The Paul R. Lipscomb ALUMNI SOCIETY presents the

2009 Grand Rounds and Graduate Research Symposium

Thursday, June 18, 2009
Friday, June 19, 2009

with guest speaker
Peter J. Stern, MD

sponsored by
University of California, Davis Health System
DEPARTMENT OF ORTHOPAEDIC SURGERY
Welcome to the 2009 Paul R. Lipscomb Alumni Society Graduate Research Symposium

This outstanding meeting is an opportunity for our department to highlight scientific and clinical research, and to reconnect with clinical faculty and alumni who have served our department over the years. Our special guest this year is Peter J. Stern, MD, Hill Professor and Chair of Orthopaedic Surgery at the University of Cincinnati College of Medicine.

Most importantly, this is an occasion to commemorate the graduation of nine exceptional gentlemen - four residents and five fellows - into the ranks of orthopaedic surgery. While always a bittersweet occasion, this day validates the wonderful camaraderie and continuity of our field. Thank you for being a part of this memorable event.
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Peter J. Stern, MD

Our distinguished guest professor this year is Peter J. Stern, MD, Hill Professor and Chair of the Department of Orthopaedic Surgery at the University of Cincinnati College of Medicine.

Dr. Stern was born and raised in Cincinnati and graduated with a bachelor’s degree from Williams College in Williamstown, Massachusetts. He received his medical degree from Washington University School of Medicine in St. Louis in 1970, completed his residency at Harvard Combined Orthopaedic Residency and did a fellowship in hand surgery in Louisville, Kentucky.

Dr. Stern has held leadership positions within the AOA, serving as president and as delegate-at-large of the Executive Committee. He has also served as Chairman of the AOA-North American Traveling Fellowship (NATF), Committee and the Fellowship Coordination Committee. In addition, Dr. Stern is a past present of the American Board of Orthopaedic Surgery (ABOS) and of the American Society for Surgery of the Hand (ASSH).

Dr. Stern has also held leadership positions in several other professional societies, including the American Society for Reconstructive Microsurgery (ASRM), the American Academy of Orthopaedic Surgery (AAOS) and the American Association for Hand Surgery (AAHS). He is a past trustee of the Orthopaedic Research and Education Foundation, a deputy editor for the Journal of Bone and Joint Surgery, and chair of the Orthopaedic Residency Review Committee.

He has educated 40 fellows and over 100 residents, has published over 150 peer review articles, presented 30 endowed lectureships, and has been visiting professor at over 60 academic health care centers.
Faculty
University of California
Davis Health System

ROBERT H. ALLEN, MD
Health Sciences Associate Clinical Professor, Hand and Upper Extremity

DANIEL R. BENSON, MD
Professor, Adult and Pediatric Spine Surgery

PAUL E. DI CESARE, MD, FACS
Professor and Chair, Adult Reconstructive Surgery
Michael W. Chapman Chair

TANIA A. FERGUSON, MD
Assistant Professor, Trauma Service

DAVID P. FYHRIE, PhD
Professor and Director, Orthopaedic Research Laboratories

ERIC GIZA, MD
Assistant Professor, Foot and Ankle Service

MUNISH C. GUPTA, MD
Professor, Chief of Spinal Deformity Service
Adult and Pediatric Spine Surgery

AMIR A. JAMALI, MD
Associate Professor
Adult Reconstructive Surgery

SUNNY KIM, PhD
Assistant Professor, Orthopaedics Clinical Outcomes Research

ERIC O. KLINEBERG, MD
Assistant Professor, Adult and Pediatric Spine Surgery

MARK A. LEE, MD
Associate Professor, Trauma Service

KIRK J. LEWIS, MD
Health Sciences Associate Clinical Professor, Sports Medicine

RICHARD A. MARDER, MD
Health Sciences Clinical Professor, Chief of Sports Medicine
JOHN P. MEEHAN, MD
Health Sciences Associate Clinical Professor, Chief of Adult Reconstructive Surgery

DEBRA J. POPEJOY, MD
Assistant Professor, Pediatric Orthopaedics

GEORGE T. RAB, MD
Professor, Pediatric Orthopaedics

A. HARI REDDI, PhD
Distinguished Professor, Lawrence J. Ellison Chair of Molecular Biology

ROLANDO F. ROBERTO, MD
Health Sciences Assistant Clinical Professor, Adult and Pediatric Spine Surgery

PETER B. SALAMON, MD
Physician Associate Diplomate, Pediatric Orthopaedics

ROBERT M. SZABO, MD, MPH
Professor, Chief of Hand, Upper Extremity and Microvascular Surgery

ROBERT M. TAMURIAN, MD
Assistant Professor, Orthopaedic Oncology

JAMES VAN DEN BOGAERDE, MD
Health Sciences Assistant Clinical Professor, Sports Medicine

PHILIP R. WOLINSKY, MD
Professor, Chief of Trauma Service

BRAD J. YOO, MD
Health Sciences Assistant Clinical Professor, Trauma Service

Faculty
Shriners Hospital for Children
Northern California

JENNETTE BOAKES, MD
Clinical Professor, Pediatrics

MICHELLE A. JAMES, MD
Clinical Professor, Chief of Orthopaedics
Pediatric Hand and Upper Extremity

JOEL LERMAN, MD
Assistant Clinical Professor, Pediatrics
Thursday, June 18, 2009

Grand Rounds
Medical Education Building

5:30 pm - Refreshments
Third Floor Bridgeway

6:00 pm
Lecture Hall 2222
Guest Speaker - Peter J. Stern, MD
“Complications Following Hinged Total Elbow Arthroplasty”

Friday, June 19, 2009

Resident and Fellow Research Presentations

Medical Education Building - Lecture Hall 1222

8:00 AM  Continental Breakfast

8:15 AM  WELCOME - Department Chair,
Paul Di Cesare, MD, FACS

8:20 AM  Peter J. Stern, MD
University of Cincinnati, College of Medicine
“Current Perspectives on the Management of Small Joint Injuries and Arthrosis”

9:15 AM  Cale W. Bonds, MD
“Skeletal Fixation of Vertically Unstable Pelvic Ring Injuries.”

9:30 AM  Gene Choi, MD
“Complications of Multilevel Fusions for Adult Spinal Deformity in Patients over age 65.”

9:45 AM  Douglas A. Dennis, MD
“The Mechanical Effect of Screw Number and ‘Locked’ Versus ‘Non-locked’ Proximal Locking Bolts on Intramedulary Fixation of Prolateral Third Tibia Fractures”
10:00 AM  BREAK

10:30 AM  Mohammed Khaddar, MBBS  
“Incidence of Resistant Organism Infection in TKA with Vancomycin Prophylaxis”

10:45 AM  Jerry Labson, MD  
“Pain Scores Following Arthroscopic Biceps Tenotomy versus Tenodesis - A Retrospective Review”

11:00 AM  George K. Myo, MD  
“Biomechanical Comparison of Locked Versus Unlocked Metacarpal Plating Techniques in a Metacarpal Gap Model.”

11:15 AM  William T. Page, MD  

11:30 AM  Ravi Patel, MD  
“Fractures of the Acetabulum in Patients 60 Years and Older: Epidemiology, Fracture Patterns, and Radiographic Morphology.”

11:45 AM  Michael I. Quackenbush, DO  
“Does Insurance Affect Continuity of Care in Ambulatory Patients with Operative Fractures?”

12:00 PM  George K. Van Osten, III, MD  
“Stability of Intertrochanteric Hip Fractures with or without Distal Locking Screw in a Cephalomedullary Construct.”

12:15 PM  Adjournment
Education
Bachelor of Science in Biochemistry, United States Air Force Academy

Washington University School of Medicine, St. Louis, MO

Next Step
General Orthopaedics, Travis AFB, CA

Career Objective
General Orthopaedics with a focus in Trauma and Sports Medicine

Spouse
Marta Bonds

Children
Anna Bonds

Personal Statement
The past five years provided many wonderful memories. I will always remember my time at UC Davis fondly. There are so many people to thank and so little space. First, to our faculty, I can never thank you enough for your time and dedication to my education. To the nurses and support staff, your work is greatly appreciated, yet rarely recognized. I would like to formally thank you all for your help. To my classmates (including Safdar) and their families, I greatly value your friendship. I have thoroughly enjoyed working and playing along side all of you. Your presence will be missed as we go our separate ways. I look forward to following your careers as I know you are destined to do great things for patients in our field. To all residents, past and present, thank you for the time you took to teach, your work along side in the trenches, and your friendships along the way. To my parents, your love and support are the reason I stand here today. I can never thank you enough for all you have done and continue to do. Finally, to my beautiful wife, Marta, words cannot describe my love and admiration for you. You are a blessing beyond measure and I thank God nightly for your presence in my life. I anxiously await the next phase of our life and the time we will finally have together.
Skeletal Fixation of Vertically Unstable Pelvic Ring Injuries
Cale Bonds, MD, Tania Ferguson, MD, Mark Lee, MD and Shane Curtiss, AS

Thirty percent of patients sustaining pelvic trauma have fractures involving the sacrum (Denis 1988). A small percentage of sacral fractures may lead to pelvic instability and neurologic injury. The ideal treatment of unstable sacral fractures and the associated pelvic ring remains controversial. Even with internal fixation of the posterior pelvic ring, loss of reduction is observed in up to 26% of patients with an overall malunion rate of 44% (Keating 1999). Vertical fractures through the sacrum have demonstrated significant instability despite anterior and posterior fixation (Griffin 2003). Some authors (Beaule 2006) theorize iliosacral screws are less effective for sacral fractures than for sacroiliac dislocation because of the increased cantilever bending moment. The goal of our study is to evaluate the effect of fracture reduction, the stability of various forms of iliosacral and trans-sacral fixation, and determine the role of anterior external fixation in a vertically unstable pelvis fracture model. We created a single leg stance model and used fourth generation composite pelvis models to evaluate various fracture fixation constructs. Each construct was subjected to a physiologic load (100N). We used a digital camera array to determine three dimensional displacement and rotation at the fracture. Preliminary data collection is ongoing and will be presented.
Education
Undergraduate: Tufts University, Medford, MA
Medical School: Tufts University School of Medicine, Boston, MA
Residency: New York Medical College Orthopaedic Residency Program

Next Step
Joining Riverside Medical Clinic in Riverside, CA

Career Objective
Providing good care to patients. Hopefully, the rest will follow.

Spouse
Mei Li

Children
None yet

Personal Statement
One year seems like a short time in the grand scheme of things, but this past year has been an invaluable experience for me. I have learned not just the nuances of spine surgery, but also the skills of interacting with patients and valuing their trust, and knowing that I can never be satisfied with the amount of knowledge I have gained. Many thanks to Dr. Gupta, Dr. Roberto, Dr. Klineberg and Dr. Benson, who have not only been my teachers, but have also become my friends. Thanks to the residents and staff, who are amongst the best people I have worked with.

Thanks to my parents for supporting me and giving me every opportunity I could ever ask for, and my sister and her family, for providing a sense of home here in Sacramento. And thanks especially to my wife, who has endured many years of residency and now fellowship with nothing but love and support for me.
Purpose
To evaluate the perioperative complications in adults over the age of 65 undergoing surgery for adult spinal deformity compared to patients under the age of 65.

Methods
88 patients who underwent surgery for adult spinal deformity were retrospectively evaluated. Diagnosis included degenerative scoliosis, adult idiopathic scoliosis, fixed sagittal imbalance, and Scheuermann's kyphosis. Preoperative comorbidities, operative, and post-operative complications were recorded and compared between each group.

Results
There were 21 males and 67 females total, with an average age of 62. Average length of follow-up was 21 months. Of these patients, 36 (40%) patients had complications, 18 (20%) in the under 65 age group and 18 (20%) in the over 65 group. The average number of comorbidities in the under 65 group was 0.8 and 1.9 in the over 65 group. The average number of levels fused was 8. 52 (59%) patients underwent anterior and posterior fusion. 34 (39%) patients underwent revision surgery.

Conclusion
The overall complication rate was similar between the two groups. There was a trend towards increased junctional breakdown in the over 65 group compared to the under 65 group.
Career Objective
Total joint reconstruction, arthroscopy, trauma.
Professional boxing ringside physician

Spouse
Tracy Dennis

Children
Ty, Briahn, Devin and Zeus (Bullmastiff)

Personal Statement
I recently heard a statement at my daughter’s leadership graduation banquet. It went something like this, “When you look back at your time here will you be saying, I wish that I had, or I’m glad that I did?” As I reflect on my time here I find myself asking that very question. Upon further reflection, I came to the realization that from day one of residency to 6 years later, I always viewed this opportunity as an honor and a privilege. The opportunity to learn from my professors, and treat patients was a gift and not something that I was necessarily entitled to. The answer to the above question is “I’m glad that I did.”

This amazing journey would not have been possible without the support of so many. I want to thank my professors for their tireless efforts and teaching me how to be a good doctor and surgeon. Each of you has been down this path before and I have the utmost respect for every one of you. The support staff in the OR, clinics, and office deserves special thanks. They are the people behind the scenes that keep the wheels of the UC Davis Ortho machine turning.

Getting to this stage of my life would not have been possible without my family. My parents
gave me the compass necessary to navigate through this crazy thing called “life”. They poured their hearts and souls into me and gave me the foundation from which I continue to build upon. So, with all my heart and soul, thank you. To my in-laws, Mãe and Sis, thank you for being a special part of my life and supporting me throughout this endeavor.

Ty, Bri and Dev, thanks for the days that you’re good, and the ones when you’re bad. You each provide balance to my life and keep it interesting. You provide me with inspiration and fill my heart with love. Thanks for making my life more than just books and work. I love being your Dad.

If there is someone else I have forgotten to thank, I’m sorry. PSYCHE!!! To my wife: Damn girl, we did it! We both know the journey’s never over, but we’re living life and loving each other. You are the one that makes me better in every aspect of my life and I don’t have the words to express how thankful I am to have you. Thanks for dedicating your life to making my world perfect.

The Mechanical Effect of Screw Number and “Locked” Versus “Nonlocked” Proximal Locking Bolts on Intramedullary Fixation of Proximal Third Tibia Fractures
Douglas Dennis, MD, Scott Hazelwood, PhD, Philip Wolinsky, MD

Objective
To determine if securing proximal locking bolts to intramedullary nails with end caps and compression screws to form a fixed angle device or increasing the number of proximal bolts from two to three increases the stiffness of intramedullary constructs used to stabilize proximal third tibia fractures.

Methods:
Four constructs with different proximal locking bolt configurations were examined using a sawbone tibia model with a 2 cm gap to mimic a comminuted fracture of the proximal third of the tibia with no bony contact. The constructs examined were: two proximal bolts with none, one, or two of the screws compressed to the nail with an end cap or compression
screw and three proximal locks with only the most proximal screw secured to the nail an end cap. All constructs were instrumented with an 11 mm T2 Stryker tibial nail and distally locked with two bolts. Mechanical tests with axial, torsional and three-point bending loading configurations were used to compare the stiffness of each construct.

Results
When two proximal locking screws are used, securing them to the nail produced significantly greater axial and torsional stiffness than did securing only one or neither of the screws. Adding a third proximal transverse screw significantly increased the axial stiffness of the construct compared to using only two oblique proximal bolts. There were no differences among the constructs in three-point bending.

Conclusions
The use of end caps and compression screws to secure two proximal locking bolts to the nail or the addition of a third proximal locking bolt increases the stiffness of intramedullary nail constructs used to stabilize fractures of the proximal third of the tibia.
Personal Statement
It was a great fellowship training in which I learned many things from my attendings and improved my surgical skills. It was an excellent experience and an opportunity to make good friends.

Incidence of Resistant Organism Infection in TKA with Vancomycin Prophylaxis
Amir Jamali, MD, Mohammad Khadder, MBBS, and John Meehan, MD

We report the results of a retrospective analysis of primary total knee arthroplasty cases done between 2003 and 2008 by two surgeons. The objective of the study is to retrospectively determine the rate of surgical site infections after total knee arthroplasty with preoperative prophylactic antibiotics consisting of vancomycin with or without a first generation cephalosporin. The follow up period was between 6 months to 4 years. We hypothesize that the incidence of resistant organism surgical site infections will not be significantly higher in these cases in spite of theoretical concerns that vancomycin perioperative antibiotics may lead to a higher rate of resistant organism infections.
Next Step
To do further training in Orthopaedic Sports Medicine at UC Davis

Career Objective
To serve in the US Air Force, then pursue a practice in General Orthopaedics and Sports Medicine

Spouse
The love of my life, Amy Power Labson

Children
The other love of my life, my son, Kai Power Labson

Personal Statement
My life and education have been filled with great experiences and opportunities. My time at UCD has been the icing on the cake. I have many to thank for this. I would like to thank all the attendings in the orthopaedic department and medical center who have contributed to my experience and learning. Thanks to my co-chiefs and co-residents who have not only been a great support, but who have also provided great times and memories away from work. Thanks to all the men and women of the US Armed Forces, both past and present, with whom I am honored to serve. Of course, I am grateful to my parents and siblings who have always been a great support and inspiration to me. Lastly, I thank my wife, Amy, and son, Kai, for all the joy that they bring into my life and for the sacrifices they make daily for me to pursue my dreams.
Pain Scores Following Arthroscopic Biceps Tenotomy versus Tenodesis - A Retrospective Review
Richard A. Marder, MD and Jerry D. Labson, MD

Background
Lesions of the long head of the biceps tendon are often associated with shoulder pain and dysfunction. Biceps tenotomy and tenodesis have been performed for biceps lesions. The purpose of this study was to compare improvement in pain scores following tenotomy vs. tenodesis in a series of our patients at a university hospital.

Methods
We conducted a retrospective chart review of shoulder arthroscopies performed by two senior orthopaedic sports surgeons (RAM, KJL) over the past five years, in which patients underwent either a biceps tenotomy or tenodesis. Out of 648 total shoulder arthroscopies, tenotomy was performed in eleven cases and tenodesis performed in seven. Visual analog pain scores were evaluated pre-operatively as well as post-operatively at 1 week, 6 weeks, 3 months and 6 months.

Results
Average pre-op score averages for tenotomy vs. tenodesis group were 5.81 and 5.14 respectively. Post-op score averages for tenotomy vs. tenodesis at 1 week were 2.9/3.42; at 6 weeks 1.63/2.71; at 3 months 0.9/1.28; and 6 months 0.36/0.85. Essentially, all patients in the tenotomy group had a pain score of 2 or less at 6 months. In the tenodesis group, all patients had a pain score of 0 at 6 months, except for one patient who continued to have a score of 6.

Conclusion
Both tenodesis and tenotomy patients seem to have similar improvement in pain scores.
Career Objective
Provide quality orthopaedic care

Personal Statement
I enjoyed my time at UC Davis working with the faculty and the residents.

Biomechanical Comparison of Locked Versus Unlocked Metacarpal Plating Techniques in a Metacarpal Gap Model
Varun K. Gajendran, MD, George Myo, MD, Robert M. Szabo, MD, MPH, Shane B. Curtiss, AS

Purpose
While stable metacarpal fractures can often be treated closed, open or unstable fractures frequently require open reduction and internal fixation. The introduction of locking plate technology has now made it possible to obtain special fixation of unstable fractures in certain settings. In this study, we hypothesized that there would be a difference in strength of fixation using double-row locking places compared to single and double-row non-locking plates in comminuted metacarpal fracture.

Models
We tested our hypothesis in a gap metacarpal fracture model simulating comminution using fourth-generation biomechanical testing grade composite sawbones (Sawbones; Pacific Research Laboratories, Vashon WA). The metacarpals were divided into 6 groups of 15 bones each. Groups 1 and 4 were plated with a standard 6-hole, 2.3 mm plate in AO fashion. Groups 2 and 5 were plated with a
6-hole double-row three-dimensional (3D) non-locking plate with bicortical screws aimed for convergence. Group 3 and 6 were plated with a 6-hole double-row 3D locking plate with unicortical screws. The plated metacarpals were then tested to failure against cantilever apex dorsal bending (Groups 1-3) and torsion (Groups 4-6).

**Results**
The loads to failure in Groups 1-3 were 198±18 N, 223±29 N, and 203±19 N respectively. The torques to failure in Groups 4-6 were 2,033±155 N mm, 3,190±235 N mm, and 3,161±268 N mm respectively. Group 2 had the highest load to failure, while Groups 5 and 6 shared the highest torques to failure (p<0.05). Both double-row plates had equivalent bending and torsional stiffness, significantly higher than observed for the single-row non-locking plate. No other statistical differences were noted between the groups.

**Conclusions**
When subjected to the physiologically relevant forces of apex dorsal bending and torsion in a comminuted metacarpal fracture model, double-row 3D non-locking plates provided superior stability in bending and equivalent stability in torsion compared to double-row 3D locking plates, while single-row non-locking plates provided the least stability.
William T. Page, MD
Resident

Career Objective
Upper Extremity Surgery

Spouse
Jaclyn Page

Children
Ally Page

Personal Statement
My five years at UC Davis have been wonderful. I am incredibly fortunate to have worked with such kind and professional colleagues. The combination of staff and patients in the UC Health system provide an excellent and truly enjoyable learning experience. The nursing, operating room, and clinic staff have molded my education and helped me become a physician - thank you.

Our department is blessed with exceptional attending physicians. While here you have provided me the foundation I will continue to build upon as a surgeon, taught me how to care for patients, and provided me with endless guidance. You have served as role models and friends, and my gratitude will last a lifetime.

To all my co-residents, I would never do this again unless I could do it with you. Above all, this has been an incredibly fun experience. Thank you. I have made life-long friends and I wish you all the very best.

To my parents, Alice and Mike, you have made everything in my life possible. Your support is always appreciated and seems to only get stronger as life becomes more challenging. I have looked up to you forever, and will always try to emulate your kindness and generosity.

Education
College - Washington State University
Medical School - University of Washington

Next Step
Fellowship - Hand, Upper Extremity and Microvascular Surgery at the Indiana Hand Center

William T. Page, MD
Resident

Education
College - Washington State University
Medical School - University of Washington

Next Step
Fellowship - Hand, Upper Extremity and Microvascular Surgery at the Indiana Hand Center
To my beautiful wife, Jaclyn, you make every day better. You make all the important aspects of my life perfect. You have an amazing outlook on life and such a positive attitude. I learn from you every day. You have the most important job in the world and you impress me daily with your success. Thank you for guiding me through each day with a smile on your face.

To the most fun person in the world, Ally, daddy loves you! You make everything worthwhile. I will always try to make you proud.

Technical Consideration in the Surgical Management of Femoral Neck Fractures in Patients Less than 50 Years of Age: An Expert Opinion Survey
William Page, MD, Ravi Patel, MD, Mark Lee, MD, and Tania Ferguson, MD

Purpose
To identify current opinions and practice trends among orthopaedic traumatologists relating to the surgical management of femoral neck fractures in young patients (<50 years old).

Methods
We used a cross-sectional survey design to examine surgeons’ preferences on optimal surgical timing, the importance of anatomic reduction, and the effect of operating room availability on decision making in the treatment of femoral neck fractures in young patients (<50 years old). The survey was administered to 378 orthopaedic surgeons identified as experts in orthopaedic traumatology based on active membership in the Orthopaedic Trauma Association.

Results
231 of 378 surgeons responded (61%). 79% of responding surgeons were currently taking call at level I trauma centers, with an average call experience of 11 years (mean, range 0-35). 78% of those actively taking level I call and 37% of those not taking level I call had protected, daytime OR time designated for trauma available at their institutions.

74% of respondents believed time to operation influences patient outcome, yet only 17% felt the
time to surgery was more important than “optimal surgical conditions.” Regarding time to operation, 37% responded that timing was very important (8-10), and 58% somewhat important (4-7) to patient outcome (average 6.5+1.9, mean 7). In contrast, 97% felt anatomic reduction was very important for patient outcome with an average numerical score of 9.3+1.1, and a mean of 10.

30% of respondents felt the gold standard was to have patients in the OR within 6 hours. 24% considered 12 hours to be the maximum acceptable time delay, and 29% considered 24 hours to be acceptable. Almost half of surveyed surgeons would not start the case after 8 PM if there was a designated OR available for a guaranteed first case in the morning, and 87% indicated they would not start after midnight under these conditions. On the contrary, 56% responded they would begin the surgery regardless of time if there was not a guaranteed OR available in the morning.

Conclusions
While traditionally considered a surgical emergency, our survey demonstrates a change in opinion regarding the acceptable delay to operation in young patients with femoral neck fractures. The emergence of “trauma room” availability has potentially changed the management approach. Most agree anatomic reduction is important for outcome and that reduction takes precedence over time to operation.
Career Objective
To be a great surgeon

Spouse
Tiffany Patel

Personal Statement
These past 5 years have been the most rewarding of my life, first and foremost because of the love and support of my wonderful wife, Tiffany.

I would also like to thank my parents for everything they have done for me. I have only made it to this point because of them.

Every day at work, I am reminded how fortunate I am to have a career that I truly love.

I would like to thank the faculty for their mentorship, knowledge, and wisdom. I will always remember the principles of being a great orthopaedic surgeon that I have learned during my time here. What I will miss the most about Davis is working with the other residents - you all are great, and it has been a privilege to train with you.

Fractures of the Acetabulum in Patients 60 Years and Older: Epidemiology, Fracture Patterns, and Radiographic Morphology
Ravi Patel, MD, Tania A. Ferguson, MD, Mohit Bhandari, MSc, MD and Joel M. Matta, MD

Background
We aimed to examine incidence, predominant fracture patterns, and unique radiographic characteristics of acetabular fractures in patients 60 years of age and older.
Methods
Using a prospective database of 1309 displaced acetabular fractures from 1980-2007, we identified two cohorts of patients: age 60 years or greater (study group) and age less than 60 years. We compared associated injuries, fracture patterns and radiographic findings across groups. The incidence of fractures over time was also compared between the periods of 1980-1993 and 1994-2007.

Results
Two hundred thirty five patients were >60 years of age compared with 1074 controls. The incidence of elderly patients with acetabular fractures increased 2.4 fold in the last half of the collection period (10% vs. 24% p<0.0001). Fractures characterized by displacement of the anterior column were significantly more common in the study versus control patients (64% vs 43%, respectively, p=0.0001). Common radiographic features of the study group fractures included a separate quadrilateral plate component (63%) and radiologic roof impaction (48%) in the anterior fractures, and comminution (56%) and marginal impaction (45%) of posterior wall components.

Conclusions
Acetabular fractures in elderly patients have significantly increased over time. These patients present with different fracture patterns and unique radiographic findings compared to those sustained by younger patients.
Education
Pennsylvania State University, BS, 1999

Arizona College of Osteopathic Medicine, DO, 2003

University of Medicine and Dentistry of New Jersey, Orthopaedic Residency, 2008

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Career Objective
Level I Academic Orthopaedics; continue to work on clinical research and resident education

Personal Statement
I cannot express the infinite gratitude I have for all of the faculty, staff and residents, who have made a one year visitor feel like part of the family. The skills I have learned will be invaluable to me as I begin the long anticipated journey into my orthopaedic practice.

To Mark, Phil, Tania, and Brad, a special thanks for taking a chance on an unknown and helping him to become a better surgeon in every meaning of the word.

To the residents, I hope you appreciate the talented faculty and staff that you have and the opportunities that you have been given here. I know you will all become superb surgeons as a result of their undivided dedication to your education and training.

I am truly grateful to everyone here and I wish you all continued success in all your future endeavors. Thank you for everything.
Does Insurance Affect Continuity of Care in Ambulatory Patients with Operative Fractures?
Michael Quackenbush, DO and Philip Wolinsky, MD

Introduction
We sought to determine if “non-medical factors” played a role in the location of the definitive treatment of ambulatory patients with operative fractures of the distal radius and ankle. This patient group can be discharged from the emergency room after their initial care, but must then find a surgeon who will provide their definitive care.

Method
A retrospective chart review of 700 patients with operative distal radius fractures and ankle fractures who received their definitive treatment at a Level 1 Trauma Center was carried out. Demographics, mechanism of injury, insurance type, and whether or not they had received their initial treatment at another institution were recorded.

Results
Ambulatory patients who had their initial treatment performed elsewhere and had their definitive operative treatment at a Level 1 Trauma Center were different than those who either presented directly to the Level 1 Trauma Center or who had other reasons to come to our institution (insurance contracts, needed care for associated injuries, medical issues). They were more likely to have a lower energy mechanism of injury (p<0.001), and/or to be under or uninsured (p<0.001, odds 2.59X). Logistic regression analysis revealed that when age, sex and race were held constant, the odds of being under or uninsured was 2.6X greater for the group that was initially treated elsewhere and had no reason to be treated at our institution.

Discussion/conclusion
These results suggest that non-medical reasons play a role in where ambulatory patients are able to receive definitive care for their operative fractures.
Stability of Intertrochanteric Hip Fractures With or Without Distal Locking Screw in a Cephalomedullary Construct
Mark Lee, MD, George K. Van Osten III, MD

Unstable hip fractures are commonly treated with a cephalomedullary construct. This provides fracture stabilization with a fixed angle device and allows early mobilization and weight bearing. Typically, these constructs are locked distally in a standard free-hand fashion with at least one interlocking screw. However, placement of distal interlocking screws is not without complication and surgeons may elect to avoid this step. This study consisted of a retrospective review of the x-rays of patients with hip fractures treated with either distally locked or non-locked cephalomedullary constructs. Radiographic parameters to evaluate for fracture settling or displacement were devised and all x-rays were measured with a standard protocol.
Magnification differences of the x-rays were taken into account. Any differences in fracture settling or displacement between the two groups was calculated and statistical analysis performed. It is our hope to be able to provide useful recommendations regarding this issue in order to ensure successful hip fracture treatment and optimal function outcome for patients.