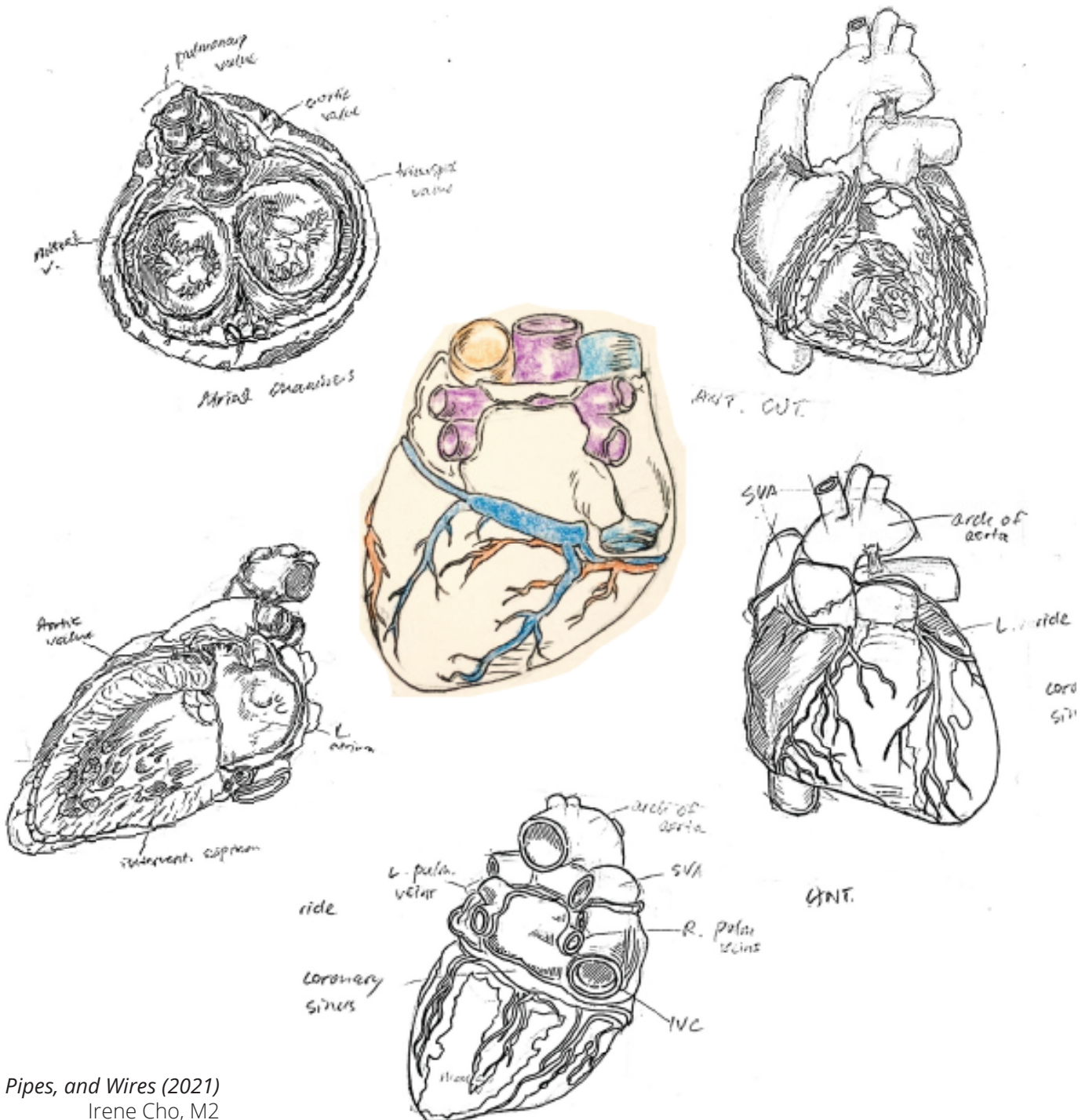


# MUSCULOSKELETAL MATTERS

SUMMER 2021

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# A PILOT IN THE SKY AND THE OPERATING ROOM: AN INTERVIEW WITH DR. THOMAS BOWEN

MIRA PATEL, M2

Passion, devotion, and excitement: some of the characteristic traits that were readily evident in our brief interview with Dr. Thomas Bowen. As the only orthopedic oncologist in the Geisinger system, Dr. Bowen has committed his career to caring for the unique needs of orthopedic oncology patients in our community. He tells of his path into medicine and orthopedics and passes on some encouraging words for our medical student readers.

Dr. Bowen completed his residency at Geisinger, coming to really love the community and love the people here over the five years. When an oncologist retired during his tenure, he could see that this left a gap in optimal orthopedic oncology care for residents of Pennsylvania. Dr. Bowen went on to complete his fellowship at Massachusetts General Hospital in Boston. Seeing the saturation of orthopedic oncologists in Boston reminded him of the real need for subspecialty people in places like Central Pennsylvania and Northeast Pennsylvania.

For the patients who previously might have had to travel to cities like Philadelphia and Pittsburgh for oncology care, Dr. Bowen has built a vibrant practice in Danville. He is meeting the needs of our community and changing the lives of his patients along the way.

Dr. Bowen continues to be excited about his practice every day. The process of making a diagnosis of a malignant tumor, understanding it, and going through the stages and treatment with a family; the process of being the doctor throughout this episode of care is, as Dr. Bowen describes it, “meaningful and very, very addicting. I don’t know, intoxicating, like it’s worth doing.”

One of the unique aspects of orthopedic oncology, as it differs from other subspecialties is the follow of patient care over time. Starting with a biopsy and diagnosis, Dr. Bowen might start preoperative radiation, which would be a month and a half or so. Then he would do the surgery to remove the tumor, with the patient spending three to five days in the hospital. But then he’d start a process of surveillance. For something like a high-grade sarcoma, he might see a patient every three months for a year, quarterly for the first year. Then he would see them every four months in the second year, and every six months



What you’re  
doing matters.  
And the real  
test is coming.



after the five years. Then, depending on the sarcoma and risk of late recurrence, he would see a patient yearly, for up to 10 years.

Throughout this follow-up care, Dr. Bowen sees patients for many years. He gets to know their families; and he has even seen his patients get married and have children. And in this way, he really gets to see it all. At times, Dr. Bowen becomes the team doctor for the medical oncology program, coordinating the care of different specialties to ensure the patient’s needs are met.

With growth of effective cancer treatments over the past twenty years, Dr. Bowen has seen the successes in oncology and has “seen lives change and people live better than ever before.” Dr. Bowen is excited to follow this growth in healthcare in the coming years along with the growth of his practice in Danville.

Outside of his work in the clinic and operating room, Dr. Bowen is usually planning his next flying trip. As a private pilot, he owns a small, single-engine, piston airplane. “I like how you can plan for it. And it can be predictable.” He describes flying as learning to play an instrument: once you learn it you can do it the same way every time. For a few hours he can enjoy some time by himself with the engine droning. Like his passion for serving the people of NEPA, this passion for planes is one of many years. Dr. Bowen got his pilot’s license in high school and since has flown as far as places like Nassau, Miami, and New Orleans.

Dr. Bowen’s service to his patients and the people of NEPA will leave a lasting legacy at Geisinger. However, he shares some lasting words for our medical school readers: “What you’re doing matters. And the real test is coming. There’s a patient out there who doesn’t know you and you don’t know them. But they’re relying on you to know something 10 years from now, when they show up in your office. And it’s a real pleasure to ace that test. Yeah, you have to work for the grade. And that gets a little dark and bitter sometimes, but there’s actually a much, much more fulfilling, meaningful test coming and that’s the one you want.”

## VOLUNTEER OPPORTUNITIES: REACH-HEI

Regional Education Academy for Careers in Health- Higher Education Initiative (REACH-HEI) is an out-of-school program for grade school students in northeastern and central Pennsylvania focused on leadership and mentoring oriented towards careers in health professions. Many of the 700 participants are first-generation to college, with a high degree of attrition to medical school and beyond. In November of last year, the Pennsylvania Department of Education named REACH HEI a "Best Practice" program in the state. REACH-HEI is currently seeking virtual programming for students, such as an engaging slideshow about musculoskeletal topics, to garner interest in and foster exposure to the plethora of health-related professions available to them.

To get involved or if you have any questions, please reach out to Maureen Murtha at 570-504-9072 or [mmurtha@som.geisinger.edu](mailto:mmurtha@som.geisinger.edu).



### REACH-HEI

Regional Education Academy for Careers in Health - Higher Education Initiative

## ST. JOSEPH'S CENTER: FIELD DAY PLANNING COMMITTEE

GCSOM Student Musculoskeletal Society will be hosting a Field Day (games, BBQ, arts and crafts) for the St. Joseph's Center residents at their Pavilion in Dunmore in August or September. St. Joe's Center provides individuals and families who have special needs the opportunity to develop their abilities through in house living programs. We are looking for 4 to 5 students to join the planning committee. Service hours will be earned for planning and attending the event.

If you are interested in getting involved, please reach out to GCSOM Student Musculoskeletal Society Service Chair Alexia Gagliardi at [agagliardi@som.geisinger.edu](mailto:agagliardi@som.geisinger.edu).



## AMWA: GIRL'S DAY IN SCIENCE

GCSOM Student Musculoskeletal Society will be hosting a Casting Clinic for participants in the AMWA Girl's Day in Science. The event will take place at Geisinger Commonwealth School of Medicine on Saturday, October 9, 2021, from 9am-3pm. Girl's Day in Science provides school-aged girls the opportunity to explore health related science topics through hands-on activities. Service hours will be earned for this event.

If you are interested in getting involved with AMWA, please reach out to GCSOM Student Musculoskeletal Society Service Chair Alexia Gagliardi at [agagliardi@som.geisinger.edu](mailto:agagliardi@som.geisinger.edu). Please note that this opportunity is for women only.



# TALK TO PATIENTS IN LANGUAGE THEY UNDERSTAND

LISA FRIEDMAN, MD

Marie (name and details changed) was an elderly and frail patient with extremely poor bone quality, who had had previously undergone successful surgery for periprosthetic fractures about both her total hip arthroplasty and total knee arthroplasty. However, these prior surgeries required rigid fixation that resulted in a stress riser, and she was now presenting with a fracture of her midshaft femur. Her poor health and eggshell-like bone cortices made it unclear what to do next. A total femur replacement was raised as an option to treat the fracture, but it seemed unlikely she would survive the operation. I was on call on a Saturday as she waited on the floor for the team to come up with a plan.

Throughout my busy call day, the nurses paged me with updates on Marie. Marie was refusing being turned. Marie was refusing to eat. Marie kicked the physical therapist out of her room. Marie was refusing vitals. An onslaught of reducing fractures and ruling out septic joints had allowed me little chance to do much but take note. Marie was going to have to wait.

Finally, a page that Marie had begun refusing to communicate with nursing reached me right as I had a lull in consults. I had never met Marie before—I had only heard about her in conference—so I quickly perused her chart to remind myself of our plan and ascertain why she might not be cooperating. Many clicks later, my memory was confirmed. We had no plan. But I did glean a piece of information in history that I thought might be helpful.

“Marie?” I said, entering the patient’s room. “**Vous êtes de France? Quelle partie?**” (You’re from France? Which part?). I pulled up a chair next to Marie. It felt good to sit down.

Marie looked up at me and smiled. “**Je suis née en Normandie.**” (I was born in Normandy).

“**Normandie?**” What luck! In Middle School everyone in my French class had been assigned a region of France to research and about which to give an oral report to class, and I had been randomly assigned Normandy, giving me a considerable amount of trivial knowledge of the region in Northern France. “**I hear the apples there are very good.**”

“**You are familiar with Normandy?**” Marie asked. She leaned forward and took a bite of her lunch that was growing cold on the tray in front of her.

“**I have read a little bit about it.**”

Marie and I sat together and talked. She told me what it was like being a little girl during the Normandy landings in 1944. I told her about how my father, as a young Jewish boy with his family displaced in the chaos of World War II, sought refuge in France, where he had spent a substantial part of his childhood, and which had inspired me to study French in school, even though it was perhaps a less practical skill than Spanish. Marie told me about her long career as a French pro-

fessor at the local college teaching students not unlike me.

Marie’s adult children looked on and were encouraged to see her eating and engaged in conversation.

“Doctor Friedman, tell her to **laver le cheval!**” her daughter interjected.

“Sure,” I said, as a mischievous grin crossed my face.

“Marie,” I said, switching to English. “Your daughter wants you to wash your horse.”

“No! No! **Laver les cheveux!** She needs to wash her hair!” Her daughter groaned.

Marie laughed. “Yes, her French was never any good.”

We chatted some more before an open fracture pulled me out of the room and down to the Emergency Department.

Marie’s English was far better than my French. We still did not have a plan for her fracture. I never broached with Marie the many pages of her problematic behavior that had brought me into her room. Yet, when I checked in on her over the next few days, there were no further complaints about Marie. Not every problem has a surgical solution, but there is always an opportunity to form a connection.



# “PEOPLE NEED PEOPLE”: AN INTERVIEW WITH DR. DENISE MARIE TORRES

MIRA PATEL, M2

“No successful person does it all on their own” From inspiring mentors and a supportive family and friends, Dr. Denise Marie Torres shares her story as the Division Chief for Acute Care Surgery for the Geisinger Health System and the Trauma Medical Director at Geisinger Medical Center in Danville, a level one adult trauma center. Under these titles, she oversees trauma, emergency general surgery, and surgical critical care.

Dr. Torres emphasizes the importance that her support systems played in where she is today. While she was a resident at Temple University Hospital, now the current Dean, Dr. Amy Goldberg was the Program Director and the Chief of Trauma. Seeing the way that she did what she did, with a fearless confidence, and not afraid of operating on anything, Dr Torres knew that this very small woman but tough as nails was in a way who she wanted to be when she grew up: “I just thought that she was larger than life and just amazing. And I wanted to be as good as her.”

Dr. Torres thought she was going to go into emergency medicine. While she enjoys her work in the emergency room, she was always wondering what happens to the patient next and yearned to see the outcomes take place. Along with this drive, her inspiration from Dr. Goldberg, and a few interesting cases in residency, she knew that trauma was what she was most happy doing.

One of those cases that has stuck with her is one of a gentleman that came with a stab wound. Dr. Torres, a then resident, got to open the chest, fix the heart, and the patient came back. The patient was then able to leave the hospital within four days. That was the kind of case that sealed the deal. While all the cases are not like that, Dr. Torres knew that what she really liked was taking care of very sick patients and seeing them when they got better. She wanted to be the one that got to fix a variety of problems, and through these experiences comes Dr. Torres’ unique role in emergency medicine, trauma, and intensive care.

Even outside the hospital, Dr. Torres is blessed to have a very supportive spouse and family. Her husband is the Head CRNA in the Danville Central region. Raising their family and growing their careers, they have realized that “you can’t do this alone. You need like a village to support you.” She was fortunate to have family support

“Being a Superwoman, or Superman, you don’t get to do any of that alone; no successful person does it all on their own.”



while raising her children, because being a mother and a wife as well as a resident is no easy task. One things Dr. Torres has learned is “being a Superwoman, or Superman, you don’t get to do any of that alone; no successful person does it all on their own.”

These days, Dr. Torres has made an effort to be meaningful of how she spends her time. A group of her friends meet every month and make challenges for the month to do some volunteer work. She also enjoys time with friends and family, and is now even trying mountain biking. She says that no matter what stage of your medical career you’re in, you can work on being intentional in planning these things out to find time for your passions and for your people.

Dr. Torres is an incredible who has seen success in her career and family with the support of the people around her. In doing so, she hopes to share with medical students that “it’s okay to have your space and to take space. Don’t make yourself small. Someone told me, sit at the table, don’t sit in the corner. Getting through medical school and probably even more getting through residency takes a lot of grit and resilience. I have always been focused on what the the prize is, your prizes. And it’s definitely worth it.”

# RADIOLOGY INTEREST GROUP: MUSCULOSKELETAL CASE REPORT

RETO SUTTER, PD DR. MED.

## Presentation

60-year-old male with intermittent pain in the left gluteal area and limping 6 years after total hip arthroplasty.

## Case Discussion

Tearing of the abductor tendons and trochanteric bursitis are a common cause of greater trochanteric pain syndrome after total hip arthroplasty (THA). In this case the tendons are retracted and no longer attached to the greater trochanter. There is substantial fatty degeneration of the affected muscles, indicating that this is a chronic condition.

## Imaging Findings

- Extensive abductor tendon tear at the greater trochanter: the gluteus minimus tendon and the lateral portion of gluteus medius tendon are retracted, with a gap visible between the greater trochanter and the tendons on the STIR sequence
- Trochanteric bursitis with area of high STIR signal intensity lateral to greater trochanter
- Fatty muscle degeneration and atrophy of the gluteus minimus and gluteus medius muscle on T1-weighted sequence
- Hip arthroplasty: without periprosthetic fracture or adjacent bone marrow edema. However, there is communication between the trochanteric bursitis and the joint effusion.

## Implications for Patient Care

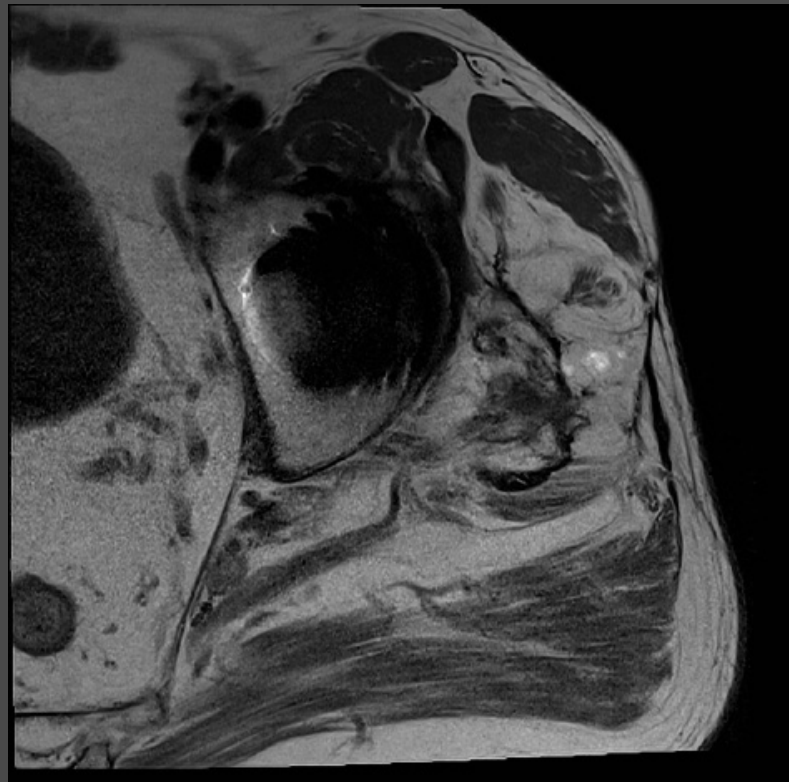
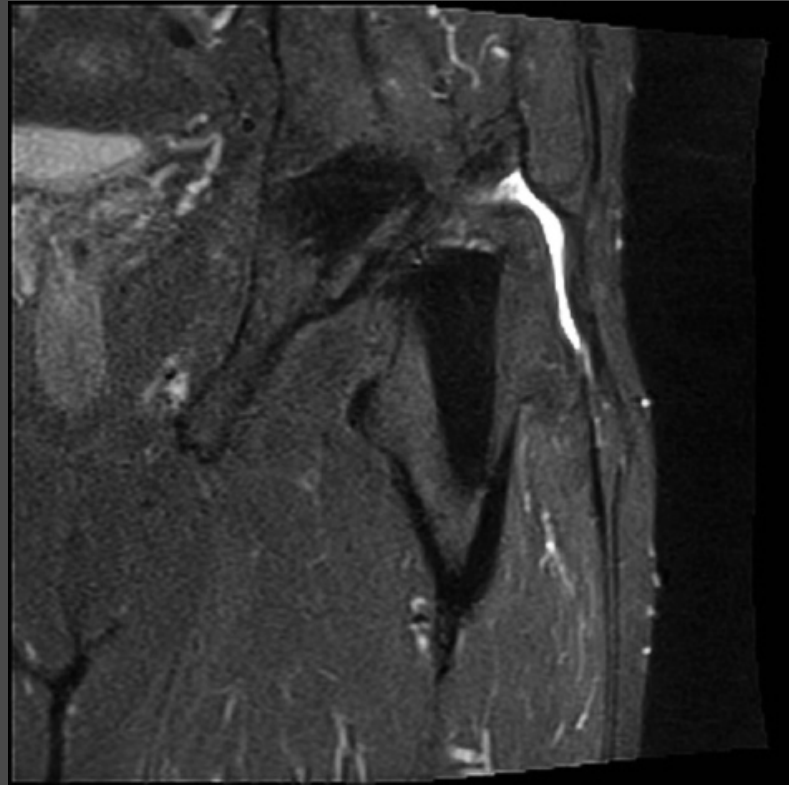
The STIR-warp sequence reduces metal artifacts around hip prostheses to an extent that might be helpful for the evaluation of periprosthetic complications.

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## Case contributed by

Dr. Reto Sutter, Chief of Radiology at Balgrist University Hospital in Zurich, Switzerland



## CHARTING A PATH THROUGH THE GEISINGER SYSTEM: AN INTERVIEW WITH DR. MAXWELL VOGEL

**CARLY DETER, M2**

An alumnus of Geisinger Commonwealth School of Medicine (GCSOM), a husband, a father of two sons and two dogs, and a former baseball player at Winthrop University in Rock Hill, SC, Dr. Maxwell Vogel is about to embark on his fourth year as an orthopedic surgery resident at Geisinger Medical Center in Danville, PA. While he kept his mind open to all specialties throughout medical school, considering the pursuit of obstetrics and gynecology, he has always been drawn to orthopedics. Growing up with a mom as a nurse, a dad as a contractor, and as an athlete himself, he integrated the world's he was exposed to growing up and landed on orthopedic surgery with a particular interest in sports medicine. He developed an enjoyment for undertaking projects around the house and finding creative solutions rather than hiring help. One of the most rewarding aspects of orthopedics, according to Dr. Vogel, is that you can actually see your results in the short term because people in orthopedics get better relatively quickly. For example, you can fix a hip fracture and the next day, the patient can walk on it.

Dr. Vogel prioritizes the patient centered approach and emphasizes getting to know his patients and taking the time to listen to their whole story, a valuable skill that he credits to his education at GCSOM. Take, for example, a patient that might give you a hard time about a test you want to order for them. If you do not take the time to listen, you may not realize that they lack health insurance and are worried about how to pay for the test. Understanding and appreciating the validity behind all patient concerns is critical to well rounded care. He hopes to carry this value into his career in a rural or suburban healthcare center to practice sports medicine and general trauma orthopedics.

Efficiency and time management are necessary for success in medical school, but these requirements are taken to a new level when you progress from medical school to residency. You are now balancing research projects, morning conferences and journal clubs as aspects of your education in addition to your job responsibilities of taking care of multiple patients. The mentorship model used by the Geisinger residency assists the residents in their pursuit of success as residents get to work primarily with just one attending per service, and they are the



What seems routine to us in medicine is often, on the patients' side of things, one of the worst days of their lives, and very scary and real.



only resident with that attending for the day. It allows residents to get more one-on-one working and teaching time with the attending physicians, making it easier to build trust and respect, cultivate meaningful relationships and master skills. According to Dr. Vogel, "Our attendings are always willing to answer our questions, always willing to field our phone calls. There is not a single attending we have that doesn't like to teach... at least it sure doesn't seem that way."

One of Dr. Vogel's primary goals in his career is to pass knowledge on to younger residents and medical students and guide them through the difficult process of developing into compassionate and excellent physicians. When asked what advice he has for anyone in healthcare, regardless of their role on the healthcare team, Dr. Vogel imparted wisdom he was given by one of the senior residents when he was an intern. "What seems routine to us in medicine is often, on the patients' side of things, one of the worst days of their lives, and very scary and real." He added that he has learned it takes a team of many people from different walks of life who are doing strong work to reach the ultimate goal of providing quality healthcare.

### Interested in writing about a topic in musculoskeletal medicine?

We are now accepting editorial submissions! We will be featuring one editorial in each issue of Musculoskeletal Matters and posting the rest of the submissions on the website! Submissions and questions can be sent to Jessica Koshinski (JKoshinski01@som.geisinger.edu).

# OUR KIDS NEED TO EXERCISE TOO

ALEXIA GAGLIARDI, M2

The need for exercise and nutrition-focused preventative healthcare programs has become increasingly apparent in recent years. The global prevalence of obesity for children 5-19 was 6.8% in 2016.<sup>1,2</sup> The numbers have not dwindled, in 2019 the World Health Organization reported that 38.3 million children under the age of five were overweight or obese.<sup>3</sup> These numbers are alarming due to the associated comorbidities. The U.S. Centers for Disease Control and Prevention's 2000 National Health and Nutrition Examination Survey estimated more than 400,000 deaths were secondary to poor diet and physical inactivity.<sup>4</sup> This is unsurprising as physical inactivity and obesity are known risk factors for cancer, diabetes, hypertension, coronary disease, and cerebrovascular disease.<sup>5</sup> Thus, an increased emphasis on physical activity has emerged as a key starting point for improving these statistics.

Increasing physical activity among youth may improve risk profiles for obesity and associated disease. Physical activity in children has been shown to augment bone mineral density, reduce symptoms of depression, enhance emotional and cognitive well-being, and increase fundamental movement skills.<sup>6-9</sup> It is recommended that adolescents and children complete at least 1 hour of moderate to vigorous activity per day.<sup>10</sup> Physical activity falling short of this recommendation has been coined "Exercise Deficit Disorder" (EDD).<sup>10</sup> Based on recent reports, EDD is rampant in the United State and emerging as a global pandemic.<sup>11</sup>

The components of our school systems, sports programs, and medical system contributing to EDD are intertwined, multifaceted, and complicated. Many school systems schedule less than two hours of Gym class per week, and recess activity is often insufficient. Participating in sports programs can be expensive, and often require a parent's ability to either take time from work or ensure childcare and transportation to practices and games. Beyond the individual's control, our current medical system is focused on treating the health manifestations of physical inactivity, which is costly, inefficient, and ineffective.<sup>12,13</sup> Reports suggest that the United States places emphasis on tertiary care rather than disease prevention. This change is largely due to the emphasis on health care reimbursement for specialists and hospital-based care, as compared with primary or preventative medicine.<sup>14</sup> Emphasis should be placed on the early intervention and prevention of EDD. Fortunately, we are beginning to see small shifts towards rewarding the patient for preventative healthcare measures, as many health insurance plans provide incentives for physical activity and good health

markers, including normal BMI, non-smoking status, and exercise. Increased public health awareness programs and national campaigns promoting physical activity may be helpful, although the effectiveness of these efforts may subpar, considering that children are less active, weaker, and have more fat than ever before.<sup>15</sup>

Personally, my faith is placed in improving school-based physical education as the ideal way to teach and reinforce habits of daily exercise among children. Well-designed physical education programs that enhance children's health literacy may be optimal considering the cost-free aspect, in-school required participation, and diverse modes of play that may be incorporated. While this issue may fly under the radar of many educators, health professionals, and parents, it is imperative that we all move forward with an awareness of its magnitude. For the first time in documented human history, children will live shorter lives than their parents. Through collaboration between health care providers, families, school systems, and sports programs we may be able to turn the corner towards a healthier nation.

Students at Geisinger have begun to work towards this mission. Max Cornell, Class of 2021, Jino Park, Class of 2022, and Mark Mandel, Class of 2022 joined Dr. Michael Ryan and Alison Woody in creating an app, "Pediatricians Prescribing Play" to be used as a resource that families can use to encourage their child to increase their physical activity. The app includes video instruction for kids to learn yoga, exercise moves, and high-energy exercise sequences. The [full article can be found here](#).

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# RESEARCH OPPORTUNITIES:

## Geisinger Resident Research Day

Geisinger Orthopaedics RRD is an opportunity for current Geisinger Orthopaedic Residents and Research fellows to present their research projects and receive feedback from their peers and faculty on their projects.

2021 Geisinger Orthopaedics RRD Projects:

- Gabriel Makar: Non-Operative Treatment of Patients with Chondrosarcoma: Risk Factors and Survival
- Brian Foster: Analysis of YouTube Video Content for Distal Biceps Tendon Injuries
- Max Vogel: Charcot Arthropathy Limb Salvage with 3D Printed Cage and Dynamic Hindfoot Fusion Nail Combination Fixation
- Cassandra Ricketts: Predicting Post-Operative Opioid Addiction In Trauma Patients
- Jordan Nester: Pediatric ACL Injuries
- Hui Zhang: Readability of Online Foot & Ankle Resources
- Lisa Friedman: Potential Benefits of Limited Clinical and Radiographic Follow-Up After Surgical Treatment of Ankle Fractures
- Daniela Rocha: Analysis for Formal Patient Complaints, Risk Events and Malpractice Events for Orthopaedic Trauma Surgeons

If you are interested in or want to read more about any of these projects, please reach out to Jennifer Harding at [jlharding1@geisinger.edu](mailto:jlharding1@geisinger.edu).

## MSKI Orthopedic Research Application

This application is for outstanding and committed medical students who want to get involved with Orthopaedic research at Geisinger's MSKI. If accepted, students will have the opportunity to work closely with physicians and other research staff on Orthopaedic research projects. The aim of this program is to allow students to engage meaningfully with clinical Orthopaedic research. Applications are reviewed twice a year, in February and August. Student applicants are expected to engage with a Geisinger orthopaedics physician and complete a clinical shadowing experience before submitting their application. Students will also need to obtain a letter of recommendation from the physician with whom they shadowed.



[tinyurl.com/3ev57t73](https://tinyurl.com/3ev57t73)

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## RESEARCH OPPORTUNITIES (CONT.):

### NYU Orthopedic Research

Division of Adult Reconstructive Surgery, Shoulder and Elbow Surgery, Spine Surgery, Sports Medicine, and Trauma and Fracture Surgery offer one-year research opportunities for current medical school students interested in pursuing orthopedic clinical research. You have the opportunity to work closely with faculty, residents, fellows, statisticians, and other research staff. [tinyurl.com/v2ck5htw](https://www.nyu.edu/orthopedic-research)

### Johns Hopkins Poggi Pediatric Orthopedic Fellow

The Johns Hopkins Poggi Research Fellowship is a year-long fellowship program for extraordinary medical students. Fellows will have the opportunity to participate in cutting-edge clinical research, and learn the skills necessary to produce sound, high-quality papers. [tinyurl.com/3jdkcp96](https://www.jhu.edu/poggi-fellowship)

### Rush Sports Medicine Research Fellowship

This unique position will allow the research fellows to work closely with residents, fellows, and faculty at Rush. Fellows will also have extensive opportunities for publication and presentation of research at national and international conferences. Our team provides the unique opportunity to work for a leader in orthopedic sports medicine, close collaboration with Midwest Orthopaedic at Rush's own biomechanical department, and a fast-paced clinical research lab determined to produce high quality, novel research. [tinyurl.com/2w6j7d2s](https://www.rush.edu/sports-medicine-research)

## UPCOMING EVENTS:

### 9th Annual Central PA Sports Medicine Symposium

The Penn State College of Medicine will host the 9th Annual Central PA Sports Medicine Symposium on August 4th. The symposium is designed to educate sports medicine professionals on medical and mental health conditions commonly encountered in the care of athletes. This year's symposium will include presentations on topics such as long term consequences of COVID-19 in athletes, challenging cases in sports medicine, and advancements in wearable technologies for training athletes. CME credit available. [tinyurl.com/76xjzb8r](https://www.pennstate.edu/sports-medicine-symposium)

### “Returning to Sports for Elite Young Athletes” hosted by CHOP

On August 17th, the Division of Orthopaedics and the Sport's Medicine Performance Center at Children's Hospital of Philadelphia (CHOP) will host “Returning to Sports for Elite Young Athletes” as part of the Pediatric Orthopaedics and Sports Medicine Virtual Lecture Series. This lecture will discuss injuries commonly associated with return to sport and will offer guidance on rehabilitation, fitness, and returning to peak performance. CME credit available. [tinyurl.com/y6cpf4b](https://www.chop.edu/returning-to-sports)

### St. Joseph's Center Field Day

The Student Musculoskeletal Society will host a field day for St. Joseph's Center residents this Fall. Residents and their families will have the opportunity to play games, create arts and crafts, and eat BBQ. Please email the SMS at [gcsomsms@gmail.com](mailto:gcsomsms@gmail.com) if you are interested in volunteering at this event.

### MSK Mixers

A program designed to spark organic mentorship between students and physicians will hold its inaugural event this Fall. The event will feature physicians from the Northeastern Pennsylvania (NEPA) orthopedics community as well as promote the NEPA orthopedic residency coming in 2022. Stay tuned for more details!

### Residency Series

Medical students are encouraged to join the Student Musculoskeletal Society in welcoming Dr. Andrew Schoenfeld, physician at Brigham and Women's Hospital and associate professor at Harvard Medical School, for the following lectures:

- “Leveraging your research for the next stage of career success” (August 17th @ 7pm)
- “Building a competitive portfolio for the orthopedic residency match” (August 31st @ 7pm)

## SMS Orthopedics Research General Information Session

At this event, students will have the opportunity to:

- Hear from Geisinger Orthopedic Surgeons about how to get involved with musculoskeletal research
- Ask questions about the research process and what research opportunities exist at Geisinger
- Learn about how to develop a research topic/question
- Discover the importance of developing research experience to be a competitive applicant for Orthopedic residencies

Date TBD (expect updates in early Fall)

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