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Please enter the publication code(s) in the space provided beneath the application(s) of interest.

**RADIOTHERAPY**

Pub Code: \_\_\_\_\_

**IMRT**

Pub Code: \_\_\_\_\_

**BRACHYTHERAPY**

Pub Code: \_\_\_\_\_

**RADIOSURGERY**

Pub Code: \_\_\_\_\_

**DIAGNOSTIC RADIOLOGY**

Pub Code: \_\_\_\_\_

**FLUOROSCOPY**

Pub Code: \_\_\_\_\_

**MAMMOGRAPHY**

Pub Code: \_\_\_\_\_

**TBI**

Pub Code: \_\_\_\_\_

**IGRT/TOMOTHERAPY**

Pub Code: \_\_\_\_\_

**PROTON THERAPY**

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**TECH NOTES**

Pub Code: \_\_\_\_\_

**PROCEDURES**

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# MOSFET DOSIMETRY

TECHNICAL NOTES & PUBLICATIONS

- Radiotherapy
- IMRT
- Brachytherapy
- Radiosurgery
- Diagnostic Radiology
- Fluoroscopy
- Mammography
- TBI
- IGRT/ Tomotherapy
- Proton Therapy

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**PLEASE NOTE:** The *isotropic* MOSFET dosimeter was introduced in 1999. Any papers written prior to that time do not reflect this significant characteristic. From 1999 onwards, all MOSFET dosimeters are isotropic and have a response of  $\pm 2\%$  for 360°.

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**RADIOTHERAPY**

**RDCherpak09PA. Evaluation of a novel 4D *in vivo* dosimetry system**

A. Cherpak, Carleton University, Ottawa, Ontario, Canada and J.E. Cygler, Department of Medical Physics, The Ottawa Hospital Cancer Centre, Ottawa, Ontario, Canada, W. Ding and B. Hallil, Best Medical Canada, Ottawa, Ontario, Canada, Paper, Med. Phys. Volume 36, Issue 5, pp. 1672-1679 (May 2009) Published 16 April 2009

**RDSiegbhan09PA. MOSFET dosimetry with high spatial resolution in intense synchrotron generated x-ray microbeams**

E.A. Siegbahn, E. Brauer-Krisch, A. Bravin, European Synchrotron Radiation Facility (ESRF), 6 Rue Jules Horowitz, 38043 Grenoble, France, H. Nettlebec, M.L.F. Lerch and A.B. Rosenfeld, Center for Medical Radiation Physics, University of Wollongong, Wollongong, New South Wales 2522, Australia Paper, Med. Phys. Volume 36, Issue 4, pp. 1128-1137 (April 2009) Published 11 March 2009

**RDJanssens09PA. Evaluation of nonrigid registration models for interfraction dose accumulation in radiotherapy**

Guillaume Janssens and Jonathan Orban de Xivry Université Catholique de Louvain, Belgium, Stein Fekkes and Andre Dekker Department of Radiation Oncology (MAASTRO), GROW-School for Oncology and Developmental Biology, University Medical Centre Maastricht, The Netherlands Benoit Macq, Communications and Remote Sensing Laboratory (TELE), Université Catholique de Louvain, Belgium, Phillipe Lambin and Wouter van Elmpt Department of Radiation Oncology (MAASTRO), GROW-School for Oncology and Developmental Biology, University Medical Centre Maastricht, The Netherlands Paper, Med. Phys. Volume 36, Issue 9, pp. 4268-4276 (September 2009), Published 26 August 2009

**RDChow08PA. Monte Carlo simulation of MOSFET dosimeter for electron backscatter using the GEANT4 code**

James C. L. Chow Department of Radiation Physics, Princess Margaret Hospital and Department of Radiation Oncology, University of Toronto, Toronto, Ontario M5G 2M9, Canada, Department of Physics, University of Waterloo, Waterloo, Ontario N2L 3G1, Canada, and Department of Physics, Ryerson University, Toronto, Ontario M5B 2K3, Canada Michael K.K. Leung Department of Medical Biophysics, University of Toronto, Toronto, Ontario M5G 2M9, Canada Paper, Med. Phys. Volume 35, Issue 6, pp. 2383-2390 (June 2008) Published 19 May 2008

## RADIOTHERAPY

### **RDYanyi07PA. MOSFET sensitivity dependence on integrated dose from high-energy photon beams**

James A. Tanyi, University of Arizona Health Science Center, Tucson, Arizona and Department of Radiation Medicine, Oregon Health and Science University, Portland, Oregon, Shane P. Krafft, University of Arizona, Tucson, Arizona and Department of Radiation Oncology, University Medical Center, Tucson, Arizona, Tomoe Hagi, University of Arizona, Tucson, Arizona, Martin Fuss, Oregon Health and Science University, Portland, Oregon and the University of Texas Health Science Center at San Antonio, San Antonio, Texas, Bill J. Salter, University of Utah/Huntsman Cancer Institute, Salt Lake City, UT  
Paper, Med. Phys. Volume 35, Issue 1, Jan. 2008 (published Dec. 2007)

### **RDCarrasco07PA. Comparison of dose calculation algorithms in slab phantoms with cortical bone equivalent heterogeneities**

P. Carrasco and N. Jornet, Servei de Radiofísica i Radioprotecció, Hospital de la Santa Creu i Sant Pau, St. Antoni Maria-Claret 167, 08025 Barcelona, Spain  
M.A. Duch and V. Pannettieri  
Institut de Tècniques Energètiques, Universitat Politècnica de Catalunya, Barcelona, Spain,  
L. Weber, Lund University Hospital, Department of Radiation Physics, Klinikgatan, Lund, Sweden  
T. Eudaldo, Servei de Radiofísica i Radioprotecció, Hospital de la Santa Creu i Sant Pau, Barcelona, Spain, M. Ginjaume  
Institut de Tècniques Energètiques, Universitat Politècnica de Catalunya, Barcelona, Spain,  
M. Ribas  
Servei de Radiofísica i Radioprotecció, Hospital de la Santa Creu i Sant Pau, Barcelona, Spain  
Paper, Med. Phys. Volume 34, Issue 8, pp. 3323-3333 (August 2007) Published 26 July 2007

### **RDKurjewicz07PA. Measurement of Gamma Knife<sup>®</sup> helmet factors using MOSFETs**

Laryssa Kurjewicz, University of Winnipeg, Winnipeg, Manitoba, Canada  
Anita Berndt, CancerCare Manitoba, Winnipeg, Manitoba, Canada; Winnipeg Centre for Gamma Knife<sup>™</sup> Surgery, Health Sciences Centre, Winnipeg Regional Health Authority, Winnipeg MB, Canada; Section of Neurosurgery, Department of Surgery; Department of Radiology, University of Manitoba, Winnipeg MB, Canada and Department of Physics and Astronomy, University of Manitoba, Winnipeg MB R3E 0V9, Canada  
Paper, Med. Phys. Volume 34, issue 3, p. 1007 – 1012, March 2007

### **RDxiang07PA. Build-up and surface dose measurements on phantoms using microMOSFET in 6 and 10 MV x-ray beams and comparisons with Monte Carlo calculations**

Hong F. Xiang, Jun S. Song, David W. H. Chin, Robert A. Cormack, Roy B. Tishler, G. Mike Makrigiorgos, Laurence E. Court, and Lee M. Chin, Department of Radiation Oncology, Dana-Farber and Brigham-Women's Cancer Center, Harvard Medical School, Boston, Massachusetts  
Paper, Med. Phys. Volume 34, issue 4, April 2007

## RADIOTHERAPY

### **RDLavallee06PA. Dose Dependence of MOSFET Calibration Factor Between 30kV and Cobalt-60 Irradiation**

M Lavallee\*, L Gingras, L Beaulieu, Centre Hospitalier Universitaire Quebec, Pavillon Hotel-Dieu de Quebec, Quebec, QC, Canada  
Paper, AAPM 2006

### **RDBloemenVG06PA. Clinical implementation of MOSFET detectors for dosimetry in electron beams**

Esther J. Bloemen-van Gorp\*, Andre W.H. Minken, Ben J. Mijnheer, Cary J.G. Dehing-Oberye, Philippe Lambin Department of Radiation Oncology (MAASTRO), University Hospital Maastricht, Maastricht, The Netherlands  
Radiotherapy and Oncology 80 (2006) 288–295

### **RDWang05PA. Monte Carlo Study of MOSFET Dosimeter Characteristics: Dose Dependence on Photon Energy, Direction and Dosimeter Composition**

B. Wang<sup>1</sup>, X.G. Xu<sup>1</sup>, C.Kim<sup>2</sup>, <sup>1</sup>Rensselaer Polytechnic Institute, Troy, New York, NY, <sup>2</sup>Haengdang-dong, Sungdong-gu, Seoul, Korea  
Paper, Radiation Protection Dosimetry, Vol.113, No.1, p. 40-46, 2005

### **RDScalchi05PA. Characterization of a new MOSFET detector configuration for in vivo skin dosimetry**

P. Scalchi. P. Franceson, P. Rajaguru, San Bortolo Hospital, Vicenza, Italy  
Paper, Medical Physics Journal, Vol. 32 (6), pg 1571-1578, June 2005

### **RDcheung05PA. Low-dose measurement with a MOSFET in high-energy radiotherapy applications**

TSANG Cheung<sup>1</sup>; YU Peter K. N.<sup>1</sup>; BUTSON Martin J.<sup>1,2</sup>  
<sup>1</sup>Department of Physics and Materials Science, City University of Hong Kong, Kowloon Tong, HONG-KONG  
<sup>2</sup>Department of Medical Physics, Illawarra Cancer Care Centre, P.O. Box 1798, Crown St, Wollongong, NSW 2500, AUSTRALIA  
Paper, Radiation Measurements, vol. 39, n<sup>o</sup>1, pp. 91-94, 2005

### **RDRowbottom04PA. Development of an integral system test for image-guided radiotherapy**

CG Rowbottom, DA Jaffray, Department of Radiation Oncology, William Beaumont Hospital, Royal Oak, MI  
Paper, Medical Physics Journal, Vol 31 (12), pg 3500-3505, December 2004

### **RDJornet04PA. Comparison study of MOSFET detectors and diodes for entrance in vivo dosimetry in 18 MV x-ray beams**

Jornet N, Carrasco P, Jurado D, Ruiz A, Eudaldo T, Ribas M  
Paper, Medical Physics Vol. 31 (9), pp 2534-2542, September 2004

## RADIOTHERAPY

### **RDJaffray04PA. Characteristics and performance of a micro-MOSFET: An "imageable" dosimeter for image-guided radiotherapy**

C.G. Rowbottom<sup>1</sup>, D.A. Jaffray<sup>2</sup>, (1) North Western Medical Physics, Manchester, UK, (2) Princess Margaret Hospital, Toronto, ON, CA  
Paper, Medical Physics, Vol. 31 (3), p. 609, March 2004

### **RDRamaseshan04PA. Performance Characteristics of a microMOSFET as an In-vivo dosimeter in radiation therapy**

R Ramaseshan<sup>1,2</sup>, K Kohli<sup>1</sup>, T.J Zhang<sup>1</sup>, J. T Lam<sup>1</sup>, B Norlinger<sup>1</sup>, A Hallil<sup>3</sup>, M Islam<sup>1,2</sup>  
<sup>1</sup>Radiation Medicine Program, Princess Margaret Hospital, Toronto, ON, Canada.  
<sup>2</sup>Department of Radiation Oncology, University of Toronto, Toronto, ON, Canada.  
<sup>3</sup>Thomson Nielsen Electronics Ltd, Ottawa, ON, Canada.  
Paper, Physics in Medicine and Biology Journal, vol. 49, pg. 4031-4048, August 2004.

### **RDWang04PA. Monte Carlo modeling of a High-Sensitivity MOSFET dosimeter for low- and medium-energy photon sources**

B Wang, C-H Kim, XG Xu, J-W Lee, Rensselaer Polytechnic Institute, Troy, NY  
Paper, Medical Physics Journal, Vol. 31 (5), p1003-1008, May 2004

### **RDArchambault04PA. MOSFET behaviour under irradiation by gamma rays: results from a Monte Carlo study**

L Archambault<sup>1</sup>, L Gingras<sup>1</sup>, J-F Carrier<sup>1</sup>, L Beaulieu<sup>1</sup>, R Roy<sup>2</sup> (1) Département de Radio-Oncologie et Centre de Recherche en Cancérologie, Hôtel-Dieu de Québec, Québec, QC, Canada (2) Département de physique, de génie physique et d'optique, Université Laval  
AAPM 2003, Submitted to Medical Physics Journal, 2004.

### **RDBloemanVG03PA. Clinical dosimetry with MOSFET dosimeters to determine the dose along the field junction in a split beam technique**

E.J. Bloeman-van Gurp, et al., Radiotherapy Institute Limburg, Academic Hospital Maastricht, Heerlen/ Maastricht, The Netherlands  
Paper, Radiotherapy and Oncology 67, p.351-357, 2003

### **RDNagashima01PA. Evaluation of performance of Metal Oxide-Silicon Semiconductor Field Effect Transistor (MOSFET) dosimeter.**

Hiroyuki Nagashima, Naoki Sano, & Osamu Nakamura, Department of Radiology, Yamanashi Medical University Hospital  
Paper, Japanese Journal of Radiological Technology, Vol. 7, p. 234-239, 2001  
Note: Abstracts and Diagrams in English language, body of the paper is in Japanese

### **RDTao00PA/AB. Dose responses of a MOSFET detector for in-vivo dosimetry of clinical electron beams**

L. Tao, A.M. Kalend, S.M. Rakfal  
Abstract and Paper, AAPM 2000

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### **RDScalchi98PA. Calibration of a MOSFET detection system for 6-MV in-vivo dosimetry**

P. Scalchi and P. Francescon, Vicenza Hospital, Vicenza, Italy  
Paper, The International Journal of Radiation Oncology, Biology, Physics, Vol. 40 (4), p. 987-993, March 1998

### **RDTrujillo98PA. Evaluation of the TN-RD-50 Patient Dosimetry System MOSFET-based**

G. Trujillo, Manitoba Cancer Treatment and Research Foundation  
Paper (unpublished), August 1998

### **RDRamaseshan97PA. Clinical dosimetry using MOSFETs**

R. Ramaseshan, S. Russell, & P. O'Brien, Sunnybrook Hospital, Toronto, Canada  
Paper, The International Journal of Radiation Oncology, Biology, Physics, Vol. 37 (4), p. 956-964, 1997

### **RDSoubra96PA. Application of MOSFET radiation detector for patient dosimetry**

Soubra M, Cygler J, Szanto J  
International Journal of Radiation Oncology, Biology, Physics, Vol. 36 (1), p. 400, January 1996

### **RDThomsonPA. In-vivo dosimetry using MOSFET dosimeters**

I. Thomson, Thomson & Nielsen Electronics Ltd., Nepean, Canada  
Paper

### **RDCygler94PA. Evaluation of a dual bias dual Metal-Oxide-Silicon Semiconductor Field Effect Transistor detector as a radiation dosimeter**

M. Soubra, J. Cygler and G. F. MacKay, Ontario Cancer Research Foundation, Ottawa, Canada  
Paper, Medical Physics, Vol 21 (4), pp. 567-572, 1994

### **RDCherpak08AB. Dose-Position Verification of 4D Radiotherapy using the RADPOS System in a Deformable Lung Phantom**

A.Cherpak, M. Serban, J. Seuntjens, J. Cygler  
1The Ottawa Hospital Cancer Centre, Ottawa, ON, 2Carleton University, Ottawa, ON, 3Maisonneuve-Rosemont Hospital, Montréal, QC, 4McGill University, Montreal, QC, CA  
Abstract, Medical Physics Journal, Vol. 35 (6), p 2994, June 2008

### **RDCygler07AB. 4D In-Vivo Dosimetry in Radiotherapy**

J Cygler<sup>1</sup>, A Saoudi<sup>1</sup>, A Cherpak<sup>1</sup>, W Ding<sup>2</sup> and R Ashton<sup>2</sup>, (1) The Ottawa Hospital Regional Cancer Ctr., Ottawa, Ontario, (2) Best Medical Canada, Ottawa, Ontario  
Abstract, Medical Physics Journal, Vol. 34 (6), p 2402, June 2007

**RADIOTHERAPY**

**RDChung06AB. Comparison of the Dosimetric Properties of Standard MOSFET and MicroMOSFET with Home Made Phantom**

J Chung<sup>\*1,2</sup>, J Lee<sup>1,3</sup>, D Lee<sup>1,4</sup>, Y Kim<sup>3</sup>, K Cho<sup>5</sup>, S Oh<sup>1</sup>, J Kim<sup>2</sup>, S Hong<sup>3</sup>, T Suh<sup>1</sup>, (1) The Catholic University of Korea, Seoul, KR (2) Seoul National University Bundang Hospital, Seongnam, KR (3) Konkuk University Hospital, Konkuk University, school of Medicine, Seoul, KR (4) National Cancer Center, Ilsan, KR (5) Ajou University Hospital, Ajou University School of Medicine, Suwon, KR  
Abstract, AAPM 2006

**RDChung05AB. Measurements of surface dose for 6MV and 10 MV X-ray beams using micro-MOSFET and comparisons to Monte Carlo skin dose calculations**

H Xiang<sup>\*</sup>, L Court, J Song, Y Lyatskaya, R Tishler, M Makrigiorgos, L Chin, Dana-Farber and Brigham-Women's Cancer Center, Harvard Medical School, Boston, MA  
Abstract, AAPM 2005, Medical Physics Journal, Vol. 32 (6), p 2061, June 2005

**RDHubert-Tremblay05AB. Wide energy metallic build-up caps for MOSFET dosimeters: Monte Carlo Simulation and experimental study of dose correction factors at Dmax**

V. Hubert-Tremblay<sup>1,2</sup>, L. Archambault<sup>1,2</sup>, A. Halli<sup>3</sup>, I. Thomson<sup>3</sup>, L. Beaulieu<sup>1,2</sup>, R. Roy<sup>2</sup>, (1) Centre Hospitalier Universitaire de Quebec pavillon Hotel-Dieu de Quebec, Quebec, Canada, (2) Universite Laval, Ste-Foy, Quebec, Canada, (3) Thomson Nielsen, Ottawa, Canada  
Abstract, AAPM 2005, Medical Physics Journal, Vol. 32 (6), p 2166, June 2005

**RDLehmann05AB. Performance of Two Commercial MOSFET Systems at Low Doses in and Out of Field**

J Lehmann<sup>1,2</sup>, R Stern<sup>2</sup>, Z Goldberg<sup>2</sup>  
<sup>1</sup>University of California Lawrence Livermore National Laboratory, Livermore, CA  
<sup>2</sup>University of California Davis Cancer Center, Sacramento, CA  
Abstract, Medical Physics Journal, Vol. 32, No. 6, June 2005

**RDChow05AB. Radiation leakage from the electron applicators in the Varian 21 EX Linear Accelerator**

J. Chow, G.N. Grigorov, Medical Physics Department, Grand River Regional Cancer Center, Kitchener, Canada  
Abstract, AAPM 2005, Medical Physics, Vol. 32 (6), p. 1999, June 2005

**RDBenComo04AB-phantom. Use of MOSFET detectors to verify dose calculations in an anthropomorphic breast phantom**

J BenComo<sup>\*</sup>, S Cho, T Sun, S Lee, G Ibbott, UT M.D. Anderson Cancer Center, Houston, TX  
Abstract, AAPM 2004, Medical Physics Journal, Vol. 31 (6), p. 1926, June 2004

**RDBenComo04AB. Could MOSFET detectors substitute TLD dosimeter as a remote monitoring device of megavoltage beams output?**

J BenComo<sup>\*</sup>, B Stewart, N Wells, G Ibbott, UT M.D. Anderson Cancer Center, Houston, TX  
Abstract, AAPM 2004, Medical Physics Journal, Vol. 31 (6), p. 1875, June 2004

**RADIOTHERAPY**

**RDRowbottom04AB. Characteristics and performance of a micro-MOSFET: An "imageable" dosimeter for image-guided radiotherapy**

C.G. Rowbottom<sup>1</sup>, D.A. Jaffray<sup>2</sup>, (1) North Western Medical Physics, Manchester, UK, (2) Princess Margaret Hospital, Toronto, ON, CA  
Abstract, Medical Physics, Vol. 31 (3), p. 609, March 2004.

**RDScalchi04AB. New MOSFETs for in-vivo skin dosimetry**

P. Scalchi, P. Franceson, C. Baiocchi, R. Guglielmi, Azienda U.L.S.S. 6, Vicenza, Italy.  
Abstract, Radiation & Oncology Journal, ESTRO Amsterdam Vol 73/ Supplement 1 (2004) S1-2497, p. S26-S27, October 2004

**RDMcAndrew03AB-MedPhys. The case for routine patient dose verification and its role in improving the accuracy of treatment delivery**

N. McAndrew, Cork University Hospital, Cork, Ireland  
Abstract, Medical Physics, Vol. 30 (6), p. 1480, June 2003. Presented, AAPM 2003

**RDMcAndrew03AB-IRPG. Routine in-vivo dosimetry utilizing MOSFET dosimeters for patient dose verification**

Niall McAndrew, Medical Physics Department, Cork University Hospital, Wilton, Cork, Ireland  
Abstract, Irish Radiotherapy Physics Group Fourth Annual Scientific Meeting 2003

**RDBencomo02AB. Quality assurance of linear accelerators using MOSFETs: A feasibility study**

J.A. Bencomo, G.S. Ibbott, Department of Radiation Physics, University of Texas MD Anderson Cancer Center  
Abstract and Presentation, AAPM 2002

**RDScalchi96AB. Application of MOSFETs in radiotherapy dosimetry**

P. Scalchi, F. Sanitaria, Vicenza Hospital, Vicenza, Italy  
Abstract, Radiotherapy and Oncology, Vol. 40, 23, 1996

**RDKohno06PO. Experimental Evaluation of a MOSFET Dosimeter for Therapeutic Proton Beams**

R Kohno<sup>\*1</sup>, T Nishio<sup>1</sup>, T Miyagishi-Gomi<sup>1</sup>, K Hotta<sup>2</sup>, Y Igarashi<sup>3</sup>, T Ogino<sup>1</sup>, (1) National Cancer Center Hospital East, Kashiwa, Chiba, Japan, (2) University of Tsukuba, Tsukuba, Ibaraki, Japan, (3) TM medical Corporation, Shinjuku-ku, Tokyo, Japan  
Poster, AAPM 2006

**RDDeeley06PO. Measurement of Surface and Exit Dose in Megavoltage X-Ray Beams Using Micro-MOSFET Detectors**

M Deeley<sup>\*</sup>, G Ding, C Coffey, Vanderbilt University, Nashville, TN, Vanderbilt University Medical Center, Nashville, TN, Vanderbilt Medical Center, Nashville, TN  
Poster Presentation, AAPM 2006

**RADIOTHERAPY**

**RDBloemenVG04POclinical. The implementation of MOSFET detectors for clinical dosimetry in electron beams**

*E. Bloemen-van Gurp, Maastricht Clinic, Heerlan, The Netherlands*  
Poster, ESTRO 2004, Radiotherapy & Oncology Journal, ESTRO Amsterdam Vol 73/Supplement 1 (2004) S1-2497, p. S470, October 2004.

**RDBloemenVG04PO-CF. Correction factors for accurate use of MOSFETs for entrance in-vivo dosimetry in photon beams**

*E. Bloemen-van Gurp, Maastricht Clinic, Heerlan, The Netherlands*  
Poster, ESTRO 2004, Radiotherapy & Oncology Journal, ESTRO Amsterdam Vol 73/Supplement 1 (2004) S1-2497, p. S113, October 2004.

**RDMcAndrew03PO. Routine in-vivo dosimetry utilizing MOSFET dosimeters for patient dose verification**

*Niall McAndrew, Cork University Hospital, Cork, Ireland*  
Poster, Presented at the Irish Radiotherapy Physics Group, Fourth Annual Scientific Meeting, February 2003.

**RDBloemanVG02PO. Implementation of MOSFET dosimetry in daily practice**

*E.J. Bloeman-van Gurp, A.W.H. Minken, P.A. Visser, W.F.J. du Bois, P. Lambin*  
Radiotherapy Institute Limburg, Academic Hospital Maastricht, The Netherlands  
Poster Paper, ESTRO 2002

**RDSahoo00AB/PO. Measurement of calibration factors for in-vivo dosimetry in external beam radiation therapy using MOSFET detectors**

*N. Sahoo, A.M. Kazi, Department of Radiation Oncology, Albany Medical College, Albany, NY*  
Abstract and Poster Paper, AAPM 2000

**RDLightfoot00AB/PO. MOSFET evaluation of dose for conjunctiva treatment methods**

*D. Lightfoot, MCP/ Hahnemann University, Philadelphia, PA*  
Abstract and Poster Paper, AAPM 2000

**RDLightfoot99PO. Partial bolus verification of patient dose via MOSFET dosimeters**

*D. Lightfoot, Allegheny University of Health Sciences, Philadelphia, PA*  
Poster Paper, AAPM 1999

**RDThomson02PR. Application of the MOSFETs in medical physics, IMRT, brachytherapy & IORT**

*I. Thomson, Thomson Nielsen*  
Presentation, AIFM Meeting, Italy, 2002

**RDScalchi02PR. Dosimetria in-vivo con i MOSFET aspetti fisici**

*P. Scalchi, ULSS no. 6 Vicenza, Italy*  
Presentation, AIFM Meeting, Italy, 2002  
*Note: Presentation is in Italian*

**RADIOTHERAPY**

**RDScalchi/Franceson02PR. Dosimetria in-vivo in radiotherapia**

*P. Scalchi and P. Franceson, ULSS no. 6 Vicenza, Italy*  
Presentation, AIFM Meeting, Italy, 2002  
*Note: Presentation is in Italian*

**RDPetrucchi02PR. Dosimetria in-vivo con rivelatori MOSFET principal sistemi di dosimetria in-vivo**

*A. Petrucchi, U.O. Fisica Sanitaria, A.C.O. San Filippo, Neri, Rome*  
Presentation, Meeting in Grosseto, Italy, June 2002  
*Note: Presentation is in Italian*

**IGRT/ TOMOTHERAPY**

**ITHussain07AB. Free in Air Characterization of Metal Oxide Semiconductor Field Effect Transistor (MOSFET) Dosimeters Using Computed Tomography Radiation Beam Delivery System**

*I Hussain\* M.Sc., S Anderson B.S. (BME), B Yee R.T.(R)(CT), R Kaufman, M.D., St. Jude Children's Research Hospital, Memphis, TN.*  
Abstract, AAPM 2007

**ITRavindran06PO. Investigation of Dose Reduction Strategies for Image Guidance with KV-CBCT in Radiation Therapy**

*P Ravindran\*<sup>1</sup>, M Islam,<sup>2</sup> D Jaffray<sup>2</sup>, (1)Christian Medical College Hospital, Vellore, IN, (2)Princess Margaret Hospital, Toronto, ON, Canada*  
Poster Presentation, AAPM 2006

**ITCygler06PO. Treatment Planning to Achieve Skin Sparing with Tomotherapy**

*R Studinski\*<sup>1</sup>, A Cherpak<sup>2</sup>, J Cygler<sup>1</sup>, L Gerig<sup>1</sup>, A Saoudi<sup>1</sup>, K Carty<sup>1</sup>, G Fox<sup>1</sup>, L Montgomery<sup>1</sup>, (1) The Ottawa Hospital Regional Cancer Centre, Ottawa, ON, Canada (2) Carleton University, Ottawa, ON, Canada*  
Poster Presentation, AAPM 2006

**IMRT**

**IMZhen09PA. In-vivo verification of superficial dose for head and neck treatments using intensity-modulated techniques**

*Zhen-Yu Qia and Xiao-Wu Deng, Sun Yat-Sen University Cancer Center, Guangzhou, China, and Centre for Medical Radiation Physics, University of Wollongong, Wollongong, Australia, Shao-Min Huang, Li Zhang, and Zhi-Chun He, Sun Yat-Sen University Cancer Center, Guangzhou, China, X. Allen Li, Medical College of Wisconsin, Milwaukee, Wisconsin, Ian Kwan, Michael Lerch, Dean Cutajar, Peter Metcalfe, and Anatoly Rosenfeld, University of Wollongong, Wollongong, NSW Australia*  
Paper, Medical Physics, Vol. 36 (1), January 2009

**IMRT**

**IMChow06PA. Study on surface dose generated in prostate intensity-modulated radiation therapy treatment**

James C. L. Chow, Ph.D, MCCPM, Grigor N. Grigorov, Ph.D, and Rob B. Barnett, Ph.D, FCCPM, Medical Physics Department, Grand River Regional Cancer Center, Grand River Hospital, Kitchener, Ontario, Canada; and Department of Physics, University of Waterloo, Waterloo, Ontario, Canada  
Paper, Journal of Medical Dosimetry, Vol. 31, No. 4, pp. 249-258, Winter 2006

**IMVaradhan06PA. In Vivo Prostate IMRT Dosimetry With MOSFET Detectors Using Brass Build-Up Caps**

N Varadhan<sup>\*1</sup>, B Garrity<sup>1</sup>, J Miller<sup>1</sup>, M. Weber<sup>2</sup> 1) Minneapolis Radiation Oncology, Fridley, MN, 2) Methodist Hospital, St. Louis Park, MN  
Paper, Journal of Applied Clinical Medical Physics, Vol 7, No. 4, Fall 2006

**IMChow05PA. Dose measurements near a non-radioactive gold seed using radiographic film**

James C L Chow<sup>1,2</sup>, Grigor N Grigorov<sup>1</sup> 1) Medical Physics Department, Grand River Regional Cancer Center, Grand River Hospital, Kitchener ON, Canada 2) Department of Physics, University of Waterloo, Waterloo ON, Canada  
Paper, Physics in Medicine & Biology: Vol. 50, No. 18, 21 September 2005, pp. N227-N234(1)

**IMBurmeister05PA. Contralateral breast dose reduction associated with the use of Intensity Modulated Radiotherapy**

J. Burmeister, H. Jaenisch, T. Austin, R. Isaak, L. Freedman, T. Washington, Wayne State University / Karmanos Cancer Institute, Detroit, MI  
International Journal of Radiation Oncology, Biology, Physics - 1 Vol. 63, Issue (Supplement 1), Page S61, October 2005

**IMMarcie05PA. In vivo measurements with MOSFET detectors in oropharynx and nasopharynx intensity-modulated radiation therapy**

Marcie S, Charpiot E, Bensadoun RJ, Ciais G, Hérault J, Costa A, Gérard JP  
Paper, International Journal of Radiation Oncology, Biology, Physics, Vol. 61 (5), p. 1603-1606, April 2005

**IMAyyangar05PA. In regard to Marcie et al.: In vivo measurements with MOSFET detectors in oropharynx and nasopharynx intensity-modulated radiation therapy**

Ayyangar K, Nehru R, Djajaputra D, Zhen W, Enke C  
Paper, International Journal of Radiation Oncology, Biology, Physics, Vol. 63 (1), p. 310-311, September 2005

**IMMarcie04PA. Mesures in vivo avec des détecteurs de type MOSFET**

S Marcié, Centre Antoine-Lacassagne, Nice, France  
Post Graduate Seminar Course, St. Cloud, March 2004.  
Paper, Note: Presentation in French.

**IMRT**

**IMBerg04PA. Surface Dose Prediction and Verification for IMRT Plans Using Line Dose Profiles**

R. Berg<sup>1</sup>, S. Klash<sup>2</sup>, M. Gossman<sup>1</sup>, (1) Erlanger Medical Center, Chattanooga, TN, (2) SJK Physics, Dallas, TX  
Paper, International Journal of Radiation Oncology, Biology, Physics, Vol. 60 (1) (Supplement), p. S590, September 2004

**IMChuang02PA. Investigation of the use of MOSFET for clinical IMRT dosimetric verification**

C. Chuang, L. Verhey, P.Xia, UC San Francisco & Comprehensive Cancer Center, San Francisco, CA  
Paper, Medical Physics Journal, Vol. 29 (6), p. 1109-1115, June 2002

**IMRamaseshan02PA. In-vivo dosimetry for IMRT using MOSFET dosimeter**

R. Ramaseshan, T. Lam, G. Perkins, R. Heaton, M. Islam, Princess Margaret Hospital, Toronto, Canada  
Poster Paper and Presentation, AAPM 2002

**IMKleiman99PA. IMRT Dose Verification using MOSFET dosimeters**

M. Kleiman, S. McGinley, A. Jones, Sacred Heart, Allentown, PA  
Poster Paper, AAPM 1999

**IMHalvorsen99PA. Dosimetric evaluation of a new design of MOSFET detector**

P. Halvorsen, S. Parker, U. of N. Carolina, NC  
Poster Paper, AAPM 1999

**IMHalvorsen99PA3-D. Mixed-beam 3-D conformal therapy: dosimetric verification**

P. Halvorsen and S. Parker, University of North Carolina, NC  
Poster Paper, AAPM 1999

**IMCao07AB. Extensive Patient Specific IMRT QA for a Head & Neck Patient with Pacemaker**

F Cao<sup>\*</sup>, R Ramaseshan, K Kohli, N Nuraney, S Kristensen, F Wong, A Karvat, BC Cancer Agency, Fraser Valley Centre, Surrey, BC, CA  
Abstract, AAPM 2007

**IMBurmeister05AB. Contralateral Breast Dose in Conventional and Intensity Modulated Radiotherapy**

J. Burmeister<sup>1</sup>, N. Alvarado<sup>1</sup>, P. McDermott<sup>1</sup>, S. Way<sup>2</sup>, T. Bossenberger<sup>1</sup>, H. Jaenisch<sup>1</sup>, R. Patel<sup>1</sup>, and T. Washington<sup>1</sup>, <sup>1</sup>Gershenson Radiation Oncology Center, Karmanos Cancer Institute, Harper University Hospital and Wayne State University, Detroit, MI, <sup>2</sup>Minneapolis Radiation Oncology, Robbinsdale, MN  
Abstract, AAPM 2005

## IMRT

### **IMChern04AB. In vivo measurements on head and neck IMRT patients using a MOSFET dosimeter**

S Chern\*, G Watson, J Rankin, D Leavitt, University Utah, Salt Lake City, UT  
Abstract, AAPM 2004, Medical Physics Journal, Vol. 31 (6), p. 1895, June 2004

### **IMChow04AB. Surface and peripheral surface dose on the prostate IMRT treatment**

J. Chow, G.N. Grigorov and R.B. Barnett, Medical Physics Department, Grand River Regional Cancer Center, Kitchener, Canada  
Presentation & Abstract, COMP 2004, Physics in Canada, 60(3), 116, May/June (2004)

### **IMRamaseshan03AB. Quantitative evaluation of cumulative system uncertainties in Intensity Modulated Radiotherapy Treatments**

R. Ramaseshan, R. Heaton, T. Zhang, B. Norrlinger, T. Lam, M. Islam, Princess Margaret Hospital, Toronto, Canada  
Abstract, AAPM 2003

### **IMCharpiot03AB. Measures in vivo with detectors MOSFET in IMRT of head and neck diseases**

E. Charpiot, S. Marcie, R.J. Bensadoun, A. Costa, J.P. Gerard  
Centre Antoine-Lucasagne, Unite de Physique et Radiotherapie, Nice, France  
Abstract, ESTRO 2003

### **IMWu02AB. IMRT QA using superimposed film / MOSFET technique**

X. Wu, D. Deligero, C. Luo, H. Shao, M. Watzich, S.M. Crooks, E.L. Bossart, Department of Radiation Oncology, University of Miami, FL  
Abstract and Presentation, AAPM 2002

### **IMAmin06PO. Image Guided High Definition Dosimetry of IMRT Plans Using the MobileMOSFET System**

M Amin\*, B Norrlinger, R Heaton, M Islam, Princess Margaret Hospital, Toronto, Ontario, CA  
Poster, AAPM 2006

### **IMDrud08PR. Durchfuhrbarkeitsstudie einer Methode zur in-vivo-verifikation bei der Tomotherapie der Prostata mit MOSFETs**

E. Drud, R. Schwarz, R. Schmidt  
Short Presentation (DEGRO 2008, Vienna), Journal of Radiation Oncology Biology Physics 2008, Band 184, Sondernr, 1, 57-58

### **IMVaradhan06PO/PR. In Vivo Prostate IMRT Dosimetry With MOSFET Detectors Using Brass Build-Up Caps**

N Varadhan<sup>\*1</sup>, B Garrity<sup>1</sup>, J Miller<sup>1</sup>, M. Weber<sup>2</sup> 1) Minneapolis Radiation Oncology, Fridley, MN, 2) Methodist Hospital, St. Louis Park, MN  
Poster Presentation, AAPM 2006

## BRACHYTHERAPY

### **BTBloemenVG09PA. IN VIVO DOSIMETRY WITH A LINEAR MOSFET ARRAY TO EVALUATE THE URETHRA DOSE DURING PERMANENT IMPLANT BRACHYTHERAPY USING IODINE-125**

Esther J. Bloemen-Van Gorp, M.A.,\* BjorK K. C. Haanstra, B.A.S.,\* Lars H. P. Murrer, PH.D.,\*Francis C. J. M. Van Gils, M.D., PH.D.,\* Andre L. A. J. Dekker, PH.D.,\* Ben J. Mijneer, PH.D.,\*AND Phillippe Lambin, M.D., PH.D.\*  
\*Department of Radiation Oncology (MAASTRO), GROW, University Hospital Maastricht, the Netherlands  
Paper, Int. J. Radiation Oncology Biol. Phys., Vol. 75, No. 4, pp. 1266–1272, 2009

### **BTBloemenVG09PA-array. IN VIVO DOSIMETRY USING A LINEAR MOSFET-ARRAY DOSIMETER TO DETERMINE THE URETHRA DOSE IN 125I PERMANENT PROSTATE IMPLANTS**

ESTHER J. BLOEMEN-VAN GURP, M.A., LARS H. P. MURRER, PH.D., BJO" RK K. C. HAANSTRA, FRANCIS C. J. M. VAN GILS, M.D., PH.D., ANDRE L. A. J. DEKKER, PH.D., BEN J. MIJNHEER, PH.D. AND PHILIPPE LAMBIN, M.D. PH.D.  
Department of Radiation Oncology, Maastro Clinic, Research Institute Growth and Development (GROW), University Hospital Maastricht, Maastricht, The Netherlands  
Int. J. Radiation Oncology Biol. Phys., Vol. 73, No. 1, pp. 314–321, 2009

### **BTOh09PA. Measurements of dose discrepancies due to inhomogeneities and radiographic contrast in balloon catheter brachytherapy**

Seungjong Oh, The Catholic University of Korea, Seoul, Korea and Research Institute of Biomedical Engineering, Jacob Scott, Moffitt Cancer Center, Tampa, Florida, Dong Hoon Shin, Korea Institute of Nuclear Nonproliferation and Control, Daejeon, Korea, Tae-Suk Suha, Department of Biomedical Engineering, The Catholic University of Korea, Seoul, Korea and Research Institute of Biomedical Engineering, Siyong Kima, Mayo Clinic, Jacksonville, Florida 32224  
Paper, Medical Physics, Vol 36 (9), September 2009

### **BTDrud06PA. Beta dosimetry with microMOSFETs for endovascular brachytherapy**

E. Drud, M. Todorovic, T. Schonborn, R. Schmidt, Dept. of Radiotherapy and Radio-oncology, Center for Diagnostic Imaging and Image Guided Therapy, University Medical Center Hamburg-Eppendorf, Germany  
Paper, Medical Physics, Vol 51 (5977-5986), December 2006

### **BTSadeghi06PA. Clinical Use of Linear Array MOSFET for Urethral Dose Verification in Prostate High Dose Rate Brachytherapy**

A Sadeghi<sup>\*12</sup>, B Prestidge<sup>12</sup>, J Lee<sup>2</sup>, I Jurkovic<sup>2</sup>, W Bice<sup>23</sup>, (1) Texas Cancer Clinic, San Antonio, Texas,(2) University of Texas Health Science Center at San Antonio, San Antonio, Texas,(3) International Medical Physics Services, Helotes, TX  
Poster Paper, AAPM 2006



**BRACHYTHERAPY**

**BT Axelrod06PA. Characterization of MOSFET Response to the Xofo X-Ray Brachytherapy Source**

S Axelrod\*, T Rusch, Xofo Inc, Fremont, CA  
Poster Paper, AAPM 2006

**BTCygler06PA. Feasibility study of using MOSFET detectors for in vivo dosimetry during permanent low-dose-rate prostate implants**

Joanna E. Cygler\*, Abdelhamid Saoudi, Gad Perry, Christopher Morash, Choan E, The Ottawa Hospital Regional Cancer Center, Ottawa, Canada  
Paper, Radiotherapy and Oncology 80 (2006) 296–301

**BTRieke04PA. Dosimetric Characterization and Feasibility Testing for a New Electronic High Dose Rate Brachytherapy Source**

J.W. Rieke<sup>1</sup>, M. Zaider<sup>2</sup>, D.A. Silvern<sup>3</sup>, T.W. Rusch<sup>4</sup>, S.D. Hansen<sup>4</sup>, (1) University of Washington and Overlake Hospital Cancer Center, Bellevue, WA, (2) Memorial Sloan-Kettering Cancer Center, New York, NY, (3) Rabin Medical Center, Petah Tikva, Israel, (4) Xofo microTube, Inc., Fremont, CA  
International Journal of Radiation Oncology, Biology, Physics, Vol. 60 (1) (Supplement), p. S592, September 2004

**BT Niu04PA. Dosimetric characteristics of the Leipzig surface applicators used in the high dose rate brachy radiotherapy**

H. Niu, W.C. His, J.C.H. Chu, M.C. Kirk, Rush University Medical Center, Chicago, Illinois, E. Kouwenhoven, Nucletron BV, Veenendaal, The Netherlands  
Paper, Medical Physics, Vol 31 (12), p. 3372-3377, December 2004

**BTKirichenko04PA. Feasibility Study of Rectal Balloon-Delivery System for Prostate Immobilization, Rectal Wall Localization, Absolute Dosimetry and Targeted Delivery**

A.V. Kirichenko, T.A. Rich, University of Virginia, Charlottesville, VA  
International Journal of Radiation Oncology, Biology, Physics, Vol. 60 (1) (Supplement), pp. S447-S448, September 2004

**BTToye00PA. An experimental test of an automated dosimetry system for Brachytherapy sources**

W.C. Toye, K.R. Das, S.P. Todd, and P.N. Johnston, Melbourne, Australia  
Australasian Bioengineering Conference 1999 & AAPM 2000

**BTFurstoss08AB. MOSFET In-Vivo dosimetry for colorectal cancer patients treated with shielded brachytherapy**

A. Furstoss<sup>1</sup>, X. Yan<sup>1</sup>, B. Reniers<sup>3</sup>, E. Poon<sup>1</sup>, A. Halli<sup>5</sup>, F. Verhaegen<sup>6</sup>  
1McGill University, Montreal, Quebec, CA, 3Montreal General Hospital, Montreal, QC, CA, 5Best Medical Canada Ltd, Ottawa, ON, CA, 6McGill University Health Center, Montreal, QC, CA  
Abstract, Medical Physics, Vol. 35 (6), June 2008

**BRACHYTHERAPY**

**BTSabbas08AB. Dose verification of mammosite treatments with MOSFET dosimeters**

A Sabbas, L Nedialkova, S Trichter, F Kulidzhanov, M Hayes, B Parashar, P Patel, and D Nori, New York Presbyterian Hospital/ Cornell, New York, NY  
Abstract, Medical Physics, Vol. 35 (6), June 2008

**BTTakahashi08AB. Uncertainty of real time in vivo dosimetry with MOSFET linear array in I-125 prostate permanent implant brachytherapy**

Y Takahashi<sup>1</sup>, H Tachibana<sup>2</sup>, I Sumida<sup>1</sup>, T Kozuka<sup>2</sup>, A Ito<sup>2</sup>, T Ogata<sup>1</sup>, Y Yoshioka<sup>1</sup>, M Koizumi<sup>3</sup>, T Yamashita<sup>2</sup>, T Inoue<sup>1</sup>  
1Osaka University, Suita, Osaka, JP  
2Japanese Foundation for Cancer Research, Tokyo, JP  
3Osaka University, Tokyo, JP  
Abstract, Medical Physics, Vol. 35 (6), June 2008

**BTSchonborn05AB. MOSFET Dosimeters for use in intra vascular brachytherapy with Sr90/Y90 sources**

T.Schonborn, E. Drud and R. Schmidt, University Clinic Hamburg-Eppendorf, Hamburg, Germany  
Abstract, ESTRO October 30, 2005

**BTTremblay05AB. Characterization and use of MOSFET as in-vivo dosimeters under <sup>192</sup>Ir irradiation for real-time quality assurance**

C Tremblay<sup>1,2</sup>, L Gingras<sup>1,2</sup>, L Archambault<sup>1,2</sup>, M Chrétien<sup>1</sup>, A Martin<sup>1</sup>, R Roy<sup>2</sup>, L Beaulieu<sup>1,2\*</sup>,  
1. Centre Hospitalier Universitaire de Québec, Québec, Québec, CA, Hotel Dieu de Quebec, Quebec, QC, CA, 2. Université Laval, Ste-Foy, Québec, CA, Centre Hospitalier Univ de Quebec, Quebec, QC, CA  
Abstract, AAPM 2005, Medical Physics, Vol. 32, p. 2003, (2005)

**BTHalli05AB. Radiation response of a new Linear MOSFET Array Dosimeter**

A Halli<sup>\*1</sup>, J Cygler<sup>2</sup>, M Brown<sup>1</sup>, I Thomson<sup>1</sup>, A Saoudi<sup>2</sup>, J McCaffrey<sup>3</sup>, (1)Thomson Nielsen Electronics Ltd, Ottawa, ON, CA, (2) Ottawa Regional Cancer Ctr., Ottawa, ON, CA, (3)National Research Council of Canada, Ottawa, ON, CA  
Abstract, Poster Paper, AAPM 2004, Medical Physics Journal, Vol.31(6), pg1912-1913, June 2004  
Abstract & Poster, ESTRO 2005, Radiotherapy & Oncology Journal, Vol 76/ Supplement 2 (2005) S1-2497, pg S195, September 2005.

**BTChiu-Tsao05AB. Evaluation of microMOSFET Dosimeter For Low Dose Measurement of <sup>125</sup>I Seed**

S. Chiu-Tsao<sup>1</sup>, S. Dery<sup>2</sup>, A. Halli<sup>2</sup>, L. Harrison<sup>1</sup>, <sup>1</sup>Beth Israel Medical Center & St. Luke's Roosevelt Hospital Center, New York, NY, <sup>2</sup>Thomson-Nielsen Electronics Ltd., Ottawa, Canada  
Abstract, AAPM 2005, Medical Physics, Vol. 32, p. 2005 (2005)

**BTKohli04AB. Post prostate implant urethral dose measurement with microMOSFET**

K Kohli\*, R Ramaseshan, I Yeung, J Crook, M Islam, Princess Margaret Hospital, Toronto, ON, CA  
Abstract, AAPM 2004, Medical Physics Journal, Vol. 31 (6), pg 1909, June 2004

**BRACHYTHERAPY**

**BTCygler04AB. Measurement of urethral dose profiles in prostate Brachytherapy using a Linear MOSFET Array Dosimeter**

*J.E. Cygler<sup>1</sup>, A. Saoudi<sup>1</sup>, G. Perry<sup>1</sup>, A. Hallif<sup>2</sup>, M. Brown<sup>2</sup>, I. Thomson<sup>2</sup>*

<sup>1</sup>Ottawa Regional Cancer Centre, Ottawa, ON, Canada

<sup>2</sup> Thomson Nielsen Electronics Ltd, Ottawa, ON, Canada.

ESTRO-ABS-GLAC Meeting, May 2004, Barcelona, Spain, Journal of the European Society for Therapeutic Radiology and Oncology, Vol. 71, Supl 2, pg 592-593, 2004

**BTSadeghi03AB. Skin and contralateral breast surface dose associated with MammoSite high dose rate breast brachytherapy**

*A. Sadeghi, B. Prestige, A. Rosenthal, L. Salinas, R. Lee, J. Hevezi*

*Radiation Physics & Oncology, Cancer Therapy & Research center, San Antonio, TX Surgery, SW Texas Methodist Hospital, San Antonio, TX*

Abstract, Brachytherapy 2, pg. 51-60, 2003

**BTLappi02AB. In-vivo dosimetry during implantation and at post-implant calculation of permanent interstitial prostate brachytherapy. Preliminary study**

*S. Lappi, L. Perazzini, P. Lavagnini, F. Cartei, Department of Medical Physics and*

*Department of Radiation Oncology, Azienda Ospedaliera Universitaria S. Anna, Ferrara*

Abstract, ESTRO 2002

**BTDrud06PO. Influence of a commonly used stent type on the dose distribution in endovascular brachytherapy**

*E. Drud, M. Todorovic, T. Schonborn and R. Schmidt, Dept. of Radiotherapy and Radio-oncology, Center for Diagnostic Imaging and Image Guided Therapy, University Medical Center Hamburg-Eppendorf, Germany*

Poster (ESTRO 2006, Leibzig), Radiotherapy & Oncology 2006, Vol.81, Supp. 1, S262

**BTZhang06PO. A Three-Dimensional Quantitative Dose Reduction Analysis in MammoSite Balloon Due to Radiopaque Iodine-Based Contrast Solution in Ir-192 for HDR Brachytherapy: Monte Carlo Calculations and MOSFET Measurements**

*Z Zhang\*, E Parsai, J Feldmeier, Medical University of Ohio, Toledo, OH*

Poster & Presentation, AAPM 2006

**BTParsai06PO. A Quantitative Dose Attenuation Analysis Around Fletcher-Suite Device Due to Stainless Steel Tube for HDR Brachytherapy: Monte Carlo Calculations and MOSFET Measurements**

*E Parsai\*, Z Zhang, J Feldmeier, Medical University of Ohio, Toledo, OH, Medical College of Ohio, Toledo, OH*

Poster & Presentation, AAPM 2006

**BRACHYTHERAPY**

**BTVassy05PO. Verifying correct location of HDR source dwell position in the MammoSite catheter using an integral linear MOSFET dosimeter array**

*D. Vassy<sup>1</sup>, A. Hallif<sup>2</sup>, J. Stubbs<sup>3</sup>, M. Webster<sup>3</sup>, J. Turmel<sup>1</sup>, B. Salazar<sup>3</sup>, (1) Spartanburg Radiation Oncology, Spartanburg, SC, (2) Thomson Nielsen Electronics Ltd., Ottawa, Canada, (3) Proxima Therapeutics, Inc, Alpharetta, GA*

Poster, AAPM 2005, Medical Physics, Vol. 32, p. 1962 (2005)

**BTLappi03PO-PA. Dosimetria in vivo durante le fasi di impianto e di controllo nelle procedure di brachiterapia interstiziale permanente della prostata**

*S. Lappi, L. Perazzini, G. Candini*

*Servizio di Fisica Sanitaria, Azienda Ospedaliera S. Maria della Misericordia Udine*

Poster Paper, AIFM Meeting, Italy, 2003

Note: Presented in Italian

**BTSaoudi01PO. Feasibility study of using microMOSFET detectors for LDR prostate Brachytherapy evaluation during implant procedure**

*A. Saoudi, J.E. Cygler, D. Wilkins, C. Morash, C.E.G. Perry, The Ottawa Regional Cancer Center, Ottawa, Canada*

Poster Paper, AAPM 2001, ABS 2001 & COMP 2001

**BTSood97PO. On line in-vivo dosimetry for intracavitary HDR brachytherapy using MOSFET dosimetry system**

*B.M. Sood, S.M. Deore, D.P. Fontenla, M. Ahmad and B. Vikram, Radiation Oncology Dpt Albert Einstein College of Medicine, Montefiore Medical Center, New York, NY*

Poster Paper, ESTRO 1997

**BTCygler95PO. Application of MOSFET dosimetry in TBI and HDR treatments**

*J. Cygler, G. MacKay et al., Ontario Cancer Research Foundation, Ottawa, Canada*

Poster Paper, AAPM 1995

**BTDrud05PR. Dosimetry with MOSFETs in Endovascular Brachytherapy with beta sources**

*E. Drud, M. Todorovic, H. Thurmann, T. Schonborn, R. Schmidt*

*Department of Radiotherapy & Radio-Oncology, Radiological Physics, Center of Radiology, Universitätsklinikum Hamburg-Eppendorf, Hamburg, Deutschland*

Presentation, ESTRO 2005

**BTLappi02PR. Dosimetria in-vivo durante l'impianto e durante il calcolo post-impianto nella brachiterapia prostatica interstiziale permanente. Studio preliminare**

*S. Lappi, L. Perazzini, P. Lavagnini, F. Cartei, Azienda Ospedaliera – Universitaria S. Anna, Ferrara*

Presentation, October 2002

Note: Presentation in Italian

## BRACHYTHERAPY

### **BTCygler01PR. Use of MOSFET detectors for in-vivo dosimetry during permanent low-dose-rate prostate implants**

*J.E. Cygler, A. Saoudi, D. Wilkins, C. Morash, G. Perry, The Ottawa Regional Cancer Center, Ottawa, Canada*  
Presentation, ABS 2001

## INTRAOPERATIVE RADIOTHERAPY (IORT)

### **IOConsorti05PA. In vivo dosimetry with MOSFETs: dosimetric characterization and first clinical results in intraoperative radiation therapy (IORT)**

*R. Consorti, A. Petrucci, F. Fortunato, A. Soriani, S. Marzi, G. Iaccarino, V. Landoni, M. Benassi, H.S. Filippo Neri, Rome, Italy, Istituto Regina Elena, Rome, Italy*  
Paper, International Journal of Radiation Oncology, Biology, Physics. Vol 63 (3), p. 952-960, November 2005

### **IOConsorti02AB. In-vivo dosimetry using IORT with NOVAC 7 using MOSFETs**

*R. Consorti, A. Petrucci, F. Falbo, A. Soriani, S. Marzi, G. Iaccarino, V. Landoni, M. Benassi, U.O. Fisica Sanitaria, Istituto Regina Elena, Rome, Italy*  
Abstract; English version of paper presented at meeting in Grosseto, Italy, 2002

### **IOCiocca04. Real-time in vivo dosimetry using a micro-MOSFET detector during IORT in early-stage breast cancer**

*M. Ciocca, V. Piazzini, F. Cattani, A. Luini\*\*, P. Veronesi\*\*, V. Galimberti\*\*, M. Intra\*\*, G. Tosi, R. Orecchia\*, U. Veronesi\*\*, Depts. of Medical Physics, \*Radiation Oncology and \*\*Senology, European Institute of Oncology, Milano, Italy*  
Submitted to the ESTRO Annual Meeting, Amsterdam, 2004

### **IOPetrucci03PO. On line MOSFETs in vivo dosimetry system in intraoperative radiation therapy with high dose per pulse dedicated accelerators**

*Dr. ssa Petrucci, Italy*  
Poster, WC2003, Australia, 2003

### **IOConsorti03PO. Caratterizzazione di un sistema on-line per la dosimetria in vivo con rivelatori MOSFET nella IORT**

*R. Consorti, A. Soriani,*  
Poster Paper, AIFM Meeting, Italy, 2003  
*Note: Poster in Italian*

### **IOSoriani03PR. Dosimetria in vivo mediante MOSFET nella radioterapia intraoperatoria (IORT) della mammella**

*A. Soriani, G. Iaccarino, V. Landoni, S. Marzi, M. Benassi*  
*Istituto Regina Elena, Rome Italy*  
Presentation, AIFM Meeting, Italy, 2003

## INTRAOPERATIVE RADIOTHERAPY (IORT)

### **IOConsorti02PR. Dosimetria in-vivo durante IORT con rivelatori MOSFET**

*R. Consorti, A. Petrucci, A. Soriani, M. Benassi, U.O. Fisica Sanitaria, Istituto Regina Elena, Rome, Italy*  
Presentation, Meeting in Grosseto, Italy, 2002  
*Note: Presentation is in Italian*

### **IOConsorti02PR-clinical. Use of MOSFETs in Intra-Operative Radiotherapy: Preliminary studies and clinical experiences**

*R. Consorti, A. Petrucci, U.O. Fisica Sanitaria, A.C.O. San Filippo, Neri, Rome*  
Presentation, ISIOR Meeting, Germany, 2002

### **IOCassola98PO. Evaluation of a dosimeter for Intra-Operative Radiation Therapy**

*S. Cassola and G.S. Ibbott, University of Kentucky*  
Poster Paper, AAPM 1998

## RADIOSURGERY

### **RSKurjewicz05PA. Evaluation of MOSFETs for Gamma Knife<sup>®</sup> Helmet Factor Measurements**

*Laryssa Kurjewicz<sup>1</sup>, Anita Bernd<sup>2</sup>*  
*<sup>1</sup>University of Winnipeg & <sup>2</sup>CancerCare Manitoba, and Winnipeg Center for Gamma Knife<sup>®</sup> Surgery, Winnipeg MB*  
Paper, COMP 2005

### **RSFrancescon98PA. Use of a new type of radiochromic film, a new parallel-plate micro-chamber, MOSFETs and TLD 800 Microcubes in the dosimetry of small beams**

*P. Francescon, S. Cora, C. Cavedon, P. Scalchi, S. Reccanello, F. Colombo, Vicenza, Italy*  
Paper, Medical Physics, Vol. 25 (4), pg. 503-511, January 1998

### **RSScalchi96AB. Dosimetry of small beams of 6MV x-rays for stereotactic radiosurgery: An intercomparison among different dosimeters**

*P. Francescon, S. Cora, P. Scalchi, F. Colombo, ULSS no. 6, Vicenza, Italy*  
Abstract, Radiotherapy and Oncology, Supplement 1 to Vol. 40, 1996

### **RSWojcicka05PO. Commissioning a 5 Mm circular cone for Linac-based stereotactic radiosurgery using microMOSFET and polymer gel**

*J Wojcicka\*, R Kudynski, D Lasher, G Fortier, York Cancer Center, York, PA*  
Poster Paper, AAPM 2005

### **RSFrancescon05AR. "CyberKnife Dosimetric Beam Characteristics: Comparison Between Experimental Results & Monte Carlo Simulation"**

*Francescon P, Cora S, Cavedon C, Scalchi P, Stancanello J*  
Book Article, Robotic Radiosurgery Vol. 1, Mould R F, CyberKnife Society Press, Sunnyvale, California, p. 71-81, 2005.

## RADIOSURGERY

### **RSWu94PO. Performance of a new dosimetry system with MOSFET sensor for radiosurgery applications**

A. Wu, A. Maiz, K. Shortt, G. MacKay et al., Allegheny General Hospital, Pittsburgh, PA  
Poster Paper, AAPM 1994

## TBI – TOTAL BODY IRRADIATION

### **TBCranmer-Sargison07AB. Using a Commercial MOSFET System for TBI in-vivo Dosimetry: Characterization, Calibration, and Mid-Plane Dose Calculations**

G Cranmer-Sargison, C Lapointe, Saskatoon Cancer Center, Saskatoon, SK  
Abstract, AAPM 2007

### **TBScalchi97AB. MOSFET dosimetry for 6MV radiotherapy beams**

P. Scalchi, P. Francescon, G. Terrin, Ospedale di Vicenza, Italy  
Abstract, ESTRO 1997

### **TBCygler95PO. Application of MOSFET dosimetry in TBI and HDR treatments**

J. Cygler, G. MacKay et al., Ontario Cancer Research Foundation, Ottawa, Canada  
Poster Paper, AAPM 1995

### **TBMarini02PR. L'uso dei MOSFET per la dosimetria in-vivo tecnica TBI**

P. Marini, G. Barboni, E. Richetta, Ospedale di Vicenza, Italy  
Presentation, MOSFET Symposium, Vicenza, Italy, 2002  
Note: Presentation is in Italian

### **TBGuglielmi02PR. Uso dei MOSFETs in TBI. La nostra esperienza**

R. Guglielmi, ULSS no. 6, Vicenza Italy  
Presentation, MOSFET Symposium, Vicenza, Italy, 2002  
Note: Presentation is in Italian

## PROTON THERAPY

### **PTHsi07AB. A Correction Method for the MOSFET Energy Dependence Response to Therapeutic Proton Beams**

Wen C. Hsi<sup>\*1</sup>, Abdelbasset Hallil<sup>2</sup>, and L. Cai L. Wang<sup>3</sup>, (1) Midwest Proton Radiotherapy Institute (MPRI), Bloomington, IN (2) Best Medical Canada, Ltd., Ottawa, ON, K2H 8S1, Canada (3) PartTec Ltd., Bloomington, IN  
Abstract, AAPM 2007

## PROTON THERAPY

### **PTKohno06AB-PO. Experimental Evaluation of a MOSFET Dosimeter for Therapeutic Proton Beams**

R Kohno<sup>\*1</sup>, T Nishio<sup>1</sup>, T Miyagishi-Gomi<sup>1</sup>, K Hotta<sup>2</sup>, Y Igarashi<sup>3</sup>, T Ogino<sup>1</sup>, (1)National Cancer Center Hospital East, Kashiwa, Chiba, Japan, (2) University of Tsukuba, Tsukuba, Ibaraki, Japan, (3)TM medical Corporation, Shinjuku-ku, Tokyo, Japan  
Abstract & Poster, AAPM 2006

## DIAGNOSTIC RADIOLOGY, FLUOROSCOPY, CT, MAMMOGRAPHY

### **DRYoshizumi07PA. Validation of metal oxide semiconductor field effect transistor technology for organ dose assessment during CT: Comparison with Thermoluminescent Dosimetry**

Terry T. Yoshizumi<sup>1</sup>, Philip C. Goodman<sup>1</sup>, Donald P. Frush<sup>1</sup>, Giao Nguyen<sup>2</sup>, Greta Toncheva<sup>2</sup>, Maksudur Sarder<sup>3</sup>, Lottie Barnes<sup>2</sup>  
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<sup>2</sup>Division of Radiation Safety, Duke University Medical Center, Durham, NC.  
<sup>3</sup>Radiation Safety Office, University of Arkansas  
Paper, AJR:188, 2007

### **DRMukundan07PA. MOSFET Dosimetry for Radiation Dose Assessment of Bismuth Shielding of the Eye in Children**

S. Mukundan, P. Wang, D. Frush, T. Yoshizumi, J. Marcus, E. Kloeblen, M. Moore  
Department of Radiology, Duke University Medical Center, DUMC  
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### **DRHollingsworth07PA. Pediatric Cardiac-Gated CT Angiography: Assessment of Radiation Dose**

C. Hollingsworth<sup>1</sup>, T. Yoshizumi<sup>1,2</sup>, D. Frush<sup>1</sup>, F. Chan<sup>3</sup>, G. Toncheva<sup>2</sup>, G. Nguyen<sup>2</sup>, C. Lowry<sup>1</sup>, L. Hurwitz<sup>1</sup>  
<sup>1</sup>Department of Radiology, Division of Pediatric Radiology, Duke University Medical Center, Durham, NC.  
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<sup>3</sup>Department of Radiology, Stanford University Medical Center, Palo Alto, CA.  
Paper, American Journal of Roentgenology : 189, July 2007

### **DRFrush06PA. Conventional and CT angiography in children: dosimetry and dose comparisons**

Donald Frush<sup>1</sup>, Terry Yoshizumi<sup>2</sup>  
<sup>1</sup>Division of Pediatric Radiology, Department of Radiology, Duke University Medical Center, Durham, NC  
<sup>2</sup>Radiation Safety Division, Duke University Medical Center, Durham, NC  
Paper, Pediatric Radiology Journal: Volume 36, Supplement 2, September 2006

**DIAGNOSTIC RADIOLOGY, FLUOROSCOPY, CT, MAMMOGRAPHY**

**DRHurwitz06PA-Breast. Radiation Dose to the Female Breast from 16-MDCT Body Protocols**

L. Hurwitz<sup>1</sup>, T. Yoshizumi<sup>1,2</sup>, R. Reiman<sup>1</sup>, E. Paulson<sup>1</sup>, D. Frush<sup>1</sup>, G. Nguyen<sup>2</sup>, G. Tonchova<sup>2</sup>, P. Goodman<sup>1</sup> <sup>1</sup>Department of Radiology, Duke University Medical Center, DUMC 3808, Durham, NC <sup>2</sup>Radiation Safety Division, Duke University Health System, Durham, NC  
Paper, American Journal of Roentgenology: 186, June 2006

**DRHurwitz06PA-Fetus. Radiation Dose to the Fetus from Body MDCT During Early Gestation**

L. Hurwitz<sup>1</sup>, T. Yoshizumi<sup>1,2</sup>, R. Reiman<sup>1,2</sup>, P. Goodman<sup>1</sup>, E. Paulson<sup>1</sup>, D. Frush<sup>1</sup>, G. Tonchova<sup>2</sup>, G. Nguyen<sup>2</sup>, L. Barnes<sup>2</sup> <sup>1</sup>Department of Radiology, Duke University Medical Center, DUMC 3808, Durham, NC <sup>2</sup>Radiation Safety Division, Duke University Health System, Durham, NC  
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**DRJaffe06PA. Optimization of Multiplanar Reformations from Isotropic Data Sets Acquired with 16-Detector Row Helical CT Scanner<sup>1</sup>**

T. Jaffe, R. Nelson, G.A. Johnson, E. Lee, T. Yoshizumi, C. Lowry, A. Bullard, D. DeLong, E. Paulson <sup>1</sup> Department of Radiology, Duke University Medical Center, Durham, NC  
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**DRJones05PA. MOSFET dosimeter depth-dose measurements in heterogeneous tissue-equivalent phantoms at diagnostic x-ray energies**

A. K. Jones, F. D. Pazik, D. E. Hintenlang<sup>a</sup>, and W. E. Bolch<sup>a,b</sup>  
Department of Nuclear and Radiological Engineering, University of Florida, Gainesville FL  
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G. Toncheva<sup>1</sup>, T. Yoshizumi<sup>1</sup>, G. Nguyen<sup>1</sup>, D. Frush<sup>1</sup>, J. Racadio<sup>2</sup>, N. Luckau<sup>1</sup>, A. Halli<sup>3</sup>, D. Stueve<sup>4</sup>, (1) Duke University Medical Center, Durham, NC, (2) Cincinnati Children's Hospital Medical Center, Cincinnati, OH, (3) Thomson Nielsen Electronics Ltd., Ottawa, Canada, (4) Philips Medical System, Bothell, WA  
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J. Lehmann<sup>1,2</sup>, R. Stern<sup>2</sup>, Z. Goldberg<sup>2</sup>, (1) University of California Lawrence Livermore National Laboratory, Livermore, CA, (2) University of California Davis Cancer Center, Sacramento, CA  
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**DIAGNOSTIC RADIOLOGY, FLUOROSCOPY, CT, MAMMOGRAPHY**

**DRWang04PA. Monte Carlo modeling of a High-Sensitivity MOSFET dosimeter for low- and medium-energy photon sources**

B. Wang, X.G. Xu<sup>1</sup>, Rensselaer Polytechnic Institute, Troy, New York, C.H. Kim, Hanyang University, Seoul, Korea  
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<sup>1</sup>*Department of Biomedical Engineering and Medical Physics, North Staffordshire Hospital, Staffordshire, UK*  
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*M. Lemire, McGill University, Montreal, Canada*  
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*T Yoshizumi<sup>1</sup>, D Frush<sup>1</sup>, E Samei<sup>1</sup>, P Goodman<sup>1</sup>, P Simon<sup>2</sup>, G Toncheva<sup>1</sup>, G Nguyen<sup>1</sup>, L Barnes<sup>1</sup>, C Lowry<sup>1</sup>, (1) Duke University Medical Center, Durham, NC, (2)GE Medical Systems, Waukesha, WI*  
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**DRCampbell04PA. Quantifying and Minimizing Radiation Exposure During Pediatric Cardiac Catheterization**

*R.M. Campbell<sup>1</sup>, M.J. Strieper<sup>1</sup>, P.A. Frias<sup>1</sup>, G. Jeager<sup>1</sup>, G. Balfour<sup>1</sup>, L. Costello<sup>1</sup> and K.M. Sullivan<sup>2</sup>, (1)Childrens Healthcare of Atlanta, Atlanta, GA, (2)Emory University, Atlanta, GA*  
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*T. Yoshizumi, M. Sarder, P. Goodman, D. Frush, L. Barnes, G. Nguyen*  
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**DRBenevides03AB. Characterization of MOSFET dosimeters for applications in mammography dosimetry**

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**DRColetti02AB. Evaluation of a MOSFET patient dose verification system for CT dosimetry**

*J. Coletti, R. Person, A. Kalend, J. Hogg, West Virginia University, Morgantown, WV*  
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**DRPorter99PO. Measurement of radiation exposure during pediatric cardiac catheterization**

*A. Porter, R.M. Campbell, et. al. Egleston Children's Hosp., Emory University, Atlanta, GA*  
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### **DRHussain07PO. Free in air characterization of Metal Oxide Semiconductor Field Effect Transistor (MOSFET) Dosimeters using computed tomography radiation beam delivery system**

*I Hussain M.Sc, S Anderson B.S. (BME), B Yee R.T. (R) (CT), R. Kaufman M.D., St. Jude Children's Research Hospital, Memphis, TN  
Poster, AAPM 2007*

### **DRBelliPO. Misure sperimentali di dose in ingresso con differenti tipologie di rivelatori in mammografia analogical e digitale**

*G. Belli, B. Lazzari, S. Mazzocchi, F. Rossi, P. Salucci, A. Taddeucci, G. Zatelli  
U.O. Fisica Sanitaria, Azienda Ospedaliera Careggi, Firenze, Italy  
Fisica Sanitaria, Azienda Sanitaria Fiorentina, Firenze, Italy  
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### **DRBercha09PR. Characterization of next generation MOSFET (Metal Oxide Semiconductor Field Effect Transistor) radiation detectors under scatter conditions using CT radiation beam delivery system**

*\*I. H. Bercha<sup>1,2</sup>, MSc, A. Maghsoudpour<sup>1,2</sup>, MSc., G. S. Keyes<sup>1</sup>, PhD, R. A. Kaufman<sup>1,2</sup>, MD, 1 Univ. of Tennessee Health Science Center, 2 St. Jude Children's Research Hospital, Memphis, TN.  
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### **DRDeMarco05PR. A Monte-Carlo based method to estimate radiation dose from multidetector helical CT: Verification in Anthropomorphic phantoms**

*JJ DeMarco<sup>1</sup>, C H Cagnon<sup>1</sup>, D D Cody<sup>2</sup>, D M Stevens<sup>2</sup>, C H McCollough<sup>3</sup>, J O'Daniel<sup>2</sup> and M F McNitt-Gray  
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### **DRJones02PR/AB. Characterization of high-sensitivity, isotropic p-MOSFET dosimeters and a new tissue-equivalent plastic for use in pediatric anthropomorphic phantoms**

*A. Jones, F. Pazik, D. Hintenlang, W. Bolch, University of Florida, Gainesville, FL  
Presentation and Abstract, AAPM 2002*

## TECHNICAL NOTES

### **T1. Dose reproducibility assessment for the Thomson and Nielsen Electronic dosimetry systems**

*Andrew Hartshorn*

An internally generated technical note that describes manufacture and QC testing of TN-502RD dosimeters and compares results to dose reproducibility data for TLD and Diode systems.

## TECHNICAL NOTES

### **T2. Dose depth measurements using MOSFETS, diodes and ion chambers**

*Gary MacKay*

An internally generated technical note that describes the effect of increasing beam size, and beam energy for photons and electrons and the use of build up materials to achieve dose equilibrium.

### **T3. Reproducibility using model TN-RD-22 Dual Bias Supply**

*Andrew Hartshorn*

An internally generated technical note that describes the enhanced dose to dose reproducibility available to MOSFET users who use the High Sensitivity setting on the TN-RD-22 bias supply for verifying doses below 75cGy.

### **T4. Introduction to the MOSFET dosimeter**

*Gary MacKay*

An internally generated technical note that describes the physics and radiation response mechanisms of the TN MOSFET.

### **T5. Patient dose measurements in fluoroscopically guided procedures using the TN-RD-50 dosimetry system**

*Gary MacKay*

An internally generated technical note delineating the background for dose measurements in this application and the response of the MOSFET dosimeter to angiographic biplane X ray beams.

### **T6. Cost recovery using the TN-RD-50 Patient Dose Verification System**

*Ian Thomson*

An internally generated technical note that describes the cost-saving benefit of the TN-RD-50. (For US reference only).

### **T7. MOSFET dosimeter specifications**

An internally generated Technical Note designed to provide additional specifications for the MOSFET dosimeters, such as dimensions. It also acts as a guideline for choosing Bias Supply and MOSFET combinations for specific applications.

### **T8. Linear MOSFET 5ive Array Application in Prostate Brachytherapy and Correction Factors for the MOSFET 20 System (model TN-RD-51)**

An internally generated technical note on using the Linear MOSFET 5ive Array for prostate brachytherapy.

### **T9. MOSFET Dosimeters for Low-Dose Measurements**

An internally generated technical note on using MOSFETs for measuring low doses.

## PROCEDURES

*(Internally generated technical notes on using MOSFET dosimeters in specific applications)*

### **PR1. Procedure 1. Linear 5ive MOSFET Array in clinical brachytherapy**

### **PR2. Procedure 2. MOSFET Dosimeters in IGRT & TomoTherapy®**

## PROCEDURES

**PR3. Procedure 3. MOSFET Dosimeters in IMRT QA & In-vivo**

**PR4. Protocol – Brachytherapy**

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