

PROFESSIONAL AFFILIATION

American Association of Physicists in Medicine	1991-present
New England Chapter AAPM, Secretary/Treasurer	1997-1999
American Association of Medical Dosimetrists	2003-present
American Society for Therapeutic Radiology and Oncology	2006-present

PATENT

U.S. Patent Number 5,452,720, dated Sep. 26, 1995
METHOD FOR TREATING BRAIN TUMORS
Inventors: D.Smith, A.Sliski, K.Harte, P.Biggs, J.Beatty

BOOK CHAPTER

The Modern Technology of Radiation Oncology, J.Van Dyk, ed., Medical Physics Publishing, 1999, "Kilovoltage X-Rays", P.Biggs, C.Ma, K.Doppke, A.Niroomand-Rad, J.Beatty

PRACTICUM PRESENTATION

RADIOSURGERY: A PRACTICAL COURSE
International Stereotactic Radiosurgery Society, Las Vegas June 2001

PAPERS

STEREOTACTIC INTERSTITIAL RADIOSURGERY FOR MALIGNANT BRAIN TUMORS

Cosgrove R, Spiro I, Loeffler J, Biggs P, Beatty J, Zervas NT
Stereotactic and Functional Neurosurgery 1999, Vol.73, No.1-4, p.37

DISTANCE-DOSE CURVE FOR A MINIATURE X-RAY TUBE FOR STEREOTACTIC RADIOSURGERY USING AN OPTIMIZED APERTURE WITH A PARALLEL-PLATE

IONIZATION CHAMBER P.J.Biggs, J.Beatty, and T.Yasuda
Medical Physics, Vol.26, No.12, p.2550-2554, December 1999

CLINICAL RELATIVE BIOLOGICAL EFFECTIVENESS OF LOW-ENERGY X-RAY

EMITTED BY MINIATURE X-RAY DEVICES D.J.Brenner, C-S.Leu, J.F.Beatty, R.E.Shefer
Phys. Med. Biol. 44:323-333 (1999).

SCATTER AND ATTENUATION MEASUREMENTS AT DISTANCES GREATER THAN

10 CM FROM AN ¹⁹²IR SOURCE T.Mauceri, P.Biggs, J.Beatty and D.Flynn
Medical Physics, Vol.26, No.1, p.97-99, January 1999.

EVIDENCE FOR A SIGNIFICANTLY HIGHER THAN EXPECTED DEPTH DEPENDENCE OF WEDGE TRANSMISSION FACTORS ON THE 4 MV BEAM OF A DUAL ENERGY

ACCELERATOR P.J.Biggs, J.Beatty and J.Radloff
Medical Physics, Vol.25, No.11, p.2234-2236, November 1998.

TWO-DIMENSIONAL DOSE DISTRIBUTION OF A MINIATURE X-RAY DEVICE FOR

STEREOTACTIC RADIOSURGERY T.Yasuda, J.Beatty, P.J.Biggs and K.Gall
Medical Physics, Vol.25, No.7, p.1212-1216, July 1998.

INITIAL CHARACTERIZATION OF THE DOSIMETRY AND RADIOBIOLOGY OF A DEVICE FOR ADMINISTERING INTERSTITIAL STEREOTACTIC RADIOSURGERY

R.Hakim, N.T.Zervas, F.Hakim, W.E.Butler, J.Beatty, J.C.Yanch, P.J.Biggs, K.P.Gall and
A.P.Sliski *Neurosurgery*, Vol.40, No.3, 510-517, March 1997.

DOSIMETRIC RESULTS FROM A FEASIBILITY STUDY OF A NOVEL
RADIOSURGICAL SOURCE FOR IRRADIATION OF INTRACRANIAL METASTASES

Robert M. Douglas, MD; John Beatty, MS; Kenneth Gall, PhD; Raul F. Valenzuela, MD; Peter Biggs, PhD; Paul Okunieff, MD; and Francisco S. Pardo, MD

Int. J. Radiation Oncology Biol. Phys., Vol.36, No.2, pp 443-450, June 1996.

A NEW MINIATURE X-RAY DEVICE FOR INTERSTITIAL RADIOSURGERY:

DOSIMETRY J.Beatty, P.Biggs, K.Gall, P.Okunieff, K.Harte, M.Dalterio, A.Sliski, & F.Pardo,

Medical Physics, Vol. 23, No.1, p.53-62, January 1996.

A METHOD FOR PREDICTING THE VARIATION OF THE DEPTH OF MAXIMUM DOSE
IN SHAPED ELECTRON FIELDS T.Mauceri, P.J.Biggs, J.Beatty, K.Doppke, K.Gall, L.Hong,

J.Leong, Y.C.Lo, S.R.Rosenthal, & M.D.Russell *Medical Physics*, Vol.23, No.5, p.695-697,

May 1996.

REMOTELY CONTROLLED POSITIONING LASERS P.J.Biggs, J. Beatty, J. Capalucci, and

M. Russell *Medical Dosimetry* Vol.16, No.1, 1991.

ABSTRACTS

DEVELOPMENT AND DOSIMETRY OF AN ⁹⁰Y PLAQUE FOR IRRADIATION OF

SARCOMAS OF THE SPINE T.Mauceri, J.Beatty, G.Chen, T.Delaney, F.Hornicek, J.Kung,

H.Suit, J.Munro *Medical Physics*, Vol.28, No.8, p.1827, August 2001

STEREOTACTIC INTERSTITIAL RADIOSURGERY FOR CEREBRAL METASTASES

Cosgrove R, Zervas NT, Spiro I, Loeffler J, Beatty J, Biggs P. *Acta Neurochirurgica*, Vol.140,

No.8, (1998), p. 865. Presented at European Society for Stereotactic and Functional

Neurosurgery 13th Congress, Freiburg, Germany, September 20-23, 1998.

LONG TERM STABILITY OF TWO MINIATURE X-RAY SOURCES USED FOR

STEREOTACTIC TREATMENT OF SMALL BRAIN LESIONS P. J. Biggs & J. Beatty

Medical Physics, Vol.24, No.6, p.1075, 1997. Presented at AAPM Annual Meeting, Milwaukee,

WI 1997.

EVIDENCE FOR A SIGNIFICANTLY HIGHER THAN EXPECTED DEPTH DEPENDENCE OF WEDGE TRANSMISSION FACTORS ON THE 4 MV BEAM OF A DUAL ENERGY ACCELERATOR P.J.Biggs, J.Beatty & J.Radloff *Medical Physics*, Vol.24, No.6, 1997. Presented at AAPM Annual Meeting, Milwaukee, WI 1997.

CLINICAL COMMISSIONING OF A PROTON BEAM STEREOTACTIC RADIOSURGERY TREATMENT PLANNING SYSTEM K.Gall, J.Beatty, M.Bussiere, W.Butler, and D.O'Farrell *Medical Physics*, Vol.23, No.6, p.1053, 1996. Presented at AAPM Annual Meeting, Philadelphia 1996.

TWO DIMENSIONAL DOSE DISTRIBUTIONS OF A MINIATURE X-RAY DEVICE FOR STEREOTACTIC RADIOSURGERY T.Yasuda, P.Biggs, J.Beatty, and K.Gall *Medical Physics*, Vol.23, No.6, p.1166, 1996. Presented at AAPM Annual Meeting, Philadelphia 1996.

INTERSTITIAL PHOTON RADIOSURGERY FOR INTRACRANIAL TUMORS G.Cosgrove, N.Zervas, R.Valenzuela, P.Biggs, F.Hochberg, F.Pardo, J.Beatty. Presented at 2nd Congress of the International Stereotactic Radiosurgery Society, Boston, MA 1995.

PHASE I STUDY OF A MINIATURE X-RAY SOURCE FOR INTERSTITIAL RADIOTHERAPY OF BRAIN METASTASES R.Douglas, J.Beatty, P.Biggs, R.Valenzuela, P.Okunieff, G.Cosgrove, G.Harsh, F.Hochberg, N.Choi, A.Thornton, F.Pardo Presented at ASTRO, Miami, FL 1995.

PRECISION OF OUTPUT CALIBRATION IN AIR AND WATER OF A MINIATURE X-RAY TUBE. J.Beatty, P.Biggs, T.Yasuda, *Medical Physics*, Vol.22, No.6, p.968, 1995. Presented at AAPM Annual Meeting, Boston, MA 1995.

EFFECT OF USING AN APERTURE WITH A PARALLEL PLATE ION CHAMBER ON THE CALIBRATION AND DOSE-DISTANCE CURVE OF A MINIATURE X-RAY TUBE. P.Biggs, J.Beatty, T.Yasuda, *Medical Physics*, Vol.22, No.6, p.979, 1995. Presented at AAPM Annual Meeting, Boston, MA 1995.

INTERSTITIAL PHOTON RADIOSURGERY FOR INTRACRANIAL TUMOURS G.R.Cosgrove, N.T.Zervas, F.H.Hochberg, R.Valenzuela, F.Pardo, P.Biggs, J.Beatty *Acta Neurochirurgie*, Vol.129, pp. 220-221, 1994.

A COMPARISON OF ATTENUATION CHARACTERISTICS OF SOLID PHANTOMS WITH WATER FOR DOSIMETRY OF A 40 KV X-RAY DEVICE FOR STEREOTACTIC RADIATION THERAPY - J.Beatty, P.Biggs, A.Sliski, M.Dalterio *Medical Physics*, Vol.21, No.6, p.930, 1994. Presented at AAPM Annual Meeting, Anaheim, CA 1994.

AN INVESTIGATION INTO THE PROPERTIES OF A THIN WINDOW PARALLEL PLATE CHAMBER FOR AN X-RAY SPECTRUM HAVING AN AVERAGE ENERGY OF ~20 KEV USING THE ITS MONTE CARLO PROGRAM - P.Biggs and J.Beatty *Medical Physics*, Vol.20, No.4, p. 1292, 1993. Presented at AAPM Annual Meeting, Washington D.C. 1993.

ABSOLUTE DOSIMETRY FOR A NEW 40KV X-RAY DEVICE USED FOR STEREOTACTIC RADIATION THERAPY - P.Biggs, J.Beatty, K.Gall, K.Harte, A.Sliski *Medical Physics*, Vol. 20, No. 3, p. 925, 1993. Presented at AAPM Annual Meeting, Washington D.C. 1993.

NOVEL MICRODENSITOMETER FOR RADIOCHROMIC FILM CHARACTERIZATION OF A NEW 40KV X-RAY DEVICE USED FOR STEREOTACTIC RADIATION THERAPY - K.Gall, J.Beatty, P.Biggs, W.Butler, A.Sliski *Medical Physics*, Vol. 20, No. 3, p. 925, 1993. Presented at AAPM Annual Meeting, Washington D.C. 1993.

A NEW MINIATURE X-RAY DEVICE FOR STEREOTACTIC RADIOTHERAPY: TREATMENT METHODOLOGY - D.Smith, A.Sliski, J.Beatty, P.Biggs, K.Harte *Medical Physics*, Vol.20, No.4, p.1291, 1993. Presented at AAPM Annual Meeting, Washington D.C. 1993.

POSTERS

FEASIBILITY OF IMRT WITH A MINIATURE MLC FOR SMALL BRAIN TUMORS M. Bues, H. Kooy, J. Beatty, N. Tarbell, P. Chapman, J. Loeffler *Medical Physics*, Vol.26, No.6, p.1138, 1999. Presented at AAPM Annual Meeting, Nashville, TN 1999.

TWO-DIMENSIONAL DOSE DISTRIBUTION OF A MINIATURE X-RAY DEVICE FOR STEREOTACTIC RADIOSURGERY T.Yasuda, J.Beatty, P.J.Biggs and K.Gall *Medical Physics*, Vol.23, No.6, p.1053, 1996. Presented at AAPM Annual Meeting, Philadelphia, PA 1996.

A METHOD TO FACILITATE WHOLE SCALP IRRADIATION UTILIZING A HIGH DOSE RATE BRACHYTHERAPY MOLD (HDRBM) - T.Mauceri, J.Beatty, P.Biggs, T.Yasuda, H.Suit, *Medical Physics*, Vol.22, No.6, p.903, 1995. Presented at AAPM Annual Meeting, Boston, MA 1995.

COMMISSIONING THE INTERNAL RADIATION MONITOR OF A MINIATURE X-RAY TUBE FOR STEREOTACTIC RADIOSURGERY - P.Biggs, J.Beatty, T.Yasuda, *Medical Physics*, Vol.22, No.6, p.904, 1995. Presented at AAPM Annual Meeting, Boston, MA 1995.

COMMISSIONING A COMPUTER CONTROLLED TISSUE COMPENSATOR SYSTEM J.Beatty, P.Biggs, T.Yasuda *Medical Physics*, Vol.22, No.6, p.905, 1995. Presented at AAPM Annual Meeting, Boston, MA 1995.

ACCEPTANCE TESTING, COMMISSIONING AND USE OF A NEW MODEL MINIATURE X-RAY TUBE FOR STEREOTACTIC RADIOSURGERY OF SMALL INTRACRANIAL LESIONS P.Biggs, J.Beatty, K.Gall, T.Yasuda Presented at 2nd Congress of the International Stereotactic Radiosurgery Society, Boston, MA 1995

SCATTER AND ATTENUATION MEASUREMENTS AT DISTANCES GREATER THAN 10 CM FROM AN IR-192 SOURCE - T.Mauceri, J.Beatty, P.Biggs, D.Flynn *Medical Physics*, Vol.21, No.6, p.971, 1994. Presented at AAPM Annual Meeting, Anaheim, CA 1994.

A METHOD TO PREDICT THE DEPTH OF MAXIMUM DOSE FOR IRREGULARLY SHAPED ELECTRON FIELDS - T.Mauceri, J.Beatty, P.Biggs, K.Doppke, K.Gall, L.Hong, Y.Lo, S.Rosenthal, M.Russell *Medical Physics*, Vol.21, No.6, p.883, 1994. Presented at AAPM Annual Meeting, Anaheim, CA 1994.

INDICATION OF DIFFERENT ENERGY SPECTRA FROM TWO 4MV WAVEGUIDES P.Biggs, K.Doppke, J.Beatty, J.Leong, Y.Lo, T.Mauceri & M.Russell *Medical Physics*, Vol.18, No.3, p.642, 1991. Presented at AAPM Annual Meeting, San Francisco, CA 1991.