

HDR Brachytherapy

A Conservative Treatment of Prostate Cancer

For the first time in Lebanon and the Near East, the Brachycenter (Middle East Institute of Health, Bsalim) is offering treatment of early prostate cancer using HDR brachytherapy, an easy, non-surgical procedure with exceptional curative results, without significant early or late side effects.

Prostate cancer is the most common cancer in men. Most cases occur after the age of 60, but a more aggressive tumor can be diagnosed earlier in the fifth decade. Localized prostate cancer can be treated and cured either by surgery (radical prostatectomy) or by radiation therapy. Major complications of treatment are urinary incontinence and sexual impotence, occurring in about 10 to 50% of patients according to the stage of disease and the skills of the treating team.

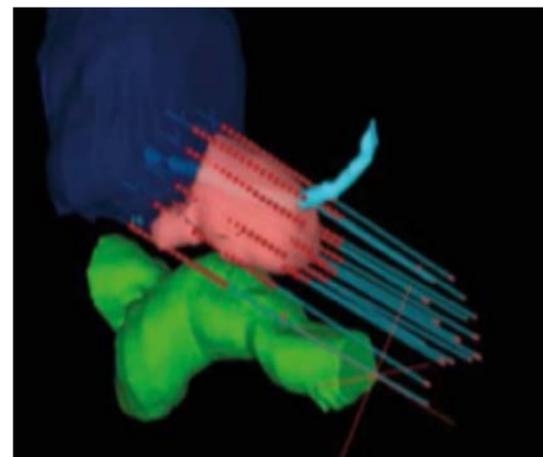
Radiation treatment can be delivered externally (conformal and IMRT) or internally using brachytherapy. Because the prostate gland is located close to the bladder and rectum, it is important for radiation treatment to be tightly focused on the prostate to avoid serious side effects. HDR brachytherapy offers a fast, precise way to administer prostate cancer radiation therapy for some patients.

Depending on the type and stage of prostate cancer, brachytherapy may be combined with other treatments, such as external irradiation or hormonal therapy.

High-dose rate (HDR) brachytherapy is a type of internal radiation therapy that delivers radiation from implants placed close to, or inside, the tumor(s) in the body.

Because cancer often affects organs and other essential structures, it is important for radiation treatment to be tightly focused on tumors to minimize serious side effects. This technique ensures the maximum radiation dose is given to cancerous tissues, while minimizing exposure to the surrounding healthy tissue.

With this form of brachytherapy, tiny, hollow catheters



Computerized image of the needle insertion

are temporarily inserted directly into a tumor. Before each treatment, we check the position of the catheters with millimeter precision.

Next, a series of radioactive pellets are inserted into each catheter. Computer guidance controls how far the pellet goes into the catheter to precisely target the location of tumors, and how long the pellet stays in the catheter to release its radiation dose.

With a few well-placed catheters, HDR brachytherapy can provide a precise treatment that takes only a few minutes. Brachytherapy offers a quicker, more effective type of radiation treatment for some patients. For many cancer types, the entire brachytherapy treatment takes one to two days, instead of five to seven weeks for external beam radiation therapy (EBRT). Depending on the type and stage of cancer, brachytherapy may be combined with other treatments, which can vary treatment times.

Qualifying for HDR Monotherapy

1. Stage T1c, T2a, or small T2b (limited findings on

digital rectal exam)

2. PSA < 15 (as long as the PSA doubling rate is > 1 year)
3. Gleason 2-7 (3+4 not 4+3 and it involves < 50% biopsy specimen)

The above criteria are applied to patients on an individual case basis. Most patients with low risk group disease (T1c or T2a, Gleason 6 or less, and PSA <10) will probably be candidates for HDR monotherapy. Some patients who fall into the intermediate risk group will also be considered candidates. Certain patients with prior radiation (external beam or permanent seeds) who have biopsy proven evidence of persistent disease may be candidates for "salvage" HDR monotherapy.



The echography probe inserted in the rectum and the needles implanted in the perineum.

Qualifying for HDR Combined modality

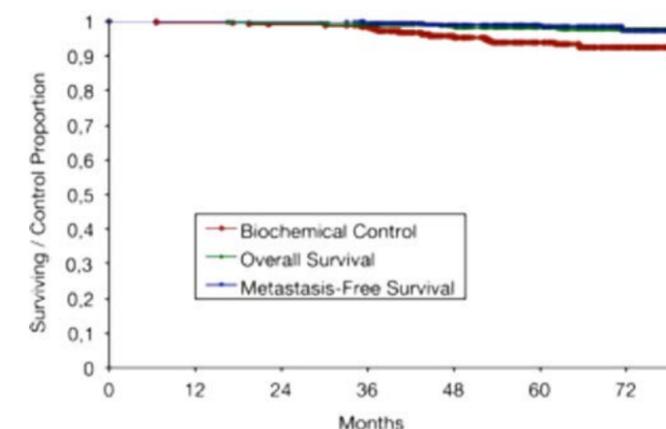
All patients and risk groups are eligible for the combination HDR and EBRT because the long-term results have demonstrated both safety and efficacy in all risk groups.

Recently published data have demonstrated the superiority of combo treatment with brachytherapy and IMRT over IMRT alone.

Results and Survival

Published studies in USA and Europe confirm the

excellent biochemical results (PSA testing) and long term survival.



Published data in Germany

Treatment Toxicity and Complications

HDR brachytherapy is a very well tolerated treatment. Patients may have some urinary discomfort for one week or two. Incidence of urinary incontinence necessitating pad use is very rare (less than 5%) compared to 15 to 50% with radical prostatectomy.

Sexual activity is conserved. In case of erectile dysfunction, this is easily manageable with the use of some drugs. Definitive impotence, however is a frequent complication of surgery.

The Brachycenter Team

The Brachycenter (Middle East Institute of Health, Bsalim), is equipped with the newest generation of afterloaders for brachytherapy. Treatment is under the authority of two highly qualified radiation oncologists (trained in Canada and the USA) and two Professors in medical physics. The medical staff has more than ten years' experience in radiation treatment.

For more information, please visit our website: www.brachycenter.com
Hot number (+961) 71 71 73 33

Joseph.A.Boustany
General Manager - Brachycenter