Contents

2016 – a year of excellence through coordinated care
   Success through collaboration ........................................ 4
   A new norm in orthopedics ........................................... 6
   Back in the game ...................................................... 7

Subspecialty teams provide the full spectrum of care
   Foot and Ankle .......................................................... 12
   Hand and Upper Extremity .......................................... 13
   Pediatric Orthopedics ................................................ 14
   Spine and Interventional Medicine .............................. 15
   Sports Medicine ...................................................... 16
   Total Joint Reconstruction ........................................ 17
   Trauma and Fracture Care .......................................... 18
   Sumter Orthopedic Specialists .................................... 19

Individualized attention helps athletes reach their potential
   Athletic Training ....................................................... 23
   Apex Athletic Performance ....................................... 24

Our orthopedic teams offer the complete continuum of care
   Rehabilitation .......................................................... 28
   Other Services ......................................................... 30
   MedAPA ............................................................... 32
   Convenient Care ...................................................... 35

Education and research spark inspiring scientific innovation
   Residency Program .................................................. 38
   Research ............................................................... 40

Refer a patient .......................................................... 44

Practice locations ....................................................... 45
2016 - A YEAR OF EXCELLENCE THROUGH COORDINATED CARE
Marking one year since the creation of Palmetto Health-USC Medical Group Orthopedic Center, 39 surgeons and physicians continue to work together to fulfill their vision of offering the full spectrum of orthopedic care while keeping quality and affordability in mind. Each physician is an orthopedic specialist in one of the following areas: Foot and Ankle, Joint Replacement, Orthopedic Trauma, Pediatric Orthopedics, Spine, Sports Medicine and Upper Extremity.

This group is focused on continuously improving community outreach, research and education. They provide complete care to a large number of middle schools, high schools, colleges, and other athletic groups through the Sports Medicine Athletic Trainer program. More than 50 research projects are concurrently underway to collect clinical data on surgical outcomes of patients, as well investigating new techniques that can improve orthopedics. Resident and student education is expanding to better reflect the size and scope of the practice, including medical residents, physical therapy residents and athletic training residents.

The commitment of Palmetto Health-USC Medical Group Orthopedic Center is to impact orthopedic care through research, education and specialization. Each physician is committed to leadership, innovation, and the ultimate patient experience in orthopedics. Bradley Presnal, MD, and John Walsh IV, MD, co-leaders of orthopedics, invite you to learn more about the expertise this practice has to offer in this comprehensive annual review.

We are excited to share our year-in-review after merging to create the most comprehensive musculoskeletal practice in South Carolina. This outstanding year celebrates the unification of five diverse orthopedic groups spanning more than nine locations, including physicians, physical therapists, occupational therapists, athletic trainers and experienced medical staff.

As the leading multispecialty group in the Midlands, we seized our unique opportunity to impact community health care in wide-reaching ways this year, guided by the extensive knowledge and hard work of our providers. Our passion and dedication enables us to offer our region the highest level of care and quality service.

Devoted to excellence, we unified academic training, adult and pediatric care, subspecialty expertise and orthopedic therapy for musculoskeletal injuries and disease. We invite you to share our excitement through the following comprehensive look into the many achievements of our past year and the opportunities that lie ahead for advancing orthopedic care.

Sincerely,

Bradley P. Presnal, MD
Senior Medical Director
Palmetto Health-USC Medical Group
Orthopedic Center

John J. Walsh, MD
Professor and Chair
Palmetto Health-USC Medical Group
Orthopedic Center

Success through collaboration

At-a-glance

Visits
188,119

Surgeries
13,286

Patient map

We are excited to share our year-in-review after merging to create the most comprehensive musculoskeletal practice in South Carolina. This outstanding year celebrates the unification of five diverse orthopedic groups spanning more than nine locations, including physicians, physical therapists, occupational therapists, athletic trainers and experienced medical staff.

As the leading multispecialty group in the Midlands, we seized our unique opportunity to impact community health care in wide-reaching ways this year, guided by the extensive knowledge and hard work of our providers. Our passion and dedication enables us to offer our region the highest level of care and quality service.

Devoted to excellence, we unified academic training, adult and pediatric care, subspecialty expertise and orthopedic therapy for musculoskeletal injuries and disease. We invite you to share our excitement through the following comprehensive look into the many achievements of our past year and the opportunities that lie ahead for advancing orthopedic care.

Sincerely,

Bradley P. Presnal, MD
Senior Medical Director
Palmetto Health-USC Medical Group
Orthopedic Center

John J. Walsh, MD
Professor and Chair
Palmetto Health-USC Medical Group
Orthopedic Center

Success through collaboration

At-a-glance

Visits
188,119

Surgeries
13,286

Patient map
A new norm in orthopedics

by Matt Frick
System Director of Orthopedic Services

2016 was a tremendous year for our practice! The Palmetto Health-USC Medical Group was formed, resulting in the single largest multispecialty group in central South Carolina. Next, Palmetto Health-USC Orthopedic Center was created by merging five healthy orthopedic practices into another “largest” – the largest and most comprehensive orthopedic practice in the area. Creating a new, larger practice positioned our providers to expand on the exceptional service their practices have provided South Carolina residents for nearly 90 years.

2016 also brought about change in our care delivery model. We reorganized the clinic support structure to create an environment allowing physicians to enjoy a dedicated team of medical professionals who they work with each day. This new team, built around our specialty trained physicians, is called a Care Team. Care Teams are devoted to getting patients scheduled faster, reducing patient wait times in our clinics, and improving the overall experience for patients and guests from the moment they contact us for an appointment until they return to their normal life activities.

As we look to the remainder of 2017, the trend of “new” continues. This year we welcome two new surgeons, Dr. Kevin Murr (orthopedic trauma surgeon) and Dr. Kristen Nathe (orthopedic pediatric surgeon), and more than 20 clinically-trained support personnel including advanced practice providers, physical therapists, athletic trainers and sports performance trainers.

Additionally, we opened a 12,000 square foot sports performance and rehabilitation facility in downtown Columbia that is home to APX Athletic Performance, serving the active sports community at the highest level. We also will open a 31,000 square foot sports medicine and rehabilitation facility in Lexington, South Carolina. The sports medicine and rehabilitation facility will be the first of its kind in South Carolina and include a fully equipped biomechanics laboratory, Hydroworx and pre-/post-workout submersion pools, top of the line sports performance equipment, turf field for sports training and more than 15,000 square feet of specialized physical and occupational therapy treatment space.

The addition of providers and support staff, coupled with facility expansion and equipment enhancement, ensures that we will continue to provide quick access to affordable, high quality orthopedic care to the population we are so fortunate to serve.

Health care is undergoing rapid transformation. From payment model and regulatory changes to incorporating the latest information technology and medical advancements, attaining high standards of excellence in orthopedic medicine will continue to require adaptability and persistence.

While we aim at a target that is in constant motion, our eyes must remain fixed on the vision of our organization: To be known for clinical excellence and remembered for compassionate care. As we count our blessings and briefly reflect on the positive things that have occurred this past year, we look with anticipation to the great things that lie ahead.

by Christopher G. Mazoué, MD and Sean Sullivan

Injuries to the ulnar collateral ligament (UCL) of the elbow, aka Tommy John ligament, have become exceedingly common in baseball players. Recent research has shown that approximately 25 percent of Major League pitchers on current MLB rosters have had a Tommy John surgery to reconstruct the UCL. We see increasing numbers of injuries to the UCL in our collegiate and high school baseball players. There are multiple reasons for these increases, including onset of organized baseball at a younger age, year-round baseball, multiple leagues and showcases for our younger athletes, and athletes who throw harder putting more stress on these ligaments.

At the Palmetto Health-USC Orthopedic Center, we have developed a strong interest in taking care of overhead athletes including baseball, softball and volleyball athletes. As team physicians and consultants for schools, such as the University of South Carolina and Coastal Carolina, we have the opportunity to treat very high level athletes. This provides us the expertise and experience to give the best of care to athletes of all ages.

Sean Sullivan's case study gives an example of how this experience may be needed to treat some of the most complicated elbow injuries in our athletes. We are thankful that with Sean’s hard work and perseverance he was able to recover from this severe elbow injury and return to baseball and help lead the USC Gamecocks to the National Championship.
Tell us the story of your injury.

I suffered a broken medial epicondyle playing QB my sophomore year in high school. Dr. Chris Mazoué suggested surgery which required a screw to be placed in the elbow, rehabilitation and recovery time. I played another five years of high school and college baseball before experiencing elbow pain again. A doctor in the Charlotte, North Carolina, area scoped my elbow and removed the screw.

Some months later I experienced a full arm blowout – completely torn UCL as well as forearm muscle detachment. Dr. Mazoué analyzed the injury and believes the screw may have caused subsequent ligament damage over the years. He said it looked like one of the worst UCL/elbow reconstruction injuries he had seen.

When my elbow finally “blew out,” I was playing center field and had a throw to home plate for a tagging runner from third base; upon release and the elbow snapping, the ball ended up in the stands over the third base side dugout.

Were you nervous about surgery?  
Extremely! Not because I did not have confidence in Dr. Mazoué, but because of the severity of the injury. We were unsure how the surgery and recovery would allow me to function on an everyday basis, let alone ever throw again.

How did Dr. Mazoué ease any fear of the healing process?  
He was completely up front and honest with me, which was refreshing. Dr. Mazoué made sure to communicate everything to us pre- and post-surgery, which automatically alleviated any extra anxiety I was carrying. Also, knowing how highly regarded Dr. Mazoué is as a surgeon – and with these injuries – eased my fears.

How was your experience with Palmetto Health-USC Orthopedic Center team?  
My experience was tremendous. They were professional in a way that was above and beyond from the start. A patient’s personal outlook can be affected by the people around him – they made sure my experience was positive and allowed me to regain confidence in my elbow.

What was the recovery process like?  
Extensive and exhausting but, in the end, worthwhile. Dr. Mazoué was great as a resource in the recovery process with constant check-ins. Brainard Cooper (AT-USC) was instrumental in my rehab. He was demanding and detail-oriented and pushed me every day. It was tough. Going through the pain of small incremental steps in a timeline that spans well over a year is daunting. But getting to play two more years at USC and in the College World Series made it worth it.

Tell me what impact the surgery has on you today?  
From a normal life function, I have no problems and can do everything I want. Athletically, it limits me a bit. I cannot do large weight training on that arm and still cannot throw a football more than 25 yards. I’m an avid golfer, which causes soreness from time to time. The biggest result of all my surgeries is my outlook. I am happy with what I have and can do and do not take it for granted.

What advice would you give other patients who present similar injuries for a great experience?  
Attack your rehab every day. I know it gets monotonous, but the only way to truly give yourself the best opportunity of a full recovery is to work for it each session.
SUBSPECIALTY TEAMS PROVIDE THE FULL SPECTRUM OF CARE
The Palmetto Health-USC Orthopedic Center Foot and Ankle specialists are proud to have some of the most groundbreaking, patient-centered and comprehensive treatment options available to their patients. Collaboration with each patient is the basis of our approach and continues throughout treatment.

The team holds decades of experience that ensure the needs, expectations, and care of each patient will be met. The foot and ankle team takes pride in training physicians as well as teaching and speaking around the world.

We currently serve local high schools, colleges and professional athletic teams, as well as the general population. Our goal is to return our patients to a healthy and active lifestyle through treatments that decrease pain and increase function.

Areas of expertise
- Achilles problems
- Ankle pain
- Arthritis
- Arthroscopy
- Athletic injuries
- Bunions
- Calluses
- Claw toes
- Deformity correction
- Diabetic foot ulcer
- Flatfoot correction
- Foot pain
- Fracture care
- Hammertoes
- Instability
- Ligament reconstruction
- Nerve decompression
- Painful flat feet
- Tendon transfers
- Total ankle replacement

At-a-glance
- Visits: 14,597
- Surgeries: 1,098
- New Patient Visits: 3,320

Areas of expertise
- Arthritis
- Arthroscopic rotator cuff repair
- Carpal Tunnel Syndrome
- Cubital Tunnel Syndrome
- DeQuervain’s Tendonitis
- Dupuytren’s Disease
- Fracture care
- Ganglion cysts
- Golfers elbow
- Hand, wrist, elbow and shoulder surgery
- Nerve decompressions such as carpal tunnel release
- Rotator cuff tear
- Shoulder arthroscopy
- Shoulder instability
- Total shoulder replacement surgery
- Tendon and arthritis reconstructive surgery
- Tendonitis
- Tennis elbow
- Trigger finger

At-a-glance
- Visits: 23,437
- Surgeries: 2,357
- New Patient Visits: 4,764

Areas of expertise
- Arthritis
- Arthroscopic rotator cuff repair
- Carpal Tunnel Syndrome
- Cubital Tunnel Syndrome
- DeQuervain’s Tendonitis
- Dupuytren’s Disease
- Fracture care
- Ganglion cysts
- Golfers elbow
- Hand, wrist, elbow and shoulder surgery
- Nerve decompressions such as carpal tunnel release
- Rotator cuff tear
- Shoulder arthroscopy
- Shoulder instability
- Total shoulder replacement surgery
- Tendon and arthritis reconstructive surgery
- Tendonitis
- Tennis elbow
- Trigger finger
The Palmetto Health-USC Orthopedic Center is home to the only specialized Pediatric Orthopedic Team in the Midlands. The group has three fellowship-trained surgeons with various backgrounds who bring diverse experiences to the team and are excited to welcoming their newest member, Dr. Kristen Nathe.

The pediatric physicians share their knowledge throughout the year with various community partners by focusing on seat belt safety, car seat safety and helmet rules.

The subspecialty staff supporting the physicians is compassionate and determined to provide the most stress-free environment for our adolescent patients. Traveling across the globe, the team truly finds joy in helping young lives find orthopedic healing.

Areas of expertise
- Pediatric orthopedic trauma
- Children's fractures
- Spinal deformity
- Early onset scoliosis
- Scoliosis casting/growing rods
- Young adult hip disorders
- Hand and foot deformity
- Limb lengthening, external fixation
- Special clinics for club feet and Spina Bifida

At-a-glance
- Visits: 22,464
- Surgeries: 934
- New Patient Visits: 5,663

Areas of expertise
- Minimally invasive spine surgery
- Cervical spine surgery
- Lumbar spine surgery
- Adult scoliosis surgery
- Scoliosis casting/growing rods
- Spinal deformities
- Slipped vertebrae
- Spondylolisthesis
- Myelopathy
- Microdiscectomy
- Physical medicine and rehabilitation
- Interventional spine procedures
- Electrodagnostic testing
- Peripheral nerve disorders
- Lower back pain
- Neck pain
- Trigger point, bursa and hip injections
- Occipital nerve blocks
- Epidural injections
- Electromyography
- Nerve conduction studies
- Musculoskeletal ultrasound
- Prolotherapy
- Osteoporosis
- Hip and knee osteoarthritis

At-a-glance
- Visits: 26,697
- Surgeries: 1,213
- New Patient Visits: 4,400
Sports Medicine

Areas of expertise
- Arthroscopic ACL reconstruction
- Arthroscopic rotator cuff repair
- Cartilage reconstructive/repair techniques
- Knee and shoulder arthroscopy
- Meniscus repair and transplantation
- Shoulder stabilization
- Sports concussions
- Tommy John UCL reconstruction surgery

The Sports Medicine team aims to provide innovative care for the most active patients in the Midlands. A comprehensive group of providers allows the team to serve the patient at each interval in the medical continuum.

Palmetto Health-USC Orthopedic Sports Medicine is the proud provider for University of South Carolina athletic programs as well as for over 60 other schools and organizations in the state.

We believe superb medical care begins at the community level where providers can serve their patients in the athletic environment, and because of this belief, the Palmetto Health-USC Orthopedic Center implements the largest and most accommodating athletic training program in the state.

The Sports Medicine team prides itself on providing patients with the latest and most efficient technology to ensure a timely recovery.

Areas of expertise
- Arthroscopic ACL reconstruction
- Arthroscopic rotator cuff repair
- Cartilage reconstructive/repair techniques
- Knee and shoulder arthroscopy
- Meniscus repair and transplantation
- Shoulder stabilization
- Sports concussions
- Tommy John UCL reconstruction surgery

At-a-glance
- Visits: 62,276
- Surgeries: 3,395
- New Patient Visits: 10,664

At-a-glance
- Visits: 24,322
- Surgeries: 2,310

Patient map

Total Joint Reconstruction

Areas of expertise
- Hip and knee arthroscopy
- Total hip replacement surgery
- Total knee replacement surgery
- Revision of total hip
- Revision of total knee

Areas of expertise
- Hip and knee arthroscopy
- Total hip replacement surgery
- Total knee replacement surgery
- Revision of total hip
- Revision of total knee

At-a-glance
- Visits: 62,276
- Surgeries: 3,395
- New Patient Visits: 10,664

At-a-glance
- Visits: 24,322
- Surgeries: 2,310

Patient map

Jeffrey S. Hopkins, MD; Andy T. McGown, MD; Kim J. Chillag, MD; Bradley P. Presnal, MD; Frank R. Voss, MD; David E. Koon, MD; Betsy Maharaj, PA; James Coffey, PA; Karin Duffy, PA; Janine Moseley, PA; Nathansael Hall, PA

Mickey F. Plymale, MD; Jeffrey A. Gay, MD; Guillaume D. Dumont, MD; Tenley E. Murphy, MD; Matthew R. Pollack, MD; David A. Scott, MD; Christopher G. Mazzulli, MD; Frank K. Nosek Jr, MD; S. Wendell Holmes Jr., MD; David A. Scott, MD; Adam Bauer, PA; Chay Malvasio, PA; Dean Levesque, PA.
SUBSPECIALTY TEAMS PROVIDE THE FULL SPECTRUM OF CARE

Thomas M. Jones, MD; Michael C. Tucker, MD; Brittany Buchanan, NP; Patrick Todd, NP; Michael Richards, PA

The Trauma and Fracture Service of Palmetto Health-USC Medical Group provides the full spectrum of orthopedic trauma care for patients. Our surgeons guide care of their patients from the time of injury through recovery.

Each of our surgeons is fellowship trained in orthopedic trauma, and they use this expertise in decision-making and management of some of the most complex injuries in orthopedics. Our physicians serve as mentors to the USC Department of Orthopedic Surgery residents through education and research, ensuring future generations of orthopedic surgeons can provide expert level care to their patients.

Our physicians teach at the regional and national levels, sharing their experiences with new and innovative surgical techniques that have the potential to improve patient outcomes. Our goal for all of our patients is to return them to their pre-injury level of function and restore their quality of life.

Areas of expertise

- Bone health
- Fracture care
- Complex periarticular fractures
- Pelvis and acetabular fractures
- Post-fracture deformity correction
- Nonunion repair

At-a-glance

- The Trauma and Fracture Service of Palmetto Health-USC Medical Group provides the full spectrum of orthopedic trauma care for patients.
- Our surgeons guide care of their patients from the time of injury through recovery.

Areas of expertise

- Rotator cuff tear
- Shoulder instability
- Tennis elbow
- Cubital tunnel syndrome
deQuervains syndrome
- Carpal tunnel syndrome
- Ganglion cysts
- Trigger finger
- Hip replacement
- Knee replacement
- Meniscus tears
- ACL reconstruction
- Quadriceps/patella tendon tears
- Arthroscopy
- Fracture care

At-a-glance

- The physicians at our Sumter orthopedic location operate the largest orthopedic clinic in the Sumter area. Our physicians have a combined 41 years experience and are all board-certified surgeons with fellowships in sports medicine and trauma.

As a group, the team provides more than 100 elective procedures a month, including total knee and hip replacements, knee and shoulder scopes, carpal tunnel and deQuervains release, ACL reconstruction, AC joint reconstruction, open and closed fracture. Our goal is to continue offering the Sumter market high quality orthopedic care that not only improves patient recovery, but also returns our patients to the things they enjoy most.

Areas of expertise

- Rotator cuff tear
- Shoulder instability
- Tennis elbow
- Cubital tunnel syndrome
deQuervains syndrome
- Carpal tunnel syndrome
- Ganglion cysts
- Trigger finger
- Hip replacement
- Knee replacement
- Meniscus tears
- ACL reconstruction
- Quadriceps/patella tendon tears
- Arthroscopy
- Fracture care

At-a-glance

- The physicians at our Sumter orthopedic location operate the largest orthopedic clinic in the Sumter area. Our physicians have a combined 41 years experience and are all board-certified surgeons with fellowships in sports medicine and trauma.

As a group, the team provides more than 100 elective procedures a month, including total knee and hip replacements, knee and shoulder scopes, carpal tunnel and deQuervains release, ACL reconstruction, AC joint reconstruction, open and closed fracture. Our goal is to continue offering the Sumter market high quality orthopedic care that not only improves patient recovery, but also returns our patients to the things they enjoy most.

Areas of expertise

- Rotator cuff tear
- Shoulder instability
- Tennis elbow
- Cubital tunnel syndrome
deQuervains syndrome
- Carpal tunnel syndrome
- Ganglion cysts
- Trigger finger
- Hip replacement
- Knee replacement
- Meniscus tears
- ACL reconstruction
- Quadriceps/patella tendon tears
- Arthroscopy
- Fracture care

At-a-glance

- The physicians at our Sumter orthopedic location operate the largest orthopedic clinic in the Sumter area. Our physicians have a combined 41 years experience and are all board-certified surgeons with fellowships in sports medicine and trauma.

As a group, the team provides more than 100 elective procedures a month, including total knee and hip replacements, knee and shoulder scopes, carpal tunnel and deQuervains release, ACL reconstruction, AC joint reconstruction, open and closed fracture. Our goal is to continue offering the Sumter market high quality orthopedic care that not only improves patient recovery, but also returns our patients to the things they enjoy most.

Areas of expertise

- Rotator cuff tear
- Shoulder instability
- Tennis elbow
- Cubital tunnel syndrome
deQuervains syndrome
- Carpal tunnel syndrome
- Ganglion cysts
- Trigger finger
- Hip replacement
- Knee replacement
- Meniscus tears
- ACL reconstruction
- Quadriceps/patella tendon tears
- Arthroscopy
- Fracture care

At-a-glance

- The physicians at our Sumter orthopedic location operate the largest orthopedic clinic in the Sumter area. Our physicians have a combined 41 years experience and are all board-certified surgeons with fellowships in sports medicine and trauma.

As a group, the team provides more than 100 elective procedures a month, including total knee and hip replacements, knee and shoulder scopes, carpal tunnel and deQuervains release, ACL reconstruction, AC joint reconstruction, open and closed fracture. Our goal is to continue offering the Sumter market high quality orthopedic care that not only improves patient recovery, but also returns our patients to the things they enjoy most.

Areas of expertise

- Rotator cuff tear
- Shoulder instability
- Tennis elbow
- Cubital tunnel syndrome
deQuervains syndrome
- Carpal tunnel syndrome
- Ganglion cysts
- Trigger finger
- Hip replacement
- Knee replacement
- Meniscus tears
- ACL reconstruction
- Quadriceps/patella tendon tears
- Arthroscopy
- Fracture care

At-a-glance

- The physicians at our Sumter orthopedic location operate the largest orthopedic clinic in the Sumter area. Our physicians have a combined 41 years experience and are all board-certified surgeons with fellowships in sports medicine and trauma.

As a group, the team provides more than 100 elective procedures a month, including total knee and hip replacements, knee and shoulder scopes, carpal tunnel and deQuervains release, ACL reconstruction, AC joint reconstruction, open and closed fracture. Our goal is to continue offering the Sumter market high quality orthopedic care that not only improves patient recovery, but also returns our patients to the things they enjoy most.
INDIVIDUALIZED ATTENTION HELPS ATHLETES REACH THEIR POTENTIAL
Athletic trainers are health care professionals who collaborate with physicians in prevention, emergency care, clinical diagnosis, therapeutic intervention and rehabilitation of injuries and illnesses. Our athletic trainers provide an unparalleled continuum of care, not only for athletes but also for individuals from a wide array of patient populations that are included in the physical medicine and rehabilitation spectrum of care.

During the 2013-2014 calendar year, nearly 7.8 million student athletes participated in sports nationwide. In 2013, there were 1.24 million emergency room visits resulting from the 14 commonly played sports by students under the age of 19. These facts aid in the vital importance of the role of athletic trainers in communities today and are helping them respond to this need within our community.

Our athletic trainers can be found in secondary schools (middle and high schools), colleges, physician offices and hospitals within the Midlands region of South Carolina. Specifically, these providers play vital care roles in over 60 secondary school and college institutions as well as support roles within the physician clinic system. In the last academic year, our athletic trainers were responsible for approximately 20,000 student athletes within the secondary school and collegiate athletic settings. The members of the athletic training team are in every divisional level within the South Carolina High School League as well as many of the institutions within the South Carolina Independent School Association. Additionally, services at the collegiate level have been provided to eight NCAA Division I, Division II, or NAIA institutions within the Midlands region of South Carolina. This involvement has enabled the athletic training service line at Palmetto Health to remain one of the most prolific and productive athletic training outreach systems in the Carolinas.

The role athletic trainers play continues to serve Midlands area communities through our community education efforts and coverage of community athletic events. It is through our continuing efforts and involvement with county and state recreation departments and associations that the educational aspects of prevention, injury awareness and care continue to be promoted and emphasized to parents, coaches and athletes within the region. These efforts will have a lasting impression and earn the trust of patients.
One of the biggest differences in the Apex model is the science behind the training. At Apex, PhD-level functional movement specialists perform precise evaluations of the intricacies of human movement to teach athletes how to apply the principles of biomechanics and physiology to improve agility and build strength.

Athletes work with trained professionals who study the body’s efficiency in motion, and then prescribe corrective movement techniques to maximize energy output and optimize body mechanics. At Apex, we use the same high-speed video analysis and other technologies used by professional athletes. By taking advantage of these tools, our athletes learn how and why their bodies move and can safely enhance their performance.

Clients are offered tailored programs that align with their personal goals. The Beginner-Intermediate group focuses on educating individuals on the foundations of training by helping athletes have confidence in themselves and their strength training and skill sets. Athletes looking to push themselves may join the Intermediate-Advanced group that encourages individuals to test their limits of physical change.

The team ensures a unique and comprehensive experience through a range of programs. These services include BMI, nutrition, sub-max vo2, and sport performance assessments, as well as education and training sessions on the fundamentals of body awareness and a movement-based coaching philosophy that each athlete will be exposed to during training.

All services offered aim to give athletes a fully personalized and integrated program that allows them to maximize performance and help them achieve their athletic goals. The team strives to help athletes of all ages develop the ability to perform safely at the highest level to become stronger and healthier athletes.
OUR ORTHOPEDIC TEAMS OFFER COMPLETE CONTINUUM OF CARE
Rehabilitation

Orthopedic surgery and rehabilitation have evolved in similar fashions. Just as orthopedic surgeons have become more focused on certain joints or extremities, so have the physical and occupational therapists who treat those patients. However, our group has evolved a little differently.

What sets our group apart is our ability to match therapists with their individual strengths and passions. While it is not unusual for an occupational therapist to specialize in hand and fine motor rehabilitation, it is less common for physical therapists to concentrate on specific joints. Until six to seven years ago, our physical therapists each could have patients with a rotator cuff repair, low back pain and an ACL reconstruction all in succession. Each patient needs to be treated very differently: with different skills, a different attitude and at a different pace.

In the past several years, we have created a rehabilitation team with physical therapists who specialize in pediatrics, adolescent, spine, total joint, general orthopedic and high performing athletic rehabilitation. This not only allows us to attract great clinicians but also provides patients with a level of care unmatched in the area.

Our occupational therapists provide the same high level of care. With two dedicated hand center locations, we provide patients a place to help them get back to normal activity. Our board-certified hand therapists are trained in complicated hand rehabilitation including custom splint fabrication. Their entire patient caseload is made up of hand, wrist and elbow pathologies.

With this type of specificity, we have a great opportunity to collect data and document outcomes within a short period of time. Our research team works closely with the rehabilitation team to come up with new treatment plans for certain diagnoses and identify what treatment is most effective. We also are working to identify more cost-effective ways of evaluating our patients’ abilities. For example, we are looking at ways to evaluate post-operative knee patients for return to competitive sports without using an isokinetic testing device.

As we continue to grow and develop, our commitment to outstanding patient care and outcomes also will continue to grow. The plan is to build services that support rehabilitation for patients before and after formal therapy.

The purpose is to reduce cost, improve outcomes and the overall patient experience. Those services include wellness services for patients preparing and recovering from total joint replacement as well as aquatic therapy and sports performance training for athletes recovering from athletic injuries and motivated to return to competition.
Other Services

Casting and more

Orthopedic technicians work in each clinic to provide orthopedic services that ensure patients have the equipment they need to recover from injury.

These services include:
- wound care
- splinting
- casting
- bracing
- adjustments of equipment.

Technicians also are available to provide education on how to use and care for walkers, canes and crutches.

Fracture Liaison Service

Historically, primary care providers have not addressed bone health and fracture prevention until after a patient falls and breaks a bone. National statistics tell us approximately one in five fracture patients receive secondary fracture evaluation and prevention assistance after a fracture is surgically corrected.

Palmetto Health recognized that by creating a fracture liaison service in conjunction with the Palmetto Health-USC Orthopedic Center, we can identify fracture patients when they arrive at the hospital. We coordinate fracture care and bone health evaluations while the patient is in the hospital and after discharge. Our nurse navigator identifies fragility fracture patients and directs them to the outpatient fracture liaison clinic. In the Fracture Liaison Service Clinic, the nurse practitioner completes the bone health evaluation and prescribes medications and treatment as indicated to help prevent future fractures.

Orthopedic Wellness

The Palmetto Health Orthopedics Wellness team, led by Medical Director Dr. Jeffrey Hopkins, includes experts in the fields of nutrition, exercise physiology, biomechanics and functional anatomy, and physical therapy. With more than 50 years combined experience, Palmetto Health-USC Orthopedic Center offers South Carolina’s only fully integrated orthopedic wellness program, which treats the whole person over the entire cycle of care.

Imaging

Patients of Palmetto Health-USC Orthopedic Center have access to some of the most advanced imaging services available. Imaging conveniently is done on-site to help with diagnosis and treatment.

Types of imaging offered include:
- digital radiography
- magnetic resonance imaging (MRI)
- extremity MRI
- ultrasound.

Physicians also utilize in-office fluoroscopic interventional radiography and ultrasound to help perform procedures such as epidural steroid injections, sacroiliac joint injections, selective nerve root blocks, radiofrequency obliterations and arthrograms.

The imaging technologists are licensed and registered through the American Registry of Radiologic Technologists and the South Carolina Radiation Quality Standards Association. Further, the facilities that offer imaging services are registered through the South Carolina Department of Health and Environmental Control, the American College of Radiology, and the Joint Review Committee on Education in Radiologic Technology.
MedFit12 was developed with a single premise:

Lifestyle mediated conditions can be prevented and reversed by comprehensive lifestyle intervention.

The MedFit12 protocol

1. Physical assessment including:
   - review of past medical history and family medical history
   - measurement of biometrics including blood pressure, heart rate, oxygen saturation, BMI, body fat, waist circumference
   - submaximal cardiovascular fitness test

2. Lifestyle and nutrition assessment and screening

3. Cardiovascular prescription (per ACSM guidelines)

4. Corrective exercise prescription (per American Physical Therapy Association guidelines)

5. Twice weekly supervised exercise sessions (per ACSM guidelines) with an exercise physiologist

6. Once weekly nutrition consults, including behavior modification, recipes and menu planning with a registered dietitian nutritionist (per Academy of Nutrition and Dietetic guidelines)

7. Ending assessment, progress note, and lifestyle prescription

Expected clinical outcomes

- Weight loss
- Reduced abdominal fat
- Improved cardiopulmonary fitness
- Improved musculoskeletal strength, balance, and mobility
- Improved blood pressure (systolic and diastolic)
- Improved lipid panel (reduced LDL, VLDL, and triglycerides; increased HDL)
- Improved glucose levels and reduced hemoglobin A1C
- Documented reversed coronary artery disease, type 2 diabetes and sleep apnea
- Improved orthopedic issues such as shoulder, back, hip and knee pathologies
- Improved energy and well-being

70% of all health care expenses are from chronic conditions.

75% of these chronic conditions are preventable:

- Obesity 90% preventable
- Heart Disease 80% preventable
- Stroke 80% preventable
- Diabetes 80% preventable
- Cancer 80% preventable
Convenient Care

Convenient Care is an orthopedic walk-in clinic that offers access to orthopedic specialty care during the day, after normal business hours and on weekends. This service caters to the working professional who has sustained an injury or other orthopedic condition but may not be able to leave work. Convenient Care also offers access to athletes, children and adolescents who sustain weekend injuries, without requiring them to wait until Monday morning to be seen.

No appointment is required and most insurance plans are accepted without a referral. Common injuries seen at Convenient Care are fractures, dislocations, strains, sprains and lacerations.

Convenient Care is a full service walk-in clinic offering on-site X-ray, fluoroscopy services, casting and durable medical equipment fitting.

Our clinic is open Monday-Saturday, 8 a.m.-8 p.m., six days a week, 12 hours a day, to meet the ever-growing needs of the community.

101 Business Park Blvd., 2nd Floor
Columbia, SC 29223
803-296-9290

We treat urgent orthopedic problems such as:
• Sprains
• Strains
• Fractures
• Lacerations
• Sports medicine injuries

We also offer care for chronic conditions relating to:
• Knee
• Shoulder
• Elbow
• Ankle
• Spine
Residency Program

Palmetto Health and the University of South Carolina School of Medicine offer two fully accredited five-year orthopedic residency positions in collaboration with the Palmetto Health-USC Orthopedic Center in Columbia, South Carolina. We currently accept two resident applicants into our program per year by participating in the match administered by the National Resident Matching Program (NRMP).

Orthopedic rotations are supervised by 22 full-time faculty in each of eight major subspecialties: orthopedic trauma; pediatric orthopedics; upper extremity; sports medicine; spine; adult reconstruction; foot and ankle; and general orthopedics. A minimum of two faculty represent each subspecialty.

Our residency program is unique for several reasons. The Palmetto Health-USC Orthopedic Center currently serves 135,000 outpatient visits and more than 7,000 surgical procedures each year. The faculty-to-resident ratio allows for one-on-one clinical and operative experiences, promoting earlier and more rapid progression of responsibilities.

The presence of multiple faculty within each subspecialty field allows for diversity of approach and opinion. Additionally, the breadth of practice types and locations - from a Level 1 Trauma Center at Palmetto Health Richland to an outpatient surgery center/community hospital on the Palmetto Health Baptist Parkridge campus - exposes residents to a full spectrum of orthopedic surgery.

The early operative experience and one-on-one mentorship model permit an intimate and highly individualized educational experience. We encourage residents to participate in and complete multiple research projects during their training. This is consistent with the mission and vision for the office of orthopedic research – to develop lifelong learners and contributors to the orthopedic community.

Research opportunities are numerous, and the program has a dedicated research director and research development specialist. Each resident participates in a self-designed, mentored project with the goal of a publication or presentation at a local, regional or national meeting.

The curriculum and didactic schedule offer a wide range of experiences while providing a complete education in both general and subspecialty training. Didactics occur early each morning, allowing residents to spend more time concentrating on clinical duties. The program is a two-year cycle in which residents rotate through all subspecialties in years two and three, and again in years four and five. This allows residents to become closely familiar with each subspecialty before choosing a fellowship path, and then hone their skills as senior residents.

Learn more about our orthopedic surgery residency program online at residency.palmettohealth.org/residencies/orthopedic-surgery.
Publications


Guillaume Dumont, MD; Stephen A. Parada, MD; Randy Cohn, MD; Bryan G. Vosat, MD; Amun Makani, MD; George Sanchez, BS; Peter Gollanin, BA; Brendan B. Beaulieu-Jones, BA; Anthony Sanchez, BS; Matthew T. Provencer, MD. Traditional Versus Congruent Arc Latarjet Technique: Effect on Surface Area for Union and Bone Width Surrounding Screws. The Journal of Arthroscopic and Related Surgery. December 2018.


J. Benjamin Jackson III, MD; Anthony Crimaldi, MD; DDS; Richard Peindl, PhD; H. James Norton, PhD; William E. Anderson, MS; Joshua C. Patt, MD; MPH. Effect of Polyethylene Efter Ketone on Therapeutic Radiation to the Spine: A Pilot Study. The Spine Journal. January 2017.


Derek Bremner, PharmD; Brandon Booskaver, PharmD, BCPC (AO-ID); FCCP; AAHIVP; Mark Cairns, MD; Kenneth Lindley, MD; Martin Durkin, MD; David Koon, MD; April Miller Guiley, PharmD, BCPS, FCCP; FCOM: Impact of Body Mass Index and Bacterial Resistance in Osteomyelitis Following Open Lower Extremity Fractures. Surgical Infections. January 2017.


Lisa K. Cannada, MD; Paul Tometta, MD; Robert Hynes, MD; Griff Jones, MD; Brian Mullis, MD; Eben Carroll, MD; William O'Brienkeye, MD; Andrew Massanz, MD; David Tegue, MD; Michael Tucker, MD; Robert Ostrow, MD; Dirk Knier, MD; Lauren Germany, BS; Michael Delcore, MD; Sarah Dawson, BS; Heidi Israel, PhD. Operative versus Non Operative Treatment of Isolated Humeral Shaft Fractures: A Prospective Cohort Comparison Study. Orthopaedic Trauma Association. February 2017. (Submitted).

Presentations


John Walsh, MD. What's New in the Upper Extremity. 36th International CMBA-CMDE, Marathon, Greece.

Gregory Grabowski, MD; J. Benjamin Jackson III, MD. Evaluation and Treatment of Spondylosis in the Athlete. Southern Orthopaedic Association.

Gregory Grabowski, MD; Alfredo Arrojas, MD; J. Benjamin Jackson III, MD. Outcomes of Geriatric Patients with Isolated Lower Extremity Fractures. Southern Orthopaedic Association.

J. Benjamin Jackson III, MD; Scott Vincent, MD; James Davies, MD; Kevin Philips, MD; Chris Cornett, MD; Greg Grabowski, MD; Brian Scannell, MD; Alan Stotts, MD; Miranda Bice MD. A prospective, Multicenter Evaluation of the Value of the On-Call Orthopaedic Resident. South Carolina Orthopaedic Association. Kiawah Island, SC. August 5, 2016. AAOS Annual Meeting

Alfredo Arrojas, MD; J. Benjamin Jackson III, MD; Gregory Grabowski, MD. Trends in the Treatment of a Single and Multi-Level Cervical Stenosis: A Review of the ABOS Database. South Carolina Orthopaedic Association.

Alessi Pilato, MD; Gregory Grabowski, MD. The Association Between Lumbar Spine and Hip Pathology. South Carolina Orthopaedic Association.

Christopher Hong Che, Kevin A. Williams, MD; J. Benjamin Jackson III, MD. Normal Sonographic Parameters of Posterior Tibial, Peroneal and Achilles Tendons. Southern Orthopaedic Association.


Andrew Swentik, MD; Thomas Jones MD. Dual Plate Stabilization of Commuted Intra/Supracondylar Femur Fractures. Southern Orthopaedic Association.


W. Brent Smith, DO; William Melton, MD; Jaynesh H. Patel, PhD. Frontal Plane Rotation of the 1st Metatarsal in Relation to Arch Height. AOFAS Annual Meeting.


Jaynesh H. Patel, PhD. Implications of the Kinetic Chain in Overhand Throwing. South Carolina Student Athletic Trainers Association Annual Meeting.
Posters

Kyle Mobley, MD; J. Benjamin Jackson III, MD. A Prospective Analysis of Current Clinical Methods in Evaluating Sterile Integrity. Presented at South Carolina Orthopedic Association


Tyler Goodwin; J. Benjamin Jackson III, MD. Adult Acquired Flatfoot Surgical Incidence and Economic Burden. Presented at Discover USC, American Orthopaedic Foot and Ankle Society

Andrew Swentik, MD; Michael Tucker, MD; Thomas Jones, MD. Dual Plate Stabilization of Comminuted Intra/Supracondylar Femur Fractures. Presented at Southeastern Fracture Symposium

Kevin A. Williams, MD; Christian Askew; J. Benjamin Jackson III, MD. Supplemental Vitamin D for Prevention of Bone Stress Injuries in Collegiate Athletes. Presented at Southern Orthopedic Association

Christian Askew; Kevin A. Williams, MD; J. Benjamin Jackson III, MD. Supplemental Vitamin D for the Prevention of Stress Fractures in Collegiate Athletes A Follow Up. Presented at Discover USC

Kevin A. Williams, MD; J. Benjamin Jackson III, MD. Natural History and Physical Function of Foot and Ankle Patients with Tendinopathy. Presented at American Orthopedic Foot and Ankle Society

Sydney Boykin; Andrew Swentik, MD; J. Benjamin Jackson III, MD. Incidence of Conversion from Tibial Plateau and Distal Femur Fractures to Total Knee Arthroplasty. Presented at Discover USC

Samantha Giaccio; Christopher Mazoué, MD. Analysis of Ulnar Collateral Ligament Injuries in the State of South Carolina. Presented at Discover USC

Adam Moneys, MD; J.D. Spearman; J. Benjamin Jackson III, MD. A Prospective Analysis of the Utility of ABI Measurements in Trauma Patients. Presented at Discover USC

Christopher Hong Chu; Kevin A. Williams, MD; J. Benjamin Jackson III, MD. Normal Sonographic Parameters of Posterior Tibial, Peroneal, and Achilles Tendons Ultrasound. Presented at Discover USC, American Orthopedic Foot and Ankle Society (Seattle)

Holly M. Chais and Jaynesh H. Patel, PhD. Relationship between Arch Height Index and Incidence of ACL Injury. American College of Sports Medicine, Southeast Chapter

Emily C. Taylor & Jaynesh H. Patel, PhD. Servant Leadership Leads to Lasting Purpose. Presented at Discover USC

Book Chapters


William Melton, MD; J. Benjamin Jackson III, MD. Concussion in the Young Athlete. October 2016. (submitted)

The orthopedics department of Palmetto Health-USC Medical Group is growing in resources and providers. Each subspecialty and physician is working closely together to ensure patients are receiving fast, quality orthopedic care. The teams operate as one practice.

For more information on providers and locations, visit www.PHUSCOrthoCenter.org. To make a referral to one of the orthopedic physicians, please reference the contact information listed below:

Call 803-29ORTH (803-296-7846) for:

**Foot and Ankle**
- J. Benjamin Jackson III, MD
- Ryan M. Putnam, MD
- W. Brot Smith, DO, MS

**Hand and Upper Extremity**
- David B. Fulton, MD
- Earl B. McFadden Jr., MD
- John J. Walsh IV, MD
- Mae E. Young, MD

**Pediatric Orthopedics**
- Michael P. Horan, MD, MS
- Christopher R. Hydorn, MD
- Mark D. Locke, MD

**Sports Medicine**
- Guillaume D. Dumont, MD
- Jeffrey A. Guy, MD
- Jeffrey P. Holloway, MD
- S. Wendell Holmes Jr., MD
- Christopher G. Mazzue, MD
- Tenley E. Murphy, MD
- Frank K. Noonin III, MD
- Mickey F. Pymale, MD
- Matthew R. Pollack, MD
- David A. Scott, MD

**Spine and Interventional Medicine**
- John Clavet, MD
- P. Douglas deHoll, MD
- William T. Feloney, MD
- Gregory Grabowski, MD

**Pranitha R. Nallu, MD**
**J. Talley Parrott, MD**
**W. Alanic Van Dam, MD**
**Michael W. Peelle, MD, MHA**

**Total Joint Reconstruction**
- Kim J. Chilag, MD
- Jeffrey S. Hopkins, MD
- David E. Koon Jr., MD
- Andy T. McGown, MD
- Bradley P. Presnal, MD
- Frank R. Voss, MD

**Trauma and Fracture Care**
- Thomas M. Jones, MD
- Michael C. Tucker, MD

Call 803-774-7621 for:

**Sumter Orthopedic Specialists**
- Danny H. Ford, MD
- Kurt T. Strobel, MD
- Ryan C. Zitzke, MD