Patient evaluation of the RayPilot system during radiation therapy of prostate cancer

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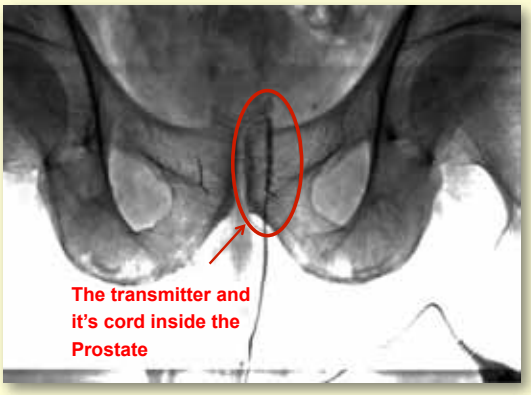
RayPilot is an electromagnetic, four-dimensional, tumor-tracking system which consists of three parts:

- Receiving system
- Transmitter
- Software for analyzing

Purpose:

The purpose was to make a compilation of, and evaluate, the patients' experiences of the implanted **RayPilot** (Micropos Medical, Göteborg, Sweden) transmitter during the treatment period.



Method:

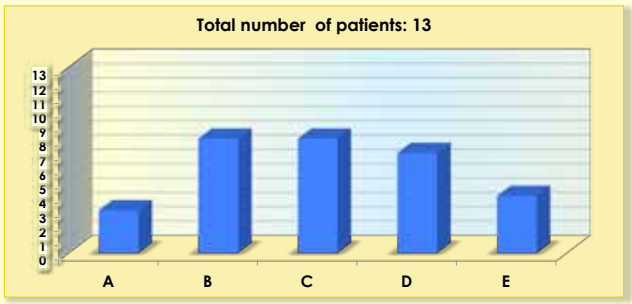
A pilot project was conducted during 2010-2011 with the first in-vivo patients treated with the RayPilot system. The patients' experiences were collected from a survey containing questions about complications, symtoms and observations of the skin around the cord.

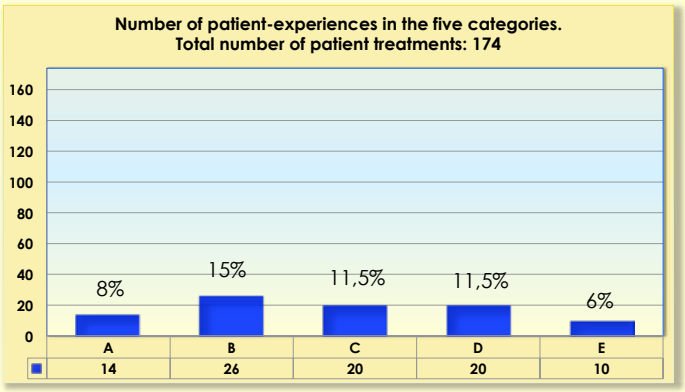
In this project the system was used parallel with combined treatment, brachytherapy and external radiotherapy, for prostate cancer. The transmitter and it's cord were implanted in the prostate via perineum after brachyterapy to be used in the following external radiotherapy. It was removed when the treatment period was finished. The patients were treated with the transmitter in their prostate during external radiotherapy for between **10-25 treatment-days**. Total number of patients treated was **13**.

The total number of patient-treatments for these thirteen patients were **174**.

Result

The patients' answers of the survey questions, and the nurses' comments, was interpreted and summarized in the categories **Pain, Tenderness, Redness of the skin, Discomfort from the cord or suture** and **Overall discomfort**.





A: Pain B: Tenderness C:Redness of the skin
D: Discomfort from cord or suture E: Overall discomfort

A: Pain from perineum, due to the transmitter was documented from **three** different patients.
B: Tenderness from the area from **eight** patients, and three of those patients only in the first days.
C: Redness of the skin was reported from **eight** patients.
D: Discomfort from cord or suture was a problem that **seven** patients experienced.
E: Overall discomfort was described as difficulties to sit on hard surfaces and was reported from **four** patients.

One patient with tenderness and redness in the area were checked for wound infection with negative result.

Conclusion:

The patients reported few discomforts throughout the period of treatment. The majority of the days had no documentations of discomforts at all.

The discomfort the patients experiences is what you can expect from a skin-penetrating catheter.

Based on the reported patient comments the conclusion is that the impact on every day living due to the implanted transmitter was low. Several patients expressed that the purpose of the intervention outweighed the discomfort.

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