prostate cancer. This disease is one of the most diagnosed malignancies in males beyond middle age and shows an increasing incidence and mortality in most developed countries.

Recently, advances in computerization have enabled doctors to use fractionated high dose rate implant treatment (HDR brachytherapy) to introduce radiation via needles directly into tumors without damaging adjacent healthy tissues. The improved accuracy of this technique makes it a favorable treatment option for prostate cancer. To complement the new treatment modality, Nucletron and the California Endocurietherapy Medical Corporation (CET, Oakland, CA, USA), a leading center for prostate treatment, have collaborated in the development of the CET Prostate Applicator Set.

A small re-usable template for needle guidance forms the basis of the set. Both the template shape and the needle hole pattern are anatomically designed to encompass the prostate volume while reducing the dose to the critical organs.

CET Director Dr. D. Jeffrey Demanes explains: "The CET prostate perineal template is designed to achieve optimal catheter position for temporary afterloading prostate brachytherapy. The peripheral guides conform to prostate capsular anatomy and the central guides avoid the urethra. The arching posterior guides permit placement just within the posterior aspect of the prostate to avoid the anterior rectal wall and to permit access to the seminal vesicles".

The applicator set includes disposable polymer needles that are suitable for image-based planning using US, CT or MR. To ensure compatibility with MR imaging, metallic components of the template are manufactured from titanium. HDR brachytherapy represents a streamlined, targeted approach to the treatment of prostate cancer. In contrast with low dose rate (LDR) brachytherapy, in which careful pre-planning is followed by the permanent implantation of radioactive seeds, HDR brachytherapy involves the temporary introduction of a 10 Ci Iridium source into the tumor volume. The dose is delivered inside surgically placed needles within a 10-20 minute treatment. Afterwards the needles are removed and no radioactivity remains in the patient. To assure conformal brachytherapy the treatment plan is made after needle insertion. Many prostate cancer patients prefer the ease of HDR brachytherapy, which can often be completed during a few visits as an outpatient. For more information about the CET Prostate Applicator Set (part number 089.066) contact your nearest Nucletron sales office.

* Currently not for sale in the United States, 510(k) pending.