T. Sean Lynch, MD, a specialist in the nonoperative and operative treatment of hip and knee disorders in athletes of all levels, joined the Department of Orthopedic Surgery at NewYork-Presbyterian/Columbia University Medical Center last year—and what a year it has been. “I wear multiple hats—as a clinician, researcher, educator, and team physician. Coming to Columbia is exactly what I wanted to do and the type of job I was looking for.”

Dr. Lynch earned his medical degree at Georgetown University and completed his residency in orthopedic surgery at Northwestern University in Chicago, followed by a sports medicine fellowship at the Cleveland Clinic. While in Cleveland, he was recognized for his skills as an educator, receiving the Cleveland Clinic Excellence in Clinical Teaching for his work with the orthopedic surgery residents and medical students. Additionally, he received the prestigious Herodicus Society North American Traveling Fellowship, which allowed him to work with knee articular cartilage specialists and hip arthroscopists across the United States. An expert in hip surgery and knee ligament reconstruction with minimally invasive and arthroscopic techniques, Dr. Lynch’s particular clinical interests include injuries of the ACL, knee articular cartilage, and the meniscus. He also specializes in labral injuries of the hip using advanced arthroscopic techniques.

Now at Columbia, Dr. Lynch balances his clinical practice with teaching residents, pursuing research, and most recently serving as Associate Team Physician of Fordham University Athletics. “My position here allows me to combine the things that I’m most passionate about—orthopedics and sports.”

On a Research Track

Dr. Lynch’s arrival at Columbia coincided with his selection to participate in the American Academy of Orthopaedic Surgeons/Orthopaedic Research Education Fund/Orthopaedic Research Study Clinician Scholar Career Development Award Program. Each year the program accepts up to 15 residents, fellows, and junior faculty who have the potential and desire to become orthopedic clinician-scientists. The intensive three-day program in Chicago included courses on the peer review process, navigating the National Institutes of Health, collaborating with scientists, and establishing a mentor, among others. “This was a fantastic opportunity to bring together orthopedic surgeons of varying levels of training—people in their late residency, as well as young, junior faculty members such as myself,” says Dr. Lynch. “The program is a forum for clinician-scientists and is geared toward showing how to integrate research with clinical work as an orthopedic surgeon. When you are concerned about building your clinical practice, research can fall by the wayside. The Clinician Scholar Career Development Program was invigorating and motivating. It exposed me to a network of like-minded up-and-coming orthopedic surgeons, as well as those physicians who have already established themselves as leaders in sports medicine and research. Meeting with people from all over the country who have very similar interests you often find common ground and the potential for future collaborations.” Clearly, Dr. Lynch has already begun to establish himself in the research arena. He recently served as a co-author on a review article summarizing study

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findings from research produced in partnership with the Multicenter Orthopaedic Outcomes Network (MOON) ACL Study Group. The studies use prospective, longitudinal data from thousands of patients treated by 17 surgeons at seven institutions across the country and provide invaluable insights into ACL reconstruction. “The MOON approach has been a blueprint for other multicenter studies, including revision ACL, shoulder rotator cuff and instability, knee osteochondritis dissecans, and a soon-to-be meniscal study group,” says Dr. Lynch, who notes that the Clinician Scholar Program gave him the skills to move forward with his research in a methodical way.

“Ultimately, it provided me with the tools necessary to obtain my grant funding for the MOON meniscal study,” he says. “We are extremely excited that we could make discoveries that might change the treatment of meniscal injuries in young athletes. We are trying to determine if we are doing harm if we repair or remove the meniscus. Are we causing the athletes to have another surgery down the road? Also, are we putting them at risk for arthritis in the future depending on what treatment option they receive? There have been no studies to date looking at these athletes.”

Dr. Lynch and his colleagues are seeking to gather information on 1,000 athletes ages 14 to 22 with meniscal injury. “We will enroll patients over the next two years and follow each individual at one year and two years to see how they are doing and if they required new surgery.”

On the Playing Field
In October 2015, Fordham University Athletics named the Department of Orthopedic Surgery as the medical provider for the University’s athletic teams. George J. Zambetti, Jr., MD, serves as Head Team Physician and Dr. Lynch as Associate Team Physician. Drs. Zambetti and Lynch are responsible for coordinating the orthopedic care of Fordham’s 22 varsity teams, as well as the athletes’ medical needs with subspecialists at NewYork-Presbyterian. Additionally, they emphasize injury prevention and sports performance with the University’s athletic training staff and strength and conditioning team. A former competitive athlete, Dr. Lynch is particularly gratified to work with the Fordham teams and athletic trainers.

“The trainers at Fordham do a fantastic job and have a keen knowledge of the various athletic conditions that we address,” says Dr. Lynch. “The training staff and myself work very much as a team and they are an invaluable aspect of the treatment and rehabilitation process. They make my job as the team physician much easier and help us expedite the care of our student athletes in order for them to recover faster and hopefully accelerate their return to play.”

Dr. Lynch believes that each interaction is a learning opportunity. “Whether it’s in the training room picking up on subtle muscular imbalances that a trainer notices that might be contributing to an athlete’s injury and recovery, or talking to orthopedic leaders on how they would design a project or treat a patient, being open to learn from others has only helped to make me a better physician.”

Reference Article

For More Information
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A Win-Win for the Department of Orthopedic Surgery and the New York City Football Club
More than 28,000 fans were in the stands at Yankee Stadium when William N. Levine, MD, Chief of the Department of Orthopedic Surgery at NewYork-Presbyterian/Columbia University Medical Center, did the coin toss for the September 19 game between the New York City Football Club (NYCFC) and the San Jose Earthquakes. The occasion was Title Night celebrating the partnership with NewYork-Presbyterian and the NYCFC. NewYork-Presbyterian is a founding sponsor and Official Hospital of the NYCFC, and the Department of Orthopedic Surgery provides Team Physician Services, led by Drs. Christopher Ahmad and William Levine. NYCFC enjoyed a 3-2 victory!
Advances in Orthopedics

Expanding Expertise in Sports Medicine and Oncology

The Department of Orthopedic Surgery at NewYork-Presbyterian/Columbia University Medical Center is pleased to announce the appointment of two new faculty members, Natasha N. Desai, MD, and Robert J. Steffner, MD.

Natasha N. Desai, MD

Dr. Natasha N. Desai specializes in the nonoperative treatment of musculoskeletal injuries and disorders, as well as concussion management in children and adults. Providing alternative options for patients who do not desire or who are not candidates for surgical intervention, Dr. Desai has particular expertise in ultrasound for diagnosis and treatment. Her dual appointment in emergency medicine enables her to work one day a week in the Emergency Department at NewYork-Presbyterian/Columbia, where she often first sees patients with concussion.

After earning her medical degree from George Washington School of Medicine where she was inducted into the Alpha Omega Alpha Honor Medical Society, Dr. Desai completed residency training in Emergency Medicine at Mount Sinai in New York City following specialty tracks in both sports medicine and global health. While there she received the Humanitarian Award for her work in the Dominican Republic on head injury. Dr. Desai then pursued a Pediatric and Adult Primary Care Sports Medicine fellowship at the Children’s Hospital of Philadelphia.

During fellowship training she focused her research predominantly on concussion in females and continues to pursue her interest in this area. “It seems that females take longer to recover and we don’t really know why,” says Dr. Desai, who is in the data collection phase of a research study, with a goal to present results in 2016. “I want to know if there were any predisposing factors or modifiable risk factors – even in terms of physician coverage at sports events – that could affect the recovery patterns of concussion in female athletes. For example, football and hockey often have a physician or an athletic trainer on the sidelines, but in women’s sports, such as soccer, which is the sport that has the highest rate of concussion, there is usually no medical coverage at games.”

Dr. Desai’s choice of a career in sports medicine was a logical progression for the former competitive gymnast. “I was involved in gymnastics from the age of 5, having been on the club team from elementary school through high school. I also competed while at UCLA as a member of the Pac-10 championship team in 2002,” says Dr. Desai, who today treats athletes of all ages and caliber.

“When you’re an athlete, you try to figure out how to get the best out of your body, how to train your muscles and your joints to do everything you want them to do. It was a natural transition from doing this for myself to trying to help others achieve their goals.”

As a team physician, Dr. Desai’s experience includes pre-sports physicals, and training room and sideline coverage with National Collegiate Athletic Association Division I and II sports, as well as with professional athletes. She currently serves as an Assistant Team Physician for Columbia University Athletics and previously served as an Assistant Team Physician for the Philadelphia Eagles NFL team and Philadelphia Flyers NHL team.

While orthopedic surgeons typically subspecialize, Dr. Desai says she enjoys treating the broad spectrum of athletes and range of injuries and disorders. “I like taking care of the whole athlete, seeing the big picture, and keeping people as active as they want to be,” she says. “We think of athletes as a football player or a soccer player, but I also see dancers and others whose careers or hobby interests can take a toll on their bodies. My job is to help patients develop ways of modifying their risk factors for injury and help them maintain their careers or activities that they enjoy and provide them with quality of life.”

Robert J. Steffner, MD

An orthopedic oncologist, Dr. Robert J. Steffner focuses on the multidisciplinary care of bone and soft tissue tumors, including benign and malignant conditions in pediatric and adult patients. In addition, he cares for patients with metastatic cancer to bone and primary marrow tumors such as multiple myeloma and lymphoma. His clinical interests also include high-energy fracture management, revision surgery for fracture, and joint replacement, including anterior hip replacements.

After receiving his medical degree from Wayne State School of Medicine, where he was elected to the Alpha Omega Alpha Honor Medical Society, Dr. Steffner completed residency training at the University of Chicago, followed by fellowships in Orthopedic Oncology and Orthopedic Trauma at the University of Chicago and University of California – Davis, respectively. His research interests include investigating the outcomes of patients with metastatic carcinoma, decision-making for patients presented with an unplanned excision of a soft tissue sarcoma, biomedical engineering adjuncts to aid function after bone tumor surgery, and perioperative pain management in tumor surgery.

“As an orthopedic oncologist, coming to Columbia is an immense opportunity from a professional standpoint,” says Dr. Steffner. “There is a lot of motivation at the medical center to develop an outstanding multidisciplinary sarcoma program. We really have all the pieces in place to take excellent care of cancer patients with complex problems.”

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Dr. Steffner will be working closely with Francis Y. Lee, MD, PhD, Chief of the Tumor and Bone Disease Service, and Gary K. Schwartz, MD, Chief, Division of Hematology/Oncology. “The core group will also include David P. Horowitz, MD, in Radiation Oncology, Fabrizio Remotti, MD, in Bone and Soft Tissue Pathology, and Michael Rasiej, MD, in Musculoskeletal Radiology. Because sarcomas are uncommon, it is critical to receive care in a large medical center where the patient can benefit from the expertise of multiple physicians in different specialties,” says Dr. Steffner.

The core group meets weekly to discuss the care of patients with sarcomas or metastatic disease. “We look at every aspect of the patient – clinical history, individual patient factors, imaging, and the pathology slides,” says Dr. Steffner. “We then discuss what roles surgery, medical therapy, and radiation will play, coming up with a plan that is individualized to the patient. That is where cancer care should be in this day and age.”

Due to the rarity of sarcomas, says Dr. Steffner, there is much room from a research perspective to better understand these tumors and to develop more successful treatments. “Working with the medical oncologists we will try to determine new and novel treatments that elicit a greater response. Currently, there are not a lot of systemic treatments available that are effective.”

Dr. Steffner is encouraged by the progress that has been made to date in categorizing sarcomas and targeting specific treatments.

“We used to categorize these tumors by what the tissue looked like under a microscope,” he says. “We are now able to classify them based on the molecular and genetic defects that we are finding. That alone is a huge leap, enabling us to begin taking specific approaches based on the tumor and not just a broad stroke view where we give the patient medication or a treatment that kills anything that grows fast.”

Dr. Steffner expects to integrate his expertise in trauma – especially with pelvic and acetabular surgery – with his specialty in oncology. “With my background in trauma, I am able to offer a unique approach to oncology, especially in terms of reconstruction after tumor resection. This is most notable in the treatment of bone tumors or metastatic cancer to the pelvis and acetabulum,” he says.

“It is a very interesting time to be in oncology and even more so in orthopedic oncology,” adds Dr. Steffner. “The beauty of being in a major academic medical center is that I am part of a team working to diagnose these cancers and figure out how to best tailor treatments. With this multidisciplinary approach, we are able to identify deficiencies and then go to the research lab to better understand these challenging problems. With time, we then translate these advances to the bedside.”

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