Welcome to the third issue of the Vienna Brachytherapy Group newsletter.

We would be grateful for any information from your field that we can share in the future and thank to all of you who have helped us to prepare and publish this issue.

ICRU report 88 (Update of ICRU 38):

The final draft of the ICRU report prepared by the ICRU report 88 committee (co-chairs R. Pötter, C. Kirisits) is currently under the final review by the ICRU main commission and its publication is expected soon. It will also contain 8 clinical examples for different tumour situations and from different centers in Europe, USA and India.

Dietmar Georg has received the professorship for Medical Radiation Physics and Oncotechnology. Congratulations!

NEW EQUIPMENT:

In autumn 2014, we have started commissioning the new 0.35 T open Magnetom C1 MRI scanner at our department. As a replacement for the old 0.2T scanner which has been used to develop MRI based BT planning techniques at our department, the new scanner will continue to be used for routine post-implantation brachytherapy planning, in-room imaging for complex brachytherapy interventions, and near-to-online treatment verification. Due to a new custom made transport system, which is currently being developed for our clinic, time between MR imaging and treatment will be minimized to allow for verification of the patient anatomy close to the time of dose delivery. This will allow us to monitor high doses to organs at risk for patients with complex tumours or challenging anatomies of organs in relation to the brachytherapy implant.

Since September, the new scanner has been used for cervix cancer brachytherapy in clinical routine. The image quality has improved in comparison to our old scanner, both in terms of implant and tissue visibility.

Furthermore, we will exploit the MR scanners improved imaging capabilities to include it also in treatment planning for external beam therapy in the future.

SELECTION OF PUBLISHED PAPERS FROM OUR BRACHYTHERAPY GROUP:

Editorial in the Journal of Medical Physics by Jamema Swamidas and Christian Kirisits: IMRT, IGRT and other high technology becomes standard in External Beam Radiotherapy - but is Image Guided Brachytherapy for Cervical Cancer too expensive?


Kirchheiner K, Nout RA, Czajka-Pepl A, Ponocny-Seliger E, Sturdza AE, Dimopoulos JC, Dörr W, Pötter R. Health related quality of life and patient reported symptoms before and during definitive ra-


EGRAM:

As at 1st December 2014, there were 1234 patients registered on the EMBRACE Study. The 6th Annual EMBRACE meeting took place in Vienna on 16th and 17th January, 2015. Treatment centres from Europe, Asia, Canada and USA were represented. This meeting has also marked the official launch of the EMBRACE II Study. EMBRACE II will build on the EMBRACE study with the primary aim of implementing more strict dose constraints into image guided brachytherapy clinical practice.

An EMBRACE II coordinator group (R Pötter, D Georg, I Jürgenlemk-Schulz, C Kirisits, A de Leeuw, J Lindegaard, K Tanderup) met in Utrecht in August 2014 to set the main frame for the EMBRACE II protocol. Regular webex meeting have followed. The outline for EMBRACE II was widely distributed to the community on Feb 2, 2015. The protocol is planned to be ready by June 1, 2015. EMBRACE II start if projected for October 1, 2015.

Please visit https://www.embracestudy.dk/

RECENT AND UPCOMING MEETINGS AND WORKSHOPS:

Clinical Workshop “3D – Image - Guided Adaptive Brachytherapy for Gynaecology using Combined Intracavitary-Interstitial Technique”, with 14 participants from 8 different hospitals (Changchun City, Odense C, Leipzig, Newcastle, Belo Horizonte, Milan, Montpellier, Hong Kong, Zagreb, Toronto) and sponsored by Nucletron, an Elekta company was held on 24-25 November, 2014 at our department.

The 2nd GEC-ESTRO workshop was held on the 4th December, 2014 in Brussels. This one-day workshop had a common theme where each of the GEC ESTRO Working Groups (anorectal, braphyqs, breast, gynae, head & neck and prostate) addressed the question: “State of art of brachytherapy to maximize the therapeutic window”. In addition all Working Groups presented their current most important work as posters (source http://www.estro.org/congresses-meetings/items/2nd-gec-estro-workshop)
Image-guided Brachytherapy for Cervix Cancer one-day meeting that was organized on Friday 6th March 2015, at Moller Centre, Cambridge, discussed topical issues in image-guided brachytherapy for cervix cancer.

Radiotherapy Physics Course was held over 3-7 March 2015 at The Institute of Cancer Research and The Royal Marsden NHS Foundation Trust.

UPCOMING MEETINGS AND COURSES:
After our international educational activities in Mumbai, Bangkok and Gunma University, the next clinical workshop sponsored by Nucletron, an Elekta company, is going to be organized in Korea on 26-27 March 2015.

3rd ESTRO Forum

http://www.estro.org/congresses-meetings/items/3rd-estro-forum

Varian Research Partnership Symposium, March 23-25, 2015, Atlanta, Georgia, with a presentation of EMBRACE and our ACUROS for brachytherapy project (N. Nesvacil).

Clinical Workshop “3D – Image - Guided Adaptive Brachytherapy for Gynaecology using Combined Intracavitary-Interstitial Technique”, sponsored by Elekta will be held at our department over 15-16 June and 9-10 November 2015.

NEW RESIDENTS AND FELLOWS (-03/2015):
Katarina MAJERAKOVA has been appointed to become a staff member at our department from 2015. Apart from her work on her PhD (Clinical implementation of adaptive radiotherapy (ART) and assessment of early pelvic morbidity for cervical cancer patients – A pilot study) her main focus will be on Adaptive Radiotherapy in cervix cancer.

Israël FORTIN, MD, PhD, is a radiation oncology Fellow from Centre hospitalier de l’Université de Montréal, in Montreal, where he has completed his residency. Dr Fortin has completed also a master degree in cellular and molecular cancer biology. His interest in gynaecology and brachytherapy led him to a one year fellowship in MRI guided adaptive brachytherapy with our team in Vienna. His fellowship is supported by the CARO (Canadian Association Radiation Oncology). He is working on EMBRACE data in regard to systemic control and on a matched pair of analysis of intracavitary and intracavitary/interstitial applications. He will present at the next CARO meeting.

Chatrawut PATTAWEERAKUL, MD, Phitsanulok, Thailand. Over his 1-year fellowship in Vienna AKH, he will be trained to confront with increasing number of clinical service and upcoming development of advanced radiation techniques. His fellowship is supported by Naresuan University. He is working on repetitive MR and CT imaging and the variations when applying the new concept of an initial HR CTV-T and a LR CTV-T for EBRT and IMRT.
Laura MOTISI, MD, comes from University hospital "Umberto I" of Rome to get trained on brachytherapy treatments of malignancies with a focus on gynecological cancers treatment. Her fellowship is supported by her University. She is working on biomarkers in the Vienna cervix cancer patient cohort treated with IGABT through applying immunohistochemistry (e.g. Cox2, HIF1α) in pathologic specimen.

Junyao DU, MD, from Liaoning Cancer Hospital & Institute, District Shenyang City Liaoning Province, China, will focus on Radiotherapy for cervical cancer, incl. External beam Radiotherapy and Brachytherapy.

Olivia JORDI OLLERO, is in the last year of training in medical physics at the hospital de al Santa Creu i de Sant Pau in Barcelona, Over her three weeks observer visit she has tried to get familiar with brachytherapy techniques and treatments of malignancies.

Zahra SIAVASHPOUR, comes from Shahid Beheshti University, Tehran, Iran and works on PhD thesis about verification and adaptive planning in cervix cancer brachytherapy. C Kirisits is acting as co-supervisor.

A detailed overview on the fellows list and time of their visit can be obtained from Karin Summer-Burger (karin.summer-burger@meduniwien.ac.at).

As always the visits of our close colleagues Prof. Kari Tanderup (Aarhus), Dr. Umesh Mahantshetty (Mumbai) and Prof. Ohno (Gunma) for working meetings at our department were very helpful, constructive and friendly.

INTERNAL
PROJECTS/CO OPERATIONS:

Ultrasound in GYN brachytherapy: The new phase of the project will focus on an improved clinical prototype for a workflow where the U/S based target volume is registered to CT for definitive planning. The clinical phase of testing will start in March.

Educational Video - "Combined Interstitial/Intracavitary Brachytherapy for cervical cancer" sponsored by Nucletron, an Elekta company: A video that shows the implantation of a combined interstitial Ring applicator (director Thomas Lehner, internal coordination by A Sturdza and C Kirisits) has been produced and will be released soon.

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