# Abdominal Imaging and Intervention
## Staff Publications
## 2019

1. Aguirre AJ, Nowak JA, Camarda ND, Moffitt RA, Ghazani AA, Hazar-Rethinam M, Raghavan S, Kim J, Brais LK, Ragon D, Welch MW, Reilly E, McCabe D, Marini L, Anderka K, Helvie K, Oliver N, Babic A, Da Silva A, Nadres B, Van Seventer EE, Shahzade HA, St Pierre JP, Burke KP, Clancy T, Cleary JM, Doyle LA, Jajoo K, McCleary NJ, Meyerhardt JA, Murphy JE, Ng K, Patel AK, Perez K, Rosenthal MH, Rubinson DA, Ryou M, Shapiro GI, Sicinska E, **Silverman SG,** Nagy RJ, Lanman RB, Knoerzer D, Welsch DJ, Yurgelun MB, Fuchs CS, Garraway LA, Getz G, Hornick JL, Johnson BE, Kulke MH, Mayer RJ, Miller JW, **Shyn PB,** Tuveson DA, Wagle N, Yeh JJ, Hahn WC, Corcoran RB, Carter SL, Wolpin BM. Real-time genomic characterization of advanced pancreatic cancer to enable precision medicine. Cancer Discov 2018:8(9):1096-1111.

2. Aksit Ciris P, Chiou JG, **Glazer DI**, Chao TC, **Tempany-Afdhal CM**, Madore B, Maier SE. Accelerated segmented diffusion-weighted prostate imaging for higher resolution, higher geometric fidelity, and multi-b perfusion estimation. Invest Radiol 2019 Apr;54(4):238-246.

3. Alessandrino F, Ghaith O, Williams KE, Sonpavde GP, **Silverman SG,** Shinagare AS. Advanced urothelial cancer: a radiology update. Abdom Radiol 2019;44:3858-3873.

4. Alessandrino F, Ivanovic A, **Souza D,** Chaoui A, Mortele KJ. The Hepatoduodenal Ligament Revisited: Cross-sectional imaging spectrum of non-neoplastic conditions. Abdom Radiol 2019;44(4):1269-1294.

5. Alessandrino F, Taghipour M, Hassanzadeh E, Ziaei A, Vangel M, Fedorov A, **Tempany CM,** Fennessy FM. Predictive role of PI-RADSv2 and ADC parameters in differentiating Gleason pattern 3 + 4 and 4 + 3 prostate cancer. Abdom Radiol 2019;44(1):279-285.

6. Baeeri M, Bahadar H, Rahimifard M, Navaei-Nigjeh M, **Khorasani R**, Rezvanfar MA, Gholami M, Abdollahi M. α-Lipoic acid prevents senescence, cell cycle arrest, and inflammatory cues in fibroblasts by inhibiting oxidative stress. Pharmacol Res 2019 Mar;141:214-223.

7. **Bhagavatula, SK,** Upadhyaya K, Miller BJ, Bursch P, Lammers A, Cima MJ, **Silverman SG**, Jonas O. An interventional image-guided microdevice implantation and retrieval method for in-vivo drug response assessment. Med Phys 2019; 46(11):5134-5143.

8. Bi WL, Hosny A, Schabath MB, Giger ML, Birkbak NJ, Mehrtash A, Allison T, Arnaout O, Abbosh C, Dunn IF, Mak RH, Tamimi RM, **Tempany CM**, Swanton C, Hoffmann U, Schwartz LH, Gillies RJ, Huang RY, Aerts HJWL. Artificial

intelligence in cancer imaging: clinical challenges and applications. Ca Cancer J Clin 2019 Mar;69(2):127-157.

9. Carrodeguas E, Lacson R, Swanson W, **Khorasani R**. Use of machine learning to identify follow-up recommendations in radiology reports. J Am Coll Radiol 2019 Mar;16(3):336-343.

10. Casper D, vanSonnenberg E, Mamlouk M, Hoechsler T, Morrison P, **Tuncali K, Silverman SG.** Cryotherapy of Liver Tumors in Mauro MA, et al, editors. Image-guided Interventions. 3rd ed. Elsevier, 2019

11. Chaurasia A, Gawalek KL, **Matalon S.** A 13-year-old woman with incidental left upper quadrant mass. AMSER Rad Path Case of the Month. Accepted for March, 2020.

12. Cochon LR, Kapoor N, Carrodeguas E, Ip IK, Lacson R, **Boland G**, **Khorasani R**. Variation in follow-up imaging recommendations in radiology reports: patient, modality, and radiologist predictors. Radiology 2019 Jun;291(3):700-707.

13. Davenport MS, Hu EM, Zhang A, Shinagare AB, Smith AD, Pedrosa I, Kaffenberger SF, **Silverman SG.** Standardized report template for indeterminate renal masses at CT and MRI: a collaborative product of the SAR Disease-Focused Panel on renal cell carcinoma. Abdom Radiol 2019;44(4):1423-1429. (Selected Best DFP paper of the Journal in 2019)

14. Daye D, Staziaki PV, Fiorini Furtado V, Tabari A, Fintelmann FJ, Elie Frenk NE, **Shyn PB**, **Tuncali K**, **Silverman SG,** Arellano R, Gee MS, Uppot RN. CT texture analysis and machine learning improve post-ablation prognostication in patients with adrenal metastases: a proof-of-concept. Cardiovasc Intervent Radiol 2019;42:1771–1776.

15. Diaz de Leon A, Davenport MS, **Silverman SG**, Schieda N, Cadeddu JA, Pedrosa I. Role of virtual biopsy in the management of renal masses. AJR 2019 Apr;17:1-10.

16. deSouza NM, **Tempany CM.** A risk-based approach to identifying oligometastatic disease on imaging. Int J Cancer 2019;144(3):422-430.

17. Emani S, Sequist TD, Lacson R, **Khorasani R**, Jajoo K, Holtz L, Desai S. Ambulatory safety nets to reduce missed and delayed diagnoses of cancer. Jt Comm J Qual Patient Saf 2019;45(8):552-557.

18. Francis IR, **Mayo-Smith WW**. Adrenal imaging. Diseases of the Abdomen and Pelvis 2018-2021: Diagnostic Imaging. Chapter 9.

19. Giess CS, Wang A, Frost EP, Chikarmane SA, **Boland GW**, **Khorasani R**. Impact of an information technology-enabled quality improvement initiative on timeliness of patient contact and scheduling of screening mammography recall. AJR 2019 2019 Oct;213(4):880-885.

20. Giess CS, Wang A, Ip IK, Lacson R, Pourjabbar S, **Khorasani R.** Patient, radiologist and examination characteristics affecting screening mammography recall rates in a large academic practice. J Am Coll Radiol. 2019 Apr;16(4 Pt A):411-418.

21. **Glazer DI**, Alper DP, **Lee LK**, Wach RL, Hooton SM, **Boland GW**, **Khorasani R**. Technologist productivity and accuracy in assigning protocols for abdominal CT and MRI examinations at an academic medical center: implications for physician workload. AJR 2019 Nov;213(5):1003-1007.

22. Hentel KD, Menard A, Morgan J, Durack JC, Johnson, PT, Raja AS, **Khorasani R.** What physicians and health organizations should know about mandated imaging appropriate use criteria. Ann Intern Med 2019 Jun;170(12):880-885.

23. Hentel KD, Menard A, Mongan J, Durack JC, Raja AS, **Khorasani R.** Mandated Imaging Appropriate Use Criteria. Ann Intern Med. 2019 Nov 5;171(9):682-683.

24. Johnson PT, Raja A, **Khorasani R.** Solutions to reduce unnecessary imaging. JAMA 2019 Jun;321(22):2242.

25. Kang SK, Berland LL, **Mayo-Smith WW**, Hoang JK, Herts BR, Megibow AJ, Pandharipande PV. Navigating uncertainty in the management of incidental findings. J Am Coll Radiol 2019 May;16(5):700-708.

26. Kapoor N, Gaviola G, Wang A, Babatunde VD, **Khorasani R**. Quantifying and characterizing trainee participation in a major academic radiology department. Curr Probl Diagn Radiol 2019;48(5):436-440.

27. Kapoor N, Yan Z, Wang A, Wickner P, Kachalia A, **Boland G**, **Khorasani R**. Improving patient experience in radiology: impact of a multifaceted intervention on national ranking. Radiology 2019 Apr;291(1):102-109.

28. Kim NY, Lubner NG, Nystrom JT, Swietlik JF, Abel EJ, Havighurst TC, **Silverman SG**, McGahan JP, Pickhardt PJ. Utility of CT texture analysis in differentiating low-attenuation renal cell carcinoma from cysts: a bi-institutional retrospective study. AJR 2019;213:1259–1266.

29. King MT, Nguyen PL, Boldaatar N, Yang DD, Muralidhar V, **Tempany CM**, Cormack RA, Hurwitz MD, Suh WW, Pomerantz MM, D'Amico AV, Orio PF. Evaluating the influence of prostate-specific antigen kinetics on metastasis in men with PSA recurrence after partial gland therapy. Brachytherapy 2019;18(2):198-203.

30. Lacson R, Cochon L, Ip I, Desai S, Kachalia A, Dennerlein J, Benneyan J, **Khorasani R**. Classifying safety events related to diagnostic imaging from a safety reporting system using a human factors framework. J Am Coll Radiol 2019 Mar;16(3);282-288.

31. Lacson R, Odigie E, Wang A, Kapoor N, Shinagare A, **Boland GW**, **Khorasani R**. Multivariate analysis of radiologists' usage of phrases that convey diagnostic certainty. Acad Radiol 2019 Sep;26(9):1229-1234.

32. Larson DB, **Boland GW**. Imaging quality control in the era of artificial intelligence. J Am Coll Radiol 2019;16(9 Pt B):1259-1266.

33. Lim CS, Schieda N, **Silverman SG**. Update on indications for percutaneous for renal mass biopsy in the era of advanced CT and MRI. AJR 2019;212:1187-1196.

34. Lim CS, Tirumani S, van der Pol CB, Alessandrino F, Sonpavde GP, **Silverman SG,** Shinagare AB. Evaluation of MR quantitative T2-weighted (T2W) and Apparent Diffusion Coefficient (ADC) texture features of bladder cancer and extravesical fat to predict Stage ≥T2 and ≥T3 bladder cancer after transurethral resection. AJR 2019;212:1060-1069.

35. **Matalon SA,** Chikarmane SA, Yeh ED, Smith SE, **Mayo-Smith WW**, Giess CS. Variability in the use of simulation for procedural training in radiology residency: opportunities for improvement. Curr Probl Diagn Radiol 2019;48(3):241-246.

36. **Matalon SA,** Guenette JP*, Smith SE, Uyeda JW, Chua AS, Gaviola GC, Durfee SM. Factors influencing choice of radiology and relationship to residency job satisfaction. Curr Probl in Diagn Radiol 2019;48(4):333-341.

37. **Matalon SA,** Howard SA, Abrams MJ. Assessment of Radiology Training during Radiation Oncology Residency. Journal of Cancer Education 2019;34(4):691-695.

38. **Matalon SA,** Abrams MJ. 4 Steps to Revitalize a Tired Post-Graduate Curriculum. Harvard Macy Blog. May be accessed here: https://harvardmacy.org/index.php/hmi/4steps-revitalize-post-gradcurr

39. Mehrtash A, Ghafoorian M, Pernelle G, Ziaei A, Heslinga FG, **Tuncali K**, Fedorov A, Kikinis R, **Tempany CM**, Wells WM, Abolmaesumi P, Kapur T. Automatic needle segmentation and localization in MRI with 3-D convolution neural networks: application to MRI-target prostate biopsy. IEEE Trans Med Imaging 2019 Apr;38(4):1026-1036.

40. Mojdeh Mirmomen S, Shinagare AS, Williams KE, **Silverman SG, Malayeri AA**. Preoperative imaging for locoregional staging of bladder cancer. Abdom Radiol 2019;44:3843-3857.

41. Odigie E, Lacson R, Raja A, Osterbur D, Ip I, Schneider L, **Khorasani R**. Fast healthcare interoperability resources, clinical quality language, and systematized nomenclature of medicine-clinical terms in representing clinical evidence of logic statements for the use of imaging procedures: descriptive study. JMIR Med Inform 2019 May;7(2):e13590.

42. O'Donohoe RL, Dunne RM, Kimbrell V, **Tempany CM.** Prostate MRI using an external phased array wearable pelvic coil at 3T: comparison with an endorectal coil. Abdom Radiol (NY). 2019 Mar;44(3):1062-1069.

43. Padhani AR, Barentsz J, Villeirs G, Rosenkrantz AB, Margolis DJ, Turkbey B, Thoeny HC, Cornud F, Haider MA, Macura KJ, **Tempany CM**, Verma S, Weinreb JC. PI-RADS steering committee: the PI-RADS multiparametric MRI and MRI-directed biopsy pathway. Radiology 2019 Aug;292(2):464-474.

44. Patel NA, Li G, Shang W, Wartenberg M, Heffter T, Burdette EC, Iordachita I, Tokuda J, Hata N, **Tempany CM**, Fischer GS. System integration and preliminary clinical evaluation of a robotic system for MRI-guided transperineal prostate biopsy. J Med Robot Res 2019 Jun;4(2).

45. Peled S, Vangel M, Kikinis R, **Tempany CM**, Fennessy FM, Fedorov A. Selection of fitting model and arterial input function for repeatability in dynamic contrast-enhanced prostate MRI. Acad Radiol 2019;26(9):e241-e251.

46. Raja AS, Pourjabbar S, Ip IK, Baugh CW, Sodickson AD, O'Leary M, **Khorasani R**. Impact of a health information technology-enabled appropriate use criterion on utilization of emergency department CT for renal colic. AJR 2019 Jan;212(1):142-145.

47. Raja AS, Cochon L, Pourjabbar S, Yun B, Schuur J, **Khorasani R.** Will publishing evidence-based guidelines for low back pain imaging decrease imaging use? Am J Emerg Med. 2019 Mar;37(3):545-546.

48. Randall EC, Zadra G, Chetta P, Lopez BGC, Syamala S, Basu SS, Agar JN, Loda M, **Tempany CM**, Fennessy FM, Agar NYR. Molecular characterization of prostate cancer with associated gleason score using mass spectrometry imaging. Mol Cancer Res 2019 May;17(5):1155-1165.

49. Ratanaprasatporn L, **Sainani N,** Duba JB, Aghayey A, **Tatli S, Silverman SG**, **Shyn PB**. Imaging findings during and after percutaneous cryoablation of hepatic tumors. Abdom Radiol 2019;44(7):2602-2626.

50. Rousseau JF, Ip IK, Raja RS, Valtichinov VI, Cochon L, Schuur JD, **Khorasani R**. Can automated retrieval of data from emergency department physician notes enhance the imaging order entry process? Appl Clin Inform 2019 Mar;10(2):189-198.

51. Schieda N, Davenport MS, Pedrosa I, Shinagare A, Chandarana H, Doshi A, Curci N, Israel GM, Remer E, Wang J, **Silverman SG.** Renal and adrenal masses containing fat at MRI: proposed nomenclature by the Society of Abdominal Radiology Disease-Focused Panel on renal cell carcinoma. J Magn Reson Imaging 2019;49(4):917-926.

52. Schwier M, van Griethuysen J, Vangel MG, Pieper S, Peled S, **Tempany C,** Aerts HJWL, Kikinis R, Fennessy FM, Fedorov A. Repeatability of Multiparametric Prostate MRI Radiomics Features. Sci Rep. (in press).

53. Shinagare AB, Lacson R, **Boland GW**, Wang A, **Silverman SG, Mayo-Smith WW, Khorasani R**. Radiologist preferences, agreement and variability in phrases used to convey diagnostic certainty in radiology reports. J Am Coll Radiol 2019;16(4 Pt A):458-464.

54. **Silverman SG**, Pedrosa I, Ellis JH, Hindman NM, Schieda N, Smith AD, Remer EM, Shinagare AB, Curci NE, Raman SS, Wells SA, Kaffenberger SD, Wang ZJ, Chandarana H, Davenport MS. Bosniak classification of cystic renal masses, version 2019: an update proposal and needs assessment. Radiology 2019 Aug; 292(2):475-488.

55. Taghipour M, Ziaei A, Alessandrino F, Hassanzadeh E, Harishinghani M, Vangel M, **Tempany CM**, Fennessy FM. Investigating the role of DCE-MRI, over T2 and DWI, in accurate PI-RADS v2 assessment of clinically significant peripheral zone prostate lesions as defined at radical prostatectomy. Abdom Radiol 2019;44(4):1520-1527.

56. Tirumani S, **Silverman SG.** Chapter 16: Kidneys and Ureters in: Computed Body Tomography with MRI Correlation, 5e, Fifth edition Wolters Kluwer 2019;1007-1070.

57. Trinh TW, **Boland GW, Khorasani R**. Improving radiology peer learning: comparing a novel electronic peer learning tool and a traditional score-based peer review system. AJR 2019;212(1):135-141.

58. Trinh TW, Ip I, Healey MJ, Landman AB, Morris C, **Boland GW**, **Khorasani R**. An electronic health record order entry-enabled educational intervention is not effective in reducing STAT inpatient radiology orders. J Am Coll Radiol 2019 Aug;16(8):1018-1026.

59. Trinh TW, Shinagare AB, **Glazer DI**, DiPiro PJ, Mandell JC, **Boland G**, **Khorasani R**. Radiology report template optimization at an academic medical center. AJR 2019 2019 Jan;212(1):135-41.

60. Turkbey B, Rosenkrantz AB, Haider MA, Padhani AR, Villeirs G, Macura KJ, **Tempany CM**, Choyke PL, Cornud F, Margolis DJ, Thoeny HC, Verma S, Barentsz J, Weinreb JC. Prostate imaging reporting and data system version 2.1: 2019 update of prostate imaging reporting and data system version 2. Eur Urol 2019 Sep;76(3):340-351.

61. Valtichinov VI, Ip IK, **Khorasani R**, Schuur JD, Zurakowski D, Lee J, Raja AS. Use of imaging in the emergency department: do individual physicians contribute to variation? AJR 2019 Sept;213(3):637-643.

62. van Beek EJR, Kuhl C, Anzai Y, Desmond P, Ehman RL, Gong Q, Gold G, Gulani V, Hall-Craggs M, Leiner T, Lim CCT, Pipe JG, Reeder S, Reinhold C,

Smits M, Sodickson DK, **Tempany C,** Vargas HA, Wang M. Value of MRI in medicine: More than just another test? J Magn Reson Imaging 2019 Jun;49(7):e14-e25.

63. Whorms DS, Giess CS, Golshan M, Freedman RA, Bunnell CA, Apler EC, Losk K, **Khorasani R**. Clinical impact of second opinion radiology consultation for patients with breast cancer. J Am Coll Radiol 2019 Jun;16(6):814-823.

64. Yamauchi FI, Leao Filho HM, Rocha MS, **Mayo-Smith WW**. Incidental findings on imaging exams: what is the essential nature of radiology? Radiol Bras 2019;52(2):IX-X.

65. Zafar HM, Ip IK, Mills AM, Raja AS, Langlotz CP, **Khorasani R**. Effect of clinical decision support–generated report cards versus real-time alerts on primary care provider guideline adherence for low back pain outpatient lumbar spine MRI orders. AJR 2019;212(2):386-394

66. Zhao A, **Matalon S,** Rizzo N, Giardino A. 24-Year-Old Woman with New Onset Hypertension. AMSER Rad Path Case of the Month. May, 2019. Available: https://tinyurl.com/y46l8o4m