

Peer reviewed journal papers

- Haisong Liu, Jun Li, Evangelos Pappas, David Andrews, James Evans, Maria Werner-Wasik, Yan Yu, Adam Dicker, and Wenyin Shi, 'Dosimetric validation for an automatic brain metastases planning software using single isocenter dynamic conformal arcs', accepted for publication in *Journal of applied clinical medical physics*, (2016)
- Papoutsaki MV, Maris TG, Pappas E, Papadakis AE, Damilakis J. "Dosimetric characteristics of a new polymer gel and their dependence on post-preparation and post-irradiation time: Effect on X-ray beam profile measurements *Phys Med.* S1120-1797(13), 2013
- Moutsatsos A, Karaiskos P, Petrokokkinos L, Sakelliou L, Pantelis E, Georgiou E, Torrens M, Seimenis I. 'Assessment and characterization of the total geometric uncertainty in Gamma Knife radiosurgery using polymer gels' *Med Phys.* Mar;40(3):031704, 2013
- Pantelis E, Moutsatsos A, Zourari K, Petrokokkinos L, Sakelliou L, Kilby W, Antypas C, Papagiannis P, Karaiskos P, Georgiou E, Seimenis I. 'On the output factor measurements of the CyberKnife iris collimator small fields: Experimental determination of the $k(Q(\text{clin}), Q(\text{msr}))$ ($f(\text{clin}), f(\text{msr})$) correction factors for microchamber and diode detectors' *Med Phys.* Aug;39(8):4875-85, 2012
- Moutsatsos A, Petrokokkinos L, Karaiskos P, Papagiannis P, Georgiou E, Dardoufas K, Sandilos P, Torrens M, Pantelis E, Kantemiris I, Sakelliou L, Seimenis I. 'Gamma knife output factor measurements using VIP polymer gel dosimetry' *Med Phys.* Sep;36(9):4277-87, 2009
- Pappas E., Maris T.G., Manolopoulos S., Zacharopoulou F., Papadakis A., Green S. and Wonjnecki C. "Small SRS photon field profile dosimetry performed using a PinPoint air ion chamber, a diamond detector, a novel silicon-diode array (DOSI) and polymer gel dosimetry. Analysis and intercomparison" *Med. Phys.* 35(10), p.4640-4648, 2008
- Papadakis A.E., Maris T.G., Zacharopoulou F., Pappas E., Zacharakis G. and Damilakis J. "An evaluation of the dosimetric performance characteristics of N-vinylpyrrolidone-based polymer gels" *Phys. Med. Biol.* 52, p.5069-5083, 2007
- Pappas E., Maris T.G., Papadakis A., Zacharopoulou F., Damilakis J., Papanikolaou N. and Gourtsoyiannis N. "Experimental determination of the effect of detector size on profile measurements in narrow photon beams" *Med. Phys.* 33(10), p.3700-3710, 2005
- Pappas E., Petrokokkinos L., Angelopoulos A., Maris T.G., Kozicki M., Dalezios I. and Koulolias V. "Relative output factor measurements of a 5 mm diameter radiosurgical photon beam using polymer gel dosimetry" *Med. Phys.* 32(6), p.1513-1520, 2005

- Pappas E., Angelopoulos A., Kipouros P., Vlachos L., Xenofos S. and Seimenis I. "Evaluation of the performance of VIPAR polymer gels using a variety of x-ray and electron beams" *Phys. Med. Biol.* 48, p.N65-N73, 2003
- Baras P., Seimenis I., Kipouros P., Papagiannis P., Angelopoulos A., Sakelliou L., Pappas E., Baltas D., Karaiskos P., Sandilos P. and Vlachos L. "Polymer gel dosimetry using a 3D MRI acquisition technique" *Med. Phys.* 29(11), p.2506-2516, 2002
- Kipouros P., Pappas E., Baras P., Hatzipanayoti D., Karaiskos P., Sakelliou L., Sandilos P. and Seimenis I. "Wide dynamic dose range VIPAR polymer gel – MRI dosimetry in the presence of steep dose gradients" *Phys. Med. Biol.* 46, p.2143-2159, 2001
- Papagiannis P., Pappas E., Kipouros P., Angelopoulos A., Sakelliou L., Baras P., Karaiskos P., Seimenis I., Sandilos P. and Baltas D. "Dosimetry close to an ¹⁹²Ir HDR source using N-vinylpyrrolidone based polymer gels and Magnetic Resonance Imaging" *Med. Phys.* 28(7), p.1416-1426, 2001
- Pappas E., Seimenis I., Angelopoulos A., Georgolopoulou P., Kamariotaki-Paparigopoulou M., Maris T., Sakelliou L., Sandilos P. and Vlachos L. "Narrow stereotactic beam profile measurements using N-vinylpyrrolidone based polymer gels and magnetic resonance imaging" *Phys. Med. Biol.* 46, p. 783-797, 2001
- Pappas E., Maris T., Angelopoulos A., Paparigopoulou M., Sakelliou L., Sandilos P., Voyiatzi S. and Vlachos L. "A new polymer gel for magnetic resonance imaging (MRI) radiation dosimetry" *Phys. Med. Biol.* 44, p. 2677-2684, 1999

Peer reviewed conference proceedings and papers

- Papanikolaou N., Pappas E., Maris T. G., Boursianis T., Kalaitzakis G., Stathakis S., Gutierrez A. 'Patient-specific quality assurance in stereotactic radiosurgery using gel dosimetry' 12th International Stereotactic Radiosurgery Society Congress, Yokohama, Japan, 2015
- Milickovic N., Baltas D., Pappas E. 'On an individualized QA methodology in stereotactic radiosurgery by the use of 3D-printing technology and polymer gel dosimetry' Deutsche Gesellschaft für Medizinische Physik, Marburg, 2015
- Pappas E., Maris T.G. , Kalaitzakis G., Boursianis T., Makris D., Maravelakis E. 'Innovative QA methodology for true patient-specific Dose Volume Histograms (DVHs) measurements', 3d ESTRO forum, Barcelona, Spain 24-28 April 2015
- E. Pappas, G. Kalaitzakis, T. Boursianis, T. G. Maris, D. Makris and E. Efstathopoulos, 'On the implementation of a novel patient-specific QA process for pre-treatment

radiotherapy plan verification in brain tumor patients. An hypophysis VMAT treatment case study' Conference on Bio-Medical Instrumentation and related Engineering and Physical Sciences, Athens, 2015

- Papoutsaki M.V., Pappas E., Papadakis A., Varveris C., Damilakis J. Maris T.G. "Dosimetric characteristics of N-vinylpyrrolidone based polymer gels: utilization depending on dose range" Journal of Physics: Conference Series 444 , 012068, 2013
- Papoutsaki M.V., Pappas E., Papadakis A., Varveris C., Damilakis J., Maris T.G. "Polymer gel dosimetry utilizing a 2D (SE) and a 2D (HASTE) multiple echo sequences" Journal of Physics: Conference Series 444 (2013) 012088, 2013
- Pappas E., Maris T.G., Manolopoulos S., Zacharopoulou F., Papadakis A., Green S. and Wojnecki C. "Stereotactic radiosurgery photon field profile dosimetry using conventional dosimeters and polymer gel dosimetry. Analysis and inter-comparison" 5th International Conference of Radiotherapy Gel Dosimetry, Crete, Greece, 2008 and Journal of Physics: Conference Series 164, art. no. 012054, 2009
- Pappas E. "On the role of polymer gels in the dosimetry of small photon fields used in radiotherapy" 5th International Conference of Radiotherapy Gel Dosimetry, Crete, Greece, 2008 and Journal of Physics: Conference Series 164, art. no. 012060, 2009
- Maris T.G. and Pappas E. "The 5th International Conference on Radiotherapy Gel Dosimetry (DOSGEL 2008)" Proceedings Editors, Journal of Physics: Conference Series 164 011001, 2009
- Pappas E., Maris T.G., Papadakis A., Zacharopoulou F., Damilakis J., Papanikolaou N. and Gourtsoyiannis N. "Use of polymer gel dosimetry for the determination of the detector size effect on profile measurements of a 5 mm diameter photon beam" 4th International Conference of Radiation Gel Dosimetry, Sherbrook, Canada and Journal of Physics: Conference Series 56 (1), art. no. 040, pp. 245-248, 2006
- Maris T.G., Pappas E., Karolemeas K., Papadakis A.E., Zacharopoulou F., Papanikolaou N. and Gourtsoyiannis N. "3D polymer gel dosimetry using a 3D (DESS) and a 2D MultiEcho SE (MESE) sequence" 4th International Conference of Radiation Gel Dosimetry, Sherbrook, Canada and Journal of Physics: Conference Series 56 (1), art. no. 044, pp. 259-262, 2006
- Zacharopoulou F., Maris T.G., Karolemeas K., Papadakis A.E., Pappas E., Damilakis J. and Gourtsoyiannis N. "Optimization of the T2 parametric image map calculation in MRI polymer gel dosimetry" 4th International Conference of Radiation Gel Dosimetry, Sherbrook, Canada and Journal of Physics: Conference Series 56 (1), art. no. 041, pp. 249-252, 2006

- Papadakis A.E., Perisinakis K., Pappas E., Zacharopoulou F., Damilakis J., Gourtsoyiannis N. and Maris, T.G. "Gel dosimetry in diagnostic radiology: Measurement of the z-axis geometric efficiency in modern MDCT scanners" 4th International Conference of Radiation Gel Dosimetry, Sherbrook, Canada and Journal of Physics: Conference Series 56 (1), art. no. 047, pp. 272-275, 2006
- E. Pappas, T. Maris, L. Petrokokkinos, M. Kozicki, I. Striligas, A. Angelopoulos, L. Sakelliou, "Experimental determination of the PTW Pinpoint ion chamber size effect using polymer gel dosimetry" 14th International Conference of Medical Physics, Nuremberg, Germany and Biomedizinische Technik/Biomedical Engineering 50, Supplementary vol. I, Part 2 p. 1081-2, 2005
- M. Kozicki, L. Petrokokkinos, P. Papagiannis, K. Sakelliou, A. Angelopoulos, E. Pappas, J. M. Rosiak "Study of VIPAR gel dosimeter dose range improvement" 14th International Conference of Medical Physics, Nuremberg, Germany and Biomedizinische Technik/Biomedical Engineering 50, Supplementary vol. I, Part 2, p.1368-9, 2005
- Petrokokkinos, I. Striligas, E. Pappas, P. Baras, P. Sandilos, M. Kozicki, J.M. Rosiak and A. Angelopoulos "Polymer Gel – MRI for the quantification of volume averaging dose underestimation in Gamma knife small field dosimetry", 14th International Conference of Medical Physics, Nuremberg, Germany and Biomedizinische Technik/Biomedical Engineering 50, Supplementary vol. I, Part 1, p. 743-4, 2005
- Pappas E., Papagiannis P., Kipouros P., Seimenis I., Baras P., Karaikos P., Angelopoulos A., Sakelliou L., Sandilos P. and Vlachos L. "Intravascular brachytherapy dosimetry using VIPAR polymer gels" 2nd International Conference of Radiation Gel Dosimetry, Brisbane, Australia, p. 130-132, 2001
- Pappas E., Maris T., Sakeliou L., Angelopoulos A., Sandilos P. and Vlahos L. "Use of a new polymer gel for MRI dosimetry" 1st International Workshop in Radiotherapy Gel Dosimetry Lexington, Kentucky, USA, p. 112-114, 1999

Referred conference presentations:

- Kalaitzakis G., Papanikolaou N., Boursianis T., Pappas E.P., Lahanas V., Makris D., Stathakis S., Watts L., Efstathopoulos E., Maris T.G., Pappas E., "A quality assurance test for the validation of the spatial and dosimetric accuracy of a new technique for the treatment of multiple brain metastases", ECMP 2016, September 1 – 4, Athens, Greece
- E P Pappas, N Papanikolaou, G Kalaitzakis, T Boursianis, D Makris, V Lahanas, I Genitsarios, S Stathakis, L Watts, T G Maris, E Pappas, "Pseudo-In-Vivo Dose Verification of a New Mono-Isocentric Technique for the Treatment of Multiple Brain Metastases", 58th AAPM annual meeting 2016, July 31 – August 4, Washington, DC

- N. Papanikolaou, E. Pappas, T. Maris, R. Teboh Forbang, S. Stojadinovic, S. Stathakis and A. N. Gutierrez, "Stereotactic Treatment of Multiple Brain Metastasis: Pseudo In Vivo Evaluation of Three Different Techniques", ASTRO meeting 2015, October 17-21, San Antonio, Texas
- Pappas E., Maris T.G., Hammoud R., Perkins G., Al Hammadi N. "An innovative method for patient-specific pre-treatment plan-verification (PTPV) in head & neck radiotherapy treatments: preliminary results" 55th ASTRO Annual Meeting, 22-25 September, Atlanta, USA, 2013
- Hammoud R., Sheim S., El Kaissi T., Pappas E., Maris T.G., Vapoutsaki V., Tsakiris G., Al Hammadi N. "Evaluation of a 3D pre-treatment plan verification process for stereotactic radiosurgery (SRS) treatments" 55th ASTRO Annual Meeting, 22-25 September, Atlanta, USA, 2013
- Maris T.G., Papoutsaki M.V., Pappas E., Varveris C. and Damilakis J. "Fitting regression algorithms in qMRI polymer gel dosimetry" Euromar 2013 (European magnetic resonance community), 30 June – 5 July, Crete, Greece, 2013
- Papoutsaki M.V., Pappas E., Varveris C., Damilakis J. and Maris T.G. "The effect of the manufacture methodology on the dosimetric characteristics of normoxic n-vinylpyrrolidone based polymer gels as assessed by qMRI methods" Euromar 2013 (European magnetic resonance community), 30 June – 5 July, Crete, Greece, 2013
- Hammoud R., El Kaissi T., Sheim S., Al Hammadi N., Spirou S., Zaimis G., Bakas A., Pappas E. and Maris T.G. "A Methodology for Stereotactic Radiosurgery Pre-Treatment Plan Verification Using EBT2-Films and Polymer Gel Dosimetry" 2nd International Conference on Bio-Medical Instrumentation and related Engineering and Physical Sciences, 21-22 June, Athens, Greece, 2013
- Pappas E., Maris T. And Sakelliou L. "Quantification of the effect of Magnetic Resonance Imaging resolution on small photon beam profile measurements performed using polymer gel - MRI dosimetry" 2nd International Conference of Imaging Technologies in Biomedical Sciences (ITBS) Milos, Greece, 2006
- Pissakas G., Georgolopoulou P., Kalogeridou M., Andriotis E., Doukaki K., Kosmidou S., Mourgela S., Archontakis G., Pappas E., Kouloulis V., Kouvaris I., Sotiropoulou A. "Stereotactic radiosurgery for benign brain tumors – A single institution experience" 7th International Stereotactic Radiosurgery Society Congress, Brussels, Belgium, 2005

- Pissakas G., Georgolopoulou P., Doukaki K., Kalogeridou M., Kosmidou S., Pappas E., Andriotis E., Arhontakis G. and Sotiropoulou A. "Stereotactic radiosurgery for benign meningiomas" *Radiother. Oncol.* 71:85 Suppl.1, p.S33-S33, 2004
- Pissakas G., Georgolopoulou P., Doukaki K., Kalogeridou M., Kosmidou S., Pappas E., Andriotis E., Arhontakis G. and Sotiropoulou A. "Stereotactic radiosurgery for acoustic neuromas" *Radiother. Oncol.* 71:76 Suppl.1, p. S30-S31, 2004
- Pappas E. and Maris T. "Polymer gel dosimetry using 3-dimensional (3D) magnetic resonance imaging (MRI) sequences" *European Congress of Radiology, ECR, Wien, 2002*
- Kordioli N., Pissakas G., Georgolopoulou K., Doukaki K., Pappas E. and Andriotis A. "Early results of stereotactic radiosurgery in a new unit" *Inter. J. Cancer, Suppl.* 13, p. 460-460, 2002
- Pappas E., Kipouros P., Papagiannis P., Seimenis I. And Sandilos P. "Dosimetry in the presence of steep dose gradients using N-vinylpyrrolidone based polymer gels and MRI" *European Congress of Medical Physics and Clinical Engineering, Belfast, 2001 and Physica Medica, Volume XVII, N. 3, p. 168, 2001*
- Kipouros P., Papagiannis P., Pappas E., Baras P., Karaiskos P., Sakelliou L. And Sandilos P. "MRI techniques for brachytherapy dosimetry using polymer gels" *International Conference of Imaging Technologies in Biomedical Sciences (ITBS) Milos, Greece, 2001*
- Pappas E., Kipouros P., Papagiannis P., Seimenis I. and Sandilos P. "Dosimetry in the presence of steep dose gradients using N-Vinylpyrrolidone based polymer gels and MRI," *Physica Medica, Volume XVII, N. 3, pp. 168, 2001*
- Pappas E., Paparigopoulou M., Angelopoulos A. and Sakelliou L. "A new material for Magnetic Resonance Imaging (MRI) radiation dosimetry" *34th International Conference on Coordination Chemistry, Edinburgh, UK, 2000*