

Darryl G.L. Kaurin, Ph.D., DABR, CHP

OHSU, Radiation Oncology, L-337, Portland, OR 97201, (503)494-8756 kaurind@ohsu.edu

EXPERIENCE

- Oregon Health and Science University, Portland, OR 2002-present
Department of Radiation Oncology
Assistant Professor, Chief Medical Physicist
Carry out dosimetry treatment planning (2-D, 3-D, IMRT), total body irradiation, total skin irradiation, stereotactic radiosurgery, LDR, HDR, in vivo dosimetry (diodes and TLD), weekly chart reviews, monthly and annual accelerator QA, accelerator commissioning, didactic lectures for RTT and residents. Commissioned IMRT and HDR.
- Vanderbilt University Medical Center, Nashville, TN 1997-2002
Department of Radiation Oncology
Assistant Professor and Medical Physicist 2000-2002
Carry out dosimetry treatment planning (2-D and 3-D), total body irradiation, total skin irradiation, stereotactic radiosurgery, low dose-rate brachytherapy, HDR, in vivo dosimetry (diodes and TLD), weekly chart reviews, monthly and annual accelerator QA, accelerator commissioning, didactic lectures for RTT students, teach masters degree health physics course for College of Arts and Sciences.
- Instructor in Medical Physics 1999-2000
Clinical Physics Fellowship/Residency 1997-1999
- Brookhaven National Laboratory, Upton, NY 1996-1997
Safety and Environmental Protection Division, Environmental Monitoring Group
Staff Engineer, Health Physicist
Developed compliance documents for anticipated rule 10 CFR Part 834, Radiation Protection of the Public and the Environment, and NESHAPS for periodic monitoring of minor radioactive effluents.
- Brookhaven National Laboratory, Upton, NY 1991-1996
Department of Advanced Technology, Radiation Sciences Division
Health Physics Associate Level III
Determined incidence of skin ulcer induction as a function of beta particle energy due to hot particles on swine skin. Neutron activation of sources, radiochromic dye film dosimetry, performed pig irradiations, probit and linear regression analysis.
Authored published papers, NUREGs and monthly summaries for NRC sponsors.
Developed α , β , and γ counting systems for assaying isotopic activity of highly enriched uranium samples. Wrote in-house operations manuals.
Analyzed radiation clearance rate data of patients administered radiolabeled antibodies.
Supervised semester interns: high school teachers, undergraduate and graduate students.

EDUCATION

- Rutgers University, New Brunswick, NJ 1994-1996
Ph.D. 1996
Department of Environmental Science, Radiation Science Option
- Colorado State University, Fort Collins, CO 1989-1990
M.S. 1992, Radiological Health Sciences
U.S. Department of Energy Operational Health Physics Fellow

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Concordia College, Moorhead MN 1984-1989
B.A., Cum Laude, 1989
Majors: Physics and Mathematics, Minor: Computer Science

SUPPORTED RESEARCH

Radiotherapy planning via autosegmented brain structures 2002-2004
Principle Investigator: Darryl Kaurin, Agency: NIH/NCI, type: R21 (CA089657)
Direct Costs: \$200,000 (total), my effort: 15%
The objective of this study is to determine if a brain structure autosegmentation algorithm is accurate for use with radiation therapy

CERTIFICATION

American Board of Radiology 2001-Present
Certificate in Therapeutic Radiologic Physics

American Board of Health Physics 1997-Present
Certified Health Physicist through 2009

PROFESSIONAL DEVELOPMENT and SERVICE

Oregon Health and Science University 2004-Present
Clinical Radiation Safety Committee, Alternate

Vanderbilt University Medical Center 2000-2002
Human Subjects Radiation Committee, Institutional Review Board
Radioactive Drug Research Committee, Institutional Review Board
Dose Calculational Member (2000-2001)
Member (2000-2002)

American Association of Physicists in Medicine 1997-Present
Full Member
Radiation Protection Committee, 2001-2004
Task Group #62 Diode In-Vivo Dosimetry, 2000-2005 (Report completed 2005)
Reviewer of submitted journal articles
International Journal of Radiation Oncology Biology Physics
Medical Physics

Health Physics Society 1991-Present
Plenary Member

Toastmasters International 1990-1997
Area Governor Eastern Suffolk County, Club President Brookhaven National Laboratory

Brookhaven National Laboratory Speakers Bureau 1993-1995
Lectured on fundamentals of radiation at Shoreham-Wading River Science Museum, Brookhaven Mini-Semester program, and Half Hollow Hills High School chemistry and physics classes.

PUBLICATIONS AND REPORTS

Yorke, Ellen, R. Alecu, L. Ding, D. Fontenla, A. Kalend, **D. Kaurin**, M Masterson-McGary, G. Marinello, T. Matzen, A. Saini, J. Shi, W. Simon, T. Zhu, X. Zhu, G. Rikner, G. Nilsson. "AAPM Report No. 87 Diode In Vivo Dosimetry for Patients Receiving External Beam Radiation Therapy, Report of Task Group 62 of the Radiation Therapy Committee". Medical Physics Publishing, February, 2005.

Weinber, R., **D.G.L. Kaurin**, , H. Choy, W.J. Curran, R. MacRae, J. S. Kim, J. Kim, S.L. Tucker, P. D. Bonomi, C. Belani, G. Starkschall. "Dosimetry uncertainties of three-dimensional dose reconstruction from two-dimensional data in a multi-institutional study. Journal of Applied Clinical Medical Physics 5(4)15-28, 2004.

Kaurin, D.G.L., J.W. Baum, A.L. Carsten, C.W. Schaefer, P.D. Forbes. "Scab Diameters on Pig Skin Resulting from Hot Particles Exposures under Varying Conditions". Health Physics 81(1)35-46, 2001.

Kaurin, D.G.L., J.W. Baum, A.L. Carsten, and C.W. Schaefer. "Scab Incidence on Pig Skin Resulting from Hot Particles Exposures under Varying Conditions". Health Physics 81(1)47-56, 2001.

Kaurin, D.G.L., A.L. Carsten, J.W. Baum, "Effective Half-lives for Patients Administered Radiolabeled Antibodies and Calculated Dose to the Public in Close Proximity to Patients". Health Physics 78(2):215-221, 2000.

Kaurin, D.G.L., M.J. Maryanski, D.M. Duggan, K.C. Morton, C.W. Coffey. "Use of MRI-based Polymer Gel Dosimetry, Pelvic Phantom, and Virtual Simulation to Verify Setup and Calculated Three-dimensional Dose Distribution for a Prostate Treatment." Proceedings of the 1st International Workshop on Radiotherapy Gel Dosimetry, Lexington, KY, July 21-23, pp.184-186, 1999.

Kaurin, D.G.L., J.W. Baum, A.L. Carsten, J.O. Archambeau, and C.W. Schaefer. "Effects of Radioactive Hot Particles on Pig Skin", NUREG/CR-6531, U.S. Nuclear Regulatory Commission, Washington D.C. 1997.

Barber, D.E., A.L Carsten, **D.G.L. Kaurin**, J.W. Baum, "Doses to the Hand During the Administration of Radiolabeled Antibodies Containing Y-90, Tc-99m, I-131, and Lu-177", NUREG/CR-6493, U.S. Nuclear Regulatory Commission, Washington D.C. 1997.

Kaurin, D.G.L., D.E. Barber, A.L. Carsten, J.W. Baum, "Whole-Body Effective Half-lives for Radiolabeled Antibodies and Related Issues", NUREG/CR-6374, U.S. Nuclear Regulatory Commission, Washington D.C. 1996.

Kaurin, D.G., T.A. Khan, S.G Sullivan, J.W. Baum, "Occupational Dose Reduction at Nuclear Power Plants: Annotated Bibliography of Selected Readings in Radiation Protection and

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ALARA", NUREG/CR-3469, U.S. Nuclear Regulatory Commission, Washington D.C. 1993.

Baum, J.W., **D.G. Kaurin**, M. Waligorski, R. Bird, L.C. Sun, "Progress Report on Hot Particle Studies", NUREG/CR-5725, U.S. Nuclear Regulatory Commission, Washington D.C. 1992.

Baum, J.W., **D.G. Kaurin**, "Reassessment of Data Used in Setting Exposure Limits for 'Hot Particles'", Radiation Protection Dosimetry, Vol.39, No.1/3, pp.49-54, 1991.

PRESENTATIONS

Kaurin, D.G.L. "What Is a Medical Physicist." Seminar presented to the Department of Nuclear Engineering and Radiation Health Physics, Oregon State University, Corvallis, OR, April 6, 2004.

Kaurin, D.G.L. "Clinical Research for Automated Treatment Planning Contours". Presented at the Oregon Society of Radiologic Technologists, Radiation Therapy Group, Fall Symposium, Hillsboro, OR, Oct 4, 2003.

MacRae, R., R. Weinberg, J.S. Kim, **D.G.L. Kaurin**, C. Scott, W. Curran, H. Choy. Sequence Of Chemoradiation And Initial Field Length Predict For Esophagitis During Combined Modality Therapy Of Locally Advanced Non-Small Cell Lung Cancer(NSCLC), ASTRO, 2001.

Kaurin, D.G.L., K. Morton, D. Duggan, C. Coffey. "Use of Ionization Chamber in an Anthropomorphic Pelvic Phantom to Verify Monitor Unit Calculation Accuracy of a Three-dimensional Radiation Treatment Planning System." Presented at the 41st Annual Meeting of the American Association of Physicists in Medicine, Nashville, TN, July 25-29, 1999.

Kaurin, D.G., K. Morton, M. Maryanski, C. Coffey, D. Duggan. "Use of BANG Polymer Gel in an Anthropomorphic Pelvic Phantom for Verification of a Three-dimensional Radiation Treatment Planning System." Presented at the 41st Annual Meeting of the American Association of Physicists in Medicine, Nashville, TN, July 25-29, 1999.

Kaurin, D.G.L. Three-Dimensional Radiation Treatment Planning. Invited talk presented to the Mid-South Society of Radiation Therapy on 10 July 1999.

Kaurin, D.G.L. Interpreting Data from Physics Printouts: Wedges, Independent Jaw, and Beam SSD. In-service presented to Vanderbilt University Radiation Therapists on 09 June 1999.

Kaurin, D.G.L., D.M. Duggan, K.C. McGee, C.W. Coffey. "Use of an ionization chamber in an anthropomorphic head phantom to verify monitor unit calculational accuracy of a three-dimensional radiation treatment planning system". Presented at the 40th Annual Meeting of the American Association of Physicists in Medicine, San Antonio, TX, August 9-13, 1998.

Kaurin, D.G.L., J.W. Baum, M.W. Charles, D.P.J. Darley, J.S. Durham, M.J. Scannell, C.G. Soares. " 'Hot Particle' Intercomparison Dosimetry". BNL-62150, pp.3-28 to 3-30, Vol.3 of the

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Proceedings of the 9th International Congress of the International Congress on Radiation Protection Association, held in Vienna, Austria, April 14-19, 1996.

J.W. Baum, A.L. Carsten, **D.G.L. Kaurin**, C.W. Schaefer. "Acute Skin Lesions Due to Localized 'Hot Particle' Radiation Exposures". BNL-62140, pp.4-57 to 4-59 in Vol.4 of the Proceedings of the 9th International Congress of the International Radiation Protection Association, held in Vienna, Austria, April 14-19, 1996.

Kaurin, D.G.L., J.W. Baum, A.L. Carsten, C.W. Schaefer. "Ulcer Induction as a Function of Beta Particle Energy Due to 'Hot Particles' on the Skin". Presented at the 40th Annual Health Physics Conference, Boston, MA, July 23-27, 1995.

Baum, J.W., **D.G. Kaurin**, A.L. Carsten, C. Slavinsky. "Limits for 'Hot Particles' on Skin", Presented at the 38th Annual Health Physics Conference, Atlanta, GA, July 11-15, 1993.

Baum, J.W., A.L. Carsten, **D.G. Kaurin**, C. Slavinsky. "Effects of 'Hot Particles' on Pig Skin". Presented at the 41st Annual Meeting of the Radiation Research Society, March 20-25, 199

