

# 2009 OTA ANNUAL MEETING THURSDAY, OCTOBER 8, 2009

- 6:30 am **Registration**  
(Douglas Pavilion Foyer)
- 1:00 pm **WELCOME** (Elizabeth Ballroom A-E, Level II)  
David C. Templeman, MD – *President*  
William M. Ricci, MD – *Program Chair*  
James A. Goulet, MD – *Program Co-Chair*  
CDR Michael T. Mazurek, MD – *Local Host*  
Jeffrey M. Smith, MD – *Local Host*
- 1:10 pm – **RESEARCH AWARD PRESENTATIONS**  
1:20 pm Joseph Borrelli, Jr., MD,  
OTA Research Committee Chair

1:20 –  
2:35 pm

## SYMPOSIUM I: ASSESSMENT OF FRACTURE HEALING

- (Notes p. 127) **Moderator:** *Emil H. Schemitsch, MD* (Elizabeth Ballroom A-E, Level II)  
**Faculty:** *Mohit Bhandari, MD*  
*Michael D. McKee, MD*  
*Theodore Miclau, III, MD*  
*Marc F. Swiontkowski, MD*  
*Paul Tornetta, III, MD*
- 1:20 pm **Fracture Healing Defined: Is There a Consensus?**  
*Theodore Miclau, III, MD*
- 1:30 pm **Measurement Error: Who Should Measure Healing in Clinical Research?**  
*Paul Tornetta, III, MD*
- 1:40 pm **Which Radiographic Measure Should We Use? Feasibility and Relevance**  
*Michael D. McKee, MD*
- 1:50 pm **What Outcomes Should We Measure? Beyond the X-Ray**  
*Marc F. Swiontkowski, MD*
- 2:00 pm **Clinical Trials in Fracture Healing: Is the Evidence Good Enough?**  
*Mohit Bhandari, MD*
- 2:10 pm **Discussion**

Key:  $\Delta$  = presentation was funded by an OTA administered grant  
Names in bold = Presenter

**SESSION I  
PEDIATRICS and INJURY PREVENTION**

2:35 –  
3:43 pm

Moderators - Andrew H. Schmidt, MD & Steven L. Frick, MD

2:35 pm  
(p. 128)  
Paper #25

**Pulseless and Puzzling, Vascular Injuries in Supracondylar Humeral Fractures in Children: A Meta-Analysis of Observational Studies and Results of a POSNA Membership Survey**

*Lydia A. White, MD<sup>1</sup>; Charles T. Mehlman, DO, MPH<sup>2</sup>;  
Alvin H. Crawford, MD<sup>2</sup>;*

<sup>1</sup>University of Cincinnati, Cincinnati, Ohio, USA;

<sup>2</sup>Cincinnati Children's Hospital, Cincinnati, Ohio, USA

2:41 pm  
(p. 129)  
Paper #26

**Elastic Stable Intramedullary Nailing in Pediatric Forearm Fractures: An Analysis of 162 Cases**

*Christian Schinkel, MD; Marcel Dudda, MD; Gert Muhr, MD;*

**Hamid Joneidi-Jafari, MD; Tobias Fehmer, MD;**

*Alexandros P. Anastasiadis, MD;*

*University Hospital Bergmannsheil, Ruhr University Bochum,  
Bochum, Germany*

2:47 pm

Discussion

2:52 pm  
(p. 130)  
Paper #27

**On-Call Coverage for Pediatric Orthopaedic Emergencies: Description of an Effective Call System to Optimize Pediatric Patient Care**

*Christopher Bray, MD<sup>1</sup>; Brian Scannell, MD<sup>1</sup>; Michael J. Bosse, MD<sup>1</sup>;  
Steven Frick, MD<sup>1</sup>; Virginia Casey, MD<sup>2</sup>; D. Christian Clark, MD<sup>2</sup>;  
J. Michael Wattenbarger, MD<sup>2</sup>;*

<sup>1</sup>Department of Orthopaedic Surgery, Carolinas Medical Center,  
Charlotte, North Carolina, USA;

<sup>2</sup>OrthoCarolina, Charlotte, North Carolina, USA

2:58 pm  
(p. 131)  
Paper #28

**Dispelling the Myth: Emergency Fracture Care, Who's Doing What?**

*Kenneth J. Koval, MD<sup>1</sup>; Jeffrey O. Anglen, MD<sup>2</sup>; James Weinstein, DO, MS<sup>1</sup>;  
J. Lawrence Marsh, MD<sup>3</sup>; John J. Harrast, MS<sup>4</sup>;*

<sup>1</sup>Dartmouth Hitchcock Medical Center, Lebanon, New Hampshire, USA;

<sup>2</sup>Indiana University, Indianapolis, Indiana, USA;

<sup>3</sup>University of Iowa, Iowa City, Iowa, USA;

<sup>4</sup>Web Data Solutions, Hinsdale, Illinois, USA

3:04 pm

Discussion

- The FDA has not cleared this drug and/or medical device for the use described in this presentation (i.e., the drug or medical device is being discussed for an "off label" use). For full information refer to page 478.

THURSDAY, OCTOBER 8, 2009

3:09 pm  
(p. 133)  
Paper #29

**Comparing Acute Narcotic Requirements of Pediatric Patients with Isolated Femur Fractures: Skeletal vs. Skin Traction**

*Cameron J. Vanlaningham, MD<sup>1</sup>; Thomas M. Schaller, MD<sup>2</sup>; Christopher Wise, MD<sup>3</sup>;*

*<sup>1</sup>Michigan State University/Kalamazoo Center for Medical Studies, Kalamazoo, Michigan, USA;*

*<sup>2</sup>Orthopaedic Trauma Surgery, HealthCare Midwest, Kalamazoo, Michigan, USA;*

*<sup>3</sup>Orthopaedic Trauma Surgery, DFP Orthopedics, Independence, Missouri, USA*

3:15 pm  
(p. 134)  
Paper #30

**Prescription Narcotic Use before and after Orthopedic Trauma Surgery and the Effect of Perioperative Counseling**

*Joel Holman, MD; Thomas F. Higgins, MD; Daniel S. Horwitz, MD; University of Utah, Department of Orthopedics, Salt Lake City, Utah, USA*

3:21 pm

Discussion

3:26 pm  
(p. 135)  
Paper #31

**Outcomes in Pregnant Trauma Patients with Orthopaedic Injuries**

*Lisa K. Cannada, MD<sup>1</sup>; Ping Pan, BS<sup>2</sup>; Brian M. Casey, MD<sup>3</sup>; Donald D. McIntire, PhD<sup>3</sup>; Shahid Shafi, MD, MPH<sup>4</sup>; Kenneth J. Leveno, MD<sup>3</sup>;*

*<sup>1</sup>Department of Orthopaedic Surgery, St. Louis University Hospital, Saint Louis, Missouri, USA;*

*<sup>2</sup>University of Texas Southwestern Medical School, Dallas, Texas, USA;*

*<sup>3</sup>Department of Obstetrics and Gynecology &*

*<sup>4</sup>Trauma Surgery, University of Texas Southwestern Medical Center, Dallas, Texas, USA*

3:32 pm  
(p. 137)  
Paper #32

**Childbirth after Pelvic Fractures: Debunking the Myths**

*Lisa K. Cannada, MD<sup>1</sup>; Sara Strebe, MD<sup>2</sup>; Heather A. Vallier, MD<sup>3</sup>; Beth Ann Cureton, BS<sup>3</sup>; Jennifer Barr, MD<sup>4</sup>; Zhen Qin, MS<sup>4</sup>;*

*George V. Russell, Jr., MD<sup>4</sup>; Carol E. Copeland, MD<sup>5</sup>;*

*<sup>1</sup>St. Louis University Medical Center, Saint Louis, Missouri, USA;*

*<sup>2</sup>University of Texas-Southwestern, Dallas, Texas, USA;*

*<sup>3</sup>Metrohealth Medical Center, Cleveland, Ohio, USA;*

*<sup>4</sup>University of Mississippi, Jackson, Mississippi, USA;*

*<sup>5</sup>Sinai Hospital, Baltimore, Maryland, USA*

3:38 pm

Discussion

3:43 pm

Break

Visit Scientific Posters (Elizabeth Ballroom Foyer)  
& Technical Exhibits (Douglas Pavilion Level I)

SESSION II  
 PELVIS and ACETABULUM

4:10 –  
 5:00 pm

Moderators - Victor A. deRidder, MD & Mark C. Reilly, MD

4:10 pm  
 (p. 139)  
 Paper #33

**Nonoperative Immediate Weightbearing of Minimally Displaced Lateral Compression Sacral Fractures Does Not Result in Displacement**  
*Gillian Sembler, MD; John Lien, MD; Paul Tornetta, III, MD;*  
*Boston University Medical Center, Boston, Massachusetts, USA*

4:16 pm  
 (p. 141)  
 Paper #34

**Predicting Future Displacement of Non-Operatively Managed Sacral Fractures: Can It Be Done?**  
*Brandon Bruce, MD<sup>1</sup>; Mark Reilly, MD<sup>2</sup>; Steven Sims, MD<sup>1</sup>;*  
*<sup>1</sup>Carolinas Medical Center, Charlotte, North Carolina, USA;*  
*<sup>2</sup>New Jersey Medical School, Newark, New Jersey, USA*

4:22 pm

Discussion

4:27 pm  
 (p. 143)  
 Paper #35

**• Minimally Invasive Treatment of Unstable Pelvic Ring Injuries with an Internal Anterior Fixator (INFIX) and Posterior Iliosacral Screws**  
*Rahul Vaidya, MD; Frederick Tommos, DO; Robert Colen, DO; Anil Sethi, MD;*  
*Detroit Medical Center Detroit Receiving Hospital, Detroit, Michigan, USA*

4:33 pm  
 (p. 144)  
 Paper #36

**A Clinical Comparison between Anterior Pelvic External Fixation and Subcutaneous Locked Pelvic Spanning Internal Fixation for Pelvic Ring Injuries**  
*Archie A. Heddings, MD<sup>1</sup>; Jack Anavian, MD<sup>2</sup>; Thuan V. Ly, MD<sup>2</sup>;*  
*Robert A. Morgan, MD<sup>2</sup>; Peter A. Cole, MD<sup>2</sup>;*  
*<sup>1</sup>Department of Orthopaedic Surgery, University of Kansas Medical Center, Kansas City, Kansas, USA;*  
*<sup>2</sup>Department of Orthopaedic Surgery, University of Minnesota-Regions Hospital, Saint Paul, Minnesota, USA*

4:39 pm

Discussion

4:44 pm  
 (p. 145)  
 Paper #37

**Value of Three-Dimensional Computed Tomography in Classifying Acetabular Fractures during Orthopaedic Residency Training**  
*Jeffrey P. Garrett, MD; Lawrence X. Webb, MD; Joseph A. Veneziano, MD;*  
*Eben A. Carroll, MD;*  
*Wake Forest University Health Sciences, Winston-Salem, North Carolina, USA*

4:50 pm  
 (p. 146)  
 Paper #38

**Impact of a 3-Dimensional “Hands-On” Anatomical Teaching Module on Acetabular Fracture Pattern Recognition by Orthopaedic Residents: A Pilot Study**  
*Erik Hansen, MD; Meir Marmor, MD; Amir Matityahu, MD;*  
*University of California San Francisco, San Francisco, California, USA*

4:56 pm

Discussion

• The FDA has not cleared this drug and/or medical device for the use described in this presentation (i.e., the drug or medical device is being discussed for an “off label” use). For full information refer to page 478.

**THURSDAY, OCTOBER 8, 2009**

5:00 – 6:00 pm

**Business Meeting for OTA Members Only**

5:30 – 7:30 pm

**Welcome Reception**

*Join the OTA for entertainment, cocktails and a generous assortment of hors d'oeuvres while taking in the magnificent views of downtown, San Diego Bay and the Pacific Ocean from the pool deck of the Manchester Grand Hyatt.*

*Dinner on your own.*



See pages 67 - 90 for financial disclosure information.

# 2009 OTA ANNUAL MEETING FRIDAY, OCTOBER 9, 2009

6:30 am

## Attendee Registration

(Douglas Pavilion Foyer)

## Scientific Posters

(Elizabeth Ballroom Foyer)

## Speaker Ready Room

(Elizabeth Foyer)

6:45 - 7:45 am

(Notes p. 148)

## Case Presentations—Tickets Required

Continental Breakfast (6:15—Available at Case Discussion Rooms)

6:45 –

7:45 am

## CASE PRESENTATIONS

### Problems Solved in Proximal Humerus Fractures (#F-1)

(America's Cup A/B, Level 4)

Moderators: John T. Gorczyca, MD and Utku Kandemir, MD

Faculty: Milan K. Sen, MD and Donald A. Wiss, MD

### Pelvis and Acetabulum (#F-2)

(Elizabeth F, Level 2)

Moderator: Paul Tornetta, III, MD

Faculty: Kyle F. Dickson, MD; Alan L. Jones, MD; Mark A. Lee, MD  
and David C. Templeman, MD

### Common Pediatric Fractures (#F-3)

(Molly A/B, Level 2)

Moderator: Stephen L. Frick, MD

Faculty: Susan Scherl, MD and Kelly L. VanderHave, MD

### Clinical Research Seminar: Randomized Controlled Trials (#F-4)

(America's Cup C/D, Level 4)

Moderators: Mohit Bhandari, MD and Theodore Miclau, III, MD

Faculty: Michael J. Bosse, MD; Saam Morshed, MD; Emil H. Schemitsch, MD and  
Andrew H. Schmidt, MD

### Ankle Fractures (#F-5)

(Mohsen A/B, Level 3)

Moderator: Michael J. Gardner, MD

Faculty: David P. Barei, MD and J. Tracy Watson, MD

8:00 am



## 25th Anniversary Lecture

(Elizabeth Ballroom A-E, Level II)

### The Growth of the OTA as a Subspecialty Society

**Richard F. Kyle, MD,**  
Past President AAOS,  
Past President OTA



- The FDA has not cleared this drug and/or medical device for the use described in this presentation (i.e., the drug or medical device is being discussed for an "off label" use). For full information refer to page 478.

FRIDAY, OCTOBER 9, 2009

8:15 –  
9:45 am

**SYMPOSIUM II:  
SURGICAL TIMING:  
WHAT'S EMERGENT AND WHAT'S NOT**

(Notes p. 150) **Moderator:** *Mark A. Lee, MD* (Elizabeth Ballroom A-E, Level II)

**Faculty:** *Brett D. Crist, MD*  
*Tania A. Ferguson, MD*  
*Yvonne M. Murtha, MD*  
*Philip R. Wolinsky, MD*

- 8:15 am **Introduction / Goals and Objectives**  
*Mark A. Lee, MD*
- 8:20 am **True Emergencies**  
*Mark A. Lee, MD*
- 8:30 am **Urgent or Emergent?**  
*Tania A. Ferguson, MD*
- 8:40 am **Damage Control Orthopaedics**  
*Yvonne M. Murtha, MD*
- 8:50 am **Staged Management of Periarticular Injuries**  
*Brett D. Crist, MD*
- 9:05 am **The Influence of the Orthopaedic "Trauma" Room**  
*Philip R. Wolinsky, MD*
- 9:20 am **Case Examples**  
*Faculty*
- 9:35 am **Question/Answer Session**  
*Faculty*

9:45 am **Break**  
Visit Scientific Posters (*Elizabeth Ballroom Foyer*)  
& Technical Exhibits (*Douglas Pavilion Level I*)

See pages 67 - 90 for financial disclosure information.

**SESSION III  
HIP and GERIATRIC**

10:25 –  
11:28 am

**Moderators - James A. Goulet, MD & Clifford B. Jones, MD**

10:25 am  
(p. 151)  
Paper #39

**Low-Energy Femoral Diaphyseal Fractures and Long-term Bisphosphonate Use**

**Brett A. Lenart, MD<sup>1</sup>**; Andrew S. Neviaser, MD<sup>2</sup>; Stephen Lyman, PhD<sup>2</sup>; Charles C. Chang, MD, DDS<sup>2</sup>; Folorunsho Edobor-Osula, MD, MPH<sup>3</sup>; Barbara Steele, MD<sup>4</sup>; Marjolein C.H. van der Meulen, PhD<sup>2,5</sup>; Dean G. Lorch, MD<sup>6</sup>; Joseph M. Lane, MD<sup>6</sup>;  
<sup>1</sup>Rush University Medical Center, Chicago, Illinois;  
<sup>2</sup>Hospital for Special Surgery, New York, New York, USA;  
<sup>3</sup>Long Island Jewish Medical Center, New Hyde Park, New York, USA;  
<sup>4</sup>New York Medical College at Westchester Medical Center, Valhalla, New York, USA;  
<sup>5</sup>Cornell University, Ithaca, New York, USA;  
<sup>6</sup>Hospital for Special Surgery, New York-Presbyterian Hospital-Weill Cornell Medical Center, Weill Medical College of Cornell University, New York, New York, USA

10:31 am  
(p. 152)  
Paper #40

**Complications Associated with Pharmacologic Reversal of Warfarin-Associated Coagulopathy in Patients with Hip Fractures**

**Mark A. Vitale, MD, MPH**; Corrine Vanbeek, MD; Jeffrey A. Geller, MD; Columbia University Medical Center, Department of Orthopaedic Surgery, Hip Fracture Service, New York, New York, USA

10:37 am  
(p. 153)  
Paper #41

**Depth of Sedation and Postoperative Delirium during Spinal Anesthesia for Hip Fracture Repair in Elderly Patients: A Randomized Controlled Study**

Frederick Sieber, MD; Khwaja Zakriya, MD; Hochang Lee, MD; Paul Rosenberg, MD; **Simon C. Mears, MD**; Johns Hopkins Bayview Medical Center, Baltimore, Maryland, USA

10:43 am

Discussion

10:48 am  
(p. 154)  
Paper #42

**Does ORIF of Geriatric Acetabular Fractures Lead to Hip Arthroplasty and Poor Midterm Outcomes?**

**Robert V. O'Toole, MD**; Emily Hui, MPH; Amit Chandra, BA; RA Cowley Shock Trauma Center, Dept. of Ortho, University of Maryland School of Medicine, Baltimore, Maryland, USA

10:54 am  
(p. 155)  
Paper #43

**Protrusio Fractures of the Acetabulum in Patients 70 Years and Older**

**Michael T. Archdeacon, MD, MSE**; University of Cincinnati Academic Health Center, Cincinnati, Ohio, USA

11:00 am

Discussion

- The FDA has not cleared this drug and/or medical device for the use described in this presentation (i.e., the drug or medical device is being discussed for an "off label" use). For full information refer to page 478.



FRIDAY, OCTOBER 9, 2009

- 11:05 am  
(p. 156)  
Paper #44
- A Randomized Clinical Trial Comparing Minimally Invasive Surgery to Conventional Approach for Endoprosthesis in Elderly Patients with Hip Fractures**  
*G. Yves Laflamme, MD<sup>1</sup>; Louis Roy, MD<sup>1</sup>; Mathieu Carrier, MD<sup>1</sup>; Paul R. Kin, MD<sup>2</sup>; Stephane Leduc, MD<sup>1</sup>;*  
<sup>1</sup>Université de Montréal, Division Chirurgie Orthopédique, Hôpital du Sacré Cœur, Montréal, Québec, Canada;  
<sup>2</sup>Department of Surgery, University of Ottawa, Ottawa Hospital–General Campus, Ottawa, Ontario, Canada
- 11:11 am  
(p. 157)  
Paper #45
- A Randomized, Prospective Comparison of the DHS and DHHS Implants for the Treatment of Pertrochanteric Hip Fractures Performed in the Community Setting**  
*Daniel C. Fitzpatrick, MS, MD; Daniel V. Sheerin, MD; Thomas K. Wuest, MD;*  
Slocum Center for Orthopedics, Eugene, Oregon, USA
- 11:17 am  
(p. 159)  
Paper #46
- Outcomes of Length Stable Fixation of Femoral Neck Fractures**  
*Sreevathsa Boraiah, MD<sup>1</sup>; Omesh Paul, MD<sup>2</sup>; Michael J. Gardner, MD<sup>3</sup>; Joseph U. Barker, MD<sup>2</sup>; Robert J. Parker, BS<sup>2</sup>; David Helfet, MD<sup>2</sup>; Dean Lorich, MD<sup>2</sup>;*  
<sup>1</sup>Westchester Medical Center, Valhalla, New York, USA;  
<sup>2</sup>Hospital for Special Surgery, New York, New York, USA;  
<sup>3</sup>Washington University School of Medicine, Saint Louis, Missouri, USA
- 11:23 am
- Discussion

## SESSION IV UPPER EXTREMITY

11:28 am –  
12:31 pm

Moderators - Michael D. McKee, MD & Laura J. Prokuski, MD

- 11:28 am  
(p. 160)  
Paper #47
- Outcomes of Conservatively Treated Displaced Scapular Body Fractures**  
*Apostolos Dimitroulias, MD; Kenneth G. Molinero, DO; Daniel E. Krenk, DO; Matthew T. Muffly, MS; Daniel T. Altman, MD; Gregory T. Altman, MD;*  
Allegheny General Hospital, Pittsburgh, Pennsylvania, USA
- 11:34 am  
(p. 161)  
Paper #48
- Surgical and Functional Outcomes after Operative Management of Displaced Intra-articular Glenoid Fractures**  
*Jack Anavian, MD; Coen A. Wijdicks, MSc; Lisa K. Schroder, BS, MBA; Peter A. Cole, MD;*  
University of Minnesota, Regions Hospital, Saint Paul, Minnesota, USA
- 11:40 am
- Discussion
- 11:45 am  
(p. 163)  
Paper #49
- Operative versus Nonoperative Treatment of Humeral Shaft Fractures: A Retrospective Review of 213 Patients from Two Level I Trauma Centers**  
*Southeastern Fracture Consortium; Michael C. Tucker, MD<sup>1</sup>; William T. Obrebskey, MD<sup>2</sup>; Mark Floyd, BS<sup>3</sup>; Anthony Denard, BS<sup>2</sup>;*  
<sup>1</sup>Palmetto Health Richland/USC, Columbia, South Carolina, USA;  
<sup>2</sup>Vanderbilt University, Nashville, Tennessee, USA;  
<sup>3</sup>Medical College of Georgia, Augusta, Georgia, USA

See pages 67 - 90 for financial disclosure information.

11:51 am  
(p. 164)  
Paper #50

**Anterior Sub-Muscular Plating of the Humerus**

**Bruce R. Ziran, MD<sup>1</sup>**; Wade R. Smith, MD<sup>2</sup>; Gabrielle Peacher, BS<sup>2</sup>;  
<sup>1</sup>Atlanta Medical Center, Decatur, Georgia, USA  
<sup>2</sup>Denver Health Medical Center, Denver, Colorado, USA

11:57 am  
(p. 165)  
Paper #51

**A Comparison of Open versus Percutaneous Plating of Proximal Humerus Fractures**

**Jeffrey S. Staron, MD<sup>1</sup>**; B. Matthew Hicks, MD<sup>2</sup>;  
<sup>1</sup>Fort Wayne Medical Education Program,  
<sup>2</sup>Fort Wayne Orthopaedics, Fort Wayne, Indiana, USA

12:03 pm

Discussion

12:08 pm  
(p. 166)  
Paper #52

**Prospective Randomised Treatment of Distal Radius Fractures in the Elderly: Are Fixed Angle Implants Superior to K-Wire Osteosynthesis?**

**Christian Probst, MD<sup>1</sup>**; Rebekka Schmidt, MD<sup>1</sup>; Katja Briese, MD<sup>1</sup>;  
Ralph Gaulke, MD<sup>1</sup>; Christian Krettek, MD<sup>1</sup>; Reinhard Meier, MD<sup>2</sup>;  
<sup>1</sup>Hannover Medical School, Department of Trauma, Hannover, Germany;  
<sup>2</sup>Würzburg University Hospital, Department of Trauma, Würzburg, Germany

12:14 pm  
(p. 168)  
Paper #53

**Effects of Brachioradialis Lengthening and Pronator Quadratus Repair on Outcomes following Volar Plating of Distal Radius Fractures**

**Stuart Hershman, MD**; Igor Immerman, MD; Christopher Bechtel, BS;  
Michael Walsh, PhD; Nader Paksima, DO; Kenneth A. Egol, MD;  
NYU Hospital for Joint Diseases, New York, New York, USA

12:20 pm  
(p. 170)  
Paper #54

**Do Antioxidants Modulate the Outcome of Fractures? A Prospective Randomized Controlled Trial**

**Ingri Ekrol, MD<sup>1</sup>**; Charles Court-Brown, MD<sup>1</sup>; Stuart Ralston, MD<sup>2</sup>;  
Margaret McQueen, MD<sup>1</sup>;  
<sup>1</sup>Orthopaedic Trauma Unit, Royal Infirmary of Edinburgh;  
<sup>2</sup>University of Edinburgh, Edinburgh, United Kingdom

12:26 pm

Discussion

12:31 –  
1:31 pm

**Lunch**

Visit Scientific Posters (Elizabeth Ballroom Foyer)  
& Technical Exhibits (Douglas Pavilion Level I)

12:31 –1:31 pm

**Kathy Cramer, MD Memorial  
Women in Orthopaedic Trauma  
Luncheon/Meeting**

(America's Cup, Level 4)

Co-Chairs: *Jacqueline J. Krumrey, MD*  
*Laura S. Phieffer, MD*



*Pre-Registration is required.*

- The FDA has not cleared this drug and/or medical device for the use described in this presentation (i.e., the drug or medical device is being discussed for an "off label" use). For full information refer to page 478.

**FRIDAY, OCTOBER 9, 2009**

1:31 – **Concurrent Sessions**  
3:01 pm *(Skills Labs and Mini Symposia run concurrently.)*  
(Notes pgs. 171 - 172) **Tickets Required**

**1:31 –  
3:01 pm**

**SKILLS LABS**

**Clavicle / Proximal Humerus (#F-6)** *(Elizabeth H, Level 2)*

Moderator: *Lawrence X. Webb, MD*

Faculty: *Eben A. Carrol, MD; Barnaby T. Dedmond, MD; Kyle J. Jeray, MD;  
Clifford B. Jones, MD; Michael D. McKee, MD; Joseph Veneziano, Jr., MD*

**IM Nail Proximal Femur (#F-7)** *(Madeleine ABC, Level 3)*

Moderator: *Kyle F. Dickson, MD*

Faculty: *Christopher T. Born, MD; Stuart M. Gold, MD; David W. Lowenberg, MD;  
Nirmal C. Tejwani, MD; Walter W. Virkus, MD*

**ORIF Proximal Tibia (#F-8)** *(Douglas D, Ground Level)*

Moderator: *Cory A. Collinge, MD*

Faculty: *Brett D. Crist, MD; Michael J. Gardner, MD; Bradley R. Merk, MD  
and Franklin D. Shuler, MD, PhD*

**1:31 –  
3:01 pm**

**MINI SYMPOSIA**

**Soft Tissue Coverage for the Non-Microsurgeon (#F-9)** *(Elizabeth F, Level 2)*

Moderator: *Gregory L. DeSilva, MD*

Faculty: *Michael T. Archdeacon, MD and Stephen P. DeSilva, MD*

**OTA/ORA Amputation: Indications, Techniques,  
Outcomes and Rehabilitation (#F-10)** *(Molly A/B, Level 2)*

Moderator: *William J. Ertl, MD*

Faculty: *Michael J. Bosse, MD and Paul J. Dougherty, MD*

**Considerations and Techniques in the Management of  
Peri-prosthetic Fractures (#F-11)** *(Elizabeth A-D)  
(OTA General Session, Room Level 2)*

Moderator: *Samir Mehta, MD*

Faculty: *David P. Barei, MD; James A. Goulet, MD; Thomas J. Ellis, MD;  
John L. Esterhai, Jr., MD; George J. Haidukewych, MD and Andrew H. Schmidt, MD*

3:01 – **Break**  
3:35 pm **Visit Scientific Posters** *(Elizabeth Ballroom Foyer)*  
& **Technical Exhibits** *(Douglas Pavilion Level I)*

See pages 67 - 90 for financial disclosure information.

3:41 –  
4:11 pm  
(Notes p. 173)

**PRESIDENT'S  
MESSAGE**  
(Elizabeth Ballroom Level II)

*David C. Templeman, MD*



**SESSION V  
PILON / FOOT and ANKLE**

4:11 –  
5:20 pm

Moderators - Stephane Ledue, MD & William M. Ricci, MD

4:11 pm  
(p. 174)  
Paper #55

**Youtube Video Clips as a Tool for the Study of Injury Dynamics:  
Validating the Lauge-Hansen Ankle Fracture Classification System  
for In-Vivo Ankle Fractures**

*John Y. Kwon, MD; John J. Kadzielski, MD; Aron T. Chacko, BS;  
Paul T. Appleton, MD; Edward K. Rodriguez, MD, PhD;  
Beth Israel Deaconess Medical Center, Boston, Massachusetts, USA*

4:17 pm  
(p. 175)  
Paper #56

**Syndesmotic Injuries: The Clinical Consequence of Mal-reduction at  
a Minimum of Two Year Follow-Up**

*Anjan R. Shah, MD; H. Claude Sagi, MD;  
Orthopaedic Trauma Service, Tampa General Hospital, Tampa, Florida, USA*

4:23 pm  
(p. 176)  
Paper #57

**Twenty-One-Year Follow-Up of Supination-Eversion (SE) II-IV  
Ankle Fractures: A Retrospective Cohort Study**

*Christian Donken, MD<sup>1</sup>; Michiel Verhofstad, MD<sup>1</sup>; Cees van Laarhoven, MD<sup>2</sup>;  
<sup>1</sup>Saint Elisabeth Hospital, Tilburg, The Netherlands;  
<sup>2</sup>University Medical Centre Saint Radboud, Nijmegen, The Netherlands*

4:29 pm

Discussion

4:34 pm  
(p. 178)  
Paper #58

**Primary Subtalar Fusion for Unreconstructable Intra-Articular  
Calcaneal Fractures: Long-Term Results**

*Gregory P. Witkowski, MD; Arthur K. Walling, MD;  
Roy Sanders, MD;  
Florida Orthopaedic Institute, Orthopaedic Trauma Service, Tampa, Florida, USA*

4:40 pm  
(p. 179)  
Paper #59

**Primary Arthrodesis of the Tibiotalar Joint with Reconstruction of the  
Distal Tibial Metaphysis following Highly Comminuted C2 and C3  
Pilon Fractures**

*Gary S. Gruen, MD; Ryan L. McMillen, DPM; Jason Dragavon Dahl, BS;  
University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, USA*

- The FDA has not cleared this drug and/or medical device for the use described in this presentation (i.e., the drug or medical device is being discussed for an "off label" use). For full information refer to page 478.

**FRIDAY, OCTOBER 9, 2009**

4:46 pm  
(p. 180)  
Paper #60

**Clinical Results of the Anatomic Compression Arthrodesis Technique with Anterior Plate Augmentation for Ankle Arthrodesis**

*Michael P. Clare, MD<sup>1</sup>; Scott A. Swanson, MD<sup>1</sup>; John P. Ketz, MD<sup>1</sup>; Matthew A. Mormino, MD<sup>2</sup>; Lori K. Reed, MD<sup>2</sup>; Ivan S. Tarkin, MD<sup>3</sup>; Arthur K. Walling, III, MD; Roy Sanders, MD<sup>1</sup>;*

*<sup>1</sup>Florida Orthopaedic Institute, Tampa, Florida, USA;*

*<sup>2</sup>University of Nebraska Medical Center, Omaha, Nebraska, USA;*

*<sup>3</sup>University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, USA*

4:52 pm

Discussion

4:57 pm  
(p. 181)  
Paper #61

**Treatment of Displaced Intra-Articular Calcaneal Fractures with Closed Reduction and Percutaneous Screw Fixation**

*Tijmen Tomesen, BA; Jan Biert, MD, PhD; Jan Paul M. Frölke, MD, PhD; Department of Surgery, Radboud University Medical Centre, Nijmegen, The Netherlands*

5:03 pm  
(p. 182)  
Paper #62

**Efficiency of Low-Intensity Pulsed Ultrasound on Distraction Osteogenesis after Trauma: A Prospective, Randomized Study**

*Marcel Dudda, MD<sup>1</sup>; Jörg Hauser, MD<sup>2</sup>; Gert Muhr, MD<sup>1</sup>; Stefan A. Esentwein, MD<sup>1,3</sup>;*

*<sup>1</sup>Department of Surgery,*

*<sup>2</sup>Department of Plastic Surgery, University Hospital Bergmannsheil, Ruhr-University Bochum, Bochum, Germany;*

*<sup>3</sup>Department of Orthopaedic Surgery, University Duisburg-Essen, Essen, Germany*

5:09 pm  
(p. 183)  
Paper #63

**The Preoperative Diagnosis of Infection in Nonunions**

*Charlton Stucken, MD; Dana Olszewski, MD; William Creevy, MD; Paul Tornetta, III, MD;*

*Boston University Medical Center, Boston, Massachusetts, USA*

5:15 pm

Discussion

5:20 pm

Adjourn

5:45 –  
6:45 pm

**MILITARY RECEPTION –**

*Seaport Tower Lounge (32nd Floor)*

*(All Active Duty Military & DVSP Attendees are Welcome)*

*Hosted by: OTA Board of Directors,*

*Military Committee - COL (ret) Roman A. Hayda, MD, Chair;*

*LTC Romney C. Andersen, MD; CDR Michael T. Mazurek, MD;*

*COL Mark W. Richardson, MD; LTC Greg Osgood, MD*



# 2009 OTA ANNUAL MEETING

## SATURDAY, OCTOBER 10, 2009

6:30 am

### Attendee Registration

(Douglas Pavilion Foyer)

### Scientific Posters

(Elizabeth Ballroom Foyer)

### Speaker Ready Room

(Elizabeth Foyer)

6:45 - 7:45 am

(Notes p. 185)

### Case Presentations—Tickets Required

Continental Breakfast (6:15—Available at Case Discussion Rooms)

6:45 –  
7:45 am

## CASE PRESENTATIONS

### Elbow Trauma (#S-1)

(Elizabeth H, Level 2)

Moderator: Jesse B. Jupiter, MD

Faculty: Michael D. McKee, MD; Sean E. Nork, MD; Emil H. Schemitsch, MD  
and Thomas F. Varecka, MD

### Nonunions and Malunions (#S-2)

(Elizabeth F, Level 2)

Moderator: Stuart M. Gold, MD

Faculty: William M. Ricci, MD; Walter W. Virkus, MD and J. Tracy Watson, MD

### Mid-Forefoot (#S-3)

(Mohsen A/B, Level 3)

Moderators: Peter A. Cole, MD and Dolfi Herscovici, Jr., DO

Faculty: Clifford B. Jones, MD and Robert A. Probe, MD

### Failures and Potential Salvage in Lower Extremity Trauma (#S-4)

(America's Cup A/B, Level 4)

Moderator: Daniel S. Horwitz, MD

Faculty: Wade R. Smith, MD and Bruce H. Ziran, MD

### Evaluation, Resuscitation and Operative Management of Patients with Pelvic Fractures and Hemorrhagic Shock (#S-5)

(Molly A/B, Level 2)

Moderator: David J. Hak, MD

Faculty: Milton L. "Chip" Routt, MD; Andrew N. Pollak, MD and Adam J. Starr, MD

- The FDA has not cleared this drug and/or medical device for the use described in this presentation (i.e., the drug or medical device is being discussed for an "off label" use). For full information refer to page 478.

SATURDAY, OCTOBER 10, 2009

8:00 –  
9:30 am

**SYMPOSIUM III:  
GRAFT OPTIONS FOR BONE DEFECTS**

(Notes p. 186) **Moderator:** *Paul Tornetta, III, MD* (Elizabeth Ballroom A-E, Level II)

**Faculty:** *Michael J. Bosse, MD*  
*Clifford B. Jones, MD*  
*H. Claude Sagi, MD*  
*J. Tracy Watson, MD*

- 8:00 am **Introduction**  
*Paul Tornetta, III, MD*
- 8:05 am **Autogenous Bone: The Gold Standard**  
*Michael J. Bosse, MD*
- 8:20 am **RIA and Other Autogenous Augmentation**  
*H. Claude Sagi, MD*
- 8:35 am **The BMP's: What's the Evidence?**  
*Clifford B. Jones, MD*
- 8:50 am **Bone Transport**  
*J. Tracy Watson, MD*
- 9:05 am **Discussion**

9:30 – Break  
10:05 am Visit Scientific Posters (Elizabeth Ballroom Foyer)  
& Technical Exhibits (Douglas Pavilion Level I)

10:10 am –  
12:15 pm

**SESSION VI  
BASIC SCIENCE / INJURY PREVENTION / SPINE**

**Moderators - Theodore Miclau, III, MD & William T. Obrebsky, MD**

10:10 am  
(p. 187)  
Paper #64

**The Use of Endothelial Progenitor Cells to Promote Bone Healing:  
A Defect Model in the Rat Femur**  
*Kivanc Atesok, MD; Ru Li, PhD; Emil H. Schemitsch MD, FRCS(C);  
Musculoskeletal Research Lab, Division of Orthopaedics, Department of Surgery,  
St. Michael's Hospital, University of Toronto, Toronto, Ontario, Canada*

10:16 am  
(p. 188)  
Paper #65

**Expression of Bone Morphogenetic Protein Antagonists during  
Fracture Healing**  
*D. Brian Dean, MD<sup>1</sup>; J. Tracy Watson, MD<sup>1</sup>; Wu Jin, BS<sup>1</sup>; Charles Peters, BS<sup>2</sup>;  
Tyler Enders, BS<sup>2</sup>; Berton R. Moed, MD<sup>1</sup>; Zijun Zhang, PhD<sup>1,2</sup>*  
<sup>1</sup>Department of Orthopaedic Surgery,  
<sup>2</sup>Anatomical Science Program, Saint Louis University, Saint Louis, Missouri, USA

See pages 67 - 90 for financial disclosure information.

- 10:22 am Discussion
- 10:27 am  
(p. 190)  
Paper #66 **Δ Power Doppler Ultrasound Allows for Real Time Blood Flow Analysis of Tibial Fracture Callus in Patients**  
*Adam F. Rana, MD; Alda Cossi, MD; June F. Cheng, MD; Elizabeth Krall Kaye, PhD; Paul Tornetta, III, MD; Boston University Medical Center, Boston, Massachusetts, USA*
- 10:33 am  
(p. 192)  
Paper #67 **Environmental Oxygen Levels Affect Angiogenesis during Fracture Healing**  
*Chuanyong Lu, MD; Zhiqing Xing, MD; Diane Hu, MD; Theodore Miclau, III, MD; Ralph Marcucio, PhD; Department of Orthopaedic Surgery, University of California at San Francisco, San Francisco, California, USA*
- 10:39 am  
(p. 194)  
Paper #68 **Minimally Invasive Plate Osteosynthesis: Advanced Early Fracture Healing in a Sheep Trauma Model**  
*Martin E. Wullschleger, MD<sup>1</sup>; Roland Steck, PhD<sup>1</sup>; John Webster<sup>1</sup>; Kathleen Wilson<sup>2</sup>; Keita Ito, PhD<sup>3</sup>; Michael A. Schuetz, PhD<sup>1</sup>; <sup>1</sup>Queensland University of Technology, Institute of Health and Biomedical Innovation, Brisbane, Queensland, Australia; <sup>2</sup>The Prince Charles Hospital, Biological Research Facility, Brisbane, Queensland, Australia; <sup>3</sup>Eindhoven University of Technology, Orthopaedic Biomechanics Section, Eindhoven, The Netherlands*
- 10:45 am Discussion
- 10:50 am  
(p. 195)  
Paper #69 **A Biomechanical Testing Model That Matches Clinical Failure Modes of Locked Plate Constructs**  
*William M. Ricci, MD<sup>1</sup>; Jacob Cartner BA<sup>2</sup>; Yanming Zheng, PhD<sup>3</sup>; Bob Jones, BA<sup>3</sup>; Zane Hartsell<sup>3</sup>; Paul Tornetta, III, MD<sup>2</sup>; <sup>1</sup>Washington University School of Medicine, Saint Louis, Missouri, USA; <sup>2</sup>Boston University School of Medicine, Boston, Massachusetts, USA; <sup>3</sup>Smith & Nephew, Inc., Memphis, Tennessee, USA*
- 10:56 am  
(p. 197)  
Paper #70 **Does Bone Mineral Density Influence the Strength of Locked and Unlocked Plates?**  
*Paul Tornetta III, MD<sup>1</sup>; William M. Ricci, MD<sup>2</sup>; Jacob Carnter, BA<sup>3</sup>; Yanming Zheng, PhD<sup>3</sup>; <sup>1</sup>Boston University Medical Center, Boston, Massachusetts, USA; <sup>2</sup>Washington University Orthopaedic Trauma, Saint Louis, Missouri, USA; <sup>3</sup>Smith & Nephew, Inc., Memphis, Tennessee, USA*
- 11:02 am Discussion

Δ OTA Grant

- The FDA has not cleared this drug and/or medical device for the use described in this presentation (i.e., the drug or medical device is being discussed for an "off label" use). For full information refer to page 478.



SATURDAY, OCTOBER 10, 2009

- 11:07 am  
(p. 199)  
Paper #71
- Δ Negative Pressure Dressings on Primarily Closed Wounds Improve Wound Healing Parameters at Three Days in a Porcine Model**  
*James E. Meeker, MD; Laurence Dahners, MD;*  
*Department of Orthopaedic Surgery, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA*
- 11:13 am  
(p. 200)  
Paper #72
- Incisional Negative Pressure Wound Therapy as a Treatment for Draining Hematomas: A Prospective Randomized Study**  
*James P. Stannard, MD<sup>1</sup>; David A. Volgas, MD<sup>2</sup>; Rena L. Stewart, MD<sup>1</sup>;*  
*Jorge E. Alonso, MD<sup>2</sup>;*  
<sup>1</sup>*The University of Alabama at Birmingham, Birmingham, Alabama, USA*  
<sup>2</sup>*The University of South Alabama, Mobile, Alabama, USA*
- 11:19 am
- Discussion
- 11:24 am  
(p. 201)  
Paper #73
- Does Stress Induced Hyperglycemia Increase the Risk of Perioperative Infectious Complications in Nondiabetic Orthopaedic Trauma Patients?**  
*Madhav A. Karunakar, MD<sup>1</sup>; Kurtis S. Staples, MD<sup>2</sup>;*  
<sup>1</sup>*Carolinas Medical Center, Charlotte, North Carolina, USA;*  
<sup>2</sup>*The CORE Institute, Phoenix, Arizona, USA*
- 11:30 am  
(p. 202)  
Paper #74
- A Prospective Study of Cognitive Deficits, Depression and Posttraumatic Stress Disorder (PTSD) in Trauma Patients without Intracranial Injury**  
*William T. Obremskey, MD, MPH; Rebecca Bauer, MD, MPH;*  
*Christine Abraham; Venice Anderson, MA; Yanna Song, MA;*  
*Kristin Archer, PhD, DPT; Oscar Guillamondegui, MD;*  
*James C. Jackson, PsyD; E. Wesley Ely, MD, MPH;*  
*Vanderbilt University Medical Center, Nashville, Tennessee, USA*
- 11:36 am
- Discussion
- 11:41 am  
(p. 203)  
Paper #75
- Financial Implications of Non-Operative Fracture Care at an Academic Trauma Center**  
*Paul Appleton, MD; Edward Rodriguez MD;*  
*Beth Israel Deaconess Medical Center, Boston, Massachusetts, USA*
- 11:47 am  
(p. 204)  
Paper #76
- Financial Impact of a Dedicated Orthopaedic Traumatologist on a Private Group Practice**  
*Peter L. Althausen, MD, MBA; Lisa Davis, MBA; Eric Boyden, MD;*  
*Timothy J. Omara, MD; Timothy J. Bray, MD;*  
*Reno Orthopaedic Clinic, Reno, Nevada, USA*
- 11:53 am
- Discussion

Δ OTA Grant  
See pages 67 - 90 for financial disclosure information.

<p>11:58 am (p. 205) Paper #77</p>	<p><b>The Value of Adding MRI to CT Protocols for Cervical Spine Clearance In Blunt Trauma: A Meta-Analysis</b>  <i>Andrew Schoenfeld, MD<sup>1</sup>; Natalie Warholic, MA<sup>2</sup>; Christopher M. Bono, MD<sup>2</sup>; Kevin J. McGuire, MD<sup>3</sup>; Mitchel B. Harris, MD<sup>2</sup>;</i>  <sup>1</sup>Harvard Combined Orthopaedic Program, Boston, Massachusetts, USA;  <sup>2</sup>Brigham and Women's Hospital, Boston, Massachusetts, USA;  <sup>3</sup>Beth Israel Deaconess Medical Center, Boston, Massachusetts, USA</p>
<p>12:04 pm (p. 207) Paper #78</p>	<p><b>Posterior C2 Instrumentation in the Management of Trauma: Accuracy and Risks Associated with Four Techniques</b>  <i>Richard J. Bransford, MD<sup>1</sup>; Anthony J. Russo, MD<sup>2</sup>; Mark Freeborn, MD<sup>1</sup>; Quynh Nguyen, PA-C<sup>1</sup>; Michael J. Lee, MD<sup>1</sup>; Jens R. Chapman, MD<sup>1</sup>; Carlo Bellabarba, MD<sup>1</sup>;</i>  <sup>1</sup>Harborview Medical Center / University of Washington, Seattle, Washington, USA;  <sup>2</sup>Montana Orthopaedics, Butte, Montana, USA</p>
<p>12:10 pm</p>	<p>Discussion</p>
<p>12:15 – 1:15 pm</p>	<p><b>Lunch</b>            Visit Scientific Posters            (Elizabeth Ballroom Foyer)</p> <p>LAST OPPORTUNITY TO VISIT Technical Exhibits            (Douglas Pavilion Level I)</p>
<p>1:15 – 2:45 pm (Notes pgs. 209 - 210)</p>	<p><b>Concurrent Sessions</b>            (Skills Labs and Mini Symposia run concurrently.)  <b>Tickets Required</b></p>

1:15 –  
2:45 pm

**SKILLS LABS**

<p><b>Distal Radius (#S-6)</b></p>	<p>(Ford ABC, Level 3)</p>
<p>Moderator: <i>Jesse B. Jupiter, MD</i></p>	
<p>Faculty: <i>John T. Capo, MD; Charles M. Court-Brown, MD; Mark D. Perry, MD; Margaret M. McQueen, MD</i></p>	
<p><b>ORIF Distal Femur (#S-7)</b></p>	<p>(Annie AB, Maggie, Level 3)</p>
<p>Moderator: <i>Michael S. Sirkin, MD</i></p>	
<p>Faculty: <i>Cory A. Collinge, MD; Bharat M. Desai, MD; Robert F. Ostrum, MD; Atilla Poka, MD</i></p>	
<p><b>ORIF Distal Tibia (#S-8)</b></p>	<p>(Edward ABC, Level 2)</p>
<p>Moderator: <i>Frank A. Liporace, MD</i></p>	
<p>Faculty: <i>Daniel S. Horowitz, MD; Erik Kubiak, MD; Ulises P. Militano, MD; Brian H. Mullis, MD; Mark C. Reilly, MD; Anthony S. Rhorer, MD</i></p>	

- The FDA has not cleared this drug and/or medical device for the use described in this presentation (i.e., the drug or medical device is being discussed for an "off label" use). For full information refer to page 478.

1:15 –  
2:45 pm

MINI SYMPOSIA

**Treatment of Orthopaedic Infections (#S-9)** (Elizabeth H, Level 2)

Moderator: William T. Obremskey, MD  
Faculty: Jeffrey O. Anglen, MD and Andrew H. Schmidt, MD

**Fragility Fractures and Bone Health: Beyond ORIF (#S-10)** (Elizabeth F, Level 2)

Moderator: Douglas R. Dirschl, MD  
Faculty: Clifford B. Jones, MD; Joseph M. Lane, MD and Priscilla Majewski

**Orthopaedic Traumatologist as Educator (#S-11)** (America's Cup C/D, Level 4)

Moderator: J. Tracy Watson, MD  
Faculty: Piet de Boer, FRCS; Richard E. Buckley, MD; Robert D. Fox, Ed.D;  
Susan Scherl, MD and Paul Tornetta, III, MD

**OTA / ORA: Heterotopic Ossification:** (Molly A/B, Level 2)

**Highlights & Considerations (#S-12)**  
Moderator: Samir Mehta, MD  
Faculty: Michael J. Gardner, MD; Nader M. Hebel, MD; Major Joseph R. Hsu, MD  
and Mary Ann E. Keenan, MD

2:45 pm

**Break**  
Visit Scientific Posters  
(Elizabeth Ballroom Foyer)

3:10 –  
3:40 pm  
(Notes p. 211)

**JOHN BORDER MEMORIAL LECTURE**

(Elizabeth Ballroom A-E, Level II)

Introduction: David C. Templeman, MD  
Lecture Co-sponsored by AO North America

**“Trauma Surgery Is Not Supposed To Be Easy”**

**Lawrence B. Bone, MD**  
Past President of OTA, Professor and Chairman,  
Department of Orthopaedic Surgery,  
State University of New York at Buffalo

