

Department of Orthopaedic Surgery & Rehabilitation

Ortho Research Update

Jan - Aug 2021

## Welcome New Faculty and Staff

In February, Dr. Rajiv Rajani took over as Chair of the Department of Orthopaedic Surgery & Rehabilitation here at TTUHSC. He completed his fellowship in orthopaedic oncology at University of Florida, and served as Vice Chair for Education and Residency Program Director for the UT Health San Antonio Department of Orthopaedic Surgery. His other influential leadership roles include spearheading the Musculoskeletal Tumor Society (MSTS) effort to develop a fellowship credentialing pathway, among his other accomplishments.

Dr. Norman ("Trea") H. Ward III was Chief Resident in Academics during his residency at University of Texas Medical School at Houston. He completed a year-long combined fellowship in pediatric orthopaedic surgery at Duke and University of North Carolina.

Dr. Evan D. Corning completed his residency at the University of Oklahoma. His fellowship training was in orthopaedic sports medicine at Barton Health and Lake Tahoe, in conjunction with the Mammoth Orthopaedics Institute.

We also welcome our new Research Associate, Brianna **Godinez.** She earned her M.S. in Biochemistry from Texas State University, where she completed a thesis in protein structure and function. She's coming to us from a translational research position in a cardiology/molecular biology lab at Texas A&M Health Science Center – Houston. She is very excited to organize, conduct and participate in the ongoing research projects in the department of orthopaedics.

## Publications January - August 2021

We have approximately 50 publications so far this year! For your convenience, each is linked:

#### January:

- Flexor Tendon Repair with Adjunctive Botulinum Toxin Administration: A Systematic Review.
  - o Alberts, Orr, Nesti, Dunn; WBAMC
- **latrogenic Radial Artery Injuries: Variable Injury** Patterns, Treatment Times, and Outcomes
  - Gonzalez, TTUHSC
- Treatment of Dupuytren's Contracture With Collagenase: A Systematic Review
  - Scanaliato, Dunn (WBAMC), Gonzalez (TTUHSC)
- Characterization of traumatized muscle-derived multipotent progenitor cells from low-energy trauma
  - Dunn, WBMAC
- Quality of prospective controlled randomized trials regarding platelet-rich plasma injection for osteoarthritis of the knee
  - Chan, Hoffmann, Dunn (WBAMC), Pisquiy (TTUHSC)
- There Is No Role for Damage Control Orthopedics Within the Golden Hour
  - Dunn, Blair; WBAMC
- SARS-CoV-2 and limb ischemia: A systematic review
  - Dunn, WBAMC

#### February:

- Systematic Review and Analysis of the Quality of Randomized Controlled Trials Comparing Reamed and Unreamed Intramedullary Nailing of Tibial **Fractures** 
  - Vo (TTUHSC), Chan, Dunn (WBAMC)



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## Publications January – August 2021 cont'd

#### Feb cont'd:

- Combat-Sustained Peripheral Nerve Injuries in the **United States Military** 
  - Dunn, Eckhoff, Nicholson; WBAMC

#### March:

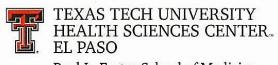
- Supercharge End-to-Side Nerve Transfer: Systematic Review
  - Dunn, Orr, Polfer (WBAMC), Fernandez, Gonzalez (TTUHSC)
- Ischemic Contracture following Compartment Syndrome Diagnosed 16 Months after Total Knee Arthroplasty: A Case Report and Review of the Literature
  - Boren, Carter, Gonzalez (TTUHSC), Polmear (WBAMC)
- Implementation of a Multidisciplinary "Code Hip" Protocol is Associated with Decreased Time to Surgery and Improved Patient Outcomes
  - VanTienderen, Bockelman (WBAMC), Adler (TTUHSC)
- Bone Morphogenic Protein for Upper Extremity Fractures: A Systematic Review
  - Scanaliato, Dunn; WBAMC
- Response to Letter to the Editor by Drs George and Power on Supercharge End-to-Side Nerve Transfer: A Systematic Review
  - Dunn, WBAMC
- **Lower Extremity Combat Sustained Peripheral** Nerve Injury in US Military Personnel
  - Eckhoff, Nicholson, Dunn; WBAMC
- Generating the American Shoulder and Elbow Surgeons Score Using Multivariable Predictive Models and Computer Adaptive Testing to Reduce Survey Burden
  - Bevevino, Burns, Garcia, Lanzi, et al; WBAMC

#### April:

- Hand Surgeons Are Tackling Tougher Scaphoids: A Study of ABOS Candidate Data
  - Nicholson, Dunn; WBAMC
- Variation in state and federal reimbursement in the United States in the treatment of upper extremity fractures
  - Scanaliato, Polmear, Fitzpatrick, Dunn; WBAMC
- A systematic review and analysis of the quality of randomized controlled trials comparing infrapatellar and suprapatellar approach for nailing of tibial fractures
  - Pisquiy (TTUHSC), Chan, Dunn (WBAMC)
- **Incidence of Scaphoid Fractures and Associated** Injuries at US Trauma Centers
  - Wells, Nicholson, Dunn; WBAMC
- Open reduction of pediatric lateral condyle fractures: a systematic review
  - Eckhoff, Tadlock, Nicholson, Wells, Garcia; **WBAMC**

#### May:

- Carpometacarpal Fracture-Dislocations: A Retrospective Review of Injury Characteristics and Radiographic Outcomes
  - o Corning, TTUHSC
- Nerve Reconstruction Using Processed Nerve Allograft in the U.S. Military
  - Dunn, Tadlock, Klahs; WBAMC
- Publication trends of residents accepted for shoulder and elbow fellowships (no link)
  - o Fares, Weiss; WBAMC
- Conventional Cartilaginous Tumors: Evaluation and **Treatment** 
  - Wells, Eckhoff, Polfer; WBAMC



Paul L. Foster School of Medicine
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## Publications January – August 2021 cont'd

#### June:

- Arthroscopically Assisted Fixation of Terrible Triad Variant Injuries of the Elbow With Small-Bore Needle Arthroscopy
  - o Corning, TTUHSC
- Analysis of the Quality of Prospective Randomized Controlled Trials for Treatment of Boxer's Fractures
  - Patrick, Dunn (WBAMC), Fernandez, Gonzalez (TTUHSC)
- Cost Analysis and National Trends in the Treatment of Dupuytren Contracture Comparing Collagenase Injection, Needle Fasciotomy, and Open Fasciectomy Procedures
  - o Carter, Gonzalez; TTUHSC
- Practice Patterns Among Hand Surgeons According to Primary Residency Training: A National Surgical Quality Improvement Project Study
  - o Carter, Gonzalez (TTUHSC), Polmear (WBAMC)
- <u>Utility of 3-Dimensional Intraoperative Imaging in</u>
   <u>Pelvic and Acetabular Fractures: A Network Meta-</u>
   Analysis
  - o Pisquiy, Thabet; TTUHSC
- Outcomes and Complications With Treatment of Open Tibial Plafond Fractures With Circular External Fixator
  - Thabet, TTUHSC
- Early Open Reduction and Internal Fixation of Acute Low-Energy Tibial Plateau Fractures Does Not Increase the Rate of Perioperative Complications
  - o Thabet, TTUHSC
- Excessive Tibial Overgrowth Associated Ankle
   Valgus Deformity After Pediatric Open Mid-Shaft
   Tibial Fracture: A Case Report
  - Thabet, TTUHSC
- Bone Morphogenetic Protein in Scaphoid Nonunion: A Systematic Review
  - o Polmear, Lanier, Orr, Dunn; WBAMC

#### June cont'd:

- Analysis of the Quality of Prospective Randomized Controlled Trials for Treatment of Boxer's Fractures
  - Patrick, Dunn (WBAMC), Fernandez, Gonzalez (TTUHSC)
- Care of low-income patients with sports injuries disincentivized by government reimbursement
  - o Polmear, Dunn, Scanaliato; WBAMC
- Chronic Volar Dislocation of the Middle and Ring Finger Metacarpophalangeal Joint: A Case Report
  - Moreno, Carter, Pisquiy (TTUHSC), Polmear (WBAMC)

#### July:

- <u>Dorsal Bridge Plate for Distal Radius Fractures: A</u>
   <u>Systematic Review</u>
  - o Fares, Childs, Polmear, Dunn; WBAMC
- Epidemiology and Long-Term Outcomes of Wrist Sprains in Military Academy Cadets
  - Klahs, Scanaliato, Dunn (WBAMC)
- <u>Development of Parsonage-Turner Syndrome After</u> <u>Interscalene Brachial Plexus Block Including 10-Year</u>
   Follow-up: A Case Report
  - Dunn, Scanaliato; WBAMC
- Response to Letter to the Editor "There Is No Role for Damage Control Orthopedics Within the Golden Hour
  - Eckhoff, Orr, Wells, Dunn; WBAMC
- The Interface of Surgical and Anesthesiological Postoperative Analgesic Regime: Pericapsular Injection Versus Lumbar Plexus Block: Response
  - o Scanaliato, Polmear; WBAMC



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### August:

- Periosteal Chondroma of the Pelvis: An Uncommon Tumor in an Unusual Location
  - Rajani, TTUHSC
- Three-Dimensional Modeling of the Structural Microenvironment in Post-Traumatic War Wounds
  - Dunn, WBAMC

#### Summer 2021:

- Orthopaedists Versus Radiologists: A Prospective Comparison of Radiographic Interpretation Between Orthopaedists and Radiologists at a Level I Trauma Center
  - Fernandez (TTUHSC), Dunn (WBAMC), Nelson (WBAMC/TTUHSC Transmountain)
- **Wartime Military Orthopaedics** 
  - o Eckhoff, Purcell, Orr, Dunn; WBAMC

## Recognitions

Congratulations to Dr. Ahmed Thabet-Hagag and Dr. Gilberto Gonzalez for their promotions from Assistant to Associate Professors!

Congratulations to Dr. Michael Eckhoff for winning Resident Researcher of the Year!

And to the Beaumont faculty who have/are currently serving abroad this year, we all thank you for your service!

#### Conferences

#### Dr. Gonzalez presented at:

- The American Society of Pain and Neuroscience (ASPN) conference in January ("Repair Versus AIN SETS in Ulnar Nerve Injuries: Cohort Study")
- The Annual Regional Research Conference held virtually this year ("Necrotizing Fasciitis of the Upper and Lower Extremities at a Level 1 Center," "Internal Joint Stabilizer Application via a Posterior Approach to the Elbow").
- The Sport and Society Conference in Granada, Spain ("Sports Injury and Athletic Identity")
- And the Scholarly Activity and Research Program (SARP) Symposium this fall ("Incidence and Treatment of Necrotizing Fasciitis of the Upper Extremity in IV Drug Users Admitted to a Level 1 Center")

## American Academy of Orthopaedic Surgeons (AAOS): Aug 31 - Sept 3, 2021 in San Diego, CA

AAOS was back in person this year. Several of our faculty and residents attended and presented, including **Dr. Thabet** with the following (virtually):

- Podium: "Open Ankle Fractures: Is Immediate Internal Fixation Safe?"
- Poster: "Malpractice Lawsuits in Orthopaedic Trauma: A Critical Analysis of the Recent Literature"
- Media Presentation: "Management of Chronic Radiocapitellar Joint Dislocation with Hexapod External Fixator"

Upcoming: Society of Military Orthopaedic Surgeons (SOMOS) - December 14-17, 2021 in Olympic Valley, CA