From vision to sight:
the MRI linac

September 14-15, 2015
Location: Leeuwenbergh, Utrecht, The Netherlands

Registration Information
• On line: www.fromvisiontosight.nl or scan the QR-code
• Registration is free, but required
Advance registration is encouraged as space is limited

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From vision to sight: the MRI linac

On September 15th Bas Raaymakers will have his formal inauguration as professor in experimental clinical physics at the department of Radiotherapy of the UMC Utrecht. Bas will continue his work on the MRI linac. Back in 2000, this idea of truly simultaneous MR imaging and radiation delivery was launched in UMC Utrecht, with the goal to give sight to the operator, reduce treatment uncertainties and thus optimize the local tumour therapy. The MRI linac is now a future product of Elekta incorporating imaging by Philips, the research topic of a wide international consortium and at the verge of clinical introduction.

To celebrate this, we have organized a two day symposium, the 14th and 15th of September 2015, to give an overview of the technical and clinical activities that should jointly result in added clinical value by the MRI linac.

The symposium is held in a beautiful venue, the Leeuwenbergh Gasthuis in downtown Utrecht, which can be seen as a metaphor for the MRI linac development. The Leeuwenbergh is an old plague house, which later acted as barracks, university, hospital, church, music theater and lecture hall. The symposium is free for all participants, breaks, lunches and reception are sponsored by Elekta.

Program

Day 1, Monday 14 September 2015
Chairman: Jan Lagendijk (UMC Utrecht)

09.00-09.30 Registration
09.30-09.40 Welcome
Jan Kimpen (President of the board of UMC Utrecht)

09.40-10.05 MRI linac in UMC Utrecht
Jan Lagendijk

10.05-10.30 MRI linac design by Elekta
David Roberts

10.30-11.00 Break

11.00-11.20 Absolute dosimetry – Jaco de Pooter

11.20-11.40 Reference dosimetry – Geoffrey Ibbott

11.40-12.00 Daily dosimetry – Jochem Wolthaus

12.00-12.20 Radiotherapy dashboard – David Jaffray

12.20-12.40 QA revisited for emerging technologies – Dietmar Georg

12.40-13.40 Lunch

13.40-14.00 QA for MRI radiotherapy systems, part I

14.00-14.20 QA of image registrations – Wessel van Herk

14.20-14.40 Gentle Radiotherapy
Lars E. Olsson

14.40-15.00 QA for MRI guided RT
Jipd Cnns

15.05-15.25 On-line plan adaptation
Dave Rogers

15.25-15.45 Evaluation of GPU-based Monaco Algorithm for use with the MRI accelerator
Brian Keller

15.45-16.05 Analytical solution for fast dose calculations in the presence of a magnetic field
Gino Fallone

16.05-16.30 Refreshments

16.30-16.50 On-line plan plan adaptation, part I

16.50-17.10 Automated planning
Sebastian Brandt

17.10-17.30 Real-time interactive IMRT adaptations – Uwe Oelfke

17.30-17.50 Daily on-line plan adaptations
Anh Li

17.50-18.10 MLC tracking – Per Poulsen

18.10 Closure day 1

Program

Day 2, Tuesday 15 September 2015
Chairman: Marco van Vulpen (UMC Utrecht)

09.00 Opening day 2

09.00-09.20 MRI for MRI-guided Radiotherapy

09.20-09.40 Functional MRI/FET for adaptive RT
Daniela Thorwarth

09.40-10.00 MRI for prostate tumour characterization
Uulke van der Heide

10.00-10.20 4D MRI for simulation
Eric Poulsen

10.20-10.40 MRI-based treatment planning workflow in Helsinki
Juha Korhonen

10.40-11.00 Break

11.00-11.20 Bringing the MRI linac to the clinic

11.20-11.40 The do’s and don’ts of introducing a new therapy, experiences from BNCT, proton therapy and Cyberknife
Jean-Phillipe Pignol

11.40-12.00 Early-adopter view on MRI linac
Steve Hahn

12.00-13.00 Lunch

Preparing the clinical MRI linac studies

13.00-13.15 First in man
Linda Kerkmeijer

13.15-13.30 Rectum
Marcel Verheij

13.30-13.45 Oropharynx
Dave Fuller

13.45-14.00 Esophagus
Gert Meijer

14.00-14.15 Brain
Arjun Saghil

14.15-14.30 Pancreas
Chris Schultz

14.30-14.45 Lung
Ananya Choudhury

14.45-15.00 Prostate
Alison Teo

15.00 Closing remarks and invitation for the inaugural speech

Inaugural speech (Academiegebouw)

“MRI guided Radiotherapy: a direct hit” by Bas Raaymakers