9th International Congress on Surgery of the Shoulder
May 2-5, 2004
Washington DC, USA

DAY ONE
CONCURRENT SESSION 1
SUNDAY, MAY 2, 2004
CONSTITUTION BALLROOM

Session I: Shoulder Arthroplasty
Moderators: Louis U. Bigliani, MD (a,c-Zimmer, Inc.) and Dominique F. Gazielly, MD (n)

PAPER #1A
8:00 – 8:06 AM Results of Cancellous Compaction Technique for Glenoid Resurfacing
Dominique F. Gazielly, MD (n), Christian Allende, MD, Emanuele Pamelin, MD

PAPER #2A
8:07 – 8:13 AM Glenoid Cortico-Cancellous Autograft After Glenoid Component Removal in the Treatment of Glenoid Component Loosening in Total Shoulder Arthroplasty
T. Bradley Edwards, MD, Lionel Neyton, MD, Francois Sirveaux, MD, Daniel Mole, MD (n), Gilles Walch, MD, Pascal Boileau, MD

PAPER #3A
8:14 – 8:20 AM Impaction Bone Grafting Of The Glenoid In Revision Shoulder Arthroplasty
Richard S. Page, FRACS (Orth), John F. Haines, FRCS, Ian A. Trail, MD, FRCS (n)

8:21 – 8:30 AM Discussion

PAPER #4A
8:31 – 8:37 AM Copeland Surface Replacement Arthroplasty of the Shoulder (CSRA) for Rheumatoid Arthritis
Ofer Levy, MD, MCh(Orth), Lennard Funk, FRCS(Orth), Giuseppe Sforza, MD, Stephen Copeland, FRCS (c-Biomet)

PAPER #5A
8:38 – 8:44 AM Copeland Surface Replacement Arthroplasty for Avascular Necrosis of the Humeral Head
Lennard Funk, FRCS(Tr&Orth) (c-Biomet), Elias Koury, MRCS, Ofer Levy, MD, Steven Copeland, FRCS

PAPER #6A
8:45 – 8:51 AM Outcome of Copeland Surface Replacement Shoulder Arthroplasty
Simon Robert Thomas, MA, MRCS, Adrian Wilson, FRCS, Andrew Chambler, FRCS, Ian Harding, FRCS, Michael Thomas, FRCS (n)

8:52 – 9:01 AM Discussion

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PAPER #7A
9:02 – 9:08 AM Reasons for the Failed Shoulder Arthroplasty
Qi Yin, MD (n), Ashif Pardiwala, MD, Christo Sinopidis, MD, Simon P. Frostick, MD

PAPER #8A
9:09 – 9:15 AM Causes of Failure and Outcomes of Revision Shoulder Arthroplasty
Steven P. Kalandiak, MD, Michael A. Wirth, MD, Charles A. Rockwood, MD (n)

PAPER #9A
9:16 – 9:22 AM An Analysis of Failures in Primary Shoulder Arthroplasty: Predictable, Therefore Avoidable, Consequences
Simon M. Lambert, FRCS (n), Stefano Di Fabio, MD, J. Ian L. Bayley, FRCS

9:23 – 9:33 AM Discussion

PAPER #10A
9:34 – 9:40 AM Initial Experience and Complications With the Delta Reverse-Anatomy Total Shoulder Prosthesis
Adam J. Dalgleish, FRACS Ortho (n), Andrew Wallace, FRACS Ortho, Andrew Forester, FRCS Ortho

PAPER #11A
9:41 – 9:47 AM Two-Year Results After Exchange Shoulder Arthroplasty Using Inverse Implants
Alexander Katzer, PD Dr med (n), Klaus Seemann, Dr med, Joachim F. Loehr, Prof Dr med

PAPER #12A
9:48 – 9:54 AM Reverse Shoulder Prosthesis Improves Function Compared to Hemiarthroplasty
Mark A. Frankle, MD (a,b,c,d,e-Encore Medical Corporation), Mark Mighell, MD, Scott Devinney, DO, Matthew Vasey, BS, Derek Pupello, BS

PAPER #13A
9:55 – 10:01 AM The Reversed Delta Prosthesis as Option For Treatment of Painful Pseudoparalysis Due to Irreparable Rotator Cuff Deficiency
Patrick Steinmann, Med Student (n), Clement ML Werner, MD, Christian Gerber, MD

10:02 – 10:15 AM Discussion

10:16 – 10:44 AM Break

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### Session II: Basic Science/Biomechanics

**Moderators:** Anthony Miniaci, MD (*) and David Sonnabend, MD (n)

<table>
<thead>
<tr>
<th>Paper #</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>#14A</td>
<td>10:45 – 10:51 AM</td>
<td>Application of Tissue Engineering Technique for Rotator Cuff Repair Using the Novel Scaffold Material</td>
<td>Tadanao Funakoshi, MD (a-Japan Ministry of Education, Culture, Sports, Science &amp; Technology), Naoki Suenaga, MD, PhD, Tokifumi Majima, MD, PhD, Norimasa Iwasaki, MD, PhD, Shintaro Yamane, MD, Kazuo Harada, PhD, Michio Minami, MD, PhD, Akio Minami, Prof, MD, PhD, Shin-Ichiro Nishimura, Prof, PhD</td>
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<tr>
<td>#15A</td>
<td>10:52 – 10:58 AM</td>
<td>In Vitro Regeneration of the Rotator Cuff by Tissue Engineering</td>
<td>Naoki Suenaga, MD (n), Margaret M. Smith, PhD, Susan M. Smith, BSc, David H. Sonnabend, MD</td>
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<tr>
<td>#16A</td>
<td>10:59 – 11:05 AM</td>
<td>Anabolic Steroids Enhance the Remodeling and Mechanical Properties of Bioengineered Human Supraspinatus Tendons</td>
<td>Spero G. Karas, MD (n), Triantafillopoulos K. Ioannis, MD, Melissa Maloney, MS, Karl F. Bowman, BS, Albert J. Banes, PhD</td>
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<tr>
<td>#17A</td>
<td>11:06 – 11:16 AM</td>
<td>Discussion</td>
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<td>#18A</td>
<td>11:17 – 11:23 AM</td>
<td>Tendon Gene Therapy Modulates the Local Repair Environment in the Shoulder</td>
<td>David M. Dines, MD (c-Biomet), Daniel A. Grande, PhD, Pasquale Razzano, MS, James Mason, PhD</td>
</tr>
<tr>
<td>#19A</td>
<td>11:24 – 11:30 AM</td>
<td>TGFB-1 Localization at the Bone Tendon Healing Site in a Rat Rotator Cuff Injury and Repair Model</td>
<td>Leesa M. Galatz, MD (a-OREF), Stefan Rothermich, BS, Ava Mastny, Linda J. Sandell, PhD</td>
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<tr>
<td>#20A</td>
<td>11:31 – 11:37 AM</td>
<td>Expression of Growth Factors During the Healing Process of the Supraspinatus Tendon in Rabbits</td>
<td>Moto Kobayashi, MD (n), Eiji Itoi, MD, Hiroshi Minagawa, MD, Naohisa Miyakoshi, MD, Shu Takahashi, MD, Tatsushi Kamata, MD, Hidetomo Saito, MD, Koji Nozaka, MD</td>
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<td>11:45 – 11:59 PM</td>
<td>Discussion</td>
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</table>
12:00 – 12:59 PM  Lunch

Session III: Instability
Moderators: James E. Tibone, MD (e-Arthrex) and Richard Wallensten, MD (n)

PAPER #21A
1:00 – 1:06 PM  Traumatic Anterior Shoulder Dislocation in the Young Patient: What we do in the UK
Matt Freudmann, MB, Bch, MRCSEd (n), Stuart Hay, MD

PAPER #22A
1:07 – 1:13 PM  Outcome Following Open Bankart Repair for Anterior Shoulder Instability Using a Subjective-Patient-Based Shoulder Questionnaire (Oxford Instability Score)
John R. Williams, DM, Jonathan Loughead, MBBS (n)

1:14 – 1:23 PM  Discussion

PAPER #23A
1:24 – 1:30 PM  The Prevalence of Inappropriate Muscle Sequencing in Recurrent Shoulder Instability
Alex A. Malone, MRCS (n), Anju Jaggi, BSc (Hons), Simon M. Lambert, FRCS, Paul C. Calvert, FRCS, J. Ian L. Bayley, FRCS

PAPER #24A
1:31 – 1:37 PM  Expanded Assessment in Multidirectional Instability: An Aid in Planning Effective Rehabilitation?
Jo C. Gibson, GradDipPhy (n), Vanessa S. Rayner BapSci, Simon Frostick, MA, DM, FRCS

PAPER #25A
1:38 – 1:44 PM  Involuntary Positional Instability: When Rehabilitation Fails, is Botulinum Toxin the Solution?
Jo C. Gibson, GradDipPhy, Vanessa S. Rayner, BapSci, Christos Sinopidis, MD, Simon Frostick, MA, DM, FRCS (n)

1:45 – 2:01 PM  Discussion

PAPER #26A
2:02 – 2:08 PM  Immobilization in External Rotation after Shoulder Dislocation: An Interim Report of an Ongoing Trial
Eiji Itoi, MD (n), Yuji Hatakeyama, MD, Takeshi Sato, MD, Tadato Kido, MD, Hiroshi Minagawa, MD, Ikuko Wakabayashi, MD, Moto Kobayashi, MD, Hidetomo Saito, MD, Tatsushi Kamata, MD
PAPER #27A
2:09 – 2:15 PM  Assessment of Proprioceptive Function and Comparison of Active-Passive Proprioception Test Methods in Patients with Traumatic Anterior Instability of the Shoulder  
*Mustafa Ozkan, Ass Prof (n), Rafet Idin, MD, Selmin Gulbahar, MD, Kivanc Muratli, Gurdal Ozkes*

PAPER #28A
2:16 – 2:22 PM  Does Weber's Humerus Rotation Osteotomy in the Treatment of Anterior Instability Induce Late Osteoarthritis of the Glenohumeral Joint?  
*Matthias P. Flury, MD (n), Patrick Holzmann, MD, Hans-Kaspar Schweyzer, MD, Beat R. Simmen, Professor, MD*

2:23 – 2:32 PM  Discussion

PAPER #29A
2:33 – 2:39 PM  Segmental Humeral Head Allografts for Recurrent Anterior Instability of the Shoulder with Large Hill-Sachs Defects: A Two to Eight Year Follow-Up  
*Anthony Miniaci, MD (n), Chris Hand, MD, Greg Berlet, MD*

PAPER #30A
2:40 – 2:46 PM  Achilles Tendon Allograft Augmentation in Revision Surgery for Glenohumeral Instability  
*George M. McCluskey III, MD (n), Bryce W. Gaunt, PT, SCS, Brian S. McCluskey, PhD*

PAPER #31A
*Robert A. Arciero, MD, Craig R. Bottoni, MD, Thomas M. DeBerardino, MD, Dean C. Taylor, MD (n)*

PAPER #32A
2:54 – 3:00 PM  Muscle Strength After Anterior Shoulder Stabilization-Arthroscopic vs Open Bankart Repair  
*Yong Girl Rhee, MD (n), Chan Teak Lim, MD*

3:01 – 3:15 PM  Discussion

3:16 – 3:44 PM  Break

Session IV:  Outcomes
Moderators:  Ofer Levy, MD (n) and Robin R. Richards, MD (n)

PAPER #33A
3:45 – 3:51 PM  A Comparison of Functional Assessment Scores in Subacromial Impingement of the Shoulder  
*John R. Williams, DM, David Cloke, FRCS (n)*

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PAPER #34A  
3:52 – 3:58 PM  
•The Reliability and Reproducibility of Shoulder Abduction Strength Measurement  
  
  W. Jaap Willems, MD, PhD (e-Smith & Nephew), Floor van Eijk, MD,  
  Daniel Saris, MD, PhD

PAPER #35A  
3:59 – 4:05 PM  
Variables Affecting the Measurement of Strength Component in Constant-Murley Scoring System  
  
  Amit Bhargava, FRCS (n), B. Venkateshwaran, FRCS, T. Even, Msc,  
  Steven Copeland, FRCS, Ofer Levy, MD

4:06 – 4:15 PM  
Discussion

PAPER #36A  
4:16 – 4:22 PM  
Long-Term Results After Surgery for Snapping Scapula: A Comparison Between Surgical Results and "Natural Course"  
  
  Martti Vastamaki, MD (n)

PAPER #37A  
4:23 – 4:29 PM  
Scapulothoracic Fusion: A Mid-Term Follow-Up  
  
  Sridhar Musthyala, FRCS (n), A. Ebied, Mch, C. Sinopidis, MD, Q. Yin, MD, S.P. Frostick, FRCS

PAPER #38A  
4:30 – 4:36 PM  
Eden Lange Muscle Transfer: A Mid-Term Follow-Up  
  
  A. Ebied, Mch (n), S. Musthyala, FRCS, C. Sinopidis, MD, Q. Yin, MD, S.P. Frostick, FRCS

PAPER #39A  
4:37 – 4:43 PM  
Over Utilization of Shoulder MRI (ShMRI) as a Diagnostic Screening Tool  
  
  Michael P. Bradley, MD (n), Glenn Tung, MD, Andrew Green, MD

4:44 – 4:59 PM  
Discussion

5:00 PM  
Adjourn

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| 8:00 – 8:03 AM | Welcome Speech | Robert J. Neviaser, MD

**Session I: Clavicle/A-C Joint**

**Moderators:** Abraham J. Lambrechts, MD (n) and Michael J. Sandow, MD (n)

**PAPER #1B**
8:04 – 8:10 AM Acromioclavicular Joint Capsular Anatomy
*Gregory P. Nicholson, MD (n), Augustus D. Mazzocca, MD, Anthony A. Romeo, MD*

**PAPER #2B**
8:11 – 8:17 AM Diagnostic Value of Physical Tests in Acromioclavicular Joint Arthritis
*Harpreet S. Gill, MD (n), Tae Kyun Kim, MD, PhD, Hyung Bin Park, MD, Atushi Yokota, MD, PhD, Edward G McFarland, MD, Efthathios Chronopoulos, MD*

**PAPER #3B**
8:18 – 8:24 AM Tests for Acromioclavicular Joint Pain and Their Diagnostic Value
*George A.C. Murrell, MBBS, Dphil (n), Judie Walton, BSc, PhD, Sanjeev Mahajan, MBBS, MS, Anastasios Paxinos, MBBS, DDR, FRACR, Jeanette Marshall, Carl Bryant, MBBS, DDR, FRACR, Ron Shnier, MBBS, FRACP, Richard Quinn, MBBS, FRACR*

8:25 – 8:34 AM Discussion

**PAPER #4B**
8:35 – 8:41 AM Functional Outcomes After Total Claviculectomy
*Sumant G. Krishnan, MD, Wayne Z. Burkhead, MD (n), Mike Rimlawi, DO*

**PAPER #5B**
8:42 – 8:48 AM Anterior Inferior Reconstruction Plate on Acute Midshaft Clavicle Fracture
*Moonsup Lim, MD (n), Jaedo Kang, MD, Kwangyul Kim, MD, Hyungcheon Kim, MD, Jinhyeong Kim, MD, Shingweon Choi, MD*

**PAPER #6B**
8:49 – 8:55 AM Evaluation of Sternoclavicular Joint Disorders
*Arvind Rawal, MS, FRCS, Vrinda Bihari Somanchi, MS (n), Andrew Dunn, Pidikiti Prasad, Chris Sinopidis, David A. Ritchie, Peter Brownson, Simon P. Frostick, DM, FRCS*

**PAPER #7B**
8:56 – 9:02 AM Stabilization Procedure for Sternoclavicular Joint Instability
*Zain Ul Abiddin, MS, FRCS (n), Chris Sinopidis, MD, Yin Qi, MD, Prof Simon P. Frostick, MA, DM*
9:03 – 9:14 AM Discussion

9:15 – 10:15 AM Symposium – Labral Lesions without Dislocation
Moderator: Stephen J. O’Brien, MD, PLLC (n)

9:15 – 9:35 AM Pathomechanics of Labral Lesions
Stephen J. O’Brien, MD, PLLC (n)

9:35 – 9:55 AM The Case for Treatment of Labral Lesions
Stephen Snyder, MD (a,b,c-D.J. Ortho, Linvatec, S&N Dyonics, Arthrex, e-Linvatec)

9:55 – 10:15 AM Are Labral Lesions a Cause of Shoulder Pain?
Bertram Zarins, MD (n)

10:16 – 10:44 AM Break

Session II: Rotator Cuff
Moderators: Simon Bell, MD (n) and Osvandre Lech, MD (n)

PAPER #8B
10:45 – 10:51 AM Patient Expectations Correlate with Pain, Function, and General Health Following Rotator Cuff Repair
Ralph Frank Henn, BS, Lana Kang, MD (n), Robert Z. Tashjian, MD, Andrew Green, MD

PAPER #9B
10:52 – 10:58 AM Workers Compensation Patients Have Worse Pain, Function, and General Health After Rotator Cuff Repair
Ralph Frank Henn III, BS (n), Lana Kang, MD, Robert Z. Tashjian, MD, Andrew Green, MD

PAPER #10B
10:59 – 11:05 AM Medical Comorbidities Affect Pain, Function, and General Health Status Associated with Chronic Rotator Cuff Tears
Robert Z. Tashjian, MD (n), Ralph F. Henn, BS, Lana Kang, MD, Andrew Green, MD

11:06 – 11:16 AM Discussion

PAPER #11B
11:17 – 11:23 AM Postoperative Cuff Integrity After Arthroscopic Full-Thickness Rotator Cuff Repair: Single-Row Versus Dual-Row Fixation
Hiroyuki Sugaya, MD (n), Joji Moriishi, MD, Akihiro Tsuchiya, MD

PAPER #12B
11:24 – 11:30 AM Rotator Cuff Repair: The Effect of Double-Row Fixation Versus Single-Row Fixation on Three-Dimensional Repair Site
Steven W. Meier, MD (a,b-Mitek), Jeffrey D. Meier, DO, Andrew S. Levy, MD
PAPER #13B  
11:31 – 11:37 AM  Mini-Open Assisted Arthroscopic Rotator Cuff Repair in Patients with Large and Massive Tears Using a Double Row Fixation Technique  
George M. McCluskey, III, MD, Howard Routman, DO (n), Bryce W. Gaunt, PT, SCS, Brian S. McCluskey, PhD

PAPER #14B  
11:38 – 11:44 AM  Cuff Integrity Following Arthroscopic Versus Open Rotator Cuff Repair: A Prospective Study  
Julie Bishop, MD (n), Ian Lo, MD, Steven Klepps, MD, Justin Bird, MD, James Gladstone, MD, Evan Flatow, MD

11:45 – 11:59 PM  Discussion

12:00 – 12:59 PM  Lunch

Session III: Elbow  
Moderators: William H. Seitz, MD (n) and Martti Vastamaki, MD (n)

PAPER #15B  
1:00 – 1:06 PM  Arthroscopic Assisted Percutaneous Radial Head Osteosynthesis  
Matthias Lannoo, MD, Stefaan J.B. Nijs, MD, Paul L.O. Broos, MD, PhD, Koen Vindevoghel, MD (n)

Paper #16B moved to Monday, May 3 from 8:14 – 8:20 AM, directly after Paper #41A in Constitution Ballroom  
PAPER #16B: Radial Head Fractures in Adults: Analysis of 372 Fractures  
Bernard F. Morrey, MD, Roger P. van Riet, MD (n), Francis Van Glabbeek, MD, Shawn W. O’Driscoll, MD, PhD

PAPER #17B  
1:07 – 1:13 PM  Radiocapitellar Synovitis Secondary to Recalcitrant Lateral Epicondylitis  
William H. Seitz, Jr, MD, Hideaki Matsuoka, MD (n)

1:14 – 1:30 PM  Discussion

PAPER #18B  
1:31 – 1:37 PM  Extracorporeal Shockwave Therapy for Lateral Epicondylitis  
Mark Ross, FRACS, Phillip Duke, FRACS, David Gilpin, FRACS, Ken Cutbush, FRACS (n), Christopher Roberts, FRCS

PAPER #19B  
1:38 – 1:44 PM  Treatment of Acute Traumatic Elbow Instability Without Medial Collateral Ligament Repair  
David Ring, MD, Chris Forthman, MD (n)

PAPER #20B  
1:45 – 1:51 PM  The Effect of Examination Under Anesthesia on the Stiff Elbow Following Surgical Release
Bernard F. Morrey, MD, Arash Araghi, DO (n), Andrea Celli, MD, Robert A. Adams, MA, RPA

1:52 – 2:14 PM Discussion

2:15 – 3:15 PM Symposium – Advances in Shoulder and Elbow Arthroscopy
Moderator: David W. Altchek, MD (n)

2:15 – 2:30 PM Advances in the Shoulder (Non-Athlete)
Daniel D. Buss, MD (e-Zimmer)

2:30 – 2:45 PM Advances in the Shoulder (For the Athlete)
Russell F. Warren, MD (a-Smith & Nephew, c-Biomet, d-Opus)

2:45 – 3:05 PM Advances in the Elbow (Non-Athlete)
Ian A. Trail, MD, FRCS (n)

3:05 – 3:15 PM Advances in the Elbow (For the Athlete)
David Altchek, MD (n)

3:16 – 3:44 PM Break

Session IV: Shoulder Fractures
Moderators: David M. Dines, MD (c-Biomet, Inc.) and Kenji Takagishi, MD, PhD (n)

PAPER #21B
3:45 – 3:51 PM Proximal Humeral Fractures: Fracture Patterns and Classifications
Iain A.R. MacLeod, MBBS, Roger Emery, FRCS (n), Adam Dalglish, FRCS, Addie Majed, MBBS

PAPER #22B
3:52 – 3:58 PM Results of the Surgical Treatment of Epiphyseal Fractures of the Humeral Head
Alberto N. Miyazaki, MD (n), Sergio L. Checchia, MD, Pedro S. Doneux, MD, Marcelo Fregoneze, MD, Luciana A. Silva, MD, Fernando J. Pedro, MD, Jose Antonio A. Alan, MD

PAPER #23B
3:59 – 4:05 PM Surgical Treatment of Fractures of the Anatomical Neck of the Humerus
Pedro S. Doneux, MD (n), Sergio L. Checchia, MD, Alberto N. Miyazaki, MD, Marcelo Fregoneze, MD, Luciana A. Silva, MD, Alexandre Santa Cruz, MD, Rafael Ruaro, MD

4:06 – 4:15 PM Discussion

PAPER #24B
4:16 – 4:22 PM Open Reduction and Internal Fixation for Three and Four-Part Fractures of the Proximal Humerus by Intramedullary Pin and Wire
Yoshiyuki Nakagawa, MD (n), Manabu Oshima, MD, Takamitsu Mondori, MD

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PAPER #25B
4:23 – 4:29 PM
•Irregular Multiple Fin Shapes Best Stabilize Reconstructed Tuberosities in Four-Part Proximal Humerus Fractures
  Mark A. Mighell, MD (a,b,c,d,e-Encore Medical Corporation), Avi Kumar, MD, William Lee III, PhD, Leo Ondrovic, PhD, Tim Ganey, PhD, Sergio Gutierrez, BS, Matthew Vasey, BS

PAPER #26B
4:30 – 4:36 PM
Shoulder Arthroplasty for Proximal Humeral Fracture: Results of Anatomical Reconstruction and Stable Tuberosity Osteosynthesis
  Sumant G. Krishnan, MD (e-Zimmer Austin), Wayne Z. Burkhead, MD

PAPER #27B
4:37 – 4:43 PM
Effects of Different Suture Techniques on Reattachment of the Tuberosities of the Humerus Following Hemiarthroplasty for 4-Part Fracture
  Rashid B. Abu-Rajab, MBChB, MRCS (a-Zimmer), I.G. Kelly, MD, A.C. Nicol, B. Stansfield

4:44 – 4:59 PM
Discussion

5:00 PM
Adjourn

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DAY TWO      MONDAY, MAY 3, 2004
CONCURRENT SESSION 1   CONSTITUTION BALLROOM

Session V: Elbow
Moderators: Michael D. McKee, MD (e-Zimmer, Inc.) and David Ring, MD (n)

PAPER #40A
8:00 – 8:06 AM  Arthroscopic Osteocapsular Arthroplasty for Treatment of Primary Osteoarthritis of the Elbow
Luther H. Wolff, MD, Scott P. Steinmann, MD, PhD (n)

PAPER #41A
8:07 – 8:13 AM  Hinged Elbow Fixation for Severe Elbow Contracture
David Ring, MD, Robert N. Hotchkiss, MD, Daniel Guss, BS (n), Jesse B. Jupiter, MD

PAPER #16B
8:14 – 8:20 AM  Radial Head Fractures in Adults: Analysis of 372 Fractures
Bernard F. Morrey, MD, Roger P. van Riet, MD (n), Francis Van Glabbeek, MD, Shawn W. O’Driscoll, MD, PhD

8:21 – 8:30 AM  Discussion

PAPER #42A
8:31 – 8:37 AM  Functional Outcomes and General Health Status After Ulnohumeral Arthroplasty for Primary Degenerative Elbow Arthritis
Andrew Green, MD (n), Robert Tashjian, MD, Mark Ritter, MD, Jennifer Wolff, MD, Arnold P.C. Weiss, MD

PAPER #43A
8:38 – 8:44 AM  Triceps Insufficiency Following Total Elbow Arthroplasty
Bernard F. Morrey, MD, Andrea Celli, MD (n), Arash Araghi, DO, Robert A. Adams, MA, RPA

PAPER #44A
8:45 – 8:51 AM  Reconstructive Options for Revision Total Elbow Arthroplasty with Bone Deficiency
Bernard F. Morrey, MD (c-Zimmer)

8:51 – 9:11 AM  Discussion

9:15 – 10:15 AM  Symposium: Codman Lecture (Independence Ballroom)
“The Origin of the Shoulder- A Fairytale Based on Fact”
David Sonnabend, MD
Moderators: Robert H. Cofield, MD and Robert J. Neviaser, MD

10:16 – 10:44 AM  Break

Session VI: Basic Science/Biomechanics
Moderators: Ralph B. Blasier, MD (n) and Richard E. Debski, PhD (n)
**PAPER #45A**  
10:45 – 10:51 AM  
Immunohistochemical Studies on Atrophy of the Rotator Cuff Muscles  
*Frank Erol Gohlke, Prof MD (a-German Ministry for Technology & Science), Michael Jensen, MD, Christine Schneider, PhD, Theodor Boehm, MD, Stefan Gattenloehner, MD*

**PAPER #46A**  
10:52 – 10:58 AM  
Fatty Muscular Changes After Tendon Tear Are Not Degenerative but Caused by Altered Muscle Architecture  
*Dominik C. Meyer, MD (n), Hans Hoppeler, Prof, Brigitte von Rechenberg, DVM, Christian Gerber, Prof*

**PAPER #47A**  
10:59 – 11:16 AM  
Discussion

**PAPER #48A**  
11:17 – 11:23 AM  
Reformation of the Enthesis Extracellular Matrix After Implantation of the Supraspinatus Tendon into Bone  
*Yoichi Koike, MD (n), Guy Trudel, MD, MSc, FRCPC, Hans K. Uthoff, MD, FRCSC*

**PAPER #49A**  
11:24 – 11:30 AM  
Calcification or Bone Formation: Histologic Features of Calcifying Tendonitis of the Shoulder  
*Christoph Bartl, MD (n), Reiner Bartl, PHD, MD, Peter Habermeyer, PhD, MD*

**Session VII: Shoulder Arthroplasty**

**Moderators:**  
Stephen A. Copeland, FRCS (c-Biomet) and John M. Fenlin Jr., MD (e-Stryker)

**PAPER #51A**  
1:00 – 1:06 PM  
Comparison of Micromovement of Pegged Versus Keeled Glenoid Components Using RSA  
*David Nutall, PhD (a-DePuy International), Ian A. Trail, FRCS, John F. Haines, FRCS*

**PAPER #52A**  
1:07 – 1:13 PM  
Survival of Uncemented Shoulder Arthroplasty is Improved with Hydroxy-Apatite Coating of the Glenoid Baseplate  
*Nahum Rosenberg, MD, In-Ho Jeon, MD, Lars Neumann, FRCS (Ed) (n), William Angus Wallace, FRCS, FRCSEd (Orth)*
PAPER #53A
1:14 – 1:20 PM Glenoid Stability After Shoulder Arthroplasty: Influence of Glenohumeral Conformity
Alain Farron, MD, Alexandre Terrier, PhD (n), Philippe Buechler, PhD

1:21 – 1:30 PM Discussion

PAPER #54A
1:31 – 1:37 PM Radiographic and Computed Tomographic (CT) Analysis of Cemented Pegged Polyethylene Glenoids in Total Shoulder Replacement
Edward H. Yian, MD, Clement Werner, MD (e-Zimmer), Richard Nyffeler, MD, Christian Pfirrmann, MD, Arun Ramappa, MD, Christian Gerber, MD (e-Zimmer)

PAPER #55A
1:38 – 1:44 PM Incidence of Immediate Radiolucent Glenoid Lines in Patients Undergoing Total Shoulder Replacement
Edward Lee, MD (n), Steven Klepps, MD, Alexis Chiang, MD, Suzanne Miller, MD, Chun Yan Jiang, MD, Yassamin Hazrati, MD, Evan Flatow, MD

1:45 – 1:54 PM Discussion

PAPER #56A
1:55 – 2:01 PM The Effect of Humeral Component Anteversion on Shoulder Stability with Glenoid Component Retroversion
Edwin E. Spencer Jr, MD (a-DePuy), Antonio Valdevit, MS, Helen Kambic, PhD, John J. Brems, MD, Joseph P. Iannotti, MD PhD

PAPER #57A
2:02 – 2:08 PM Loosening of the Prosthetic Glenoid: Influence of the Subscapularis Stiffness and the Retroversion of the Glenoid
Alain Farron, MD (n), Alexandre Terrier, PhD, Phillippe Buechler, PhD

PAPER #58A
2:09 – 2:15 PM Microfracture for the Treatment of Full-Thickness Articular Cartilage Lesions of the Shoulder: A Prospective Study.
Rainer Siebold, MD (n), Sven Lichtenberg, MD, Peter Habermeyer, MD

2:16 – 2:25 PM Discussion

PAPER #59A
2:26 – 2:32 PM Polyethylene Glenoid Surface Geometry is Changed by In Vivo Use
Jon P. Braman, MD (n), Alexis Falicov, MD, Frederick A. Matsen III, MD
As of 04/26/04

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PAPER #60A
2:33 – 2:39 PM  Immediate Postoperative Pain Experienced by Patients Following Hemi and Total Shoulder Arthroplasty
Scott Isenhath, BS, Alexis Falicov, MD, Kevin L. Smith, MD (n), Frederick A. Matsen III, MD

PAPER #61A
2:40 – 2:46 PM  Complications of Total Shoulder Arthroplasty: Is it getting lower?
Patrick Y.K. Chin, MD, FRCS(C), John W. Sperling, MD, Adam Smith, MD (c-Smith & Nephew), Robert H. Cofield, MD

PAPER #62A
2:47 – 2:53 PM  Patient Self-Assessment as an Indicator of Glenoid Failure After Shoulder Arthroplasty
Brian P. Buckingham, BS (*), I. Moby Parsons, MD, Barry Campbell, BS, Robert M. Titelman, MD, Kevin L. Smith, MD, Frederick A. Matsen III, MD

2:54 – 3:15 PM  Discussion

3:16 – 3:44 PM  Break

Session VIII: Shoulder Fractures
Moderators: Ralph Hertel, MD (n) and Tom R. Norris, MD (e-Tornier)

PAPER #63A
3:45 – 3:51 PM  Treatment of Midshaft Clavicle Nonunions with Plate Fixation and Intercalary Bone Grafts
George M. McCluskey, III, MD, Grant L. Jones, MD (a,b,e-Zimmer)

PAPER #64A
3:52 – 3:58 PM  Functional Outcome After United Mid-Shaft Clavicle Fractures, and After Surgical Correction for Symptomatic Non-Union & Mal-Union
Nahum Rosenberg, MD (n), Alhasan Gibril, MSc(Sp Med), Lars Neumann, FRCSEd, W. Angus Wallace, FRCSEd(Orth)

3:59 – 4:08 PM  Discussion

PAPER #65A
4:09 – 4:15 PM  Mid-Term Results of Planttan Plate - Proximal Humerus Fracture Fixator Plate
Bhuvaneshwar Machani, MRCS (n), C. Sinopidis, MBChb, P. Papadopoulos, MBChb, P. Brownson, FRCS(orth), J. Gibson, K.. P. Meda, FRCS, S. P. Frostick, FRCS(orth)

PAPER #66A
4:16 – 4:22 PM  Locking Compression Plated for Delayed Unions and Nonunions of the Diaphyseal Humerus
David Ring, MD, Peter Kloen, MD, John Kadzielski, BA, David Helfet, MD, Jesse B. Jupiter, MD, Jason Tavakolian, MD (b-AO Foundation)
PAPER #67A
4:23 – 4:29 PM  •Interlocking Intramedullary Nailing for Nonunion of Proximal Humerus with the Straight Nail System
   Naoki Suenaga, MD, Akio Minami, MD, Naomi Oizumi, MD (n),
   Shintaro Yamane, MD

4:30 – 4:59 PM  Discussion

5:00 PM  Adjourn
### Session V: Impingement

**Moderators:** Peter Habermeyer, MD (n) and Christopher M. Jobe, MD (a,c,d,e-Wright)

**PAPER #28B**  
8:00 – 8:06 AM  
**OS Acromiale: 1. Missed Radiological Signs, and 2. Surgical Outcomes of Excision or Fixation**  
Stephen J.L. Roche, MD, Abraham J. Lambrechts, MD, Basil C. Vrettos, MD, Theo G. Rosch, MD (n), Andre Morrish, MD

**PAPER #29B**  
8:07 – 8:13 AM  
**Wide Lateral Extension of the Acromion is Associated with Rotator Cuff Tearing**  
Richard W. Nyffeler, MD (n), Clement M.L. Werner, MD, Christian Gerber, MD

**PAPER #30B**  
8:14 – 8:20 AM  
**Comparison of Outcome in Impingement Syndrome with and Without Stiff Shoulder**  
Jin-Young Park, MD, Ki-Hyuk Moon, MD (n), Moon-Jib Yoo, MD

8:21 – 8:30 AM  
**Discussion**

**PAPER #31B**  
8:31 – 8:37 AM  
**Entrapment of the Long Head of the Biceps: the “Hourglass Biceps” A Cause of Painful and Locked Shoulder**  
Pascal Boileau, MD, Philip Michael Ahrens, MD (n), Sumant G. Krishnan, MD

**PAPER #32B**  
8:38 – 8:44 AM  
**Failed Acromioplasty: the Unappreciated Etiologic Role of Biceps Tendinitis**  
Robert J. Neviaser, MD (n), Robin West, MD, Melissa Koenig, MD

**PAPER #33B**  
8:45 – 8:51 AM  
**Arthroscopic Tenotomy of the Long Head of the Biceps in the Treatment of Rotator Cuff Tears**  
Gilles Walch, MD (n), T. Bradley Edwards, MD, Laurent Nove-Josserand, MD, Aziz Boualahia, MD, Lionel Neyton, MD

**PAPER #34B**  
8:52 – 8:58 AM  
**Functional Symptomatology Following Biceps Tenodesis Compared to Biceps Tenotomy or Rupture**  
Melissa Koenig, MD (n), Robin West, MD, Robert J. Neviaser, MD

8:59 – 9:14 AM  
**Discussion**
9:15 – 10:15 AM Symposium: Codman Lecture
“The Origin of the Shoulder- A Fairytale Based on Fact”
David Sonnabend, MD

Moderators: Robert H. Cofield, MD and Robert J. Neviaser, MD

10:16 – 10:44 AM Break

Session VI: Clavicle/A-C/S-C
Moderators: Sergio L. Checchia, MD (n) and Charles A. Rockwood Jr., MD (c-DePuy)

PAPER #35B
10:45 – 10:51 AM Clavicular Hook Plate for Lateral End Fractures
Prasad Meda, FRCS (n), Bhuvaneswar Machani, Chris Sinopidis, Peter Brownson, Ian Braithwaite, Simon Frostick

PAPER #36B
10:52 – 10:58 AM Complications After Open Distal Clavicle Excisions (DCE)
Efstatios Chronopoulos, MD, Tae Kyun Kim, MD, PhD, Hyung Bin Park, MD, Atushi Yokota, MD, PhD, Edward G. McFarland, MD (n)

PAPER #37B
Romulo Brasil Filho, MD (n), Fabiano Reboucas, MD, Eduardo Meniti, MD, Cantidio Filardi, MD

11:06 – 11:16 AM Discussion

PAPER #38B
11:17 – 11:23 AM A Study of the Coracoclavicular Distance on an Acromioclavicular Separation
Koutaro Shinmura, MD (n), Katsumi Takase, MD

PAPER #39B
11:24 – 11:30 AM Biomechanical and Radiographic Analysis of Partial Coracoclavicular Ligament Injuries
Augustus D. Mazzocca, MD (n), Stephen A. Santangelo, BS, Clifford G. Rios, MSIII, Mark L. Dumonski, MSIII, Kevin P. Shea, MD, Carl W. Nissen, MD, Anthony A. Romeo, MD, Robert A. Arciero, MD

PAPER #40B
11:31 – 11:37 AM Coracoclavicular Sutures for Acromioclavicular Dislocations: A Two Mini-Open Approach
Michael Simoni, MD (n)

PAPER #41B
11:38 – 11:44 AM The Anatomy of the Pectoralis Minor Tendon, and its Use in Acromioclavicular Joint Reconstruction
Anand M. Murthi, MD (n), Amir Moinfar, MD
11:45 – 11:59 PM Discussion

12:00 – 12:59 PM Lunch

Session VII: Miscellaneous
Moderators: Roger Emery, MD (n) and Thomas J. Neviaser, MD (n)

PAPER #42B
1:00 – 1:06 PM Immunolocalization of Cytokines and Histologic Changes in Rotator Cuff Disease and Secondary Frozen Shoulder Chang-Hyuk Choi, MD (n), Min-Chul Shin, MD, So-Yoon Park, MD, Sang-Kyung Kim, MD

PAPER #43B
1:07 – 1:13 PM Intra-Articular Lesions in Primary Frozen Shoulder Following Manipulation During General Anesthesia Markus Loew, Professor (n), Thomas Oliver Heichel, MD, Burkhard Lehner, MD

PAPER #44B
1:14 – 1:20 PM Arthroscopic Capsular Release for Resistant Post Traumatic Shoulder Stiffness Balachandran Venkateswaran FRCS Orth (n), Len Funk, FRCS Orth, Ofer Levy, MD, MCh Orth, Stephen A. Copeland, FRCS

1:21 – 1:30 PM Discussion

PAPER #45B
1:31 – 1:37 PM Surgical Treatment of Spinoglenoid Notch Ganglion Cysts of the Shoulder Amy K. Franta, MD (n), John F. Orwin, MD

PAPER #46B
1:38 – 1:44 PM Fifty Cases of Peripheral Nerve Palsy in the Shoulder Region Due to Unknown Causes Hiroyasu Ikegami, MD, PhD (n), Kiyohisa Ogawa, MD, PhD, Atsushi Yoshida, MD, PhD, Michimasa Ui, MD, Noriaki Nakamichi, MD, Takahiko Mikasa, MD

PAPER #47B
1:45 – 1:51 PM A One Stage Shoulder Arthrodesis and Biceps Tendon Transfer for Upper Brachial Plexus Injuries Mark Andrew Cvitanich, MBChB (n), Micheal Solomons, FCS Orth, Steven Roche, FCS Orth
PAPER #48B
1:52 – 1:58 PM  Ultrasonographic Measurement of the Humeral Retroversion in Elementary School Baseball Players
Nobuyuki Yamamoto, MD (n), Eiji Itoi, MD, PhD, Hiroshi Minagawa, MD, PhD, Masakazu Urayama, MD, PhD, Hidetomo Saito, MD, Nobutoshi Seki, MD, Takenobu Iwase, MD, PhD, Shinji Kashiwaguchi, MD, PhD, Tetsuya Matsuura, MD

1:59 – 2:14 PM  Discussion

2:15 – 3:15 PM  Symposium – Tennis Elbow
Moderator: Bernard Morrey, MD (n)

2:15 – 2:35 PM  Basic Science of Elbow Tendinopathy
William Regan, MD (n)

2:35 – 2:55 PM  Surgical Options for Elbow Tendinopathy
Felix Savoie, MD (n)

Bernard Morrey, MD (n)

3:16 – 3:44 PM  Break

Session VIII:  Rotator Cuff
Moderators: Pascal Boileau, MD (n) and Russell F. Warren, MD (a-Smith & Nephew, d-Opus)

PAPER #49B
3:45 – 3:51 PM  Anatomical Study of the Latissimus Dorsi as it Pertains to Tendon Transfers for Massive Irreparable Tears of the Rotator Cuff
Anthony Miniaci, MD, Moreno Morelli, MD (n), Jun Nagamori, MD

PAPER #50B
3:52 – 3:58 PM  The Modified L’Episcopo Procedure to Reconstruct Massive Rotator Cuff Tears
Peter Habermeyer, PhD, Petra Magusch, MD (n), Sven Lichtenberg, MD

PAPER #51B
3:59 – 4:05 PM  Is Simply a Teres Major Tendon Transfer for Primary Reconstruction of a Massive Rotator Cuff Tear Sufficient?
Michiel J. van de Sande, MD, PhD-student (n), Dennis J. Magermans, MSc, PhD, Juriaan H. de Groot, Ir, PhD, Piet M. Rozing, MD, PhD

4:06 – 4:15 PM  Discussion
PAPER #52B
4:16 – 4:22 PM  The Demographics and Morphology of Rotator Cuff Disease: A Comparison of Asymptomatic and Symptomatic Shoulders
Ken Yamaguchi, MD (*), Keith Baumgarten, MD, Gerlach J. David, MD, Konstantinos Ditsios, MD, Sharlene A. Teefey, MD, William D. Middleton, MD, Charles F. Hildebolt, PhD, Leesa M. Galatz, MD

PAPER #53B
4:23 – 4:29 PM  Ultrasonic Evaluation of Dynamic Shoulder Elevation for Diagnosing Supraspinatus Pathology
Dean W. Ziegler, MD (n), Scott Primack, DO

PAPER #54B
4:30 – 4:36 PM  Factors Influencing the Outcome of Conservative Treatment for Partial Thickness Rotator Cuff Tears
Hiroshi Hashiguchi, MD (n), Hiromoto Ito, MD, Yuko Banzai, MD, Gen Horiguchi, MD

4:37 – 4:59 PM  Discussion

5:00 PM  Adjourn

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DAY THREE      TUESDAY, MAY 4, 2004
CONCURRENT SESSION 1       CONSTITUTION BALLROOM

Session IX:    Shoulder Arthroplasty
Moderators:    Ian G. Kelly, MD (a,b-Zimmer) and John Sperling, MD (n)

PAPER #68A
8:00 – 8:06 AM  •One-Stage Arthroplasty of the Ipsilateral Shoulder and Elbow
Basil Christopher Vrettos, MBChB, FRCS, FCS(SA) (a-Biomet),
William Angus Wallace, FRCS, Lars Neumann, FRCS

PAPER #69A
8:07 – 8:13 AM  Ipsilateral Shoulder and Elbow Replacements: Assessing the Risk of Periprosthetic Fracture
Derek Plausinis, MASc, MD, FRCSC, Carolyn Greaves, BSc, Thomas R. Oxland, PhD, William D. Regan, MD, FRCSC (n)

PAPER #70A
8:14 – 8:20 AM  Periprosthetic Humeral Fractures After Shoulder Arthroplasty
John W. Sperling, MD, Sanjay Kumar, MD, George J. Haidukewych, MD, Robert H. Cofield, MD (n)

8:21 – 8:30 AM  Discussion

PAPER #71A
8:31 – 8:37 AM  Long Term Results of a Modular Total Shoulder Arthroplasty for the Treatment of Primary Osteoarthritis of the Shoulder
David A. Abrutyn, MD (n), David M. Dines, MD

PAPER #72A
8:38 – 8:44 AM  The Short Stemmed ESKA Total Shoulder System: The Smaller the Better?
Michiel A.J. van de Sande, MD, PhD-student, Jochem Nagels, MD, (b-Endocare Netherlands), Piet M. Rozing, MD, PhD

PAPER #73A
8:45 – 8:51 AM  Do Second Generation Designs Improve Results of Total Shoulder Arthroplasty?
John W. Sperling, MD (n), Robert H. Cofield, MD, Jeff Harrington, MS, Tanya Hoskin, MS, Joe Mileti, MD

8:52 – 9:01 AM  Discussion

PAPER #74A
9:02 – 9:08 AM  The Fate of Revision Shoulder Arthroplasty with Positive Intraoperative Cultures
Mark S. Topolski, MD, Patrick Y.K. Chin, MD, FRCS(C) (n), John W. Sperling, MD, Robert H. Cofield, MD

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PAPER #75A
9:09 – 9:15 AM  Staged Exchange Arthroplasty for Shoulder Sepsis
William H. Seitz, Jr, MD (n), Harvey Damacen, MD

9:16– 9:26 AM  Discussion

PAPER #76A
Edward H. Yian, MD (n), Clement Werner, MD, Christian Pfiermann, MD, Christian Gerber, MD

PAPER #77A
9:34 – 9:40 AM  Ultrasound Evaluation of the Subscapularis Tendon After Total Shoulder Arthroplasty
April Armstrong, MD (n), Cyrus Lashgari, MD, Jamie Menendez, RN, Sharlene A. Teefey, MD, Leesa M. Galatz, MD, Ken Yamaguchi, MD

PAPER #78A
9:41 – 9:47 AM  The Documentation of Subscapularis Strength, Integrity and Outcome Following Shoulder Arthroplasty
Dean W. Ziegler, MD (a,e-DePuy), Robert Manz, MD, Sarah Beykirch

PAPER #79A
9:48 – 9:54 AM  Shoulder Arthroplasty for Glenohumeral Arthritis After Instability Surgery
In-Ho Jeon, MD (*), Rinco Koorevaar, MD, Paul D. Triffitt, DM, Lars Neumann, FRCS (Ed), William Angus Wallace, FRCS, FRCSEd (Orth)

9:55 – 10:15 AM  Discussion

10:16 – 10:44 AM  Break

Session X:  Elbow
Moderators:  Simon Frostick, MD (n) and Basil C. Vrettos, MD, FRCS (b)

PAPER #80A
10:45 – 10:51 AM  Coronoid Fracture Patterns
David Ring, MD, Job Doornberg, MS (n)

PAPER #81A
10:52 – 10:58 AM  Fracture-Dislocations of the Elbow: Can Injury Components be Predicted Based Upon Injury Patterns?
David Ring, MD (a-AO Foundation), Chris Forthman, MD

10:59 – 11:09 AM  Discussion
PAPER #82A
11:10 – 11:16 AM Loss of Alignment After Operative Treatment of Posterior Monteggia Fractures: Salvage with Dorsal Contoured Plating
David Ring, MD, Jason Tavakolian, MD, Peter Kloen, MD, David Helfet, MD, Jesse B. Jupiter, MD (n)

PAPER #83A
11:17 – 11:23 AM Total Elbow Replacement for Acute C3 Distal Humeral Fractures in the Elderly Population
Christos Sinopidis, MD, Mohhamed El Meligy, MD, Socrates Kalogrianitis, FRCS (n), Ravi Pydishetty, FRCS, Simon P. Frostick, FRCS

PAPER #84A
11:24 – 11:30 AM Fluoroscopy After Radial Head Replacement Arthroplasty
Pidiikit Prasad, MS (n), Arvind Rawal, MS, FRCS, Dave Ritchie, Peter Brownson, Simon Frostick, MD, FRCS, Chris Sinopidis, MD

PAPER #85A
11:31 – 11:37 AM Pain Dominates Measurements of Elbow Function and Health Status
David Ring, MD, Lauren M. Fabian, BS (a-AO Foundation), Leah Fourt, BA, Jesse B. Jupiter, MD

11:38 – 11:59 PM Discussion
12:00 PM Adjourn
DAY THREE       TUESDAY, MAY 4, 2004
CONCURRENT SESSION 2       INDEPENDENCE BALLROOM

Session IX: Shoulder Fractures
Moderators: Richard J. Hawkins, MD (a-SHSMF, c-DePuy, Hardeor Books, d-Opus Medical, e-DePuy, U.S. Surgical Sports Medicine) and W. Angus Wallace, MD, Prof (n)

PAPER #55B 8:00 – 8:06 AM
Eduardo Liborio Menniti, MD (n), Romulo Brasil Filho, MD, Cantidio Salvador Fillardi Filho, Fabiano Reboucas Ribiero

PAPER #56B 8:07 – 8:13 AM
Arthroscopic Treatment for Greater Tuberosity Fractuers: 4-Year Experience 
Ettore Taverna, MD (n), Valerio Sansone, MD, Ferdinando Battistella, MD, Guiseppe Pacelli, MD, Carlo Perfetti, MD

8:14 – 8:23 AM Discussion

PAPER #57B 8:24 – 8:30 AM
The Locking Proximal Humerus Plate-Early Experience in 50 Patients 
Stefaan J.B. Nijs, MD (n), Paul J.B. Broos, MD

PAPER #58B 8:31 – 8:37 AM
Simple “Palm Tree” Percutaneous Fixation Technique for Proximal Humeral Fractures 
Ofer Levy, MD MCh(Orth) (n), Elias Koury, MRCS, Lennard Funk, FRCS (Orth), Stephen Copeland, FRCS

PAPER #59B 8:38 – 8:44 AM
•Light Antegrade Nailing with Autostable Screws (LIANAS) for Proximal Humerus Fractures. 
Christian Cuny, MD (c-FH Orthopedics), Patrick Beau, MD, M'barek Irrazi, MD

PAPER #60B 8:45 – 8:51 AM
Minimal Invasive Fixation of Proximal Humerus Fractures 
Manfred Pfahler, MD (n), Hermann Anetzberger, MD, Christoph Schulz, MD

8:52 – 9:14 AM Discussion

9:15 – 10:15 AM Symposium – Revision Arthroplasty of the Shoulder
Moderator: David M. Dines, MD (c-Biomet)

9:15 – 9:35 AM Revision for Total Shoulder Failure 
David M. Dines, MD (c-Biomet)

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9:35 – 9:55 AM  Revision for Hemiarthroplasty Failure
Charles Rockwood, MD (c-DePuy Ortho Co)

9:55 – 10:15 AM  Revision for Glenoid Failure
W. Angus Wallace, MD (a,e-Biomet, Nottingham Shoulder, Merck)

10:16 – 10:44 AM  Break

Session X:  Rotator Cuff
Moderators:  Wayne Z. Burkhead Jr., MD (c-Linvatec, e-Zimmer/Centerpulse) and Christian Gerber, MD (n)

PAPER #61B
10:45 – 10:51 AM  Do Partial Thickness, Bursal Side Cuff Tears Affect Outcome Following Arthroscopic Subacromial Decompression
Mohammed Al-Maiyah, FRCS (n), Brenden Fourie, MRCS, Lorna Goodchaild, Paul Finn, Amar Rangan, FRCS(ORTH)

PAPER #62B
Hirotaka Sano, MD (n), Wakabayashi Ikuko, MD, Eiji Itoi, MD

PAPER #63B
10:59 – 11:05 AM  Cross-Sectional Area of the Tendon and Muscle of the Biceps Brachii in Shoulders with Rotator Cuff Tears: A Cadaveric Study
Toshiaki Aizawa, MD (n), Eiji Itoi, Prof, Hiroshi Minagawa, PhD, Nobuyuki Yamamoto, PhD, Tuoheti Yilihamu, MD, Nobutoshi Seki, MD, Tatsushi Kamata, MD, Hidetomo Saito, MD, Koji Nosaka, MD

11:06 – 11:16 AM  Discussion

PAPER #64B
11:17 – 11:23 AM  Outcome of Full Thickness Rotator Cuff Tears Treated with Arthroscopic Decompression Alone
Stephen J.L. Roche, MD, Abraham J. Lambrechts, MD (n)

PAPER #65B
11:24 – 11:30 AM  Outcome From Sub-Acromial Decompression Does a Rotator Cuff Tear Make Any Difference?
Martin A. Scott, MCSP (n), Lars Neumann, FRCSeD, W. Angus Wallace, FRCSeD(Orth)

PAPER #66B
11:31 – 11:37 AM  Longitudinal Assessment of Mini-Incision Rotator Cuff Repair, at Average 2 and 7 Years
Simon N. Bell, FRACS (n), Jennifer Coghlan, BAppSc, Homan Zandi, FRACS
PAPER #67B
11:38 – 11:44 AM  Fatty Infiltration & Atrophy of the Rotator Cuff Do Not Improve Following Rotator Cuff Repair
Ian Lo, MD, Julie Bishop, MD, James Gladstone, MD (n), Evan Flatow, MD

11:45 – 11:59 AM  Discussion

12:00 PM  Adjourn
DAY FOUR      WEDNESDAY, MAY 5, 2004
CONCURRENT SESSION 1   CONSTITUTION BALLROOM

Session XI:  Instability
Moderators:  Markus Loew, MD (n) and Michael Simoni, MD (n)

PAPER #86A
8:00 – 8:06 AM  Results of Anterior Inferior Capsular Shift in Females Less than 40 Years Old
Rolando Izquierdo, MD, Walter Stanwood, MD, Marshall Kuremsky, MD, Christopher S. Ahmad, MD (n), Theodore Blaine, MD, William Levine, MD, Louis U. Bigliani, MD

PAPER #87A
8:07 – 8:13 AM  A Modified Capsular Shift for the Treatment of Non-Traumatic Shoulder Instability
Bjoern Marquardt, MD (n), Wolfgang Poetzl, MD, Kai-Axel Witt, MD, Joern Steinbeck, MD

PAPER #88A
8:14 – 8:20 AM  Multidirectional Instability: A review of 124 cases
Jo C. Gibson, GradDipPhy, Vanessa S. Rayner, BapSci (n), Simon Frostick, MA, DM, FRCS

8:21 – 8:30 AM  Discussion

PAPER #89A
W. Angus Wallace, FRCSEd(Orth) (n), Rajesh Jari, MD, MSc(Sp Med), Amar Bal, MSc(Sp Med), Stacy L. Turner, MSc(Sp Med), Lisa-Marie Schmitz, MSc(Sp Med), Lars Neumann, FRCSEd

PAPER #90A
8:38 – 8:44 AM  Capsular Shrinkage: Factors Increasing the Risk of Failure
Christos Sinopidis, MD (n), Jo Gibson, MCSP, Arvind Rawal, FRCS, Simon P. Frostick, FRCS

PAPER #91A
8:45 – 8:51 AM  Revision Surgery for Failed Thermal Capsulorrhaphy (TC)
Hyung Bin Park, MD (n), Tae Kyun Kim, MD, PhD, Atushi Yokota, MD, PhD, Edward G. McFarland, MD

8:52 – 9:01 AM  Discussion

PAPER #92A
9:02 – 9:08 AM  Surgical Results of Open Anterior Inferior Capsular Shift in Athletes with Recurrent Bi-Directional Instability
George M. McCluskey, III, MD, Sean Kaminsky, MD (n), Bryce W. Gaunt, RT, SCS

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PAPER #93A
9:09 – 9:15 AM  ‘Purse String Technique’ for Arthroscopic Stabilization and Early Results
Timothy Matthews, MRCS (n), Ofer Levy, MD, MCh(Orth)

PAPER #94A
9:16 – 9:22 AM  Arthroscopic Capsulolabroplasty for Multidirectional Instability of the Shoulder
Seung-Ho Kim, MD (d-ConMed), Hyo-Kyun Kim, MD, Jong-Il Sun, MD, Jun-Sic Park, MD, Irvin Oh, MD

9:23 – 9:33 AM  Discussion

PAPER #95A
Junji Ide, Assistant Professor (n), Satoshi Maeda, MD, Katsumasa Takagi, Professor

PAPER #96A
9:41 – 9:47 AM  Arthroscopic Bankart Repair Using a Knotless Method: Technique and Results
Jon J.P. Warner, MD (a-Mitek), Michael Gilbart, MD, Edward Yian, MD, Conrad Wang, MD, Peter Millett, MD

PAPER #97A
Robert M. Hollinshead, MD, Nicholas G.H. Mohtadi, MD (n), Ivan J. Bitar, MD, Treny M. Sasyiniuk, BPE, Wade P. Harper, MD

9:55 – 10:15 AM  Discussion

10:16 – 10:44 AM  Break

Session XII: Rotator Cuff
Moderators:  Michel F. Mansat, MD (n) and Robert J. Neviaser, MD (n)

PAPER #98A
10:45 – 10:51 AM  Vascular Proliferation and Nsaids in the Torn Rotator Cuff
Arvind Rawal, MS, FRCS (n), Anuradha Sheth, Margaret Roebuck, Jo Gibson, Vanessa Rayner, Simon P. Frostick

PAPER #99A
10:52 – 10:58 AM  Intraoperative Supraspinatus Strength, Histology and Correlation with the Outcome of Tendon Repair
Dominik C. Meyer, MD, Hans Hoppeler, MD, Prof (n), Alberto G. Schneeberger, MD, Christian Gerber, Prof

10:59 – 11:09 AM  Discussion

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As of 04/26/04

PAPER #100A
11:10 – 11:16 AM  Irreparable Rotator Cuff Tears - Results of the Surgical Treatment by Mini-Open Incision
Osvandre L. Lech, MD, Mikael Borges, MD (*)

PAPER #101A
11:17 – 11:23 AM  Arthroscopically Assisted Repair of Large to Massive Rotator Cuff Tears
Kwang Won Lee, MD, PhD (n), Ha Yong Kim, MD, PhD, Byung Sung Kim, MD, PhD, Won Sik Choy, MD, PhD, Kap Jung Kim, MD

PAPER #102A
11:24 – 11:30 AM  Complications of Using Bioheaded Corkscrews in Rotator Cuff Surgery
Stephen J.L. Roche, MD (a-South African Shoulder & Elbow Society), Basil C. Vrettos, MD

PAPER #103A
11:31 – 11:37 AM  Arthroscopic Repair of Full-Thickness Tears of the Supraspinatus: Does the Tendon Really Heal?
Pascal Boileau, MD (n), Nicolas Brassart, MD, Armodios M. Hatzidakis, MD, Sumant G. Krishman, MD

11:38 – 11:59 PM  Discussion

12:00 – 12:59 PM  Lunch

Session XIII: Shoulder Arthroplasty
Moderators: Evan L. Flatow, MD (*) and Gilles Walch, MD (c-Tornier)

PAPER #104A
1:00 – 1:06 PM  Comparative Mortality and Morbidity of Shoulder, Hip and Knee Arthroplasties
Kevin Farmer, MD (n), Tae Kyun Kim, MD, PhD, Atushi Yokota, MD, PhD, Edward G McFarland, MD

PAPER #105A
1:07 – 1:13 PM  •A New Fracture Prosthesis with Adjustable Head Height: Results According to Healing of Greater Tuberosity
Peter Habermeyer, PhD, MD, Helmut Lill, PhD, MD, Rainer Hente, MD (c-Arthrex, Inc), Petra Magosch, MD

PAPER #106A
1:14 – 1:20 PM  Effectiveness of Replacement Arthroplasty with Calcar Grafting for the Treatment of Surgical Neck Nonunions of the Humerus
Jason Lin, MS, Steven Klepps, MD, Suzanne Miller, MD, Edmond Cleeman, MD, Evan Flatow, MD (a,c-Zimmer)

PAPER #107A
1:21 – 1:27 PM  Analysis of Failed Hemiarthroplasty in Patients with Primary Glenohumeral Osteoarthritis
Steven P. Kalandiak, MD, Robert S. Tapscott, MD, Kirk L. Jensen, MD (n), Michael A. Wirth, MD, Charles A. Rockwood, MD

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1:28 – 1:48 PM  Discussion

PAPER #108A
1:49 – 1:55 PM  Humeral Hemiarthroplasty with Biologic Resurfacing for Glenohumeral Arthritis Associated with Massive Irreparable Rotator Cuff Tears
Sumant G. Krishnan, MD, Wayne Z Burkhead, MD, Robert J. Nowinski, DO (n)

PAPER #109A
1:56 – 2:02 PM  Biomechanical Analysis of Shoulder Prostheses Treating Cuff Tear Arthropathy: A Comparative Study
Lieven Franciscus De Wilde, MD (n), Emmanuel Audenaert, MD, Bart Berghs, MD

PAPER #110A
2:03 – 2:09 PM  Middle-Term Results After Shoulder Arthroplasty - Evaluation of Shoulder Function with a New Assessment Set
Hans-Kaspar Schwyzer, MD, Geza Pap, MD (a-Foundation G & H Schwyzer), Felix Angst, MD

2:10 – 2:25 PM  Discussion

PAPER #111A
2:26 – 2:32 PM  •Cementless Glenoid Resurfacing in Concentric Versus Eccentric Glenoid Deformity: A Prospective Study
Peter Habermeyer, PhD, MD (c-Arthrex, Inc), Petra Magosch, MD, Sven Lichtenberg, MD

PAPER #112A
2:33 – 2:39 PM  Long Term Results of Shoulder Arthroplasty: A 5-12 Year Outcome Study
Michael Wirth, MD, Todd Swenning, MD (n), Charles Rockwood, Jr, MD, Carelton Southworth, MB

PAPER #113A
2:40 – 2:46 PM  Results of Shoulder Arthroplasty in Patients with Osteoarthritis
John F. Haines, FRCS (a-DePuy International, Ltd), Ann Birch, Andrew D. Barrow, FRCS, David Nuttall, PhD, Ian A. Traill, FRCS

PAPER #114A
2:47 – 2:53 PM  Long Term TSA Follow-Up
Rolando Izquierdo, MD, Marshall Kuremsky, MD, Ilya Voloshin, MD, Theodore Blaine, MD, William N. Levine, MD (*), Louis Bigliani, MD

2:54 – 3:15 PM  Discussion

3:16 – 3:44 PM  Break
Session XIV: Basic Science/Biomechanics  
Moderators: William N. Levine, MD (*) and Thay Q. Lee, PhD (n)

<table>
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<tr>
<th>Paper #</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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</thead>
<tbody>
<tr>
<td>#115A</td>
<td>3:45 – 3:51</td>
<td>Measurement of Internal Rotation of the Shoulder with a Magnetic Tracking Device</td>
<td>Ikuko Wakabayashi, MD (n), Eiji Itoi, MD, Hiroshi Minagawa, MD, Moto Kobayashi, MD, Nobutoshi Seki, MD, Koji Nozaka, MD, Hidetomo Saito, MD, Tatsushi Kamata, MD, Toshiaki Aizawa, MD</td>
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<tr>
<td>#116A</td>
<td>3:52 – 3:58</td>
<td>Humeral Retrotorsion Angle in Younger Baseball Players</td>
<td>Daisuke Makiuchi, MD (n), Hiroaki Tsutsui, MD, Kenichi Mihara, MD, Kazuhide Suzuki, MD, Naoya Nishinaka, MD</td>
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<td>#117A</td>
<td>3:59 – 4:05</td>
<td>Mathematical Modeling of Humeral Head Geometry</td>
<td>Anthony Miniaci, MD, John Phillips, MD (n), John Runciman, MD</td>
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<td>4:06 – 4:15</td>
<td>Discussion</td>
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<tr>
<td>#118A</td>
<td>4:16 – 4:22</td>
<td>Proprioception of the Shoulder Joint After Surgical Repair for Instability - A Long-Term Follow Up Study</td>
<td>Wolfgang Potzl, MD (n), Lothar Thorwesten, PhD, Kai-Axel Witt, MD, Bjorn Marquardt, MD, Oliver Greshake, MD, Jorn Steinbeck, MD</td>
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<td>#119A</td>
<td>4:23 – 4:29</td>
<td>A Biomechanical Evaluation of Glenohumeral Translations after Anterior Capsulorrhaphy in a Shoulder Instability Model</td>
<td>James Tibone, MD (n), David J Schneider, MD, Michelle H. McGarry, MS, Thay Q. Lee, PhD</td>
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<td>#120A</td>
<td>4:30 – 4:36</td>
<td>The Influence of Arthroscopic Subscapularis Tendon and Anterior Capsule Release on the Glenohumeral Translation: A Biomechanical Study</td>
<td>Joern Steinbeck, MD (n), Stefan Garmann, MD, Christof Hurschler, PhD, Bjoern MD Marquardt, MD, Wolfgang Poetzl, MD, Kai A. Witt, MD</td>
</tr>
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<td>#121A</td>
<td>4:37 – 4:43</td>
<td>The Effect of Bankart Lesions on the Sagittal Axis Pathway of Extending Shoulders.</td>
<td>Nicholas W. Emms, MRCS (n), John D. Moorehead, PhD, Stephen C. Montgomery, FRCS, Peter Brownson, FRCS, Simon P. Frostick, FRCS</td>
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<td>4:44 – 4:59</td>
<td>Discussion</td>
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DAY FOUR     WEDNESDAY, MAY 5, 2004
CONCURRENT SESSION 2          INDEPENDENCE BALLROOM

Session XI: Arthroscopy
Moderators: Robert Hollinshead, MD (n) and W. Jaap Willems, MD, PhD (n)

PAPER #68B
8:00 – 8:06 AM Navigation System for Shoulder Arthroscopy
Yoichi Ito, MD, PhD (n), Hiroyasu Tomo, MD, Yoshihiro Nakao, MD,
Tatsuya Koike, MD, PhD, Kunio Takaoka, MD, PhD

PAPER #69B
8:07 – 8:13 AM Clinical Findings and Operative Results of Slap Lesion in Baseball
Players
Teruhiko Nakagawa, MD (n), Masamitsu Tsuchiya, MD

PAPER #70B
8:14 – 8:20 AM Arthroscopic Treatment in Calcific Tendonitis of the Shoulder
Yong Girl Rhee, MD, Chan Teak Lim, MD (n)

8:21 – 8:30 AM Discussion

PAPER #71B
8:31 – 8:37 AM Initial Experience With Bursal Envelope on Arthroscopic Rotator Cuff
Repair
Sergio Montenegro, MD (n), Lautaro Campos, MD, Marcelo Ipinzas,
MD

PAPER #72B
8:38 – 8:44 AM Reversed Arthroscopic Subacromial Decompression (ASD) for Massive
Rotator Cuff Tears
Markus T. Scheibel, MD (n), Sven Lichtenberg, MD, Peter Habermeyer,
MD

PAPER #73B
8:45 – 8:51 AM Arthroscopic Repair of Full Thickness Rotator Cuff Tears Using
Bioabsorbable Tacks
Anthony Miniaci, MD, Julie McBurnie, MD (a-Smith & Nephew), Sara
Lyn Miniaci, MD

PAPER #74B
8:52 – 8:58 AM Second Look of Arthroscopic Rotator Cuff Repair
Sergio Montenegro, MD, Lautaro Campos, MD (n), Marcelo Ipinzas,
MD

8:59 – 9:14 AM Discussion
9:15 – 10:15 AM  Kessel Symposium – Rotator Cuff Tears And Arthritis  
Moderator:  
Ian Bayley, FRCS (n)

9:15 – 9:35 AM  Pathology and Evolution  
Charles Neer, MD (e-Smith & Nephew, Inc.)

9:35 – 9:55 AM  Non-Prosthetic Management  
Gilles Walsh, MD

9:55 – 10:15 AM  Role of the Reverse Prosthesis  
Christian Gerber, MD

10:16 – 10:44 AM  Break

Session XII:  Basic Science/Biomechanics  
Moderators:  Joseph P. Iannotti, MD, PhD (n) and Hans K. Uthhoff, MD (n)

PAPER #75B  
10:45 – 10:51 AM  A Three-Dimensional Analysis of Scapular Kinematics in Rotator Cuff Rehabilitation: A Comparison of ‘Full Can’ vs. ‘Empty Can’ Exercise Techniques  
Charles Thigpen, MS (n), Darin Padua, PhD, Nick Morgan, BS, Carly Kreps, BS, Spero G. Karas, MD

PAPER #76B  
10:52 – 10:58 AM  Analysis of Scapulohumeral Rhythm During Internal and External Rotation Using Skin-Mounted Electromagnetic Tracking Sensors  
Nobutoshi Seki, MD (n), Eiji Itoi, PhD, Ikuko Wakabayashi, PhD, Hiroshi Minagawa, PhD, Yilihamu Tuoheti, PhD, Nobuyuki Yamamoto, PhD, Toshiaki Aizawa, MD, Moto Kobayashi, MD

PAPER #77B  
10:59 – 11:05 AM  In-vivo Kinematics of Normal Shoulders and Shoulders with Massive Rotator Cuff Tears  
Steven P. Kalandiak, MD (n), Avinash Kumar, MD, Joseph J. Crisco, PhD, Andrew Green, MD

11:06 – 11:16 AM  Discussion

PAPER #78B  
11:17 – 11:23 AM  Acromioclavicular Stability: A Biomechanical Comparison of Acromioplasty to Acromioplasty with Coplaning of the Distal Clavicle  
Scott G. Edwards, MD (n)

PAPER #79B  
11:24 – 11:30 AM  Comparison of Radiofrequency Ablation with Mechanical Shaving on Tendon Using Histological and Ultrastructural Analysis  
Rakulan Balendran, BSc, MBBS, MRCS (n), Ann Sandison, M. Phil, MBChB, MRCPath, Jill Moss, PhD, David Peston, DMS, FIBMS, Andrew Lachlan Wallace, MBBS, PhD, FRACS
PAPER #80B
11:31 – 11:37 AM Location of the Glenoid Defect in Shoulders with Recurrent Anterior Dislocation

Hidetomo Saito, MD (n), Eiji Itoi, MD, PhD, Hiroshi Minagawa, MD, PhD, Elham Tohte, MD, Nobuyuki Yamamoto, MD, Moto Kobayashi, MD, Koji Nozaka, MD, Tatsushi Kamata, MD, Nobutoshi Seki, MD

PAPER #81B

Pol E. Huysmans, MD (n), Pieter-Steijn W. Haen, student, Viktor van der Hulst, MD, PhD, Wouter J. Dhert, MD, PhD, Jaap W. Willems, MD, PhD

11:45 – 11:59 PM Discussion

12:00 – 12:59 PM Lunch

Session XIII: Shoulder Fractures
Moderators: Leeza Galatz, MD (n) and Herbert Resch, MD (n)

PAPER #82B
1:00 – 1:06 PM Outcome of Shoulder Hemiarthroplasty for Complex Displaced Proximal Humeral Fractures

Richard S. Page, FRACS (Orth) (a-Royal College of Surgeons of England), Mike C. Robinson, FRCS (Orth), Charles Court-Brown, MD FRCS Ed, Richard M.F. Hill, FRCS (Tr and Orth), Alison Wakefield, MSc

PAPER #83B
1:07 – 1:13 PM Hemiarthroplasty for Proximal Humeral Fracture: A New Method to Obtain Correct Humeral Length

Ariane Gerber, MD (n), Maria Apereva, PhD, Fraser Harrold, BS, Philippe Clavert, MD, Jon Warner, MD

PAPER #84B
1:14 – 1:20 PM Early Versus Late Mobilization Following Shoulder Hemiarthroplasty for Proximal Humeral Fractures.

Ioannis Agorastides, MRCS (n), Chris Sinopidis, Mohamed El Meligy, Quy Yin, Peter Brownson, Simon P. Frostick

1:21 – 1:30 PM Discussion

PAPER #85B
1:31 – 1:37 PM •Clinical Results After Surgical Repair of Glenoid Rim Fractures Using Canulated Titanium Screws

Frank Erol Gohlke, Prof, Christian Fix, MD, Thomas Dirk Boehm, MD (*)
**PAPER #86B**
1:38 – 1:44 PM  Open Intramedullary Nail with Tension Band and Locking Sutures on Proximal Humeral Fracture  
*Jin-Young Park, MD (n), Jin-Woo An, MD, Sung-Churl Lee, MD*

**PAPER #87B**
1:45 – 1:51 PM  Treatment of Diaphyseal and Proximal Metaphyseal Humerus Fractures with the True-Flex Intramedullary Nail  
*Gary Sherman, M.D. (n), William H Seitz, Jr., M.D.*

1:52 – 2:14 PM  Discussion

2:15 – 3:15 PM  Symposium – The Stiff Shoulder  
**Moderator:**  *Stephen A. Copeland, FRCS (n)*

2:15 – 2:35 PM  Etiology and Pathophysiology  
*Kazutoshi Hamada, MD (n)*

2:35 – 2:55 PM  Releases in the Presence of Arthritis  
*Robert Cofield, MD (c-Contract between Smith & Nephew, Mayo Clinic)*

2:55 – 3:15 PM  Treatment for Soft Tissue Stiffness  
*Stephen A. Copeland, FRCS (n)*

3:16 – 3:44 PM  Break

**Session XIV:** Rotator Cuff  
**Moderators:**  *Frances Cuomo, MD (n) and Eiji Itoi, MD (n)*

**PAPER #88B**
3:45 – 3:51 PM  •Rupture of the Subscapularis Tendon - A New Clinical Test  
*Osvandre Luiz Lech, MD (n), J. Felipe Medeiros F., MD*

**PAPER #89B**
3:52 – 3:58 PM  Repair of Tears of the Subscapularis: Minimum Two Year Follow-up Results of 84 Cases  
*T. Bradley Edwards, MD (n), Gilles Walch, MD, Daniel Mole, MD, Laurent Nove-Josserand, MD, Aziz Boulahia, MD, Lionel Neyton, MD, Bruce Lindgren, MS, Istvan Szabo, MD*

3:59 – 4:08 PM  Discussion

**PAPER #90B**
4:09 – 4:15 PM  Outcome of Rotator Cuff Tears with and Without Shoulder Stiffness  
*Tatsuro Komatsuda, MD (n), Katsumi Sato, MD, Shigeki Sone, MD, Koji Ishibashi, MD, Jun Kumagai*

**PAPER #91B**
4:16 – 4:22 PM  The Effect of Shoulder Manipulation on Rotator Cuff Integrity  
*Ehud Rath, MD (n), Tirtza Even, MD, MSc, Harry Brownlow, Stephen Copeland, Ofer Levy*

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PAPER #92B
4:23 – 4:29 PM  Asymmetric Atrophy of the Supraspinatus Muscle Following Tendon Tear
Dominik C Meyer, MD, Christof Pirkl, MD (n), Chrsitian Pfirrmann, MD, Marco Zanetti, MD, Christian Gerber, Prof

PAPER #93B
4:30 – 4:36 PM  Triceps Myotendinous Rotation Flap for Unrepairable Rotator Cuff Tears: Minimum 2 Year Follow Up
Drew V. Miller, MD (n), James D. Namnoum, MD

4:37 – 4:59 PM  Discussion

5:00 PM  Adjourn