

### Refereed journal publications:

- J1. **Samei E**, Davidian Z, Ejtehad R, Nahal A, Meshginfam P. A preliminary study on Halley's comet (in Persian). *Iranian Journal of Physics* 3(4): 390-394, 1986.
- J2. Poorang P, Davidian Z, **Samei E**, Shadanpour N, Nahal A, Hoda H. Halley: results of recent investigations (in Persian). *Iranian Journal of Physics* 4(3): 243-245, 1986.
- J3. **Samei E**, Kearfott KJ, Wang C-KC, Han S. Impact of variations in physical parameters on glow curves for planchet heating of TL dosimeters. *Nuclear Instruments and Methods in Physics Research A* 353: 415-419, 1994.
- J4. Kearfott KJ, Han S, McMahan KL, **Samei E**, Sensitivity of a mixed field dosimetry algorithm to uncertainties in thermoluminescent element readings. *Health Physics* 68(3): 340-349, 1995.
- J5. **Samei E**, Kearfott KJ, Wang C-KC. Numerical modeling of a new method for determination of shallow dose and deep dose in low-LET radiation fields. *Radiation Protection Dosimetry* 58(2): 103-114, 1995.
- J6. **Samei E**, Kearfott KJ. A limited bibliography of atomic energy commission-funded human radiation experiments. *Health Physics* 69(6): 885-891, 1995.
- J7. **Samei E**, Kearfott KJ, Gillespie TJ, Wang C-KC. An atlas of selected beta ray spectra and depth-dose distribution generated by a fast Monte Carlo-based sampling method. *Radiation Physics and Chemistry* 48(6): 719-725, 1996.
- J8. **Samei E**, Flynn MJ, Eyler WR. Simulation of subtle lung nodules in projection chest radiography. *Radiology* 202(1): 117-124, 1997.
- J9. Beute GH, Flynn MJ, Eyler WR, **Samei E**, Zylak CJ, Spizarny DL. Chest radiographic image quality: comparison of asymmetric film/screen, digital storage phosphor, and digital selenium drum systems - a preliminary study (*invited article*). *Radiographics* 18: 745-754, 1998.
- J10. **Samei E**, Flynn MJ, Reimann DA. A method for measuring the presampled MTF of digital radiographic systems using an edge test device. *Medical Physics* 25: 102-113, 1998.
- J11. Flynn MJ, **Samei E**. Experimental comparison of noise and resolution for 2k and 4k storage phosphor radiography systems. *Medical Physics* 26: 1612-1623, 1999.
- J12. **Samei E**, Flynn MJ, Eyler WR. Detection of subtle lung nodules: relative influence of quantum and anatomical noise on chest radiographs. *Radiology* 213: 727-734, 1999.
- J13. Kearfott KJ, Han S, Wagner EC, **Samei E**, Wang C-KC. Numerical simulation of a TLD pulsed laser-heating scheme for determination of shallow dose and deep dose in low-LET radiation fields. *Journal of Applied Radiation and Isotopes* 52(6): 1419-1429, 2000.
- J14. Ryan MT, Spicer KM, Frei-Lahr D, **Samei E**, Frey GD, Hargrove H, Bloodworth G. Health physics consequences of out-patient treatment of non-Hodgkin's lymphoma with <sup>131</sup>I-radiolabelled anti-B1 antibody. *Operational Health Physics* 79(5): S52-S55, 2001.

- J15. Mah E\*, **Samei E**, Peck D. Evaluation of a quality control phantom for digital chest radiography systems. *Journal of Applied Clinical Medical Physics* 2(2): 90-101, 2001. **This paper received the Award for Excellence for best diagnostic imaging paper published during 2001 in the Journal of Applied Clinical Medical Physics.**
- J16. **Samei E**, Seibert JA, Willis CE, Flynn MJ, Mah E, Junck KL. Performance evaluation of computed radiography systems. *Medical Physics* 28(3): 361-371, 2001.
- J17. **Samei E**, Flynn MJ. An experimental comparison of detector performance for computed radiography systems. *Medical Physics* 29(4): 447-459, 2002.
- J18. Dobbins III JT, **Samei E**, Chotas HG, Warp RJ, Baydush AH, Floyd CE, Ravin CE. Optimization of x-ray spectra for chest radiography with a CsI/a:Si flat-panel detector. *Radiology* 226: 221-230, 2003.
- J19. **Samei E**, Hill J, Frey GD, Southgate W, Mah E, Delong D. Evaluation of a flat panel digital radiographic system for low-dose portable imaging of neonates. *Medical Physics* 30: 601-607, 2003.
- J20. **Samei E**, Flynn MJ, An experimental comparison of detector performance for direct and indirect digital radiography systems. *Medical Physics* 30: 608-622, 2003.
- J21. **Samei E**, Flynn MJ, Peterson E, Eyler WR. Subtle lung nodules: influence of local anatomical variations on detection. *Radiology* 228: 76-84, 2003.
- J22. **Samei E**. Image quality in two phosphor-based flat panel digital radiographic detectors. *Medical Physics* 30(7): 1747-1757, 2003.
- J23. Saunders RS\*, **Samei E**. A method for modifying the image quality parameters of digital radiographic images. *Medical Physics* 30: 3006-3017, 2003.
- J24. Turner SR\*, **Samei E**, Hertzberg BS, Delong DM, Vargas-Voracek R, Maynor CH, Singer A, Kliwer MA. Sonography of fetal choroid plexus cysts: detection depends on cyst size and gestational age. *Journal of Ultrasound in Medicine (JUM)* 22: 1219-1227, 2003.
- J25. **Samei E**, Seibert AJ, Anderiole K, Badano A, Crawford J, Reiner B, Flynn MJ, Chang P. General guidelines for purchasing and acceptance testing of PACS equipment (**invited article**). *Radiographics* 24: 313-334, 2004.
- J26. McKinley RL\*, Tornai MP, **Samei E**, Bradshaw ML. Simulation study of a quasi-monochromatic beam for x-ray computed mamotomography. *Medical Physics* 31(4): 800-813, 2004.
- J27. Saunders RS\*, **Samei E**, Hoeschen C. Impact of resolution and noise characteristics of digital radiographic detectors on the detectability of lung nodules. *Medical Physics* 31: 1603-1613, 2004 (Cross-referenced in *Virtual Journal of Biological Physics Research*, June 2004, <http://www.vjbio.org/>).
- J28. McKinley RL\*, Tornai MP, **Samei E**, Bradshaw ML. Development of an optimal x-ray beam for dual-mode emission and transmission mamotomography. *Nuclear Instruments and Methods in Physics Research A* 527: 102-109, 2004.
- J29. Jung H, Kim H-J, Kang W-S, Yoo SK, Fujioka K, Hasegawa M, **Samei E**. Assessment of flat panel LCD primary class display performance based on AAPM TG 18 acceptance protocol. *Medical Physics* 31(7): 2155-2164, 2004.

- J30. Neitzel U, Günther-Kohfahl S, Borasi G, **Samei E**. Determination of the detective quantum efficiency of a digital x-ray detector: comparison of three evaluations using a common image data set. *Medical Physics* 31(8): 2205-2211, 2004.
- J31. **Samei E**, Saunders RS, Lo JY, Dobbins III JT, Jesneck JL, Floyd Jr CE, Ravin CE. Fundamental imaging characteristics of a slot-scan digital chest radiographic system. *Medical Physics* 31(9): 2687-2698, 2004.
- J32. **Samei E**, Wright SL. Luminance and contrast performance of liquid crystal displays for mammographic applications (*invited article*). *Technology in Cancer Research and Treatment* 3(5): 429-436, 2004.
- J33. **Samei E**, Rowberg A, Avraham E, Cornelius C. Towards clinically-relevant standardization of image quality (*invited article*). *Journal of Digital Imaging* 17(4): 235-300, 2004.
- J34. Saunders RS\*, **Samei E**, Jesneck JL, Lo JY. Physical characterization of a prototype selenium-based full field digital mammography detector. *Medical Physics* 32: 588-599, 2005.
- J35. **Samei E**. Technological and psychophysical considerations for digital mammography displays (*invited article*). *Radiographics* 25(2): 491-501, 2005.
- J36. **Samei E**, Badano A, Chakraborty D, Compton K, Cornelius C, Corrigan K, Flynn MJ, Hemminger B, Hangiandreou N, Johnson J, Moxley-Stevens DM, Pavlicek W, Roehrig H, Rutz L, Shepard J, Uzenoff RA, Wang J, Willis CE. Assessment of display performance for medical imaging systems: Executive summary of AAPM TG18 report (*invited article*). *Medical Physics* 32(4):1205-1225, 2005.
- J37. **Samei E**, Lo JY, Yoshizumi TT, Dobbins III JT, Jesneck JL, Floyd Jr CE, McAdams HP, Ravin CE. Comparative scatter and dose performance of slot-scan and full-field digital chest radiographic systems. *Radiology* 235(3): 940-949, 2005.
- J38. **Samei E**, Dobbins III JT, Lo, JY, McKinley RL, Tornai, M, A framework for optimizing the radiographic technique in digital x-ray imaging, *Radiation Protection Dosimetry* 117(1-2): 220-229, 2005.
- J39. Ranger NT, **Samei E**, Dobbins III JT, Ravin CE. Measurement of the detective quantum efficiency in digital detectors consistent with the IEC 62220-1 standard: practical considerations regarding the choice of filter material. *Medical Physics* 37(7): 2305-2311, 2005.
- J40. **Samei E**, Buhr E, Granfors P, Vandenbroucke D, Wang X. Comparison of edge analysis techniques for the determination of the MTF of digital radiographic systems. *Physics in Medicine and Biology* 50: 3613-3625, 2005.
- J41. McKinley RL\*, Tornai MP, **Samei E**, Bradshaw ML. Initial study of quasi-monochromatic x-ray beam performance for x-ray computed mammatomography, *IEEE Transactions on Nuclear Science* 52(5): 1243-1250, 2005.
- J42. McKinley RL\*, Tornai MP, Brzymialkiewicz C, **Samei E**, Bowsher JE. Analysis of a novel offset cone-beam computed mammatomography imaging system for attenuation correction of SPECT in a proposed dual modality dedicated breast mammatomography system. *Physica Medica* XXII (Sup. I): 46-53, 2006.

- J43. Hoe CL\*, **Samei E**, Frush DP, Delong DM. Simulation of liver lesions for pediatric CT. *Radiology* 238: 699-705, 2006.
- J44. Saunders RS\*, **Samei E**. Resolution and noise measurements of selected commercial medical displays. *Medical Physics* 33(2): 308-319, 2006.
- J45. **Samei E**, Wright SL. Viewing angle performance of medical liquid crystal displays. *Medical Physics* 33(3): 645-654, 2006.
- J46. Boyce S\*, **Samei E**. Imaging properties of digital magnification radiography. *Medical Physics* 33(4): 984-996, 2006.
- J47. **Samei E**, Ranger NT, Dobbins III JT, Chen Y. Inter-comparison of methods for image quality characterization: 1. Modulation transfer function. *Medical Physics* 33(5): 1454-1465, 2006.
- J48. Dobbins III JT, **Samei E**, Ranger NT, Chen Y. Inter-comparison of methods for image quality characterization: 2. Noise power spectrum. *Medical Physics* 33(5): 1466-1475, 2006.
- J49. Borasi G, **Samei E**, Bertolini M, Nitrosi A, Tassoni D. Contrast-detail analysis of two indirect flat panel detectors for digital radiography. *Medical Physics* 33(6): 1707-1719, 2006. [Errata in *Medical Physics* 33: 3580, 2006.]
- J50. **Samei E**. The role of image perception in radiology (*guest editorial*). *Journal of American College of Radiology* 3(6): 400-401, 2006.
- J51. Saunders RS\*, **Samei E**, Baker JA. Simulation of mammographic lesions. *Academic Radiology* 13: 860-870, 2006.
- J52. Siegel E, Krupinski E, **Samei E**, Flynn MJ, Andriole K, Erickson B, Thomas J, Badano A, Seibert JA, Pisano E. Digital mammography image quality: image display. *Journal of American College of Radiology* 3(8): 615-627, 2006.
- J53. Fetterly KA, **Samei E**. A photographic technique for assessing the viewing angle performance of liquid crystal displays. *Journal of the Society for Information Display (JSID)* 14: 867-872, 2006.
- J54. **Samei E**, Cleland EW, Roehrig H. In-field assessment of display resolution and noise: performance evaluation of a commercial measurement system. *Journal of the Society for Information Display (JSID)* 14: 839-845, 2006.
- J55. Roehrig H, Gaskill J, Fan J, Martin C, Greivenkamp J, **Samei E**. In-field evaluation of the modulation transfer function and the signal-to-noise ratio of electronic-display devices. *Journal of the Society for Information Display (JSID)* 14: 847-860, 2006.
- J56. Badano A, Schnieder S, **Samei E**. Visual assessment of angular response in medical LCDs, *Journal of Digital Imaging* 19(3): 240-248, 2006.
- J57. Lin MD\*, **Samei E**, Badea CT, Johnson GA. Optimized radiographic spectra for small animal digital subtraction angiography. *Medical Physics* 33(11): 4249-4257, 2006.
- J58. Saunders RS\*, **Samei E**, Baker JA, Delong DM, Scott Soo M, Walsh R, Pisano E, Kuzmiak CM, Pavic D. Comparison of LCD and CRT displays based on utility for mammographic tasks. *Academic Radiology* 13: 1317-1326, 2006.

- J59. McAdams HP, **Samei E**, Dobbins III JT, Tourassi G, Ravin CE. Recent advances in chest radiography (**invited article**). *Radiology* 241(3): 663-683, 2006.
- J60. Saunders RS\*, **Samei E**. Improving demographic decision accuracy by incorporating observer ratings with interpretation time (**invited article**). *British Journal of Radiology* 79: 5117-5122, 2006.
- J61. Chawla A\*, **Samei E**. Ambient illumination revisited: A new adaptation-based approach for optimizing medical imaging reading environments. *Medical Physics* 34(1): 81-90, 2007.
- J62. Ruschin M\*, Timberg P, Båth M, Hemdal B, Svahn T, Saunders RS, **Samei E**, Andersson I, Mattsson S, Chakraborty D, Tingberg A. Dose dependence of mass and microcalcification detection in digital mammography: free response human observer studies. *Medical Physics* 34(2): 400-407, 2007.
- J63. Badea C, **Samei E**, Hedlund L, Johnson GA. Tomographic digital subtraction angiography for lung perfusion estimation in rodents. *Medical Physics* 34(5): 1546-1555, 2007.
- J64. **Samei E**, Saunders RS, Baker JA, DeLong DM. Digital mammography: impact of reduced dose on diagnostic performance. *Radiology* 243: 396-404, 2007.
- J65. **Samei E**, Stebbins SA, Dobbins III JT, McAdams HP, Lo JY. Multiprojection correlation imaging for improved detection of pulmonary nodules. *AJR* 188: 1239-1245, 2007.
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- J67. Ranger NT, Dobbins III JT, **Samei E**, Ravin CE. Assessment of detective quantum efficiency: Inter-comparison of the recent international standard with prior methods. *Radiology* 243(3): 785-795, 2007.
- J68. Chawla A\*, **Samei E**, Saunders RS, Abbey C, DeLong D. Effect of dose reduction on the detection of mammographic lesions: a mathematical observer analysis. *Medical Physics* 34(8): 3385-3398, 2007.
- J69. Saunders RS\*, Baker JA, DeLong DM, Johnson JP, **Samei E**. Does image quality matter? Impact of resolution and noise on mammographic task performance. *Medical Physics* 34(10): 3971-3981, 2007.
- J70. Fetterly KA, Flynn MJ, Blume H, **Samei E**. Introduction to grayscale calibration and related aspects of medical imaging grade liquid crystal displays. *Journal of Digital Imaging* 21(2): 193-207, 2008.
- J71. Schindera ST\*, Nelson RC, Paulson EK, Jaffe TA, Miller CM, DeLong DM, Kawaji K, Yoshizumi TT, Mukundan S, **Samei E**. Low tube voltage, high tube current multi-detector row CT for enhanced detection of hypervascular liver tumors: phantom study. *Radiology* 146(1): 125-132, 2008.
- J72. Chawla AS\*, **Samei E**, Lo JY, Baker JA. A mathematical model platform for optimizing a multi-projection breast imaging system. *Medical Physics* 35(4): 1337-1345, 2008.
- J73. **Samei E**, Ranger NT, DeLong DM. A comparative contrast-detail study of five medical displays. *Medical Physics* 35(4): 1358-1364. 2008.
- J74. Pollard BJ\*, Chawla AS, DeLong DM, Hashimoto N, **Samei E**. Object detectability at increased ambient lighting conditions. *Medical Physics* 35(6): 2204-2213, 2008.

- J75. Williams MB, Raghunathan P, More MJ, Seibert JA, Kwan A, Lo JY, **Samei E**, Ranger NT, Fajardo LL, McGruder A, McGruder SM, Maidment ADA, Yaffe MJ, Bloomquist A, Mawdsley G. Optimization of exposure parameters in full field digital mammography *Medical Physics* 35(6): 2414-2423, 2008.
- J76. Singh S\*, Tourassi GD, Baker JA, **Samei E**, Lo JY. Automated breast mass detection in 3D reconstructed tomosynthesis volumes: a featureless approach. *Medical Physics* 35 (8): 3626-3636, 2008.
- J77. Li X\*, **Samei E**, Segars WP, Sturgeon GM, Colsher JG, Frush DP. Patient-specific dose estimation for pediatric CT. *Medical Physics* 35(12) 5821-5828, 2008.
- J78. Saunders RS\*, **Samei E**. The effect of breast compression on mass conspicuity in digital mammography. *Medical Physics* (35(10): 4464-4473, 2008.
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- J80. Pollard BJ\*, **Samei E**, Chawla AS, Baker JA, Ghate S, Kim C, Soo MS, Hashimoto N. The influence of ambient lighting on mass detection in mammograms. *Academic Radiology* 16(3): 299-304, 2009.
- J81. Chawla AS\*, Saunders RS, Singh S, Lo JY, **Samei E**. Towards optimized acquisition scheme for multiprojection correlation imaging of breast cancer. *Academic Radiology* 16(4): 456-463, 2009.
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- J84. Saunders RS\*, **Samei E**, Lo JY, Baker JA. Can breast compression be reduced for breast tomosynthesis? A Monte Carlo study on mass and microcalcification conspicuity in tomosynthesis. *Radiology* 251(3): 673-782, 2009.
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- J87. Chawla AS\*, Boyce S, Washington L, McAdams HP, Washington L, **Samei E**. Design and development of a new multi-projection x-ray system for chest imaging. *IEEE Transactions of Medical Imaging* 56(1): 36-45, 2009.
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- J91. Mahesh A, **Samei E**, Bisset III GS. Radiation dose in CT. RSNA/AAPM Educational module, RSNA Publications, 2009.
- J92. **Samei E**, Ranger NT, Bisset III GS, Maxfield C, Hollingsworth CL, Lo JY, Dobbins III JT, Wilson KL. Image quality and dose in digital radiography. RSNA/AAPM Educational module, RSNA Publications, 2009.
- J93. **Samei E**, Saunders RS, Badea CT, Ghaghada KB, Hedlund LW, Qi Y, Yuan H, Bentley RC, Mukundan, Jr S. Micro-CT imaging of breast tumors in rodents using a liposomal, nanoparticle contrast agent. *International Journal of Nanomedicine* 4: 277–282 2009.
- J94. Chawla AS\*, Lo JY, Baker JA, **Samei E**. Optimized image acquisition for breast tomosynthesis in projection and reconstruction space. *Medical Physics* 36(11): 4859-4869, 2009.
- J95. Marin D\*, Nelson R, Schindera ST, Richard S, Youngblood RS, Yoshizumi TT, **Samei E**. Low-tube-voltage, high--tube current multi-detector row CT of the abdomen: improved image quality and decreased radiation dose with an adaptive statistical iterative reconstruction algorithm – initial clinical experience. *Radiology* 254(1): 145-153, 2010.
- J96. Fleck MS\*, **Samei E**, Mitroff SR. Generalized ‘satisfaction of search’: Adverse influences on dual-target search. *Journal of Experimental Psychology: Human Perception & Performance* 16(1): 60-71, 2010.
- J97. Ranger NT, Lo JY, **Samei E**. A technique optimization protocol and the potential for dose reduction in digital mammography. *Medical Physics* 37(3): 962-969, 2010.
- J98. Shafer C\*, **Samei E**, Lo JY. The quantitative potential for breast tomosynthesis imaging. *Medical Physics* 37(3): 1004-1016, 2010.
- J99. Richard S\*, **Samei E** Quantitative imaging in breast tomosynthesis and CT: comparison of detection and estimation task performance. *Medical Physics* 37(6): 2627-2637, 2010. **This article was selected as Editor’s Pick as a top article in the journal issue.**
- J100. Marin D\*, Nelson R, Barnhart H, Schindera ST, Ho LM, Jaffe TA, Yoshizumi TT, Youngblood R, **Samei E**. Effect of a low tube voltage, high tube current multi-detector row CT technique on the detection of pancreatic tumors, image quality and radiation dose during the pancreatic parenchymal phase. *Radiology* 256(2): 450-459, 2010.
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- J105. **Samei E**, McAdams P. Evaluation and derivatives of medical image quality. RSNA/AAPM Educational module, RSNA Publications, 2010.
- J106. Peck D, **Samei E**. How to understand and communicate radiation risk. Image Wisely Alliance, ACR, 2010.
- J107. Li X\*, **Samei E**, Segars W, Sturgeon G, Colsher J, Toncheva G, Yoshizumi TT, Frush DP. Monte Carlo method for estimating patient-specific radiation dose and cancer risk in CT: development and validation. *Medical Physics* 38(1): 397-407, 2011.
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- J109. Chen B\*, Shorey J, Nolte L, Saunders RS, Thompson J, Richard S, **Samei E**. An anthropomorphic breast model for breast imaging simulation and optimization. *Academic Radiology* 18: 536-546, 2011. **This article was selected as a featured paper as a top article in the journal issue.**
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- J113. **Samei E**, Ranger NT, Dobbins III JT, Ravin CE. Effective Dose Efficiency (eDE): an application-specific metric of quality and dose for digital radiography. *Physics in Medicine and Biology* 56: 5099-5118, 2011. **This article was selected Featured Article as a top article in the journal issue.**
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- J115. D'Alessandro B, Madsen M, **Samei E**, Li X, Wooi-Tan J, Berbaum KS, Schartz K, Caldwell R, Zuckier. Synthetic PET and PET-CT images for use in perceptual studies (**invited article**). *Seminars of Nuclear Medicine* 41:437-448, 2011.



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- J117. Wang CE\*, Chea YW, Boll DT, **Samei E**, Neville AM, Dale BM, Merkle EM. Effect of Gadolinium chelate contrast agents on diffusion weighted MR imaging of the liver, spleen, pancreas and kidney at 3T. *European Journal of Radiology* 80: e1-e7, 2011.
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- J120. Schnell EA, **Samei E**, Dobbins III JY. Plate-specific gain map correction for the improvement of detective quantum efficiency in computed radiography. *Medical Physics* 39(3): 1495-1504, 2012.
- J121. **Samei E**, Button T, Orton C. The 2014 initiative can have potentially unintended negative consequences for medical physics in diagnostic imaging and nuclear medicine. Point-Counterpoint Debate. *Medical Physics* 39(3): 1167-1169, 2012.
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- J123. Guo W\*, Li Q, Boyce SJ, McAdams TP, Shiraishi J, Doi K, **Samei E**. A computerized scheme for lung nodule detection in multi-projection chest radiography. *Medical Physics* 39(4), 2001-2012, 2012.
- J124. Husarik DB\*, Marin D, Richard S, **Samei E**, Chen B, Jaffe TA, Bashir MR, Nelson RC. Radiation dose reduction in abdominal CT using a model based iterative reconstruction algorithm: How low can we go? *Investigative Radiology* 47(2): 121-127, 2012.
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- J126. Zhang Y\*, Li X, Segars WP, **Samei E**. Organ dose, effective dose, and risk index in adult CT: comparison of four types of reference phantoms across different protocols. *Medical Physics* 39(6), 3404-3423, 2012.
- J127. Richard S\*, Yadava G, Murphy S, **Samei E**. Towards task-based assessment of CT performance: system and object MTF across different reconstruction algorithms. *Medical Physics* 39(7), 4115-4121, 2012. **This article was selected as Editor's Pick as a top article in the journal issue.**
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