Stanford



Robert Downey Boutin

Clinical Professor, Radiology

CLINICAL OFFICE (PRIMARY)

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Bio

BIO

Dr. Boutin works clinically as a musculoskeletal radiologist interpreting a broad array of diagnostic imaging examinations, most frequently MRI, CT, sonography, and radiography.

The clinical focus for Dr. Boutin is MRI and CT of joints, bones, and muscles, as well as adding value to routine radiology exams by translating advancements from fields of artificial intelligence and imaging informatics. These advancements include enhancing routine imaging exams to help promote physical function, quality of life, and healthspan in our patients. Because the worldwide population of people > 60 years of age is projected to double by 2050, there is a crucial need for improvements in the accurate and efficient management of derangements associated with biological aging, including osteoporosis, sarcopenia, and adiposity.

Dr. Boutin was introduced to orthopaedics at an early age by his father and older brother -- both orthopaedists. After earning undergraduate and graduate degrees at Stanford University, Dr. Boutin completed advanced fellowship training in Musculoskeletal Imaging at the University of California, San Diego, and worked on the faculty at Harvard Medical School. Core professional values include a commitment to outstanding quality, compassion, safety, and integrity.

Dr. Boutin is a leader in musculoskeletal imaging. He is the President of the Society of Academic Bone Radiologists and serves on the Appropriateness Criteria Panel for the American College of Radiology. He is an Assistant Editor at the American Journal of Roentgenology (AJR), and recently served as the Chair of the Musculoskeletal Imaging Program Committee for the largest medical meeting in the world (RSNA).

He is a frequent invited lecturer for continuing medical education courses, such as those at the annual meetings of the Radiological Society of North America, the International Skeletal Society, and the American Roentgen Ray Society. He also lectures regularly at the international Orthopaedic Imaging course in Davos, Switzerland.

CLINICAL FOCUS

- Diagnostic Radiology

ACADEMIC APPOINTMENTS

- Clinical Professor, Radiology

ADMINISTRATIVE APPOINTMENTS

- Director, Musculoskeletal Imaging Fellowship, Department of Radiology, (2021- present)
- Affiliated Faculty, Integrative Biomedical Imaging Informatics at Stanford (IBIIS), (2022- present)
- Chair, Appointments & Promotions Committee, Stanford University School of Medicine, (2023-2025)

HONORS AND AWARDS

- "From Images to Insights: Leveraging AI-Driven CT Analysis to Improve Diagnosis", RSNA Research & Education Foundation (2026)
- Editor's Recognition Award, RadioGraphics (2024)
- Musculoskeletal Imaging 2024: Lessons Learned, Society of Academic Bone Radiologists - The John Hunter Medal (2024)
- AI-Based CT for Assessment of Muscle Mass in Patients with Malnutrition and Denied Insurance Claims, Stanford Quality Improvement & Patient Safety Symposium - Innovation Winner (2024)
- Myositis and its Mimics, American Roentgen Ray Society (ARRS) (2024)
- Cachexia: Current Concepts and Imaging Implications, American Roentgen Ray Society (ARRS) (2024)
- Accessory Infraglenoid Muscle in Patients with and without Teres Minor Fatty Infiltration, ARRS - Magna Cum Laude Award (2024)
- Soft Tissue Tumors, RSNA - Cum Laude Award (2022)
- CMS and Calculators: Hospital Price Transparency Requirements and Imaging Cost Variability, American Roentgen Ray Society (ARRS) (2022)
- Liposclerosing Myxofibrous Tumor (LSMFT), Society of Skeletal Radiology (AIRP Award) (2022)
- Meniscus Roots, Ramps, Repairs, and Repercussions, RSNA - Magna Cum Laude Award (2021)
- The Sternum and Sternoclavicular Joints, RSNA - Magna Cum Laude Award (2021)
- Altered Biomechanics and Patterns of Injury in the Presence of Rotator Cuff Insufficiency, Radiological Society of North America (2020)
- Fast Musculoskeletal MRI: What the Radiologist Needs to Know, Radiological Society of North America (2019)
- Value-Added 'Opportunistic' CT: State-of-the-Art Insights into Bone, Muscle, and Fat, Radiological Society of North America (2019)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- AJR Assistant Editor (2026 - 2027), American Journal of Roentgenology (AJR) (2026 - present)
- SABR President (2024 - 2026), Society of Academic Bone Radiologists (SABR) (2013 - present)
- ACR Appropriateness Criteria Panel (2025 - 2029), American College of Radiology (ACR) (2025 - present)
- Chair, RSNA Msk Meeting Program Committee (2021-22); RadioGraphics Subspecialty Panel (2021-Present), Radiological Society of North America (RSNA) (1992 - present)
- ARRS Musculoskeletal Radiology Scientific Program Committee (2011 - Present), American Roentgen Ray Society (ARRS) (1991 - present)
- ISS Scientific Session Cmte (2021-24); Chair, Grants Cmte (2019-20); Chair, Audit Cmte (2017-18), International Skeletal Society (ISS) (2001 - present)
- QIBA Musculoskeletal Biomarkers Committee (Articular Cartilage MRI), Quantitative Imaging Biomarkers Alliance (QIBA) (2019 - 2023)

PROFESSIONAL EDUCATION

- Fellowship, University of California San Diego School of Medicine , Musculoskeletal Radiology
- Board Certification, American Board of Radiology , Diagnostic Radiology
- Residency, UNM School of Medicine , Diagnostic Radiology

- Medical Degree, University of California Davis School of Medicine , Medicine
- Master's Degree, Stanford University , Biological Sciences
- Bachelor's Degree, Stanford University , Biological Sciences

Publications

PUBLICATIONS

- **Deep learning reveals relationships between muscle and adipose tissue and their associations with age, body mass index, and low back pain: A cross-sectional study in 10,835 subjects.** *PLOS digital health*
  Marusich, K. R., Gatti, A. A., Blankemeier, L., Boutin, R. D., Smuck, M., Gold, G. E., Delp, S. L., Chaudhari, A. S.
  2026; 5 (11): e0001788
- **Patellar maltracking with dynamic MRI: clinical feasibility and diagnostic utility.** *Skeletal radiology*
  Wudhikulprapan, W., Tangkittithaworn, P., Do, B. H., Seo, A., Wong, J., Shea, K. G., Sherman, S. L., Boutin, R. D., Zandee van Rilland, E. D.
  2026
- **Public perspectives on artificial intelligence in healthcare in the USA: a cross-sectional survey.** *BMJ digital health & AI*
  Nair, V. P., Handler, R., Tandel, M. D., Weng, Y., Holdsworth, L. M., Goh, E., Sands, R. W., Steele, N. Z., Derry, L. T., Boutin, R. D., DeBell, M., Scott, T., Svec, et al
  2026; 2 (1): e000183
- **AI-Driven Multimodal Risk Assessment Combining CT Imaging Biomarkers and Frailty Scores for Enhanced Mortality Prediction in Surgery Patients.** *Journal of the American College of Surgeons*
  Liu, B., Fereydooni, A., Jensen, M., Lakshmi, A., Fisher, A., Wu, J. T., Dudum, R., Boutin, R. D., Chaudhari, A. S., Arya, S.
  2026
- **Standardized MRI nomenclature for knee meniscal lesions: SSR consensus panel report.** *Skeletal radiology*
  Nguyen, J. C., Gorbachova, T., Flores, D. V., Casagranda, B. U., Chalian, M., Kani, K. K., Mills, M. K., Nwawka, O. K., Shea, K. G., Spindler, K. P., Stevens, K. J., Weaver, J. S., Zoga, et al
  2026
- **Interdisciplinary consensus statements on imaging of scaphoid fractures.** *European radiology*
  Dietrich, T. J., Teh, J., Schmitt, R., Blum, A., Hesse, N., Lalam, R. K., Toms, A. P., Becce, F., Omoumi, P., Shahabpour, M., Bień, M., Zanetti, M., Boutin, et al
  2026
- **Standardized Knee Meniscus MRI Reporting: An Interdisciplinary Delphi Consensus.** *Radiology*
  Nguyen, J. C., Patel, V. S., Abrams, G. D., Alaia, E. F., Casagranda, B. U., Chalian, M., Chang, E. Y., Crepeau, A. E., Davis, K. W., Farrow, L. D., Flemming, D., Flores, D. V., Fritz, et al
  2026; 319 (3): e251833
- **Optimizing Radiography Utilization: Multidisciplinary Expert Consensus Recommendations Endorsed by the Society of Academic Bone Radiologists, Society of Skeletal Radiology, American Society of Emergency Radiology, Orthopaedic Trauma Association, American Academy of Emergency Medicine, and American Rhinologic Society.** *Radiology*
  Zandee van Rilland, E. D., Fayad, L. M., Link, T. M., Davis, K. W., Wu, J. S., Brown, I. P., Chang, E. Y., Chow, L. C., Desai, S. C., Fritz, J., Gatz, J. D., Garner, H. W., Gorbachova, et al
  2026; 319 (2): e252309
- **MRI Diagnosis of Meniscus Tears in the Knee: An Updated Systematic Review and Meta-analysis.** *Radiology*
  Nguyen, J. C., Yaya-Quezada, C., Lerebo, W. T., Patel, V. S., Chalian, M., Flores, D. V., Gorbachova, T., Kani, K. K., Mills, M. K., Stevens, K. J., Weaver, J. S., Boutin, R. D.
  2026; 319 (1): e252288
- **ACR Appropriateness Criteria® Diagnosis and Monitoring of Sarcopenia.** *Journal of the American College of Radiology : JACR*
  Boutin, R. D., Lenchik, L., Baker, J. C., Allen, H., Banks, J., Kamel, S. I., Napier, K. B., Rhodes, N. G., Scott, J. A., So, C. C., Wessell, D. E.
  2026
- **Merlin: a computed tomography vision-language foundation model and dataset.** *Nature*

Blankemeier, L., Kumar, A., Cohen, J. P., Liu, J., Liu, L., Van Veen, D., Gardezi, S. J., Yu, H., Paschali, M., Chen, Z., Delbrouck, J. B., Reis, E., Holland, et al
2026

- **Patellofemoral instability: Anatomy, imaging techniques, and clinically relevant measurements.** *Skeletal radiology*
  Zandee van Rilland, E. D., Stevens, K. J., Wudhikulprapan, W., Tangkittithaworn, P., Shea, K. G., Sherman, S. L., Boutin, R. D.
  2026

- **Subchondral bone abnormalities in the knee: imaging techniques, regional anatomy, and pathology.** *Skeletal radiology*
  Zandee van Rilland, E. D., Boutin, R. D., Stevens, K. J.
  2026

- **MR Imaging of Clinically Relevant Anatomy and Pathology of the Wrist Ligaments.** *Magnetic resonance imaging clinics of North America*
  Zandee van Rilland, E. D., Bayne, C. O., Boutin, R. D.
  2026; 34 (1): 129-141

- **AI-Quantified Patient Frailty Predicts Clinical Response to CAR-T**
  Smith, C. J., Fettahoglu, A., Johnston, A., Smith, B. R., Mikkilinenni, L., Sidana, S., Weng, W., Frank, M., Dahiya, S., Smith, M., Chaudhari, A., Miklos, D. B., Boutin, et al
  ELSEVIER SCIENCE INC.2026

- **Artificial Intelligence-Assisted Opportunistic Computed Tomography for Steatotic Liver Disease Detection and Association with Cardiovascular and Mortality Outcomes in Adults with Cardiometabolic Risk** *American Heart Association (AHA) Scientific Sessions*
  Derry, L. T., et al
  2026

- **3D Patellar instability Anatomical Severity Score (3D-PASS): A Novel Machine Learning Score Using 3D Bone Position From MRI to Predict Outcomes of Patellar Instability Treatment (Using a Subset of Data in the JUPITER Cohort).** *Orthopaedic journal of sports medicine*
  Sinopoli, M. L., Gatti, A. A., Wright, C. E., Bartsch, A., Veerkamp, M. W., Boutin, R. D., Mintz, D. N., Emery, K. H., Shea, K. G., Chaudhari, A. S., JUPITER Study Group, Wall, E. J., Elangovan, S., et al
  2025; 13 (12): 23259671251362675

- **Increased Inferior Capsular Thickness on Magnetic Resonance Imaging Is Associated With Adhesive Capsulitis of the Hip.** *Arthroscopy, sports medicine, and rehabilitation*
  Chona, D. V., Loughran, G. J., Yoon, J., Oladeji, K., Workman, A. D., Boutin, R. D., Safran, M. R.
  2025; 7 (6): 101291

- **Liposclerosing myxofibrous tumor: radiographic reporting frequency, pathologic correlation, and malignant transformation.** *Skeletal radiology*
  Zandee van Rilland, E. D., Riley, G. M., Garner, H. W., Edgar, M. A., Charville, G. W., Steffner, R. J., Boutin, R. D.
  2025

- **Cost-effectiveness of opportunistic CT versus clinical methods for sarcopenia screening.** *Skeletal radiology*
  Padwal, J., Hanly, A., Johnston, A., Lenchik, L., Gyftopoulos, S., Boutin, R. D.
  2025

- **Body Composition Metrics Associated with Time to Progression in Smoldering Multiple Myeloma** *DIAGNOSTICS*
  Bauer, F., Huber, F. A., Galdamez, M. E., Zorgno, I., Habibollahi, S., El Kandoussi, A., Fintelmann, F. J., Tonnesen, P., Dietrich, A. W., Wang, Z., Graeber, A., Boutin, R. D., Lenchik, et al
  2025; 15 (21)

- **MRI evaluation of the lumbar spine: a survey-based assessment of protocols and practice patterns used by musculoskeletal radiologists in the United States.** *Skeletal radiology*
  Debs, P., Dabiri, M., Boutin, R. D., Smith, S., Link, T. M., Fayad, L. M.
  2025

- **Pediatric scaphoid fractures: predictors of surgery and fracture complications.** *Skeletal radiology*
  Patel, V. S., Fanney, L., Yaya-Quezada, C., Tariq, S. M., Boutin, R. D., Shah, A. S., Nguyen, J. C.
  2025

- **Cartilage Imaging: MRI of Chondral Degeneration and Injury.** *Clinics in sports medicine*

Zandee van Rilland, E. D., Fritz, R. C., Chaudhari, A. S., Boutin, R. D.
2025; 44 (3): 467-498

- **Magnetic Resonance Imaging Characteristics of the Iliocapsularis in Hip Microinstability: A Comparative Analysis.** *The American journal of sports medicine*
  Raji, Y., Pierre, K. J., Wagle, S., Pham, N. S., Boutin, R. D., Safran, M. R.
  2025: 3635465251344600

- **DXA Screening Updates: Translating Expert Consensus Into Clinical Excellence.** *AJR. American journal of roentgenology*
  Boutin, R. D.
  2025

- **Fully Automated Multimodal Risk Assessment Using Body Composition Biomarkers and Frailty Scores Enhances Mortality Prediction in Patients Undergoing Cardiovascular Surgery**
  Fereydooni, A., Liu, B., Blankemeier, L., Jensen, M., Lakshmi, A., Fisher, A. T., Lopez, I., Boutin, R., Chaudhari, A., Arya, S.
  MOSBY-ELSEVIER.2025: E199-E200

- **Defining Reference Values for Skeletal Muscle Metrics on Abdominal CT Using Data From Healthy Young Adult Populations: A Systematic Review and Meta-Analysis.** *AJR. American journal of roentgenology*
  Ju, C., Yao, L., Yoon, S. Y., Lenchik, L., Johnston, A., Derry, L. T., Hom, J., Svec, D., Chaudhari, A. S., Boutin, R. D.
  2025

- **Sarcopenia Diagnosis Trends and Opportunistic Use of Abdominal CT Among Medicare Beneficiaries.** *Journal of the American College of Radiology : JACR*
  Christensen, E. W., Drake, A. R., Lenchik, L., Boutin, R. D.
  2025

- **Sarcopenia, Obesity, and Sarcopenic Obesity: Retrospective Audit of Electronic Health Record Documentation versus Automated CT Analysis in 17 646 Patients.** *Radiology*
  Zambrano Chaves, J. M., Hom, J., Lenchik, L., Chaudhari, A. S., Boutin, R. D.
  2025; 315 (1): e243525

- **Using deep feature distances for evaluating the perceptual quality of MR image reconstructions.** *Magnetic resonance in medicine*
  Adamson, P. M., Desai, A. D., Dominic, J., Varma, M., Bluethgen, C., Wood, J. P., Syed, A. B., Boutin, R. D., Stevens, K. J., Vasanawala, S., Pauly, J. M., Gunel, B., Chaudhari, et al
  2025

- **Effect of baseline geriatric and quality of life assessments on treatment outcomes in ECOG-ACRIN EA2186 (GIANT): A randomized phase II study of gemcitabine and nab-paclitaxel compared with 5-fluorouracil, leucovorin, and liposomal irinotecan in older patients with treatment-naïve metastatic pancreatic cancer.**
  Dotan, E., Catalano, P. J., Lenchik, L., Boutin, R., Yao, X., Ohr, J., Lim, K., Fisher Jr, G. A., Vijayvergia, N., Chandana, S. R., Kalyan, A., Dunne, R., Zhen, et al
  LIPPINCOTT WILLIAMS & WILKINS.2025

- **Opportunistic Screening of Bone Fragility Using Computed Tomography.** *Seminars in musculoskeletal radiology*
  Acevedo, J. B., Lenchik, L., Weaver, A. A., Boutin, R. D., Wuertzer, S.
  2024; 28 (5): 620-627

- **Editorial Comment: A New Chapter for Obesity-Glucagon-Like Peptide-1 Agonists and Body Composition Imaging.** *AJR. American journal of roentgenology*
  Boutin, R. D.
  2024

- **Merlin: A Vision Language Foundation Model for 3D Computed Tomography.** *Research square*
  Blankemeier, L., Cohen, J. P., Kumar, A., Veen, D. V., Gardezi, S., Paschali, M., Chen, Z., Delbrouck, J. B., Reis, E., Truyts, C., Bluethgen, C., Jensen, M., Ostmeier, et al
  2024

- **Myositis and Its Mimics: Guideline Updates, MRI Characteristics, and New Horizons.** *AJR. American journal of roentgenology*
  Zandee van Rilland, E. D., Yao, L., Stevens, K. J., Chung, L. S., Fiorentino, D. F., Boutin, R. D.
  2024

- **MRI of Soft-Tissue Tumors: What to Include in the Report.** *Radiographics : a review publication of the Radiological Society of North America, Inc*
  Riley, G. M., Steffner, R., Kwong, S., Chin, A., Boutin, R. D.
  2024; 44 (6): e230086

- **A randomized phase II study of gemcitabine and nab-paclitaxel compared with 5-fluorouracil, leucovorin, and liposomal irinotecan in older patients with treatment-naive metastatic pancreatic cancer (GIANT): ECOG-ACRIN EA2186.**
  Dotan, E., Catalano, P. J., Lenchik, L., Boutin, R., Yao, X., Ohr, J., Lim, K., Vijayvergia, N., Chandana, S. R., Kalyan, A., Dunne, R., Zhen, D., Li, et al
  LIPPINCOTT WILLIAMS & WILKINS.2024

- **Abdominal CT metrics in 17,646 patients reveal associations between myopenia, myosteatosis, and medical phenotypes: a phenome-wide association study** *EBIOMEDICINE*
  Chaves, J., Lenchik, L., Gallegos, I. O., Blankemeier, L., Liang, T., Rubin, D. L., Willis, M. H., Chaudhari, A. S., Boutin, R. D.
  2024; 103

- **Automated abdominal CT contrast phase detection using an interpretable and open-source artificial intelligence algorithm.** *European radiology*
  Reis, E. P., Blankemeier, L., Zambrano Chaves, J. M., Jensen, M. E., Yao, S., Truyts, C. A., Willis, M. H., Adams, S., Amaro, E., Boutin, R. D., Chaudhari, A. S.
  2024

- **Chronic Nonspinal Osteomyelitis in Adults: Consensus Recommendations on Percutaneous Bone Biopsies from the Society of Academic Bone Radiologists.** *Radiology*
  Debs, P., Boutin, R. D., Smith, S. E., Babic, M., Blankenbaker, D., Chandra, V., Murphey, M., Thottacherry, E., Kreulen, C., Fayad, L. M.
  2024; 311 (1): e231348

- **ASSOCIATIONS BETWEEN ABDOMINAL ADIPOSE AND MUSCLE TISSUE COMPOSITIONS AND KNEE, HIP, AND SPINE OSTEOARTHRITIS DIAGNOSED PATIENTS: DEEP LEARNING COMPUTED TOMOGRAPHY ANALYSIS IN 14,714 PATIENTS**
  Lenskjold, A., Blankemeier, L., Chaves, J. M., Boesen, M., Boutin, R. D., Chaudhari, A.
  ELSEVIER SCI LTD.2024: S199-S200

- **Body composition measurements and clinical outcomes in patients with resectable pancreatic adenocarcinoma - analysis from SWOG S1505.** *Journal of gastrointestinal surgery : official journal of the Society for Surgery of the Alimentary Tract*
  Sohal, D. P., Boutin, R. D., Lenchik, L., Kim, J., Beg, M. S., Wang-Gillam, A., Wade, J. L., Guthrie, K. A., Chiorean, E. G., Ahmad, S. A., Lowy, A. M., Philip, P. A., Chang, et al
  2024; 28 (3): 232-235

- **Biomarkers of Body Composition.** *Seminars in musculoskeletal radiology*
  Chang, C. Y., Lenchik, L., Blankemeier, L., Chaudhari, A. S., Boutin, R. D.
  2024; 28 (1): 78-91

- **Relationships Between Diagnostic Imaging of First Carpometacarpal Osteoarthritis and Pain, Functional Status, and Disease Progression: A Systematic Review.** *Osteoarthritis and cartilage*
  Mazza, D. F., Boonsri, P. S., Arora, A., Bayne, C. O., Szabo, R. M., Chaudhari, A. J., Boutin, R. D.
  2023

- **Advanced Arthritis of the Carpus: Preoperative Planning Practices of 337 Hand Surgeons.** *Journal of wrist surgery*
  Bayne, C. O., Moontasri, N. J., Boutin, R. D., Szabo, R. M.
  2023; 12 (6): 517-521

- **Opportunistic assessment of ischemic heart disease risk using abdominopelvic computed tomography and medical record data: a multimodal explainable artificial intelligence approach.** *Scientific reports*
  Zambrano Chaves, J. M., Wentland, A. L., Desai, A. D., Banerjee, I., Kaur, G., Correa, R., Boutin, R. D., Maron, D. J., Rodriguez, F., Sandhu, A. T., Rubin, D., Chaudhari, A. S., Patel, et al
  2023; 13 (1): 21034

- **Skeletal Muscle Area on CT: Determination of an Optimal Height Scaling Power and Testing for Mortality Risk Prediction.** *AJR. American journal of roentgenology*
  Blankemeier, L., Yao, L., Long, J., Reis, E. P., Lenchik, L., Chaudhari, A. S., Boutin, R. D.
  2023

- **Real-Time MRI of the moving wrist at 0.55 tesla.** *The British journal of radiology*

Chaudhari, A. J., Lim, Y., Cui, S. X., Bayne, C. O., Szabo, R. M., Boutin, R. D., Nayak, K. S.
2023: 20230298

- **MRI of patellar stabilizers: Anatomic visibility, inter-reader reliability, and intra-reader reproducibility of primary and secondary ligament anatomy.** *Skeletal radiology*
  Zandee van Rilland, E. D., Payne, S. R., Gorbachova, T., Shea, K. G., Sherman, S. L., Boutin, R. D.
  2023
- **Clinical, functional, and opportunistic CT metrics of sarcopenia at the point of imaging care: analysis of all-cause mortality.** *Skeletal radiology*
  Yao, L., Petrosyan, A., Chaudhari, A. J., Lenchik, L., Boutin, R. D.
  2023
- **Muscle Steatosis and Fibrosis in Older Adults, From the AJR Special Series on Imaging of Fibrosis.** *AJR. American journal of roentgenology*
  Lenchik, L., Mazzoli, V., Cawthon, P. M., Hepple, R. T., Boutin, R. D.
  2023
- **Association of CT-Derived Skeletal Muscle and Adipose Tissue Metrics with Frailty in Older Adults.** *Academic radiology*
  Bunch, P. M., Rigdon, J., Niazi, M. K., Barnard, R. T., Boutin, R. D., Houston, D. K., Lenchik, L.
  2023
- **Noise2Recon: Enabling SNR-robust MRI reconstruction with semi-supervised and self-supervised learning.** *Magnetic resonance in medicine*
  Desai, A. D., Ozturkler, B. M., Sandino, C. M., Boutin, R., Willis, M., Vasanawala, S., Hargreaves, B. A., Re, C., Pauly, J. M., Chaudhari, A. S.
  2023
- **Knee MRI: Meniscus Roots, Ramps, Repairs, and Repercussions.** *Radiographics : a review publication of the Radiological Society of North America, Inc*
  Tomsan, H., Gorbachova, T., Fritz, R. C., Abrams, G. D., Sherman, S. L., Shea, K. G., Boutin, R. D.
  2023; 43 (7): e220208
- **Fast volumetric ultrasound facilitates high-resolution 3D mapping of tissue compartments.** *Science advances*
  Park, E. Y., Cai, X., Foiret, J., Bendjador, H., Hyun, D., Fite, B. Z., Wodnicki, R., Dahl, J. J., Boutin, R. D., Ferrara, K. W.
  2023; 9 (22): eadg8176
- **Patellar Tracking: An Old Problem with New Insights.** *Radiographics : a review publication of the Radiological Society of North America, Inc*
  Watts, R. E., Gorbachova, T., Fritz, R. C., Saad, S. S., Lutz, A. M., Kim, J., Chaudhari, A. S., Shea, K. G., Sherman, S. L., Boutin, R. D.
  2023; 43 (6): e220177
- **Interdisciplinary consensus statements on imaging of DRUJ instability and TFCC injuries.** *European radiology*
  Cerezal, L., Del Piñal, F., Atzei, A., Schmitt, R., Becce, F., Klich, M., Bień, M., de Jonge, M. C., Teh, J., Boutin, R. D., Toms, A. P., Omoumi, P., Fritz, et al
  2023
- **The GIANT trial (ECOG-ACRIN EA2186) methods paper: A randomized phase II study of gemcitabine and nab-paclitaxel compared with 5-fluorouracil, leucovorin, and liposomal irinotecan in older patients with treatment-naïve metastatic pancreatic cancer - defining a new treatment option for older vulnerable patients.** *Journal of geriatric oncology*
  Dotan, E., Catalano, P., Lenchik, L., Boutin, R., Yao, X., Marques, H. S., Ioffe, D., Zhen, D. B., Li, D., Wagner, L. I., Simon, M. A., Wong, T. Z., O'Dwyer, et al
  2023; 14 (3): 101474
- **Editorial Comment: Death and Taxes…and Artificial Intelligence.** *AJR. American journal of roentgenology*
  Boutin, R. D.
  2023
- **Improving Data-Efficiency and Robustness of Medical Imaging Segmentation Using Inpainting-Based Self-Supervised Learning.** *Bioengineering (Basel, Switzerland)*
  Dominic, J., Bhaskhar, N., Desai, A. D., Schmidt, A., Rubin, E., Gunel, B., Gold, G. E., Hargreaves, B. A., Lenchik, L., Boutin, R., Chaudhari, A. S.
  2023; 10 (2)
- **Ageism in Society and Its Health Impact.** *AJR. American journal of roentgenology*
  Lenchik, L., Steinbach, L., Boutin, R. D.

2023

- **Pre-operative imaging for surgical decision-making and the frequency of wrist arthrodesis and carpectomy procedures: a scoping review.** *Skeletal radiology*
  Baylosis, B. L., McQuiston, A. S., Bayne, C. O., Szabo, R. M., Boutin, R. D.
  2022
- **Generalizability of Deep Learning Segmentation Algorithms for Automated Assessment of Cartilage Morphology and MRI Relaxometry.** *Journal of magnetic resonance imaging : JMRI*
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PRESENTATIONS

- Opportunistic Assessment of Biological Aging: Comparing 2D vs. 3D Metrics for Muscle and Adipose Tissue - RSNA 2021
- Elbow MRI: Pearls and Pitfalls - RSNA 2021 (12/2/2021 - 12/2/2021)
- RSNA Image Interpretation Session - Arie Crown Theater - Radiological Society of North America (December 1, 2019)
- Linscheid-Dobyns Excellence in Wrist Instructional Course: Advanced Imaging Role in Decision Making - American Society for Surgery of the Hand (9/30/2021)
- Displaced Flap Tears of the TFCC Diagnosed by Prospective Study of 3,411 Wrist MRI Exams: Prevalence, Flap Location, and the “Comma Sign” - Society of Skeletal Radiology (3/13/2021 - 3/17/2021)
- ACR Accreditation Results Using CT Phantoms: Implications for Opportunistic CT Screening of Sarcopenia, Adiposity, and Emphysema - American Roentgen Ray Society (ARRS) (4/18/2021 - 4/22/2021)

- The ABCs of qCT: Transforming the Everyday Practice of Radiology - University of Vermont, Department of Radiology Grand Rounds (October 21, 2022)
- Musculoskeletal MRI: Research and Clinical Applications - International Congress on Magnetic Resonance (March 27, 2020)
- Advanced Muscle Imaging: State of the Art - Radiological Society of North America (December 1, 2019)
- Role of Body Composition Imaging in Healthy Aging - Radiological Society of North America (12/6/2019)
- ACR Database Evaluation of 67,392 Accreditation Examinations: Implications for Opportunistic CT Diagnosis of Osteoporosis - Radiological Society of North America (December 2, 2019)
- MRI of the Wrist; MRI of the Elbow - IDKD South America (10/31/2019 - 11/3/2019)
- Soft-tissue Masses: Practical Pearls & Pitfalls - National Diagnostic Imaging Symposium (12/5/2021 - 12/5/2021)
- MRI of the Pelvis and Groin - IDKD Davos (3/27/2022 - 3/31/2022)
- Musculoskeletal Radiology: Lessons Learned 2023 - Society of Academic Bone Radiologists (7/27/2023 - 7/28/2023)
- Clinical, Functional, and Opportunistic CT Screening for Sarcopenia in the Radiology Department Predicts All-Cause Mortality - American Roentgen Ray Society (ARRS) (4/18/2023) (4/16/2023 - 4/20/2023)
- MRI of the Knee: 2023 Keynote - American Roentgen Ray Society (ARRS) (4/17/2023) (4/16/2023 - 4/20/2023)
- Opportunistic Imaging: Sarcopenia and Beyond - Korean Congress of Radiology (9/23/2023) (9/20/2023 - 9/23/2023)
- Sports Medicine Imaging: Patellar Tracking - International Skeletal Society (10/13/2023) (10/11/2023 - 10/13/2023)
- Controversies & Solutions: From Knee MRI to Opportunistic Imaging - Radiological Society of North America (11/26/2023) (11/26/2023 - 11/30/2023)
- AI-based muscle segmentation and clinical use-case scenario - American Roentgen Ray Society (ARRS) (5/5/2024) (5/5/2024 - 5/9/2024)
- Diagnostic Dilemmas in Muscle: Inflammatory Myositis or Not? - American Roentgen Ray Society (ARRS) (5/5/2024 - 5/9/2024)
- 10-year Horizon in Musculoskeletal Imaging: Opportunistic Imaging - International Skeletal Society (9/20/2024) (9/15/2024 - 9/20/2024)