

Department of Orthopaedics

New Staff

Catherine Mills, MD Sports Medicine



Catherine Mills, M.D. joined the Department of Orthopaedics in September and will be providing non-operative sports medicine care and interventional spine procedures at 330 Brookline Ave and BID-Needham. Dr. Mills is a graduate of Georgetown University and received her medical degree from the Icahn School of Medicine at Mount Sinai in New York City. She completed her residency in Physical Medicine & Rehabilitation at Spaulding Rehabilitation Hospital/Harvard Medical School in Boston prior to returning to the Icahn School of Medicine at Mount Sinai for her Sports Medicine and Interventional Spine Fellowship, where she cared for athletes of all ages and abilities. Her fellowship training included ultrasound-guided and fluoroscopic procedures.

During her fellowship she served as a team physician for a local high school, a division III college, and the USA Fencing/Parafencing Team. Throughout her training, she also provided medical coverage for multiple large-scale sporting events, including USA boxing, New York Road Runners, Boston Athletic Association, and Adaptive Sports New England events. She currently serves as a Medical Advisor to USA Fencing. Her clinical interests include adaptive sports medicine, running medicine, and women's sports medicine.

How to refer: Orthoappointments@bidmc.harvard.edu or 617-667-3940.

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New Staff

Monica Shoji, MD Orthopaedic Hand Surgeon



Monica Shoji, M.D., joined the Department of Orthopaedics in September and will be providing orthopaedic hand surgery consultations and procedures at 330 Brookline Ave, BIDMC, 725 Concord Ave in Cambridge, and Mt Auburn Hospital. She is a board-eligible orthopedic surgeon, with a subspecialty in hand and upper extremity surgery. She completed her residency at the Harvard Combined Orthopaedic Residency Program, where she was granted the William H. Thomas Award given to the resident that best exemplifies excellence in orthopaedics, devotion to patient care, collegiality, and teamwork. She then completed a fellowship in hand and microsurgery at the prestigious Curtis National Hand Center.

Her clinical and research interests include complex upper extremity trauma, vascularized bone reconstruction of extremity non-unions, peripheral nerve surgery, and small joint arthroscopy.

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Honors and Awards

Awards

Tamara Rozental, MD, hand surgeon, recently received the Andrew J. Weiland Medal for Outstanding Research in Hand Surgery from the American Society for Surgery of the Hand at its annual conference. The medal is awarded annually to a mid-career researcher who has contributed a body of research that advances the field and is dedicated to advancing patient care in the field of hand surgery.



National Leadership

Mary Bouxsein, PhD, has been serving as President of the American Society for Bone and Mineral Research, the leading scientific society for bone, mineral and musculoskeletal research worldwide. Her role culminates this month as she presides over the Annual Meeting, being held this year in Vancouver, Canada, with over 2000 attendees.

Tamara Rozental, MD has been elected as the President-Elect of the American Society for Surgery of the Hand, and for the next year will preparing the next year's membership, committee assignments, and Council positions.

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Honors and Awards

FDA Approval

Jack Wixted, MD, received FDA approval of his disposable, injection-molded external fixation system intended to provide stabilization of open and/or unstable fractures and where tissue injury precludes the use of other fracture treatments such as IM rodding or casting.

“One area of orthopedic innovation often ignored is the assessment and adaptation of alternative manufacturing process to make devices that are comparable to what we already have, but at a significantly lower cost of production. Jack has worked, in collaboration with BIDMC's Technology Ventures Office, on low-cost devices for some time and this initiative has been rewarded with the creation of a product line that will reduce the cost of a very expensive and wasteful area of trauma care. This work may also bring substantial licensing and royalty revenues to our department in the future to support our overall mission.

“The creation of low-cost devices both for US and low-resource setting use is one of the primary interests of our Translational Innovation Initiative and of our Global Health Program, and an important part of our research mission,” said Edward K. Rodriguez, MD, PhD, Chief, Carl J. Shapiro Department of Orthopaedics.

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Publications

Mary Bouxsein, PhD

[Small animal DXA instrument comparison and validation](#) Coulombe J, Maridas D, Chow J, **Bouxsein ML**. Bone, 2023, 116923, ISSN 8756-3282, doi.org/10.1016/j.bone.2023.116923.

[Validity of Evaluating Spinal Kinetics Without Participant-Specific Kinematics](#) Yan C, Lynch AC, Alemi MM, Banks JJ, **Bouxsein ML**, Anderson DE, Journal of Biomechanics, 2023, 111821, ISSN 0021-9290, doi.org/10.1016/j.jbiomech.2023.111821.

[Total Calcium Intake Is Associated With Trabecular Bone Density in Adolescent Girls With Type 1 Diabetes](#) Saunders RK, Kilroe KM, Joseph TV, Caksa S, **Bouxsein ML**, Misra M. and Mitchell DM (2023),. JBMR Plus e10813. <https://doi.org/10.1002/jbm4.10813>.

[Sex differences in muscle health in simulated micro-and partial-gravity environments in rats](#) Rosa-Caldwell M, Mortreux M, Wadhwa A, Kaiser UB, Sung DM, **Bouxsein ML**, Rutkove S. Sports Medicine and Health Science, 2023. doi.org/10.1016/j.smhs.2023.09.002.

[EMG Validation of a Subject-Specific Thoracolumbar Spine Musculoskeletal Model During Dynamic Activities in Older Adults](#). Alemi MM., Banks J, Lynch AC, Allaire BT, **Bouxsein ML**, Anderson, DE. Ann Biomed Eng 51, 2313–2322 (2023). doi.org/10.1007/s10439-023-03273-3

[Predicting ankle and knee sagittal kinematics and kinetics using an ankle-mounted inertial sensor](#) Long T, Outerleys J, Yeung T, Fernandez J, **Bouxsein ML**, Davis IS, Bredella MA, Besier TF. Computer Methods in Biomechanics and Biomedical Engineering, 30 Jul 2023. doi.org/10.1080/10255842.2023.2224912

Ara Nazarian, PhD

[97. Gene expression changes with short-and long-term cannabinoid treatments in a spinal fusion model](#). Fogel H, Yeung C, Yeritsyan ., Momenzadeh K, Kheir N, Abbasian M. and **Nazarian A.**, 2023. The Spine Journal, 23(9), p.S50. doi.org/10.1016/j.spinee.2023.06.149.

[Monitoring Scapular Kinematics through Wearable Magneto-Inertial Measurement Units: State of the Art and New Frontiers](#). Antonacci C, Longo UG, **Nazarian A**, Schena E, Carnevale A. Sensors. 2023; 23(15):6940. doi.org/10.3390/s23156940

[Propylene glycol and Kolliphor as solvents for systemic delivery of cannabinoids via intraperitoneal and subcutaneous routes in preclinical studies: a comparative technical note](#). Momenzadeh K., Yeritsya D, Kheir N, Nazarian R, **Nazarian A**. J Cannabis Res 5, 24 (2023). doi.org/10.1186/s42238-023-00194-9.

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Publications

Tamara Rozental, MD and Carl Harper, MD

[Trends in Orthopedic Management of Distal Radius Fractures Among Medicare Beneficiaries From 2019 to 2020: A Claims Analysis](#) He LD, Duggan JL, Lans J, **Harper CM, Rozental TD**. Journal of Hand Surgery Global Online. 2023 Jul 22. doi.org/10.1016/j.jhsg.2023.06.002

[Evaluating Male Patients' Understanding of Osteoporosis Evaluation and Treatment Following a Distal Radius Fracture](#). Russo M, Liu C, Liu Y, Mahar S, **Rozental TD, Harper CM**.. The Journal of Hand Surgery. 2023 Aug 7. doi.org/10.1016/j.jhsa.2023.07.006

[Do Surgeons Accurately Predict Level of Activity in Patients with Distal Radius Fractures?](#) **Harper CM, Model Z, Xiong G, Hegermiller K, Rozental TD**..The Journal of Hand Surgery. 2023 Aug 26. doi.org/10.1016/j.jhsa.2023.07.007

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Presentations

Chris Miller, M.D., and **Fernando Raduan, M.D.**, recently attended the 6th International Congress of Foot & Ankle Minimally Invasive Surgery held in Rio de Janeiro, Brazil. Working with international leaders in minimally invasive surgery (MIS), the conference is designed to teach the most recent advances and techniques in MIS foot and ankle surgery and expand our understanding of what is possible with a minimal incision approach. Dr. Miller was part of the scientific organizing committee for the conference, moderated several of the sessions, and presented BIDMC research on complex midfoot and hind foot osteotomies for deformity correction as well as a novel minimally invasive technique for repairing Achilles tendon ruptures and for 1st MTP fusion.

Following the conference in Rio, they travelled to Sao Paulo, Brazil to meet with Dr. Raduan's former surgical partners at the University of Sao Paulo to build a partnership between them and the BIDMC Orthopaedic community. While there, Drs. Miller and Raduan demonstrated modern MIS techniques, which the Brazilian surgeons are not using frequently.

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Events

2023-2024 Wilson C. Hayes Distinguished Musculoskeletal Health Lecture Series

Carl J. Shapiro Department of
Orthopaedic Surgery

Beth Israel Lahey Health 
Beth Israel Deaconess
Medical Center

 HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL



Nadeen Chahine, PhD
Associate Professor of Biomechanics
Columbia University
November 1, 2023



Brendan Harley, PhD
Robert W. Schafer Professor of Chemical &
Biomolecular Engineering, University of
Illinois Urbana-Champaign
February 7, 2024



Treena Arinze, PhD
Professor of Biomedical Engineering
Columbia University
April 3, 2024



Kurt Hankenson, DVM, MS, PhD
Henry Ruppenthal Family Professor of
Orthopaedic Surgery & Bioengineering,
University of Michigan
May 1, 2024

Lectures are at 8 am. Email Jessica Osorio josorio@bidmc.harvard.edu
for the Zoom link.

Beth Israel Deaconess
Medical Center



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