Name: Kenneth P. Gall

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Education:

1981	A.B.	Colby College, Waterville, ME
1985	M.A.	Boston University, Boston, MA (Physics)
1989	Ph.D.	Boston University, Boston, MA (Nuclear/Particle Physics)

Licensure and Certification:

1994	American Board of Radiology Certification in Therapeutic Radiological Physics
1997	State of Texas License, Therapeutic Radiological Physics

Academic Appointments:

1988-1996	Instructor in Radiation Therapy, **Harvard Medical School**, Massachusetts General Hospital, Boston, MA
1996-2003	Associate Professor, **with Tenure** University of Texas Southwestern Medical School Dallas, Texas
2003-2006	Visiting Scientist Plasma Science and Fusion Center **Massachusetts Institute of Technology** Cambridge, Massachusetts

Hospital Appointments:

1988-1990	Assistant in Radiation Therapy (Biophysics), Massachusetts General Hospital, Boston, MA
1990-1996	Assistant Radiation Biophysicist, Massachusetts General Hospital, Boston, MA
1996-2002	Director, Division of Physics and Dosimetry Parkland Health and Hospital System Dallas, Texas
2000-2002	Director of Physics and Dosimetry St Paul University Hospital Dallas, Texas

1996-2003	Director of UT Southwestern Radiosurgery Program Zale-Lipshy University Hospital Dallas, Texas

Professional Positions:

2003 - 2005	Founder and CEO, Still River Systems
2005 – 2013	Chief Technology Officer, Mevion Medical Systems / Still River Systems
2013 - present	Technical Consultant, Mevion Medical Systems

Corporate Positions:

1999-2001	Executive Vice President and Chief Medical Physicist, Proton Therapy Corporation of America, Dallas, Texas
2003 - 2009	President, Still River Systems
2009 – 2012	Corporate Officer Mevion Medical Systems (formerly Still River Systems)

Other Professional Positions and Major Visiting Appointments:

1982-1984	University Teaching Fellowship, Boston University, Boston, MA
1984-1988	University Research Fellowship, National Science Foundation, Boston University, Boston, MA
1985-1988	Visiting Research Assistant, Brookhaven National Laboratory, Upton, NY
1990	Consultant to Loma Linda Medical Center (Proton Radiotherapy Center Commissioning), Loma Linda, CA
1995-1998	Adjunct Professor, Department of Physics, University of Massachusetts, Amherst, MA
1997	Adjunct Professor, Department of Physics University of North Texas
1997-2003	Full Member, Graduate Faculty, Biomedical Engineering Graduate Program, University of Texas Southwestern Medical Center
1997-2003	Full Member, Graduate Faculty, Radiological Sciences Program, University of Texas Southwestern Medical Center

1999-2001	Executive Vice President and Chief Medical Physicist, Proton Therapy Corporation of America, Dallas, Texas

Major Committee Assignments:

1991-1996	MGH Northeast Proton Therapy Center Radiation Safety Committee, **Chair**
1992,1993	MGH Northeast Proton Therapy Center Construction/ Equipment Committee
1998-2003	UTSWMC Accuray Stereotactic Radiotherapy Program, Steering Committee

Memberships, Offices and Committee Assignments in Professional Societies:

1988-present	American Association of Physicists in Medicine, Member
1988-1996	American Association of Physicists in Medicine, New England Chapter, Member
1988-present	Proton Therapy Cooperative Group, Member
1990-1996	Proton Therapy Cooperative Group, Facilities **Co-chair**
1993-2009	American Society for Therapeutic Radiology and Oncology, Member
1993-2004	Council on Ionizing Radiation Measurement Standardization, Member
1994-present	American College of Radiology, Member
1994-1998	American Association of Physicists in Medicine, Task Group 55, Member
1995	National Institutes of Health Small Business Innovative Research Grant Study Section, Special Review Member
1996	Council on Ionizing Radiation Measurement Standardization Two-Dimensional Dose Measurement Committee Report Author
1997-2003	American Association of Physicists in Medicine, Southwest Chapter, Member
1999-2003	National Institutes of Health, Special Study Section, Member, **Chair 6/01, 11/01, 11/02, 3/03**
2000	National Institutes of Health, Image Guided Prostate Cancer Therapy Program, Study Section, Member
1988-1996, 2004-present	American Association of Physicists in Medicine, New England Chapter, Member

Major Research Interests:

1. Proton therapy treatment system development
2. Radiotherapy dosimetry.
3. Automation of image guided patient positioning for radiation therapy.

Research Funding Information:

1988-1996	NIH/P01 Proton Radiation Therapy Research H Suit, MD, D Phil, Principal Investigator $23,000,000
1990-1991	NIH Planning & Development for a Proton Facility at MGH M Goitein, Ph.D, Principal Investigator **K Gall, PhD, co-Principal Investigator** $749,000
1992-1996	NIH/C06 NPTC Construction Grant M Goitein, Ph.D, Principal Investigator $3,440,000
1996-2000	Department of Commerce National Institute of Standards and Technology Construction and Characterization of a Water Calorimeter **K Gall, Principal Investigator**

Corporate Funding Information:

2005 - 2012	Private Investments in Preferred Stock Caxton, Venrock, CHL Medical, ProQuest and private investors Operational funding of Still River Systems / Mevion Medical Systems 5 funding rounds, totaling **$140,000,000**

Principal Clinical and Hospital Service Responsibilities:

Massachusetts General Hospital (1988-1996):

1990-1995	Brachytherapy Rotations
1992,1993	Radiotherapy Linear Accelerator Commissioning Team
1991-1996	Radiotherapy Beam Calibrations, Coordinator
1992-1996	Advising and oversight of dosimetrists (treatment planning)
1993-1996	Photoelectron Radiosurgery Development Team
1991-1994	Proton Beam Stereotactic Radiotherapy Team
1994-1996	Proton Beam Stereotactic Radiotherapy Team, **Physics Chief**

University of Texas Southwestern Medical Center (1996-2003):

1996-2003	**Director**, Division of Physics and Dosimetry
1996-2001	Brachytherapy Rotations
1996-2001	Radiation Oncology Physics Quality Assurance/ Calibrations Rotations
1996-2003	UTSWMC Accuray Stereotactic Radiotherapy Program, **Physics Chief**

Self Report of Teaching:

Hospital Contributions

1989-1996	**Radiation Therapy Physics** MGH Resident's Training Summer Course Lecturer 5-10 Residents and other Students 2-4 hours/year
1989-90	**Radiation Therapy Physics** MGH Resident's Training Program Lecturer 10-15 Residents and other Students 2 hours
1991-92, 95	**Radiation Therapy Physics** MGH Resident's Training Program Lecturer 10-15 Residents and other Students 4 hours
1993, 1995	**Patient Alignment** MGH Radiation Therapist's Ongoing Training Program Lecturer 10 Therapists and other Students 2 hours
1993, 1995	**Proton Beam Calibrations** MGH Radiation Physics Ongoing Training Program Lecturer 10 Physicists and other Students 2 hours
1997	**Radiation Therapy** Biomedical Engineering Program, University of Texas Arlington Lecturer, 15 Biomedical Engineering Students 2 hours
1998-2003	**Radiosurgery** Biomedical Engineering Program, University of Texas Arlington Lecturer, 15 Biomedical Engineering Students, 2 hours each year

Student Advising Responsibilities

1991	**Post-Doctoral Supervision** Training and Advising of 2 (1 MGH and 1 Harvard Cyclotron) Post-Doctoral Fellows (Skip Rosenthal, Charles Mayo)
1994-1996	**Doctoral Student Advisor** (Mark Tries) Advisor and Primary Director of University of Mass. graduate student pursuing Medical Physics Ph.D.
1994-1998	**Doctoral Student Primary Advisor** (Piotr Zygmanski) Advisor and Primary Director of University of Mass. graduate student pursuing Medical Physics Ph.D. Completed April 1998 Thesis topic: Proton Cone Beam Computed Tomography
1997	**Doctoral Student Advisor** (Andrew Abbott) Advisor and Primary Director of University of North Texas graduate student pursuing Medical Physics Ph.D.
1997-2001	**Masters Student Primary Advisor** (Nandan Deshpande) Advisor and Primary Director of University of Texas Arlington graduate student pursuing Biomedical Engineering M.S. Thesis topic: Construction and Characterization of a Water Calorimeter
1998-2002	**Masters Student Primary Advisor** (Sashank Ganti) Advisor and Primary Director of University of Texas Arlington graduate student pursuing Biomedical Engineering M.S. Thesis topic: A Fast 6D Patient Positioning Algorithm
2008-2010	**Masters Student Primary Advisor** (Jonathan Beatty) Advisor and Primary Director of University of Massachusetts Lowell graduate student pursuing Medical Physics M.S. Thesis topic: Neutron background surround a Single Room Proton Radiotherapy System

Regional, National, and International Contributions

Invited Presentations

1991	"Plans for a Proton Medical Facility at the Massachusetts General Hospital", Invited Speaker at the 16th International Conference on Medical and Biological Engineering, Kyoto, Japan, July 7-12
1993	"Proton Beam Radiation Therapy", Invited Presentation, Cornell University Physics Colloquium March 1.

1993	"New Dosimeters for Radiation Therapy; Radiochromic Film and Alanine ESR", Invited Presentation, New England Chapter of the AAPM Annual Meeting, Newport R.I. May 21.
1995	"Proton Beam Radiation Therapy", Invited Presentation, National Institute of Standards and Technology Physics Colloquium, August 16.
1995	"Proton Beam Radiation Dosimetry", Invited Presentation, Council on Ionizing Radiation Measurements Standardization, Gaithersburg, MD, November 28.
1997	"Radiochromic Film to Map 3D Dose Distributions", Invited Presentation, Proton Therapy Cooperative Group, Boston, MA, April 29.
1998	"The NIST Water Calorimeter" Invited Presentation, Council on Ionizing Radiation Standards and Measurement, Gaithersberg, MD, October
1999	"Research and Clinical Activities at the University of Texas Southwestern Medical Center", Organized and Chaired Session, AAPM Southwestern Chapter Spring Meeting, Dallas, TX , April 10.
1999	"Construction of the NIST Water Calorimeter", invited presentation, AAPM Southwestern Chapter Spring Meeting, Dallas, TX, April 10.
2000	"Proton Beam Radiation Therapy", Invited Presentation, Indiana University Physics Colloquium Bloomington, IN, January 19.
2001	"Quality Assurance for the Accuray Cyberknife", Invited Presentation, Accuray Cyberknife Japanese Users Group Meeting, Osaka, Japan, May 18.
2003	"Robotic Radiotherapy", Invited Presentation, National Institute of Standards and Technology, June 23
2006	"New Accelerator Designs for Particle Therapy", Invited Speaker at the "Biography of the Proton" Symposium, Massachusetts General Hospital, Boston, MA, April 26
2006	"The Superconducting Synchrocyclotron", Invited Presentation, Massachusetts Institute of Technology, Cambridge MA, Dec 1
2008	"The Still River Proton Therapy System ", Invited Presentation, Swedish Cancer Center, Seattle, Washington, June 16
2009	"Compact System for Proton Therapy", Invited Presentation, ESTRO Proton Therapy Teaching Course, February 24

2009	The Single Room Proton Therapy System, Invited Presentation, British Institute of Radiology, London, England, May 21
2011	“Performance of the Still River Systems Proton Therapy System”, Invited Presentation, Siteman Cancer Center, Washington University, April 15
2012	“The Mevion Proton Therapy System”, Invited Presentation, Barnes Jewish Hospital, St. Louis, MO, August 23

Patents

Radio Frequency Waveform Generator for Radiation Therapy Beam

US 7,402,963	Issued 7/22/2008
US 7,626,347	Issued 12/1/2009
Foreign counterparts	issued and pending

Programmable Particle Scatterer for Radiation Therapy Beam

US 7,718,982	Issued 5/18/2010
Foreign counterparts	issued and pending

Charged Particle Radiation Therapy

US 8,907,311	Issued 12/9/2014
US 7,728,311	Issued 6/1/2010
Foreign counterparts	issued and pending

Interrupted Particle Source

US 8,581,523	Issued 11/12/2013
US 8,970,137	Issued 3/3/2015
Foreign counterparts	issued and pending

Inner Gantry

US 8,344,340	Issued: 1/1/2013
US 8,916,843	Issued: 12/23/2014
Foreign counterparts	issued and pending

Magnetic shims to alter magnetic fields

US 9,185,789	Issued: 11/10/2015
Foreign counterparts	pending

Focusing a particle beam

US 8,927,950	Issued: 1/6/2015
Foreign counterparts	issued and pending

Programmable radio frequency waveform generator for a synchrocyclotron

US 8,952,634	Issued: 2/10/2015
Foreign counterparts	issued and pending

Focusing a particle beam

US 8,927,950	Issued: 1/6/2015
Foreign counterparts	issued and pending

Focusing a particle beam using magnetic field flutter

US 9,155,186	Issued: 10/6/2015
Foreign counterparts	issued and pending

Multiple additional patents filed and not yet published

Bibliography

Peer Reviewed Publications:

1. **Gall KP**, Eckhause M, Guss PP, Hertzog DW, Kane JR, Kunselman AR, Miller JP, O'Brien F, Phillips WC, Powers RJ, Roberts BL, Sutton RB, Vulcan WF, Welsh RE, Whyley RJ, Winter RG. Precision Measurements of the K^- and $\sum^-$ Masses. Phys Rev Letters. 1988; 60:3.

2. Austin EJ, Booth EC, Delli Carpini D, **Gall KP**, McIntyre EK, Miller JP, Warner D, Whitehouse DA, Cross Sections for the Reaction $^4He(\gamma,\gamma)^4He$ in the $\Delta(1232)$Resonance Region, Physical Review Letters, 1988; 61:17, 1988.

3. Roberts BL, McIntyre EK, Booth EC, **Gall KP**, Miller JP, Whitehouse DA, Sakitt M, Skelly J, Hessey NP, Lowe J, Hasinoff MD, Measday DF, Noble AJ, Fickinger WJ, Robinson DK, Horvath D, Salomon M. Radiative Kaon Capture and Hyperon Weak Radiative Decay. Nuclear Physics. 1988; A479.

4. Miller JP, Austin EJ, Booth EC, **Gall KP**, McIntyre EK, Whitehouse DA. Development of a NaI(Tl) Detector with Superior Photon Resolution for use above 200 MeV. Nuclear Instruments and Methods in Physics Research. 1988, A270: 431.

5. Whitehouse DA, Booth EC, **Gall KP**, McIntyre EK, Miller JP, Roberts BL, Sakitt M, Skelly J, Hessey NP, Lowe J, Hasinoff MD, Measday DF, Noble AJ, Fickinger WJ, Robinson DK, Horvath D, Salomon M. Radiative Kaon Capture at Rest on the Proton, Physical Review Letters, 1989; 63,1352.

6. Hessey NP, Booth EC, **Gall KP**, McIntyre EK, Miller JP, Roberts BL, Whitehouse DA, Sakitt M, Skelly J, Lowe J, Hasinoff MD, Measday DF, Noble AJ, Fickinger WJ, Robinson DK, Horvath D, Salomon M. A Measurement of the Branching Ratio for the Sigma + Weak Radiative Decay, Zietschrift fur Physic, 1989, C42:175.

7. Batty CJ, Eckhause M, **Gall KP**, Guss PP, Hertzog DW, Kane JR, Kunselman AR, Miller JP, O'Brien F, Phillips WC, Powers RJ, Roberts BL, Sutton RB, Vulcan WF, Welsh RE, Whyley RJ, Winter RG, Strong Interacton Effects in High-Z Kaonic Atoms, Physical Review, 1989; C40: 2154.

8. **Gall KP**, Booth EC, McIntyre EK, Miller JP, Roberts BL, Whitehouse DA, Lowe J, Hessey NP, Hasinoff MD, Measday DF, Noble AJ, Sakitt M, Fickinger WJ, Robinson DK, Horvath D, Salomon M, Radiative Kaon Capture on Deuterium and the Λ n Scattering Lengths, Physical Review, 1989, C Rapid Comm, 42 R475.

9. **Gall KP**, Verhey LJ, Wagner MS, Computer Assisted Positioning of Radiotherapy Patients Using Implanted Radiopaque Fiducials, Medical Physics, 1993, 20 (4): 1153-1159.

10. **Gall KP**, Verhey LJ, Alonso J, Castro J, Collier JM, Chu W, Daftari I, Goitein M, Kubo H, Ludewigt B, Munzenrider JE, Petti P, Renner T, Rosenthal S, Smith A, Staples J, Suit HD, Thornton AF, State of the Art? New Proton Medical Facilities for the Massachusetts General Hospital and the University of California Davis Medical Center, Nuclear Instruments and Methods in Physics Research, 1993, B79: 881-884.

11. Rosenthal S, **Gall KP**, Jackson M., Thornton Jr AF, A Precision Cranial Immobilization System for Conformal Stereotactic Fractionated Radiation Therapy, Int. J of Rad. Onc. Biol. and Physics, 1995, 33 (5), 1239-1246.

12. Serago CF, Chapman P, **Gall KP**, Niemierko A, Rosenthal SJ, Thornton AF, Urie MM, Verhey L, Comparison of Proton and X-ray Conformal Dose Distributions for Radiosurgery Applications, Med. Phys., 1995, 22(12) 2111-2116.

13. Beatty J, Biggs PJ, **Gall KP**, Okunieff P, Pardo FS, Harte KJ, Dalterio MJ, Sliski AP, A New Miniature X-Ray Device for Interstitial Radiosurgery: Dosimetry, Med. Phys., 1996, 23 (1) 53-62.

14. Mauceri T, Biggs P, Beatty J, Doppke K, **Gall KP**, Hong L, Leong J, Lo YC, Rosenthal SR, Russell MD, A Method for Predicting the Variation of the Depth of Maximum Dose in Shaped Electron Fields, Medical Physics, 1996, 23 (5) 695-697.

15. Douglas RM, Beatty J, **Gall KP,** Valenzuela RF, Biggs P, Okunieff P, Pardo FS, Dosimetric Results from a Feasibility Study of a Novel Radiosurgical Source for Irradiation of Intracranial Metastases, Int. J. Radiation Oncology Biol. Phys., 1996, 36 (2) 443-450.

16. Copeland JF, **Gall KP**, Lee S-Y, Chabot GE, Proton Dosimetry in Bone Using Electron Spin Resonance, Appl. Radiat. Isot., 1996, 47 (11,12) 1533-1538.

17. **Gall KP,** Desrosiers M, Bensen D, Serago C, Alanine EPR Dosimeter Response in Proton Therapy Beams, Appl. Radiat. Isot., 1996, 47 (11,12) 1197-1199.

18. Mazal A, **Gall KP**, Bottollier-Depois JF, Michaud S, Delacroix D., Fracas P, Clapier F, Delacroix S, Nauraye C, Ferrand R, Louis M, Habrand JL, Shielding Measurements for a Protontherapy Beam of 200 MeV: Preliminary Results, Radiation Protection Dosimetry, 1997, 70 (1-4) 429-436.

19. Vatnitsky, S., Siebers, J., Miller, D., Moyers, M., Schaeger, M.,Jones, D., Vynckier, S., Hayakawa, Y., Delacroix, S., Isacsson, U., Medin, J., Kacperek, A., Lomax, A., Coray, A., Kluge, H.,Heese, J., Verhey, L., Daftari, I., **Gall, K.,** Lam, G., Beck, T., Hartmann, G. Proton dosimetry intercomparison.Radiotherapy and Oncology 41: 169-177, 1996.

20. Hakim R, Zervas NT, Hakim F, Butler WE, Beatty J, Yanch JC, Biggs PJ, **Gall KP**, Sliski AP, Initial Characterization of the Dosimetry and Radiobiology of a Device for Administering Interstitial Stereotactic Radiosurgery, Neurosurgery, 1997, 40 (3) 510-517.

21 T. Yasuda, Beatty J, Biggs PJ, **Gall KP**, Two Dimensional Dose Distribution of a Miniature X-Ray Device for Stereotactic Radiosurgery, Med. Phys., 1998, 25 (7) 1212-1216.

22 Niroomand-Rad A, Blackwell CR, Coursey B, **Gall KP** , Galvin JM, McLaughlin WL, Meigooni AS, Nath R, Rodgers JE, Soares CG, Radiochromic Film Dosimetry, Recommendations of AAPM Radiation Therapy Committee Task Group 55, Med. Phys., 1998, 25(11) 2093-2115.

23 Zygmanski P., **Gall KP**, Rabin MSZ, Rosenthal SJ, The Measurement of Proton Stopping Power using Proton-Cone-Beam Computed Tomography, Physics in Medicine and Biology, 2000, 45(2), 511-528.

24 **Gall KP,** Chang CH, Radiation Beam Characteristics of the Accuray Cyberknife, Medical Physics, 2002

25 Psarros TG, Mickey B, **Gall K**, Gilio J, Delp J, White C, Drees J, Willis M, Pistemmna D, Giller CA: Image-guided robotic radiosurgery in a rat glioma model. Minim Invasive Neurosurg 47:266-272, 2004.

26 Giller CA, Berger BD, Gilio JP, Delp JL, **Gall KP**, Weprin B, Bowers D: Feasibility of radiosurgery for malignant brain tumors in infants by use of image-guided robotic radiosurgery: preliminary report. Neurosurgery 55:916-924, 2004.

27 Giller CA, Berger BD, Pistenmaa DA, Sklar F, Weprin B, Shapiro K, Winick N, Mulne AF, Delp JL, Gilio JP, **Gall KP**, Dicke KA, Swift D, Sacco D, Harris-Henderson K, Bowers D: Robotically guided radiosurgery for children. Pediatr Blood Cancer 45:304-310, 2005

28 Psarros TG, Mickey B, Gilio J, Drees J, **Gall K**, Carlson D, Giller C, Willis MS: Gliosarcoma cell death after radiosurgery in a rat model. Minim Invasive Neurosurg 48:142-148, 2005

Book Chapters:

1 **Gall K, "**The Single-Room Ion Beam Facility**",** in Ion Beam Therapy: Fundamentals, Technology, Clinical Applications Model, U Linz editor, Springer – Verlag, 2012

Papers Published in Conference Proceedings:

1. McIntyre EK, Booth EC, **Gall KP**, Miller JP, Roberts BL, Whitehouse DA, Sakitt M, Skelly J, Hessey NP, Lowe J, Hasinoff MD, Measday DF, Noble AJ, Fickinger WJ, Robinson DK, Horvath D and Salomon M. Radiative Kaon Capture. 3rd Conference on the Intersection of Particle and Nuclear Physics. AIP Conf. Proc. 1988, 176;673.

2. Noble AJ, Booth EC, **Gall KP**, McIntyre EK, Miller JP, Roberts BL, Whitehouse DA, Sakitt M, Skelly J, Hessey NP, Lowe J, Hasinoff MD, Measday DF, Fickinger WJ, Robinson DK, Horvath D and Salomon M. Weak Radiative Decays. 3rd Conference on the Interactions between Particle and Nuclear Physics. AIP Conf. Proc. 1988, 176;842.

3. **Gall KP**, McIntyre EK, Booth EC, Miller JP, Roberts BL, Whitehouse DA, Sakitt M, Skelly J, Hessey NP, Lowe J, Hasinoff MD, Measday DF, Noble AJ, Fickinger WJ, Robinson DK, Horvath D and Salomon M. Radiative Kaon Capture in Deuterium. Bull. Am. Phys. Soc. 1988, 33;1022.

4. Whitehouse DA, McIntyre EK, Booth EC, **Gall KP**, Miller JP, Roberts BL, Sakitt M, Skelly J, Hessey NP, Lowe J, Hasinoff MD, Measday DF, Noble AJ, Fickinger WJ, Robinson DK, Horvath D and Salomon M. Radiative Kaon Capture in Hydrogen. Bull. Am. Phys. Soc. 1988, 33;1022.

5. Roberts BL, McIntyre EK, Booth EC, **Gall KP**, Miller JP, Roberts BL, Whitehouse DA, Sakitt M, Skelly J, Hessey NP, Lowe J, Hasinoff MD, Measday DF, Noble AJ, Fickinger WJ, Robinson DK, Horvath D and Salomon M. Hyperon Weak Radiative Decay. Bull. Am. Phys. Soc. 1988, 33;1022.

6. Roberts, BL, McIntyre EK, Booth EC, **Gall KP**, Miller JP, Roberts BL, Whitehouse DA, Sakitt M, Skelly J, Hessey NP, Lowe J, Hasinoff MD, Measday DF, Noble AJ, Fickinger WJ, Robinson DK, Horvath D and Salomon M. Radiative Kaon Capture and Hyperon Weak Radiative Decay. International Symposium on Strangeness in Nuclear Matter. Bad Honef W. Germany. June, 1987.

7. Booth EC, McIntyre EK, **Gall KP**, Miller JP, Roberts BL, Whitehouse DA, Sakitt M, Skelly J, Hessey NP, Lowe J, Hasinoff MD, Measday DF, Noble AJ, Fickinger WJ, Robinson DK, Horvath D and Salomon M. A Study of Radiative Hyperon Processes at Brookhaven. XI International Conference on Particles and Nuclei. Kyoto, Japan. April, 1987.

9. **Gall KP**, Goitein M, Gottschalk B, Gragoudas E, Koehler AM, Liebsch NJ, Munzenrider JE, Urie M, Verhey LJ, Wagner MS, Plans for a Proton Medical Facility at Massachusetts General Hospital, Proceedings of the NIRS International Workshop on Heavy Charged Particle Therapy and Related Subjects, Chiba, Japan, July 1991.

10. Thornton AF, **Gall KP**, Rosenthal S, Recent Technical Advances in the Irradiation of Head and Neck Neoplasia, Proc. of 3rd Intern. Conf. of Head and Neck Cancer, (1992).

11. **Gall KP**, Rosenthal SJ, Smith AR, Proton Dosimetry Protocol Comparisons, Proc. of the XXI PTCOG, Chiba, Japan, (1994)

12. Smith AR, Goitein M, Suit HD, Durlacher S, Flanz S, **Gall KP**, Levin A, Rosenthal SJ, Woods S, The Massachusetts General Hospital Northeast Proton Therapy Center, Proc. of the XXI PTCOG, Chiba, Japan, (1994)

13. Cosgrove R, Zervas NT, Valensuela R, Biggs P, Hochberg FH, Pardo F, **Gall KP**, Beatty J, Interstitial Photon Radiosurgery for Intracranial Tumors, Proceedings of the 2nd Congress of the International Stereotactic Radiosurgery Society, Boston, MA, (1995).

14. D T L Jones, A N Schreuder, J E Symons, S Vynckier, A Kacperek, A Mazal, S Delacroix, C Nauraye, A Bridier, M Wagner, J Beatty, **K Gall** and Y Hayakawa:"National Accelerator Centre: Dosimetry Intercomparisons Proc. NIRS Int. Seminar on the Application of Heavy Ion Accelerators to Radiation Therapy of Cancer, November 1994, Eds. T Kanai and E Takada, NIRS, Chiba (1995) p230)

15. Flanz J, **Gall K**, Goitein M, Rosenthal S, Smith A, Design Approach for a Highly Accurate Patient Positioning System for NPTC, XXV PTCOG and Hadrontherapy Symposium. (1996)

16. **Gall KP**, Deshpande N , "Construction and Characterization of the NIST Water Calorimeter", Proceedings of the Conference on Recent Advances in Calorimetric Absorbed Dose Standards, Richmond, Surrey, UK, (1999)

17. D. Zhao, A. Constantinescu, L. Jiang, K. Chang, **K. Gall**, E. W Hahn, & R. P. Mason, "Prognostic Radiology: the value of FREDOM" Proc. EPR Viable Systems 9th International Meeting, #S-8, Dartmouth, NH Sept. (2001)

Abstracts:

1. Siebers J, DeLuca PM, Awschalom M, Coutrakon G, **Gall KP**, Shielding Parameters for a 250 MeV Proton Therapy Accelerator, Works in Progress Proceedings of the 75th Annual Meeting of the Radiological Society of North America, Chicago, (1989).

2. **Gall KP**, Verhey LJ, Automated Patient Positioning for High Precision Radiotherapy, presented at the 33rd Annual Meeting of the American Association of Physicists in Medicine, San Francisco, CA., (1991).

3. **Gall KP**, Verhey LJ, Wagner MS, Automating Proton Therapy Patient Positioning I: Repoman, presented at the Proton Therapy Cooperative Group Meeting XVI, Vancouver, Canada, March 1992, Particles Number 10 June (1992).

4. **Gall KP**, Automating Proton Therapy Patient Positioning II: Digital Radiography, presented at the Proton Therapy Cooperative Group Meeting XVI, Vancouver, Canada, March 1992. Particles Number 10, June (1992).

5. **Gall KP**, Urie M, Rosenthal S, Butler B, Chapman P, Birnbaum S, Koehler AM, Proton Beam Radiosurgery Techniques, Med. Phys., 19, 829, (1992).

6. **Gall KP**, Miller D, Siebers J, Moyers M, Coursey B, Derosiers M, Puhl J, Dick C, Proton Beam Dosimetry: The potential for Alanine ESR, presented at the Proton Therapy Cooperative Group Meeting XVII, Loma Linda, CA October 1992, Particles Number 11, Jan. (1993)

7. Serago C, Urie M, Okunieff P, **Gall KP**, Rosenthal S, Serago M, Measurement of Intracranial Motions with Implications for Precision Radiotherapy and Radiosurgery, Proceedings of the 78th Annual Meeting of the RSNA, (1992).

8. Serago C, Urie M, Thornton AF, Crowell C, Rosenthal S, **Gall KP**, Comparison of Proton Dose Distributions with Multiple Arc and Conformal Linac Techniques for Radiosurgery Applications, Med. Phys., 20, 868, (1993).

9. Biggs P, Beatty J, **Gall KP**, Harte K, Sliski A, Absolute Dosimetry for a New 40kV X-ray Device Used for Stereotactic Radiation Therapy, Med. Phys., 20, 925, (1993).

10. **Gall KP**, Beatty J, Biggs P, Butler B, Sliski A, Novel Microdensitometer for Radiochromic Film Characterization of a new 40kV X-ray Device used for Stereotactic Radiation Therapy, Med. Phys., 20, 925, (1993).

11. **Gall KP**, Thornton AF, Munzenrider JE, Rosenthal S, Experience Using Radiopaque Fiducial Points for Patient Alignment During Radiotherapy, Proceedings of the Annual Meeting of the American Society for Therapeutic Radiology and Oncology, New Orleans, LA (1993).

12. Mauceri T, Beatty J, Biggs P, Doppke K, **Gall KP**, Hong L, Leong J, Lo YC, Rosenthal S, Russel M, A Method to Predict the Depth of Maximum Dose for Irregularly Shaped Electron Fields, Med. Phys., 21, 883, (1994).

13. Rosenthal S, **Gall KP**, Goitein M, Hong L, Serago C, Urie MM, Verification of a Pencil Beam Algorithm for Proton Dose in a Stereotactic Proton Beam, Med. Phys., 21, 958, (1994).

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