

T1 = Invited speaker S. Kuhn**CARBON ION RADIOTHERAPY AT THE GSI INDARMSTADT**

Kuhn S, Schulz-Ertner D

Department of Clinical Radiology, University of Heidelberg, Germany

Objective:

Carbon ion treatment is a new method for cancer treatment developed at the GSI using the raster-scan system with pulse-to-pulse energy variation for intensity-modulated beam application.

Material and Methods:

Between 1997 and 2003, more than 200 patients were treated. Most patients were treated for chordomas and low-grade chondrosarcomas of the skull base using a three-dimensional treatment planning up to a median dose of 60 GyE.

Results:

The results obtained by now are very encouraging and clinically confirm the theoretical physical and biological advantages of carbon ion therapy.

Conclusion:

Due to physical and biological advantages of intensity modulated therapy with carbon ions compared with photon therapy excellent dose distributions can be achieved by using an active beam delivery technique.

T2**STRESS UND BURNOUT IM BERUFSALLTAG**

Scherz S

Klinik für Radio-Onkologie Inselspital und Schule für MTRA, Ausbildungszentrum Insel, Bern

Objective:

Stress, Stressbewältigung (Coping), Stress und Burnout

Material and Methods:

Präsentation der Arbeit zum Kompetenznachweis der Weiterbildung in Radio-Onkologie Modul III /SVMTRA

Results:

Ich versuche auch künftig eine realistische Sichtweise beizubehalten, d.h. falls ich eine Situation ändern kann, die es sich lohnt zu ändern, versuche ich dies auch umzusetzen (beispielsweise den Patienten nach seinen Erwartungen zu fragen und nicht unausgesprochen zu lassen). Wenn ich realisiere, dass sich eine Situation aus gegebenen Gründen nicht ändern lässt, versuche ich mich damit abzufinden und keine zusätzliche Energie zu investieren. Der Knackpunkt hierbei ist, den Unterschied zwischen lohnenswert veränderbaren Situationen und solchen die mit viel Energieverlust verbunden sind, und die es sich definitiv nicht lohnt zu ändern, zu unterscheiden

Conclusion:

Sich mit einer solchen Thematik bewusst auseinanderzusetzen schafft Gelegenheit, das eigene Tun zu reflektieren, es anderen Kollegen mitzuteilen und sich somit vor der Gefahr des Ausbrennens ein wenig besser zu schützen. Möglichkeiten zu entdecken den Blickwinkel zu ändern oder einfach nur bestätigt zu finden, dass man bisher ganz gut funktionierende Bewältigungsstrategien entwickelt hat, gehört mit zu den befriedigenden Ergebnissen einer solchen Arbeit. Wenn es mir weiterhin gelingt, Wesentliches von Unwesentlichem, aber auch Unveränderbares von Veränderbarem zu unterscheiden und danach zu handeln, bin ich überzeugt, dass ich mich und andere Mitmenschen weniger „stresse“.

T3

USE OF MR IMAGING FOR BREAST EXTERNAL BEAM TREATMENT PLANNING

Jargy C, Dipasquale G, Rouzard M, Nouet P, Balmer-Majno S, Pastoors B, Kurtz J
Division de Radio-Oncologie, Hôpitaux Universitaires de Genève

Objective:

The main aims of this study are the feasibility of using MR data for breast external beam treatment planning, and the investigation of possible advantages of MR compared with standard CT-based virtual simulation. Image quality (reference images for quality control of treatment) and dose planning results are evaluated.

Material and Method:

A classical virtual simulation on CT data (Philips PQ 2000S) is done. For the MR exam (Philips Proview 0.23 T open system) MR compatible markers are placed on the patient's skin (isocenter position, tumorectomy scar). The carbon fibre breast board is replaced by a compatible MR-CT one for the two exams. All the MR data sets are acquired with a gradient distortion correction. We compare CT dose planning obtained with different algorithms of heterogeneity correction with MR plans calculated with the body volume with density 1.00 and the lung volume with density 0.3.

Results:

The references images are good enough to be used for the quality control of the treatment. The first analysis of the MR plans seem to give similar dosimetric results to those obtained on CT data where the same bulky heterogeneity corrections are applied.

Conclusion:

The preliminary results show that MRI virtual simulation seems to be feasible from the technical and dosimetric point of view. We hope for more important improvements concerning the volume definition (tumour bed, mammary gland, internal mammary chain). This part of work is still in progress.

T4

FULL DIGITIZED RADIOTHERAPY CENTER: CURRENT POSSIBILITIES

Schoch S, Amsler C, Bucco A, Chiesa M, Amsler B
Radio-Onkologie Amsler / Aerztehaus Allschwil

Objective:

In setting up a new radiotherapy center the goal was that all software modules interface with each other and allow a complete electronic patient workflow while retaining the necessary legal requirements of documentation.

Material and Methods:

The evaluated software modules were: RT treatment and verification, portal imaging, treatment planning system, virtual simulation, electronic patient chart, lab and electronic billing, document archive. For each class 2-3 major vendors were chosen and checked for tight internal integration of modules, database type, external interfaces, adaptability and price.

Results:

Most requirements were satisfied for the radiotherapy modules by VARIAN, which had the tightest integration of its software. For the patient chart, document archive, lab and electronic billing VITODATA had an integrated solution while being flexible and adaptable to radiation oncology. Thru a specific programmed software link the 2 databases are linked for consistency. During the first year the system has functioned well and allowed a very efficient paper free workflow. For ease of handling a few procedures are documented on paper before being scanned. All users adapted quickly to the system and wouldn't go back to paper. Tight IT-security, backup procedures and QA checks as redundant radiation data storage fulfill legal and safety requirements.

Conclusion:

With highly integrated yet adaptable software a very efficient paper free workflow in radiation oncology is possible today.

T5

EUROPEAN COMPARISON OF THE PROFESSION MTRA

Vitz M, Concannon K, Göller V, Hug J, Bühler M, Neuweiler H
Radio-Onkologie, Kantonsspital Münsterlingen

Objective:

We compare the profession and the departments of therapists in eight european countries.

Material and Methods:

We send a questionnaire with 27 questions to these countries and we made a summary of this.

Results:

Following countries answered and sent us the questionnaire back:

France - Paris

Spain - Barcelona

Sweden - Göteborg, Stockholm

Germany - Essen

Ireland - Dublin

Austria - Innsbruck

Switzerland - Münsterlingen

Russia - St. Petersburg

Netherlands - Tilburg

The results are very different and interesting,
because the working-conditions are completely splitted.

Conclusion:

By means of the solutions we found out, that it is not so easy to work in foreign countries.

In several countries you need a special education to be a MTRA/ Therapist/ Radiotherapist/ Manipulateur de Radiooncologie and the other things are the different workingtimes, holidays, numbers of accelerators, -simulators, -cobalt 60, salaries, kinds of treatments, pupil educations and more.

T6

LISTENING FOR THE SILENT SCREAM: A PRACTICAL APPLICATION OF PSYCHO-ONCOLOGY BY RADIATION TECHNOLOGISTS DURING RADIATION THERAPY

Cairl GB

Clinic for Radio-Oncology, University of Zurich Hospital, Zurich, Switzerland

Objective:

To determine what factor(s) was negatively affecting an obviously troubled cancer patient during his prolonged course of radiation therapy treatment, and to initiate appropriate countermeasures to alleviate his suffering.

Material and Methods:

The patient's mental and physical conditions were obviously and steadily deteriorating. Concerned inquiries at the beginning of each daily treatment as to his welfare were consistently answered with a denial of any problem existing. Active listening techniques, mirroring the patient's responses and comments, and empathetic conversation all failed to draw him out. Then, his daughter, who often accompanied him, was questioned. She explained that he was suffering ever increasing pain, which fact had never been communicated by the patient to any member of the radio-oncology team.

Results:

Through seeking information to aid and support an inexplicably severely suffering patient, it was determined that the whole unnecessarily painful situation was due to the patient's misunderstanding of a doctor's rejoinder to a comment the patient made in response to a simple medical question. This discovery was communicated to the case physician and department director, who then immediately clarified the misunderstanding, much to the physical and emotional relief of all parties involved.

Conclusion:

Severe physical and emotional distress of patients and their loved ones can be successfully combated by caring radiation technologists by means of regular inquiries as to the patients' well-being, and by communicating problems observed or expressed to those in the medical team who can deal with the situation in a competent and professional manner.

T7

BEWEGUNG UND SPORT BEI KREBS

Schneider-Mörsch B

Fachstelle Bewegung und Sport bei Krebs, Kriens

Objective:

Verschiedene wissenschaftliche Studien haben auf eindrucksvolle Weise einen Zusammenhang zwischen körperlicher Aktivität und der primären Krebsprävention sowie einen günstigen Einfluss auf verschiedene krankheitsassoziierte Symptome insbesondere „Fatigue“ nachgewiesen.

Ziel des im Jahr 1999 begonnenen Projekts „Bewegung und Sport bei Krebs“ der Krebsliga Schweiz war es ein flächendeckendes, qualitativ hohes und standardisiertes Angebot von Bewegung und Sport bei Krebs – Gruppen in allen drei Landesteilen der Schweiz aufzubauen.

Material and Methods:

Von Mai 2000 bis Juli 2002 konnten 63 ambulante Krebsportgruppen mit 462 Teilnehmer/innen unter der Leitung speziell ausgebildeter Therapeut/innen in allen drei Landesteilen der Schweiz durchgeführt und evaluiert werden.

Results:

Die Evaluation zeigt, dass der Bewegungskurs mithilfe den allgemeinen Gesundheitszustand zu steigern (33%), sowie die körperliche Fitness (29%), das psychische Wohlbefinden (36%) und die Alltagsbewältigung positiv zu beeinflussen (24%).

11% der Kursteilnehmer/innen berichten zudem über eine Schmerzlinderung.

Conclusion:

Bewegung und Sport können für Krebsbetroffene einen Beitrag zur physischen, psychischen und sozialen Stabilisierung leisten und damit entscheidend zur Verbesserung der Lebensqualität beitragen.