



2021

ORTHOPAEDICS

ANNUAL
REPORT

 WVU Medicine

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THE CHAIRMAN'S

WELCOME



2021 was another tumultuous year in healthcare due to the COVID-19 virus and sequelae.

For weeks at a time, early in the year, and again late in the year, we were essentially on hold for elective outpatient cases. The primary problem was availability of inpatient beds due to increasing admissions and a nursing shortage. This year (2022), has been difficult due to the COVID sequelae, i.e., the staffing shortage of OR nurses, surgical technicians, and anesthesia providers.

Despite these challenges, our department continued to work hard and take care of patients, both from West Virginia and from our regional catchment area. We did more cases than the prior year, and nearly surpassed pre-COVID 2019 levels. We continue to increase outpatient surgeries for total joint and spine patients. Our hand service is performing over 500 cases per year in our clinic setting, maximizing efficiency, cost, and patient satisfaction. Discussions among the institutional leaders continue regarding a future ambulatory surgery center, which would truly be an exciting growth opportunity.

New faculty members added to our department in 2021 include Dr. Lou Bivona (spine), Dr. Andrew Parsons (pediatric ortho), Dr. Kylie Parrish (orthopaedic medical optimization), and Dr. Drew Wroblewski (hand/upper extremity). Dr. Najji Madi (foot and ankle) will also be starting with us in late 2022. We have expanded into Uniontown Hospital (which joined the system in January 2021) and planted some of our orthopaedic resident graduates around the state at system hospitals. Our research program remains robust with significant (i.e. millions) of external funding. The education of our residents and fellows remains a top priority, fostering a close-knit family and a culture of excellence.

Read on and I hope you enjoy this edition of our Annual Report!

A handwritten signature in black ink that reads "Sanford E. Emery MD". The signature is fluid and cursive.

Sanford E. Emery MD, MBA
Professor and Chairman
Department of Orthopaedics
Director of Surgical Services
West Virginia University

FACULTY



Sanford E. Emery MD, MBA
Chairman, Professor
Orthopaedics, Spine



John C. France MD
Chief, Spine Service;
Professor and Vice Chairman.
Director, Spine Fellowship



George Bal MD
Chief, Sports Medicine Service;
Associate Professor



Louis Bivona MD
Assistant Professor,
Orthopaedics, Spine



J. David Blaha MD
Professor, Orthopaedics



Kathryn Bosia DPM
Assistant Professor,
Orthopaedics, Podiatry



Michelle Bramer MD
Associate Professor,
Orthopaedic Trauma



Rusty Cain DPM
Assistant Professor,
Orthopaedics, Podiatry



Shari Cui MD
Associate Professor,
Orthopaedics, Spine



Scott Daffner MD
Professor, Orthopaedics,
Spine



Matthew Dietz MD
Associate Professor,
Orthopaedics, Adult
Reconstruction



Stephanie Ferimer MD
Assistant Professor, Physical
Medicine and Rehabilitation



Benjamin Frye MD
Associate Professor, Orthopaedics,
Adult Reconstruction. Director,
Adult Reconstruction Fellowship



Derik Geist MD
Assistant Professor,
Orthopaedics, Sports Medicine



Daniel Grant MD
Assistant Professor,
Pediatric Orthopaedics



Bethany Honce MD
Assistant Professor, Physical
Medicine and Rehabilitation



David F. Hubbard MD
Chief, Orthopaedic
Trauma Service; Professor,
Orthopaedics



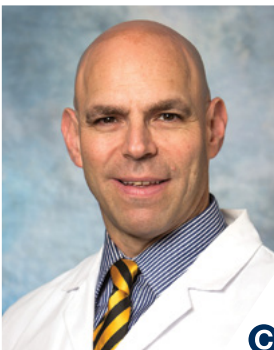
Dina Jones PT, PhD
Professor Orthopaedics,
Human Performance - Physical
Therapy, WVU Injury Control
Research Center



Cherie Kelly-Danhires DPM
Assistant Professor,
Orthopaedics, Podiatry



Kathryn Kasicky MD
Assistant Professor,
Orthopaedics, Internal
Medicine



Adam Klein MD
Assistant Professor,
Orthopaedics, Adult
Reconstruction



FACULTY PROMOTIONS

On July 1, 2021, the following faculty members earned promotions:

Promoted to Associate Professor:

Dr. Shari Cui
Dr. Shafic Sraj

Promoted to Professor:

Dr. E. Barry McDonough
Dr. B. Joseph Prud'homme

FACULTY & STAFF

Clinical and Research



C R

Andréa Lese MD
Assistant Professor,
Orthopaedics, Hand and
Upper Extremity



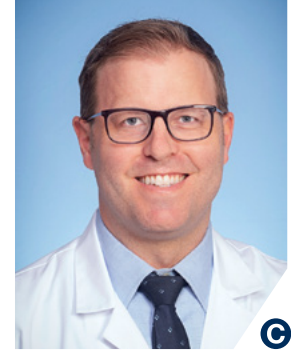
C R

Bingyun Li PhD
Professor, Orthopaedics,
WVU Cancer Institute
Research Programs



C R

Brock Lindsey MD
Chief, Adult Reconstruction;
Musculoskeletal Oncology, Associate
Professor, Orthopaedics; Director,
Orthopaedic Research Laboratory



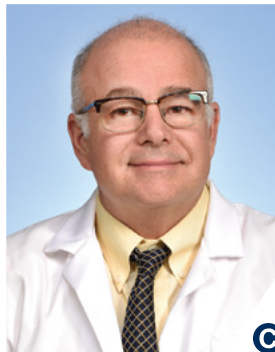
C R

Justin Lockrem MD
Assistant Professor,
Orthopaedics,
Sports Medicine



C R

John P. Lubicky MD
Chief, Pediatric Orthopaedics;
Professor, Orthopaedics



C R

David Lynch MD
Assistant Professor, Physical
Medicine and Rehabilitation



C R

E. Barry McDonough MD
Professor, Orthopaedics,
Sports Medicine



C R

Benjamin Moorehead MD
Assistant Professor,
Orthopaedics, Sports Medicine



C R

T. Ryan Murphy MD
Assistant Professor, Orthopaedics,
Adult Reconstruction



C R

Kylie Parrish MD
Assistant Professor,
Orthopaedics, Internal Medicine



C R

Andrew Parsons MD
Assistant Professor,
Pediatric Orthopaedics



C R

Jami Pincavitch MD
Assistant Professor,
Orthopaedics, Internal Medicine

WELCOME NEW FACULTY



Ming Pei MD, PhD
Professor, Orthopaedics;
Professor, Human Performance -
Exercise Physiology



Najji Madi MD
Assistant Professor,
Orthopaedics, Foot & Ankle



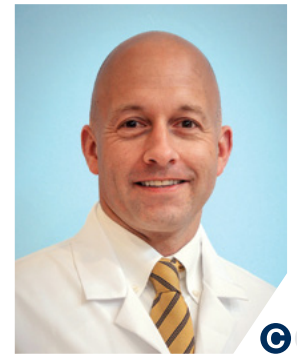
B. Joseph Prud'homme MD
Chief, Hand and Upper
Extremity; Professor,
Orthopaedics



Mary Louise Russell MD
Assistant Professor, Physical
Medicine and Rehabilitation



Shafic Sraj MD
Associate Professor, Orthopaedics,
Hand and Upper Extremity



David Tager MD
Assistant Professor,
Pediatric Orthopaedics



John Taras MD
Professor, Orthopaedics,
Hand and Upper Extremity



Colleen Watkins MD
Associate Professor,
Orthopaedics, Rheumatology/
Metabolic Bone



Drew Wroblewski MD
Assistant Professor, Orthopaedics,
Hand and Upper Extremity

FACULTY & STAFF

Awards and Honors



Sanford E. Emery, MD, MBA, FAOA, was presented with The American Orthopaedic Association's 2021 Distinguished Clinician Educator Award during the Opening Ceremony of the 2021 Virtual AOA Annual Leadership Meetings on June 8.

Sanford Emery, MD, MBA, FAOA, professor and chair of the Department of Orthopaedics in

the West Virginia University School of Medicine and director of Surgical Services, was presented with the 2021 Distinguished Clinician Educator Award. He was nominated by peers within the AOA for his leadership and accomplishments for his contributions to the specialty.

Emery was presented the award for his achievements training medical students, graduates, residents and other health professionals. He has been in the active practice of orthopaedic surgery for the last 33 years, and sub-specializes in adult spine surgery. Emery is a past president of the AOA (2017).

Dr. Emery's career demonstrates a commitment to excellent orthopaedic education. Over the course of his time at WVU, Dr. Emery grew the department from 5 to 39 full-time faculty, established a resident research program and fostered a significant increase in both funding and productivity of basic and clinical research in orthopaedics. He has more than 70 publications, 34 book chapters, one textbook and has been invited to present his work on more than 200 occasions at local, regional, national and international meetings.

In addition to his dedicated leadership to the AOA, Emery's leadership roles include serving as president of the American Board of Orthopaedic Surgery and the Cervical Spine Research Society. He has sat on several leadership committees in his institution, including the University Health Associates Board of Directors. He is an esteemed member of several professional medical societies including the American Academy of Orthopaedic Surgeons, North American Spine Society, Scoliosis Research Society, Lumbar Spine Research Society and West Virginia Orthopaedic Society.

In his virtual acceptance speech, Dr. Emery expressed his gratitude to colleagues, mentors, residents, fellows and his family for their influence on him, both personally and professionally. To close, he shared a pearl of wisdom developed over the course of a dynamic career as an orthopaedic educator.

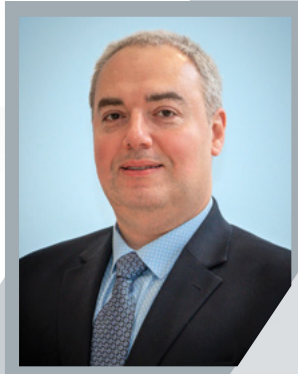
"The take home for the next generation of young leaders is the necessity of change in almost everything we do, but particularly relevant in medical education," he said.



AMERICAN
ORTHOPAEDIC
ASSOCIATION

**"...the necessity of change
[is important] in almost
everything we do, but particularly
relevant in medical education."**

Sanford E. Emery, MD, MBA, FAOA,
AOA 2021 Distinguished Clinician Educator



Sraj named president of the West Virginia State Medical Association

Dr. Shafic Srj, associate professor of orthopaedic surgery, was sworn in by WVU President Gordon Gee as the 174th president of the West Virginia State Medical Association at the WVSMA Healthcare Summit held at the Greenbrier August 20-22.

Dr. P. Brad Hall, executive medical director of the West Virginia Medical Professions Health Program, is the immediate past president, and Dr. Lisa Costello, assistant professor of pediatrics, was sworn in as the president-elect.

Among several effective speakers, Srj and School of Medicine alumna and WVU Board of Governors member, Dr. Patrice Harris, provided thought-provoking sessions in line with the summit's focus on physician unity and diversity and inclusion efforts.

The WVSMA is highly active in promoting the health and well-being of all West Virginians and the physicians who serve the state and surrounding areas. Membership to the WVSMA and its committees is open to all physicians in West Virginia.

FACULTY & STAFF

Advanced Practice Providers

In addition to our many faculty and residents, the WVU Department of Orthopaedics employed the services of 27 Advanced Practice Providers (APPs) in 2021.

Our APPs include 23 physician assistants and four nurse practitioners. We also have an additional four physician assistants who are expected to start throughout the spring and summer in 2022.

As our department continues to expand, the role of our APPs has continued to evolve to help meet the changing needs of orthopaedic patient care. These APPs also play a vital role in our clinic and operating room efficiencies. Their responsibilities include, but are not limited to, evaluating and treating patients in clinic, assisting with surgeries and clinical procedures, pre-operative examinations, patient communication,

triage, follow-up, and data collection for ongoing research projects. Our APPs are involved in every subspecialty within our department as well as our Orthopaedic Medical Optimization Program (OMOP) and our inpatient service. In addition, several of our APPs participate in our satellite and outreach clinics across West Virginia and southwestern Pennsylvania. These providers travel with faculty to clinic locations in Fairmont, Parkersburg, Martinsburg, Wheeling, Summersville, and Waynesburg, PA. In collaboration with our faculty providers, our APPs continue to work diligently to provide high quality orthopaedic care to all of our patients at WVU Medicine.

UTC APPs – Left to Right: (FRONT ROW) Casey Mozingo, Rachel Dearth, Amy Stubblefield, Colleen Allison, (BACK ROW) Ron Bewick, Nathan Guerriere, Kris Smith, Travis Randolph



POC APPs –
 Left to Right:
 Stacy Skidmore,
 Laura Stavrakis,
 Brittany Dzugan,
 Ashley Barber,
 Holly Bonnell



ADULT RECONSTRUCTION

Alicia Cooper, PA-C
 Nathan Guerriere, PA-C*
 Katie Seifried, PA-C
 Stacy Skidmore, PA-C

**ORTHO MEDICAL
 OPTIMIZATION PROGRAM**

Valerie Matyus, APRN
 Casey Mazingo, APRN

PEDIATRIC ORTHOPAEDICS

Holly Bonnell, PA-C
 Brittney Dzugan, PA-C

ATHLETICS

Travis Randolph, PA-C

**PHYSICAL MEDICINE
 AND REHABILITATION**

Gyl Cendana, PA-C

FOOT & ANKLE

Hannah Williams, PA-C*

SPINE

Emily Viglianco, PA-C
 Jacqueline Walker, PA-C

HAND & UPPER EXTREMITY

Colleen Allison, APRN
 Rachel Dearth, PA-C*
 Kelsie Lusk, PA-C*
 Jon Kline, PA-C

SPORTS MEDICINE

Kristopher Smith, PA-C
 Amy Stubblefield, PA-C

INPATIENT

Thomas Gocke, PA-C
 Claire Leinhauser, PA-C

TRAUMA

Laura Stavrakis, PA-C

METABOLIC BONE DISEASE

Ashley Wilson, APRN

WAYNESBURG CLINIC

Ron Bewick, PA-C

**MUSCULOSKELETAL
 ONCOLOGY**

Stacy Skidmore, PA-C

**Incoming 2022*

SPINE APPs - Left to Right:
 Emily Viglianco, Jacqueline Walker



FACULTY & STAFF

Staff Members



▲ **HSC Staff** – Left to Right: (FRONT ROW) Kerry Fluharty (Executive Assistant), Jennifer Forquer (Surgical Scheduler / Admin Assistant), Heather Hudson (Surgical Scheduler / Admin Assistant), Stacy Marolt (Surgical Scheduler / Admin Assistant), Melinda Quarrick (Surgical Scheduler / Admin Assistant), Elaine Cumberledge (Lead Surgical Scheduler / Admin Assistant), (BACK ROW) Dominique Friend (Registration Specialist), Brenda Sandy (Financial Analyst), Lisa Myles (Surgical Scheduler / Admin Assistant), Adrian Hagood (Surgical Scheduler / Admin Assistant), Nancy McGalla (Surgical Scheduler / Admin Assistant), Valarie Bunnell (Surgical Scheduler / Admin Assistant), Antoinette Summers (Administrator), Jackie Horton (Surgical Scheduler / Admin Assistant)



▲ **SPINE Staff** – Left to Right: Mark Townsend (Rad Tech), Christina Lattanzo (Lead Ortho Tech), Ashley Wilson (ACA), Jennifer Burns (RN)

POC Staff – Left to Right: Victoria Gifford (Ortho Tech), Renee Dillow (Lead Ortho Tech), Kailey Myers (ACA), Ashley Wilson (ACA) ▶



CONGRATULATIONS!



Congratulations **Natalie Gilbert**, WVU School of Medicine, Orthopaedics, for being named 2021 Ambulatory Nurse of the Year Platinum Award winner (20+ years of experience)!

WVU Medicine WVU Hospitals announced award-winners for its top nurses and personnel who support nursing efforts at the 2021 Nurse of the Year virtual ceremony held May 6.

“Any time we can celebrate the achievements and accomplishments of these deserving individuals is an honor and a reflection of the tremendous care at WVU Medicine,” Lya M. Cartwright-Stroupe, DNP, APRN, CPNP, NEA-BC, NPD-BC, manager of nursing research and professional development, Magnet® program director, and transition to practice program director, said.



UTC Staff – Tera Fetty (MS ATC LAT)

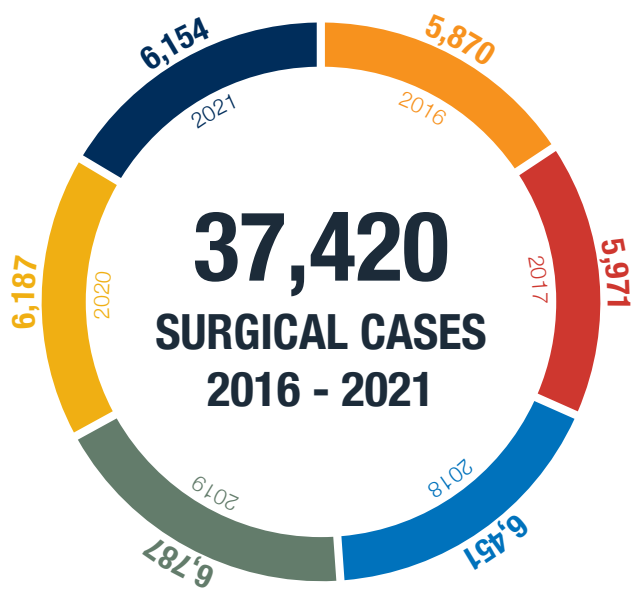
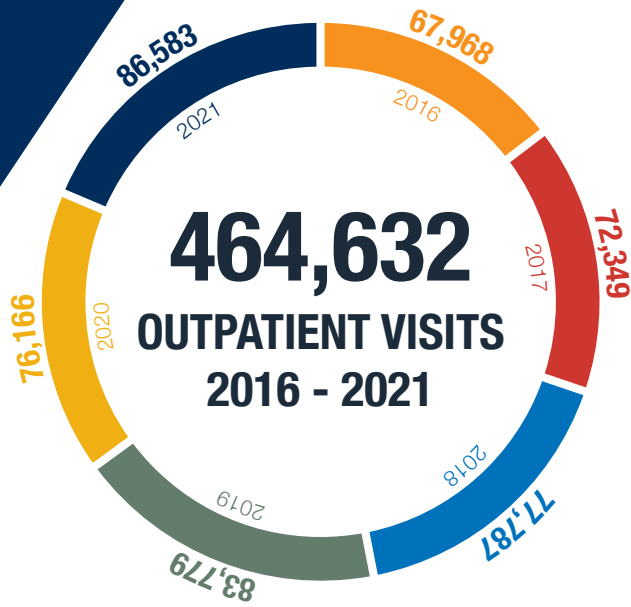


▲ UTC Staff – Left to Right: Angie Lamp (MA), Amanda Ball (Ortho Tech), Tiffany Whittaker (MA), Samantha Uphold (MA), Amber Kitzmiller (MA), Leanna Weidman (MA), Keisha Gaston (MA)

◀ UTC Staff – Left to Right: Jess Kaczmarczyk (Ortho Tech), Paige O’Neal (RN), Natalie Gilbert (RN), Marilyn Bragg (Certified Surg Tech), Paula Salamone (Lead Ortho Tech)

PATIENT CARE





ORTHOPAEDIC CLINICS

We have three conveniently located clinics in Morgantown, Fairmont, and now Waynesburg, PA. The Morgantown location is in the Physician Office Center, attached to J.W. Ruby Memorial Hospital. The Fairmont location is housed in our WVU Medicine Outpatient Center, directly across from the I-79 Downtown Fairmont exit. The Waynesburg clinic features multiple specialties and is located off the I-79 Waynesburg exit.

UNIVERSITY TOWN CENTRE

University Town Centre is the home for several of our Orthopaedic centers, including the Center for Joint Replacement, the WVU Sports Medicine Center, and the Orthopaedic Hand Clinic. WVU Medicine University Town Centre is conveniently located in the University Town Centre development just off I-79 in Granville. This spacious center offers patients access to their favorite primary care providers.

CENTER FOR JOINT REPLACEMENT AT WVU MEDICINE

The Center for Joint Replacement at WVU Medicine offers patients a comprehensive planned course of treatment. We believe our patients play a key role in ensuring a successful recovery. Our goal is to involve our patients in their treatment through each step of the program.

WVU MEDICINE SPORTS MEDICINE CENTER

WVU's Sports Medicine Center cares for athletes of all levels. We work to get all patients back to their highest level of activity possible. Our physicians manage sports-related injuries and medical conditions that include muscle and joint pain, sprains, and concussions. The WVU Sports Medicine Center has access to specialists from multiple disciplines, including Orthopaedics and experts from the WVU Spine Center. Individuals with sports injuries have same-day access to our services, which are available around the clock, seven days a week.

WVU SPINE CENTER

The WVU Spine Center brings specialists together with a multidisciplinary team approach to provide our patients with comprehensive spinal care. We use a full range of treatment options to ensure that patients with spine problems get the treatment they need quickly, efficiently, and easily. The Spine Center combines the expertise of WVU neurologists, orthopaedic specialists, neurosurgeons, pain management physicians, and rehabilitation services to target every patient's particular problem and provide optimal treatment.

PATIENT CARE

Spine

When Mr. Bill Stalnaker first came to The Spine Medicine Center in 2018, he said his first love was guitar, and his second love was singing. He spoke of his passions and the recent loss of function as well as his fears.

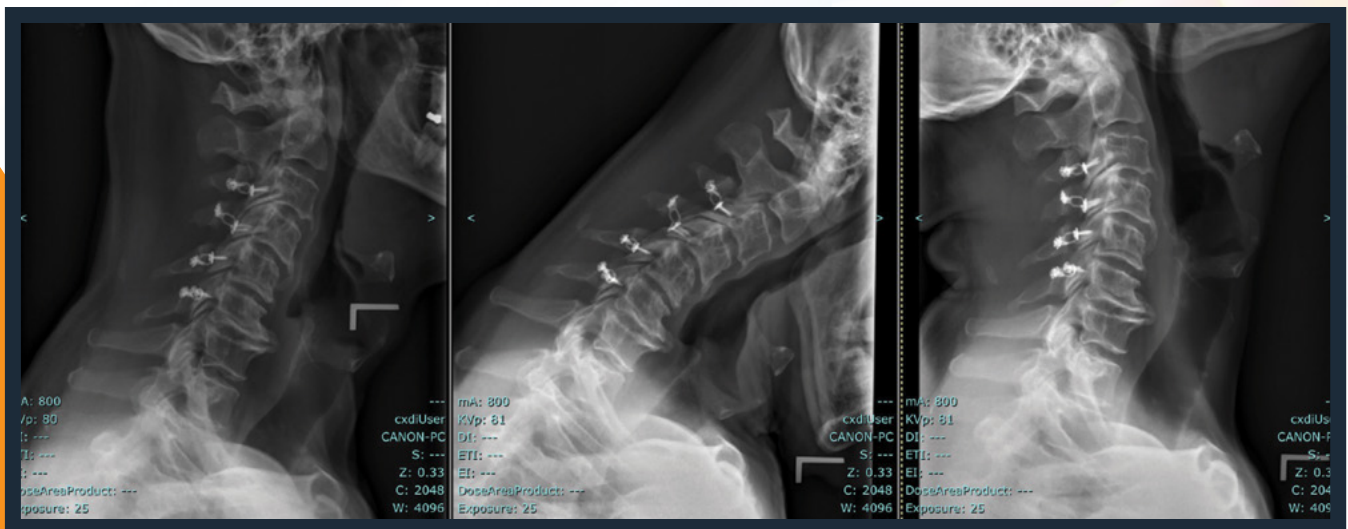
Mr. Stalnaker is a professional musician/guitarist and teacher, but by the time he came to clinic, he was incapable of even strumming a guitar. He had been gradually losing his hand function and balance for a couple of months with symptoms suddenly worsening in the two weeks preceding his first clinic visit. He had searing pain shooting from his neck into his shoulders and hands, and was no longer able to do the thing which defined so much of his life, play guitar. Mr. Stalnaker had an MRI and the results prompted expedited referral and intake into the spine clinic.

After examining Mr. Stalnaker and reviewing his imaging, it was evident that he was suffering from rapidly progressive cervical spondylotic myelopathy (CSM). CSM is a disorder and dysfunction of the spinal cord

resulting from pressure from arthritis. It is a traffic jam of the biggest highway of messages in the body, the cervical (neck) spinal cord. In essence, a mega-highway is slowed by the gradual narrowing of the lanes until signals controlling our arms, legs, and sometimes even involuntary bowel and bladder functions, are impeded. It typically occurs slowly, resulting in the loss of dexterity, sharpness, and balance; these symptoms are subtle and can go unnoticed for quite some time, especially in the absence of pain. In some cases, rapid progression can occur with or without injury/insult. In severe cases, patients can lose function altogether, resulting in spinal cord injury and frank paralysis.

Once patients are symptomatic, the only treatment is surgical, as nothing but a change of spinal structure can alleviate the tightness and compression causing the cord dysfunction.

Mr. Stalnaker was presented with multiple treatment options after which it was determined that he would undergo a Cervical Laminoplasty with Reconstruction. This procedure is a posterior (back of the neck) surgery that essentially “raises the roof” of a flattened hallway



ABOVE: Post-operative x-rays showing segmental reconstructions of each lamina (roof) increasing total canal diameter while preserving intersegmental motion



LEFT: Dr. Cui and Mr. Stalnaker at a follow-up visit
ABOVE: Sagittal and axial pre-operative MRI showing severe multi-level cord compression with signal change representing myelomalacia behind C3

containing the crushed spinal cord. Though the shape of Bill's spine was not perfectly suited to a back-sided surgery (he was curved forward rather than backward), it was the procedure that could best alleviate multiple levels of tightness while sparing vocal cord function. And having already lost the ability to play guitar (his first love), his spine team was hesitant to endanger his ability to sing (his second love) by performing a multi-level front-sided surgery. As an added bonus, the surgery does not require fusion; therefore, patients are able to achieve the benefits of decompression without the lasting stiffness of a long, rigid fixation. Weighing multiple other factors, it was agreed that he would undergo this approach; his surgery was urgently set to prevent further loss of function.

One week later, Mr. Stalnaker underwent a cervical laminoplasty from C3-C6 with reconstruction. Surgery went routinely and he recovered uneventfully,

being discharged home the next day. Though his early recovery was riddled with odd symptoms and waxing/waning scares (zingers into his left chest/collar, fluctuating numbness in his hands), eventually his spinal cord awoke. By two weeks after surgery, he was walking better and playing guitar again. By six months after surgery, Bill had regained nearly all of his lost function and insisted he played guitar even better than before his myelopathy diagnosis and consequent surgical intervention.

Now, years after surgery, Mr. Stalnaker is playing in his band, teaching high school students, and continuing to regale clinic staff with his tales of fighting the good fight both as a teacher and in political activities. Though life surrounding his scare with CSM left some scars, the lessons and tribulations will live on.

PATIENT CARE

National Recognition



ORTHOPAEDICS

HIGH PERFORMERS

WVU Medicine J.W. Ruby Memorial Hospital has been named the number one hospital in West Virginia for 2021-22 by U.S. News & World Report, which also recognized six WVU Medicine hospitals, including Ruby Memorial, as High Performing Hospitals.



KNEE REPLACEMENT

In the Specialties category, Ruby Memorial Hospital was recognized as High Performing in multiple categories, including Orthopaedics. In the Procedures and Conditions category, Ruby Memorial Hospital was also recognized as High Performing in multiple categories, including Knee Replacement.

The annual Best Hospitals rankings and ratings are designed to assist patients and their doctors in making informed decisions about where to receive care for challenging health conditions or for common elective procedures.

CENTER FOR JOINT REPLACEMENT RECEIVES ADVANCED CERTIFICATION

The Center for Joint Replacement at WVU Medicine, led by Dr. Brock Lindsey, recently received advanced certification and is one of 120 Joint Commission ADVANCED CERTIFIED PRIMARY HIP AND KNEE programs in the country!



The advanced certification was developed by the Joint Commission in 2016 and involves a significantly more rigorous and comprehensive review than the standard certification, which the program previously held. Programs are evaluated on the quality, consistency, and safety of their services and patient care. This advanced certification award demonstrates the commitment to provide exceptional orthopaedic care to the people of West Virginia and surrounding areas.

WVU ORTHOPAEDIC CLINIC LOCATIONS

MORGANTOWN
Physician Office Center

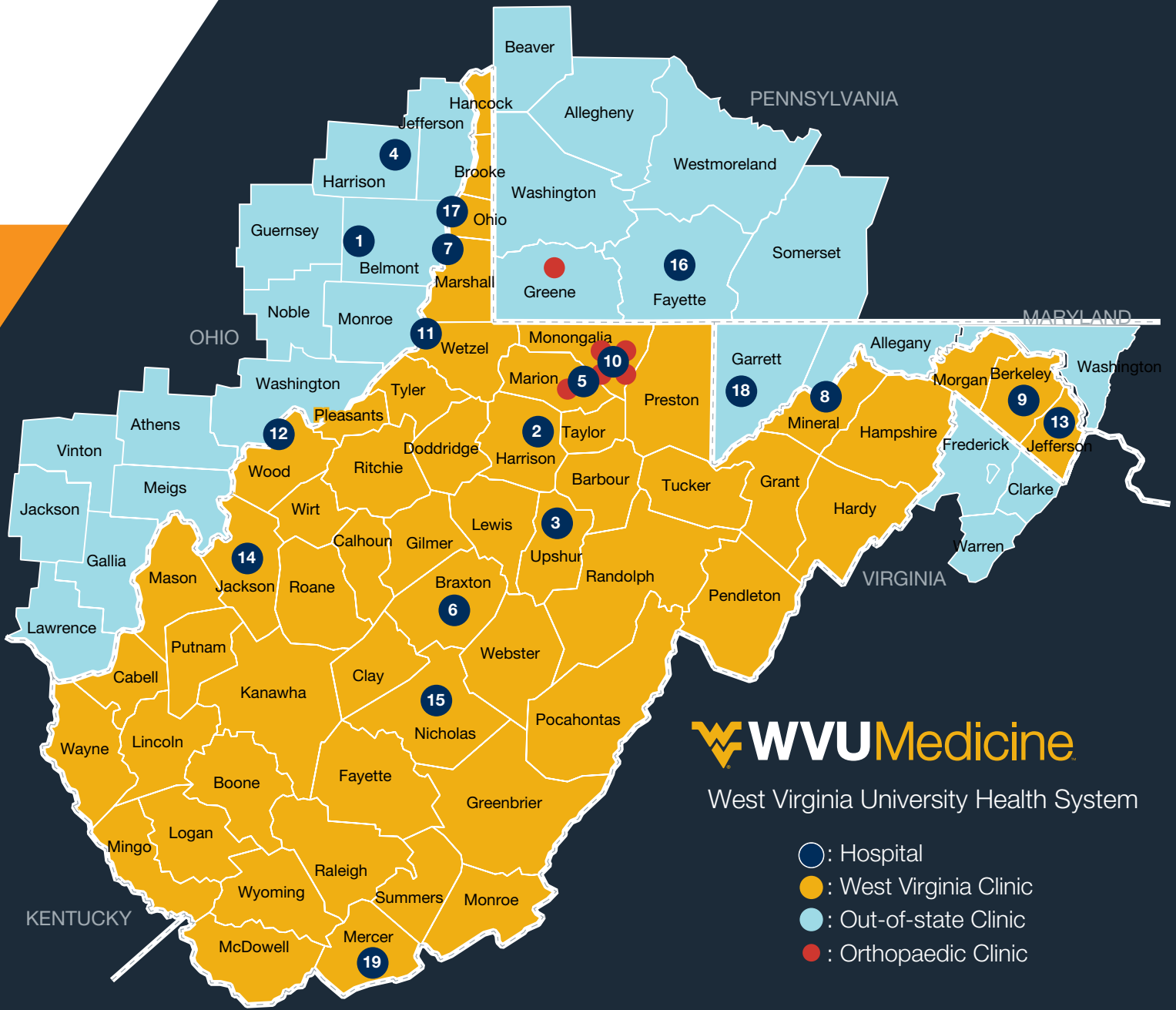
MORGANTOWN
WVU Spine Center

MORGANTOWN
WVU Medicine Sports
Medicine Center

MORGANTOWN
Center for Joint Replacement
at WVU Medicine

FAIRMONT
WVU Medicine Outpatient
Center: Fairmont

WAYNESBURG
WVU Medicine Outpatient
Center: Waynesburg



WVU Medicine
West Virginia University Health System

- : Hospital
- : West Virginia Clinic
- : Out-of-state Clinic
- : Orthopaedic Clinic

MEMBER SYSTEM HOSPITALS

- 1. BARNESVILLE, OHIO**
Barnesville Hospital
- 2. BRIDGEPORT**
United Hospital Center
- 3. BUCKHANNON**
St. Joseph's Hospital
- 4. CADIZ, OHIO**
Harrison Community Hospital
- 5. FAIRMONT**
Fairmont Medical Center
A CAMPUS OF J.W. RUBY
MEMORIAL HOSPITAL
- 6. GASSAWAY**
Braxton County
Memorial Hospital
- 7. GLEN DALE**
Reynolds Memorial Hospital
- 8. KEYSER**
Potomac Valley Hospital
- 9. MARTINSBURG**
Berkeley Medical Center
- 10. MORGANTOWN**
- J.W. Ruby Memorial Hospital
- Children's Hospital
A CAMPUS OF J.W. RUBY
MEMORIAL HOSPITAL
- 11. NEW MARTINSVILLE**
Wetzel County Hospital

MANAGED HOSPITALS

- 12. PARKERSBURG**
Camden Clark Medical Center
- 13. RANSON**
Jefferson Medical Center
- 14. RIPLEY**
Jackson General Hospital
- 15. SUMMERSVILLE**
Summersville Regional
Medical Center
- 16. UNIONTOWN, PENNSYLVANIA**
Uniontown Hospital
- 17. WHEELING**
Wheeling Hospital
- 18. OAKLAND, MARYLAND**
Garrett Regional Medical Center
- 19. PRINCETON**
Princeton Community Hospital

The WVU Orthopaedic Residency Program had another successful academic year in 2020-2021.

RESIDENCY PROGRAM

CONTINUED EXCELLENCE IN EDUCATION AND FACILITIES

Our residents continue to receive top-notch education from our dedicated staff in the major orthopaedic sub-specialties. Through graduated responsibility, our junior residents expand their knowledge and skills with the guidance of both senior residents and faculty. There is an emphasis on clinical excellence and research proficiency. Residents receive robust operative experience and ample opportunities to expand their knowledge of orthopaedics through research projects and presentations at both local and national levels.

The residents also provide excellent education to others in the healthcare field and community through outreach

programs, medical student anatomy labs, splinting and casting workshops, and Special Forces training labs.

As the WVU Medicine system expands, our residents see a larger volume of patients with increasing complexity. The department has expanded to meet these challenges with additional new faculty and APPs.

With the easing of COVID restrictions, the residency program is having a resurgence of group activities outside of work. The yearly intern welcome party has returned, as well as gatherings for all major holidays. We now have a growing WVU Orthopaedics tailgate for all WVU football home games that is attended by friends, family, residents, and faculty.





FELLOWSHIP NEWS

As the year ends, there is a departure of the graduating Chief Residents. Each matched into a competitive fellowship:

Williams Brooks, MD - UT Houston Orthopedic Sports Medicine and Shoulder Fellowship

Julie Glener, MD - Holy Cross Orthopaedic Institute Shoulder and Elbow Fellowship

Jason Kinney, MD - Johns Hopkins Adult Hip and Knee Replacement Fellowship

Justin Ray, MD - OrthoCarolina Foot and Ankle Fellowship

ARRIVALS AND DEPARTURES

Each year we welcome four new interns. The class of 2026-2027 includes Brendan Farley, MD (Central Michigan University), John Pisquiy, MD (Texas Tech University), Grant Slack, MD (Wright State University), and Chris Wilson, MD (Penn State).

We look forward to training more competent and conscientious orthopaedic surgeons and are excited to see what the 2022-2023 academic year brings.

RESIDENCY PROGRAM

Graduates and Current Residents



Will Brooks MD

SOM: East Tennessee State University

Fellowship: UT Houston Orthopedic Sports Medicine and Shoulder Fellowship



Julie Glener MD

SOM: University of Central Florida

Fellowship: Holy Cross Orthopaedic Institute – Shoulder and Elbow



Jason Kinney MD

SOM: Medical College of Georgia at Augusta University

Fellowship: Johns Hopkins Adult Hip and Knee Replacement Fellowship



Justin Ray MD

SOM: East Carolina University

Fellowship: OrthoCarolina Foot and Ankle Fellowship



Justin Vaida MD

SOM: University of Massachusetts

Fellowship: Prisma Health Upstate-Orthopaedic Trauma Fellowship



Patrick Luchini MD

SOM: West Virginia University

Fellowship: Vanderbilt Univ. Orthopedic Sports Medicine and Shoulder Surgery Fellowship



Eric Neumann MD

SOM: West Virginia University

Fellowship: University of Washington Spine Surgery Fellowship



Joshua Reside MD

SOM: University of Florida

Fellowship: Mississippi Sports Medicine & Orthopaedic Center



Taylor Shackelford MD

SOM: University of Kentucky



Keenan Atwood MD

SOM: Medical College of Wisconsin



Michael Booth MD

SOM: SUNY Upstate Medical University



Michael Niemann MD

SOM: West Virginia University



2025

Benjamin Giertych MD

SOM: University of Wisconsin



2025

Michael Quinet MD

SOM: Medical College of Georgia at Augusta University



2025

Kenneth Sabacinski MD

SOM: Charles E. Schmidt College of Medicine at Florida Atlantic University



2025

Nathaniel Williams MD

SOM: Pennsylvania State University College of Medicine



2026

Edwin Chaharbakhshi MD

SOM: Loyola University Chicago Stritch School of Medicine



2026

Brendan Farley MD

SOM: Central Michigan University College of Medicine



2026

Grant Slack MD

SOM: Wright State University Boonshoft School of Medicine



2026

Christopher Wilson MD

SOM: Penn State College of Medicine



2027

Jennafir Ernst MD

SOM: University of Pittsburgh



2027

Vincent Morrow MD

SOM: West Virginia University



2027

Caitlyn Patton MD

SOM: West Virginia University



2027

John Pisquiy MD

SOM: Texas Tech University Health Science Center El Paso - Foster School of Medicine



2028

Brody Fitzpatrick MD

SOM: University of Wisconsin

RESIDENCY PROGRAM

Resident Research Year

At West Virginia University, the Accreditation Council for Graduate Medical Education offers an accredited orthopaedic surgery research position each year.

At West Virginia University, the Accreditation Council for Graduate Medical Education offers an accredited orthopaedic surgery research position each year. This position is a six-year track, compared to the traditional five-year categorical track. It is completed between the residents' first and second years.

During this time, residents have no hospital-based duties or call responsibilities, which provides them with the autonomy to establish and conduct their own research projects. They also have the opportunity to participate in ongoing studies alongside several faculty research members. The residents are expected to prepare grant submissions, oversee and manage studies, present poster and podium presentations, and submit peer-reviewed manuscripts.

Brock Lindsey, MD, (Chief, Adult Reconstruction and Musculoskeletal Oncology), is the Director of the WVU Department of Orthopaedics Research Laboratory and advises lab residents during their research year.

He, along with Matthew Dietz, MD, (Adult Reconstruction), Ming Pei, MD, PhD, and Bingyun Li, PhD, conduct the majority of the Department's basic science research with main focuses on:

NANOTECHNOLOGY

IMMUNOTHERAPY

TISSUE REGENERATION

ONCOLOGY

INFECTION (BIOFILM)

The Department also has an active clinical research focus with ongoing projects in every orthopaedic subspecialty.

The WVU Department of Orthopaedics Research Laboratory is located on the fifth floor of the WVU Health Sciences Center adjacent to the main hospital campus. The 4,000-square-foot lab space contains state-of-the-art amenities capable of conducting basic science research with emphasis on tissue engineering, nanotechnology, and cadaver and pre-clinical model studies.

The Research Resident also participates in daily resident education conferences, performs monthly cadaver dissection for anatomy conference, and provides lectures to students in the School of Medicine. The opportunities and experiences generated from this year are meant to serve as a foundation for a career as a clinician-scientist.

Interested in
learning more?
Contact:

EDWIN CHAHARBAKHSI MD
edwin.chaharbakhshi@hsc.wvu.edu
Current Research Resident

BROCK LINDSEY MD
blindsey@hsc.wvu.edu
Director, WVU Department of
Orthopaedics Research Laboratory

2020-2021 Presentations and Publications

PODIUM AND POSTER PRESENTATIONS

Giertych BF, Patton C, Colantonio A, Chandi S, Katzmeyer T, Bramer M, Hubbard D.

Evaluation of aspirin vs enoxaparin for venous thromboembolism prophylaxis following femoral shaft fracture. Podium Presentation. WVU Annual Research Day. Morgantown, WV. May 2021.

•Awarded *Jon Michael Moore Trauma Center Research Grant*

Giertych BF, Dietz M, Klein A, Frye B, Jochimsen K, Lindsey B. Robotic-arm assisted THA:

acetabular cup placement accuracy and clinical outcomes. Podium Presentation. WVU Annual Research Day. Morgantown, WV. May 2021.

Giertych BF, Niemann M, Lokant M, Makani A, Williams S, Dietz M, Lastinger A. Utilization of a

standardized tool to measure distress in prosthetic joint infection combined clinics. Podium Presentation. WVOS Annual Meeting. Roanoke, WV. Apr 2021.

Luchini PM, Glener JE, Vaida J, Taras JS. Percutaneous Threaded Pin Fixation of Distal Radius Fracture in the Athlete. Podium presentation. SOA Annual Meeting. Charleston, SC. Jul 2021.

Vaida J, Conti AD, Ray JJ, Bravin DA, and Bramer MA. Evaluating the Efficacy of Vancomycin Powder in Treating Open Fractures. Podium Presentation. WVOS Annual Meeting. Roanoke, WV. Apr 2021.

Vaida J, Shackleford TL, Neumann EJ, Frye BM, Klein AE, Dietz MJ. Examining the Microbiome in Direct Anterior Total Hip Arthroplasty. Podium Presentation. AAOS Annual Meeting. San Diego, CA. Aug 2021.

Vaida J, Luchini PM, Glener JE, Kessler MW, McCabe LA, Taras, JS. Threaded Pin and Volar Plate Fixation of Distal Radius Fractures: Early Functional Recovery. Podium Presentation. SOA Annual Meeting. Charleston, SC. Jul 2021.



Left to Right: Eddie Chaharbakhshi, Justin Ray, Tyler Quinet, Kenny Sabacinski, Chris Wilson, Eric Neumann

PUBLICATIONS

Atwood K, Shackleford T, Lemons W, Eicher JL, Lindsey BA, Klein AE. Postdischarge Opioid Use after Total Hip and Total Knee Arthroplasty. *Arthroplast Today*. 2021 Jan 30; 7:126-129. doi: 10.1016/j.artd.2020.12.021. PMID: 33553537. PMCID: PMC7851352

Ashberg L, Close MR, Perets I, Walsh JP, **Chaharbakhshi EO**, Domb BG. The Hip-Spine Connection: How to Differentiate Hip Conditions From Spine Pathology. *Orthopedics*. 2021 Nov-Dec; 44(6):e699-e706. doi: 10.3928/01477447-20211001-06. Epub 2021 Oct 1. PMID: 34618633

Perets I, **Chaharbakhshi EO**, Barkay G, Mu BH, Lall AC, Domb BG. Diabetes Mellitus Is Not a Negative Prognostic Factor for Patients Undergoing Hip Arthroscopy. *Orthopedics*. 2021 Jul-Aug; 44(4):241-248. doi: 10.3928/01477447-20210621-02. Epub 2021 Jul 1. PMID: 34292812

RESIDENCY PROGRAM

2020-2021 Presentations and Publications (cont.)



Left to Right: Jason Kinney, Pat Luchini, Will Brooks, Michael Niemann, Eric Neumann, Chris Wilson, Justin Ray, Eddie Chaharbakhshi, Taylor Shackelford

Chaharbakhshi E, Schmitt D, Brown NM. The Added Burden of Transfer Status in Patients Undergoing Surgery After Sustaining a Periprosthetic Fracture of the Hip or Knee. *Cureus*. 2021 Aug 1; 13(8):e16805. doi: 10.7759/cureus.16805. PMID: 34513411. PMCID: PMC8407044

Frye BM, Patton C, **Kinney JA**, Murphy TR, Klein AE, Dietz MJ. A Medial Congruent Polyethylene Offers Satisfactory Early Outcomes and Patient Satisfaction in Total Knee Arthroplasty. *Arthroplast Today*. 2021 Jan 19; 7:243-249.e0. doi: 10.1016/j.artd.2020.11.003. PMID: 33786348. PMCID: PMC7987930

Niemann MJ, Brooks WC, Ghobrial JA, Makani A, Sraj S. Arthroscopic Biceps to Subscapularis Tenodesis: A Surgical Technique. *Tech Hand Up Extrem Surg*. 2021 Apr 14. doi: 10.1097/BTH.0000000000000347. Epub ahead of print. PMID: 33859100

Niemann MJ, Brooks WC, Cavanaugh P, Lese AB, Taras JS. Excision of a Rare Triquetral Body Fracture Nonunion. *J Hand Surg Glob Online*. 2021 Jan 11; 3(2):103-105. doi: 10.1016/j.jhsg.2020.12.002. Erratum in: *J Hand Surg Glob Online*. 2021 Nov 17; 3(6):373-374. PMID: 35415537. PMCID: PMC8991643

Ray JJ, Shackelford TL, Bronikowski D, Lubicky JP, Lancaster J, Grant DR. Pain Medication Disposal Rates After Pediatric Surgery. *Hosp Pediatr*. 2021 May; 11(5):521-524. doi: 10.1542/hpeds.2020-000398. Epub 2021 Apr 12. PMID: 33846141. PMCID: PMC8074109

Shackelford T, Niemann M, Vaida J, Davis S, Braga S, Coyne K, Bronikowski D, Sraj SA. Normal Values of the Second Interosseous Pinch: A Measurement of Pure Ulnar-Innervated Intrinsic Muscles of the Hand. *J Hand Surg Am*. 2021 Dec 10: S0363-5023(21)00620-1. doi: 10.1016/j.jhsa.2021.09.024. Epub ahead of print. PMID: 34903391

Shackleford TL, Ray JJ, Bronikowski DM, Lancaster JD, Grant DR. Effect of State Legislation on Opioid Prescribing Practices After Surgery at a Pediatric Hospital. *Acad Pediatr.* 2021 Oct 2: S1876-2859(21)00460-5. doi: 10.1016/j.acap.2021.09.017. Epub ahead of print. PMID: 34610461

Zhang S, **Vaida J**, Parenti J, Lindsey BA, Xing M, Li B. Programmed Multidrug Delivery Based on Bio-Inspired Capsule-Integrated Nanocoatings for Infected Bone Defect Treatment. *ACS Appl Mater Interfaces.* 2021 Mar 17; 13(10):12454-12462. doi: 10.1021/acsami.0c20332. Epub 2021 Mar 8. PMID: 33683872

Vaida J, Liechti DJ, Shackleford TL, Lubicky JP. Complications Associated with Implant Removal

after Femoral Shaft Fractures in Pediatric Populations. *AAOS Now.* 2021 Jan; 15(1), 16-17.

Vaida J, Luchini PM, Glener JE, Kessler MW, McCabe LA, Taras JS. Threaded Pin and Volar Plate Fixation of Distal Radius Fractures: Early Functional Recovery. *J Hand Surg Glob Online.* 2021 Jun 27; 3(5):245-248. doi: 10.1016/j.jhsg.2021.05.012. PMID: 35415575. PMCID: PMC8991605



Left to Right: Chief Residents Jason Kinney, Will Brooks, Julie Glener, Justin Ray



RESEARCH

Welcome to the West Virginia University Orthopaedic Research Laboratory. In the lab, you will find research and education opportunities in the areas of tissue/cartilage engineering, stem cell research, immunophenotyping, and nanotechnology/nanomedicine. There are also opportunities in the clinical areas of adult reconstruction, spine, sports medicine, trauma, and hand and upper extremity.



TOP: UTC Research Staff (Left to Right) – Savannah Connelly (PROMs Assistant), Faviola Aguilar (PROMs Assistant)



CENTER: HSC Research Staff (Left to Right) – [Front Row] Amanda Stewart (Research Associate), Paige Harman (Clinical Trials Manager), [Back Row] Elizabeth Stewart (Research Assistant II), Jenn Eicher (Manager of Clinical Research & Patient Outcomes), Suzanne Danley (Research & Grants Analyst), Josh Parenti (Research Assistant III)



BOTTOM: Dr. Pei with his laboratory students.

The laboratory conducts *in vivo* and *in vitro* research in a modern environment. The laboratory faculty and staff are multidisciplinary and include faculty from Orthopaedics, Microbiology and Immunology, Pathology, and Statistics.

Graduate students from the university's Health Sciences Center collaborate with orthopaedic surgeons and bioengineers on MS and PhD research topics. The lab is situated within the Department of Orthopaedics at WVU and provides support to orthopaedic residents in research projects, both basic science and clinical. The lab is well equipped and encourages multidisciplinary musculoskeletal research between various departments in the Health Sciences Center.

RESEARCH

Globally Recognized Cartilage Research

Ming Pei, MD, PhD, has been named a world expert in cartilage research by Expertscape. They report Pei is in the top 0.1% of scholars in the world who have written medical literature about cartilage in the past decade.

Pei is a professor in the West Virginia University School of Medicine Department of Orthopaedics and Division of Exercise Physiology and this is the third time he has received this recognition.

Pei's lab focuses on the investigation of cell-matrix interaction and attempts to explore/engineer an ideal matrix to rejuvenate adult stem cells' stemness. Achieving this goal will benefit future stem cell-based musculoskeletal tissue engineering and regeneration, particularly for cartilage regeneration.

“Cartilage defects occur often in the elderly population and tend to cause osteoarthritis if no treatment is received. Current treatments in the clinic can relieve patients' symptoms but fail to repair

cartilage functionally and biologically,” explained Pei. “Adult stem cells are a promising cell source for cartilage tissue engineering and regeneration, which needs a large quantity of high-quality stem cells. However, a long-term *ex vivo* expansion of stem cells can cause cell senescence where the cells lose their proliferation and differentiation potentials.”

Since joining the department in 2005, Pei's work has been supported by the AO Foundation, Musculoskeletal Transplant Foundation, and National Institutes of Health.

Through collaboration with principal investigators across the country, Pei's lab has been published more than 97 times in his area of interest in various medical publications.

Expertscape is a database that objectively ranks people and institutions by their expertise in more than 27,000 biomedical topics. It examines all medical publications indexed in the National Library of Medicine's MEDLINE database and then experts are ranked by both the quality and quantity of their publications.

“Current treatments in the clinic can relieve patients' symptoms but fail to repair cartilage functionally and biologically. Adult stem cells are a promising cell source for cartilage tissue engineering and regeneration.”

Ming Pei, MD, PhD

2021 Active Grants



CONGRATULATIONS!

Congratulations **Suzanne Danley**, Research & Grants Analyst, WVU School of Medicine, Orthopaedics for being awarded the 2021 Vice President's Award for Clerical/Secretarial!

Each year, WVU Health Sciences recognizes individuals and teams with Vice President's Awards for their significant contributions to the mission of the Health Sciences Center.

The Vice President's Awards honor faculty and staff who have been recognized by their peers for their outstanding accomplishments. Winners were nominated by their peers and selected by their respective Achievement Award committees.

SCOTT D. DAFFNER MD

- Title: M6-C™ Artificial Cervical Disc IDE Post-Approval Study
Source: Spinal Kinetics

MATTHEW J. DIETZ MD

- Title: Relationship of Biomarkers and Fluorescence in Prosthetic Knee Infections
Source: US DHHS-NIH-National Institute of Arthritis, Musculoskeletal and Skin Diseases
- Title: Prescrib3d Technologies Active Antibiotic Spacer
Source: US NSF-Biological Sciences
- Title: WVCTSI Research Scholar Program
Source: West Virginia Clinical and Translational Science Institute

SANFORD E. EMERY MD, MBA

- Title: Prospective, Randomized, Controlled, Blinded Pivotal Study – Transforaminal Lumbar Interbody Fusion (TLIF) At 1 Or 2 Levels Using Infuse™ Bone Graft and The Capstone™ Spinal System with Posterior Supplemental Fixation For Treatment of Symptomatic Degeneration.
Source: Medtronic Incorporated

JOHN C. FRANCE MD

- Title: Thoracolumbar Burst Fractures (AOSpine A3, A4) in Neurologically Intact Patients: An Observational, Multicenter Cohort Study Comparing Surgical Versus Non-Surgical Treatment
Source: AO Research Foundation

BENJAMIN M. FRYE MD

- Title: Fellowship in Adult Reconstruction
Source: OMeGA Medical Grants Association
- Title: Fellowship in Adult Reconstruction
Source: Smith+Nephew

DAVID F. HUBBARD MD

- Title: Fixation Using Alternative Implants for the Treatment of Hip Fractures
Source: McMaster University
- Title: A Prospective, Randomized, Multicenter Controlled Trial of CERAMENT™|G as Part of Surgical Repair of Open Diaphyseal Tibial Fractures
Source: BONE SUPPORT AB

BINGYUN LI PHD

- Title: Mid-Atlantic Sustainable Biomass for Value-added Products Consortium (MASBio)
Source: USDA – National Institute of Food & Agriculture

- Title: Unique Nanotechnology Converts Carbon Dioxide to Valuable Products
Source: US DoE – Department of Energy

- Title: Innovative Nano-Hybrids with Controlled Drug Release for Bone Regeneration
Source: US DoD – Defense Health Agency

BROCK A. LINDSEY MD

- Title: Systemic IL-12 Therapy within Nanocapsules Leading to Immune Modulation for Osteosarcoma
Source: WV CTSI: CTR IdeA /US DHHS-NIH-NIGMS
- Title: A Prospective, Post-Market, Multi-Center Study of Tritanium Acetabular Shell
Source: Stryker
- Title: A Longitudinal Multi-Center Study of Robotic-Arm Assisted THA: Acetabular Cup Placement Accuracy and Clinical Outcomes
Source: Stryker
- Title: Delineating Mechanisms of Checkpoint Blockade Failure While Manipulating MDSCs as a Treatment to this Conundrum
Source: Musculoskeletal Tumor Society / Sarcoma Strong Foundation
- Title: Comparative Effectiveness of Pulmonary Embolism Prevention after Hip and Knee Replacement (PEPPER): Balancing Safety and Effectiveness
Source: Dartmouth College/Medical University of South Carolina

MING PEI MD, PHD

- Title: Decellularized Matrix and Cartilage Regeneration
Source: US DHHS – NIH – National Institute of Arthritis, Musculoskeletal and Skin Diseases

RESEARCH


2021 Publications

- Slobogean GP, Sprague S, Bzovsky S, Scott T, Thabane L, Heels-Ansdell D, O'Toole RV, Howe A, Gaski GE, Hill LC, Brown KM, Viskontas D, Zomar M, Della Rocca GJ, O'Hara NN, Bhandari M; **FAITH-2 Investigators**. Fixation using Alternative Implants for the Treatment of Hip Fractures (FAITH-2): The Exploratory Health-Related Quality of Life and Patient-Reported Functional Outcomes of a Multi-Centre 2 x 2 Factorial Randomized Controlled Pilot Trial in Young Femoral Neck Fracture Patients. *Injury*. 2021 Oct; 52(10):3051-3059. doi: 10.1016/j.injury.2021.02.030. Epub 2021 Feb 14. PMID: 33618847
- Shapiro LM, Kamal RN; **Management of Distal Radius Fractures Work Group**; Nonvoting Clinical Contributor; Nonvoting Oversight Chairs; Staff of the American Academy of Orthopaedic Surgeons and the American Society for Surgery of the Hand. **Distal Radius Fracture Clinical Practice Guidelines-Updates and Clinical Implications**. *J Hand Surg Am*. 2021 Sep; 46(9):807-811. doi: 10.1016/j.jhsa.2021.07.014. Epub 2021 Aug 9. PMID: 34384642
- Cui S**, Sedney CL, **Daffner SD**, Large MJ, Davis SK, Crossley L, **France JC**. Effects of telemedicine triage on efficiency and cost-effectiveness in spinal care. *Spine J*. 2021 May; 21(5):779-784. doi: 10.1016/j.spinee.2021.01.006. Epub 2021 Jan 9. PMID: 33434648
- Katsevman GA, Spencer RD, **Daffner SD**, Bhatia S, Marsh RA, **France JC**, **Cui S**, Dekeseredy P, Sedney CL. **Robotic-Navigated Percutaneous Pedicle Screw Placement Has Less Facet Joint Violation Than Fluoroscopy-Guided Percutaneous Screws**. *World Neurosurg*. 2021 Jul; 151:e731-e737. doi: 10.1016/j.wneu.2021.04.117. Epub 2021 May 4. PMID: 33962072. PMCID: PMC8609466
- Brown TS, Bedard NA, Rojas EO, Anthony CA, Schwarzkopf R, Stambough JB, Nandi S, Prieto H, Parvizi J, Bini SA, Higuera CA, Piuze NS, Blankstein M, Wellman SS, **Dietz MJ**, Jennings JM, Dasa V; AAHKS Research Committee. **The Effect of the COVID-19 Pandemic on Hip and Knee Arthroplasty Patients in the United States: A Multicenter Update to the Previous Survey**. *Arthroplast Today*. 2021 Feb; 7:268-272. doi: 10.1016/j.artd.2020.11.025. Epub 2020 Dec 3. PMID: 33294537. PMCID: PMC7713541
- Frye BM**, Patton C, Kinney JA, **Murphy TR**, **Klein AE**, **Dietz MJ**. **A Medial Congruent Polyethylene Offers Satisfactory Early Outcomes and Patient Satisfaction in Total Knee Arthroplasty**. *Arthroplast Today*. 2021 Jan 19; 7:243-249.e0. doi: 10.1016/j.artd.2020.11.003. PMID: 33786348. PMCID: PMC7987930
- Prince N, Penatzer JA, Shackelford TL, Stewart EK, **Dietz MJ**, Boyd JW. **Tissue-level cytokines in a rodent model of chronic implant-associated infection**. *J Orthop Res*. 2021 Oct; 39(10):2159-2168. doi: 10.1002/jor.24940. Epub 2020 Dec 15. PMID: 33283316. PMCID: PMC8180530
- Reitman CA, Hills JM, Standaert CJ, Bono CM, Mick CA, Furey CG, Kauffman CP, Resnick DK, Wong DA, Prather H, Harrop JS, Baisden J, Wang JC, Spivak JM, Schofferman J, Riew KD, Lorenz MA, Heggeness MH, Anderson PA, Rao RD, Baker RM, **Emery SE**, Watters WC 3rd, Sullivan WJ, Mitchell W, Tontz W Jr, Ghogawala Z. **Cervical fusion for treatment of degenerative conditions: development of appropriate use criteria**. *Spine J*. 2021 Sep; 21(9):1460-1472. doi: 10.1016/j.spinee.2021.05.023. Epub 2021 Jun 1. PMID: 34087478
- Bostian PA, Grisez BT, **Klein AE**, **Frye BM**. **Complex Primary Total Hip Arthroplasty: Small Stems for Big Challenges**. *Arthroplast Today*. 2021 Mar 23; 8:150-156. doi: 10.1016/j.artd.2021.02.016. PMID: 33786353. PMCID: PMC7994729
- Moschetti WE, **Frye BM**, Gililand JM, Braziel AJ, Shah VM. **The Emergence of Collaboration in the Education of Fellows and Residents during COVID-19**. *J Arthroplasty*. 2021 Jun; 36(6):2223-2226. doi: 10.1016/j.arth.2021.02.019. Epub 2021 Feb 9. PMID: 33685742. PMCID: PMC8054614
- Kissenberth MJ, Thigpen CA, Bailey LB, Campbell J, **Geist DJ**, Schweppe ML, Wyland DJ, Hawkins RJ, Noonan TJ, Shanley E. **Professional Pitchers Display Differences in UCL Morphology and Elbow Gapping During Moving Valgus Stress Testing After UCL Reconstruction**. *Orthop J Sports Med*. 2021 Nov 1; 9(11):23259671211035734. doi: 10.1177/23259671211035734. PMID: 34746324. PMCID: PMC8564131
- Shackelford TL, Ray JJ, Bronikowski DM, Lancaster JD, **Grant DR**. **Effect of State Legislation on Opioid Prescribing Practices After Surgery at a Pediatric Hospital**. *Acad Pediatr*. 2021 Oct 2: S1876-2859(21)00460-5. doi: 10.1016/j.acap.2021.09.017. Epub ahead of print. PMID: 34610461
- Ray JJ, Shackelford TL, Bronikowski D, **Lubicky JP**, Lancaster J, **Grant DR**. **Pain Medication Disposal Rates After Pediatric Surgery**. *Hosp Pediatr*. 2021 May; 11(5):521-524. doi: 10.1542/hpeds.2020-000398. Epub 2021 Apr 12. PMID: 33846141. PMCID: PMC8074109
- Moschetti WE, **Frye BM**, Gililand JM, Braziel AJ, Shah VM. **The Emergence of Collaboration in the Education of Fellows and Residents during COVID-19**. *J Arthroplasty*. 2021 Jun; 36(6):2223-2226. doi: 10.1016/j.arth.2021.02.019. Epub 2021 Feb 9. PMID: 33685742. PMCID: PMC8054614
- Frye BM**, Laughery KR, **Klein AE**. **The Oxinium Arthrogram: A Sign of Oxidized Zirconium Implant Failure**. *Arthroplast Today*. 2021 Mar 7; 8:103-109. doi: 10.1016/j.artd.2021.02.001. PMID: 33732834. PMCID: PMC7943965
- Atwood K, Shackelford T, Lemons W, Eicher JL, **Lindsey BA**, **Klein AE**. **Postdischarge Opioid Use after Total Hip and Total Knee Arthroplasty**. *Arthroplast Today*. 2021 Jan 30; 7:126-129. doi: 10.1016/j.artd.2020.12.021. PMID: 33553537. PMCID: PMC7851352
- Niemann MJ, Brooks WC, Cavanaugh P, **Lese AB**, **Taras JS**. **Excision of a Rare Triquetral Body Fracture Nonunion**. *J Hand Surg Glob Online*. 2021 Jan 11; 3(2):103-105. doi: 10.1016/j.jhsg.2020.12.002. Erratum in: *J Hand Surg Glob Online*. 2021 Nov 17; 3(6):373-374. PMID: 35415537. PMCID: PMC8991643
- Lese AB**, Waggy CA. **Hand and Finger Injuries: Chronic Hand and Wrist Pathologies**. *FP Essent*. 2021 Jan; 500:33-41. PMID: 33433189
- Lese AB**, Waggy CA. **Hand and Finger Injuries: Finger Fractures and Dislocations**. *FP Essent*. 2021 Jan; 500:21-27. PMID: 33433187
- Lese AB**, Waggy CA. **Hand and Finger Injuries: Metacarpal Fractures**. *FP Essent*. 2021 Jan; 500:13-20. PMID: 33433186
- Lese AB**, Waggy CA. **Hand and Finger Injuries: Tendon and Soft Tissue Injuries of the Hand**. *FP Essent*. 2021 Jan; 500:28-32. PMID: 33433188

- Lee DH, Reasoner K, Lee D, Davidson C, Pennings JS, Blazar PE, Frick SL, Kelly AM, LaPorte DM, **Lese AB**, Mercer DM, Ring D, Salazar DH, Schar Schmidt TJ, Snoddy MC, Strauch RJ, Tuohy CJ, Wongworawat MD. **Is Grit Associated with Burnout and Well-being in Orthopaedic Resident and Faculty Physicians? A Multi-institution Longitudinal Study Across Training Levels.** Clin Orthop Relat Res. 2021 Dec 1; 479(12):2576-2586. doi: 10.1097/CORR.0000000000001987. PMID: 34587147
- Xiao L, Guo Y, Wang F, Wang Y, Xu X, Ni W, **Li B**, Xing M, Luo G, Zhan R. **A 3D chemotactic-thermo-promo bacterial hunting system: Programmatic bacterial attract, capture, killing and healing the wound.** Chem En J. 2021 August 1; 417 (128123). doi: 10.1016/j.cej.2020.128123
- Wickramasinghe S, Wang J, Morsi B, **Li B**. **Carbon Dioxide conversion to nanomaterials: Methods, applications and challenges.** Energy & Fuels. 2021; 35(15): 11820-11834. doi: 10.1021/acs.energyfuels.1c01533
- Zhang S, Vaida J, Parenti J, **Lindsey BA**, Xing M, **Li B**. **Programmed Multidrug Delivery Based on Bio-Inspired Capsule-Integrated Nanocoatings for Infected Bone Defect Treatment.** ACS Appl Mater Interfaces. 2021 Mar 17; 13(10):12454-12462. doi: 10.1021/acscami.0c20332. Epub 2021 Mar 8. PMID: 33683872
- Lockrem J**, Ciocca M. **Concussion in the Athletic Training Room: a Team Physician Narrative.** Curr Pain Headache Rep. 2021 Mar 18; 25(4):24. doi: 10.1007/s11916-021-00937-4. PMID: 33738547
- Herring S, Kibler WB, Putukian M, Solomon GS, Boyajian-O'Neill L, Dec KL, Franks RR, Indelicato PA, LaBella CR, Leddy JJ, Matuszak J, **McDonough EB**, O'Connor F, Sutton KM. **Selected issues in sport-related concussion (SRC|mild traumatic brain injury) for the team physician: a consensus statement.** Br J Sports Med. 2021 Nov; 55(22):1251-1261. doi: 10.1136/bjsports-2021-104235. Epub 2021 Jun 16. PMID: 34134974. PMID: PMC8543193
- Herring S, Kibler WB, Putukian M, S Solomon G, Boyajian-O'Neill L, Dec KL, Franks RR, A Indelicato P, R LaBella C, Leddy JJ, Matuszak J, **McDonough EB**, O'Connor FG, Sutton KM. **Selected Issues in Sport-Related Concussion (SRC | Mild Traumatic Brain Injury) for the Team Physician: A Consensus Statement.** Curr Sports Med Rep. 2021 Aug 1; 20(8):420-431. doi: 10.1249/JSR.0000000000000871. PMID: 34357889
- Liu C, **Pei M**, Li Q, Zhang Y. **Decellularized extracellular matrix mediates tissue construction and regeneration.** Front Med. 2022 Feb; 16(1):56-82. doi: 10.1007/s11684-021-0900-3. Epub 2021 Dec 28. PMID: 34962624. PMID: PMC8976706
- Pei YA, Dong Y, He TC, Li WJ, Toh WS, **Pei M**. **Editorial: Extracellular Vesicle Treatment, Epigenetic Modification and Cell Reprogramming to Promote Bone and Cartilage Regeneration.** Front Bioeng Biotechnol. 2021 Apr 21; 9:678014. doi: 10.3389/fbioe.2021.678014. PMID: 33968918. PMID: PMC8096898
- Gao G, Chen S, Pei YA, **Pei M**. **Impact of perlecan, a core component of basement membrane, on regeneration of cartilaginous tissues.** Acta Biomater. 2021 Nov; 135:13-26. doi: 10.1016/j.actbio.2021.08.032. Epub 2021 Aug 26. PMID: 34454085. PMID: PMC8595634
- Zhou S, Chen S, Pei YA, **Pei M**. **Nidogen: A matrix protein with potential roles in musculoskeletal tissue regeneration.** Genes Dis. 2021 Apr 2; 9(3):598-609. doi: 10.1016/j.gendis.2021.03.004. PMID: 35782975. PMID: PMC9243345
- Wang Y, Pei YA, Sun Y, Zhou S, Zhang XB, **Pei M**. **Stem cells immortalized by hTERT perform differently from those immortalized by SV40LT in proliferation, differentiation, and reconstruction of matrix microenvironment.** Acta Biomater. 2021 Dec; 136:184-198. doi: 10.1016/j.actbio.2021.09.021. Epub 2021 Sep 20. PMID: 34551328. PMID: PMC8627502.
- Shubert DJ, **Prud'homme J**, **Sraj S**. **Nerve Conduction Studies in Surgical Cubital Tunnel Syndrome Patients.** Hand (N Y). 2021 Mar; 16(2):170-173. doi: 10.1177/1558944719840750. Epub 2019 Apr 4. PMID: 30947553. PMID: PMC8041427
- Niemann MJ, Brooks WC, Ghobrial JA, Makani A, **Sraj S**. **Arthroscopic Biceps to Subscapularis Tenodesis: A Surgical Technique.** Tech Hand Up Extrem Surg. 2021 Apr 14. doi: 10.1097/BTH.0000000000000347. Epub ahead of print. PMID: 33859100
- Sraj S**. **Carpal Tunnel Release With Wide Awake Local Anesthesia and No Tourniquet: With Versus Without Epinephrine.** Hand (N Y). 2021 Sep; 16(5):592-594. doi: 10.1177/1558944719890038. Epub 2019 Dec 7. PMID: 31813286. PMID: PMC8461198.
- Sraj SA**. **CORR Insights@: Test-retest Reliability and Construct Validity of the Satisfaction with Treatment Result Questionnaire in Patients with Hand and Wrist Conditions: A Prospective Study.** Clin Orthop Relat Res. 2021 Sep 1; 479(9):2033-2035. doi: 10.1097/CORR.0000000000001830. PMID: 34019497. PMID: PMC8373542
- Shackelford T, Niemann M, Vaida J, Davis S, Braga S, Coyne K, Bronikowski D, **Sraj SA**. **Normal Values of the Second Interosseous Pinch: A Measurement of Pure Ulnar-Innervated Intrinsic Muscles of the Hand.** J Hand Surg Am. 2021 Dec 10: S0363-5023(21)00620-1. doi: 10.1016/j.jhsa.2021.09.024. Epub ahead of print. PMID: 34903391
- Taras JS**, Tadley M, McCabe L. **Dorsal Coaptation for the Treatment of Digital Neuroma.** J Hand Surg Am. 2021 Jun; 46(6):514.e1-514.e5. doi: 10.1016/j.jhsa.2020.10.027. Epub 2020 Dec 27. PMID: 33375993
- Vaida J, Luchini PM, Glenner JE, Kessler MW, McCabe LA, **Taras JS**. **Threaded Pin and Volar Plate Fixation of Distal Radius Fractures: Early Functional Recovery.** J Hand Surg Glob Online. 2021 Jun 27; 3(5):245-248. doi: 10.1016/j.jhsg.2021.05.012. PMID: 35415575. PMID: PMC8991605
- Sardar ZM, Coury JR, Cerpa M, DeWald CJ, Ames CP, Shuhart C, **Watkins C**, Polly DW, Dirschl DR, Klineberg EO, Dimar JR, Krohn KD, Kebaish KM, Tosi LL, Kelly M, Lane NE, Binkley NC, Berven SH, Lee NJ, Anderson P, Angevine PD, Lehman RA, Lenke LG. **Best Practice Guidelines for Assessment and Management of Osteoporosis in Adult Patients Undergoing Elective Spinal Reconstruction.** Spine (Phila Pa 1976). 2022 Jan 15; 47(2):128-135. doi: 10.1097/BRS.0000000000004268. PMID: 34690329



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