



RECTAFIX

Rectal protector for prostate radiotherapy

RECTAFIX

The beauty of simplicity

Effective

Easy to use

Safe

Well tolerated

WHY?

Prostate cancer is the most common cancer among men in the western world and radiotherapy has proven to be an effective treatment technique in most cases.

It has also been shown that escalating the target dose to the prostate above 70 Gy improves the local control significantly. The proximity of the rectum to the prostate and the high radiation sensitivity of the rectal mucosa lead to negative aspects of this dose escalation technique. Doses higher than 70 Gy to the rectum (volume dependent) leads to a high incidence of rectal bleeding and other serious side effects (\geq grade II) in the rectum, some of them chronic, which significantly reduces the quality of life for these patients. Rectal toxicity frequencies of 8–80% (any grade, depending on treatment techniques) has been reported. Various techniques to reduce the dose to the rectum have been tried, such as 3-D Conformal Radiotherapy, IMRT, rectal balloons, radioprotective drugs etc. This has improved the situation to some extent, but the rectal toxicity is still frequent, particularly when combined with high integral doses.

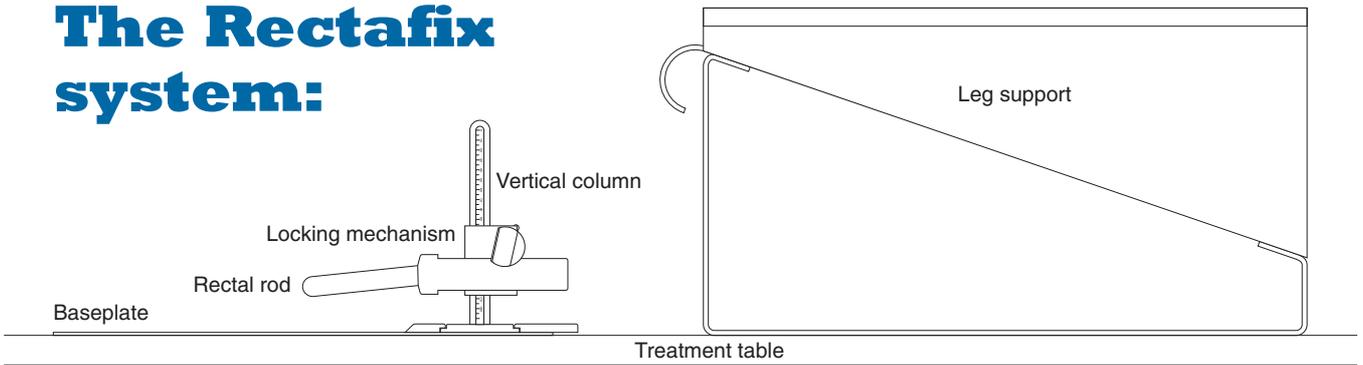
HOW?

A novel method for reducing the dose to the rectum during radiotherapy has been developed by a group at the University Hospital in Uppsala (Asplund, Isacsson and Nilsson). Their method was initially used in proton therapy with very good results, and has also in recent years been applied to 3D-conformal photon therapy. The clinical results with this method have already been presented at a couple of scientific meetings and their invention is now available commercially as the Rectafix system.

The principle of their method is very simple: A cylindrical rod of suitable length and shape is inserted in the rectum and manually pushed down dorsally about 20–25 mm and locked in place with a locking mechanism. This increases the distance between the prostate and the rectum and a very small volume of the rectal wall remains close to the prostate. This minimizes the volume of rectal mucosa that gets a high dose and in this way the rectal toxicity is reduced to very low levels.

This method has been used clinically for several years and it has eliminated the acute rectal toxicity in almost all patients, leaving just a few with very light grade I acute toxicity. The protection with the Rectafix method is so effective that it is sufficient to use it just for the boost therapy fractions in combination with conventional EBRT.

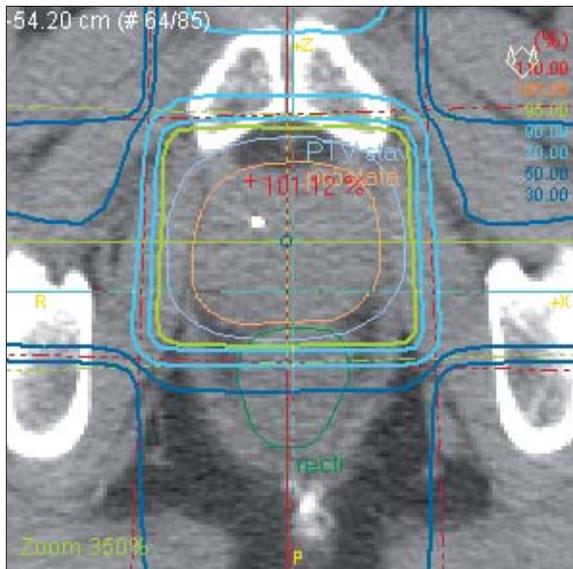
The Rectafix system:



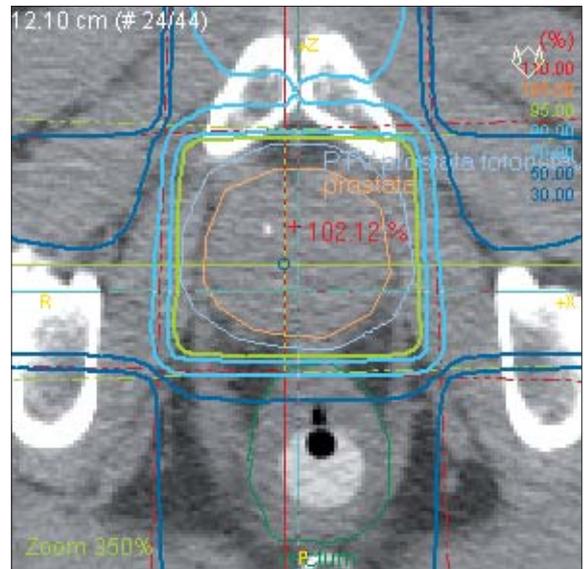
The Rectafix system consists of a baseplate that is placed on the treatment table, a rectal rod with a locking mechanism for locking it to the vertical column and a leg support to hold legs and feet in a reproducible position during all procedures.

Rectafix is applied at the CT-scanner for the treatment planning images, at the simulator or Sim-CT for simulation and at the treatment machine for each treatment fraction of the boost therapy.

It is very easy to use and provides reproducible patient positioning and superior reduction of rectal toxicity and is also well tolerated by the patients.



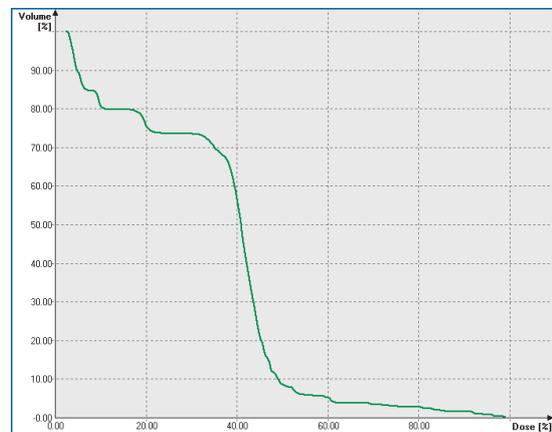
Prostate dose plan without Rectafix



Prostate dose plan with Rectafix



Dose/volume histogram of the rectum without Rectafix



Dose/volume histogram of the rectum with Rectafix

Technical specifications

Baseplate

Dimensions: 500×520×12 mm

Weight: 1.4 kg



Rectal rod

Dimensions: Ø 20×110 mm with

shaft Ø 40×150 mm

Weight: 175 g



Vertical column with locking mechanism

Dimensions: 120×80×215 mm

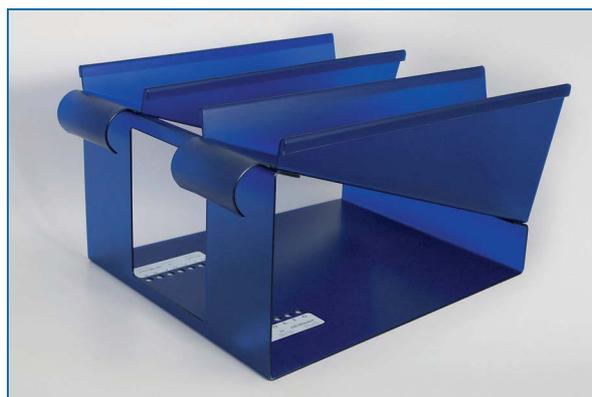
Weight: 410 g



Leg support

Dimensions: 610×560×330 mm

Weight: 4.6 kg



Specifications are subject to change without notice.

US and international patents pending.

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