

CONTENTS OF VOLUME 2

NUCLEAR MEDICINE DOSIMETRY (Session 9)

Radiation dose assessment in nuclear medicine (IAEA-CN-96/63) <i>M. G. Stabin</i>	3
Quality assurance programmes for radioactivity measurements in n u c l e a r m e d i c i n e (I A E A - C N - 9 6 / 6 4) <i>B.E. Zimmerman</i>	17
Monte Carlo techniques in diagnostic and therapeutic nuclear m e d i c i n e (I A E A - C N - 9 6 / 6 5) <i>H. Zaidi</i>	2Y
Performance and quality control of radionuclide calibrators in n u c l e a r m e d i c i n e (I A E A - C N - 9 6 / 6 6) <i>M.J. Woods, M. Baker</i>	45

Poster presentations

Relationship of bone uptake to radiation doses in bone pain treatment with ^{188}Re HEDP (IAEA-CN-96/67P) <i>J. Gaudiano, E. Savio, A. Paolino</i>	59
Comparisons of activity measurements in nuclear medicine with radionuclide calibrators in the Czech Republic (IAEA-CN-96/68P) <i>V. Olsovcová, P. Dryák</i>	67

BRACHYTHERAPY (Session 10)

Source specification and codes of practice for brachytherapy d o s i m e t r y (I A E A - C N - 9 6 / 7 0) <i>C.G. Soares, H. Tölli</i>	79
Development of a Dutch primary standard for beta emitting b r a c h y t h e r a p y s o u r c e s (I A E A - C N - 9 6 / 7 1) <i>J. van der Marel, E. van Dijk</i>	93
New developments on primary standards for brachytherapy at the National Institute of Standards and Technology and the Physikalisch-Technische Bundesanstalt (IAEA-CN-96/72) <i>H.-J. Selbach, C.G. Soares</i>	101
The need for international standardization in clinical beta d o s i m e t r y f o r b r a c h y t h e r a p y (I A E A - C N - 9 6 / 7 3) <i>U. Quast, J. Böhm, T. W Kaulich</i>	111

- Energy dependence of the air kerma response of a liquid ionization chamber at photon energies between 8 keV and 1250 keV (I A E A - C N - 9 6 / 7 4) . 121
G. Hilgers, J. Bahar-Gogani, G. Wickman
- Comparison of two different methods to determine the air kerma calibration factor, N_k , for ^{192}Ir (IAEA-CN-96/75) . 129
E. van Dijk

RADIOTHERAPY DOSIMETRY AUDITS (Session 11)

- Worldwide quality assurance networks for radiotherapy dosimetry (I A E A - C N - 9 6 / 7 6) . 139
J. Izewska, H. Svensson, G. Ibbott
- ESTRO European assurance programme for radiation treatments (the EQUAL network) (I A E A - C N - 9 6 / 7 7) . 157
I. H. Ferreira, A. Dutreix, A. Bridier, H. Svensson
- Radiation therapy thermoluminescence dosimetry service in Germany: The experience of the first year (IAEA-CN-96/78) . 167
C. Pychlau
- Audit of radiotherapy dosimetry in New Zealand: Practical considerations and results (I A E A - C N - 9 6 / 7 9) . 177
V.G. Smyth, J.A. Laban
- The United Kingdom's radiotherapy dosimetry audit network (I A E A - C N - 9 6 / 8 1) . 183
D.I. Thwaites, S.K. Powley, A. Nisbet, M. Allahverdi
- Thermoluminescence dosimetry as a tool for the remote verification of output for radiotherapy beams: 25 years of experience (I A E A - C N - 9 6 1 8 2) . 191
J.F. Aguirre, R. C. Tailor, G. Ibbott, M. Stovall, WE Hanson

Poster presentations

- Role of the National Physical Laboratory in monitoring and improving dosimetry in radiotherapy in the United Kingdom (I A E A - C N - 9 6 / 8 0 P) . 201
R.A.S. Thomas, S. Duane, M. R. McEwen, K.E. Rosser
- An anthropomorphic head and neck phantom for the evaluation of intensity modulated radiation therapy (IAEA-CN-96/85P) . 209
G. Ibbott, A. Nelson, D. Followill, P. Balter, W.F. Hanson

POSTERS ON BRACHYTHERAPY (Session 12a)

Design and implementation of a phantom for the quality control of high dose rate ^{192}Ir sources used in brachytherapy (IAEA-CN-96/87P) . . .	221
<i>R. Ochoa, I. H. Ferreira, C.E. de Almeida</i>	
New approach for standardizing absorbed dose from beta radioactive wires and seeds used for intravascular brachytherapy (I A E A - C N - 9 6 / 8 8 P)	231
<i>S. Pszona, B. Kocik, K. Wincel, B. Zureba, W. Bulski</i>	
Comparison of calibration techniques for ^{192}Ir high dose rate brachytherapy sources (IAEA-CN-Yh192P)	239
<i>C. Tannanonta, T. Layangkul, C. Orkongkiat</i>	

POSTERS ON RADIOTHERAPY DOSIMETRY AUDITS (Session 12b)

IAEA supported national thermoluminescence dosimetry audit networks for radiotherapy dosimetry: Summary of the posters presented in Session 12b (IAEA-CN-96/137)	249
<i>J. Izewska, D.I. Thwaites</i>	
Thermoluminescence dosimetry quality assurance network for radiotherapy and radiology in the Czech Republic (IAEA-CN-96/97)	269
<i>D. Kroutiliková, J. Novotny, L. Novák</i>	

PROTON AND HADRON DOSIMETRY (Session 13)

Codes of practice and protocols for the dosimetry in reference conditions of proton and ion beams (IAEA-CN-96/110)	279
<i>S.M. Vatnitsky, P. Andreo</i>	
Dosimetry with the scanned proton beam on the Paul Scherrer Institute treatment gantry (IAEA-CN-96/111)	295
<i>A. Corny, E. Pedroni, T. Boehringer, S. Lin, A. Lomax, G. Goitein</i>	
Dosimetry of ^{12}C ion beams at the German heavy ion therapy facility: Comparison of the currently used approach and TRS 398 (I A E A - C N - 9 6 / 1 1 2)	303
<i>O. Jäkel, G.H. Hartmann, P. Heeg, C.P. Karger</i>	

- Proton dosimetry intercomparison using parallel-plate ionization chambers in a proton eye therapy beam (IAEA-CN-96/113) . 311
*A. Kacperek, E. Egger, L. Barone Tonghi, G. Cuttone,
L. Rafaele, A. Rovelli, M.G. Sabini, P. Tabarelli de Fatis,
F. Luraschi, L. Marzoli*

Poster presentations

- Proton beam dosimetry: Protocol and intercomparison in Japan (I A E A - C N - 9 6 / 1 1 5 P) . 321
*A. Fukumura, T. Kanai, N. Kanematsu, K. Yusa, A. Maruhashi,
A. Nohtomi, T. Nishio, M. Shimbo, T. Akagi, T. Yanou, S. Fukuda,
T. Hasegawa, Y. Kusano, Y. Masuda*
- Parallel-plate and thimble ionization chamber calibrations in proton beams using the TRS 398 and ICRU 59 recommendations (I A E A - C N - 9 6 / 1 1 6 P) . 327
S. M. Vatnitsky, M.F. Moyers, A.S. Vatnitsky

DEVELOPMENTS IN CLINICAL RADIOTHERAPY DOSIMETRY (Session 14)

- Radiotherapy gel dosimetry (IAEA-CN-96/117) . 339
C. Baldock
- Development of optical fibre luminescence techniques for real time in vivo dosimetry in radiotherapy (IAEA-CN-96/118) . 353
*C.E. Andersen, M.C. Aznar, L. Botter-Jensen, S.Å.J. Bäick,
S. Mattsson, J. Medin*
- An anthropomorphic head phantom with a BANG polymer gel insert for the dosimetric evaluation of intensity modulated radiation therapy treatment delivery (IAEA - C N - 9 6 / 1 1 9) . 361
G. Ibbott, M. Beach, M. Maryanski
- Clinical implementation and quality assurance for intensity modulated radiation therapy (IAEA-CN-96/120) . 369
*C.-M. Mu, R. Price, S. McNeely, L. Chen, J.S. Li, L. Wang,
M. Ding, E. Fourkal, L. Qin*
- QUASIMODO: An ESTRO project for performing the quality assurance of treatment planning systems and intensity modulated radiation therapy (IAEA-CN-96/121) . 381
B.J. Mijnheer, C. de Wager, S. Gillis, A. Olszewska

Poster presentations

Factors affecting the extraction of absorbed dose information in 3-D polymer gel dosimeters by X ray computed tomography (I A E A - C N - 9 6 / 1 2 2 P)	389
<i>J.V. Trapp, G. Michael, Y. de Deene, C. Baldock</i>	
Acoustic evaluation of polymer gel dosimeters (I A E A - C N - 9 6 / 1 2 3 P)	397
<i>M. L. Mather, Y. de Deem, C. Baldock, A. K. Whittaker</i>	
Photon energy dependence of the electron paramagnetic resonance alanine dosimetry system: An experimental investigation (I A E A - C N - 9 6 / 1 2 4 P)	405
<i>E.S. Bergstrand, K. R. Shortt, C. K. Ross, E. O. Hole</i>	
Experience with in vivo diode dosimetry for verifying radiotherapy dose delivery: The practical implementation of cost effective approaches (IAEA-CN-96/131P)	415
<i>D.I. Thwaites, C. Blyth, L. Carruthers PA. Elliott, G. Kidane, C.J. Millwater, A.S. MacLeod, M. Paolucci, C. Stacey</i>	

CONCLUSIONS AND RECOMMENDATIONS (Session 15)

C o n c l u s i o n s a n d r e c o m m e n d a t i o n s	427
C h a i r s o f S e s s i o n s	441
C o - c h a i r s o f S e s s i o n s	441
R a p p o r t e u r s o f S e s s i o n s	442
P r o g r a m m e C o m m i t t e e	443
S e c r e t a r i a t o f t h e S y m p o s i u m	443
L i s t o f P a r t i c i p a n t s	445
A u t h o r I n d e x	495