Targeting device for high precision radiation therapy of prostate cancer.
Maximises precision during treatment of prostate cancer thus allowing for higher radiation dosage.

**IMPROVED OUTCOME WITH HIGHER DOSAGE**

BeamCath® is a device to assist in dose escalation, using conventional, conformal radiation therapy techniques.

It has been shown that the outcome for prostate cancer patients is improved when they are given higher doses of radiation (Hanks 1999, Pollack 2000). Increased radiation dose however causes greater risk of side-effects, particularly in the rectum and bladder. Accordingly, the radiation must be focused to the prostate also taking into account the variations in target position.

**BETTER CONTROL–FEWER SIDE EFFECTS**

BeamCath®, is a tool for visualising the prostate position during treatment of prostate cancer, with external beam conformal radiation therapy technique. Introducing a catheter with fiducial markers into the urethra, for planning, simulation and boost-treatment allows precise localisation of the prostate. It facilitates dose escalation with high precision avoiding complications in sensitive organs and tissues adjacent to the prostate.

**COST-EFFECTIVE**

Increasing the external beam radiation dose is a cost-effective method to dose-escalate prostate cancer treatment, since regular treatment machines and portal imaging systems are used. Total cost is significantly lower than for other, invasive methods that are more labour-intensive and might require large investments in new equipment.

**PROVEN RESULTS**

Since 1997 more than 800 prostate cancer patients have been treated with dose escalation up to 78 Gy with BeamCath®. The BeamCath® catheter technique has been a prerequisite to do this without any increase in side-effects in the bladder and rectum.
The BeamCath® method allows for exact positioning of the external beam boost during radiation therapy

The catheter is introduced into the urethra and retained by inflating the balloon in the bladder. A light constant pull is applied to the catheter, to ensure it is in the same position for all phases of the therapy—planning, simulation and the initial target movement.

The markers within the catheter are the size of lead shot and are made of very high-density material so as to be visible during all treatment phases. Utilising portal imaging for beam alignment, the catheter markers help doctors target the desired treatment area. It is possible to make adjustments for gland movement immediately before treatment is given.
Targeting device for high precision radiation therapy of prostate cancer.

- Better control with proven results
- Easy to use
- No surgical procedure involved
- Convenient for the patients
- Cost effective

References: