The entire procedure is done under ultrasound guidance, enabling the medical team to monitor the placement of every needle and each individual seed with absolute precision. Seed implantation is usually performed under general anesthesia.

The seeds are inspected via x-ray.

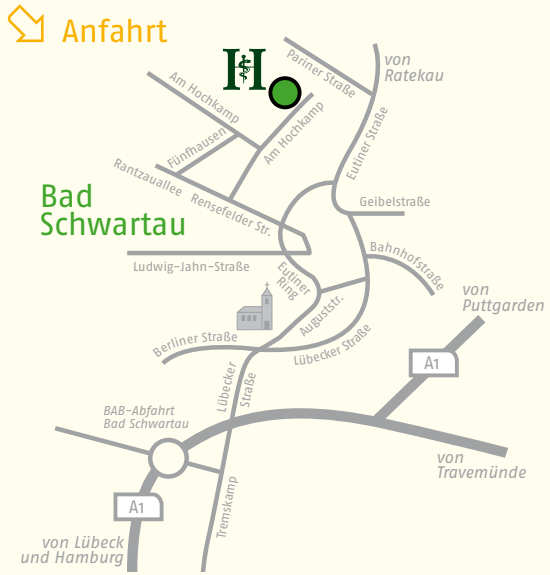
The needles, which are temporarily inserted via the perineum, serve to place the seeds into the prostate. Throughout the process, the team monitors seed placement and the dynamic radiation plan continuously. After the implantation, a final fluoroscopic control serves to identify the correct position of all seeds.

After implantation

The patient usually leaves the hospital one to two days after the operation. He can resume his normal daily routine immediately. No particular precautions are needed. About six weeks after the implantation, the radiation therapist will perform a CT scan of the prostate for postoperative dosage control and quality assurance. Comparison with the intraoperative radiation plan will indicate the quality of the treatment.

Image source: C. R. Bard GmbH

Anfahrt



Location information

The HELIOS Agnes Karll Hospital is situated between Luebeck and the Baltic Sea in eastern Schleswig-Holstein. The clinic is easily accessible from both the Hamburg and Luebeck airports.

HELIOS
healthcare international

HELIOS Agnes Karll Hospital Bad Schwartau
Am Hochkamp 21 · 23611 Bad Schwartau

Get into contact with the international department – HELIOS healthcare international

Hotline: +49 30 68 323 885
E-mail: info@helios-international.com
www.helios-international.com

Imprint
Publisher: HELIOS Agnes Karll Hospital · Am Hochkamp 21 · 23611 Bad Schwartau

HELIOS healthcare international

HELIOS Agnes Karll Hospital
Bad Schwartau

SEED brachytherapy for prostate cancer –

The minimally invasive treatment option

Information for patients

A short introduction

Prostate cancer is the most common form of cancer in men. The five-year survival rate is very good – provided the disease is detected in the early stages. The Robert Koch Institute reports up to 70,000 new cases per year in Germany. In recent time, major advances have been made toward better and more effective diagnosis and treatment of this disease.

In some cases, surgical removal of the prostate may still be the preferred treatment option. Seed brachytherapy, also known as permanent interstitial seed implantation, in contrast, is a minimally invasive method of treatment with similar effectiveness.

Since 2003, Prof. Andreas Böhle and his team of radiation therapists and physicists have been using seed brachytherapy to fight prostate cancer at the HELIOS Agnes Karll Hospital in Bad Schwartau. After ten years of working with the technology, the physicians can look back on more than 1,500 successfully treated patients, making the hospital a leading national and international center in the field.

On the following pages you will find detailed information about the use of minimally invasive seed brachytherapy to treat prostate cancer.

Current treatment options

Surgery

(Surgical removal of the prostate)

Radical prostatectomy is an operation to remove the prostate gland. The two most common side effects of this method of treatment are loss of bladder control (incontinence) and erectile dysfunction (impotence).

Radiation therapy

(External radiation)

Radiation therapy is applied five days a week for a period of six to eight weeks. Side effects may include impotence, difficulty with urinating and/or radiation damage to the intestines and the bladder.

Hormone therapy

Hormone therapy slows down the growth of the cancer cells but does not remove cancer. In certain situations, hormones can be used together with brachytherapy to shrink the prostate and the tumor.

Seed brachytherapy

(Intra-organ radiation therapy)

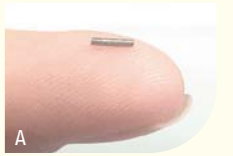
Brachytherapy is the implantation of weakly radioactive material encapsulated into tiny titanium cylinders (about the size of a grain of rice) into the prostate. By this way, an exactly defined high dose of radiation is administered directly into the organ while the risk of damage to surrounding organs is significantly reduced. Radioactivity decreases with time, whereas the titanium cylinders harmlessly remain within the prostate.

Brachytherapy can be performed as monotherapy or in combination with external radiation. After implantation, some patients might experience problems with urinating. This is temporarily and may last from a few days to a few weeks after implantation.

A closer look at seed-brachytherapy

Before implantation

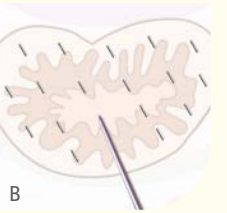
Before seed implantation, diagnostic tests are necessary to determine the PSA level, calculate the Gleason score from a tissue sample and determine the prostate volume using transrectal ultrasound (TRUS) imaging. The results of the ultrasound examination provide a "map" from which the required number of seeds can be calculated (usually 50 – 70).



The seeds are smaller than a grain of rice.

Implantation

The implantation procedure usually takes around one hour. Before implantation of the seeds, ultrasound images of the prostate are acquired by 5 mm layers, in order for the specialist to calculate the radiation plan. This ensures that the seeds are implanted exactly where they are needed.



The seeds are placed using hollow needles.