

CURRICULUM VITAE

Robert D. Boutin, M.D.

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EDUCATION

Undergraduate	Stanford University; Stanford, California; 1981-1985. Bachelor of Sciences Degree, Biological Sciences, 1985.
Graduate	Stanford University; Stanford, California; 1985-1986. Master of Sciences Degree, Biological Sciences, 1986.
Medical	University of California, Davis; Davis, California; 1986-1991. Degree in Medicine, 1991.
Residency	University of New Mexico; Albuquerque, New Mexico; 1991-1995. American Board of Radiology Certification, 1995.
Fellowship	University of California, San Diego; San Diego, California; 1995-1996. Instructor of Radiology.

PROFESSIONAL EXPERIENCE

Harvard Medical School; Boston, Massachusetts; 1996-1998.

Beth Israel Deaconess Medical Center.

Co-Director of Musculoskeletal Radiology; Instructor of Radiology.

- Founding member of Musculoskeletal Section within the Department of Radiology.
- Founder and faculty member of core lecture series on musculoskeletal radiology for residents.
- Director and faculty member of a continuing medical education program conducted through the Harvard University School of Medicine.
- Initiator of ongoing Musculoskeletal Radiology & Orthopedic Surgery joint conferences aimed at interdisciplinary learning to advance both fields.
- Co-Director of newly established fellowship program in Musculoskeletal Radiology, jointly administered with the New England Baptist Hospital.
- Member of Residency Curriculum Committee, Beth Israel Deaconess Medical Center.

University of California, San Diego; San Diego, California; 1998-1999.

Assistant Professor of Radiology.

- Contributor to ongoing interdisciplinary conferences between members of the Musculoskeletal Radiology, Orthopedic Surgery, and Rheumatology Departments.
- Supervisor for 7 clinical fellows and 6 research fellows in Musculoskeletal Radiology.

Marin Radiology Medical Group; San Mateo, California; 1999-2001.

Medical Director, National Orthopedic Imaging Associates.

- Regular lecturer for continuing medical education courses at the University of California, San Francisco.

Washington Imaging Associates of Maryland (Progressive Radiology; Medical Resources, Inc; Med-Tel, Inc); Falls Church, VA; 2001-present.

Musculoskeletal Radiologist; Medical Director for Medical Resources, Inc.

University of California, Davis; Davis, California; 2012-present.

Section Chief, Musculoskeletal Radiology (July 2016-present)

Clinical Professor of Radiology

- Instructor at Resident Conferences and trainees rotating on the musculoskeletal service (2012-present)
- Presenter and participant at weekly Musculoskeletal Radiology International Teleconference ("Intergalactic Conference Presentations from UC Davis Health System") (2012-present)
- Presenter at weekly Medical Center academic conferences, including Sarcoma Tumor Board (2013-present) and Bone Tumor Clinical Conference (2016-present)
- Instructor of Record, weekly continuing medical education conference "Advanced MSK Imaging Case Review", Musculoskeletal Radiology (2013-present)
- Organizer of bootcamp curriculum for musculoskeletal fellows (other fellows also invited) that includes over a dozen lectures by musculoskeletal faculty, as well as establishing a reading list/library (2013-present)
- Member of UC Davis Department of Radiology Residency Clinical Competency Committee (C3) (2013-present)
- Participant on Feasibility Assessment with Health Strategies & Solutions Committee (March 2014)
- Member of UC Davis Excellence in Teaching Committee (September 2016-August 2018)
- Committee member selecting new hospital MRI equipment
- Established enduring fund/endowment for annual Grand Rounds in the Department of Orthopedic Surgery on the topic of orthopaedic imaging (2014-present)
- Arrange clinical correlation conferences with orthopaedic services, including arthroscopy, arthroplasty, hand/wrist, ankle/foot services
- Member of Radiology Department Academic Personnel Committee (August 2016-present)
- Mentor to visiting scholars: Sara Bamrungchart (2015)
- Mentor to medical students:

- Zachary Ashwell, George Washington School of Medicine, Washington, DC (Co-author on Real Time Wrist MRI project) (summer 2012)
- Michelle Wu, New York
- Amode Ravindra Tembhekar
- Mentor to residents:
 - Behrad Golshani, UC Davis Radiology Resident (2013-present)
 - Jennifer Chang, UC Davis Radiology Resident (2014); co-author on Notch of Harty project
 - Myles Mitsunaga, UC Davis Radiology Resident (2015-present)
 - Daniel Goff, UC Davis Radiology Resident (2015-2016); faculty mentor/sponsor on UC Davis Medical Center GME High Value Competition submission on “Improving Available History for Radiology Studies”
 - Steve Henrichon, UC Davis Radiology Resident (2015-present); faculty research mentor

CERTIFICATION AND LICENSURE

1992 Certification, National Board of Medical Examiners.

1995 Certification, American Board of Radiology.

1995-present Certification, Controlled Substance Registration, U.S. Department of Justice.

1995-present State Medical Licensure in California.

1999-present State Medical Licensure in Maryland.

2000-present State Medical Licensure in Washington.

2001-present State Medical Licensure in Texas.

2002-present State Medical Licensure in Hawaii.

2009-present State Medical Licensure in Virginia.

PROFESSIONAL SOCIETIES

American Roentgen Ray Society (1991-present)

Radiological Society of North America (1992-present)

- Appointed to the Musculoskeletal Radiology Subcommittee of the Scientific Program Committee (2015-2018)
- Appointed to the Musculoskeletal Radiology RSNA Panel for ***RadioGraphics***

American College of Radiology (1996-2011)

Society of Skeletal Radiology (1997-present)

- Appointed to Membership Committee (1999-2003)
- Chair of Membership Committee (2001-2003)
- Appointed to Socioeconomic Affairs Committee (2003-2007)
- Chair of Socioeconomic Affairs Committee (2005-2007)
- Appointed to Strategic Planning Committee (2015-present)

International Skeletal Society (2001-present)

- Assistant Secretary (2008-2009)
- Appointed to Liaison Committee (2011-2012)

International Society for Magnetic Resonance in Medicine (2002-2011)

Society of Academic Bone Radiologists (2013-present)

- Appointed to Rules Committee (2013-2016)
- Chair of Rules Committee (2014-2016)
- Appointed to Nominating Committee (2014-2017)

PEER REVIEW

National Institute of Health – 1998 Study Section (Review of NIH Grant Applications)

Imaging in Medical Rehabilitation

American Roentgen Ray Society – 2003 Annual Meeting

Scientific Exhibit Judge

American Roentgen Ray Society – 2007 Annual Meeting

Scientific Exhibit Judge

American Roentgen Ray Society -- 2012 Annual Meeting

Abstract Reviewer

American Roentgen Ray Society -- 2011-2016

Appointment to the Scientific Program Subcommittee - Musculoskeletal

Journal Reviewer

American Journal of Roentgenology

Skeletal Radiology

AWARDS, GRANTS AND HONORS

- 1990 Rapp-Rummelsberg Research Scholar
Boutin RD.
University of California, Davis, School of Medicine.
- 1992 Nominated, Richard B. O'Connor Award, Outstanding Clinical Study
Weber SC, **Boutin RD.**
Arthrography and Magnetic Resonance Imaging in the Diagnosis of Rotator Cuff Tears: A Critical Review of Their Accuracy in a Community Setting.
Arthroscopy Association of North America.
- 1994 Third Place, Scientific Exhibit
Boutin RD, Sibbitt RR, Orrison WW, Jahnke R, King JN, Rupp FW.
Localization of Cerebrospinal Fluid Leaks by MR Imaging.
Association of University Radiologists Annual Meeting; Boston, MA.
- 1994 Certificate of Honor
Orrison WW, Lewine JD, Sanders JA, **Boutin RD.**
Clinical Applications of Magnetic Source Imaging.
American Roentgen Ray Society Annual Meeting; New Orleans, LA.
1995. Award of Achievement
Boutin RD.
Injuries Associated with MR Imaging.
Technical Publications Competition, Society for Technical Communication.
- 1996 RSNA Seed Grant
Boutin RD.
Clinical MR Imaging of Early Cartilage Degradation.
Radiological Society of North America.
- 1997 Mosby-Year Book, Inc. Grant
Jacobson J, **Boutin RD**, van Holsbeeck M, Resnick D.
Musculoskeletal MRI and Ultrasound: A Correlative Atlas and Teaching File.
- 1997 Picker-AUR Academic Faculty Development Program
Boutin RD.
Association of University Radiologists.
- 1997 Award of Merit -- Peer Review
Boutin RD.
Radiology.

- 1998 Certificate of Merit, Scientific Exhibit
Boutin RD, Spitz DJ, Newman, Lenchik L, Steinbach LS.
MR Imaging of Complications of Paget's Disease: An Interactive Exhibit.
 American Roentgen Ray Society Annual Meeting; San Francisco, CA.
- 2000 National Institute of Health Grant Application -- Consultant
Boutin RD.
Principal Investigator: Sharmila Majumdar, Ph.D.
- 2012-2013 National Institute of Health Pilot Award (P50AR060752)
 Chaudhari A (PI), **Boutin RD (Co-investigator).**
Ultra High Field MRI and Image Analysis for Improving the Management of Osteoarthritis. (Total cost: \$13,000)
- 2012-2013 Center for Molecular and Genomic Imaging
 Chaudhari A (PI), **Boutin RD (Co-investigator).**
Inflammatory Arthritis Detection Using Ultra High Field MRI. (Total value: \$10,000)
- 2013 Fellow Research Award for Outstanding Performance in Research
 Immerman I, **Boutin RD**, Buonocore M, Chaudhari A, Szabo, R.
2-D and 3-D Active MRI of the Wrist.
 University of California, Davis, Department of Orthopaedic Surgery.
- 2013 Cum Laude Award, Education Exhibit
Boutin RD, Lenchik L, Yao L.
Be Strong! Strengthening the Case for Diagnosing Sarcopenia and Sarcopenic Obesity.
 Radiological Society of North America Annual Meeting; Chicago, IL.
- 2013 Certificate of Merit, Education Exhibit
Boutin RD, Bredella M, Lopez B, Spitz D, Laor T.
Gelatinous Transformation of Bone Marrow.
 Radiological Society of North America Annual Meeting; Chicago, IL.
- 2013 National Science Foundation/National Institute of Health Grant
 Lane NE (PI), (Duncan et al), **Boutin RD (Co-investigator).**
3D in Vivo Morphometry of Trabecular Microstructure.
- 2013-2014 Senior Faculty Teaching Award
Boutin RD.
University of California, Davis Radiology Residents.

- 2013-2014 National Institute of Health/National Institute of Biomedical Imaging and Bioengineering Grant
Chaudhari A (PI), **Boutin RD (Co-investigator)**.
Quasi-Rigid Image Registration for DCE-MRI. (Direct cost: \$100,000; grant funds portion of salary)
- 2013-2015 National Institute of Health, Office of Research on Women's Health, Specialized Centers of Interdisciplinary Research (SCOR) on Sex Differences Grant
Boutin RD (PI), Chaudhari A, Szabo R, Buonocore M.
Histopathology-based Validation of Imaging Biomarkers of Trapeziometacarpal Osteoarthritis of the Thumb. (Total cost: \$10,000)
- 2013-2018 National Institute of Health/Building Interdisciplinary Research Careers in Women's Health (BIRCWH) - K Award
Chaudhari AJ (PI), **Boutin RD (Mentoring Committee)**.
Sex-based Imaging Biomarkers of Function in Hand Osteoarthritis. (Direct cost: \$400,000)
- 2014-2015 Clinical and Translational Sciences Center
Chaudhari A (PI), **Boutin RD (Co-investigator)**.
Functional Magnetic Resonance Imaging for Thumb Rehabilitation. (Direct cost: \$50,000)
- 2015 Fellow Research Award for Outstanding Performance in Research
Ragsdale M, Wong F, **Boutin RD**, Meehan J.
Pelvic Tilt Evaluation from Frontal Radiographs: The Validity, Interobserver Reliability and Intraobserver Reproducibility of the Sacro-Femoral-Pubic Parameter.
University of California, Davis, Department of Orthopaedic Surgery.
- 2015 Magna Cum Laude Award, Education Exhibit
Boutin RD, Fritz RC, Laor T, Yao L, Pathria MN.
Interposition Injuries in Orthopaedics: MRI Features and Clinical Significance.
Radiological Society of North America Annual Meeting; Chicago, IL.
- 2015 Excellence in Research
Boutin RD*, Szabo R, Netto A, Nakamura D, Bateni C, Cronan M, Chaudhari A.
Cracking the Case on "Knuckle Cracking": The Sonographic Evidence.
Society of Skeletal Radiology; Scottsdale, AZ.
- 2016 Nominated by Radiology Department for "Academic Federation Excellence in Research Award" , University of California, Davis

- 2016 University of California Davis - Interdepartmental Grant
Boutin RD (PI), Wise, BL (Co-investigator).
The Significance of Sarcopenia in Hip Fracture Patients. (Direct Cost: \$19,755)
- 2016 Patrick T. Liu Innovation Research Award
Boutin RD*, Bamrungchart S, Bateni C, Beavers K, Beavers D, Meehan J,
Lenchik L.
CT of Hip Fracture Patients: Can Muscle Size & Attenuation Predict Outcomes?
Society of Skeletal Radiology; New Orleans, LA.

PUBLICATIONS

Textbooks

Resnick D, **Boutin RD**. *Volume III: Musculoskeletal Imaging*.
The Encyclopedia of Medical Imaging. Oslo, Norway: The NICER Institute, 1999.

Editor

Boutin RD, Sartoris DJ. Issue Editors of *Musculoskeletal Imaging Update -- Part I*.
Orthopedic Clinics of North America 1997; 28(4).

Boutin RD, Sartoris DJ. Issue Editors of *Musculoskeletal Imaging Update -- Part II*.
Orthopedic Clinics of North America 1998; 29(1).

Boutin RD. Issue Editor of *Cartilage Magnetic Resonance Imaging: Part I*.
Topics in Magnetic Resonance Imaging 1998; 9(6).

Boutin RD. Issue Editor of *Cartilage Magnetic Resonance Imaging: Part II*.
Topics in Magnetic Resonance Imaging 1999; 10(3).

Boutin RD. Issue Editor of *Imaging of Sports Injuries: The Lower Extremity*.
Current Radiology Reports 2014; 42.

Boutin RD. Issue Editor of *Advanced Muscle Imaging*. Current Radiology Reports 2015-2016.

Boutin RD. Issue Editor of *MRI-Arthroscopic Correlation*. Current Radiology Reports 2015-2017.

Boutin RD. Issue Editor of *Muscle Imaging Update*. Seminars in Musculoskeletal Radiology 2017.

Book Chapters

Boutin FJ, **Boutin RD**, Boutin FJ, Jr. *Bursitis*. In: Chapman MW, ed. Operative Orthopaedics.
2nd ed. Philadelphia, PA: JB Lippincott, 1993; 3419-3432.

Boutin FJ, **Boutin RD**. *The Patient*. In: Reese P, Henderson J, eds. Ten Million Steps. Waco,
TX: WRS Publishing, 1993; 137-139.

Boutin RD, Rupp FW, Orrison WW. *Neuroradiology: Intrathecal Studies*.

In: Ansell G, Wilkins RA, Bettmann MA, Kaufman J, eds. Ansell's Complications of Diagnostic and Therapeutic Radiology. 3rd ed. Boston, MA: Blackwell Scientific Publications, 1996; 447-464.

Marcantonio D, **Boutin RD**, Resnick D. *MR Arthrography*. In: Hodge JC, ed. Handbook of Musculoskeletal Procedures. Georgetown, TX: Landes Publishing, 1997; 109-122.

Boutin RD, Spaeth HJ, Resnick D. *Degenerative Diseases of the Spine*. In: Orrison WW, ed. Neuroimaging. Philadelphia, PA: WB Saunders, 2000, 1302-1333.

Boutin RD, Rupp FW, Sartoris D. *Myelography*. In: Orrison WW, ed. Neuroimaging. Philadelphia, PA: WB Saunders, 2000, 449-468.

Boutin RD. *Muscle Disorders*. In: Resnick D, ed. *Diagnosis of Bone and Joint Disorders*. 4th ed. Philadelphia, PA: WB Saunders, 2002, 4696-4768.

Marcantonio D, **Boutin RD**, Resnick D. *MR Arthrography*. In: Hodge JC, ed. Musculoskeletal Procedures: Diagnostic and Therapeutic. 2nd ed. Georgetown, TX: Landes Bioscience. 2003.

Boutin RD. *Muscle Disorders*. In: Resnick D, ed. *Bone and Joint Imaging*. 3rd ed. Philadelphia, PA: Elsevier Saunders, 2005, 1374-1397.

Boutin RD, Pathria MN. *MRI of Muscle*. In: Edelman R, Hesselink J, Zlatkin M, eds. Clinical Magnetic Resonance Imaging. 3rd ed. Philadelphia, PA: Saunders Elsevier. 2006, 3466-3496.

Boutin RD, Resnick DL. *Muscle Disorders*. In: Resnick D, ed. Internal Derangements of Joints. 2nd ed. Philadelphia, PA: Saunders Elsevier. 2007.

Flemming DJ, **Boutin RD**. *Muscle Injury and Sequelae*. In: Pope T, et al, ed. Imaging of the Musculoskeletal System. Philadelphia, PA: Saunders Elsevier. 2008.

Boutin RD. *Radiologic Perspective: Magnetic Resonance Imaging of Muscle*. In: Pedowitz R, Chung C, Resnick D, eds. Magnetic Resonance Imaging in Orthopedic Sports Medicine. New York, NY: Springer. 2008.

Pathria MN, **Boutin RD**. *Imaging of Muscle*. In: Hodler J, von Schulthess GK, Zollikofer CL, eds. *Musculoskeletal Diseases 2009-2012: Diagnostic Imaging*. Berlin: Springer-Verlag 2009.

Boutin RD, Pathria MN. *Magnetic Resonance Imaging of Muscle*. In: Hodler J, von Schulthess GK, Zollikofer CL, eds. *45th International Diagnostic Course Davos - Musculoskeletal Diseases*. Berlin: Springer-Verlag 2013.

Boutin RD. *11 Year-old Girl with “Tail-bone” Pain for 3 Years (Chapter 35).* In: Richardson ML, ed. Intergalactic Online MSK Conference Cool Case Book 3. Seattle, WA: **Bare-BonesBooks.com** 2013.

Kim W, Bindra J, **Boutin RD.** *Imaging of the Musculoskeletal System.* In: Chapman MW, James M, eds. Chapman’s Comprehensive Orthopaedic Surgery. 4th ed. Philadelphia, PA: Jaypee Medical Publishing, 2017, in press.

Boutin RD, Bindra J. *Imaging of Bone Tumors.* In: Chapman MW, James M, eds. Chapman’s Comprehensive Orthopaedic Surgery. 4th ed. Philadelphia, PA: Jaypee Medical Publishing, 2017, in press.

Boutin RD, Bindra J, Canter R. *Imaging of Soft-tissue Tumors.* In: Chapman MW, James M, eds. Chapman’s Comprehensive Orthopaedic Surgery. 4th ed. Philadelphia, PA: Jaypee Medical Publishing, 2017, in press.

Peer-Reviewed Papers

Boutin RD, Williamson MR. Magnetic Resonance Imaging of Musculoskeletal Tumors. West J Med 1992; 156(3):295.

Boutin RD, Briggs JE, Williamson MR. Injuries Associated with MR Imaging: Survey of Safety Records and Methods Used to Screen Patients for Metallic Foreign Bodies Before Imaging. AJR Am J Roentgenol 1994; 162(1):189-194.

Williamson MR, Espinosa MC, **Boutin RD**, Orrison WW, Hart BL, Kelsey CA. Metallic Foreign Bodies in the Orbits of Patients Undergoing MR Imaging: Prevalence and Value of Pre-MR Radiography and CT. AJR Am J Roentgenol 1994; 162(4): 981-983.

Williamson MR, Espinosa MC, **Boutin RD**, Orrison WW, Hart BL, Kelsey CA. Reply to commentary on Metallic Foreign Bodies in the Orbits of Patients Undergoing MR Imaging: Prevalence and Value of Pre-MR Radiography and CT. AJR Am J Roentgenol 1994; 162(4):986.

Boutin RD, Ketani LH, Sell JJ. Spiral Computed Tomography. West J Med 1994; 160(5):454-455.

Sell JJ, Williamson MR, **Boutin RD**, Igel B. CT Demonstration of a Giant Adrenal Endothelial Cyst of the Angiomatous Subtype. Comput Med Imag Graph 1994; 18(6):469-471.

Sell JJ, Linver M, **Boutin RD**. Development of Extensive Breast Calcification with Tumoral Calcification in a Patient with Chronic Renal Failure. Breast 1995; 4(4):305-306.

Boutin RD, Spaeth HJ, Mangalik A, Sell JJ. Epithelioid Hemangioendothelioma of Bone. Skeletal Radiology 1996; 25(4):391-395.

Boutin RD, Sartoris DJ, Rose SC, Plecha EJ, Bundens W, Resnick DL. Intraosseous Venous Drainage Anomaly in Patients with Symptomatic Pretibial Varicosities: Imaging Findings. Radiology 1997; 202(3):751-757.

Brossmann J, Frank LR, Pauly JM, **Boutin RD**, Pedowitz RA, Haghighi P, Resnick D. Short Echo Time Projection Reconstruction MR Imaging of Cartilage with Histopathologic Correlation: Comparison with Fat-Suppressed Spoiled GRASS and Magnetization Transfer Contrast MR Imaging. Radiology 1997; 203(2):501-507.

Bashir A, Gray ML, **Boutin RD**, Burstein D. Glycosaminoglycan in Articular Cartilage with Delayed Gd(DTPA)²⁻-enhanced MR Imaging. Radiology 1997; 205(2):551-558.

Boutin RD, Resnick D. The SAPHO Syndrome: An Evolving Concept for Unifying Several Idiopathic Disorders of the Bone and Skin. AJR Am J Roentgenol 1998; 170(3):585-591.

Boutin RD, Pathria M, Resnick D. Imaging of Disorders in the Stumps of Amputees. *AJR Am J Roentgenol* 1998; 171(2):497-501.

Boutin RD, Spitz DJ, Newman JS, Lenchik L, Steinbach LS. MR Imaging of Complications in Paget's Disease. *Radiology* 1998; 209(3): 641-651.

Richman KM, **Boutin RD**, Vaughan LM, Haghighi P, Resnick D. Tophaceous Pseudogout of the Sternoclavicular Joint. *AJR Am J Roentgenol* 1998; 172(6): 1587-1589.

De la Puente R, **Boutin RD**, Theodorou DJ, Hooper A, Schweitzer M, Resnick D. Post-Traumatic and Stress-Induced Osteolysis of the Distal Clavicle: MR Imaging Findings in 17 Patients. *Skeletal Radiology* 1999; 28(4):202-208.

Muhle C, Ahn JM, Yeh L, Bergman GA, **Boutin RD**, Schweitzer M, Jacobson JA, Haghighi P, Trudell DJ, Resnick D. Iliotibial Band Friction Syndrome: MR Imaging Findings in 16 Patients and MR Arthrographic Study of 6 Cadaveric Knees. *Radiology* 1999; 212(1):103-110.

Skaf A, **Boutin RD**, Dantas RWM, Hooper AW, Muhle C, Chou DS, Trudell D, Haghighi P, Resnick D. Bicipitoradial Bursitis: MR Imaging Findings in Eight Patients and Anatomic Data from Contrast Material Opacification of Bursae Followed by Routine Radiography and MR Imaging in Cadavers. *Radiology* 1999; 212(1):111-116.

Chan KK, Muldoon KA, Yeh L, **Boutin RD**, Pedowitz R, Skaf A, Trudell DJ, Resnick D. Superior Labral Anteroposterior Lesions: MR Arthrography with Arm Traction. *AJR Am J Roentgenol* 1999; 173(4): 1117-1122.

Sciulli RL, **Boutin RD**, Brown RR, Nguyen KD, Muhle C, Lektrakul N, Pathria MN, Pedowitz R, Resnick D. Evaluation of the Postoperative Meniscus of the Knee: A Study Comparing Conventional Arthrography, Conventional MR Imaging, MR Arthrography with Iodinated Contrast Material, and MR Arthrography with Gadolinium-Based Contrast Material. *Skeletal Radiology* 1999; 28(9):508-514.

Theodorou DJ, Theodorou SJ, **Boutin RD**, Chung C, Fliszar E, Kakitsubata Y, Resnick D. Stress fractures of the lateral metatarsal bones in metatarsus adductus foot deformity: a previously unrecognized association. *Skeletal Radiology* 1999; 28(12):679-684.

Kakitsubata Y, **Boutin RD**, Theodorou DJ, Kerr R, Steinbach LS, Chan K, Pathria MN, Haghighi P, Resnick D. Calcium Pyrophosphate Dihydrate (CPPD) Crystal Deposition In and Around the Atlantoaxial Joint: Association with Type II Odontoid Fractures in 9 Patients. *Radiology* 2000; 216:213-219.

Hauger O, Frank L, **Boutin RD**, Lektrakul N, Chung CB, Haghighi P, Resnick D. Characterization of the "Red Zone" of the Knee Meniscus: MR Imaging and Histologic Correlation. *Radiology* 2000; 217(1):193-200.

Hauger O, Chung CB, Lektrakul N, Botte MJ, Trudell D, **Boutin RD**, Resnick D. Pulley System in the Fingers: Normal Anatomy and Simulated Lesions in Cadavers at MR Imaging, CT, and US with and without Contrast Distention of the Tendon Sheath. *Radiology* 2000; 217(1):201-212.

Sirlin CB, **Boutin RD**, Brossmann J, Pathria MN, Convery FR, Bugbee W, Resnick D. Polydioxanone Biodegradable Pins in the Knee: MR Imaging. *AJR Am J Roentgenol* 2001; 176(1):83-90.

Burstein D, Velyvis J, Scott KT, Stock KW, Kim YJ, Jaramillo D, **Boutin RD**, Gray ML. Protocol Issues for Delayed Gd(DTPA)(2-)-enhanced MRI (dGEMRIC) for Clinical Evaluation of Articular Cartilage. *Magn Reson Med* 2001; 45(1):36-41.

Sirlin CB, Brossman J, **Boutin RD**, Pathria MN, Convery FR, Bugbee W, Deutsch R, Lebeck LK, Resnick D. Shell Osteochondral Allografts of the Knee: Comparison of MR Imaging Findings and Immunologic Responses. *Radiology* 2001; 219(1):35-43.

Boutin RD, Januario JA, Newberg AH, Gundry CR, Newman JS. Osteochondritis Dissecans of the Femoral Sulcus: MR Imaging Features. *AJR Am J Roentgenol* 2003; 180(3):641-5. Also abstract: *Year Book of Diagnostic Radiology* 2004; (6)RA:8.

Yao L, Stanczak J, **Boutin RD**. Presumptive Subarticular Stress Reactions of the Knee: MRI Detection and Association with Meniscal Tear Patterns. *Skeletal Radiology* 2004; 33(5):260-4.

Boutin RD, Buonocore MH, Immerman I, Ashwell Z, Sonico GJ, Szabo RM, Chaudhari AJ. Real-Time Magnetic Resonance Imaging (MRI) During Active Wrist Motion - Initial Observations. *PLOS ONE* 2013; DOI: 10.1371/journal.pone.0084004.

Yao L, Gai N, **Boutin RD**. Axial Scan Orientation and the Tibial Tubercle-Trochlear Groove Distance: Error Analysis and Correction. *AJR Am J Roentgenol* 2014; 202(6):1291-6.

Bindra J, Lam A, Lamba R, VanNess M, **Boutin RD**. Erdheim-Chester Disease: An Unusual Presentation of an Uncommon Disease. *Skeletal Radiology* 2014; 43(6):835-40.

Canter RJ, Borys D, Olusanya A, Li C, Lee L, **Boutin RD**, Christensen SD, Tamurian RM, Monjaze AM. Phase I Trial of Neoadjuvant Conformal Radiotherapy Plus Sorafenib for Patients with Locally Advanced Soft Tissue Sarcoma of the Extremity. *Ann Surg Oncol* 2014; 21(5):1616-23.

Boutin RD, White LM, Laor T, Spitz DJ, Lopez-Ben RR, Stevens KJ, Bredella MA. MRI Findings of Serosus Atrophy of Bone Marrow and Associated Complications. *Eur Radiol* 2015; 25(9):2771-8.

Boutin RD, Yao L, Canter RJ, Lenchik L. Sarcopenia: Current Concepts and Imaging Implications. *AJR Am J Roentgenol*. 2015; 205(3):W255-66.

Boutin RD, Chang J, Bateni C, Giza E, Wisner ER, Yao L. The Notch of Harty (Pseudodefekt of the Tibial Plafond): Frequency and Characteristic Findings at MRI of the Ankle. *AJR Am J Roentgenol* 2015; 205(2):358-63.

Park JS, Nakache Y, Katz J, **Boutin RD**, Steffner R, Monjazebe A, Canter R. Conservative Management of Desmoid Tumors is Safe and Effective. *J Surg Res* 2016; 205(1):115-20.

Boutin RD, Kaptuch JM, Bateni CP, Chalfant JS, Yao L. Influence of Intravenous Contrast Administration on CT Measures of Muscle and Bone Attenuation: Implications for Sarcopenia and Osteoporosis Evaluation. *AJR Am J Roentgenol* 2016 Aug 24:1-9. [Epub ahead of print].

Imaging Periodicals

Boutin RD, Resnick D. MR Arthrography Detects Subtle Joint Pathology. *Diagnostic Imaging*, March 1996:42-49.

Boutin RD, Resnick D. Diabetic Foot Disease. *Magnetic Resonance Update*. October 1996.

Boutin RD. MR Imaging of Sports-Related Injuries. *Magnetic Resonance Update*. January 1997.

Boutin RD. MR Arthrography. *Magnetic Resonance Update*. May 1997.

Boutin RD. Arthritis and Other Arthropathies. *Magnetic Resonance Update*. July 1997.

Boutin RD. Soft Tissue Masses. *Magnetic Resonance Update*. November 1997.

Boutin RD, Weismann BN. Magnetic Resonance Imaging of Arthritides Affecting the Shoulder. In: Rafii M, Guest Editor of *Update on the Shoulder*. *Magnetic Resonance Imaging Clinics of North America* 1997; 5(4):841-879.

Boutin RD, Sartoris DJ. *Preface*. Guest Editors of *Musculoskeletal Imaging Update -- Part I*. *Orthopedic Clinics of North America* 1997; 28(4):ix-x.

Boutin RD, Sartoris DJ. *Preface*. Guest Editors of *Musculoskeletal Imaging Update -- Part II*. *Orthopedic Clinics of North America* 1998; 29(1):ix.

Boutin RD, Brossmann J, Sartoris DJ, Riley D, Resnick D. Update on Imaging of Orthopedic Infections. In: **Boutin RD**, Sartoris DJ. Guest Editors of *Musculoskeletal Imaging Update -- Part II*. *Orthopedic Clinics of North America* 1998; 29(1):41-66.

Cotton A, **Boutin RD**, Resnick D. Normal Anatomy of the Elbow on Conventional MR Imaging and MR Arthrography. *Seminars in Musculoskeletal Radiology* 1998; 2(2):133-140.

Boutin RD. Editorial. In: **Boutin RD**, Issue Editor of *Cartilage Magnetic Resonance Imaging: Part I*. *Topics in Magnetic Resonance Imaging* 1998; 9(6):327.

Gold GE, Bergman G, Pauly J, Lang P, Butts K, Beaulieu CF, Hargreaves B, Frank L, **Boutin RD**, Macovski A, Resnick D. MR Imaging of Knee Cartilage Repair. In: **Boutin RD**, Issue Editor of *Cartilage Magnetic Resonance Imaging*. *Topics in Magnetic Resonance Imaging* 1998; 9(6):377-392.

Boutin RD, Steinbach LS, Finnesey K. MR Imaging of Degenerative Diseases in the Cervical Spine. *MRI Clinics of North America* 2000; 8(3):471-490.

Fritz RC, **Boutin RD**. MR Imaging of the Peripheral Nervous System. Phys Med Rehabil Clinics of North America 2001; 12(2):399-432.

Alparslan L, Winalski CS, **Boutin RD**, Minas T. Postoperative Magnetic Resonance Imaging of Articular Cartilage Repair. Seminars in Musculoskeletal Radiology 2001; 5(4):345-363.

Boutin RD, Fritz RC, Steinbach LS. MR Imaging of Sports-Related Muscle Injuries. Radiologic Clinics of North America 2002; 40(2):333-362.

Boutin RD, Newman JS. MR Imaging of Sports-Related Hip Disorders. MRI Clinics of North America 2003; 11(2):255-82.

Boutin RD, Fritz RC, Steinbach LS. MR Imaging of Sports-Related Muscle Injuries. MRI Clinics of North America 2003; 11(2):341-72.

Pinto JSP, **Boutin RD**, Resnick D. Spinous Process Fractures Associated with Bastrup Disease. Clinical Imaging 2004; 28(3):219-22.

Boutin RD. MRI of the Hip. Open Notes 2004.

Boutin RD, Fritz RC. MRI of Snow Skiing and Snowboarding Injuries. Seminars in Musculoskeletal Radiology 2005; 9(4):360-78.

Boutin RD, Fritz RC, Marder RA. Magnetic Resonance Imaging of the Postoperative Meniscus: Resection, Repair, and Replacement. Magn Reson Imaging Clin N Am 2014 Nov; 22(4):517-55.

Boutin RD, Fritz RC. MRI of Musculotendinous Injuries – What’s New? Part I: “Non-Strain” Injuries. Current Radiology Reports 2015 Jun; 3:30.

Boutin RD, Fritz RC. MRI of Musculotendinous Injuries – What’s New? Part II: Strain Injuries. Current Radiology Reports 2015 Jun; 3:27.

Sutherland JK, Jackson LT, Giza E, **Boutin RD**. Case-based Ankle MRI and Arthroscopic Correlation. Current Radiology Reports, in press 2017.

SCIENTIFIC EXHIBITS

Orrison WW, Lewine JD, Sanders JA, **Boutin RD**.

Clinical Applications of Magnetic Source Imaging.

American Roentgen Ray Society Annual Meeting; New Orleans, LA; April 1994.

Certificate of Honor.

Boutin RD, Sibbitt RR, Orrison WW, Jahnke R, King JN, Rupp FW.

Localization of Cerebrospinal Fluid Leaks by MR Imaging.

Association of University Radiologists Annual Meeting; Boston, MA; May 1994.

Third Place Scientific Exhibit.

Boutin RD, Sibbitt RR, Orrison WW, Jahnke R, King JN, Rupp FW.

Localization of Cerebrospinal Fluid Leaks by MR Imaging.

Radiological Society of North America Annual Meeting; Chicago, IL; November 1994.

Boutin RD, Hart BL, Benzel EC, Orrison WW.

Imaging of the Cervical Spine in the Acute Setting: A Survey of Neurosurgeons and

Neuroradiologists. Joint Section on Disorders of the Spine and Peripheral Nerves,

American Association of Neurological Surgeons and Congress of Neurological Surgeons

Annual Meeting; Phoenix, AZ; February 1995.

Harper MT, Murnane TG, Chandnani VP, Gagliarde JA, Spaeth HJ, **Boutin RD**.

MR Imaging of Musculoskeletal Ganglia: A Pictorial Essay.

European Congress of Radiology; Vienna, Austria; March 1995.

Boutin RD, Spaeth HJ, Weber SC, Resnick DL.

Ganglion Cysts of the Shoulder: MR Imaging.

American Roentgen Ray Society Annual Meeting; Washington D.C.; April 1995.

Spaeth HJ, **Boutin RD**, Martin TP, Wascher DC, Looby PA.

MR of Posterior Cruciate Ligament Injury: Associated Findings and Pitfalls.

American Roentgen Ray Society Annual Meeting; Washington D.C.; April 1995.

Boutin RD, Pathria M, Resnick D.

Imaging of Disorders in the Stumps of Amputees.

Radiological Society of North America Annual Meeting; Chicago, IL; December 1996.

Boutin RD, Jacobson J, Pathria M, Sartoris D, Resnick D.

Cystic Lesions Around the Shoulder: MR and Sonographic Findings.

Radiological Society of North America Annual Meeting; Chicago, IL; December 1996.

Sirlin CB, Brossmann J, **Boutin RD**, Pathria MP, Resnick DL, Convery FR.

MR Imaging of Fresh Osteochondral Allografts of the Knee: Clinical

and Immunologic Correlation.

Radiological Society of North America Annual Meeting; Chicago, IL; December 1996.

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European Congress of Radiology; Vienna, Austria; March 1997.

Boutin RD, Pathria M, Resnick D.

Imaging of Disorders in the Stumps of Amputees.

American Roentgen Ray Society Annual Meeting; Boston, MA; May 1997.

Brossmann J, Frank LR, Pauly JM, **Boutin RD**, Pedowitz RA, Haghighi P, Resnick D.

Short Echo Time Projection Reconstruction MR Imaging of Cartilage with Histopathologic Correlation: Comparison with Fat-Suppressed Spoiled GRASS and Magnetization Transfer Contrast MR Imaging.

Radiological Society of North America Annual Meeting; Chicago, IL; December 1997.

Boutin RD, Spitz DJ, Newman JS, Lenchik L, Steinbach LS.

MR Imaging of Complications in Paget's Disease.

American Roentgen Ray Society Annual Meeting; San Francisco, CA; April 1998.

Bhorade RM, **Boutin RD**, Hochman M.

The Scapula: Imaging Techniques, Normal Anatomy, and Pathologic Processes.

American Roentgen Ray Society Annual Meeting; San Francisco, CA; April 1998.

Boutin RD, Cotton A, Schils JP, Resnick D.

The SAPHO Syndrome: Imaging Manifestations in the Extremities.

American Roentgen Ray Society Annual Meeting; San Francisco, CA; May 1998.

Spitz DJ, **Boutin RD**, Jacobi MA, Newman JS, Steinbach LS, Lenchik L.

MR Imaging of Complications in Paget's Disease: An Interactive Exhibit.

Radiological Society of North America Annual Meeting; Chicago, IL; December 1998.

Gagliato PE, Pinto P, **Boutin RD**, Schweitzer M, Steinbach LS, Resnick D.

Imaging Complications of Intravenous Drug Abuse in the Upper Extremity.

American Roentgen Ray Society Annual Meeting; New Orleans, LA; May 1999.

Theodorou DJ, Theodorou SJ, **Boutin RD**, Chung CB, Kakitsubata Y, Resnick D.

Stress Fractures of the Lateral Metatarsal Bones in Metatarsus Adductus Deformity of the Foot.

Radiological Society of North America Annual Meeting; Chicago, IL; December 1999.

Ashraf VS, Steinbach LS, **Boutin RD**, Pathria MN, Dillon WP.

Imaging of C1-2 Pseudotumors.

Radiological Society of North America Annual Meeting; Chicago, IL; December 1999.

Kakitsubata Y, **Boutin RD**, Theodorou DJ, Trudell D, Supteuesat A, Resnick D.
MR Diskography of the Lumbar Spine: A Preliminary Study.
Radiological Society of North America Annual Meeting; Chicago, IL; December 1999.

Kakitsubata Y, **Boutin RD**, Theodorou DJ, Pathria MN, Haghighi P, Resnick D.
Calcium Pyrophosphate Dihydrate (CPPD) Crystal Deposition In and Around the Atlantoaxial Joint: Association with Type 2 Odontoid Fractures in 9 Patients.
Radiological Society of North America Annual Meeting; Chicago, IL; December 1999.

Kakitsubata Y, Theodorou DJ*, Theodorou SJ, Frank LR, **Boutin RD**, Trudell D, Suptuesat A.
Resnick D.
Normal and Abnormal Lumbar Interventional Disk: Cadaveric Study Correlating Conventional MR Imaging and MR Diskography.
American Roentgen Ray Society Annual Meeting; Seattle, WA; May 2001.

Boutin RD, Yao L, Hunter J.
Triceps Anatomy, Tears, and Terminology.
Society of Skeletal Radiology; Miami, FL; March 2012.

Boutin RD.
Imaging of Triceps Injuries.
Radiological Society of North America Annual Meeting; Chicago, IL; November 2012.

Buonocore MH, **Boutin RD**, Immerman I, Ashwell Z, Sonico GJ, Szabo RM, Chaudhari AJ.
Quantitative Kinematics of the Wrist Using Dynamic MRI.
International Society for Magnetic Resonance in Medicine; Salt Lake City, UT; May 2013.

Boutin RD, Bindra J, Riley G, Pereira G, Giordani M.
Advanced Imaging of Patients with Hip Arthroplasties: CT versus MRI.
International Skeletal Society Annual Meeting; Philadelphia, PA; September 2013.

Boutin RD, Chaudhari AJ, Canter R.
The Significance of Sarcopenia: Myopenia, Malignancy, and the Musculoskeletal Imager.
International Skeletal Society Annual Meeting; Philadelphia, PA; September 2013.

Immerman I, **Boutin RD**, Buonocore MH, Ashwell Z, Szabo RM, Chaudhari AJ.
Real-time 2D and 3D MR Imaging During Active Wrist Motion.
American Society for Surgery of the Hand Annual Meeting; San Francisco, CA; October 2013.

Chaudhari AJ, Joshi AA, Leahy RM, Wise BL, Lane NE, Badawi RD, **Boutin RD**, Buonocore MH.
Sex-based Imaging Biomarkers of Carpal Bone Motion and Shape in Hand Osteoarthritis.
National Institute for Health Building Interdisciplinary Research Careers in Women's Health;
Bethesda, MD; October 2013.

Boutin RD, Lenchik L, Yao L.

Be Strong! Strengthening the Case for Diagnosing Sarcopenia and Sarcopenic Obesity.

Radiological Society of North America Annual Meeting; Chicago, IL; December 2013.

Boutin RD, Bredella M, Lopez B, Spitz D, Laor T.

Gelatinous Transformation of Bone Marrow.

Radiological Society of North America Annual Meeting; Chicago, IL; December 2013.

Canter RJ, Lee CTN, Nakache YP, Li CS, Shah D, Katz J, **Boutin RD**, Steffner R, Monjazebe A.

Predictors of Residual Disease after Unplanned Excision of Unsuspected Soft Tissue Sarcomas.

Society of Surgical Oncology; Phoenix, AZ; March 2014.

Lenchik L, **Boutin RD**.

The Math, The Myths, and the MR Findings of Atypical Femoral Fractures.

Society of Skeletal Radiology; San Diego, CA; March 2014.

Buonocore MH, **Boutin RD**, Immerman I, Chaudhari AJ.

Imaging of the Moving Wrist Using Rapid Undersampled K-Space Acquisition with Iterative Reconstruction.

International Society for Magnetic Resonance in Medicine; Milan, Italy; May 2014.

Chaudhari AJ, **Boutin RD**, Szabo RJ, Ma KL, Lane NE, Badawi RD, Buonocore MH.

First Carpometacarpal Joint Motion Differences by Sex.

American Academy of Orthopaedic Surgeons; Chicago, IL; July 2014.

Chaudhari AJ, **Boutin RD**, Szabo RJ, Lane NE, Badawi RD, Buonocore MH.

First Carpometacarpal Joint Motion Differences by Sex.

NIH Office of Research on Women's Health Eleventh Annual Interdisciplinary Women's Health Research Symposium; Bethesda, MD; November 2014.

Park JS, Nakache Y, Katz J, **Boutin RD**, Steffner R, Monjazebe A, Canter R.

Conservative Management of Desmoid Tumors is Safe and Effective.

Pacific Coast Surgical Association; Monterey, CA; February 2015.

Foster B, Gedeon D, Nittur V, **Boutin RD**, Badawi RD, Canter RJ, Chaudhari AJ.

Skeletal Muscle Quantity and Quality: Feasibility of Mining Novel Metrics from Routine Clinical 18F-FDG PET/CT.

University of California, Davis School of Medicine Dean's Symposium; Sacramento, CA; February 2015.

Foster B, Gedeon D, Nittur V, **Boutin RD**, Badawi RD, Canter RJ, Chaudhari AJ.

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Society of Nuclear Medicine and Molecular Imaging; Baltimore, MD; June 2015.

Lenchik L, **Boutin RD**.

Clinical Evaluation of Sarcopenia Using DEXA: Lessons Learned From Diagnosis, Prognosis, and Treatment of Osteoporosis.

International Skeletal Society; Maui, HI; September 2015.

Boutin RD, Fritz RC, Marder RA.

MRI of the Postoperative Meniscus: A Case-based Approach.

International Skeletal Society; Maui, HI; September 2015.

Boutin RD, Fritz RC, Laor T, Yao L, Pathria MN.

Interposition Injuries in Orthopaedics: MRI Features and Clinical Significance.

Radiological Society of North America Annual Meeting; Chicago, IL; December 2015.

Kaptuch J, Yao L, Bateni C, **Boutin RD**.

The Muscle & Bone Density Assessment for Sarcopenia & Osteopenia with CT: Impact of Contrast Material.

Society of Skeletal Radiology; New Orleans, LA; March 2016.

Sutherland JK, Jackson LT, Giza E, **Boutin RD**.

Case-based Ankle MRI and Arthroscopic Correlation.

American Roentgen Ray Society Annual Meeting; Los Angeles, CA; April 2016.

Boutin RD*, Nakache YP, Darrow M, Nelson S, Canter RJ.

Synovial Chondrosarcoma.

International Skeletal Society; Paris, France; September 2016.

ORAL PRESENTATIONS

Scientific Meetings ("*" indicates presenter)

Boutin RD*, Abou Ghaida HI, Rab GT.

Three-Dimensional Kinematics and Muscle Length Changes in Bicyclists.

American Society of Biomechanics Annual Meeting; Burlington, VT; August 1989.

Abstract: J Biomechanics 1990; 23(7):722.

Weber SC*, **Boutin RD**.

Arthrography and Magnetic Resonance Imaging in the Diagnosis of Rotator Cuff Tears: A Critical Review of Their Accuracy in a Community Setting.

American Academy of Orthopaedic Surgeons Annual Meeting; Washington D.C.;

February 1992. Abstract: Orthop Trans 1992; 16(3):740.

and Arthroscopy Association of North America Annual Meeting; Boston, MA; April 1992.

Abstract: Orthop Trans 1992; 16(3):778.

Williamson MR*, Espinosa MC, **Boutin RD**, Orrison WW, Hart BL, Kelsey CA.

CT and Plain Film Screening of Orbits Prior to MR Imaging.

Radiological Society of North America Annual Meeting; Chicago, IL; December 1992.

Abstract: Radiology 1992; 185(P) Suppl: 304.

Boutin RD*, Briggs JE, Williamson MR.

MRI Screening and Safety: A Survey of 208 Academic Institutions.

American Roentgen Ray Society Annual Meeting; San Francisco, CA; April 1993.

Abstract: AJR 1993; 160(4) Suppl: 56.

Boutin RD*, Spaeth HJ, Weber SC, Resnick DL.

Ganglion Cysts of the Shoulder: MR Imaging.

European Congress of Radiology; Vienna, Austria; March 1995.

Abstract: European Radiology 1995; 5 Suppl: 189.

Spaeth HJ, **Boutin RD***, Martin TP, Wascher DC, Looby PA.

MR of Posterior Cruciate Ligament Injury: Associated Findings and Pitfalls.

European Congress of Radiology; Vienna, Austria; March 1995.

Abstract: European Radiology 1995; 5 Suppl: 115.

Spaeth HJ, **Boutin RD***, Martin TP, Wascher DC, Looby PA.

MR of Posterior Cruciate Ligament Injury: Associated Findings and Pitfalls.

American Roentgen Ray Society Annual Meeting; Washington D.C.; April 1995.

Abstract: AJR 1995; 164(3) Suppl: 39.

Boutin RD*, Spaeth HJ, Weber SC, Resnick DL.

Ganglion Cysts of the Shoulder: MR Imaging.

American Roentgen Ray Society Annual Meeting; Washington D.C.; April 1995.

Abstract: AJR 1995; 164(3) *Suppl*: 70.

Sirlin CB*, Brossmann J, **Boutin RD**, Pathria MP, Resnick DL, Convery FR.
MR Imaging of Fresh Osteochondral Allografts of the Knee: Clinical and Immunologic Correlation.

Radiological Society of North America Annual Meeting; Chicago, IL; December 1996.
Abstract: Radiology 1996; 201(P) *Suppl*: 333.

Lenchik L*, Jacobson JA, **Boutin RD**, Pathria MN, Hoyt DB.
Value of Cervical Spine Flexion-Extension Radiographs in Acute Blunt Trauma.
Radiological Society of North America Annual Meeting; Chicago, IL; December 1996.
Abstract: Radiology 1996; 201(P) *Suppl*: 333.

Boutin RD*, Sartoris DJ, Rose SC, Plecha EJ, Bundens W, Resnick DL.
Intraosseous Venous Drainage Anomaly in Patients with Symptomatic Pretibial Varicosities: Imaging Findings.
Radiological Society of North America Annual Meeting; Chicago, IL; December 1996.
Abstract: Radiology 1996; 201(P) *Suppl*: 333.

Bashir A*, **Boutin RD**, Gray ML, Burstein D.
MRI of Glycosaminoglycan Distribution in Cartilage using Gd-DTPA In Vivo.
International Society for Magnetic Resonance in Medicine; Vancouver, B.C.; April 1997.

Boutin RD*, Bashir A, Gray ML, Burstein D.
MR Imaging of Early Cartilage Degeneration in the Knee.
American Roentgen Ray Society Annual Meeting; Boston, MA; May 1997.
Abstract: AJR 1997; 168(3) *Suppl*: 58-59.

Lenchik L*, Carr JJ, Jacobson JA, **Boutin RD**, Pathria MN.
Cervical Subluxation in Acute Blunt Trauma: The Effect of Degenerative Disease.
American Roentgen Ray Society Annual Meeting; Boston, MA; May 1997.
Abstract: AJR 1997; 168(3) *Suppl*: 113.

Boutin RD*, Bashir A, Gray ML, Burstein D.
MR Imaging of Cartilage Degeneration with Gd-DTPA²⁻ Contrast Material.
Biomedical Engineering Society Meeting; San Diego, CA; October 1997.

Boutin RD*, Kaplan RT, Buff BL, David V, Hochman M.
Comparison of Conventional Dual-Echo and Turbo Inversion Recovery Sequences in MR Imaging of Rotator Cuff Tears.
Radiological Society of North America Annual Meeting; Chicago, IL; December 1997.
Abstract: Radiology 1997; 205(P) *Suppl*: 238.

Brossmann J*, Frank LR, Pauly JM, **Boutin RD**, Pedowitz RA, Haghighi P, Resnick D.

Short Time Echo Projection Reconstruction MR Imaging with Histopathologic Correlation: Comparison with Fat Suppressed Spoiled GRASS and Magnetization Transfer Contrast MR Imaging.

Radiological Society of North America Annual Meeting; Chicago, IL; December 1997.
Abstract: Radiology 1997; 205(P) Suppl: 364.

Boutin RD*, Spitz DJ, Newman JS, Lenchik L, Steinbach LS.

MR Imaging of Complications in Paget's Disease.

Society of Skeletal Radiology Annual Meeting; Palm Springs, CA; March 1998.
Abstract: Proceedings of the 21st Annual Meeting, 1998; 31.

Boutin RD*, Hart BL, Benzel EC, Orrison WW.

Imaging of the Cervical Spine in the Setting of Acute Trauma: A Survey of Neuroradiologists and Neurosurgeons.

American Roentgen Ray Society Annual Meeting; San Francisco, CA; May 1998.
Abstract: AJR 1998; 170(4) Suppl: 26.

Boutin RD*, Cotton A, Schils JP, Resnick D.

The SAPHO Syndrome: Imaging Manifestations in the Extremities.

American Roentgen Ray Society Annual Meeting; San Francisco, CA; May 1998.
Abstract: AJR 1998; 170(4) Suppl: 70.

Boutin RD*.

Imaging of Patients with Ankylosing Spondylitis.

National Institute of Health Meeting; Bethesda, MD; September 1998.
Abstract: Proceedings of "Ankylosing Spondylitis Research: HLA-B27 and Beyond."

Skaf AY, Chung CB*, **Boutin RD**, Gilbeau C, Roger B, Resnick DL.

Pubalgia in Athletes: MR Findings in 88 Patients.

Radiological Society of North America Annual Meeting; Chicago, IL; December 1998.
Abstract: Radiology 1998; 209(P) Suppl: 195.

Skaf AY*, **Boutin RD**, Lektrakul N, Chan KK, Roger B, Resnick DL.

Subscapularis Tendon Tears: Comparison of MR Arthrography with Conventional Radiography, Arthrography and CT Arthrography.

Radiological Society of North America Annual Meeting; Chicago, IL; December 1998.
Abstract: Radiology 1998; 209(P) Suppl: 234.

Skaf AY*, **Boutin RD**, Dantas RW, Hooper AW, Muhle C, Trudell D, Resnick D.

Bicipitoradial Bursitis: MR Imaging Findings in Six Patients Supplemented by Data from Standard and MR Bursography in Cadavers.

Radiological Society of North America Annual Meeting; Chicago, IL; December 1998.
Abstract: Radiology 1998; 209(P) Suppl: 389.

Muhle C, Bergman G, **Boutin RD***, Schweitzer ME, Trudell DT, Resnick DL.
Iliotibial Band Friction Syndrome: MR Imaging in 16 Patients and Correlation of Findings with MR Imaging, MR Arthrography, Kinematic MR Imaging, and Anatomic Inspection in Cadavers.
Radiological Society of North America Annual Meeting; Chicago, IL; December 1998. Abstract:
Radiology 1998; 209(P) Suppl: 463.

Boutin RD*, Spitz DJ, Newman, Lenchik L, Steinbach LS.
MR Imaging of Complications in Paget's Disease.
Radiological Society of North America Annual Meeting; Chicago, IL; December 1998.
Abstract: Radiology 1998; 209(P) Suppl: 464.

Boutin RD*, Skaf AY, Roger B, Resnick DL.
Compartment Syndromes of the Lower Leg: Evaluation of 28 Patients with MR Imaging.
Radiological Society of North America Annual Meeting; Chicago, IL; December 1998.
Abstract: Radiology 1998; 209(P) Suppl: 465.

Skaf AY, Dantas RM, Hooper A, Lektrakul N, **Boutin RD***, Trudell D, Haghighi P, Resnick D.
Extrinsic and Intrinsic Ligaments of the Adult Hip: High-Resolution MR Arthrography with Anatomic Correlation in Cadavers.
American Roentgen Ray Society Annual Meeting; New Orleans, LA; May 1999.

Skaf AY, **Boutin RD***, Roger B, Resnick D.
Fatigue Fractures of the Sacrum in Elite Athletes: Radiographic, Scintigraphic, CT, and MR Imaging.
American Roentgen Ray Society Annual Meeting; New Orleans, LA; May 1999.

Gold G*, Blair T, Garcia G, **Boutin RD**, Hargreaves B, Lang P, Bergman G, Nisuimura D, Frank L, Resnick D.
Articular Cartilage in the Wrist: Driven Equilibrium and Spoiled Gradient Recalled Echo Imaging.
American Roentgen Ray Society Annual Meeting; New Orleans, LA; May 1999.

De la Puente R*, **Boutin RD**, Theodorou DJ, Hooper A, Schweitzer M, Resnick D.
Post-Traumatic and Stress-Induced Osteolysis of the Distal Clavicle: MR Imaging Findings in 17 Patients.
American Roentgen Ray Society Annual Meeting; New Orleans, LA; May 1999.

Boutin RD*.
MRI of Cartilage: Current Status.
Symposium: Update on Bone Imaging.
American Roentgen Ray Society Annual Meeting; New Orleans, LA; May 1999.

Boutin RD*.
MRI of the Hip.
Categorical Course in Body MRI.

Radiological Society of North America Annual Meeting; Chicago, IL; December 1999.

Ashraf VS, Steinbach LS, **Boutin RD***, Pathria MN, Dillon WP.

Imaging of C1-2 Pseudotumors.

Society of Skeletal Radiology Annual Meeting; Scottsdale, AZ; March 2000.

Kakitsubata Y, Theodorou DJ*, Theodorou SJ, **Boutin RD**, Kerr R, Steinbach LS, Chan K, Pathria MN, Haghighi P, Resnick D.

Calcium Pyrophosphate Dihydrate (CPPD) Crystal Deposition In and Around the Atlantoaxial Joint: Association with Type 2 Odontoid Fractures in 9 Patients.

American Roentgen Ray Society Annual Meeting; Washington, DC; May 2000.

Gold GE*, Butts RK, Hargreaves BA, Frank LR, **Boutin RD**, Resnick D.

Evaluation of Patellar Cartilage with Driven Equilibrium and Diffusion-Weighted MR Imaging.

American Roentgen Ray Society Annual Meeting; Washington, DC; May 2000.

Boutin RD*.

MRI of Soft-Tissue Tumors.

Musculoskeletal Tumor Society, Specialty Day.

American Academy of Orthopaedic Surgeons Annual Meeting; San Francisco, CA; March 2001.

Kakitsubata Y, Theodorou DJ*, Theodorou SJ, Frank LR, **Boutin RD**, Trudell D, Suptuesat A.

Resnick D. *Normal and Abnormal Lumbar Interventional Disk: Cadaveric Study Correlating Conventional MR Imaging and MR Diskography.*

American Roentgen Ray Society Annual Meeting; Seattle, WA; May 2001.

Yao L*, Stanczak J, **Boutin RD**.

"SONK-like" Lesions: Osteonecrosis or Subchondral Stress Fracture?

Radiological Society of North America Annual Meeting; Chicago, IL; December 2002.

Abstract: Radiology 2002.

Yao L*, Stanczak J, **Boutin RD**.

Derangements of the Meniscal Root: Another Complication of Obesity?

Radiological Society of North America Annual Meeting; Chicago, IL; December 2002.

Abstract: Radiology 2002.

Boutin RD*, Newbury AH, Gundry CR.

MR Imaging of Ganglion Cysts about the Proximal Tibiofibular Joint.

Society of Skeletal Radiology Annual Meeting; San Diego, CA; March 2003.

Yao L*, Stanczak J, **Boutin RD**.

"SONK-like" Lesions: Osteonecrosis or Subchondral Stress Fracture?

Society of Skeletal Radiology Annual Meeting; San Diego, CA; March 2003.

Boutin RD*.

MRI of Muscle Injuries.

Session Moderator: Musculoskeletal MRI – Clinical Studies.

Educational Course on Sports Medicine.

International Society for Magnetic Resonance in Medicine; Toronto, Canada; July 2003.

Boutin RD*.

MRI of Sports-Related Muscle Injury.

Session Moderator: Bone Marrow, Muscle and Nerve.

International Skeletal Society Annual Meeting; San Francisco, CA; September 2003.

Boutin RD.*

Muscle and Tendon Imaging: Anatomy, Injury and Intervention. (Anatomy and MR Imaging of Sports-Related Muscle Injuries.)

Categorical Course in Musculoskeletal Imaging.

Radiological Society of North America Annual Meeting; Chicago, IL; November 2003.

Boutin RD.*

MRI of Sports-Related Muscle Injury.

International Skeletal Society Annual Meeting; Malta; October 2004.

Boutin RD.*

Muscle and Tendon Imaging: Anatomy, Injury and Intervention. (Anatomy and MR Imaging of Sports-Related Muscle Injuries.)

Refresher Course in Musculoskeletal Imaging.

Radiological Society of North America Annual Meeting; Chicago, IL; November 2004.

Boutin RD.*

Muscle and Tendon Imaging: Anatomy, Injury and Intervention. (Anatomy and MR Imaging of Sports-Related Muscle Injuries.)

Refresher Course in Musculoskeletal Imaging.

Radiological Society of North America Annual Meeting; Chicago, IL; December 2005.

Boutin RD*.

MRI of Sports-Related Muscle Injuries.

Educational Course on Musculoskeletal MRI.

International Society for Magnetic Resonance in Medicine; Seattle, WA; May 2006.

Boutin RD.*

MRI of Sports-Related Muscle Injury.

International Skeletal Society Annual Meeting; Vancouver, Canada; September 2006.

Boutin RD.*

Advanced Imaging of Muscle.

International Skeletal Society Annual Meeting; New Delhi, India; October 2008.

Boutin RD*.

MRI of the Hip: Extra-articular Disorders.

Educational Course on Musculoskeletal MRI.

International Society for Magnetic Resonance in Medicine; Honolulu, HI; April 2009.

Boutin RD*.

MRI of Muscle Injury: Current Status and Future Directions.

International Skeletal Society Annual Meeting; Washington, DC; September 2009.

Boutin RD.*

Practical MRI of Cartilage and Osteochondral Injury.

Refresher Course in Musculoskeletal Imaging.

Radiological Society of North America Annual Meeting; Chicago, IL; November 2010.

Boutin RD*.

Muscle Imaging: Advanced Techniques.

International Skeletal Society Annual Meeting; San Diego, CA; September 2011.

Boutin RD.*

Practical MRI of Cartilage and Osteochondral Injury.

Refresher Course in Musculoskeletal Imaging.

Radiological Society of North America Annual Meeting; Chicago, IL; November 2011.

Boutin RD*, Yao L, Hunter J.

Triceps Anatomy, Tears, and Terminology.

Society of Skeletal Radiology; Miami, FL; March 2012.

Boutin RD*.

Low Field versus High Field: Msk MRI for an Emerging World.

International Society for Magnetic Resonance in Medicine; Melbourne, Australia; May 2012.

Boutin RD*.

Lecturer: Imaging Muscle Injury: Concepts and Principles in Musculoskeletal Radiology.

International Skeletal Society Annual Meeting; Rome, Italy; September 2012.

Additional invited duties at this meeting:

Moderator: Imaging Bone Marrow.

Boutin RD*.

Practical MRI of Cartilage and Osteochondral Injuries

Refresher Course in Musculoskeletal Imaging.

Radiological Society of North America Annual Meeting; Chicago, IL; November 2012.

Additional invited duties at this meeting:

Invited Facilitator, Lunch Hour Discussion Program: MRI Evaluation of Cartilage and Osteochondral Injuries.

Presiding Officer: Cartilage Scientific Session.

Presiding Officer: Musculoskeletal Scientific Session (Focus on MR Neurography).

Boutin RD*, Ashwell Z, Immerman I, Szabo R, Sonico GJ, Buonocore M, Chaudhari A.
Carpal Kinematics from Dynamic Wrist MRI During Active Range of Motion.
Society of Skeletal Radiology; San Antonio, TX; March 2013.

Boutin RD*, Yao L.
TT-TG Distance Measurements on Knee MRI: Error Analysis and Correction.
Society of Skeletal Radiology; San Antonio, TX; March 2013.

Boutin RD*, Bredella M, Lopez R, Spitz D, Laor T.
“Serious” Serous Atrophy of Bone Marrow: Many Different Causes and One Particular Complication.
Society of Skeletal Radiology; San Antonio, TX; March 2013.

Ashwell Z*, **Boutin RD**, Immerman I, Szabo R, Sonico GJ, Buonocore M, Chaudhari A.
Dynamic Wrist MRI in Real Time During Active Range of Motion.
American Roentgen Ray Society Annual Meeting; Washington, D.C.; April 2013.

Yao L*, **Boutin RD**.
Axial Scan Orientation and the Tibial Tubercle-Trochlear Groove Distance: Error Analysis and Correction.
American Roentgen Ray Society Annual Meeting; Washington, D.C.; April 2013.

Boutin RD*.
Imaging Muscle Structure & Function: Clinical Aspects of Muscle Physiology & Pathology.
International Society for Magnetic Resonance in Medicine; Salt Lake City, UT; April 2013.

Immerman I*, **Boutin RD**, Buonocore M, Chaudhari A, Szabo R.
2-D and 3-D Active MRI of the Wrist.
(Recipient of Fellow Research Award for Outstanding Performance in Research).
University of California, Davis, Department of Orthopaedic Surgery; Sacramento, CA; June 2013.

Boutin RD*.
Myopenia and the Musculoskeletal Imager: New Concepts
Society of Academic Bone Radiologists; Bar Harbor, ME; July 2013.

Immerman I*, **Boutin RD**, Buonocore M, Chaudhari A, Szabo R.
Real-Time 2D and 3D MR Imaging During Active Wrist Motion.

Balkan Medical Union XIX-th Session of the Balkan Medical Days; Chisinau, Republic of Moldova; September 2013.

Borys D, Canter R, **Boutin RD***.

Angiomatoid Fibrous Histiocytoma of Bone.

International Skeletal Society Annual Meeting; Philadelphia, PA; September 2013.

Chaudhari AJ*, Joshi AA, Leahy RM, Wise BL, Lane NE, Badawi RD, **Boutin RD**, Buonocore MH.

Thumb Carpometacarpal Joint Motion and Bone Shape Differences by Sex.

Proceedings of the 1st International Thumb Osteoarthritis Workshop; Newport, RI; October 2013.

Boutin RD*.

Lecturer: Muscles Around the Hip and Beyond: From Atrophy to Sarcopenia.

Moderator: Arthritis.

International Skeletal Society Annual Meeting; Philadelphia, PA; October 2013.

Boutin RD*, Fritz RC.

Stener-Like Lesion of the Medial Collateral Ligament: An Indication for Knee Surgery.

Society of Skeletal Radiology; San Diego, CA; March 2014.

Canter RJ*, Lee CTN, Nakache YP, Li CS, Shah D, Katz J, **Boutin RD**, Steffner R, Monjazebe A. *Predictors of Residual Disease after Unplanned Excision of Unsuspected Soft Tissue Sarcomas.* Society of Surgical Oncology; Phoenix, AZ; March 2014.

Boutin RD*.

Muscle -- Sports Injuries (syllabus).

International Society for Magnetic Resonance in Medicine; Milan, Italy; May 2014.

Boutin RD*.

The Notch of Harty: Differentiating the Tibial Plafond Pseudodeflect from an Osteochondral Defect.

Society of Academic Bone Radiologists; Portland, OR; July 2014.

Boutin RD*.

Case-Based Review of Musculoskeletal Radiology (an Interactive Session): Muscle Injuries.

Refresher Course in Musculoskeletal Imaging.

Radiological Society of North America Annual Meeting; Chicago, IL; December 2014.

Boutin RD*, Katz J, Chaudhari A, Nakache YP, Li CS, Lamba R, Fananapazir, Canter R.

Significance of Sarcopenia in Soft-Tissue Sarcoma Patients: Do Skeletal Muscle and Fat Measures of Body Composition on Routine CT Exams Help Predict Clinical Outcomes?

Radiological Society of North America Annual Meeting; Chicago, IL; December 2014.

Boutin RD*, Szabo R, Netto A, Nakamura D, Bateni C, Cronan M, Chaudhari A.
Cracking the Case on “Knuckle Cracking”: The Sonographic Evidence.
Society of Skeletal Radiology; Scottsdale, AZ; March 2015.

Riley G, Stewart R, Packer J, Safran M, **Boutin RD**.
Hip MR Arthrography: Are We Underdiagnosing Synovitis and Laxity Pre-operatively?
Moderator: Upper Extremity Session I.
Society of Skeletal Radiology; Scottsdale, AZ; March 2015.

Ragsdale M*, Wong F, **Boutin RD**, Meehan J.
Pelvic Tilt Evaluation from Frontal Radiographs: The Validity, Interobserver Reliability and Intraobserver Reproducibility of the Sacro-Femoral-Pubic Parameter.
(Recipient of Fellow Research Award for Outstanding Performance in Research).
University of California, Davis, Department of Orthopaedic Surgery; Sacramento, CA; June 2015.

Boutin RD*.
Interposition Injuries. Can We Evolve Beyond the Thumb with MRI?
Society of Academic Bone Radiologists; Nashville, TN; July 2015.

Boutin RD*.
Hip MR: Diagnosis of Synovitis and Instability.
Expert Quiz Panel: Plenary Session with Unknown Cases.
International Skeletal Society; Maui, HI; September 2015.

Packer J*, Riley G, Stewart R, Shibata K, **Boutin RD**, Safran M.
Capsular Thinning on MRI Is Associated with Intraoperative Hip Laxity in Women.
International Society for Hip Arthroscopy; Cambridge, England; September 2015

Boutin RD*, Fritz RC, Walker RE, Pathria MN, Lee CA, Yao L.
Distal MCL Tears of the Knee: MRI Features of Stener-like Lesions.
Radiological Society of North America Annual Meeting; Chicago, IL; December 2015.

Boutin RD*, Szabo R, Netto A, Nakamura D, Bateni C, Cronan M, Chaudhari A.
Cracking the Case on “Knuckle Cracking”: The Sonographic Evidence.
Radiological Society of North America Annual Meeting; Chicago, IL; December 2015.

Riley GM*, Richardson ML, Packer J, Safran M, **Boutin RD**, Nguyen M.
Hip MR Arthrography: Are We Underdiagnosing Laxity Pre-operatively?
Radiological Society of North America Annual Meeting; Chicago, IL; December 2015.

Boutin RD*.
Instructional Course: MRI of the Lower Extremity: Case-based Challenges & Solutions.
Radiological Society of North America Annual Meeting; Chicago, IL; December 2015.

Lenchik L*, **Boutin RD**, Bindra J, Kiani B, Bateni C, Wuertzer, SD.
Improving First-Year Resident Education in Musculoskeletal Imaging: Comparison of Workflow Using the Customary Chronologic Approach with the Novel Anatomy Based Approach.
Radiological Society of North America Annual Meeting; Chicago, IL; December 2015.

Boutin RD*, Bamrungchart S, Bateni C, Beavers K, Beavers D, Meehan J, Lenchik L.
CT of Hip Fracture Patients: Can Muscle Size & Attenuation Predict Outcomes?
Society of Skeletal Radiology; New Orleans, LA; March 2016.

Wong F*, Ragsdale M, **Boutin RD**, Meehan J.
Pelvic Tilt Evaluation from Frontal Radiographs.
American Roentgen Ray Society Annual Meeting; Los Angeles, CA; April 2016.

Boutin RD*.
Muscle: What Do I Need to Know? (SAM-approved)
Moderator: Musculoskeletal Imaging, Lower Extremity.
American Roentgen Ray Society Annual Meeting; Los Angeles, CA; April 2016.

Boutin RD*.
Intraosseous Venous Drainage Anomaly Revisited and Rediscovered.
Society of Academic Bone Radiologists; Tiburon, CA; July 2016.

Boutin RD*.
Moderator: Advance Muscle Imaging
The Emerging Epidemic: Sarcopenia.
International Skeletal Society; Paris, France; September 2016.

Boutin RD*.
Instructional Course: Muscle: Case-based Review.
Instructional Course: Sarcopenia is Significant: Why Muscle Matters
Organizer: Muscle Refresher Course.
Radiological Society of North America Annual Meeting; Chicago, IL; December 2016.

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Packer JD, Riley GM, Stewart R, Shibata K, Richardson ML, **Boutin RD**, Safran MR.
Capsular Thinning on MRI is Associated with Intraoperative Hip Laxity in Women.
American Orthopaedic Society for Sports Medicine; Colorado Springs, CO; 2016.

Roster B, Kreulen C, Golshani B, Nikpour A, DeHart M, Taghavi C, Delman C, **Boutin RD**, Giza E.
Radiographic Outcomes of Lisfranc Injuries Treated with a Suture Button Device.
American Orthopaedic Foot and Ankle Society; Toronto, Canada; 2016.

Continuing Medical Education Lectures

Poliomyelitis: Biomechanical Evaluation and Surgical Treatment.

Department of Orthopaedic Surgery, Grand Rounds; Davis, California.

University of California, Davis. January 1990.

MRI of the Shoulder.

Department of Radiology; Portland, Oregon.

University of Oregon Health Sciences University. March 1990.

MRI Diagnosis of Sports-Related Knee Injuries.

Department of Radiology; Boston, Massachusetts.

Beth Israel Hospital & Harvard Medical School. January 1996.

MRI of Knee Injuries.

Visiting Professor for Emergency Department; Auckland, New Zealand.

Middlemore Hospital. April 1996.

Osteoradiology of the Pelvis.

Department of Radiology; Boston, Massachusetts.

Brigham and Women's Hospital & Harvard Medical School. January 1997.

MRI of Soft-Tissue Tumors.

Musculoskeletal MRI for Orthopedists and Rheumatologists; Boston, Massachusetts.

Beth Israel Deaconess Medical Center & Harvard Medical School. May 1997.

Radiographic Evaluation of Upper Extremity Trauma.

Department of Emergency Medicine; Boston, Massachusetts.

Harvard Medical School. January 1998.

The SAPHO Syndrome.

Department of Rheumatology; Boston, Massachusetts.

Harvard Medical School. January 1998.

DEXA Scanning: Impact and Interpretation.

Department of Radiology; Boston, Massachusetts.

Beth Israel Deaconess Medical Center & Harvard Medical School. March 1998.

Musculoskeletal Infections in Adults: An Algorithmic Approach.

Radiology's "Aunt Minnies": Test Your Skills.

Orthopedic Radiology, Harvard Medical School Continuing Medical Education Course;

Boston, Massachusetts. Brigham and Women's Hospital. March 1998.

MRI of Cartilage: The Hottest Topic in Musculoskeletal Radiology.

San Diego Radiological Society Meeting.
San Diego, California. October 1998.

MRI of Cartilage and Arthritis.

Soft Tissue Neoplasms.

Musculoskeletal Infection.

Musculoskeletal MR Course; Hilton Head Island, South Carolina.
University of California, San Diego. October 1998.

MRI of the Knee: Meniscal Pathology.

MRI of the Knee: The Crucial Ligaments.

Postgraduate Radiology Course; San Diego, California.
University of California, San Diego. October 1998.

MRI of Articular Cartilage Using Intravenous Contrast Material.
Emeryville, California. Chiron Corporation. November 1998.

Inflammatory Diseases of the Spine.

Musculoskeletal Infection.

MRI of Articular Cartilage.

MRI of Soft-Tissue Tumors.

Muscle and Tendon Injuries.

You Remember Aunt Minnie, Don't You?

Musculoskeletal MR Course; Palm Beach, Florida.
University of California, San Diego. January 1999.

MRI of the Knee Part I: Meniscal Anatomy and Abnormalities.

MRI of the Knee Part II: Ligament Anatomy and Abnormalities.

MRI of the Pelvis and Hip.

Postgraduate MRI Course; San Diego, California.
University of California, San Diego. March 1999.

A Systematic Approach to the Plain Bone Film.

Imaging Pitfalls in the Emergency Room: Identifying Commonly Missed Abnormalities.

Office Orthopedics and Bone Radiology for the Primary Care Physician;
New Orleans, LA. March 1999.

Metabolic and Endocrine Diseases of the Musculoskeletal System: Part I.

Metabolic and Endocrine Diseases of the Musculoskeletal System: Part II.

Radiology Resident Review Course; San Diego, California.

University of California, San Diego. April 1999.

Interesting MRI Cases.

Current Issues of MRI in Orthopaedics and Sports Medicine;

San Francisco, California. August 1999.

MRI of Soft-Tissue Tumors.

Interesting MRI Cases.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco. October 1999.

MRI of Articular Cartilage.

MRI of Soft-Tissue Tumors.

Interesting MRI Cases.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco. December 1999.

MRI of Soft-Tissue Tumors.

MRI of Articular Cartilage.

Interesting MRI Cases.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco. February 2000.

Metabolic and Endocrine Diseases of the Musculoskeletal System.

Arthritis.

Interesting Cases.

Radiology Resident Review Course; San Francisco, California.

University of California, San Francisco. February 2000.

Cartilage Imaging Update.

Diagnostic Radiology Postgraduate Course; San Francisco, California.

University of California, San Francisco. March 2000.

MRI Aunt Minnie Cases for Residents.

Visiting Professor for Department of Radiology Noon Conference; San Francisco, California.

University of California, San Francisco. April 2000.

MRI of the Hip.

Imaging of Infection.

Interesting MRI Cases.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco. April 2000.

Musculoskeletal Radiology Senior Resident Board Review Session.

Department of Radiology Board Review; San Francisco, California.

University of California, San Francisco; April 2000.

MRI of Soft-Tissue Tumors.

Imaging of Infection.

MRI of Cartilage.

MRI of the Hip.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco. June 2000.

MRI of Articular Cartilage.

9th Annual Current Issues of MRI in Orthopaedics and Sports Medicine;

San Francisco, California. August 2000.

MRI of the Hip.

Cartilage Imaging Update.

MRI of Musculoskeletal Infections.

Clinical Magnetic Resonance Imaging; San Francisco, California.

University of California, San Francisco. October 2000.

MRI of Soft-Tissue Tumors.

MRI of Cartilage.

MRI of the Hip.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco. November 2000.

MRI of Soft-Tissue Tumors.

MRI of Cartilage.

MRI of the Hip.

Interesting MRI Cases.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco. December 2000.

Arthritis.

Visiting Professor for Department of Radiology; Hanover, NH.

Dartmouth Hitchcock Medical Center. January 2001.

MRI of Soft-Tissue Tumors.

MRI of Cartilage.

MRI of the Hip.

MRI of Musculoskeletal Infections.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco. February 2001.

MRI of Soft-Tissue Tumors.

Cartilage Imaging Update.

MRI of Musculoskeletal Infections.

MRI of Muscle.

Practical Musculoskeletal MRI in the Desert; Rancho Mirage, California.
University of California, San Francisco. February 2001.

Metabolic and Endocrine Diseases of the Musculoskeletal System.
Interesting Cases.

Radiology Resident Review Course; San Francisco, California.
University of California, San Francisco School of Medicine. March 2001.

Arthritis.
Visiting Professor for Department of Radiology Noon Conference; San Francisco, California.
University of California, San Francisco. April 2001.

MRI of Soft-Tissue Tumors.
MRI of Cartilage.
MRI of Muscle.
Postgraduate Mini-Fellowship Program; San Francisco, California.
University of California, San Francisco School of Medicine. April 2001.

Musculoskeletal Radiology Senior Resident Board Review Session.
Department of Radiology Board Review; San Francisco, California.
University of California, San Francisco. April 2001.

MRI of Soft-Tissue Tumors.
MRI of Cartilage.
MRI of Muscle.
Postgraduate Mini-Fellowship Program; San Francisco, California.
University of California, San Francisco School of Medicine. May 2001.

MRI of Soft-Tissue Masses.
MRI of Articular Cartilage and Osteochondral Injury.
MRI of Muscle.
Postgraduate Mini-Fellowship Program; San Francisco, California.
University of California, San Francisco School of Medicine. June 2001.

MRI of Articular Cartilage and Osteochondral Injury.
Interesting Cases.
10th Annual Current Issues of MRI in Orthopaedics and Sports Medicine;
San Francisco, California. August 2001.

MRI of Soft-Tissue Masses.
MRI of Muscle Injury.
MRI of the Hip.
Postgraduate Mini-Fellowship Program; San Francisco, California.
University of California, San Francisco School of Medicine. September 2001.

MRI of Soft-Tissue Masses.

MRI of Muscle Injury.

MRI of the Hip.

Clinical Magnetic Resonance Imaging Course; San Francisco, California.

University of California, San Francisco School of Medicine. October 2001.

MRI of Soft-Tissue Masses.

MRI of Muscle Injury.

MRI of the Hip.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. November 2001.

MRI of Soft-Tissue Masses.

MRI of Muscle Injury.

MRI of Articular Cartilage & Osteochondral Injury.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. December 2001.

Metabolic and Endocrine Bone Diseases.

Interesting Cases.

Bone Tumors and Tumor-like Lesions.

Radiology Resident Review Course; San Francisco, California.

University of California, San Francisco School of Medicine. March 2002.

MRI of Muscle.

MRI of Soft-Tissue Tumors.

MRI of the Hip.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. March 2002.

MRI of Muscle.

MRI of the Hip.

MRI of Cartilage.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. April 2002.

MRI of Muscle.

MRI of Soft-Tissue Tumors.

MRI of the Hip.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. May 2002.

MRI of Muscle.

MRI of the Hip.

MRI of Cartilage.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. June 2002.

MRI of Soft-Tissue Masses.

MRI of Cartilage and Osteochondral Lesions.

MRI of the Hip.

MRI of Muscle.

Imaging of Musculoskeletal Infection.

CT and MRI of the Musculoskeletal System; Atlanta, Georgia.

The International Institute for Continuing Medical Education. October 2002.

MRI of Muscle.

Imaging of Musculoskeletal Infection: Emphasis on MRI.

MRI of Soft-Tissue Masses.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. November 2002.

MRI of Muscle.

MRI of the Hip.

MRI of Soft-Tissue Masses.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. December 2002.

MRI of Muscle.

Imaging of Musculoskeletal Infection: Emphasis on MRI.

MRI of the Hip.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. February 2003.

Neoplasms.

Interesting Cases.

Radiology Resident Review Course; San Francisco, California.

University of California, San Francisco School of Medicine. February 2003.

MRI of Muscle.

Visiting Professor for Department of Radiology; San Diego, California.

University of California, San Diego. March 2003.

Open MR of the Hip.

Open MR of Muscle Injuries.

Open MRI Clinical Symposia; Las Vegas, NV.

Northwest Imaging Forums. April 2003.

MRI of Muscle.

Imaging of Musculoskeletal Infection: Emphasis on MRI.

MRI of the Hip.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. May 2003.

Arthritis.

Neoplasms: Bone Tumors and Tumor-like Lesions.

Visiting Professor for Department of Radiology; Albuquerque, New Mexico.

University of New Mexico. July 2003.

MRI of Soft-Tissue Masses.

MRI of Cartilage and Osteochondral Injury.

MRI of the Hip.

MRI of Muscle.

MRI of Musculoskeletal Infection.

MRI of the Musculoskeletal System; Santa Fe, New Mexico.

The International Institute for Continuing Medical Education. August 2003.

MRI of Cartilage and Osteochondral Injury.

Practical MRI of Muscle.

Imaging of Bone Tumors and Tumor-like Lesions.

Imaging of Musculoskeletal Infections.

Current Concepts in Musculoskeletal and Spine Imaging; Stowe, Vermont.

The International Institute for Continuing Medical Education. October 2003.

Bone Tumors and Tumor-like Lesions.

Visiting Professor for Department of Radiology; Hanover, NH.

Dartmouth Hitchcock Medical Center. October 2003.

MRI of Cartilage and Osteochondral Injury.

MRI of the Hip.

Advances in Clinical MR and CT Imaging; San Francisco, California.

University of California, San Francisco School of Medicine. October 2003.

MRI of Muscle.

MRI of the Hip.

Imaging of Musculoskeletal Infection: Emphasis on MRI.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. November 2003.

MRI of Muscle.

MRI of the Hip.

Postgraduate Mini-Fellowship Program; San Francisco, California.
University of California, San Francisco School of Medicine. December 2003.

MRI of Soft-Tissue Masses.

MRI of Cartilage and Osteochondral Injury.

MRI of the Hip.

MRI of Muscle.

MRI of Musculoskeletal Infection.

Practical Musculoskeletal MRI in the Desert; Indian Wells, California.

University of California, San Francisco. February 2004.

Metabolic Bone Diseases.

Neoplasms.

Interesting Cases.

Radiology Resident Review Course; San Francisco, California.

University of California, San Francisco School of Medicine. February 2004.

Fraud, Abuse and Compliance: The Need-to-Know Basics.

Annual Meeting Focus Session; Tucson, Arizona.

Society of Skeletal Radiology. March 2004.

MRI of Muscle.

MRI of the Hip.

Imaging of Infection: Emphasis on MRI.

Interesting Cases.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. April 2004.

Program Director.

MRI of the Hip: Important Updates from AVN to Labral Tears.

Practical MRI of Cartilage and Osteochondral Injury.

MRI of Soft-Tissue Masses: Neoplastic and Non-neoplastic.

Practical MRI of Muscle.

Advanced Orthopedic MRI in Wine Country; Sonoma, California.

The International Institute for Continuing Medical Education. May 2004.

MRI of Muscle.

MRI of Articular Cartilage.

MRI of the Hip.

MRI of Soft-Tissue Masses.

Current Concepts in Sports Medicine MRI; Niagara Falls, Canada.

The International Institute for Continuing Medical Education. July 2004.

Bone Tumors and Tumor-like Lesions.

Radiology Department Session; Bethesda, Maryland.
National Naval Medical Center. July 2004.

MRI of the Hip.

MRI of Muscle.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. December 2004.

MRI of the Hip.

MRI of Muscle.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. April 2005.

Metabolic Bone Diseases.

Neoplasms.

Interesting Cases.

Radiology Resident Review Course; San Francisco, California.

University of California, San Francisco School of Medicine. March 2005.

Magnetic Resonance Imaging of Muscle.

Invited Panelist: IDKD 2005 Film Interpretation Competition.

Musculoskeletal Diseases: Course on Diagnostic Imaging and Interventional Techniques; Davos, Switzerland.

37th International Diagnostic Course in Davos. April 2005.

Musculoskeletal MRI.

Mid Year Conference; Chicago, IL.

American Osteopathic College of Radiology. April 2005.

Board Review for Senior Radiology Residents.

Resident Conference; San Francisco, California.

University of California, San Francisco School of Medicine. April 2005.

MRI of Muscle.

MRI of the Hip.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. April 2005.

Program Director.

MRI of the Hip: Important Updates from AVN to Labral Tears.

MRI of Soft-Tissue Masses.

Practical MRI of Muscle.

Advanced Orthopedic MRI in Wine Country; Sonoma, California.

The International Institute for Continuing Medical Education. May 2005.

MRI of Muscle.

MRI of the Hip.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. November 2005.

Socioeconomic Survey of Musculoskeletal Radiologists.

Annual Meeting Focus Session; Tucson, Arizona.

Society of Skeletal Radiology. March 2006.

Metabolic Bone Diseases.

Neoplasms.

Interesting Cases.

Radiology Resident Review Course; San Francisco, California.

University of California, San Francisco School of Medicine. March 2006.

Program Director.

MRI of the Hip: Important Updates from AVN to Labral Tears.

MRI of Soft-Tissue Masses: A Systematic Approach.

Practical MRI of Muscle: A Case-based Interactive Approach.

Practical, Interesting and Clinically Important Cases

Advanced Orthopedic Imaging in Wine Country: Emphasis on MRI; Sonoma, California.

The International Institute for Continuing Medical Education. May 2006.

MRI of Muscle.

MRI of the Hip.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. May 2006.

MRI of Muscle.

MRI of the Hip.

Postgraduate Mini-Fellowship Program; San Francisco, California.

University of California, San Francisco School of Medicine. November 2006.

Cartilage Imaging.

MRI of Muscle.

Update on Hip MRI.

Bone Tumors.

Soft-tissue Tumors.

Musculoskeletal MR Course; Palm Beach, Florida.

University of California, San Diego School of Medicine. January 2007.

Program Director.

MRI of the Hip: Update for 2007.

MRI of Muscle: A Practical Case-based Approach.
Orthopedic Imaging; Pebble Beach, California.
The International Institute for Continuing Medical Education. February 2007.

Metabolic Bone Diseases.
Neoplasms.
Interesting Cases.
Radiology Resident Review Course; San Francisco, California.
University of California, San Francisco School of Medicine. March 2007.

Program Director.
MRI of the Hip: Update for 2007.
MRI of Muscle: A Practical Case-based Approach.
Advanced Orthopedic Imaging; Sonoma, California.
The International Institute for Continuing Medical Education. June 2007.

Arthritis: A Systematic Approach.
Practical MRI of Muscle.
Practical MRI of Cartilage and Osteochondral Injury.
MRI of Soft-tissue Tumors: A Systematic Approach.
Bone Tumors: A Practical Review.
XXXVI Brazilian Congress of Radiology; Salvador, Brazil.
The Brazilian Congress of Radiology. October 2007.

MRI of Muscle.
Cartilage and Osteochondral Disease.
Postgraduate Mini-Fellowship Program; San Francisco, California.
University of California, San Francisco School of Medicine. November 2007.

Imaging of Musculoskeletal Infection: Emphasis on MRI.
MRI of Soft-tissue Masses.
Case Presentations: Lower Extremities.
MRI of Muscle.
MRI of the Hip.
Aunt Minnie's MRI Cases: Test Your Skills.
Musculoskeletal MRI in the Desert; Palm Springs, California.
University of California, San Francisco School of Medicine. February 2008.

Metabolic.
Neoplasms.
Self-assessment Cases.
Radiology Resident Review Course; San Francisco, California.
University of California, San Francisco School of Medicine. March 2008.

Program Director.

MRI of the Hip: Update for 2008.

MRI of Muscle: A Practical Case-based Approach.

MRI of Cartilage and Osteochondral Injury.

MRI of Soft-tissue Masses: A Systematic Approach.

Advanced Orthopedic Imaging; San Francisco, California.

The International Institute for Continuing Medical Education. May 2008.

Program Director.

MRI of the Hip: Update for 2008.

MRI of Muscle: A Practical Case-based Approach.

MRI of Cartilage and Osteochondral Injury.

MRI of Soft-tissue Masses: A Systematic Approach.

Advanced Orthopedic Imaging; Aspen, Colorado.

The International Institute for Continuing Medical Education. August 2008.

Neoplasms.

Metabolic Bone Diseases.

Interesting Cases.

Radiology Resident Review Course; San Francisco, California.

University of California, San Francisco School of Medicine. March 2009.

Magnetic Resonance Imaging of Muscle.

Musculoskeletal Diseases: Course on Diagnostic Imaging and Interventional Techniques; Davos, Switzerland.

41st International Diagnostic Course in Davos. March 2009.

Program Director.

MRI of the Hip: Update for 2009.

MRI of Muscle: A New, Case-based Approach.

MRI of Soft-tissue Masses: A Systematic Approach.

Advanced Orthopedic Imaging; San Francisco, California.

The International Institute for Continuing Medical Education. May 2009.

Program Director.

MRI of the Hip: Update for 2009.

MRI of Muscle: A Practical, Case-based Approach.

Bone Tumors & Tumor-like Lesions: A Practical Review.

MRI of Cartilage and Osteochondral Injury.

MRI of Soft-tissue Tumors: Update 2009.

Advanced Orthopedic Imaging; Aspen, Colorado.

The International Institute for Continuing Medical Education. August 2009.

Shoulder MRI.

Hip MRI.

Knee MRI.

Muscle MRI.

Annual Meeting of Physician Assistants in Orthopedic Surgery; Scottsdale, AZ.

Physician Assistants in Orthopedic Surgery. October 2009.

Neoplasms.

Metabolic Bone Diseases.

Unknown Case Review-Musculoskeletal.

Radiology Resident Review Course; San Francisco, California.

University of California, San Francisco School of Medicine. March 2010.

Program Director.

MRI of the Hip: Update for 2010.

MRI of Muscle: How to "Pump it Up" in Your Practice.

MRI of Soft-tissue Masses: Advances in Diagnosis.

Advanced Orthopedic Imaging; San Francisco, California.

The International Institute for Continuing Medical Education. May 2010.

MRI of Sports-related Muscle Injuries.

Orthopedic Grand Rounds; Boston, MA.

New England Baptist Hospital. June 2010.

MRI of the Upper Extremity.

MRI of the Lower Extremity.

Annual Meeting of Physician Assistants in Orthopedic Surgery; Washington, DC.

Physician Assistants in Orthopedic Surgery. August 2010.

Neoplasms.

Metabolic Bone Diseases.

Unknown Case Review - Musculoskeletal.

Radiology Resident Review Course; San Francisco, California.

University of California, San Francisco School of Medicine. March 2011.

Neoplasms.

Metabolic Bone Diseases.

Unknown Case Review - Musculoskeletal.

Radiology Resident Review Course; San Francisco, California.

University of California, San Francisco School of Medicine. March 2012.

MRI of Muscle.

MRI of Soft Tissue Masses.

2012 Update in Advanced Imaging; Sonoma, CA.

University of California, Davis Health System. October 2012.

Osseous and Soft Tissue Tumors: Systematic Imaging Review.

MRI of the Hip.

MRI of the Knee: Practical Pearls & Pitfalls.

MRI of Muscles: A Case Based Approach.

MRI of the Upper Extremity: Highlights of the Shoulder, Elbow, and Wrist Easily Missed Diagnoses.

Case Based Unknowns.

Radiology Essentials: Neuroradiology and Musculoskeletal Radiology; Pebble Beach, California.

The International Institute for Continuing Medical Education. January 2013.

Neoplasms.

Metabolic Bone Diseases.

Unknown Case Review - Musculoskeletal.

Radiology Resident Review Course; San Francisco, CA.

University of California, San Francisco School of Medicine. February 2013.

Lecturer: Muscle Imaging.

Invited Panelist: IDKD 2013 Film Interpretation Competition.

Musculoskeletal Diseases; Davos, Switzerland.

45th International Diagnostic Course in Davos. April 2013.

The Significance of Sarcopenia: Myopenia and Musculoskeletal Imaging.

Department of Radiology Grand Rounds; San Diego, CA.

University of California, San Diego School of Medicine. September 2013.

Name the Place of Take the Case! Test Your Skills.

Resident Conference; San Diego, CA.

University of California, San Diego School of Medicine. September 2013.

Mission Impossible: Avoiding Easily Missed MSK Diagnoses.

San Diego, CA.

San Diego Radiological Society. September 2013.

Mission Impossible: Avoiding Easily Missed MSK Diagnoses.

2013 Update in Advanced Imaging; Sonoma, CA.

University of California, Davis Health System. October 2013.

MRI and CT of Muscle.

Grand Rounds - Physical Medicine and Rehabilitation Department; Sacramento, CA.

University of California, Davis School of Medicine. January 2014.

Mission Impossible? Avoiding Easily Missed Diagnoses.

MRI of Cartilage and Osteochondral Injury (Created a Self-Assessment Module (SAM) educational program for radiologist CME).

MRI of Muscle: The Top 10 List (Created a Self-Assessment Module (SAM) educational program for radiologist CME).

66th Annual Midwinter Radiology & Radiation Oncology Conference; Los Angeles, CA.

Los Angeles Radiological Society. February 2014.

Neoplasms.

Unknown Case Review - Musculoskeletal.

Radiology Resident Review Course; San Francisco, CA.

University of California, San Francisco School of Medicine. March 2014.

Wrist and Hand.

Muscle Imaging.

Musculoskeletal Diseases; Hong Kong.

4th IDKD Intensive Course in Hong Kong - Excellence in Teaching. June 2014.

Tumors and Tumor-like Conditions.

Unknown Case Review.

Radiology Resident Review Course; San Francisco, CA.

University of California, San Francisco School of Medicine. February 2015.

MRI of Muscle: A Case Based Review.

Grand Rounds - Department of Orthopaedic Surgery; Sacramento, CA.

University of California, Davis School of Medicine. April 2015.

MRI of Muscle: A Case-Based Review.

Advanced Imaging of Wrist and Hand.

Annual Radiology Research Day Invited Guest Speaker; Albuquerque, NM.

University of New Mexico, Health Sciences Center. May 2015.

Diagnostic Imaging of the Top 10 "Need to Know" Muscle Disorders.

Radiology Grand Rounds Invited Speaker

Advanced Imaging of Wrist and Hand.

Resident Noon Conference

Resident Review Warm-Up Before the Boards.

Senior Resident Conference; Winston-Salem, NC.

Wake Forest School of Medicine. May 2015.

Course Co-Chair, Moderator.

MRI of Meniscus: Pre-op and Post-op (SAM-approved).

Muscle Disorders: Case-based Review (SAM-approved).

2015 Update in Advanced Imaging; Sonoma, CA.

University of California, Davis Health System. October 2015.

MRI of the Lower Extremity: Case-based Challenges & Solutions.

Fall Course; Grapevine, TX.

Arthroscopy Association of North America. November 2015.

Tumors and Tumor-like Conditions.

Unknown Case Review.

Radiology Resident Review Course; San Francisco, CA.

University of California, San Francisco School of Medicine. March 2016.

Instructional Course: What You Need to Know: Marrow, Muscle, Metabolic.

American Roentgen Ray Society Annual Meeting; Los Angeles, CA.; April 2016.

Case-based Challenges in Orthopedic Imaging: Test Your Skills.

Grand Rounds - Department of Orthopaedic Surgery; Sacramento, CA.

University of California, Davis School of Medicine. May 2016.

Elbow, Wrist, and Hand.

Muscle.

Quiz Master for Film Panel.

Advanced Imaging of the Musculoskeletal System; New York, NY.

New York University. May 2016.

Case-based Challenges in Orthopaedic Imaging: Test Your Skills.

Grand Rounds - Department of Orthopaedic Surgery; Sacramento, CA.

University of California, Davis School of Medicine. May 2016.

Knee: MRI Case-based Review.

Pre- and Post-op Hip: MRI Case-based Review.

Wrist and Hand: MRI Case-based Review.

Muscle and Tendon: Case-based Review.

Neuro and Musculoskeletal Imaging; Kona, HI.

University of California, San Francisco School of Medicine. February 2017.

Tumors and Tumor-like Conditions.

Metabolic Bone Disease.

Radiology Resident Review Course; San Francisco, CA.

University of California, San Francisco School of Medicine. March 2017.

Wrist and Hand.

Musculoskeletal Diseases; Davos, Switzerland.

International Diagnostic Course in Davos. March 2017.

Interdepartmental Presentations

Musculoskeletal Radiology International Teleconference ("Intergalactic Conference Presentations")

12/16/2011: Turf Toe: Anatomy, Mechanism of Injury, MRI Diagnosis, and Treatment
2/10/2012: Osteoarcheology: The Differential Diagnosis of Osseous Deformity in a 20-Year-Old Woman Living 4000 Years Ago
2/10/2012: The MRI "Cartilage Black Line Sign": Newly Described Diagnostic Finding of Deep Fissures
3/16/2012: Cystercercosis' Characteristic Calcifications in Muscle
3/16/2012: MRI of Calf Implants: Composition, Cost, & Complications
6/15/2012: Erdheim-Chester Disease: A Non-Langerhans Cell Histiocytosis With Multiple Systemic Manifestations That Does Not Always Present With Classic Symmetric Sclerosis
6/22/2012: Glomangioma of the Long Finger: Reviewing the Differential Diagnosis of Distal Finger Soft-Tissue Tumors
2012: The Traumatic vs Degenerative Cartilage Lesion: Correlation with Arthroscopy
8/3/2012: Serous Atrophy of Bone Marrow: Easily Missed Marrow Derangement and Fractures
10/5/2012: Muscle Edema in the Deltoid: Association with Intramuscular Injection
10/5/2012: Patellar Maltracking: Proposed Association with the Accessory Plantaris and the Lateral Segmental Anomalous Origin of the Lateral Head of the Gastrocnemius
12/21/2012: Chronic Recurrent Multifocal Osteomyelitis: Successful Treatment with TNF-Inhibitor Adalimumab
1/4/2013: Charcot-Marie-Tooth Disease: The Most Commonly Inherited Peripheral Neuropathy has Characteristic MRI Findings
1/18/2013: Is that Femoral Physis Normal or Not? Physeal Widening in the Knee Due to Stress Injury in Adolescent Athlete
2/1/2013: Exophytic Ulcerated Soft-Tissue Mass in the Hindfoot: Leiomyoma vs DSFP
2/1/2013: Aggressive Bone Lesion with Bulky Soft-Tissue Mass: Osteosarcoma vs Ewing Sarcoma
2/8/2013: Rad-Path Correlation in the Lower Extremity: Myxofibrosarcoma and Undifferentiated Pleomorphic Sarcoma
4/26/2013: MR Arthrography: Inadvertent Iatrogenic Intraosseous Injection
5/17/2013: Meralgia Peresthetica: MRI of Lateral Femoral Cutaneous Nerve Entrapment Neuropathy
5/17/2013: Delayed Diagnosis of Wrist Mass (Whoops Lesion): Synovial Sarcoma vs Ganglion Cyst
6/7/2013: Hamstring Strain after ACL Reconstruction utilizing Hamstring Autograft: Robbing Peter to Pay Paul?
6/14/2013: The Displaced Axillary Flap Tear of the Inferior Glenoid Labrum at MRA
7/19/2013: Expansile Osteolytic Lesion with Pathological Fracture: Angiomatoid Fibrous Histiocytoma and Differential Diagnosis
7/19/2013: Delayed Diagnosis of the Paravertebral Mass: Name the Place or Take the Case
8/16/2013: Knee MRI Satisfaction of Search: Don't Forget the Distal MCL
9/6/2013: Failed Repair of Displaced Intra-osseous Meniscus Tear

9/6/2013: Septic Arthritis of the SI joint: Diagnosis by MRI
 9/20/2013: Polyostotic Periosteal Reaction in the Diaphyses: Thyroid Acropachy and Differential Diagnosis
 10/11/2013: Adamantinoma vs Osteofibrous Dysplasia: Similarities and Differences
 11/22/2013: The Thickened Extensor Retinaculum of the Wrist: Clinical Significance in 4th Extensor Compartment Impingement, Tenosynovitis, and Clinical Pseudotumor Development
 12/13/2013: New Concepts in Hip MRA: The Supraacetabular Fossa and Hip Joint Capsular Laxity
 1/10/2014: Toe Pseudotumor Workup and Follow-up: XR, MRI, DE-CT, Surgery, Pathology, and Rheumatology
 3/1/2014: Periarticular Calcification: Renal Osteodystrophy and Differential Diagnosis
 3/1/2014: Longitudinal Volar Thumb Ligament Injury: The Pechlaner Classification System
 5/23/2014: Sarcoma “Tumor Board” Conference: Infectious Tenosynovitis Masquerading as Neoplasm

Orthopedic Department Upper Extremity/Hand Service

8/2012: MRI of Soft Tissue Masses in the Hand and Wrist
 11/2012: MRI of the Shoulder: Systematic Approach for Orthopaedists
 11/12/2013: MRI of the Shoulder
 4/15/2014: MRI of Elbow
 2/23/2016: Advanced Imaging of Upper Extremity Soft-tissue Masses: Neoplastic or Not?
 5/17/2016: Advanced MRI of the Hand and Wrist
 8/23/2016: Wrist MRI-Arthroscopy Correlation

Additional Interdepartmental Presentations

8/2012: Unsolved Diagnostic Challenges that Could Impact Patients’ Lives
New Horizons in Biomedical Engineering Lecture Series, Advanced Musculoskeletal Imaging, Department of Radiology

3/11/2014: Histopathology-based Validation of Imaging Biomarkers of Trapeziometacarpal Osteoarthritis of the Thumb
Specialized Centers of Interdisciplinary Research (SCOR) on Sex Differences, NIH Office of Research on Women’s Health

12/9/14: Sarcopenia Update
Specialized Centers of Interdisciplinary Research (SCOR) on Sex Differences, NIH Office of Research on Women’s Health

2/2/15: Mining Myopenia Metrics for the Significance of Sarcopenia: Do Skeletal Muscle and Fat Measures of Body Composition on Routine CT Exams Help Predict Clinical Outcomes?
Dean’s Symposium

9/21/2015: Introduction to Musculoskeletal Imaging
Lecture for Second-Year Medical Students in Collaboration with Richard Marder, M.D.

10/14/15: Clinical Imaging of Sarcopenia
Leaders in Muscle Biology

2/2/2015: Probabilistic Atlas of Wrist and Hand Anatomy
Foster B (presenter), Boutin RD, Szabo RJ, et al.
Dean's Symposium, Poster Presentation

5/25/15: Boards Review
University of California, Davis Residents

2/9/16: Noon Lecture
Leaders in Integrative Musculoskeletal Biology

4/29/16: Boards Review
University of California, Davis Residents

5/10/16: Musculoskeletal Research Updates: Clinical and Translational
Radiology Research Symposium

6/16/16: MRI of the Shoulder Part I
Department of Anesthesiology and Pain Medicine

6/23/16: MRI of the Shoulder Part II
Department of Anesthesiology and Pain Medicine

9/22/2016: Introduction to Musculoskeletal Imaging
Lecturer for Second-Year Medical Students at the University of California, Davis

MEDIA PRESENTATIONS

Radio Interview. Boutin RD. *MRI of Early Cartilage Degeneration.*
Reporting the first use of a new technique for detecting early cartilage degeneration in humans
(dGEMRIC, delayed gadolinium-enhanced MRI of cartilage)
Boston, Massachusetts. May 5, 1997.

RSNA Video - Radiologic Study Program. Boutin RD. *MR Imaging of the Hip.*
Radiological Society of North America. Dec 2001.

Continuing Medical Education on Video. Boutin RD.
Metabolic.
Neoplasms.
Unknown Case Review.

University of California, San Francisco. 2013 and in subsequent years.

Website. Spitz DJ, **Boutin RD**, Newman J, Lenchik L, Steinbach LS. *MR Imaging of Complications in Paget Disease*.

http://radiology.bidmc.harvard.edu/prev/Headings/MedProfs/Research/paget_paper/home.html.
Spring 2013.

News from UC Davis Health System. **Boutin RD**, Chaudhari AJ. *New MRI Technique Illuminates the Wrist in Motion*. <http://www.ucdmc.ucdavis.edu/publish/news/newsroom/8559>.
December 31, 2013.

Reuters News Service Print, Online, and Video Interview. **Boutin RD**, Szabo R. *Active MRI Sheds Light on the Body in Motion*. Sacramento, California. March 17, 2014.
<http://www.reuters.com/video/2014/03/17/active-mri-sheds-light-on-the-body-in-mo?videoid=295133718>

(Widely covered in numerous countries and states by other media outlets such as Science Daily, Science & Technology, Business Standard, Futurity, Orthopedics Today, Topnews, NIH-NIBIB, Radiology Daily, San Francisco Chronicle, Meio Bit - Brazil, Medical News, Voice of America, Huffington Post, and MSN Science & Technology News; links are available upon request)

Davis Enterprise News Print and Online Article. **Boutin RD**, Szabo R, Chaudhari AJ. *UCD Pioneers Active MRI as Diagnostic Tool*. Davis, California. April 4, 2014.

Radio Interview on CBS Radio Network's The Osgood File with Charles Osgood. **Boutin RD**, Szabo R. *An MRI for the Body in Motion*. Nationwide syndication. May 8, 2014.

Voice of America. **Boutin RD**, Szabo R. Active MRI is first breakthrough mentioned in *Medical Advances, Breakthroughs Promise Improved Treatments*. December 23, 2014.

Radiologic Society of North America Annual Meeting Press Conference. **Boutin RD**, Szabo R, Netto A, Nakamura D, Bateni C, Cronan M, Chaudhari A. *Cracking the Case on "Knuckle Cracking": The Sonographic Evidence*. November 2015.

- Widely covered in November and December 2015 by newspapers, magazines, radio, TV, and online in numerous states and countries. (Examples of media covering the story: Time, Washington Post, Boston Globe Media, Headlines & Global News, National Institute of Health, the Science Update Podcast, health.com, MedPage Today, Medical Daily, Sacramento Bee, Davis Enterprise, Discovery News, Insight Ticker, The Utah People's Post, AskMen, Diagnostic Imaging, Daily Mail (UK), International Business Times (UK), The Telegraph (UK), Huffington Post (UK), Tech Times, Trinity News Daily, Cosmopolitan (UK), Ames Tribune, KOMO News, ScienceAlert, Albuquerque Journal, tampabay.com, Albany Daily Star, Jersey Tribune, Vocativ, WMBF, KSWO, WFMY, NewsWest9.com, KCBS, KXXV News Channel 25, WBRC Fox6 News, Press Herald, CBS News, philly.com, Doctors Lounge, telegraph.co.uk, U.S. News & World Report, HealthDay, Daily Star Gazette, Irish Independent, ChronicleDaily.com, examiner.com, mirror.co.uk, Medical Xpress, Military Technologies,

Metro, Yahoo News UK, Satellite PR News, Science Codex, STAT, SYS-CON Media, PR Newswire; links are available upon request.)

- Also featured by CNN in August 2016
<http://www.cnn.com/2016/08/18/health/knuckle-cracking-good-not-bad>

OTHER RESEARCH EXPERIENCE

1982-1983 The Effect of Beta-Blockers on Fitness Training in Middle-Aged Men.
Research Assistant, Stanford Center for Research in Disease Prevention.

Summer 1984 Management Options for Montana Wilderness.
Research Assistant, Montana Wilderness Association.
An original study submitted to Montana's U.S. Congressional Delegation.

Summer 1985 Demographics of Idaho's Bald Eagles.
Research Assistant, United States Forest Service.
Banding, observation, and behavioral analysis.

1984-1985 Stanford Weight Control Project: A 5-year Prospective Study of Weight Loss in
155 Middle-Aged Men by Exercise Versus Calorie Restriction.
Research Assistant, Stanford Center for Research in Disease Prevention.
*Measurements of basal metabolic rates, nutritional intake, and laboratory analysis of plasma lipids
and lipoproteins.*

Summer 1986 Migration of Wading Birds into Northwestern Australia from Asia.
Research Assistant, Royal Australian Ornithologists' Union.
*Radar study of the migration of 750,000 birds. Aerial and ground counts. Over fifty species
of birds were netted, banded, and measured.*

Summer 1987 Health and Nutrition of Mothers and Children in Masvingo Province
(Zimbabwe).
Research Assistant, Zimbabwe Ministry of Health.
*One thousand mothers and 635 children interviewed and examined. Public health recommendations
formulated.*

COMMUNITY SERVICE & MEMBERSHIPS

1987 - 1988 Davis Free Medical Clinic – volunteer
1985-89, 95 Special Olympics – volunteer

ATHLETICS

1983 - 1985 Stanford University Bicycle Team

1981, 1986	Stanford University Ski Team
1985, 1988	Davis Double Century (200 mile) Bicycle Race; Davis, CA
1988	Triathlon International de Nice; Nice, France
1989	Big Sur International Marathon; Big Sur, CA
1992	World's Toughest Triathlon; South Lake Tahoe, CA
1994	Cochiti Triathlon; Santa Fe, NM
1995	Imogene Pass Run; Ouray to Telluride, CO
1996, 1999	San Diego Half Marathon; San Diego, CA
2000	Otter Bar Kayaking Course; Forks of Salmon, CA
2003	Spring Sprint Triathlon; San Diego, CA
1985 - 2003	Mountaineering: Mount Rainier, Mount Kilimanjaro, Grand Teton, Matterhorn, Half Dome, Mount Whitney
1988, 2003	Escape from Alcatraz Triathlon; San Francisco, CA
2004 - 2006	Hyannis Triathlon; Craigville, MA
2011	The Death Ride; Markleeville, CA