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The Oregon Journal of Orthopaedics

Volume XIII June 2024



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Letter from the Editors

We are delighted to introduce the thirteenth edition of the Oregon Journal of Orthopaedics and to feature the events and accomplishments of the residency programs at Oregon Health & Science University and Samaritan Health Services. The academic year of 2023-2024 has been marked by bustling clinical services, significant departmental expansion, and a rich variety of conferences and research presentations. Our commitment to ongoing surgical training and medical education remains unwavering, and promises continued growth and excellence in the field.

In this edition of the OJO, we extend a warm welcome to new faculty members in our Kaiser pediatric service, our physical medicine and rehabilitation service, and our family medicine sports medicine program while celebrating Dr. Yoo's career transition. We acknowledge progress toward making orthopaedics a more welcoming space for women. We highlight the trauma summit held in collaboration with Shock Trauma, we touch on the exciting results from some of our American Joint Replacement Registry (AJRR) studies, and we celebrate the ongoing research growth in Corvallis.

This year was notably marked by more time spent gathering as a department. The holiday party made a triumphant return at a new venue, and the junior residents could share coconut shrimp at Chart House amongst members of the department for the first time in their residency. Looking ahead, we hope to continue this strengthened camaraderie, fostering even greater collaboration and memorable experiences in the coming years.

Our gratitude to the editorial team, including Dr. Kark, as well as Dr. Gundle and Dr. Friess for their tireless leadership of the residency and the department. Congratulations to the graduating class of 2024!

Faculty Editor: Jonathan Kark, MD

Senior Editors: Sarah Rogers, MD MPH; Katherine Velicki, MD

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Samaritan Health Services Editor: Robert Wood, DO

Medical Student Editors: Faris Fazal; Colin Lipps; Andrew Sauer

Editors Emeriti: Kate Hutchison, MD; Philip Lam, MD, MCR

Letter from the OHSU Interim Chair

OHSU Department of Orthopaedic Surgery & Rehabilitation



High quality orthopaedic patient care is still delivered to one person at a time. My desire to do that is why I get up each day and come to work. At the core, I suspect most of us went into medicine years ago because we found that inspiring. Remembering that “why” on a daily basis and finding the inspiration in treating each individual patient is a guiding force within the OHSU Department of Orthopaedics & Rehabilitation. There are so many other things that OHSU does well, but they are all focused on delivering high quality orthopaedic care, one person at a time.

This year we had our first post-pandemic faculty strategic planning retreat and focused on how we can better deliver high quality care, one person at a time. We know that education, sharing knowledge, and teaching brings others to our “why.” As we admit a fantastic new class of interns and graduate a stellar class of PGY5’s I know that there are many more patients that will benefit. The Orthopaedic Surgery Interest Group introduces new medical students to the wide possibilities of musculoskeletal care, and also facilitates multiple Orthopaedic Scholarly projects. Many of these are presented nationally and at OHSU’s annual research day.

We know that our research and clinical trials over the long term are making the “why” better. OHSU has notably become a leader in several international clinical trials examining sarcoma surveillance, distal femur fractures and antibiotic therapies. The Faculty, Residents, and Students publish a growing number of projects you will see highlighted in this issue of OJO. The Beals Orthopaedic Resource Center facilitates each of these projects and has become a core facet of our Department.

As OHSU Health expands its reach across the state of Oregon, we are understanding that this allows us to do more of our “why” and bring high quality care to more patients. Partnerships with Hillsboro Medical Center, Adventist Health Portland, and Columbia Memorial Hospital have been challenging, but we continue to find ways to improve the health of Oregonians. Other future partnerships carry the same promise, and we know that to provide benefit we have to work with the teams already in place.

Internally, OHSU changed its financial structure and this enabled us to support faculty, mid-level providers, and residents as they navigate life. We have new policies for parental leave, short and longer term FMLA, and building and weaning a surgical practice. While I never anticipated spending so much time on building policies, I’ve learned that supporting people allows them to show up daily and deliver their “why.” I’ve also learned that fostering lasting, meaningful relationships with colleagues gives an opportunity to share my “why”. Perhaps nobody was better at this than Dr Ted Vigeland. I am saddened to report his recent passing, but his memorial service was a wonderful reminder of what a lifetime of friendship and connection can bring to the world.

Reflecting on all these parts, it is clear that OHSU Orthopaedics is in a really great place. We have the opportunity to do inspiring things and appreciate your piece of that long story. I encourage you to reflect on your connection to OHSU Orthopaedics. If you wish to continue that story, please consider a donation back to OHSU Orthopaedics. Philanthropy benefits both the giver and recipient, and at the end of that donation, delivers more high-quality orthopaedic care, one person at a time.

Darin Friess, MD, MPH
Interim Chair, OHSU
Dept. of Orthopaedics & Rehabilitation

Letter from the OHSU Program Director



Thank you for reading this edition of the Oregon Journal of Orthopaedics, where we highlight but a few of the many accomplishments big and small in this past year. Each day I am proud of the hardworking residents, faculty, and the entire team that together accomplish so much for patient care, education, and research.

Allow me to toast our graduating chief residents a bit. Drs. Naomi Turner, Michelle Lawson, Danielle Peterson, Frank Rodgers and Laura Sokil make up a particularly impactful class. They are the last group of residents to have arrived in the Beforetimes, and to suddenly have their clinical lives bounced around by all the pandemic era adaptations – which certainly have lingering effects to this day.

Additional challenges were put in their path. Whether in spite of or due to these shifting sands, all five of them achieved more than we could ever hope for in a group of residents.

Individually and as a group, the Class of 2024 are clinically excellent; each could go into practice as independent orthopaedic surgeons immediately upon graduation. Instead, though, they are spreading out to elite fellowship programs across the nation in Adult Reconstruction, Foot & Ankle, and Trauma. This class has conducted high-level grant-funded research including clinical trials. They have instituted practice changing collaborative quality improvement projects at OHSU that may well influence the care of osteoporotic fractures across the country. I am very excited to hear all their research presented at the Beals Memorial Seminar in just a few weeks. While still in residency, their class has included members serving on national committees that help govern our specialty. Importantly and impressively they have also become mothers and fathers, of human children as well as dogs (and even cats). This class has likewise managed to soak up the joys of living in the Pacific Northwest, from long bike rides, camping and hiking to the restaurant and sports scene. Passions for baking, volleyball, and figure-skating were brought with them and not lost despite all the time demands of residency training.

This Class of 2024 has also pushed me and the program to improve. They have been role models that I know the junior residents have been watching well. Each of them has taught me enduring lessons I will remember many years from now, and which accompany great memories of times together in the OR, the workroom, or wandering through the hospitals. While they will be missed, I am so happy to graduate them into the community of orthopaedic surgeons.

I could go on about this class, and really all our residents. In turn, I also have unending respect for the faculty who committedly train them, show up to extra meetings, help with program administration, and provide so many opportunities for learning about musculoskeletal care. It is a privilege to serve as program director of the orthopaedic surgery residency program at OHSU. As you read this issue of the OJO, I'm confident you will see many, but still just a taste, of the reasons why.

Yours,

Kenneth R. Gundle, MD, FAOA
Associate Professor, Orthopaedic Surgery Residency Program Director
Oregon Health & Science University, Portland VA Medical Center



Good Samaritan Regional Medical Center Orthopedic Surgery Residency Program Letter from the Program Director



Every year in Corvallis, we have book club. It's a tradition started by Dr. Luis Vela when he was the program director. Dr. Vela always liked some of the more psychological aspects of education, and his book choices were often inspirational or taught life lessons. Since he left Corvallis, book club has become my responsibility. Last year, at a residents' request, we read *Endurance* by Alfred Lansing, which is an amazing story of Shackleton's failed attempt to cross Antarctica. I read the book prior to taking my son to Antarctica, and I highly recommend it. What those men did was amazing.

This year, we are reading *Grit: The Power of Passion and Perseverance* by Angela Duckworth. I've seen her TED talk, which is just over 6 minutes and worth your time.

The book is a much deeper dive and discusses how to build grit in your children and how to make yourself grittier. I personally struggle with nonfiction reading. It took almost 50% of the book until I reached that point of not wanting to put it down. I can't think of any other nonfiction book that had any section I didn't want to put down.

Before you think I'm presenting Jacque's Book Club, not to be confused with Oprah's Book Club, what I want to talk about is grit. I talked about wellness and burn out a few years ago. I suppose grit is a follow up. So, what is grit? The Oxford dictionary says, "courage and resolve; strength of character," with synonyms including pluck, mettle, backbone, toughness, determination, doggedness, and tenacity. They sound like words people try to include in their personal statement. I used the phrase "Midwest work ethic" in mine. Psychology Today says, "Grit is the passionate pursuit of long-term goals despite obstacles and setbacks." That's like a definition of residency.

Why do I care about grit? Why should you care about grit? Type grit and orthopaedic surgery into your preferred search engine, and you'll see why. We orthopods are a gritty bunch. Those who aren't so gritty are often the ones who don't finish residency or are miserable being an orthopaedic surgeon. The grittier we are, the higher our personal accomplishments and the better our psychological well-being. I also read that the longer we've been in practice, the higher our grit scores. Grit is a trait you can nurture and develop. You can develop grit by working at things that are just a bit too hard for you. Rather than continuing with what you can already do, you choose that thing that's just out of reach and work toward mastery. The kicker is that it has to be something you also enjoy. If you asked me to go out and work toward running even a 13-minute mile, that's just not going to happen. I HATE running. If you asked me to learn a new technique for reducing smashed distal tibia fractures, I'm in. Not only do you work toward the goal that is just out of reach, but you also search for ways you can improve. My specialty-specific example is to not say it fell apart because the patient walked on it, but to ask myself what I could have done so it didn't fall apart when the patient walked on it. Gritty people view failures as opportunities to learn and improve. How can you be amazing and gritty like me? Ask for an ABOS KSB eval on the case that went poorly, not the one that was slick.

Those who know me know that my long stories eventually circle back around to the beginning. Shackleton and his men spent an Antarctic winter on their ship and the ice. They watched their ship get crushed by the ice floe. They all journeyed via small boats north. Shackleton and a small crew took a lifeboat 800 miles through the place where the Antarctic, Pacific, and Atlantic oceans mix like a washing machine. The Drake Passage is no joke. Shackleton and two others then hiked across mountains and glaciers to a whaling station. After all that, they didn't stop until they made it back to Elephant Island in the South Shetland Islands archipelago and rescued their shipmates. Everyone survived. Grit.

Jacqueline Krumrey, MD
Program Director, Samaritan Health Services Orthopaedic Surgery Residency

Residency Faculty

OHSU Residency Core Faculty

Adult Reconstruction



Thomas Huff, MD
Fellowship Director



Ryland Kagan, MD



Kathryn Schabel, MD
Director Comprehensive
Joint Replacement,
Section Head



Lara Atwater, MD



James Meeker, MD
Section Head

Foot & Ankle

Orthopaedic Oncology



Yee-Cheen Doung, MD
Vice Chair; Director of
Clinical Operations



Kenneth Gundle, MD
Residency Program
Director



James Hayden, MD, PhD
Section Head



Duncan Ramsey, MD, MPH

Pediatrics



Matthew Halsey, MD
Section Head

Podiatry



**Trish Ann Marie
Otto, DPM**

Research / Basic Science



Brian Johnstone, PhD
Section Head

Residency Faculty

OHSU Residency Core Faculty

Physical Medicine & Rehabilitation



Hans Carlson, MD
Section Head



Nels Carlson, MD
Assistant Dean of
Continuing Professional
Development



Jesse Day, MD

Upper Extremity



Adam Mirarchi, MD
Fellowship Director



Omar Nazir, MD
Director of Wellness
& Health;
Section Head



**Robert Orfaly, MD,
FRCS(C)**
Quality Medical
Director

Spine



Jonathan Kark, MD



Clifford Lin, MD
Fellowship Director,
Section Head



Travis Philipp, MD



Jung Yoo, MD
Director of Spine
Center

Residency Faculty

OHSU Residency Core Faculty

Sports Medicine (Surgical)



Jacqueline Brady, MD
Associate Residency
Program Director



Dennis Crawford, MD, PhD



Andrea Herzka, MD

Trauma



Graham Dekeyser, MD



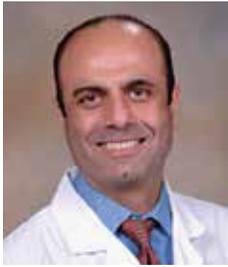
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Interim Chair



Zachary Working, MD
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Lucas Anissian, MD, PhD



Mark Berkson, MD
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Kenneth Gundle, MD



Ryan Wallenberg, MD

Shriners Hospital for Children Residency Core Faculty



Jeremy Bauer, MD
Director of Education



Robert Bernstein, MD
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Kaiser Permanente Pediatrics Residency Core Faculty



Stephen Renwick, MD



Natalie Zusman, MD

Orthopedic + Fracture Specialists Residency Core Faculty



Elizabeth Lieberman,
MD



Brett Andres, MD

Residency Faculty

Samaritan Health Services Orthopedic Surgery Core Faculty



Erin Campaigniac, MD



Wael Ghacham, MD



Lauren Hansen, MD



Jacqueline Krumrey, MD
Program Director



Jason Lin, MD



Christopher McCrum,
MD



Cay Mierisch, MD



Christopher Noonan,
MD



Donald Pennington, DO



Nicholas Tedesco, MD

OHSU Program Fellowships 2023-2024

Sports Medicine Primary Care



Connor Farrell, DO



Denice Praxidio, DO



Connor Pihl, MD

Hand



Peter Tsai, MD

Spine



Peter Du, MD



Gurmit Singh, MD



Gregory Versteeg, MD

Adult Reconstruction

Advancements in Research: Increases in Publications and Grant Funded Projects at Samaritan Health Services Residency

By Robert S. Wood, DO PGY3

Research Output Increase

Since 2018, the Samaritan Health Services Residency has experienced a substantial increase in research productivity, doubling the average number of PubMed-indexed articles published each year. This improvement in research output is a clear indication of the residents' dedication to contributing valuable insights to the field of orthopedic surgery and staying current with the latest advancements.

Grant Success

The program has had recent success in securing grants to fund various projects over the past two years. One standout achievement is the Pediatric Orthopaedic Society of North America's Quality, Safety, and Value Initiative grant. This grant is for a study titled "The Utilization of Ultrasound to Diagnose Pediatric Elbow Fractures: Evaluation of Cost Savings, Radiation Exposure, and Patient Satisfaction." This randomized controlled trial seeks to assess the feasibility and practical benefits of using ultrasound over X-rays for diagnosing pediatric elbow fractures, aiming for real-world cost savings and increased patient satisfaction.

Another grant secured by the program is the Erkkila grant, supporting a research project titled "The Effect of Proximal Pole Scaphoid Excision on Carpal Kinematics." This biomechanical study attempts to understand the practical implications of wrist biomechanics following the excision of the proximal pole of the scaphoid, offering insights into changes that occur in wrist kinematics after orthopedic procedures.

Ongoing Research Efforts

The commitment to research continues with ongoing projects in pediatric orthopedics. The Supracondylar Pinning Antibiotic Stewardship (SPAS) Trial is a multicenter randomized controlled trial actively investigating the role of prophylactic antibiotics in the closed reduction and percutaneous fixation of pediatric supracondylar humerus fractures. The study is still in data collection, but early results have shown no significant increase in postoperative infection rates in patients undergoing CRPP without preoperative antibiotics. Residents are also engaged in a prospective study examining the utility of intraoperative hematoma blocks for pediatric femur fractures to reduce the need for postoperative opiates in the pediatric trauma population. Another randomized controlled trial at Good Samaritan Regional Medical Center is exploring the use of a novel intraoperative irrigant solution to reduce surgical site infection rates in lower extremity trauma patients. A recent retrospective study examining the use of this phosphate buffer solution for intraoperative irrigation revealed a significant reduction in postoperative surgical site infections. The RCT will seek to add to this evidence and inform future postoperative infection mitigation strategies.

The residency program is also conducting retrospective projects in a variety of subspecialties. One example is an investigation into the use of preoperative cryoneurolysis to reduce opioid consumption in patients undergoing total knee arthroplasty. Patients who have undergone this procedure have demonstrated lower average Visual Analogue Scale (VAS) scores while hospitalized and

have required fewer postoperative oral opiate medications after total knee arthroplasty. Another ongoing retrospective review has examined the differences in early postoperative mobility in hip fracture patients based on the type of preoperative nerve block received. Patients who have received periscapular nerve group block have demonstrated earlier postoperative mobilization when compared to those in the femoral nerve block or fascia iliaca block group.

Future Outlook

The Samaritan Health Services Residency continues to emphasize improving its research output in the future. The program is dedicated to improving resident-driven orthopedic research. The steady increase in research output over the past five years stands as a testament to the program's commitment to excellence and its desire to play a role in shaping the future of orthopedic surgery.

Making History: Majority Women Residents at OHSU

By Sarah Rogers, MD and Katherine Velicki, MD

Oregon Health and Science University (OHSU) having over 50% of its orthopaedic surgery residents be women is a significant milestone in the field. The underrepresentation of women in orthopaedic surgery has long been a concern. Despite advancements in gender equality in medicine overall, orthopaedic surgery has lagged behind, with women comprising only a small percentage (6%) of practicing orthopaedic surgeons. The gender diversity of OHSU's residency reflects a positive shift towards emphasizing greater gender diversity within the specialty. OHSU's commitment to fostering an inclusive environment and actively recruiting and supporting female residents is commendable and serves as a beacon of progress within the orthopaedic surgery community.

We sat down with Dr. Andrea Herzka and Dr. Kathryn Schabel to hear their perspectives.

How has the gender composition of the department changed over the years?

At the beginning of her attending career, Dr. Herzka observed that OHSU's residency program (3 residents per year) usually accepted about 1 woman over the course of several application cycles. That number steadily increased over her career. She observed that until recent years, OHSU generally mirrored the gender composition of the orthopaedic applicant pool. At national hip preservation conferences two decades ago, Dr. Herzka remembers feeling like an "outlier" as the only female orthopaedic surgeon in a room of 200 suits. Now, female surgeons at these meetings are "very normal". Dr. Herzka became the first woman attending orthopaedic surgeon at OHSU in 2005 and was followed by Dr. Schabel and Dr. Doung.

Dr. Schabel noted that when she and Dr. Doung joined the department, the number of women faculty tripled (from one to three). At that time, the OHSU residency, like many residencies, had woman resident

"once in a while", so seeing a sustained group of 50% women residents marks a big change.

What has the department done well to achieve this milestone?

According to Dr. Herzka, one of the key reasons why OHSU has achieved a gender diverse residency program is that diversity, equity, and inclusion are "built into the program director philosophy". While OHSU leadership has always been interested in attracting diverse candidates, Dr. Herzka noticed an improvement in the selection process over many years. Larger class sizes (now 5 residents per class) have provided more space for unique individuals to find their place and thrive within the institution.

Dr. Schabel also highlighted the sustained commitment from leadership, starting with Dr. Jung Yoo and continuing with Dr. Darin Friess (Interim Chair), Dr. Kenneth Gundle (Program Director), and Dr. Jacqueline Brady (Associate Program Director), to hiring and supporting women. She notes that there has been a strong correlation between the number of women residents and not only the number of women in faculty, but also with the number of leadership roles held by the women on faculty. She also attributes our ongoing success to more recent wins as well, including having a codified, gender-inclusive family leave policy and working to utilize physician extenders to ensure that the hours spent in residency are focused on education opportunities.

Where can the department continue to improve?

Although the department has achieved strong gender diversity, Dr. Herzka noted that we still have room for improvement particularly in racial and socioeconomic diversity. She emphasized the importance of striving to welcome people with "all different life experiences". As Portland becomes more diverse as a city, she hopes that OHSU will

grow and bring in more fresh perspectives in future residency and faculty hires.

Dr. Schabel echoed Dr. Herzka's hope that we will also set our sights on improving our representation of other underrepresented minorities. With regard to continuing to support

gender diversity, she anticipates we will continue to refine our family leave policies to ensure we continue to strike the balance between supporting residents who want to grow their families while continuing to provide appropriately challenging educational opportunities to help our residents reach their potential.

Ruth Jackson Orthopaedic Society Panel at the American Academy of Orthopaedic Surgeon Annual Meeting

Dr. Gundle joined the "They for She" panel at the American Academy of Orthopaedic Surgeons Annual Meeting in 2024. Panelists included Lorraine A.T. Boakye, MD, Assistant Professor of Orthopaedic Surgery at the University of Pennsylvania and AAOS Diversity Advisory Board Member; Charles Nelson, MD, Chief of the Joint Replacement Service at the University

I had the great honor to speak at a Ruth Jackson Orthopaedic Surgery Society (RJOS) panel as part of their Annual Meeting in 2024. The RJOS met on the first day of the AAOS Annual Meeting week in San Francisco – my first time back to that great city in several years.

My invitation related to our exceptional and hard-earned success in recruiting and retaining women to our orthopaedic surgery residency program. In the 2023-2024 academic year (and including into next academic year), we have the rare if not unique distinction of being a majority-women residency program. For a field hovering around 6% women nationwide, which I very much do not think is a good thing, having achieved essentially gender parity in our program is worth celebrating.

Of course, and as I mentioned at the absolute beginning of my spoken remarks on the panel, I personally take extremely little if any credit for this accomplishment. I was happy instead to call out Dr. Andrea Herzka and all our women faculty in turn for joining our department and their hard work in making OHSU a place that is supportive of women in our field. Their presence as mentors, and as a group of tremendously successful orthopaedic surgeons, has incalculably improved and expanded our Department. I advised other residency programs looking to recruit women residents to be a voice in faculty recruitment – and may have mentioned that I know wonderful

residents and future leaders who will be graduating from OHSU in the years to come.

My second point was that a key to the recruitment and retention of women orthopaedic surgeons is to be intentional about it. This is not going to happen by accident. Being inclusive is not necessarily easy. It requires time, effort, and being open to criticism and willing to act on it. And when a program is lucky enough to successfully recruit a few women into their program, then it is imperative to provide support and respect to ensuring their success. Ultimately a program's current residents and graduates are the best ambassadors for a residency program.

My final message was an obvious one: recruiting women into orthopaedic surgery is not an altruistic act. It isn't something that we should do – it is something we must do as residency programs and a specialty. One of my roles as program director is to recruit the best possible talent to OHSU for training as orthopaedic surgeons. Across the country, more than 50% of medical students are women. I absolutely refuse to cede 50% or even 1% of that talent pool from which to recruit our field's future. If we do not find ways to recruit and retain the best and brightest from the entire cohort of medical students of all backgrounds and experiences, then ultimately it is our field that will lose out. I am not willing to do so, and am glad to see many other programs doing the same.

It was wonderful to be part of the RJOS meeting and to become a member of the organization. As will surprise few, I was glad to have the opportunity to share a bit about our success at OHSU and some of my opinions.

On to the Next Adventure for Dr. Jung Yoo

By Andrew Sauer



Jung Yoo, MD, Chair Emeritus, professor of Orthopaedics and Rehabilitation, OHSU School of Medicine

Dr. Jung Yoo has always had an unwavering determination. He says that he was the kind of person who would make up his mind and stick with it. At the age of six, he knew he wanted to be a physician, and his journey thus far has been nothing short of extraordinary. Dr. Yoo attended medical school at the University of Chicago, completed his

orthopedic residency at Case Western Reserve University, and later completed a spine fellowship in Syracuse, New York. But even earlier, he showed a natural aptitude for research when he investigated blood mixing in the amphibian three-chamber heart. This biological design seemed fundamentally flawed, but he had the insight to ask questions and the creativity to approach problems in a way to answer them. When I asked why frog hearts, he said he did not have any particular reason other than “There are thousands, even millions of questions just like that. You just need to wonder ‘why.’” For those who know Dr. Yoo best, he is always curious and asking these questions—and not just in medicine. He passionately studies philosophy, history, theology, economics, and literature, and every conversation with him leaves you with something more to ponder.

OHSU has been extremely lucky to have Dr. Yoo as a practicing physician. Since joining in 2004, he has been a pillar of the Department of Orthopedics and the larger community. Under his tenure, he has helped expand the Orthopaedic Surgery Residency program, teach numerous physicians, and push our understanding of medicine through cutting-edge research. To him, the most important thing about OHSU is that we are still “fulfilling the mission of being an academic department. We are taking care

of patients, educating future medical students and surgeons, and doing investigative work to push the frontier of knowledge.”

This year, we celebrate Dr. Yoo’s retirement from surgery after a long and distinguished career. But he wants to be clear that he will not be slowing down anytime soon. If anything, he finds that he now has more time to see patients—to listen to them, to care for them, to help them make healthcare decisions, and to get them back on their feet with the help of other capable physicians. While his role is changing, it is apparent to anyone who listens that he will continue to give one hundred percent to improve patient care—whether that is in the clinic or his research.

As for the next generation, there is a lot to live up to, but Dr. Yoo says he does not have any concerns. “I think the people going into medicine are just as smart as they used to be, and their dedication is the same too.” From his perspective, if you embrace the opportunities that are given in life, cultivate and share your happiness with others, and always pursue something greater without placing too much emphasis on success or failure you will be successful. “You can never guarantee the results,” but you will not know until you try.

There are plenty of challenges that lie ahead, and not all of these can be solved with research. Dr. Yoo mentioned that the healthcare system today is opaque and constructed in a way that makes timely access an ongoing challenge. This challenge is becoming increasingly obvious to both patients and providers, and any solution will require a new generation of physician activists to proactively address these challenges.

Looking toward the future, Dr. Yoo says he will take this next phase of his career one or two years at a time—an approach he jokingly admits could have served him well 30 years ago. While his presence will be missed in the OR, he will undoubtedly continue to shape the practice of medicine and touch the lives of many patients through his continued commitment to his craft. There is no doubt that his wit and charm will manifest in his ongoing work, and he will continue to lead by setting a high bar for himself—inviting other faculty members, residents, and students to join him and do the same.

Given Dr. Yoo's proclivity for weaving philosophy, literature, and medicine together, it is appropriate

to leave you with his final comments of our conversation. Dr. Yoo paraphrased the words of Robert Frost, leaving us with a simple yet profound mantra: "Pick a road and stick with it. It may be a road less traveled, but it's not lonely." These words echo the resilience of a physician who finds solace in the company of those who walk alongside him, and he invites you to join him. Pick a path, dedicate yourself wholeheartedly, and enjoy the journey with those around you.

Thank you, Dr. Yoo, for your commitment to your patients, to medicine, and to all those around you. While you will be missed in the OR, you will continue to lead us, teach us, and inspire us to serve our patients in every aspect of medicine.

OHSU 2024 AJRR Research Update

By: Colin Lipps, Mackenzie Kelly, MD, Faris Fazal

The American Joint Replacement Registry (AJRR) contains the world's largest registry of procedural data from hip and knee replacement surgery outcomes. To date, the AJRR has compiled data from over 3 million procedures across the United States in both academic and private practice settings. Access to the AJRR facilitates the development of national benchmarks in adult reconstruction, utilization of a standardized system for reporting data, and meeting one of The Joint Commission's advanced certification requirements for total hip and knee replacement centers. Members of Oregon Health & Science University have utilized the AJRR to pursue evidence-based research that helps guide physicians to improve surgical outcomes and empowers patients to make informed decisions about their healthcare.

Here is a sample of recent and ongoing projects, as well as highlights from orthopaedic faculty and resident physicians:

Cemented Femoral Fixation in Total Hip Arthroplasty Reduces the Risk of Periprosthetic Femur Fracture in Patients 65 Years and Older: An Analysis from the American Joint Replacement Registry

This study aimed to compare the risk of periprosthetic femur fracture, which can be a devastating complication in arthroplasty, in cemented versus cementless total hip arthroplasty (THA) in patients aged ≥ 65 . The authors queried the AJRR from 2012 to 2020 and identified a majority of cementless ($n=266,040$; 95.3%) compared to cemented ($n=13,012$; 4.7%) femoral fixation.

Overall, cementless stems were associated with a significantly increased risk of periprosthetic femur fracture across all timepoints in this population. Age ≥ 80 years and female sex were also associated with significantly increased risk of periprosthetic femur fracture.

The authors concluded that despite the current predominance of cementless primary THAs across the United States, surgeons should

strongly consider using cemented fixation to reduce the risk of periprosthetic femur fracture in adults aged ≥ 65 . This is especially important for female patients aged ≥ 80 years.

In considering why cementless femoral fixation is predominant in primary THAs, several factors are likely to contribute. First, many residents do not currently receive training on cemented THAs during residency, which means they may feel uncomfortable with this technique in practice. Second, if a complication does occur, revision of cemented components is a significantly greater challenge than revision of cementless components. Third, concern for bone cement implantation syndrome, which is a rare but severe condition characterized by hypoxia and hypotension, may create caution in adapting to a cemented primary THA practice.

Femoral Component Design Is Associated with the Risk of Periprosthetic Femur Fracture After Cementless THA in Patients 65 Years or Older

This study investigated whether the design of the femoral stem component in a cementless THA was associated with greater risk of periprosthetic femur fracture. The authors queried the AJRR from 2012 to 2020 and identified 232,972 primary cementless THAs in patients aged ≥ 65 years for analysis. Each femoral stem component used in the procedures was then individually categorized via the Kheir and Chen classification as single-wedge, double-wedge, or gradual taper/metadiaphyseal-filling. A Cox proportional hazard regression was used for analysis, which controlled for age, sex, geographic region, osteoporosis or osteopenia diagnosis, hospital volume, and the competing risk of death.

This study demonstrated that single-wedge and double-wedge femoral stem components were associated with a significantly greater risk of periprosthetic femur fracture when compared to gradual taper/metadiaphyseal-filling stems. Additionally, collarless stems demonstrated a significantly increased risk of periprosthetic fracture compared with collared stems.

Although cemented primary THA is the recommended fixation strategy in patients aged ≥ 65 , the prevalence of cementless fixation predominates. If choosing cementless primary THA in this population, surgeons should consider using collared and gradual taper/metadiaphyseal-filling femoral stem components given they have a lower risk of periprosthetic femur fracture.

Increased Revision Risk with Mobile Bearings in Total Knee Arthroplasty: An Analysis of the American Joint Replacement Registry

This study aimed to investigate the risk of revision arthroplasty in mobile-bearing versus fixed-bearing TKA patients aged ≥ 65 . The authors queried the AJRR from 2012 to 2019 and identified a predominance of fixed-bearing ($n=452,199$; 93.2%) compared to mobile-bearing ($n=32,825$; 6.8%) TKAs. A Cox proportional hazard regression was used for analysis, which controlled for sex, age, and competing risk of mortality. Reason for revision was categorized as all-cause revision and revision for infection.

The results demonstrated that mobile-bearing TKAs had a significantly increased risk for all-cause revision across all timepoints. However, there was not an increased risk for revision

specifically for infection. Further, these findings held true when mobile-bearing implants were analyzed specifically within the medical device company that manufactures the majority of these designs (DePuy Synthes).

The authors concluded that surgeons should consider the use of fixed bearing implants in primary TKAs, although the reason behind aseptically revision rate in mobile-bearing components remains unclear. Potential causes may include patient factors, component design, or surgical technique. Furthermore, it is important to note that despite the increased risk of all-cause revision in mobile-bearing TKAs, survivorship across both implants remained excellent ($>99\%$ survival after 8 years).

Upcoming Projects:

Two exciting new projects were recently established after publication of the findings discussed above. The first study is comparing outcomes data amongst the gradual taper/metadiaphyseal-filling collared stem versus cemented stems. The goal is to identify whether the top performing cementless stem is superior to the top-performing cemented THA technique. The second study is evaluating whether there is a superior stem design amongst cemented THAs. This study will similarly sub-classify each femoral stem component based on its design, and then identify differences in outcomes data such as risk of periprosthetic femur fracture.



From left to right: Drs. Mackenzie Kelly, Ronald Navarro, John Andrawis, Ryland Kagan, and Mita De from the ISAR in Dublin, Ireland.

Dr. Paul Duwelius, MD

Dr. Duwelius recently retired from clinical practice after 38 years in Adult Reconstruction. His past and present research has extensively focused on outcomes-based data in hip and knee arthroplasty. He currently serves on the Steering Committee of the AJRR, where his responsibilities include identifying specific surgical outcome measures to collect and helping engage new hospital systems in the AJRR nationwide. He also helps teach orthopaedic surgery residents at OHSU, and is active in the American Academy of Orthopedic Surgeons, The Hip Society, and The Adult Hip and Knee Society (AAHKS). He is the Director of Orthopedic Research at Providence Saint Vincent Hospital in Portland, Oregon. In his interview regarding the AJRR, Dr. Duwelius spoke about the importance of providing evidence-based research that helps dictate what is best for the patient. He highlighted the clinical significance of the published work so far, including hip and knee arthroplasty studies from Dr. Ryland Kagan, Dr. Kathryn Schabel, Dr. Jamil Kendall, Dr. Mackenzie Kelly, and Dr. Mita De. He also spoke about the incredible mentorship that working with the AJRR provides both residents and faculty. Given the large amount of procedural outcomes information that exists within the AJRR, he also advocated for continued expansion of faculty and hospital involvement nationwide.

Dr. Mackenzie Kelly, MD

Dr. Kelly is a fourth-year orthopaedic surgery resident at OHSU. Her post-residency plans include pursuing an Adult Reconstruction Fellowship before entering practice. She was first drawn to the AJRR after reading international registry data that highlighted an increased risk of periprosthetic femur fracture in cementless geriatric total hip arthroplasty. Since then, she has been active in publishing research from the AJRR, specifically regarding outcomes data from femoral stem component and cemented designs in total hip arthroplasty. In her interview about the AJRR, Dr. Kelly highlighted the importance of the clinically meaningful results published from this registry. She specifically mentioned these results are intended to be wide-reaching and

are useful for any orthopedic surgeon, whether they are practicing in a tertiary academic center or rural private practice. She also discussed that successful use of the AJRR requires mentorship, highlighting contributions from Dr. Ryland Kagan, Dr. Kathryn Schabel, Dr. Jamil Kendall, Dr. Mita De, and Dr. Paul Duwelius. These collaborations have allowed herself, Dr. Kagan, and Dr. De to travel internationally to present AJRR projects at the International Society of Arthroplasty Registries (ISAR) Annual Meeting in 2022 and 2023. For any residents considering becoming involved in the AJRR, she recommends reaching out to prior residents and faculty that have been through this work for guidance.

Dr. Mita De, PhD

Dr. Mita De is the current Director of Research for AAOS. In her current role, she is responsible for creating and pursuing new research opportunities and maintaining the overall research portfolio across the AAOS and AJRR. In Dr. De's interview about the AJRR, she highlighted the registry's unique position as the world's largest orthopedic registry. Dr. De also spoke about the AJRR's recent focus on investigating patient disparities across racial, regional, and geographic metrics. She specifically highlighted a recent publication comparing ceramic femoral head utilization in THA across racial groups. With ceramic femoral head considered a "premium" THA feature, the results of this study showed that its use for non-white patients was significantly lower than that of white patients. A similar trend was found in another AJRR-published study, showing that black patients have lower utilization of unicompartmental knee arthroplasty, robotic-assisted TKA, and higher rates of TKA revisions. The AJRR's future research directions include expanding research efforts internationally and exploring topics within healthcare economics and healthcare systems. Amongst the many achievements that have come about from the AJRR, Dr. De specifically highlighted the collaboration and willingness of each site participating in the AJRR to collectively improve the data pool and continually push the boundaries of orthopedic research.

Our Growing Research Team

Edited by Faris Fazal and Sarah Rogers, with thanks to Rebecca Smith



Jessica Ballin
TI Senior Clinical Research Associate, Dr. Dennis Crawford

Hometown
San Jose, CA

Research journey

I was always a curious student and loved my science courses in school. During my undergraduate degree at San Jose State, I developed an interest in further education and participating in research. A professor of mine encouraged my application to the Maximizing Access to Research Careers (MARC) program, which further supported my advancement in research and applying for graduate programs.

Future career goals

I would love to continue expanding my clinical research knowledge and administrative background. I enjoy mentoring students interested in research, developing efficient operations for various projects, as well as creating presentations and publications for relevant research findings.

On a personal note...

I love playing soccer and found a great local community since moving here almost 8 years ago for graduate school. I have been playing at least once a week and manage a local recreational indoor team. When the weather gets better in the spring and summer I like to play outdoors as well.



Zewdi Cass
Clinical Research Assistant 2, PMR, Peds, Upper Extremity

Hometown
Sandy, OR

Research journey

I first took interest in research by volunteering in a lab my sophomore year of college at University of Oregon. My physiology lab junior year confirmed for me that this was a field I was interested in.

Future career goals

For right now I'm enjoying my role as a research assistant, and I hope to elevate my career in research with further education.

On a personal note...

My favorite outdoor hobbies are playing tennis and walking around my neighborhood to explore new food and drinks. If I'm indoors, I like to crochet and play my keyboard, but my guilty pleasure would have to be watching reality TV.



Hannah Hoffman
*TI Clinical Research Associate,
 Joints and Tumors*

Hometown
 Beaverton, OR

Research journey

I started research working at the primate center hands on with the rhesus macaques. I previously worked at zoos and wanted to work with animals, from there I took an interest in HIV research and that opened the doors for me to work in clinical research.

Future career goals

My goals are to progress further into clinical research.

On a personal note...

I enjoy CrossFit, Olympic weightlifting, hiking, and skiing



Chris Nickleberry
Student Worker, all services

Hometown
 My hometown is Rancho Cucamonga, California.

Research journey

I tore my ACL and meniscus playing basketball and I love to see how clinical research translates, like how it influences my recovery process and how it translates into modern medicine.

Future career goals

My future career goal is to become a Sports Medicine Orthopedic Surgeon.

On a personal note...

I am the starting point guard for George Fox Basketball. I was all-conference and held several different accolades.



Steven Shelofsky
*Clinical Research Assistant 2,
 Joints and Tumors*

Hometown
 West Linn, OR

Research journey

I started as a scribe in the department of orthopaedics. Soon after, I found myself looking for ways to contribute more to the department and the field. That was when I was approached about a research position, which I was elated to accept.

Future career goals

I will be starting medical school this summer, with plans to graduate with the class of 2028.

On a personal note...

I love most things outdoors. I primarily snowboard in the winter and golf in the summer, with random little hobbies scattered throughout. I competed during undergrad as a Division 1 wrestler and continue to do intermittent volunteer coaching.



Rebecca Smith
Department Research Manager

Hometown
St. Louis, MO

Research journey

While my initial goal after raising my twins was to attend medical school, my perspective shifted during my post-baccalaureate studies at Portland State University. Intrigued by the possibilities of unraveling complex biological problems, I applied to the graduate program in Molecular and Cellular Biosciences at OHSU. There, during lab rotations, I was particularly captivated by Dr. Brian Druker's research on leukemia. I actively sought a research position in his lab, eager to contribute to groundbreaking discoveries. I had the privilege of participating in the Beat AML project, and the resulting Nature paper remains a source of immense pride. After three rewarding years studying blood cancers, I transitioned to Dr. Joe Gray's lab, broadening my expertise to solid tumors in breast and prostate cancers. Following Dr. Gray's retirement, my research journey took another exciting turn when Dr. Kenny Gundle and Dr. Ryland Kagan offered me the opportunity to lead their Joints and Tumors research team. After a year in this role, I applied for and was hired as the new Research Manager for the amazing Department of Orthopaedics and Rehabilitation at OHSU. This is truly a dream job for me, and I feel very fortunate to have ended up here. I will always be very grateful to Drs. Gundle and Kagan for hiring me!

Future career goals

Make the Department of Orthopaedics and Rehabilitation at OHSU a true research force to be reckoned with.

On a personal note...

I love traveling, reading, the theater (especially Broadway), and having afternoon tea with my amazing adult daughters.



Spencer Smith
*Clinical Research Associate,
Spine*

Hometown
Portland, OR

Research journey

My interest in research was sparked by my curiosity and a desire to contribute to advancements in medicine, seeking to understand complex biological processes and improve healthcare outcomes.

Future career goals

I am aspiring to attend medical school, with the goal of becoming a physician who integrates clinical practice with research to innovate patient care and treatment methods.

On a personal note...

For relaxation and enjoyment, I engage in sports to stay active and pursue woodworking projects, which allows me to express creativity and craftsmanship outside of my academic interests.



Talia Trapalis
*TI Clinical Research Associate,
Trauma*

Hometown
Roseburg, OR

Research journey

My uncle participated in a device trial that ultimately saved his life.

Future career goals

Future career goals include growing within my new role and pursuing a Masters Degree

On a personal note...

I enjoy jet skiing, snowboarding, and camping.



Albert Yim
*Clinical Research Assistant 2,
Sports and Foot & Ankle*

Hometown
Beaverton, OR

Research journey

My interest in research started when I worked on developing a wearable sweat sensor at UO.

Future career goals

As a hopeful medical school applicant, my goal is to become a physician.

On a personal note...

I enjoy trying new foods, games, hiking, and camping.

Shock Trauma Team Visits OHSU for Trauma Research Summit

By Kate Hutchison, MD, Sarah Rogers, MD, MPH, Graham DeKeyser, MD, Zachary Working, MD

The trauma section continues to make strides forward in the research field. OHSU presence at the Orthopaedic Trauma Association (OTA) national conference continues to grow and multiple current residents have been awarded the OTA resident research grant. Chief resident Dr. Danielle Peterson and faculty mentor Dr. Zach Working have an ongoing prospective randomized controlled trial investigating the effect of intravenous iron administration on fracture healing. Dr. Kate Hutchison was awarded a grant for her project investigating the effect of anemia on endochondral ossification during clinical fracture healing. Dr. Natasha McKibben was awarded a grant to look at the role of anemia and intravenous iron supplementation on fracture healing in a mouse model.

In addition to the projects we are fostering at home, we are excited to invest in opportunities to collaborate across institutions to advance orthopaedic trauma research. In spring 2024, we were excited to welcome multiple faculty members from Shock Trauma in Baltimore, MD to Portland as part of a two-day research summit. The Shock Trauma team joined OHSU faculty and residents for a Friday grand rounds on clinical trials in orthopaedics followed by a day of research discussions. Residents presented select ongoing projects to the Shock team for research feedback, followed by broad problem-solving discussions on topics including the logistics of budgeting, considerations when expanding trials to include multiple institutions, and the art of creating a specific and meaningful primary outcome. We were also fortunate to hear the visiting faculty speak about some of their ongoing research projects and interests.

Dr. Gerard Slobogean, MD, MPH, FRSCS, is an orthopaedic trauma surgeon at Shock Trauma (University of Maryland) and co-director of Center for Orthopaedics, Injury and Research Innovation (COIRI). He spoke about several of his successful trials, including Prevention of Clots in Orthopaedic Trauma (PREVENT CLOT), which investigated the effect of aspirin versus enoxaparin on 90-day mortality and the development of venous thromboembolism in orthopaedic trauma patients; Program of Randomized Trials to Evaluate Pre-operative Antiseptic Skin Solutions in Orthopaedic Trauma (PREP-IT), which investigates the effect of chloraprep versus duraprep on post-operative infections after fracture surgery; and a trial investigating operative vs non-operative management in LC1 pelvic ring injuries. He also shared his goal of expanding prospective, multicenter research trials within orthopaedics.

He was joined by Nathan O'Hara, PhD, MHA, COIRI co-director and innovative statistician involved in many key orthopaedic trials. He introduced the group to win ratios and other exciting concepts from diverse fields like behavioral economics. He hopes that using ideas from diverse perspectives will help propel orthopaedic research. The visiting group included Christina Stennett, PhD, MPH, an epidemiologist new to Shock Trauma who focuses on public health overlay with orthopaedic trauma topics. Dr. Stennett's talk highlighted the availability of alternative databases, such as census data, to look at orthopaedic questions. She further explained her work using secondary analysis of prior multicenter studies to more specifically examine how social determinants of health, such as distance from a grocery store, correlate with orthopaedic trauma outcomes.

Lastly, the group included Dane Brodke, MD, MPH, a current trauma fellow at Shock Trauma who will be joining OHSU faculty after fellowship. He shared core studies within orthopaedics highlighting various research structures and discussed his project to more accurately track patient mobilization and quality of life using smart device data.

The orthopaedic trauma research endeavors at OHSU demonstrate a commitment to innovation

and collaboration. The recent research summit with Shock Trauma demonstrates our eagerness to engage in interdisciplinary exchanges and leverage diverse expertise to address complex challenges in orthopaedic trauma. As we continue to foster partnerships across institutions, we are poised to make significant contributions to the field and improve outcomes for orthopaedic trauma patients.



Back row from left: Drs. Catherine Hutchison, Natasha McKibben, Danielle Peterson, Dane Brodke, and Zachary Working; front row: Drs. Michelle Lawson, Gerard Slobogean, Graham DeKeyser, Christine Stennet, and Nathan O'Hara



New Faculty Spotlight:

A Q&A session with Nathan Cutshall, MD

Hometown: Bangor, Maine

Medical School: University of Colorado

Residency: MAHEC Family Medicine

Fellowship: OHSU Primary Care Sports Medicine

Tell us a little about yourself.

I grew up in Maine and have been known to use any excuse to incorporate the occasional “wicked” into patient encounters. I was a medic in the Air Force and lived in Japan before finishing undergrad in medical anthropology at the University of Washington. I love to travel and studied abroad in Brazil, Vietnam, and South Africa. I worked in the Emergency Department in Khayelitsha township outside of Cape Town during medical school. I am excited to be back in the PNW and explore all it has to offer.

What brought you to OHSU?

I came to OHSU specifically for the Primary Care Sports Medicine fellowship. I loved that the program focused on a range of education topics including strong emphasis on both diagnostic and procedural ultrasound as well as working with athletes of all spectrums – from weekend warriors to high school and college athletes to professional runners. The culture and community of the department was the defining factor that led me to stay on as faculty.

What drew you to your subspecialty?

I love the patients and being able to focus on their passions and activity. Whether that is being able to go for a walk around the block or run an ultramarathon, it’s a privilege to help patients stay active and do the things that bring them joy.

What have you been most proud of so far in your career?

Finishing training and the transition to being an attending. Having learners in clinic has certainly been a huge learning process as an attending, but I also find it rewarding to be on the other side. That and always trying to find time to enjoy life outside of medicine!

What is something you wish you had learned earlier in training?

Training is the time to make mistakes and learn from them. If you never get out of your comfort zone and struggle with something, then you will not learn as much.

What do you do when you aren’t working?

When not in clinic I try to spend most of my time outside with friends and family! Mountain biking, hiking and backcountry snowboarding are my favorites. I recently started cross country skiing and trail running with plans to run a 50k this summer.





New Faculty Spotlight:

A Q&A session with Jesse Day, MD

Hometown: Marshfield, Missouri

Medical School: University of Missouri School of Medicine

Residency: University of Pittsburgh Medical Center

What brought you to OHSU?

I've been making my way towards Portland since I first visited in 2016 and fell in love with the city. I had been working in private practice in Chicago and missed my connection with nature as well as teaching. When this position opened, I knew I had to apply - and when I met the rest of the faculty, I knew I would have to stay.

What drew you to your subspecialty?

PM&R is a field of creative problem solving to create greater function for patients; this combination drew me in and hasn't let me go since I first stumbled into it. It offers both a diagnostic challenge in unraveling complicated musculoskeletal complaints and the challenge of translating your treatment options into a workable solution to help people get back to their daily tasks and the things they love to do. Add in the chance to master procedural skills (in ultrasound and fluoroscopy) and there is a lot to love.

What have you been most proud of so far in your career?

Transitioning out of a job that brought me no joy and into a practice here at OHSU where I can help build a residency, educate medical students, bring new procedural interventions to patients, and teach residents of across specialties important ultrasound skills has been incredibly meaningful for me.

What are some goals you have for your practice?

I'm currently working to bring additional procedural interventions to the orthopedics department,

including genicular nerve ablation, peripheral nerve stimulation, and Tenex tenotomy. I'm also working to develop a meaningful way to teach orthopedic surgery residents basic ultrasound injection/aspiration skills that are applicable to their broader practice.

Do you have any research projects or areas of interest that you are pursuing?

I have particular interest in ultrasound education and hypermobility syndromes and am currently working to piece together projects related to both.

Do you have any advice for the graduating chiefs?

Stay humble and take a collaborative approach wherever you go. Everyone is bettered by working with the people around you, and your care is only improved by creativity in problem solving with others. Stay curious and you'll do great things!

What is something you wish you had learned earlier in training?

Work is not everything. There is so much out in the world to enjoy, and that balance brings more joy in the work you do.

What do you do when you aren't at the hospital?

Mostly, you will find me mountain biking across the state, backpacking, hiking, or on the water. In the unfortunate case where it is raining too hard for the above, I will likely be reading, rock climbing, or sampling the incredible food/beer/wine scene in Portland.

What is your go-to OR music?

Still Woozy, Dehd, or The Oh Sees radio.

Sometimes I go a little off script and play jazz - I've been really into Ethiopian funk/jazz for the past few months.



New Faculty Spotlight:

A Q&A session with Natalie Zusman, MD

Hometown: Portland, Oregon

Medical School: Oregon Health & Science University; Portland, OR

Residency: Oregon Health & Science University; Portland, OR

Fellowship: Pediatric Orthopedics at Children's Hospital Los Angeles (CHLA)

Tell us a little about yourself.

I am excited to be back in Portland and OHSU. As a Portland native and long-time member of the OHSU community, I am grateful to be caring for patients in a region that I call home.

What brought you to OHSU?

I was raised on the back side of "The Hill" and have spent years being involved with OHSU, spanning from an after-school course when I was in high school, through college internships, medical school and beyond. What brings me back to OHSU is the orthopedic team and the staff at Doernbecher. The respect and team-based mentality is special and I hope to continue fostering such a positive environment.

What drew you to your subspecialty?

Amanda, my older sister, fractured her wrist five times in our youth, therefore a pink cast was omnipresent. Additionally, my mother survived an "oops" resection of a soft tissue sarcoma. I did my best to try other surgical specialties in medical school, but my passion for pediatric orthopedics could not be deterred and I matched into orthopedic residency during my Portland Shriners' Hospital elective rotation.

What have you been most proud of so far in your career?

That is a difficult question. Each day I try to provide patients and their families with excellent care, so I suppose I feel proud when a family is comfortable entrusting their child to me in the perioperative period.

What are some goals you have for your practice?

Delivering excellent patient care is my number one goal. I strive to do so through direct, daily patient interactions, but also by working with the residents to educate more orthopedists about pediatric bones, as well as through my research.

Do you have any research projects or areas of interest that you are pursuing?

The developing hip is my passion, but is a difficult topic to study due to widespread variations in management between US academic centers and internationally. I also have interests in peds ortho trauma, as it is ubiquitous and in no danger of going away thanks to monkey bars and trampolines. Currently I am trying to build research relationships in the Kaiser system to learn how to best navigate the kaiser research databank.

Do you have any advice for the graduating chiefs?

Build excellent relationships with your fellowship attendings, as you never know which tip/trick/personality you will need in the future when faced with a tough problem.

What has it been like to work as an attending on a team with a former co-resident?

OHSU orthopedic residents are fantastic: intelligent, reliable, respectful and responsible. It is a joy to work with them.

What is something you wish you had learned earlier in training?

Try to not get overly worked up when you first learn of a problem, as many problems resolve with time.

What do you do when you aren't at the hospital?

Outside of the hospital I am adjusting to life with an infant (born 12/11/2023), running or spending time with my immediate or extended family and support system.

What is your go-to OR music?

Pop, especially 90s/2000s for most cases; however, the music broadens to hip hop, rap, rock for certain trauma cases.

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ADULT RECONSTRUCTION

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*Including OHSU Investigators: **Working ZM, Kagan R**.

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*Including OHSU Investigator: **Schabel K**.

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UPPER EXTREMITY

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*Including OHSU Investigator: **Orfaly, R**.

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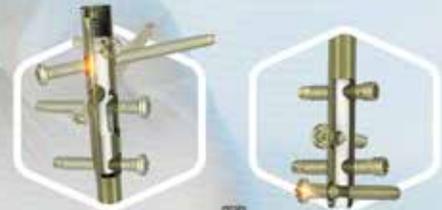
*Including Samaritan Investigator: **Than JP**.

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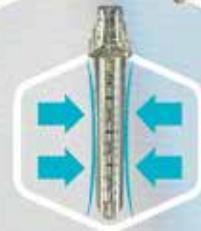
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Effect Of Proximal Pole Scaphoid Excision Versus Proximal Hamate Bone Graft On Carpal Kinematics

Delaney Keane, DO; Cay Mierisch, MD; Ravi Balasubramanian, Ph.D. B.Eng; Mike Pavol, Ph.D.; Ajay Zubin Ratty; Madeleine Vergun, BA



Delaney Keane, DO

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BACKGROUND

Proximal pole scaphoid nonunion is notoriously difficult to treat. Frequently, fracture healing cannot be accomplished due to small fragment size and devascularization, resulting in avascular necrosis. Current treatment options aim to reconstruct the proximal pole of the scaphoid with either vascularized or non-vascularized osteochondral bone grafts. These procedures have high technical difficulty, requiring prolonged operating times, and the availability of an experienced multi-surgeon team. Additionally, obtaining the bone graft can lead to significant donor site morbidity. Patients require prolonged periods of immobilization, resulting in delayed return to work or sport. Simple proximal pole fragment excision is a faster, simpler, less-specialized procedure associated with lower healthcare costs and quicker patient recovery.

OBJECTIVE

We hypothesize that the proximal pole of the scaphoid can be safely excised without creating carpal instability if all extrinsic wrist ligaments are preserved. Furthermore, with incremental removal we aim to determine how much of the proximal pole can be safely excised.

METHODS

Ten cadaver wrists were assessed for carpal bone alignment and kinematics radiographically and biomechanically after incremental (2mm) excision of the proximal pole of the scaphoid up to 10mm. The biomechanical assessment was performed using OptiTrack motion capture technology after putting the wrist through full range of motion with a robotic testing arm. This project was done in collaboration with the Collaborative Robotics and Intelligent Systems (CoRIS) Institute at Oregon State University. After each iteration, the positions of the carpal bones including carpal height, scapholunate interval, scapholunate angle, and capitulate angle were assessed and statistically compared.

RESULTS

This study is ongoing and final data collection is anticipated in April 2024. This is the initial study in a series of cadaveric biomechanical studies regarding treatment options for nonunion of the scaphoid proximal pole. The next stage of this study is pending NIH grant approval to compare the Effect of Proximal Pole Scaphoid Excision versus Proximal Hamate Bone Graft on Carpal Kinematics.

Cannabis Use in Patients Undergoing Knee Arthroscopy Is Associated With Less Postoperative Opioid Use and Fewer Thromboembolic Complications but Higher Costs

Jacob T. Wood, BS, Christopher Canario, DO, Christopher L. McCrum, MD, Senthil Sambandam, MD



Chris Canario, DO

Hometown: Newark, CA

Medical School: Rocky Vista University COM

Fellowship Plans: University of New Mexico – Sports Medicine

INTRODUCTION

Recent legalization of medicinal and recreational cannabis has led to rapidly increased use. While opioid use and abuse has become an epidemic, there is little data regarding cannabis use and the relationship between opioid use, complications, and cost after knee arthroscopy. We hypothesized that there is no difference between cannabis users and nonusers with regards to opioid use, complications, or cost following knee arthroscopy.

METHODS

The PearlDiver database was reviewed for patients undergoing knee arthroscopy between the years 2010-2019. A total of 19,336 patients were stratified into two cohorts: those undergoing knee arthroscopy with cannabis use identified by International Classification of Diseases (ICD) codes (n=9,668), and a matched group without reported cannabis use (n=9668). Opioids prescribed over the episode of care, evaluated by morphine milligram equivalents (MME), and 30-day cost were compared between groups using unequal variance t-test. Complication rates at 30 and 90 days postoperatively were compared using odds ratio (OR) with 95% confidence intervals (95%CI).

RESULTS

Patients with reported cannabis use received fewer postoperative opioids (1710+/-3292 MME) than non-users (2253 +/-5010 MME) ($p < 0.0001$). At 30 days after knee arthroscopy, cannabis users had significantly fewer deep vein thromboses (DVT) (OR 0.636 [95%CI 0.492-0.823]; $p < 0.001$) and pulmonary emboli (PE) (OR 0.362 [95%CI 0.217-0.605]; $p < 0.001$), which was significant at 90 days postoperatively for both DVT (OR 0.715 [95%CI 0.577-0.888]; $p = 0.002$) and PE (OR 0.414 [95%CI 0.271-0.636]; $p < 0.001$). The 10-day mortality rate was significantly higher in cannabis users (OR 3.207 [95%CI 1.156-6.528]; $p = 0.001$). Patients who use cannabis also have a higher 30-day cost after knee arthroscopy (\$1637+/- \$2177) than non-users (\$1517+/- \$1805) ($p < 0.0001$).

CONCLUSION

Following knee arthroscopy, patients that use cannabis receive fewer opioid prescriptions, have lower 90-day risk of DVT and PE, but also have an increased risk of 10-day mortality and higher cost per episode of care.

Supracondylar Pinning Antibiotic Stewardship (SPAS) Trial

Bob Umberhandt MD, Justin Brohard, DO, Alexandra Makenzie, DO



Alexandra Makenzie, DO

Hometown: Sonora, CA

Medical School: Rocky Vista University

Fellowship Plans: Cincinnati Shoulder and Elbow Fellowship

The goal of the SPAS trial is to determine the role of prophylactic antibiotics in closed reduction and percutaneous fixation of pediatric supracondylar humerus fractures. The study is a prospective, double-blinded, two-arm, non-inferiority trial. The intervention study arm will receive a preoperative saline placebo. The control study arm will receive 'standard of care' preoperative prophylactic antibiotics. The primary outcome of the study will be the development of a surgical site infection, including both superficial and deep infections. Secondary outcomes will include rate and type of post-operative complications, which will be monitored in an attempt to quantify drug-related adverse events. The medical premise driving this research is that closed reduction and percutaneous fixation of pediatric supracondylar humerus fractures is safe to perform without

prophylactic antibiotics, and we anticipate finding no difference in infection rates between the two study arms. The single inclusion criterion is an isolated, closed, displaced supracondylar humerus fracture treated with closed reduction and temporary percutaneous pinning. Exclusion criteria are immunocompromise, pathological fractures, open fractures, polytrauma, skeletal maturity, and treatment primarily with open reduction or conversion to open reduction. Because of the low infection rate observed in this type of surgery, the sample size for the study is estimated at 600 participants per study arm to achieve adequate power. With a multicenter design, it is expected that study enrollment will proceed over the course of 1-2 years with follow up of approximately 3 months post-surgical intervention per participant.

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Jacob Pearson, DO

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PGY-3 Class



Jeremy Brown, DO

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Resident Directory 2023-2024

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PGY-2 Class



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Sleep in Orthopaedic Surgeons: A Prospective, Longitudinal Study of the Effect of Home Call on Orthopedic Attending and Resident Sleep

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Michelle M. Lawson, MD

Hometown: Seattle, Washington

Medical School: University of Rochester School of Medicine and Dentistry

Fellowship Plans: Orthopaedic Trauma fellowship at Indiana University Methodist Hospital

BACKGROUND

The effect of home orthopaedic call on resident and attending sleep remains unquantified. We prospectively measured the impact of home call on orthopaedic surgery resident and attending sleep patterns (total sleep, slow wave sleep (SWS), and rapid eye movement (REM) sleep), as well as heart rate variability (HRV). We hypothesized that orthopedic home call would negatively impact all phases of sleep and suppress post-call HRV.

METHODS

16 orthopaedic surgery attendings and 15 orthopaedic surgery residents taking home call at multiple level 1 trauma centers in a single program wore WHOOP 3.0 straps. The WHOOP strap (previously validated against polysomnography) objectively measures and quantifies total sleep, SWS, and REM sleep. Over a 13-month period, home call nights were prospectively recorded and matched with physiologic data. For statistical analysis, we used fixed effects regression models.

RESULTS

Over 13 months, we observed 4574 recorded nights of resident sleep and 3573 recorded nights of attending sleep. Overall, attendings (6.0 hr) slept significantly less than residents (6.7 hr) ($p < 0.001$). When on home call, resident total sleep decreased by 20% from baseline ($p < 0.001$), REM sleep decreased by 12% ($p < 0.001$), and SWS decreased by 12% ($p < 0.001$). For attendings, total sleep on call decreased by 10% from baseline ($p < 0.001$), REM sleep decreased by 7% ($p < 0.001$), and SWS decreased by 4% ($p < 0.01$).

DISCUSSION

Orthopaedic surgery residents and attendings exhibit low baseline sleep, and taking home call reduces this further. On home call nights, residents and attendings experienced a significant decrease in total sleep, REM sleep, and SWS. This suggests there is a previously unmeasured toll of home call on orthopaedic surgeons, of which further research is required to ensure excellent patient care, maximize educational environments and develop strategies for resilience.

Intravenous iron therapy (IVIT) improves patient reported outcomes and immunothrombotic response following orthopaedic trauma: A pilot randomized controlled trial

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Medical School: University of Washington School of Medicine

Fellowship Plans: University of California Davis Trauma Fellowship

IMPORTANCE

Acute blood loss anemia is widespread after orthopaedic trauma but largely neglected in this population. We hypothesize that intravenous iron therapy (IVIT) mitigates negative effects of anemia after fracture care.

OBJECTIVE

To determine feasibility of study design, recruitment, randomization, intervention implementation, blinded procedures, and follow-up.

DESIGN

This was a pilot, single-institution, double-blind randomized clinical trial.

SETTING

Level 1, tertiary care academic trauma center.

PARTICIPANTS

Patients age 18-89 hospitalized following trauma with a lower extremity or pelvis fracture requiring surgical stabilization and acute blood loss anemia (hemoglobin 7.0-11.0 g/dL) postoperatively.

INTERVENTION(S)

Patients were randomized 1:1 to receive low molecular weight iron dextran (LMW ID) or saline placebo following operative fracture management.

MAIN OUTCOME(S) AND MEASURE(S)

Feasibility was assessed through rate of participant enrollment, screening failure, follow-up, missing data, adverse events and protocol deviation. The primary clinical outcome was fatigue, measured on Patient-reported Outcome Measurement Information System (PROMIS) questionnaire.

RESULTS

Feasibility of study design was established with planned modifications following enrollment of 45 patients (24 iron patients, 21 placebo patients). Under the final study protocol, eligibility and enrollment rates were 10.1 and 2.4 patients per month, respectively. The primary clinical outcome measure (PROMIS Fatigue) was successfully completed by >80% of patients at all time-points. Lost to follow-up rate was 8.9%. Exploratory data analysis of 36 qualified patients (19 iron patients, 17 placebo

patients) was conducted. The mean [SD] age was 55.2 [19.8] years, and 20 participants (56%) were male. Cohort characteristics were similar, except for sex and pre-existing depression diagnosis. Following treatment with IVIT, fatigue scores were clinically and statistically improved from baseline at 2-weeks (Δ [SE] iron: -6.8 [2.9], placebo: 1.5 [2.7], $p=0.008$), 6-weeks (iron: -6.8 [2.0], placebo: 1.2 [3.7], $p=0.007$), and 3-months (iron: -9.1 [2.0], placebo: -0.4 [3.3], $p=0.005$) follow-up. Additional analysis revealed IVIT treated patients had attenuation of the systemic inflammatory response and restored platelet function in follow-up compared to placebo treated patients.

CONCLUSIONS AND RELEVANCE

After establishing feasibility of our pilot study, exploratory analysis demonstrates IVIT improves health-related quality of life (HRQoL), attenuates systemic inflammatory responses, and restores platelet function after orthopaedic trauma. Future large scale RCTs will confirm and specify benefits of IVIT in this population.

TRIAL REGISTRATION

ClinicalTrials.gov Identifier: NCT05292001
(<https://clinicaltrials.gov/study/NCT05292001>)

Increased Odds of Post-Operative Periprosthetic Femur Fracture with Cementless Versus Cemented Hemiarthroplasty: A Nationwide Database Study of 24,468 Femoral Neck Fractures

Frank Rodgers MD, Darin Friess MD, Zachary Working MD, Jung Yoo MD, Ryland Kagan MD



Frank Rodgers, MD

Hometown: Columbia, South Carolina

Medical School: University of South Carolina School of Medicine

Fellowship Plans: Adult Reconstruction, University of Chicago

PURPOSE

Femoral component fixation in hemiarthroplasty is achieved with either cemented or cementless fixation. Post-operative periprosthetic femur fracture (PPFx) substantially increases morbidity, mortality, and cost. Previous investigations suggesting cementless fixation as a risk for PPFx were limited in their generalizability. We aimed to evaluate the odds of post-operative PPFx based on stem fixation with review of a robust national administrative claims database.

METHODS

A retrospective review using the Medicare Standard Analytical Files from the PearlDiver database was performed for patients receiving hemiarthroplasty for treatment of femoral neck fracture (FNF). We identified post-operative PPFx as our primary outcome and stratified femoral fixation as cemented or cementless. Demographic data were collected: age, sex, obesity and Charlson Comorbidity Index (CCI). Propensity matched analysis with odds ratios (OR) was performed to evaluate association between fixation and odds of post-operative PPFx; multivariate analysis was used to adjust for demographic characteristics and comorbidities.

RESULTS

We identified 24,468 patients with hemiarthroplasty as treatment of FNF from 2015-2020. The mean age was 77 years (SD 6.14), 66.9% were female, mean CCI was 3.54 (SD 3.17) and 16% carried a diagnosis of obesity. 12,777 (52.2%) received cemented femoral fixation and 11,691 (47.8%) cementless. We identified a total of 665 (2.7%) post-operative PPFxs. Cementless fixation was associated with increased odds of post-operative PPFx (OR 3.32 [95% CI, 2.75-4.00]; $p < 0.001$). Females with cementless fixation had higher odds for post-operative PPFx (OR 3.70 [95% CI, 2.94-4.76]; $p < 0.001$).

CONCLUSION

We noted increased odds of post-operative PPFx with cementless femoral fixation for hemiarthroplasty to treat FNF, particularly in females. The risk of post-operative PPFx should be considered as surgeons choose femoral fixation for hemiarthroplasty in the treatment of FNF.

Direct Anterior Approach for Pilon Fracture Fixation Demonstrates No Difference in Rate of Reoperation Compared to Other Surgical Approaches

Laura E Sokil, MD; Liam Wong, MD; Elizabeth Roti, BS; Graham DeKeyser, MD; Zachary Working, MD; Darin Friess, MD; James Meeker, MD



Laura Sokil, MD

Hometown: Merion, Pennsylvania

Medical School: Sidney Kimmel Medical College at Thomas Jefferson University

Fellowship Plans: Foot and Ankle, The Institute for Foot and Ankle Reconstruction at Mercy Medical Center, Baltimore, MD

PURPOSE

The direct anterior (DA) approach is commonly used for reconstructive procedures to treat posttraumatic ankle osteoarthritis (PTOA), however, literature investigating utilization of the DA approach (defined as the interval lateral to the tibialis anterior tendon) for initial fixation of pilon fractures is lacking. This retrospective study of patients undergoing fixation of pilon fractures hypothesizes that there is no difference in reoperation rate for patients whose pilon fractures were treated with DA approach.

METHODS

A retrospective radiographic and chart review of patients undergoing surgical fixation of tibial plafond fractures over a nine year period (2013-2022) at an urban level 1 trauma center was undertaken. Review of operative notes for reoperation for infection, PTOA, nonunion, and symptomatic hardware was utilized to determine reoperation rates. Injuries were radiographically stratified by AO/OTA classification, and quality of fracture reduction was assessed via measurement of the lateral distal tibial angle (LDTA) and lateral talar station (LTS) at the first postoperative radiograph. Likelihood of reoperation within one year of index surgery was analyzed using Kaplan-Meier estimations. Reoperation risk factors were determined with multivariable logistic regression analyses created using a backwards stepwise process.

RESULTS

135 fractures in 130 patients met inclusion criteria; 44 fractures were treated via a DA approach, 91 treated via all other approaches, many in combination. Between groups, AO/OTA classification, demographics, injury characteristics and operative time were no different. Overall reoperation rate was 40.7%. There was no significant difference between DA and all other approaches in rate of reoperation for infection (2.3% vs. 10%, $p=0.21$), nonunion (15.9% vs. 16.5%, $p=1$), PTOA (9.1% vs. 7.8%, $p=1$) and removal of symptomatic hardware (25% vs. 36.3%, $P=0.27$). Multivariable regression showed DA approach was associated with lower risk of reoperation within one year (OR 0.25, 95% CI 0.07-0.71, $P=0.015$). The DA group lateral talar station (LTS) was significantly greater (more anterior) by 0.9mm (2.75mm DA vs. 1.85mm all others, $P=0.011$).

CONCLUSIONS

Utilization of the direct anterior approach to the ankle for initial fixation of pilon fractures has no difference in overall reoperation rates and a lower likelihood of reoperation within one year compared to all other combinations of approaches to the tibial plafond. Radiographic outcomes were different between groups, but the clinical significance of this is unclear. The DA approach should be considered for fracture patterns amenable to its use and may offer benefit should reconstructive procedures become necessary.

Inpatient Administration of IV bisphosphonate therapy for treatment of osteoporosis in elderly hip fracture patients – A Quality Improvement Initiative

Naomi Turner, MD; Marissa Mayeda, MPH, MPP; Yee-Cheen Doung, MD; Katie Drago, MD



Naomi Turner, MD

Hometown: Bloomington, MN

Medical School: University of Minnesota Medical School

Fellowship Plans: Adult Reconstruction; Washington University, Saint Louis, MO

PURPOSE

The purpose of our quality improvement (QI) initiative was to increase our institution's rate of initiating osteoporosis treatment by developing and implementing an inpatient protocol facilitating appropriate osteoporosis diagnosis and prompting administration of a one-time intravenous zoledronate infusion for elderly patients admitted for hip fracture surgery.

METHODS

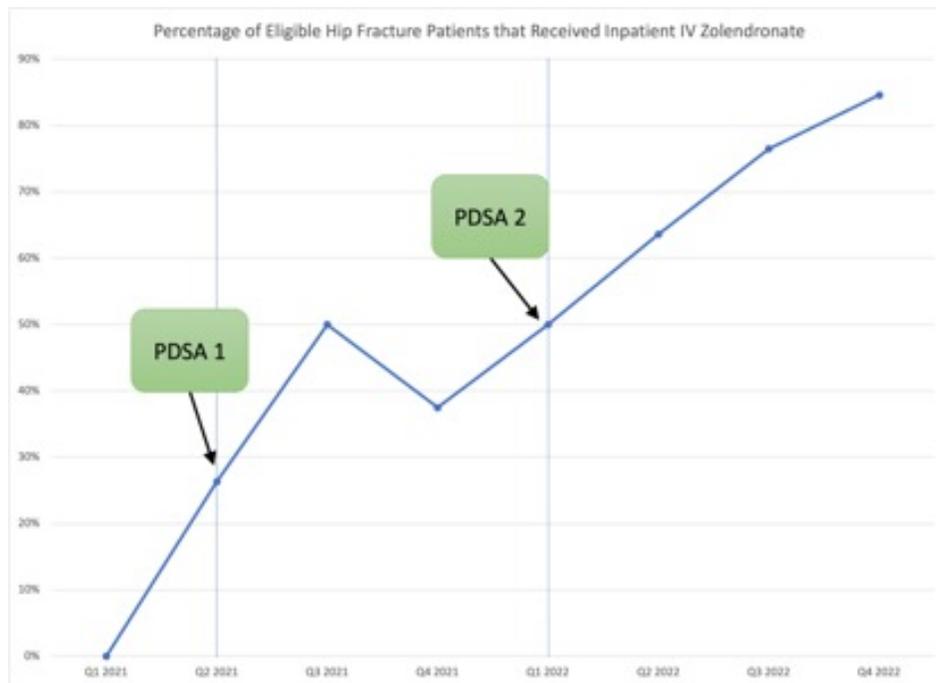
We used a model for scholarly quality improvement with iterative Plan-Do-Study-Act (PDSA) cycles to design and implement our QI initiative. Patients ≥ 50 who presented to our institution with a low-energy hip fracture and received surgical treatment were considered potential candidates for inpatient IV bisphosphonate therapy. For our preliminary PDSA cycle, we created a protocol prompting admitting services to order IV zoledronate on post-operative day two. An iterative PDSA cycle involved the orthopaedic department placing osteoporosis diagnosis and treatment recommendations in consult and post-op progress notes. For data review, we identified patients using CPT and ICD codes. We assessed

the primary outcome measure of inpatient IV zoledronate administration and a secondary outcome measure of diagnosis of osteoporosis during hospital stay.

RESULTS

During the 5 months prior to initiation of our protocol, of 37 elderly patients admitted to our institution with a hip fracture, 29 were eligible for bisphosphonate therapy. Only 3/29 (10%) patients were confirmed to have been appropriately treated for osteoporosis after hip fracture in either the inpatient or outpatient setting, and no patients received inpatient IV zoledronate. Of the 37 hip fracture patients, only 14 were diagnosed with osteoporosis during their hospital admission (38.8%).

In the 18 months since implementation of our protocol, the rate of inpatient bisphosphonate prescription at our institution has steadily improved. In our most current quarter of chart review, 23 patients were admitted to our institution with a hip fracture. Eleven of 13 eligible patients received inpatient IV zoledronate (85%). Of these 23 hip fracture patients, 21 were given a diagnosis of osteoporosis during admission (91%).



CONCLUSION

Despite AAOS guidelines, osteoporosis continues to be under-diagnosed and inadequately treated. After implementation of our QI protocol, we increased the rate of inpatient osteoporosis treatment with IV zoledronate for elderly hip fracture patients admitted to our institution from 0 to 85%. Our protocol design could be considered by other institutions to further improve the rate of appropriate osteoporosis diagnosis and treatment in the setting of admission for hip fracture.

SUMMARY

Despite AAOS guidelines, osteoporosis continues to be under-diagnosed and inadequately treated in elderly hip fracture patients. We designed and implemented a quality improvement initiative to improve the rate of diagnosis and treatment of

osteoporosis in elderly patients undergoing hip fracture surgery at our institution. We created a protocol for administration of a one-time dose of IV zoledronate during the inpatient postoperative stay for eligible elderly patients admitted for hip fracture. A second Plan-Do-Study-Act (PDSA) cycle involved the orthopaedic department placing osteoporosis diagnosis and treatment recommendations in consult and post-op progress notes. Following initiation of our protocol and subsequent iterative PDSA cycles, inpatient administration of IV bisphosphonates for elderly hip fracture patients increased from 0 to 85%. We also saw significant improvement in appropriate osteoporosis diagnosis. We believe that our protocol could be considered at other institutions to increase the rate of appropriate diagnosis and treatment of osteoporosis in elderly hip fracture patients.

Resident Directory 2023-2024

OHSU Residents (PGY-4 to PGY-1)

PGY-4 Class



Kate Hutchison, MD

Hometown:
Evanston, IL

Medical School:
University of
Pennsylvania,
Philadelphia, PA



Mackenzie Kelly, MD

Hometown:
Portland, OR

Medical School:
Oregon Health &
Science University,
Portland, OR



Phillip Lam, MD

Hometown:
Portland, OR

Medical School:
Oregon Health &
Science University,
Portland, OR



Sarah Lindsay, MD

Hometown:
Greenwood Village, CO

Medical School:
Stanford School of
Medicine, Stanford, CA



Kyle Minkel, DO

Hometown:
San Luis Obispo, CA

Medical School:
Western University
of Health Sciences,
Pomona, CA

PGY-3 Class



Jordan Arakawa, MD

Hometown:
Olympia, WA

Medical School:
Oregon Health &
Science University,
Portland, OR



Sarah Rogers, MD, MPH

Hometown:
Federal Way, WA

Medical School:
Oregon Health &
Science University,
Portland, OR



Aidan Morrell, MD

Hometown:
Newberg, OR

Medical School:
Virginia Commonwealth
University, Richmond, VA



Katherine Velicki, MD

Hometown:
Garden Grove, CA

Medical School:
Washington University
School of Medicine,
St. Louis, MO



Sebastian Welling, MD

Hometown:
Juneau, AK

Medical School:
University of
Washington School of
Medicine, Seattle, WA

Resident Directory 2023-2024

OHSU Residents (PGY-4 to PGY-1)

PGY-2 Class



Amador Bugarin, Jr., MD
Hometown:
Norwalk, CA
Medical School:
UCLA - Charles R.
Drew University of
Medicine and Science,
Los Angeles, CA



Calvin Englert, MD
Hometown:
Windsor, CO
Medical School:
University of Rochester
School of Medicine &
Dentistry, Rochester,
New York



Isaac Lapite, MD
Hometown:
Eugene, OR
Medical School:
Case Western
Reserve University
School of Medicine,
Cleveland, OH



Yash Tarkunde, MD
Hometown:
Sugar Land, TX
Medical School:
Washington University
School of Medicine,
St. Louis, MO



Stephanie Zhao, MD
Hometown:
Beaverton, OR
Medical School:
Oregon Health &
Science University,
Portland, OR

PGY-1 Class



Nicholas Collar, MD
Hometown:
Deerfield, WI
Medical School:
Medical College of
Wisconsin,
Milwaukee, WI



Hanne Gehling, MD
Hometown:
Walla Walla, WA
Medical School:
Oregon Health &
Science University,
Portland, OR



Tasha McKibben, MD
Hometown:
Eatonville, WA
Medical School:
Oregon Health &
Science University,
Portland, OR



Julia Silver, MD
Hometown:
Salem, OR
Medical School:
Tulane University,
New Orleans, LA



Josh Yuan, MD
Hometown:
Portland, OR
Medical School:
Case Western Reserve
University School of
Medicine, Cleveland, OH

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with OXINIUM[◇] Technology



JOURNEY[◇] II UK
Unicompartmental Knee System
with OXINIUM[◇] Technology



JOURNEY II ROX[◇]
Total Knee Solution
with OXINIUM[◇] and
CONCELOC[◇] Technologies



RI.HIP Solutions



OR30[◇]
Dual Mobility with
OXINIUM[◇] DH Liner Technology



POLAR3[◇]
Total Hip Solution
with OXINIUM[◇] Technology



Data Visualization and Outcomes



RI.INSIGHTS[◇]
Data Visualization Platform

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References:

1. Smith+Nephew 2022. Optimus TKA Tensioner Gap Assessment Verification Report. Internal Report. 10059269. 2. Smith+Nephew 2021. Tensioner Design Verification Test Report. Internal Report. TR100123.

OHSU Annual Beals Lectureship



Rodney K. Beals, MD

The Beals memorial lectureship is an annual event established in honor of the late Rodney K. Beals, MD, Professor Emeritus in the Department of Orthopaedics & Rehabilitation at Oregon Health & Science University, who taught orthopaedics for more than 50 years. Dr. Beals was a lifelong “Oregonian” and spent his entire professional career practicing orthopaedic surgery in Portland, OR. Dr. Beals was a committed clinician, master surgeon, revered educator, and accomplished researcher. It was not only out of respect for his scientific accomplishments, but for his humble guidance and mentorship that the OHSU Department of Orthopaedics & Rehabilitation established the annual Beals Memorial Lecture Series.

Dr. Beals attended Willamette University for his undergraduate training, graduating in 1952, and received his medical degree from the University of Oregon Medical School (precursor to OHSU) in 1956. He completed his internship at Minneapolis General Hospital followed by a General Surgical Residency in San Bernadino County Hospital in California. He ultimately completed his training in Orthopaedic Surgery at the University of Oregon Medical School in 1961. Dr. Beals immediately joined the faculty and rapidly rose through the ranks at OHSU, serving as Head of the Division of Orthopedics from 1981 to 1994. Dr. Beals also served as the first chairman for the Department of Orthopaedic Surgery at OHSU in 1994. At the age of 77, he remained an active member of the Orthopaedic faculty at OHSU until the time of his passing on August 7, 2008.

Dr. Beals was an accomplished researcher throughout his career. He was nationally recognized for his research on skeletal manifestations of growth disturbances in children. He authored more than 150 peer-reviewed publications. Dr. Beals was also a revered educator. During his tenure at OHSU, he helped train more than 150 orthopaedic surgeons in residency. He also helped thousands of patients and mentored countless numbers of medical students. Throughout his remarkable career, Dr. Beals represented and personified excellence in medicine and orthopaedic surgery.

Visiting Lectureships

BEALS DAY, APRIL 2024

GUEST LECTURER

Dr. Mary Mulcahey



Guest Lecturer 2024
Dr. Mary Mulcahey
Loyola Medicine and
University Chicago's
Stritch School of
Medicine

“Orthopaedic Surgeons as Leaders” & “Optimizing Outcomes Following Rotator Cuff Repair”

Dr. Mulcahey is a Board Certified orthopaedic surgeon specializing in shoulder and knee surgery and sports medicine. She is a New Hampshire native, who received her Bachelor of Arts in Biochemistry from Dartmouth College and her Doctor of Medicine from the University of Rochester School of Medicine. She completed her orthopaedic residency at Brown University, followed by a fellowship in Orthopaedic Trauma at the same institution. Dr. Mulcahey then went on to do a fellowship in sports medicine at San Diego Arthroscopy and Sports Medicine.

Dr. Mary Mulcahey is an Associate Professor and Chief of Sports Medicine in the Department of Orthopaedic Surgery and Rehabilitation at Loyola University Medical Center in Chicago. She is immediate past President of the Ruth Jackson Orthopaedic Society. Additionally, she recently served on the AANA Board of Directors, and she is currently on the AOSSM Education Committee, the AJSM Electronic Media Editorial Board, and she was selected for the AOSSM Traveling Fellowship to Europe in April 2022. Dr. Mulcahey is a team physician for the Loyola University Chicago Ramblers athletic teams.

OHSU FACULTY SPEAKERS

Dr. Andrea Herzka



OHSU Faculty Speaker
Dr. Andrea Herzka

“Management of Proximal Hamstring Injuries”

Dr. Herzka is an Associate Professor of Orthopaedic Sports Medicine at OHSU. Dr. Herzka attended medical school in her hometown San Francisco at UCSF, then did residency at Johns Hopkins University and Sports Medicine sub-specialty training at the University of Pittsburgh Medical Center where she assisted in caring for the Pittsburgh Steelers and other high level professional and college athletes. She spent additional time training in hip arthroscopy prior to joining the OHSU faculty.

Dr. Jacqueline Brady



OHSU Faculty Speaker
Dr. Jacqueline Brady

“Patellofemoral Instability: Early Findings from the JUPITER Study Group.”

Dr. Brady is an Associate Professor of Orthopaedic sports surgery at OHSU. She serves as Associate Residency Program Director, Simulation Director for OHSU's Orthopaedic surgery residency, and Head Team Physician for Portland State University Athletics. Her clinical focus is on knee and shoulder injuries, with specific research interests in patellofemoral instability and multiligament knee injuries. She is also interested in improving the landscape of Orthopaedic surgery and its training programs, serving on her department's DEI committee and on the board of SpeakUp Ortho.

Shriners Hospital for Children – Beattie Lecture Series



Mr. Byron J. Beattie was the owner and operator of a printing plant in Portland, Oregon. Mr Beattie became acquainted with Dr “French” Eldon Chuinard, while Dr Chuinard was the chief of staff at Shriners Hospital for Children, Portland. He was so impressed with the importance of the educational mission of Shriners Hospital that he created an endowment fund to support our local education activities. The first seminar was held in 1985.

BEATTIE MEMORIAL LECTURE, OCTOBER 2023

Coleen Sabatini, MD



Guest Lecturer 2023
Coleen Sabatini, MD

Dr. Coleen Sabatini is a Professor and Vice Chair of Orthopedic Surgery at the University of California San Francisco. She is dedicated to caring for children with musculoskeletal problems both domestically and abroad and believes that all children should have access to high quality, safe, and affordable orthopedic care. She is a pediatric orthopedic surgeon based at the University of California San Francisco (UCSF) Benioff Children’s Hospital Oakland (BCHO) in Oakland, California. She received her undergraduate degree from the University of California, San Diego where she studied biology and dance. She then moved to Boston to obtain her Doctorate of Medicine (MD) and Masters of Public Health (MPH) from Harvard Medical School and the Harvard T. H. Chan School of Public Health, respectively. She completed her residency training at the Harvard Combined Orthopedic Surgery Residency Program.

Dr. Sabatini completed her fellowship training in Pediatric Orthopedic Surgery at Children’s Hospital Los Angeles and then joined the faculty of UCSF in 2010. After joining the UCSF faculty in 2010, Dr. Sabatini became the Director and Chief of the Division of Orthopedic Surgery at Benioff Children’s Hospital Oakland in 2012. She served in these roles for over 7 years until 2019 when she transitioned away from leadership at BCHO to focus on her primary passion - health equity, in both the United States and globally. Her health equity work is rooted in capacity-building through research and education. Although she has taught and/or volunteered in numerous countries, Dr. Sabatini focuses much of her time in Uganda where she heads a pediatric orthopedic research program and serves as the Principal Investigator on multiple projects, including many focused on injection injury - gluteal fibrosis and post-injection paralysis and other neglected surgical conditions. Much of her research work is intersectional between orthopedics and public health.

The Shriners Hospital for Children was honored to have Dr. Sabatini speak on the following at the 10/2023 Beattie Lecture:

- “Treatment of Late-Presenting and Recurrent Clubfoot”
- “Femur Fractures in Children and Adolescents”
- “Acute and Chronic Osteomyelitis Management”

Visiting Lectureships



59TH ANNUAL DILLEHUNT MEMORIAL LECTURE

The Dillehunt Memorial Lecture honors the contribution of a great surgeon and legendary teacher, Dr. Richard Dillehunt, who inspired many orthopaedists. With his keen interest in medical education, he played a prominent role in the development of the medical school on the hill. He was particularly devoted to children and was instrumental in the establishment of the Shriners Hospitals for Children, Portland. He became Shriners first Chief Surgeon in 1920, and served in that position until his retirement in 1943. His legacy continues through the Dillehunt Memorial Trust Fund, sponsoring visiting distinguished Pediatric Orthopaedic Surgeons from throughout the world.

DILLEHUNT MEMORIAL LECTURE, MAY 2024

Elhanan Bar-On MD, MPH



Guest Lecturer 2024
Elhanan Bar-On MD,
MPH

Prof. Elhanan Bar-On is an Orthopedic Surgeon specializing in Pediatric Orthopedics and in Disaster Medicine. He is currently Director of The Humanitarian and Disaster Response Center at Sheba Medical Center - Israel.

Throughout his career, Prof. Bar-On has been active in disaster areas and in humanitarian aid in underserved regions. As a Lt. Colonel in the Israel Defense Forces Medical Corps Reserves, he participated in numerous ID humanitarian aid missions as a senior orthopedic surgeon and head of department in the IDF field hospitals following the earthquakes in India in 2001, in Haiti in 2010, in Nepal in 2015, following Typhoon Yolanda in the Philippines in 2013 and an explosion in Equatorial Guinea in 2021. He has also participated in missions with various other governmental and nongovernmental organizations.

In 2017, Prof. Bar-On established The Humanitarian and Disaster Response Center at Sheba Medical Center. The Center has deployed multiple teams to disaster zones, including a cholera outbreak in Zambia, a volcano eruption in Guatemala, a cyclone in Mozambique and a measles outbreak in Samoa.

In addition, the center has dispatched humanitarian missions to Nigeria, Papa New Guinea, Mongolia, Haiti, Ethiopia and many other locations around the globe. In 2020, the center led the establishment of the first COVID-19 treatment facility in Israel at Sheba Medical Center and subsequently deployed a team to support the fight against COVID in Piemonte, Italy. In 2022, following the outbreak of war in Ukraine, the center led the deployment of an Israeli national field hospital to Ukraine for treating the refugees and local population.

Prof. Bar-On holds an MD degree in medicine and an MPH degree in disaster management from Tel Aviv University and is an Associate Professor Emeritus in Orthopedic Surgery at Sackler Medical School. He has lectured and published extensively both on pediatric orthopedics and trauma, as well as treatment and organization in disasters and field hospitals.

Dr. Bar-On plans to give the following presentations at the Dillehunt Lectureship on 5/3/2024:

- "The Massively Traumatized Limb"
- "Sharp, Blunt and Crush, Blast, Bombs and Bullets: Injury Mechanisms in Disasters and Conflicts"
- "Medical Care in Disasters and Austere Environments - What's Different?"

Grand Rounds Lectures 2023-2024

OHSU Grand Rounds Topics and Speakers 2023-2024

“Driving Evaluation: When and How to Take Away the Keys”

Emily Morgan, M.D., February 5, 2024

“Recent Trends in Shoulder Arthroplasty”

Adam Mirarchi, M.D., Jan 29, 2024

“Osteochondral Allografts & Tissue Banking: An Evolving Therapeutic Option”

Dennis Crawford, M.D., Ph.D, Dec. 4, 2023

“Ankle Fractures: Making challenging injuries less difficult”

James Meeker, M.D., Oct. 30, 2023

“Holistic Review: A Way to Combat the Leaky Pipeline”

Sheri Gause, M.D., Oct 2, 2023

“Empowering Women in Orthopedics: Understanding Family Planning & Fertility Preservation”

Shanjean Lee, M.D., Aug. 21, 2023

“AOA Resident Leadership Forum Recap”

Laura Sokil, M.D. and Naomi Turner, M.D., July 31, 2023

“Surgical Management of Pelvic Bone Metastasis”

Duncan Ramsey, M.D., M.P.H., M.S., June 19, 2023

“A Deep Dive Into Distal Femur Fractures”

Graham DeKeyser, M.D., June 5, 2023

“The Role of a Multidisciplinary Approach to Complex Spine Care”

Jonathan Kark, M.D., May 1, 2023

“OASIS: What Is It and How Does It Apply to Orthopaedics and Rehabilitation?”

Lara Atwater, M.D., April 17, 2023

Available to view on <https://www.ohsu.edu/ortho/orthopaedic-grand-rounds-lecture-archive>

Resident and Teaching Awards

LEO S. LUCAS OUTSTANDING ORTHOPAEDIC EDUCATOR AWARD: Presented to the faculty member most instrumental in the development of future orthopaedic surgeons.

MORRIS HUGHES AWARD: Presented to the resident who best demonstrates concern for patients and for education of the next generation of physicians.

RESEARCH AWARD: Presented to the resident recognized for a commitment to the development, execution, and publication of original research during residency.

RODNEY BEALS AWARD: Awarded yearly by faculty to the best resident based on intelligence, quality of work, work ethic, and effect on the environment.

YEAR	LEO S. LUCAS	MORRIS HUGHES	RESEARCH AWARD	RODNEY BEALS AWARD
2007	Tom Ellis	Rob Tatsumi	Joseph Schenck	
2008	Dennis Crawford	Stephan Pro	Kate Deisseroth	
2009	Darin Friess	Stephan Pro	Khalid Shirzad	
2010	Amer Mirza	Gary Kegel Gregory Byrd	Patrick Denard	
2011	James Hayden	Jayne Hiratzka	Jayne Hiratzka Matthew Harrison	
2012	Jesse A. McCarron	Luke Rust	Dawson Brown Matthew McElvany	
2013	James Hayden	Laura Matsen Ko Jacqueline Munch	Adam Baker	
2014	Adam Mirarchi	Rich Myers	Trevor McIver	
2015	Kathryn Schabel	Dustin Larson	Alexander DeHaan	
2016	Paul Duwelius	Jacob Adams	Thomas Kowalik	
2017	Jacqueline Brady	Ryland Kagan	Michael Rose	
2018	Darin Friess	Dayton Opel	Derek Smith	Elizabeth Lieberman
2019	Kenneth Gundle	Elizabeth Lieberman	Shanjean Lee	Taylor Lara
2020	Yee-Cheen Doung	Taylor Lara	Duncan Ramsey	Loren Black
2021	Kenneth Gundle	Trevor Barronian	Sean Sterrenberg	Natalie Zusman
2022	Zachary Working	Natalie Zusman	Natalie Zusman Erik Woelber	Jamil Kendall
2023	Paul Duwelius	Connor Pihl	Jamil Kendall	Sarah Lindsay

Additional Award Recipients from OHSU's Department of Orthopaedics and Rehabilitation:

Drs. Kate Hutchison and **Mackenzie Kelly** were selected to attend the AOA Annual Resident Leadership Forum in 2024.

Dr. Sarah Rogers was recognized as the consult resident of the year by the Emergency Medicine Department. She was also appointed as OHSU's AAOS Resident Delegate.

Dr. Hutchison won an Orthopaedic Trauma Association Resident Research Grant for her work on the impact of anemia on endochondral ossification during clinical fracture healing.

Dr. Jacqueline Brady was selected as one of the new board members of Speak Up Ortho, an organization looking to raise awareness about and promote diversity in orthopedic training.

Dr. Naomi Tuner was named a board member of the International Geriatric Fracture Society.

Dr. Natasha McKibben won an Orthopaedic Trauma Association Resident Research Grant for her project "Consequences of anemia on fracture healing biology and callus strength in a murine model."



OHSU Orthopaedic Program Alumni Directory

GRADUATE	FELLOWSHIP TRAINING	CURRENT PRACTICE LOCATION
2023		
Loren Black	Orthopaedic Trauma - Harborview Medical Center, Seattle, WA	
Derek Bond	Hand, Upper extremity and Microvascular - University of California Davis	
Elliott Cole	Sports Medicine and Shoulder Fellowship - University of California San Francisco (UCSF)	
Jamil Kendall	Adult Reconstruction - Midwest Orthopedics at Rush University	
Connor Pihl	Hand & Upper Extremity - OHSU, Portland, OR	
2022		
Sam Cheesman	Hand - University of New Mexico, Albuquerque, NM	Regenerative Orthopedic Center, Portland, OR
Ryan Hadden	Hand and Upper Extremity - Brown University, Providence, RI	Olympia Orthopaedic Associates, Olympia, WA
Sam Moulton	Sports Medicine & Shoulder - University of California San Francisco, San Francisco, CA	Proliance Orthopaedics and Sports Medicine, Greater Seattle Area, WA
Erik Woelber	Adult Reconstruction - Rothman Orthopaedic Institute, Philadelphia, PA	Juneau Bone and Joint Center, Juneau, AK
Natalie Zusman	Pediatric Orthopedics - Children's Hospital Los Angeles, Los Angeles, CA	Kaiser Permanente, Portland OR
2021		
Torgom Abraamyan	Sports Medicine - Southern California Orthopaedic Institute, Van Nuys, CA	Kaiser Permanente, Woodland Hills, CA
Trevor Barronian	Total Joint Arthroplasty - Rothman South Jersey, Atlantic City, NJ	Olympia Orthopaedic Associates, Olympia, WA
Jason Laurita	Adult Reconstructive Surgery - Houston Methodist Hospital, Houston, TX	Sterling Ridge Orthopaedics & Sports Medicine, Houston, TX
Michael Robbins	Hand/Upper Extremity - University of Utah, Salt Lake City, UT	Orthopedic Associates of Northern California, Chico, CA
Sean Sterrenberg	Arthroplasty - Reno Orthopedic Clinic, Reno, NV	CHRISTUS St. Vincent Orthopedic Specialty Clinic, Santa Fe, NM
2020		
Nikolas Baksh	Spine - New York University, New York, NY; Orthopaedic Oncology - Memorial Sloan Kettering Cancer Center, New York, NY	Loyola University Medical Center, Maywood, IL
Taylor Lara	Adult Reconstruction - Florida Orthopaedic Institute, Tampa, FL	Saint Alphonsus, Boise, ID
David Putnam	Adult Reconstruction - OHSU, Portland, OR	Kaiser Permanente, Hillsboro, OR
Duncan Ramsey	Orthopaedic Oncology - Massachusetts General Hospital, Boston, MA	Oregon Health & Science University, Portland, OR
Grant Sun	Foot and Ankle - Baylor University, Dallas, TX	The Orthopaedic Specialty Clinic at TOSH, Salt Lake City, UT
2019		
Courtney Bell	Adult Reconstruction - Rothman Institute, Egg Harbor Township, NJ	Neuroscience and Spine Associates (NASA), Naples, FL
Shanjuan Lee		VA Sierra Nevada healthcare System, Reno, NV
Elizabeth Lieberman	Adult Reconstruction - Washington University, St. Louis, MO	Orthopedic + Fracture Specialists, Portland, OR
Peters Otlans	Sports Medicine - Jefferson University, Philadelphia, PA	Proliance Southwest Seattle Orthopedics, Burien, WA
Travis Phillipp	Spine - New York University, New York, NY	Oregon Health & Science University, Portland, OR
2018		
Hannah Aultman	Hand & Upper Extremity - University of Chicago, Chicago, IL	Orthopedic & Fracture Specialists, Portland, OR
Karlee Lau	Hand & Upper Extremity - University of Alabama, Birmingham, AL	University of Alabama, Birmingham, AL
Dayton Opel	Hand & Upper Extremity - Cleveland Clinic, Cleveland, OH	Orthopedic & Spine Centers of WI, Madison, WI
Derek Smith	Hand Surgery - Mary S. Stern, Cincinnati, OH	Desert Orthopedics, Bend, OR
Benjamin Winston	Arthroplasty - Tahoe Reno Orthopedic Clinic, NV	Kaiser Permanente, Hillsboro, OR
2017		
John Cox	Adult Reconstruction - Scripps Health, San Diego, CA	Kaiser Permanente, Antioch, CA
Ryland Kagan	Adult Hip and Knee Reconstruction and Hip Preservation - University of Utah, Salt Lake City, UT	Oregon Health & Science University, Portland, OR
Joseph Langston	Adult Reconstruction - Melbourne Orthopaedic Group, Melbourne, Australia	Kaiser Permanente, Lone Tree, CO
Michael Rose	Sports Medicine - Steadman Hawkins Clinic, Denver, CO	The CORE Institute, Phoenix, AZ
Ryan Wallenberg	Orthopedics - St. Vincent Hospital, Portland, OR	VA Portland Health Care System, Portland, OR

GRADUATE		FELLOWSHIP TRAINING	CURRENT PRACTICE LOCATION
2016			
Jake Adams	Adult Reconstruction – Mayo Clinic, Scottsdale, AZ	Integrated Surgical Services, Phoenix, AZ	
Kirsten Jansen	Adult Reconstruction – Indiana University, Indianapolis, IN	VA, St. Louis Healthcare System, Saint Louis, MO	
Tom Kowalik	Trauma & Adult Reconstruction – Orthopedic + Fracture Specialists, Portland, OR and Sydney Australia Arthroplasty & Trauma	OHSU Hillsboro Medical Center, Hillsboro, OR	
Jared Mahylis	Shoulder & Elbow – Cleveland Clinic, Cleveland, OH	Henry Ford Health System, Detroit, MI	
Farbod Rastegar	Spine – Cleveland, Cleveland, OH	Cincinnati Elite Orthopaedic and Spine, Cincinnati, OH	
2015			
Alex DeHaan	Adult Reconstruction – Tahoe Reno Arthroplasty, Reno, NV	Orthopedic + Fracture Specialists, Portland, OR	
Troy Miles	Adult Reconstruction – UC Davis, Davis, CA	Shasta Orthopaedics, Redding, CA	
Dustin Larson	Hand and Upper Extremity – University of New Mexico, Albuquerque, NM	Olympic Medical Physicians Orthopaedic Clinic, Port Angeles, WA	
Vivek Natarajan	Pediatrics – Childrens Hospital of Pittsburgh, PA; Spine – Oregon Health & Science University, Portland, OR	Institute For Orthopaedics and Neurosciences, Roanoke, VA	
John Seddon	Foot & Ankle – Melbourne Orthopaedic Group, Melbourne, Australia	UCHealth Orthopaedics Clinic - Briargate, Colorado Springs, CO	
2014			
Zachary Domont	Sports Medicine – University of Pennsylvania, Philadelphia, PA	Advocate Medical Group, Lincolnshire, IL	
Jia-Wei Kevin Ko	Shoulder & Elbow – The Rothman Institute, Philadelphia, PA	SEATTLE Joint Surgeons, Seattle, WA	
Trevor McIver	Spine – Spine Institute of Arizona, Scottsdale, AZ	St. Cloud Orthopedics, Sartell, MN	
Richard Myers	Trauma – R Adams Cowley Shock Trauma Center, Baltimore, MD	Sentara Orthopaedic Trauma Specialists, Norfolk, VA	
Brent Roster	Foot & Ankle – University of California Davis Medical Center, Sacramento, CA	Missoula Bone & Joint, Missoula, MT	
2013			
Adam Baker	Foot & Ankle – Northwest Orthopedic Specialists, Portland, OR	Kaiser Permanente, Hillsboro, OR	
Michael Kuhne	Trauma – Orthopedic Trauma Institute (UCSF), San Francisco, CA	Enloe Medical Center, Chico, CA	
Laura Matsen Ko	Adult Reconstruction – The Rothman Institute, Philadelphia, PA; Adult Reconstruction and Trauma – Providence St. Vincent, Portland, OR	SEATTLE Joint Surgeons, Seattle, WA	
Jacqueline Brady (Munch)	Shoulder Surgery, Sports Medicine – Hospital for Special Surgery, New York, NY	Oregon Health & Science University, Portland, OR	
Daniel Wiekig	Foot & Ankle – Melbourne Orthopaedic Group, Melbourne, Australia	Southern Oregon Orthopedics, Grants Pass, OR	
2012			
Dawson Brown	Sports Medicine – Southern California Orthopedic Institute, Van Nuys, CA	WestSound Orthopedics, Silverdale, WA	
Peter Fredericks	Trauma – Indiana Orthopedic Hospital (OrthoIndy), Indianapolis, IN	UCHealth, Colorado Springs, CO	
Matthew McElvany	Shoulder & Elbow – University of Washington, Seattle, WA	Kaiser Permanente, Santa Rosa, CA	
Cuchulain Luke Rust	Foot & Ankle – Orthopaedic Associates of Michigan, Grand Rapids, MI	Rebound Orthopedics, Vancouver, WA	
2011			
Matthew Harrison	Foot & Ankle – Oakland Bone & Joint Specialist Clinic, Oakland, CA; Middlemore Hospital, Auckland, New Zealand	Alta Orthopedics, Santa Barbara, CA	
Jayne Hiratzka	Spine – University of Utah, Salt Lake City, UT	Southern Oregon Orthopedics, Medford, OR	
Jackson Jones	Adult Reconstruction – Harvard Medical School's Brigham and Women's Hospital, Boston, MA	Reno Orthopedic Clinic, Reno, NV	
2010			
Matthew Bradley		St. Louis Spine and Orthopedic, Town & Country, MO	
Gregory Byrd	Hand – Beth Israel Deaconess Medical Center, Boston, MA	Olympia Orthopaedic Associates, Olympia, WA	
Adam Cabalo	Spine – Spine Care Medical Group, Daly City, CA	Southern Oregon Orthopedics, Medford, OR	
Patrick Denard	Shoulder – Centre Orthopédique Santy, Lyon, France and San Antonio Orthopaedic Group, San Antonio, TX	Southern Oregon Orthopedics, Medford, OR	
Gary Kegel	Hand – St. Luke's-Roosevelt Hospital Center, New York, NY	Kaiser Permanente – Capital Hill, Seattle, WA	

GRADUATE		FELLOWSHIP TRAINING	CURRENT PRACTICE LOCATION
2009			
Stephan Prô	Sports Medicine – Santa Monica Orthopaedic and Sports Medicine Group, Santa Monica, CA	OrthoKansas, University of Kansas Health System, Lawrence, KS	
Khalid Shirzad	Foot & Ankle – Duke University, Durham, NC	Northwest Orthopaedic Specialists, Spokane, WA	
Abner Ward	Hand – SUNY Stony Brook; Sports Medicine – Southern CA Center for Sports Medicine, Long Beach, CA; Shoulder & Elbow – Alps Surgery Institute, Anney, France; Shoulder & Elbow – Schulthess Klinik, Zurich, Switzerland	Yosemite Bone and Joint, Inc., Merced, Turlock, Modesto, and Manteca, CA	
2008			
Kate Deisseroth		VA Medical Center, Lebanon, PA	
Andy Kranenburg	Spine – San Francisco Spine Institute, San Francisco, CA	Southern Oregon Orthopedics, Medford, OR	
Kenna Larsen	Hand – University of New Mexico, Albuquerque, NM	Tanner Clinic, East Layton, UT	
2007			
William Magee	Sports Medicine – TRIA Orthopaedic Center, University of Minnesota, Minneapolis, MN	Providence Northeast Washington Medical Group, Colville, WA	
J. Rafe Sales	Spine – San Francisco Spine Institute, San Francisco, CA	Summit Spine, Portland, OR	
Joseph Schenck	Sports Medicine – Perth Orthopaedic Sports Medicine Clinic, Perth, Australia and Arthroscopic Surgery and Computer Navigated Total Joint Arthroplasty – Sir Charles Gairdner Hospital, Nedlands, Western Australia	Oregon Surgical Institute, Portland, OR	
Robert Tatsumi	Spine – LA Spine Institute, Santa Monica, CA	Oregon Spine Care, Portland, OR	
2006			
Catherine Humphrey	Trauma – Vanderbilt University, Nashville, TN	University of Rochester, Rochester, NY	
Amer Mirza	Trauma – Harborview Medical Center, Seattle, WA	Summit Orthopaedics, Portland, OR	
Mark Wagner		Orthopedics Northwest, Portland, OR	
2005			
Patrick Dawson	Upper Extremity and Sports Medicine – Congress Medical Associates, Pasadena, CA	Cascade Orthopaedic Group, Tualatin, OR	
Suresh Kasaraneni		Scott Memorial Hospital, Scottsburg, IN	
Christopher Untch	Davis Monthan Air Force Base, Tucson, AZ	Arizona Orthopedics, Tucson, AZ	
Corey Vande Zandschulp	Trauma – OrthoIndy, Indianapolis, IN	Summit Orthopaedics, Portland, OR	
2004			
Benjamin Kam		Kinetic Orthopedics, Colorado Springs, CO	
Britton Frome (Polzin)	Hand – University of Texas Southwestern, Dallas, TX	Summit Orthopaedics, Portland, OR	
2003			
Jennifer Miller	Sports Medicine – Congress Medical Associates, Pasadena, CA	Idaho Sports Medicine Institute, Boise, ID	
John (Jeb) Reid	Sports Medicine – Taos Orthopaedic Institute, Taos, NM	Asante Orthopedic Surgery and Sports Medicine, Ashland, OR	
Eric Shepherd	Trauma – UC Davis Medical Center and Auckland City Hospital, NZ	Santa Barbara Orthopedic Associates, Santa Barbara, CA	
2002			
Michael Binnette	Spine – University of Washington, Seattle, WA	Maine Medical Partners, Scarborough, ME	
Kevin Kahn	Trauma – Vanderbilt University, Nashville, TN and Universitatsspital, Zurich, Switzerland	Rebound Orthopedics, Vancouver, WA	
Tamara Simpson	Trauma – Orthopedic Trauma Institute (UCSF), San Francisco, CA and Hennepin Medical Center, Minneapolis, MN	Cascade Orthopaedic Group, Tualatin, OR	
2001			
Michael Gustavel	Sports Medicine – San Diego Arthroscopy and Sports Medicine, San Diego, CA	Gustavel Orthopedics, Boise, ID	
James Hayden	Oncology – Massachusetts General Hospital, Boston, MA	Oregon Health & Science University, Portland, OR	
Todd Ulmer	Sports Medicine – University of Washington, Seattle, WA	Adventist Health Orthopedic Clinic, Portland, OR	
2000			
Mark Metzger	Joint, Spine & Tumor – Harvard Medical School, Boston, MA		
Lorenzo Pacelli	Hand & Microvascular Surgery – Hand Center, San Antonio, TX	Scripps Clinic Torrey Pines, La Jolla, CA	
Edward Perez	Trauma – R. Adams Cowley Shock Trauma Center, Baltimore, MD	Broward Health, Fort Lauderdale, FL	

GRADUATE		FELLOWSHIP TRAINING	CURRENT PRACTICE LOCATION
1999			
Anthony I. Colorito	Sports Medicine – Cincinnati Sports Medicine and Orthopedic, Cincinnati, OH		
John M. Kioschos	Shoulder and Elbow Surgery – Florida Orthopaedic Institute, Tampa, FL		
Jill A. Rider-Graves			
1998			
John D. Curtis			Medical West Orthopedics, Bessemer, AL
Darrin F. Eakins	Sports Medicine and Knee – Royal N Shore Hospital, Sydney, Australia		
Ronald D. Wobig	Sports Medicine and Knee – Louisiana State University, Lake Charles, LA		Beaver Sports Medicine, Corvallis, OR
1997			
Dennis J. Davin			
Kevin M. Lee			Upper Valley Orthopedics, Rexburg, ID
Ronald L. Teed			
1996			
Knute C. Buehler	Lower Extremity Reconstruction – Scripps Clinic and Research Foundation, San Diego, CA		The Center Orthopedic & Neurosurgical Care, Bend, OR
Thomas J. Croy			Providence Newberg Specialty Clinic, Newberg, OR
Marc R. Davidson	Sports Medicine – The Hughston Clinic, Columbus, GA		Advantage Orthopedic and Sports Medicine
1995			
Douglas R. Bagge			Cortez Orthopedics, Cortez, CO
Robert A. Foster	Hand and Microvascular Surgery – University of Minnesota, Minneapolis, MN		Texas Orthopedics Sports & Rehabilitation Associates, Austin, TX
Gregory A. Voit	Hand and Microvascular Surgery – University of New Mexico, Albuquerque, NM		
1994			
Robert J. Grondel	Sports Medicine and Shoulder – Mississippi Orthopaedic & Sports Medicine Clinic; Trauma – Emanuel Hospital, Portland, OR		Orthopaedic Institute of Henderson, Henderson, NV
Allen L. Hershey	Lower Extremity Reconstruction – Scripps Clinic and Research Foundation, San Diego, CA		Precision Orthopedics and Sports Medicine, Salinas, CA
Brian J. Padrta	Foot and Ankle – Florida; Orthopaedic Institute, University of South Florida, Tampa, FL		Northwest Orthopaedic Specialists, Spokane, WA
Mark R. Rangitsch			Cheyenne Orthopaedics, Cheyenne, WY
1993			
Blaine A. Markee			
Dean K. Olsen			TRIA Orthopedics Burnsville, Burnsville, MN
Andrew H. Schmidt	Adult Reconstruction – Hennepin County Medical Hospital, Minneapolis, MN		Hennepin County Medical Center, Minneapolis, MN
1992			
Edward C. Pino	Sports Medicine – Cincinnati Sports Medicine, Cincinnati, OH; Foot and Ankle – Michigan International Foot and Ankle Center, Detroit, MI		Kaiser Permanente, Denver, CO
Stephen S. Tower			Alaskan Arthroplasty Initiative, Anchorage, AK
Michael R. Van Allen	Hand and Microsurgery – University of Alabama, Birmingham, AL		South Portland Surgical Center, Tualatin, OR
1991			
Ronald R. Bowman			Northwest Extremity Specialists, Tigard, OR
William H. Dickinson			
Richard A. Rubinstein	Methodist Sports Medicine Center, Indianapolis, IN		The Oregon Clinic, Portland, OR
1990			
Gregory T. Bigler	Sports Medicine and Arthroscopy – Harvard Medical School, Massachusetts General Hospital, Boston, MA		Knee and Shoulder Institute, Las Vegas, NV
Adrian B. Ryan			Alaska Fracture & Orthopedic Clinic, Anchorage, AK
Theodore S. Woll	Foot and Ankle – University of Washington, Seattle, WA		Rebound Orthopedics, Vancouver, WA

1989
James R. Hazel
Asa E. Stockton
Keith J. Ure
Robert G. Zirschky

1988
John D. DiPaola
Jeffrey E. Flemming
Morris Hughes
Michael B. Wyman

1987
Dale G. Bramlet
Scott B. Jones
Stefan D. Tarlow

1986
Mark J. Buehler
Wendell D. Ferguson
Paul A. Switlyk

1985
Stanley J. Neitling
Daniel N. Ovardia

1984
Steven J. Bruce
Kenneth A. Hermens
Wendy M. Hughes

1983
Michael J. Grundy
Paul J. Mills
John C. Schwartz

1982
Julie Isaacson
James D. Livermore
John S. Toohey

1981
Christopher A. Blake
Wayne K. Nadamoto
Samuel K. Tabet

1980
Lenart C. Ceder
Jonathan H. Hoppert
Robert W. Jordan

1979
Brian Laycoe
Donald Peterson
James Robbins

1978
Lyle Mason
Edgar K. Ragsdale
Enoch D. Shaw

1977
David L. Noall
Byron K. Skubi
Robert K. Smith
Theodore J. Vigeland

1976
Wayne C. Kaesche
Walter A. Smith
Stephen J. Thomas

1975
Randy W. Crenshaw
John O. Hayhurst
Patrick T. Keenan
Kelsey C. Peterson
Ned R. Schroeder

1974
Thomas W. Hutchinson
Robert J. Porter
Frederick L. Surbaugh

1973
James L. Baldwin
David A. Haaland
Craig MacCloskey

1972
Michael S. Hmura
Grant D. Lawton
Michael R. Marble

1971
Charles B. Bird
Robert G. Chuinard
Jim Dineen
Ilmar O. Soot

1970
Philip J. Fagan
Robert J. Foster
Art Hauge
Edwin A. Kayser
Gerald T. Lisac
Ira M. Yount

1969
Thomas E. Fagan
Michael H. Graham
George W. Ingham
Joseph P. Klein
Scott Struckman

1968
Benjamin F. Balme
James D. Kunzman
James D. Nelson
Frederick D. Wade

1967
Michael S. Baskin
John W. Gilsdorf
John W. Thompson

1966
Charles A. Bonnett
McGregor L. Church
Don D'Amico
Fred G. Grewe
Howard E. Johnson

1965
Arthur L. Eckhardt
John Hazel
Richard L. Mercer

1964
Robert F. Corrigan
Richard C. Zimmerman

1963
Donn K. McIntosh
Michael R. Rask

1962
Phaen Gambie
Norman D. Logan
Keith A. Taylor

1961
Rodney K. Beals
Thomas A. Edwards
George Keyes
Ralph E. Peterson

1960
Charles A. Fagan
Calvin H. Kiest
Betty J. Hohmann
Robert W. Straumfjord
Bud Yost

1959
Raymond A. Case
James V. Harber

1958
Richard G. Gardner
William D. Guyer

1957
Hadley F. Fitch
Richard S. Gilbert

1956
William E. Hummel
Joseph R. McProuty
Jack B. Watkins

1955
Edward A. Attix
Max M. Bocek

1954
Howard I. Popnoe
Dale D. Popp

1953
Donald D. Smith

1952
Melvin L. Makower

1951
Bob Maris
William E. Snell
James W. Weed

1950
Ralph Thompson

1949
Howard Cherry
Boyd G. Holbrook
Richard J. Hopkins

1948
Robert F. Anderson
George W. Cottrell
Carl L. Holm

1947
Edward A. LeBold

1946
William P. Horton
Clyde D. Platner
Faulkner A. Short

1945
Joseph H. Gill

1943
Paul G. Hafner

1942
Rodney Begg
Harold E. Davis

1940
Leslie S. Porter

1938
Arthur M. Compton

1935
E.G. Chuinard

1931
Harry Leavitt

1929
D.G. Leavitt

1928
Leslie C. Mitchell

1925
John LeCocq

1924
Leo S. Lucas



TORGOM ABRAAMYAN, MD

Post graduation training: Sports medicine and arthroscopy, Southern California Orthopedic Institute

Where are you working now?

Kaiser Permanente in Woodland Hills, CA. General orthopedics, mainly sports and trauma.

Any personal updates?

Me, my wife Arpine and our shih tzu Ponchik still going strong.

Any reflections on OHSU now that you are out in the real world?

Definitely appreciate the well rounded experience and all of our great staff. Paying attention helps too in retrospect. You never know what your practice is going to look like. For example I didn't think I would be doing pediatric trauma like pinning supracondylars and both bones but here we are.

Alumni Updates: Class of 2021



TREVOR BARRONIAN, MD

Post graduation training: Rothman Adult Reconstruction Fellowship (South Jersey)

Where are you working now?

Olympia Orthopaedic Associates (Olympia, Washington)

What kind of practice do you have?

Private practice in Adult Reconstruction

Any personal updates?

Following graduation we moved across country to New Jersey and then back to Washington. After returning to Washington we welcomed Everly into our family which has been an enjoyable adjustment.

Any reflections on OHSU now that you are out in the real world?

I look back on my time at OHSU both as a resident and medical student fondly. Now more than ever I appreciate all the guidance and training received there even including the late nights and early mornings. Without it I wouldn't be where I am today.

Alumni Updates: Class of 2021



JASON LAURITA, MD

Post graduation training:

Adult Reconstruction, Houston Methodist Hospital

Where are you working now?

I am in private practice with Sterling Ridge Orthopedics doing mostly hip and knee replacement in North Houston.

Any personal updates?

My wife Samantha is surviving her penultimate year of Gyn-Onc fellowship at MD Anderson. Our daughter Maggie Rae is growing like a weed, and I'm pretty sure she's smarter than me. She certainly bosses me around as if she is...all in all, life is good!

Any reflections on OHSU now that you are out in the real world?

I certainly appreciate the training I got at OHSU - in reflecting back, I think I got great surgical experience with surgeons who really cared, and the first couple of years of attendinghood have been less intimidating since I pretty much saw it all at least once before! Sam and I miss Portland so much, and have several visits planned - hit me up if you want to grab a beer!



MICHAEL ROBBINS, MD

Post graduation training: *University of Utah - Hand and Upper Extremity Surgery*

When the five years of training at OHSU came to a close, my family of 5 packed up and headed out to Salt Lake City for fellowship training at the University of Utah in Hand and Upper Extremity. This was an outstanding year of training and growth both personally and as a surgeon. The variety and complexity of cases was outstanding. I am grateful for the mentorship and friendships formed in my time there with the faculty, co-fellows, and residents. We were also able to explore many of the national parks and world class ski resorts while there and my kids had a blast learning how to snowboard. My amazing wife, Brandee, began homeschooling our 3 kids (Kai, Brayden, and Natalee) during residency and into fellowship, so they were able to make snowboarding their regular Physical Education activity. It is now their favorite activity.

After fellowship, we returned back to northern California where I grew up, and I joined an outstanding group of 10 orthopedic surgeons in the town of Chico. My partners here have been incredibly supportive in navigating the stresses and complexity of early practice, which is truly a unique and challenging time in this career. My practice is predominantly hand and upper extremity with general orthopedics mixed in, including fracture care, arthroscopy, and arthroplasty. I have felt well equipped to enter this challenging and rewarding career of musculoskeletal care with the skills and guidance obtained during the many years of training at OHSU and at the UofU.

On a personal note, it has been great to be back close to family where my kids can play with their cousins and family BBQ's are a regular occurrence. Most of my extended family has now rebuilt and settled back in Paradise after the Camp fire. Some of them finished rebuilding as recently as this year, and are glad to finally be back in their homes. On weekends off, we enjoy getting away Tahoe for snow sports or getting out to enjoy the endless other outdoor activities available here in Northern California.

I am truly grateful for the outstanding training and mentorship I received during my time at OHSU, which laid the foundation for me to become an empathetic and knowledgeable surgeon, and provided the tools to tackle all types of orthopedic pathology. From the top down, this program is outstanding. The faculty care about resident education and the camaraderie and work ethic between residents is strong. I believe that we all stand on the shoulders of giants, and I am grateful to the amazing attendings who took the time to pour into me personally and helped shape me into the surgeon I am today. I will always look back on my time at OHSU with fondness and gratitude.



SEAN STERREBERG, MD

Post graduation training: Hip and Knee Adult Reconstruction, Reno Orthopedic Clinic, Reno, NV

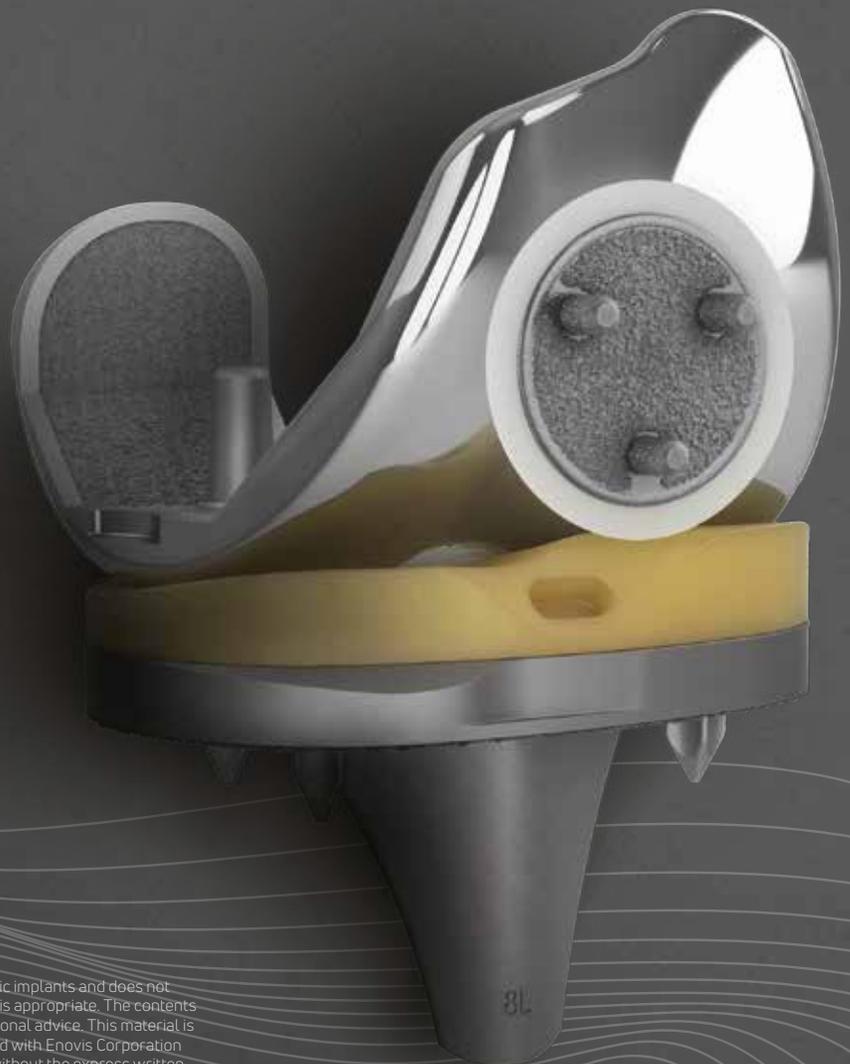
Following graduation from fellowship, I was lucky enough spend a month surfing the warm waves in Bali, Indonesia (a lifetime dream of mine) before relocating to Santa Fe, New Mexico with my fiancé Kaitlyn. Since starting my career, I have worked out of a community hospital and my practice is focused on primary and revision hip and knee joint arthroplasty. Because the hospital is a level 3 trauma center with a large catchment area, I also have the privilege to offer peri-prosthetic fracture care in an acute setting as a member of the orthopedic trauma team. I've been fortunate to be surrounded by extremely supportive partners and have one senior fellowship trained arthroplasty surgeon who has become an invaluable mentor to me.

I feel extremely grateful for my training at OHSU, and now having been in practice for a year and half can truly appreciate the high level of excellence the training program and all my mentors there provided. Outside of the hospital, and despite there being any surf here, Kaitlyn and I continue to enjoy the outdoors, hiking, skiing, and have recently taken up golf which we both enjoy. We are expecting a baby girl in August.

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1. Koo, S. and Andriacchi, T. "The knee joint center of rotation is predominantly on the lateral side during normal walking." *Journal of biomechanics* vol. 41:6 (2008): 1269-73.
2. Meneghini, R. M., Deckard, E. R., Ishmael, M. K., & Ziemba-Davis, M. (2017). A dual-pivot-pattern simulating native knee kinematics optimizes functional outcomes after total knee arthroplasty. *The Journal of Arthroplasty*, 32(10), 3009-3015. <https://doi.org/10.1016/j.arth.2017.04.050>
3. Sandberg, Rory, et al. "Dual-pivot bearings improve ambulation and promote increased activity levels in Total knee arthroplasty: A match-controlled retrospective study." *The Knee* 26.6 (2019): 1243-1249.

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Just for Fun



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For further inquiries, please contact Tim Coffey, Senior Director of Development, OHSU Foundation Phone: (503) 901-6100, Email: coffeyt@ohsu.edu

Special Thanks

A special thank you to Robin Sasaoka (Education Manager) and Tatianna Jefferson (Administrative Coordinator) for all their help in keeping the residency and educational programs going. Rebecca Smith, Orthopaedic Surgery & Rehabilitation Research Manager, also deserves special mention as a key part of making the logistics of research studies at OHSU a reality, as well as being a resource to faculty and residents alike.

This year, we would like to extend a special thank you to our medical student editors. They were instrumental in shaping the direction of this year's issue and took on challenges with positivity, creativity, and a diligent work ethic. Thank you for your excellent work!



Faris Fazal



Colin Lipps



Andrew Sauer

This journal would not be possible without assistance from Pete Dahlgren, Digital Content at OHSU, for his assistance with content, planning and logistics as well as Lia Miternique, graphic designer (Avice Design) for design and layout of the journal. Thank you for all of your help!

