

* Inter-programmatic
Intra-programmatic
& Inter-institutional
@ First tier

Department of Radiation Physics
CCSG Publications
2002 – 2007

- * 1. Azhdarinia A, Yang DJ, Chao C, Mourtada F: Infrared-based Automated Module for 68Ga-labeled Radiotracers Synthesis, *Nuclear Medicine and Biology*, 34(1): 121-127, (2007).
- @ * 2. Barker JL, Jr., **Garden AS, Ang KK, O'Daniel JC, Wang H, Court LE, Morrison WH, Rosenthal DI, Chao KS, Tucker SL, Mohan R, Dong L.** Quantification of volumetric and geometric changes occurring during fractionated radiotherapy for head-and-neck cancer using an integrated CT/linear accelerator system. *Int J Radiat Oncol Biol Phys* 59:960-970, 2004.
- @ # 3. **Beddar AS, Kainz K, Briere TM, Tsunashima Y, Pan T, Prado K, Mohan R, Gillin M, Krishnan S.** Correlation between internal fiducial tumor motion and external marker motion for liver tumors imaged with 4D-CT. *Int J Radiat Oncol Biol Phys* 2007;67:630-638.
- & 4. Bhatti P, Struewing JP, Alexander BH, Hauptmann M, Bowen L, Mateus-Pereira LH, Pineda MA, Simon SL, Weinstock RM, Rosenstein M, Stovall M, Preston DL, Linet MS, Doody MM, Sigurdson AJ. Polymorphisms in DNA repair genes, ionizing radiation exposure and risk of breast cancer in U.S. Radiologic technologists. *Int J Cancer* 2007 (Epub ahead of print).
- # 5. Borghero YO, Salehpour M, McNeese MD, Stovall M, Smith SA, Johnson J, Perkins GH, Strom EA, Oh JL, Kirsner SM, Woodward WA, Yu TK, Buchholz TA. Multileaf field-in-field forward-planned intensity-modulated dose compensation for whole-breast irradiation is associated with reduced contralateral breast dose: A phantom model comparison. *Radiother Oncol* 82:324-8, 2007.
- # 6. Briere TM, Gillin MT, and Beddar AS. Implantable MOSFET detectors: Evaluation of a new design. *Med Phys*. In Press
- @ * 7. Britton K, **Starkschall G, Tucker S, Pan T, Nelson C, Chang J, Cox J, Mohan R, Komaki R.** Assessment of gross tumor volume regression and motion changes during radiation therapy for non-small-cell lung cancer as measured by four-dimensional computed tomography. *Int J Radiat Oncol Biol Phys*, 68:1036-46, 2007.
- # 8. **Bues M, Newhauser WD, Titt U, Smith AR.** Therapeutic Step and Shoot Proton Beam Spot-Scanning with a Multi-Leaf Collimator: A Monte Carlo Study. *Radiation Protection Dosimetry* 115(1-4):164-169, 2005.
- & 9. Cao J, Roeske J, Schumra S, Salama J, Shoushtari A, Boyer A, Martel M. A Dosimetric Study of the Effect of Respiratory Motion On Whole Breast Radiation Therapy. *Medical Physics* 34(6):2403, 6/2007.

* Inter-programmatic
Intra-programmatic
& Inter-institutional
@ First tier

- # 10. **Chang JY, Zhang XD, Wang XC**, Kang YX, Riley B, Bilton S, **Mohan R, Komaki R, Cox JD**. Significant Reduction of Normal Tissue Dose by Proton Radiotherapy Compared with Three Dimensional-Conformal or Intensity-Modulated Radiation Therapy in Stage I or Stage III Non-Small Cell Lung Cancer. *Int. J. Radiation Oncology Biol. Phys.* 65:1087-1096, 2006.
- # 11. Chao KSC, Bhide S, Chen H, Asper J, Bush S, Franklin G, Kavadi V, Liengswangwong V, Gordon W, Raben A, Strasser J, Koprowski C, Frank S, Chronowski G, Ahamad A, Malyapa R, Zhang L, Dong L. Reduce in Variation and Improve Efficiency of Target Volume Delineation by a Computer-Assisted System Using a Deformable Image Registration Approach. *Int J Radiat Oncol Biol Phys* 68:1512-1521, 2007
- * 12. Cheung MR, Tucker SL, Dong L, de Crevoisier R, Lee AK, Frank S, Kudchadker RJ, Thames H, Mohan R, Kuban D. Investigation of bladder dose and volume factors influencing late urinary toxicity after external beam radiotherapy for prostate cancer. *Int J Radiat Oncol Biol Phys* 67:1059-1065, 2007
- & 13. Chi P.M., Mawlawi O., Nehmeh S.A., Erdi Y.E., Balter P.A., Luo D., Mohan R., Pan T. Design of respiration averaged CT for attenuation correction of the PET data from PET/CT. *Med. Phys.* 34(6), 2039-47, 2007. (cover article of the month)
- * 14. Chi PC, **Balter P, Luo D, Mohan R, Pan T**. Relation of external surface to internal tumor motion studied with cine CT. *Med Phys* 33:3116-3123, 2006.
- & 15. Chow EJ, Friedman DL, Yasui Y, Whitton JA, Stovall M, Robison LL, Sklar CA. Decreased adult height in survivors of childhood acute lymphoblastic leukemia: a report from the Childhood Cancer Survivor Study. *J Pediatr* 150:370-5, 5 e1, 2007.
- & 16. Ciangaru G, Yang JN, Oliver JP, Bues M, Zhu M, Nakagawa F, Chiba H, Nakamura S, Yoshino H, Umezawa M, Smith AR. Verification Procedure for Isocentric Alignment of Proton Beams. *J. Appl. Clin. Med. Phys.*, in press.
- # 17. Court L, **Rosen I, Mohan R, Dong L**. Evaluation of mechanical precision and alignment uncertainties for an integrated CT/LINAC system, *Med Phys* 30(6):1198-1210, 2003.
- # 18. Court LE, **Dong L**, Taylor N, **Ballo M**, Kitamura K, **Lee AK**, O'Daniel J, **Cheung R, Kuban D**, Evaluation of a contour-alignment technique for CT-guided prostate radiotherapy: an intra- and interobserver study. *Int J Radiat Oncol Biol Phys* 59:412-418, 2004.
- # 19. Court LE, **Dong L**. Automatic registration of the prostate for computed-tomography-guided radiotherapy. *Med Phys* 30 (10):2750-2757, 2003.
- # 20. Davidson, S, Ibbott G, Prado K, Dong L, Liao Z, Followill D. Accuracy of two heterogeneity dose calculation algorithms for IMRT in treatment plans designed using an anthropomorphic thorax phantom. *Medical Physics* 34:1850-57, 2007.

* Inter-programmatic
Intra-programmatic
& Inter-institutional
@ First tier

- * 21. de Crevoisier R, Meloncon A, Kuban D, Lee AK, Chueng RM, Tucker SL, Kudchadker R, Newhauser WD, Zhang L, Mohan R, Dong L. Changes in the Pelvic Anatomy After an IMRT Treatment Fraction of Prostate Cancer. *Int J Radiat Oncol Biol Phys* 68 (5):1529-36, 2007.
- @* 22. de Crevoisier R, **Tucker SL, Dong L, Mohan R, Cheung R, Cox JD, Kuban DA.** Increased risk of biochemical and local failure in patients with distended rectum on the planning CT for prostate cancer radiotherapy. *Int J Radiat Oncol Biol Phys* 62(4):965-973, 2005.
- @& 23. Fitzpatrick MJ, **Starkschall G,** Antolak JA, Fu J, Shukla H, Keall PJ, **Mohan R.** Displacement-based binning of time-dependent CT image data sets. *Med Phys* 33:235-246, 2006.
- & 24. Florin TA, Fryer GE, Miyoshi T, Weitzman M, Mertens AC, Hudson MM, Sklar CA, Emmons K, Hinkle A, Whitton J, Stovall M, Robison LL, Oeffinger KC. Physical inactivity in adult survivors of childhood acute lymphoblastic leukemia: a report from the childhood cancer survivor study. *Cancer Epidemiol Biomarkers Prev* 16:1356-63, 2007.
- # 25. Followill D, Evans-Radford D, Cherry C, Molineu A, Fisher G, Hanson WF, Ibbott G. Design, Development, and Implementation of the Radiological Physics Center's Pelvis and Thorax Anthropomorphic Quality Assurance Phantoms. *Medical Physics* 34:2070-76, 2007.
- & 26. Fontenot J, Newhauser WD Bloch C, White RA, Titt U, Starkschall G. Determination of output factors for small proton therapy fields. Comparison of Methods for the Calibration of Absorbed Dose Per Monitor Unit for Proton Therapy Patients. *Med Phys.* 34: 489-498, 2007.
- & 27. Frey GD, Ibbott GS, Morin RL, Paliwal BR, Thomas SR, Bosma J. The American Board of Radiology perspective on maintenance of certification: Part IV: Practice quality improvement in radiologic physics. *Medical Physics*, 2007 (in press).
- # 28. Gao S, Delclos ME, Tomas LC, Crane CH, and Beddar AS. High dose rate remote afterloaders for intraoperative radiation therapy. *AORN Journal*. In Press
- @# 29. Gao S, Zhang L, Wang H, De Crevoisier R, **Kuban DD, Mohan R, Dong L.** A deformable image registration method to handle distended rectums in prostate cancer radiotherapy. *Med Phys* 33 (9):3304-3312, 2006.
- # 30. Garden AS, Morrison WH, Wong PF, Tung SS, Rosenthal DI, Dong L, Mason B, Perkins GH, Ang KK. Disease-control rates following intensity-modulated radiation therapy for small primary oropharyngeal carcinoma. *Int J Radiat Oncol Biol Phys* 67:438-44, 2/2007.

* Inter-programmatic
Intra-programmatic
& Inter-institutional
@ First tier

- @& 31. George R, Chung TD, **Vedam SS**, Ramakrishnan V, **Mohan, R**, Weiss E, Keall PJ. Audio-visual biofeedback for respiratory-gated radiotherapy: impact of audio instruction and audio-visual biofeedback on respiratory-gated radiotherapy. *Int J Radiat Oncol Biol Phys* 65: 924-933, 2006.
- @* 32. **Guerrero T**, Sanders K, Castillo E, Zhang Y, Bidaut L, Pan T, **Komaki R**. Dynamic ventilation imaging from four-dimensional computed tomography. *Phys Med Biol* 51:777-791, 2006.
- @# 33. **Guerrero T**, Zhang G, Segars W, Huang T-C, Bilton S, **Ibbott G**, **Dong L**, Forster K, Lin KP. Elastic image mapping for 4-D dose estimation in thoracic radiotherapy. *Radiat Prot Dosimetry* 115(1-4):497-502, 2005.
- * 34. Guerrero T.M., Johnson V., Hart J., Pan T., Khan M., Luo D., Liao Z., Ajani J., and Komaki R. Radiation Pneumonitis: Local dose versus [18F]-Fluorodeoxyglucose uptake response in irradiated lung, *Int. J. Radiat. Oncol. Biol. Phys.* 68:1030-5, 2007.
- & 35. Henderson TO, Whitton J, Stovall M, Mertens AC, Mitby P, Friedman D, Strong LC, Hammond S, Neglia JP, Meadows AT, Robison L, Diller L. Secondary sarcomas in childhood cancer survivors: a report from the Childhood Cancer Survivor Study. *J Natl Cancer Inst* 99:300-8, 2007.
- @# 36. Huang TC, Zhang G, **Guerrero T**, **Starkschall G**, Lin KP, Forster K, "Semi-automated CT segmentation using optic flow and Fourier interpolation techniques," *Computer Methods and Programs in Biomedicine*, 84:124-134, 2006.
- # 37. Ibbott GS, Followill DS, Molineu HA, Lowenstein JR, Alvarez PE, Roll JE. Challenges in credentialing institutions and participants in advanced technology multi-institutional clinical trials. *Int J of Radiat Oncol Biol Phys*, 2007 (in press).
- & 38. Ibbott GS, Hanson WF, Martin E, Kuske RR, Arthur D, Rabinovitch R, White J, Wilenzick RM, Harris I, Tailor RC. Dose specification and quality assurance of RTOG protocol 95-17; a cooperative group study of 192Ir breast implants as sole therapy. *Int J of Radiat Oncol Biol Phys*, 2007 (in press).
- & 39. Jang S, Liu H, Mohan R, Siebers J. Variations in energy spectra and water-to-material stopping-power ratios in three-dimensional conformal and intensity-modulated photon fields. *Med Phys* 34:1388-97, 2007.
- & 40. Jenkinson HC, Winter DL, Marsden HB, Stovall MA, Stevens MC, Stiller CA, Hawkins MM. A study of soft tissue sarcomas after childhood cancer in Britain. *Br J Cancer* 97:695-9, 2007.

* Inter-programmatic
Intra-programmatic
& Inter-institutional
@ First tier

- # 41. Jin HK, Liu HH, Tucker SL, Liao ZX, Wei X, Mohan R, Martel M, Cox JD, Komaki R. Non-smokers and former smokers at increased risk for treatment related pneumonitis (TRP) in chemo radiation for non-small-cell lung cancer (NSCLC). ASTRO. In Press.
- & 42. Kainz KK, **Hogstrom KR**, Antolak JA, **Almond PR**, Bloch CD, Chiu C, Fomytskyi M, Raischel F, Downer M, Tajima T. Dose Properties of a Laser Accelerated Electron Beam and Prospects for Clinical Application. *Med. Phys* 31(7), 2053-2067, 2004.
- @# 43. Kang Y, **Zhang X**, **Chang JY**, Wang H, Wei X, **Liao Z**, **Komaki R**, **Cox J D**, **Balter PA**, **Liu H**, **Zhu XR**, **Mohan R**, **Dong L**. 4D Proton Treatment Planning Strategy for Mobile Lung Tumors. *Int J Radiat Oncol Biol Phys* 67: 906-914, 2007.
- @& 44. Keall P, **Starkschall G**, Shukla H, Forster K, Ortiz V, Stevens C, **Vedam S**, George R, **Mohan R**. Acquiring 4D thoracic CT scans using a multislice scanner. *PMB* 49:2053-2067, 2004.
- @& 45. Keall PJ, Joshi S, **Vedam SS**, Siebers JV, Kini VR, **Mohan R**. Four-dimensional radiotherapy planning for DMLC-based respiratory motion tracking. *Med Phys* 32:942-951, 2005.
- * 46. Krishnan S, Briere TM, Dong L, Murthy R, Ng C, Balter P, Mohan R, Gillin MT, and Beddar AS. Daily targeting of liver tumors: Screening patients with a mock treatment and using a combination of internal and external fiducials for image-guided respiratory-gated radiotherapy. *Med Phys*. In Press
- * 47. Kry SF, **Followill D**, White RA, **Salehpour M**. Uncertainty of calculated risk estimates for secondary malignancies after radiotherapy. *Int J Radiat Oncol Biol Phys* 68(4):1265-71, 2007.
- # 48. Kry SF, Price M, Followill D, Mourtada F, Salehpour M. Use of LiF (TLD-100) as an out-of-field dosimeter. *J Appl Clin Med Phys*, 2007, (In Press).
- & 49. Kry SF, Starkschall G, Antolak J, Salehpour M. Evaluation of the accuracy of fetal dose estimates using TG-36 data. *Med Phys* 34(4):1193-7, 2007.
- # 50. Kry SF, Titt U, Followill D, Ponisch F, Vassilliev ON, White RA, Stovall M, Salehpour M, A Monte Carlo model for out-of-field dose calculation from high-energy photon therapy. *Med Phys* 34:3489, 2007.
- # 51. Kry SF, Titt U, Ponisch F, Vassilliev ON, Salehpour M, Gillin M, Mohan R. Reduced neutron production through use of a flattening-filter-free accelerator. *Int J Radiat Oncol Biol Phys* 68(4):1260-1264, 2007.

* Inter-programmatic
Intra-programmatic
& Inter-institutional
@ First tier

- # 52. Li Y, **Zhang X, Dong L, Mohan R**. A Novel Patch Field Optimization Algorithm Using Optimized Grid Filter for Passively Scattered Proton Beams, *Phys. Med. Biol.* 52 (2007) N265-N275.
- & 53. Li Z, Das RK, Dewerd LA, Ibbott GS, Meigooni AS, Perez-Calatayud J, Rivard MJ, Sloboda RS, Williamson JF. Dosimetric Prerequisites for Routine Clinical Use of Photon Emitting Brachytherapy Sources with Average Energy Higher than 50 Kev. *Med Phys* 34:37-40, 2007.
- # 54. Liao ZX, Cox JD, Helen LH, Komaki R, Tucker SL, Mohan R, Martel M, Wei X, Allen PK, Thames HD. Assessing the Impact of Technological Advancement on Outcome for Patients with Unresectable Locally Advanced Non-Small-Cell Lung Cancer (NSCLC) Receiving Concomitant Chemo Radiotherapy. *ASTRO*. In Press.
- # 55. Liengsawangwong R, Yu TK, Sun TL, Erasmus J, Perkins GH, Tereffe W, Oh JL, Woodward WA, Strom EA, Salehpour M, Buchholz TA. Treatment optimization using computed tomography-delineated targets should be used for supraclavicular irradiation for breast cancer. *Int J Radiat Oncol Biol Phys*, 2007 (In Press).
- & 56. Lim G, Choi J, Mohan R. Iterative solution methods for beam angle and fluence map optimization in intensity modulated radiation therapy planning. *OR Spectrum*, 2007.
- @# 57. **Liu HH, Balter P**, Tutt T, Choi B, Zhang J, Wang C, Chi M, **Luo D**, Pan T, **Hunjan S, Starkschall G, Rosen I, Prado K, Liao Z, Chang J, Komaki R, Cox JD, Mohan R, Dong L**, "Assessing respiration-induced tumor motion and internal target volume using 4DCT for radiation therapy of lung cancer *Int J Radiat Oncol Biol Phys*, 68:531-540, 2007.
- @# 58. **Liu HH, Wang X, Dong L**, Wu Q, **Liao Z**, Stevens CW, **Guerrero TM, Komaki R, Cox JD, Mohan R**. Feasibility of sparing the lung and other thoracic structures with intensity-modulated radiation therapy (IMRT) for non-small cell lung cancer (NSCLC), *Int J Radiat Oncol Biol Phys* 58(4):1268-1279, 2004.
- & 59. Lu J, **Zhu XR**, Munro P, Chi PC, **Mohan R**, Pan T. Amplitude correlated 4-dimensional cone beam CT. In: Flynn MJ, Hsieh J, editors. *Medical Imaging 2006: Physics of Medical Imaging*. Vol 6142: SPIE; 2006. 61422I.
- & 60. Lu J., Guerrero T.M., Munro P., Jeung A., Chi P.M., Balter P., Zhu X.R., Mohan R. and Pan T. Four dimensional cone beam CT with adaptive gantry rotation and adaptive data sampling. *Med. Phys.* to appear in Sept. 2007.
- & 61. Mann AL, Kim JE, Aaberg T, Blair NP, Dierner-West M, Followill D, Gilson MM, Olsen KR, Hawkins BS. Incidence of cataract and outcomes after cataract surgery in the first 5 years after 125I brachytherapy in the COMS: COMS report No. 27. *Ophthalmology* 114:1363-71, 2007.

* Inter-programmatic
Intra-programmatic
& Inter-institutional
@ First tier

- # 62. Martel M. Imaging as a Biomarker for Therapy Response: Challenges, Opportunities and Initiatives. *Medical Physics* 34 (6):2514, 6/2007.
- # 63. Mason K, Gillin M, Mohan R, Cox J. Preclinical biologic assessment of proton beam relative biologic effectiveness at Proton Therapy Center Houston. *Int J Radiat Oncol Biol Phys* 68(4):968-70, 2007.
- # 64. Melancon AD, O'Daniel J, Zhang L, Kuban DA, de Crevoisier R, Lee AK, Cheung RM, Tucker SL, Kudchadker RJ, Newhauser WD, Mohan R, Dong L. Is 3-mm intra-fractional margin sufficient for IMRT of prostate cancer? *Radiother Oncol* (in press)
- @# 65. **Mohan R, Zhang X, Wang H, Kang Y, Wang X, Liu H, Ang KK, Kuban D, Dong L.** Use of deformed intensity distributions for on-line modification of image-guided IMRT to account for interfractional anatomic changes. *Int J Radiat Oncol Biol Phys* 61(4):1258-1266, 2005.
- # 66. Mourtada F, Gifford, K, Berner PA, Horton, JL, Price MJ, Lawyer AA, Eifel PJ: Retrospective dosimetric comparison of low-dose-rate and pulsed-dose-rate intracavitary brachytherapy using a tandem and mini-ovoids, *Medical Dosimetry*, 32(3): 181-187 (2007)
- # 67. Nelson C, **Starkschall G, Balter P**, Fitzpatrick MJ, Antolak J, Tolani N, **Prado K.** Respiration-correlated treatment delivery using feedback-guided breath hold: a technical study. *Med Phys* 32(1):175-181, 2005.
- @ * 68. Nelson C, **Starkschall G**, Morice R, Stevens CW, **Chang JY**, Assessment of lung tumor motion during respiratory gating using implanted fiducials. *Int J Radiat Oncol Biol Phys*, 67:915-923, 2007.
- @& 69. **Newhauser W**, Fontenot J, Koch N, **Dong L, Lee A**, Zheng Y, Waters L, **Mohan R.** Monte Carlo simulations of the dosimetric impact of radiopaque fiducial markers for proton radiotherapy of the prostate *Phys. Med. Biol.* 52:2937–2952, 2007.
- # 70. Newhauser W, Fontenot J, Zheng Y, Polf J, Titt U, Koch N, Zhang X, Mohan R. Monte Carlo simulations for configuring and testing an analytical proton dose-calculation algorithm. *Phys Med Biol* 52:4569-84, 2007.
- & 71. Newhauser WD, Giebeler A, Langen KM, Mirkovic D, Mohan R. Can megavoltage computed tomography reduce proton range uncertainties in treatment plans for patients with large metal implants? (submitted 2007-08-03, accepted with minor revisions?)
- * 72. Newhauser WD, Koch NC, Fontenot JD, Rosenthal SJ, Gombos D, Fitzek MM, Mohan R. Dosimetric impact of tantalum markers used in the treatment of uveal melanoma with proton beam therapy *Phys Med Biol* 52: 3979-3990 (2007).

* Inter-programmatic
Intra-programmatic
& Inter-institutional
@ First tier

- @* 73. O'Daniel J, **Dong L**, Zhang L, De'Crevoisier R, Wang, H, **Tucker S, Kudchadker R**, Bonnen M, **Cox J, Mohan R, Kuban D**. Dosimetric comparison of daily target alignment methods for prostate radiotherapy. *International Journal of Radiation Oncology Biology Physics*, 66(3):883-891, 2006.
- # 74. O'Daniel J, Garden AS, Schwartz DL, Wang H, Ang K, Ahamad A, Rosenthal DI, Morrison WH, Asper JA, Zhang L, Tung S, Mohan R, Dong L. Parotid gland dose in head-and-neck intensity-modulated radiotherapy: Is what you plan what you get? *Int J Radiat Oncol Biol Phys*. In Press.
- # 75. O'Daniel JC, Rosenthal DI, Garden AS, Barker JL, Ahamad A, Ang KK, Asper JA, Blanco AI, De Crevoisier R, Holsinger FC, Patel CB, Schwartz DL, Wang H, Dong L. The effect of dental artifacts, contrast media, and experience on interobserver contouring variations in head and neck anatomy. *American Journal of Clinical Oncology: Cancer Clinical Trials* 30:191-198, 2007.
- * 76. Pan T, **Mawlawi O**, Nehmeh SA, Erdi YE, **Luo D, Liu HH**, Castillo R, **Mohan R, Liao Z**, Macapinlac HA. Attenuation correction of PET images with respiration-averaged CT images in PET/CT. *J Nucl Med* 2005;46:1481-1487.
- * 77. Pan T, Sun X, and Luo D, Improvement of the cine-CT based 4D-CT imaging (accepted for publication in *Med. Phys.*)
- & 78. Pang JW, Friedman DL, Whitton JA, Stovall M, Mertens AC, Robison LL, Weiss NS. Employment status among adult survivors in the Childhood Cancer Survivor Study. *Pediatr Blood Cancer* 2007(Epub ahead of print).
- # 79. Polf JC, Harvey MC, Titt U, Newhauser WD, Smith AR, Initial beam size study for passive scatter proton therapy – Part I: Monte Carlo Verification, *Med. Phys.*, 34 11, (2007) In Press.
- # 80. Polf JC, **Newhauser WD, Titt U**. Patient Neutron Dose Equivalent Exposures Outside of the Proton Treatment Field. *Radiat Prot Dosim* 115(1-4):154-158, 2005.
- # 81. Polf JC, **Newhauser WD**. Calculations of Neutron Dose Equivalent Exposures from Range Modulated Proton Therapy Beams. *Phys Med Biol* 50:3859-3873, 2005.
- & 82. Rivard MJ, Butler WM, DeWerd LA, Huq MS, Ibbott GS, Meigooni AS, Melhus CS, Mitch MG, Nath R, Williamson JF. Supplement to the 2004 update of the AAPM Task Group No. 43 Report. *Medical Physics*, 2007 (accepted for publication).
- @# 83. Shioyama Y, Jang SY, **Liu HH, Guerrero T, Wang X**, Gayed IW, Erwin WD, **Liao Z, Chang JY**, Jeter M, Yaremko BP, Borghero YO, **Cox JD, Komaki R, Mohan R**. Preserving Functional Lung Using Perfusion Imaging and Intensity-Modulated Radiation Therapy for Advanced-Stage Non-Small Cell Lung Cancer. *Int J Radiat Oncol Biol Phys*, 68(5): 1349-1358, 2007.

* Inter-programmatic
Intra-programmatic
& Inter-institutional
@ First tier

- @* 84. Shiu AS, **Chang EL**, Ye J, Lii M, Rhines LD, Mendel, E, Weinberg J, Singh S, Maor MH, **Mohan R**, **Cox, JD**. Near Simultaneous Computed Tomography Image-Guided Stereotactic Spinal Radiotherapy: An Emerging Paradigm for Achieving True Stereotaxy. *Int J of Radiat Oncol Biol Phys* 57:605-613, 2003.
- & 85. Siebers JV, Keall PJ, Kim JO, **Mohan R.**, A method for photon beam Monte Carlo multileaf collimator particle transport, *Phys Med Biol* 47, 3225-49, 2002.
- & 86. Siebers, J.V., Lauterbach, M., Keall, PJ and **Mohan, R.**, Incorporating multi-leaf collimator leaf sequencing into iterative IMRT optimization., *Med Phys* 29, 952-959, 2002.
- * 87. Starkschall G, Desai N, Balter P, Prado K, Luo D, Cody D, Pan T. Quantitative assessment assurance of four-dimensional computed tomography image acquisition quality. *J. Appl. Clin. Med. Phys.* 8(3):1-20, 2007.
- & 88. Teh BS, **Dong L**, McGary JE, Mai WY, Grant W, 3rd, Butler EB. Rectal wall sparing by dosimetric effect of rectal balloon used during Intensity-Modulated Radiation Therapy (IMRT) for prostate cancer. *Med Dosim* 30(1):25-30, 2005.
- @* 89. **Thames HD**, Zhang M, **Tucker SL**, **Liu H**, **Dong L**, **Mohan R**. Cluster models of dose-volume effects. *Int J Radiat Oncol Biol Phys* 59(5):1491-1504, 2004.
- @* 90. **Titt U**, **Vassiliev ON**, Ponisch F, **Dong L**, **Liu H**, **Mohan R**. A flattening filter free photon treatment concept evaluation with Monte Carlo. *Med Phys* 33 (6):1595-1602, 2006.
- @* 91. **Tucker S**, Cheung R, **Dong L**, **Liu H**, **Thames H**, Huang E, **Kuban D**, **Mohan R**. Dose-volume-response analyses of late rectal bleeding after radiotherapy for prostate cancer. *Int J Radiat Oncol Biol Phys* 59(2), 353-365, 2004.
- @* 92. **Tucker SL**, Zhang M, **Dong L**, **Mohan R**, **Kuban D**, **Thames HD**. Cluster model analysis of late rectal bleeding after IMRT of prostate cancer: A case-control study. *Int J Radiat Oncol Biol Phys* 64 (4):1255-1264, 2006.
- # 93. Vassiliev ON, Kry SF, Kuban DA, Salehpour M, Mohan R, Titt U. Treatment-planning study of prostate cancer intensity-modulated radiotherapy with a varian clinac operated without a flattening filter. *Int J Radiat Oncol Biol Phys* 68(5):1567-71, 2007.
- # 94. Vassiliev ON, Titt U, Kry SF, Mohan R, Gillin MT. Radiation Safety Survey on a Flattening Filter-Free Medical Accelerator. *Radiat Prot Dosimetry*. e-Pub, 2007.
- # 95. Vedam S, Archambault L, Starkschall G, Mohan R, and Beddar S. Determination of prospective displacement-based gate threshold for respiratory-gated radiation delivery from retrospective phase-based gate threshold selected at 4D CT simulation. *Med Phys*. In Press.

* Inter-programmatic
Intra-programmatic
& Inter-institutional
@ First tier

- @& 96. **Vedam SS**, Keall PJ, Docef A, Todor DA, Kini VR, **Mohan R**. Predicting respiratory motion for four-dimensional radiotherapy. *Med Phys* 31:2274-2283, 2004.
- @& 97. **Vedam SS**, Keall PJ, Kini VR, Mostafavi H, Shukla HP, **Mohan, R.**, Acquiring a four-dimensional computed tomography dataset using an external respiratory signal, *Phys Med Biol* 48: 45-62, 2003.
- @& 98. **Vedam SS**, Kini VR, Keall PJ, Ramakrishnan V, Mostafavi H, **Mohan, R**, Quantifying the predictability of diaphragm motion during respiration with a non-invasive external marker, *Med Phys* 30: 505-13, 2003.
- # 99. Wang C, Shiu A, Lii M, Woo S, and Chang EL. Integration and Automation of Target Localization and Verification for Image-Guided Stereotactic Body Radiotherapy. *Technology in Cancer Research and Treatment*, 6:187-196, 2007.
- @# 100. Wang H, **Dong L**, Lii MF, **Lee AL**, **de Crevoisier R**, **Mohan R**, **Cox JD**, **Kuban DA**, **Cheung R**. Implementation and validation of a 3-dimensional deformable registration algorithm for targeted prostate cancer radiotherapy. *Int J Radiat Oncol Biol Phys* 61(3):725-735, 2005.
- @# 101. Wang H, **Dong L**, O'Daniel J, **Mohan R**, **Garden AS**, **Ang KK**, **Kuban DA**, **Bonnen M**, **Chang JY**, **Cheung R**. Validation of an accelerated 'demons' algorithm for deformable image registration in radiation therapy. *Phys Med Biol* 50(12):2887-2905, 2005.
- @# 102. **Wang X**, **Zhang X**, **Dong L**, **Liu H**, **Gillin M**, Ahamad A, **Ang K**, **Mohan R**. Effectiveness of noncoplanar IMRT planning using a parallelized multiresolution beam angle optimization method for paranasal sinus carcinoma. *Int J Radiat Oncol Biol Phys* 63(2): 594-601, 2005.
- & 103. Wu Q, **Mohan, R**, Niemierko A, Schmidt-Ullrich R. Optimization of intensity-modulated radiotherapy plans based on the equivalent uniform dose, *Int J Radiat Oncol Biol Phys* 52, 224-35, 2002.
- & 104. Wu Q, **Mohan, R.**, Multiple local minimain IMRT optimization based on dose-volume criteria, *Med Phys* 29, 1514-1527, 2002.
- * 105. Yom S, Liao Z, Liu H, Tucker S, Hu C, Wei X, Wang X, Wang S, Mohan R, Cox J, Komaki R. Initial evaluation of treatment-related pneumonitis in advanced-stage non-small-cell lung cancer patients treated with concurrent chemotherapy and intensity-modulated radiotherapy. *Int J Radiat Oncol Biol Phys* 68:94-102, 2007.
- # 106. Zhang G, **Guerrero T**, Segars W, Huang T, Bilton S, Lin KP, **Ibbott G**, **Dong L**, Forster K. Elastic Image Mapping for 4D Dose Estimation in Thoracic Radiotherapy. *Radiat Prot Dosim*, 115:497-502.

* Inter-programmatic
Intra-programmatic
& Inter-institutional
@ First tier

- @# 107. **Zhang X, Dong L, Lee AK, Cox JD, Kuban DA, Zhu RX, Wang X, Li Y, Newhauser WD, Gillin M, Mohan R.** Effect of Anatomic Motion on Proton Therapy Dose Distributions in Prostate Cancer Treatment. *Int J Radiat Oncol Biol Phys* 67: 620-629, 2007.
- # 108. **Zhang X, Wang X, Liu HH, Dong L, Mohan R.** A sensitivity-guided algorithm for automated determination of IMRT objective function parameters. *Medical Physics* 33(8):2935-44, 2006.
- # 109. Zhang Y, Zhang L, Zhu XR, Lee AK, Chambers M, Dong L. Reducing metal artifacts in cone-beam CT images by preprocessing projection data. *Int J Radiat Oncol Biol Phys* 67:924-32, 2007.
- # 110. Zhao K, Liao Z, Bucci K, Komaki R, Cox JD, Yu Z, Zhang L, Mohan R, Dong L. Evaluation of respiratory-induced target motion for esophageal tumors at the gastroesophageal junction. *Radiother Oncol.* In Press
- # 111. Zheng Y, Newhauser WD, Fontenot J, Taddei P, Mohan R. Monte Carlo Study of Neutron Dose Equivalent during Passive Scattering Proton Therapy, *Phys Med Biol* 52 4481–4496, 2007.
- # 112. Zheng Y, Newhauser WD, Fontenot JD, Koch N, and Mohan R. Monte Carlo simulation model of the M. D. Anderson Cancer Center’s passively scattered proton therapy machine. *J Nucl Matl* 361 289-297, 2007.
- # 113. Zullo J, Kudchadker R, Wu R, Lee A, Prado K. Implication of CT table sag on geometrical accuracy during virtual simulation. *Med Dosim.* In Press