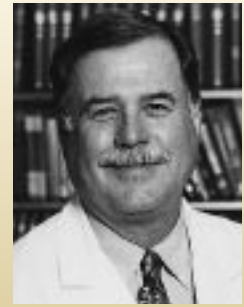


CHAIRMAN'S CORNER

JAMES H. HERNDON, MD, MBA

CHAIRMAN, PARTNERS DEPARTMENT OF ORTHOPAEDIC SURGERY
PROGRAM DIRECTOR, HARVARD COMBINED ORTHOPAEDIC RESIDENCY PROGRAM



I am pleased to welcome you to the third issue of the *Harvard Orthopaedic Journal*. Oops! I am pleased to welcome you to the new and improved, *Journal of Orthopaedics at Harvard Medical School*. Same great journal with a new name! Shortly after publication last year I was informed by Harvard Medical School that we could not use the *Harvard* name for our journal and would have to use *Harvard Medical School* instead. I was shocked. After several meetings, presentations to the Deans' Committee and finally the Faculty Council, I received an "OK" on the name we are now using. Please be assured, only the name has changed, the content is still as relevant and informative as our first two volumes. My personal thanks to Dr. Sonu Ahluwalia, his editorial staff, and all those who contributed articles to the Journal. I would also like to thank our sponsors for making this publication possible.

In my role as Head of the Residency Program, I am pleased to announce that Dr. Benjamin Bierbaum, Chief of Orthopaedic Surgery for the CareGroup has joined the Program's Executive Committee and the HMS Orthopaedic Executive Committee on behalf of the Beth Israel Deaconess Medical Center. However with this announcement comes some regret, as I acknowledge the contribution and service of Dr. Stephen Lipson who be leaving the Committee after close to 10 years of service on behalf of the Beth Israel Deaconess Medical Center. Steve has been a devoted member of the Committee and worked hard on the residents' behalf. I thank him and wish him well in his continued practice.

The past year has been filled with both great accomplishments and worrisome developments for the residency program. One of the new developments I am particularly proud of is the launch of the Journal Club, initiated by David Wimberley, PGY-4 and co-led by Dr. James Heckman, Editor of the *Journal of Joint and Bone Surgery*. The Club has been a tremendous success. I appreciate Dr. Heckman's stewardship of this important initiative and Dr. Wimberley's innovative and enthusiastic leadership in making this possible. I am also pleased that we have secured some changes in the PGY-1 year that will better prepare our residents for their training in orthopaedic surgery. These changes include the following by institution: MGH (4 residents) – increase to 3 months of orthopaedics; BWH (3 residents) – addition of rheumatology and radiology and 2 months orthopaedics; similar changes at the BIDMC (3 residents).

Of some concern is the impact of changes at the Beth

Israel Deaconess Medical Center, specifically their desire to eventually relocate orthopaedic surgery to the New England Baptist Hospital. While such reorganization may well be in the best interest of CareGroup to move the residents from the BID to the Baptist, this would not be in the best interest of the residency program. The Executive Committee will be working closely with Dr. Bierbaum in his new role to find the best solution for the residents.

With regard to the recruitment process, I am pleased to report that we continue to get an overwhelming number of excellent applicants, over 400 this past cycle. However, because the Program's reputation continues to be one of service at the expense of teaching in an environment that is not very collegial, it remains difficult to attract some of the very best applicants. Perhaps related is the fact that one resident has decided to leave the program at the end of the 2001 academic year; a PGY-3 resident is leaving for a business opportunity in venture capital. I am a bit concerned that departures might represent the beginning of a trend among younger residents who bring different values and expectations to planning for their future careers and families.

For these reasons and others, the Executive Committee arranged for an external review of the residency program earlier this year. The external reviewers were Mac Evarts and Reginald Cooper, two distinguished leaders in orthopaedic surgery. One of their principal recommendations was that we explore the creation of teaching and non-teaching services in order to consolidate the strengths of our program for the residents. This and other recommendations will be explored with the faculty and the residents over the coming months. I will be holding a retreat with the residents in June to explore their experiences in greater detail and to engage them in thinking constructively about the types of changes required to strengthen our program.

In my role as Chairman of the Partners Department of Orthopaedic Surgery, I am pleased to acknowledge the recruitment of new faculty, development of new clinical programs and growth of our research program. I would like to commend Harry Rubash and Tom Thornhill on their leadership of orthopaedic surgery at the Massachusetts General and Brigham and Women's Hospitals. I direct you to their respective "Chief's Corners" for an overview of the accomplishments of their Departments over the past year. On behalf of the joint Partners Department I would like to acknowledge the Partners in Excellence Award presented to Mark Vrahas and

the orthopaedic trauma service physicians and staff at both the Brigham and Women's and Massachusetts General Hospitals. The award is in recognition of their work with providers at the Spaulding Rehabilitation Hospital to better coordinate the care of trauma patients.

Of particular importance to the residency program and growth of the Partners Department, I would like to acknowledge the recruitment of some tremendous new physicians and teachers to the Partners Department: Andy Freiberg in hip and knee reconstructive surgery, Julie Katarincic in hand and upper extremity and Wolfgang Fitz in adult reconstruction. I am particularly pleased with the return of two residency graduates following their fellowship training: Chris Chiodo in foot and ankle and David Ring in hand and upper extremity. In addition, we anticipate the arrival in August of Malcolm Smith, a traumatologist from the UK who will be joining Mark Vrahas as part of the Partners Orthopaedic Trauma Service; Philip Blazar, a hand and upper extremity surgeon from the

Core Curriculum 2000-2001 Academic Year

SUBSPECIALTY BLOCK	FACULTY	RESIDENT
Trauma (excluding spine)	William Tomford	Paul Appleton
Tumor	John Ready	Rahul Deshmukh
Pediatrics	John Emans	David Kim
Sports Medicine (including shoulder)	Peter Gerbino	Conrad Wang
Adult Reconstruction (including shoulder)	Richard Scott Arun Shanbhag Andrew Freiberg	Ajeya Joshi
Spine (including trauma)	Frank Pedlow	Patrick Tyrance
Hand and Elbow	Jesse Jupiter	Greg Erens
Extra / 2000 OITE Review		Greg Erens
Business & Biostatistics	Dan Estok	Scott Price
Rehabilitation & Prosthetics	Don Pierce	Rahul Deshmukh
MedioLegal/Ethics	Tammy Martin	Scott Price
Foot and Ankle	Mike Wilson James Heckman	Shahram Solhpour

2000 – 2001 Grand Rounds Speakers

9/6/2000	Chris Chiodo MD	Brigham & Women's Hospital	Current Concepts in Surgical Stabilization of the Foot & Ankle
9/13/2000	James Kasser MD	Children's Hospital	Elbow Trauma
9/20/2000	Henry Mankin MD	Mass General Hospital	Gaucher Disease: A model for the future
9/27/2000	Giancarlo Puddu MD	Rome, Italy	High Tibial Osteotomies
10/4/2000	Thomas J Gill MD	Mass. General Hospital	New Perspectives on Avoiding Total Joint Arthroplasty
10/11/2000	Arthur Boland MD	Mass General Hospital	ACL Reconstruction: A Historic Prospective
10/18/2000	Gideon A. Rodan MD	Merck & Co, Inc.	Bisphosphonates, Mechanism of Action
10/25/2000	Liz Lingard MPH	Brigham & Women's Hospital	Multinational Outcome Study of Total Knee Arthroplasty
11/1/2000	David Ring MD	Massachusetts General Hospital	Traumatic Elbow Instability
11/8/2000	Leif Ryd MD	Lund, Sweden	Endoprosthetic Fixation and RSA - From Fiction to Some Facts
11/15/2000	Mercer Rang MD	Hospital For Sick Children	Orthopaedic History
11/22/2000	Julie Katarincic MD	Mass. General Hospital	Brachial Plexus Injuries; Examination, Diagnostic Testing & Treatment
11/29/2000	Karl Breuing MD	Brigham & Women's Hospital	Vacuum-assisted Closure Device: Clinical Applications in the Orthopaedic Practice
12/6/2000	John Richmond MD	Tufts New England Medical Center	Current Treatment Options for the Meniscus
12/13/2000	Troyan Brennan MD	Brigham & Women's Hospital	Medical Errors
12/20/2000	Ellen MacKenzie PhD	Johns Hopkins Univ, Sch of Hygiene & Pubic Health	Assessing Functional Outcomes Post-Injury
1/3/2001	R. Malcolm Smith MD	St. James's University Hospital	Immediate Coverage for IIIB Open Tibia Fractures
1/10/2001	Lawrence Karlin MD	Children's Hospital	Cerebral Palsy Scoliosis
1/17/2001	Myron Spector PhD	Brigham & Women's Hospital	Bone, Cartilage, and Ligament Cells that Contract: A New Paradigm for Treating Selected Orthopaedic Disorders
1/24/2001	Andrew Freiberg MD	Massachusetts General Hospital	Infections in Total Knee Arthroplasty
1/31/2001	Benjamin Bierbaum MD	New England Baptist Hospital	New Advances in Teaching and Application of Surgery in Total Hip Replacement
2/7/2001	Martha Byington MBA	Harvard Risk Management Foundation	Risk Management: Emerging Trends in Orthopaedic Malpractice Claims
2/14/2001	Peter Hauschka PhD	Children's Hospital	Cell - Cell communication and osteolytic metastasis
2/21/2001	Teresa Morales PhD	Mass. General Hospital	IGF-binding proteins in osteoarthritic human cartilage
3/7/2001	Donald Reilly MD	Beth Israel Deaconess Medical Center	Force Transmission in the Knee and Cineradiographic Analysis of TKR
3/14/2001	Greg Brick MD	Brigham & Women's Hospital	Revision of Total Knees
3/21/2001	John Magaldi MD	Yale University School of Medicine	The Evolution of Cox-2 Inhibitors: Safety, Efficacy, and Effects on Bone Ingrowth.
3/28/2001	James Kang MD	University of Pittsburgh	Intra-Discal Gene Therapy
4/4/2001	John Emans MD	The Children's Hospital	Congenital Scoliosis and Chest Wall Expansion
4/11/2001	Jesse Jupiter MD	Mass General Hospital	New Horizons for Elbow Trauma and Reconstruction
4/18/2001	Keith Wapner MD	University of Pennsylvania	Salvage of the Complex Diabetic Charcot Foot
4/25/2001	Joseph Iannotti MD	Cleveland Clinic	Anatomic and Biomechanical Factors that Affect the Outcome of Shoulder Arthroplasty
5/2/2001	Andrew Weiland MD	Hospital for Special Surgery	Non-Unions and Mal-Unions of the Scaphoid
5/9/2001	Vernon Tolo MD	Children's Hospital	The Evolution of Pediatric Fracture Care
5/16/2001	Laura Tosi MD	Children's Hospital	Women and the Orthopaedic Surgeon: Enhancing the Relationship
5/23/2001	Frank Frassica MD	Johns Hopkins University	Decision-making in Soft Tissue Tumors
5/30/2001	James Capozzi MD	Mt Sinai Hospital	Ethical Considerations in Orthopaedic Surgery
6/6/2001	Stephen Snyder MD	Southern California Orthopaedic Institute	Shoulder Arthroscopy - Instability, Rotator Cuff and SLAP Repair
6/13/2001	Judah Folkman MD	Children's Hospital	Angiogenic Disease of Bone
6/20/2001	Richard Cook MD	University of Chicago	Making Safety: How Complex Systems Fail

University of Kentucky who will be joining the Brigham and Women's Hand Service; Andy Hecht, a residency graduate with spine fellowship training will be joining the Spine Service at the MGH; Peter Millett, a shoulder surgeon, will be joining the Brigham and Women's Department as part of the Partners Shoulder Service; and a pediatric orthopaedic surgeon to join the MGH Department. In addition, I would like to welcome Dr. Mark Brezinski to the Partners Department. Dr. Brezinski's research focuses on orthopaedic applications of optical coherence tomography (OCT), specifically, the ability of OCT to determine cartilage destruction and cartilage repair. Dr. Brezinski is working closely with Scott Martin at the Brigham and Women's Hospital in these areas. Dr. Brezinski is currently the Principal Investigator on several NIH grants.

I am also pleased to report that the Center for Molecular Orthopaedics has had an extremely successful year under the leadership of Chris Evans. Chris and his team have received an NIH planning grant to develop a phase II clinical trial on gene therapy in arthritis. The expected launch of this clinical trial is early 2002. In addition, Steve Ghivizzani, an assistant professor in the Center, has received a fundable priority score on an NIH RO3 award. Of special note, I would like to congratulate Dr. Evans on receiving the Synos Foundation Research Award for an outstanding contribution to orthopaedics. Dr. Evans will receive the award at a special conference in Switzerland in June.



Dr. Chris Evans



Dr. Robert W. Lovett
1859-1924

As Chairman, I would like to acknowledge the appointment and promotion of our faculty at the Harvard Medical School. First, I am pleased to announce the appointment of Thomas Thornhill to the Buckminster Brown Professorship in Orthopaedic Surgery, the oldest Chair in orthopaedics at Harvard Medical School. In addition, Bill Tomford and Richard Scott have been promoted to full professor. Christopher Evans has been appointed to full professor and as the first incumbent of the Robert W. Lovett Professorship in Orthopaedic Surgery. The Robert W. Lovett Fund, established in 1926 in honor of Robert W. Lovett "for the purpose of organizing on a large scale a means for the systematic study and treatment of those diseases which produce deformities," was recently converted to an endowed professorship, making it the tenth professorship in orthopaedic surgery at the Medical School. The appointment of Chris Evans to this chair will surely honor the founders and legacy of Dr. Lovett.

Promotions and appointments to assistant professor include: Anuj Bellare, Mary Boussein, Andy Freiberg, Steve Ghivizzani, Tom Gill, Tom Minas, Mike Wilson, Mark Vrahas, and David Zurakowski.



Myron Spector, PhD

I would also like to acknowledge the other honors and achievements of the faculty. In recognition of his research achievements, Myron Spector received this year's Kappa Delta Society Award from the Orthopaedic Research Society at its annual meeting in March 2001.

Harry Rubash received the Ranawat Award from the Knee Society. William Harris received the Life Time Achievement Award from the Maurice Mueller Foundation. Martha Murray, recently appointed Instructor in Orthopaedic Surgery at Harvard Medical School, has received the Cabaud Award for Orthopaedic Sports Medicine Research from AOSSM and the OREF Charles H. Herndon Research Award. In addition, Dr. Murray has been honored as a Harvard Medical School Year 2000 Scholar in Medicine Fellow.



Dr. Martha M. Murray

I am pleased to announce that Jim Kasser was installed as President of the Pediatric Orthopaedic Surgery Society of America (POSNA) in May, Mark Gebhardt as President of the Musculoskeletal Tumor Society, and I have been elected Second Vice President of the American Academy of Orthopaedic Surgery. In this capacity, I will have an important opportunity to influence the development and strengthening

Resident Plans

Ahluwalia, Sonu	Fellowship in Total Joint Arthroplasty, Brigham and Women's Hospital, Boston Fellowship in Shoulder Surgery, Massachusetts General Hospital, Boston
Cheleuitte, Domingo	Fellowship in Foot and Ankle Surgery, Baylor University, Dallas
Chin, Kingsley	Fellowship in Spine Surgery, Case Western Reserve University, Cleveland
Bley, Louis	Fellowship in Sports Medicine, New England Baptist Hospital, Boston
Deshmukh, Ashwin	Private practice in Los Angeles
Erens, Greg	Fellowship in Total Joint Arthroplasty, Brigham and Women's Hospital, Boston
Golden, David	Fellowship in Sports Medicine, Massachusetts General Hospital, Boston
Hayden, Shawn	Fellowship in Spine Surgery, Massachusetts General Hospital, Boston
Kim, David	Fellowship in Spine Surgery, Thomas Jefferson University, Philadelphia
Yun, Andrew	Fellowship in Total Joint Arthroplasty, Hospital for Special Surgery, New York

of our profession and to represent orthopaedic surgery nationally. I encourage each of you to share your thoughts and concerns about our profession with me over the next year. This input is invaluable in shaping the strategic direction and formulating new programs for the Academy.

In closing, I want to congratulate the chief residents as they leave for fellowship training, congratulate the resident

graduates as they embark on their chief resident assignments, and welcome the incoming residents. On behalf of the Harvard Combined Orthopaedic Residency Program and the institutions we represent, I want each of you to know that we are proud of the role you play in ensuring the continued excellence of Harvard Orthopaedics. To all of you, good luck in your future endeavors.

ORS / AAOS Presentations 2001

San Francisco, CA San Francisco, CAORS

ORS

Podium Presentations

1 Wear Particle Analyses of Conventional and Crosslinked UHMWPE Tested in an Anatomic Hip Simulator

2 Characteristics of Cross-Linked UHMWPE Wear Debris

27 Efficient and Persistent Gene Transfer into Articular Cartilage using Recombinant Adeno-Associated Virus Vectors in Vitro and in Vivo

53 Effects of Short Term Dynamic Loading on Adult Canine Chondrocytes Seeded Into Porous Collagen-Glycosaminoglycan Scaffolds

66 Mechano-Structure Relationships In Normal, Ovariectomized And Ibandronate Treated Aged Macaques As Assessed By Micro-Tomographic Imaging And Biomechanical Testing.

95 The Effect Of A Preventative Treatment With Ibandronate On The Microstructure Of Bone In Tumor Osteolysis.

Workshops/Educational Programs

Orthopaedic Biology in the Post-Genome Era

#108 Over Expression of Human Insulin like Growth Factor-1 Promotes New Tissue Information in an Ex Vivo Model of Articular Chondrocyte

#120 Quantitative Assessment of 3D Anatomy of the Rotator Cuff Insertions and Tendon-To-Bone Attachment Areas of the Supraspinatus Tendon Before and After Surgical Repairs

134 In Vitro Analysis of Novel, Clinically Relevant Osteoclast Inhibitors

#172 Response of Cartilage to Mechanical Loading is Correlated with Sustained ERK 1/2 Activation

182 Using Nanotechnology to Improve The Fatigue Performance of Acrylic Bone Cement

#184 Efficacy of Bone Morphogenic Protein-2 to Promote Gap filling and Inrowth Across the Gap in a Canine Total Hip Replacement Model

203 Quantitative Impedance Analysis of Cartilage Graft Tissue Following Implantation into Canine Defects

210 Femoral Shaft Fractures In Children -Comparative Analysis of A New Flexible Interlocking Nail To Current Methods of Treatment.

213 In-Situ Forces In the Posterior Cruciate Ligament After Total Knee Arthroplasty.

219 NO and IRAP Modulate Cytokines Produced By Wear Particle Activated Macrophages

221 Novel Methods to Quantify Wear and Creep Deformation on UHMWPE Tibial Knee Inserts

224 Assessment of In Vivo 3-D Polyethylene Wear: Importance of Prone Neutral Position vs. Supine Internal, Neutral, or External Rotation of the Femur for Plain Radiography

272 Insulin-Like Growth Factor Binding Proteins in Fresh Human Articular Cartilage: Study Of Normal And Osteoarthritic Samples

289 Tissue Engineering of Cartilage Enhanced by the Transfer of a Human Insulin-Like Growth Factor Gene

Scott M, Widding K, Ries M, Shanbhag A

*Shanbhag AS, Vai CW, Qureshi SA, Rubash H E
Madry H, Cucchiaroni M, Terwilliger E.F, Tripple S B*

Lee, C., Grodzinsky, A., Spector, M.

Müller R, Bauss F, Smith SY, Hannan MK.

Kurth AA, Bauss F, Hayes WC, Shea M, Müller R

Organizer: Christopher H. Evans, Ph.D

Madry H, Trahan C, Zurakowski D, Tripple S B

Apreleva M, Ozbaydar MU, Fitzgibbons PG, Warner JJP

*Illgen R, Shanbhag AS, Deshmukh A, Cho DR, Vai C, Galson D,
Rubash H, Harris W*

Fanning P, Emkey G, Smith R, Grodzinsky A, Trippel S

Bellare A, Gomoll A, Fitz W, Scott RD, Thornhill TS

Bragdon C, Jasty M, Viles S, Larson S, Rubash E, Harris W

Evans R, Lee CR, Frank E, Butts E, Spector M, Grodzinsky EJ

Bartholomew WD, Snyder BD, Kwak SD, Ring D

Li G, Most E, Otterberg E, Sabbag K, Johnston T, Rubash H

Studer R, Georgescu H, Miller L, Evans C

Muratoglu O, Perinchieff R, Konrad R, Harris W

Hauser D, Velasco A, Behairy Y, Siddiqui M, Newman J, Wessinger SJ, Harris W

Morales T

*Madry H, Padera R, Seidel J, Freed L.E, Langer R, Trippel SB,
Vunjak-Novakovic G*

Poster Presentations

- # 301, New Investigator Recognition, Poster session
Insulin-Like Growth Factor (IGF-1) And Bone Morphogenic Protein 2 (BMP-2) Differentially Regulate Gene Expression By Human Articular Chondrocytes
Takahashi T, Byrne M, Morris E, Horton H, Belanger L, Sailor L, Trippel S
- # 375 Light Has Chondroprotective Effects on Photosensitized Cartilage.
Sullivan LG, Hasan T, Wright M, Mankin HJ, and Towle CA
- # 410 Contractile Behavior of Smooth Muscle Actin Expressing Human
Kinner, B, Spector, M
- # 534 Bone Strength at Clinically Relevant Sites Displays Substantial Heterogeneity and is Best Predicted from Site-specific Bone Densitometry
Eckstein F, Lochmüller EM, Lill C, Kuhn V, Schneider E, Delling G, Müller R
- # 536 Trabecular Bone Response to Mechanical and PTH Stimulation.
Kim CH, Eichler M, Takai E, Mikhail G, Zhou H, Müller R, Dempster D, Gou XE
- # 674 Expression of IL-1 Genes in Human OA Cartilage
Murata M, Trahan C, Wright M, Mankin H, Towle C
- # 0676 Intracellular IL-1 and IL-1 Receptor Antagonist in OA.
Murata M, Trahan C, Weissbach L, Mankin HJ, Towle CA
- # 768 The Value of the Pectoralis Major Tendon as an Anatomical Landmark to Determine Humeral Length and Retroversion
Gerber A, Apreleva M, Harrold F, Warner JJP
- # 776 Changes in Cell Number Density and Smooth Muscle Actin Expression
Murray M, Martin SD, Spector M
- # 788 Differences in the Outgrowth of Cells from Explant from the Proximal and Distal Human ACL and Response to TGF-B1
Meaney Murray M, Bennett R, Spector, M
- # 789 Gender Differences in the Histology of the Human Anterior Cruciate Ligament
Meaney Murray M, Dawson C, Kocolas I, Spector M
- # 790 The Effects of Selected Growth Factors on Human ACL Cell Interactions with 3-D collagen-GAG Scaffolds
Meaney Murray M, Rice K, Spector M
- # 791 Reduction of Anterior Cruciate Ligament Graft Stiffness Increases Knee Instability and Elevates Cartilage Contact Pressure.
Li G, Lopez O
- # 812 Distribution of Smooth Muscle Actin-Containing Cells in the Human Meniscus
Ahluwalia S, Fehm M, Murray M, Martin S, Spector M
- # 816 Tibial Tubercle Anteromedialization Does Not Reduce Pressure on the Lateral Patellar Facet.
Wilson D, Apreleva M, Harrold F, Steiner M
- # 818 The Effects of Medialization and Anteromedialization of the Tibial Tubercle in Knees with Patellofemoral Malalignment on Patellofemoral Mechanics and Kinematics.
Ramappa A, Wilson D, Apreleva M, Harrold F, Fitzgibbons P, Gill T
- # 865 Alpha-smooth Muscle Actin in Pathological Human Lumbar Disc Nucleus Pulposus Specimens
Hastrieter D, Chao J, Wang Q, Spector M, Ozuna R
- # 925 Thoracic and Lumbar Vertebral Failure Loads – Prediction from In-situ DXA, QCT, PQCT, and Quantitative Ultrasound.
Bürklein D, Lochmüller EM, Kuhn V, Glaser C, Müller R, Glüer CC, Eckstein F
- # 1001 Implant Wear The Effect of Surface Finish on One Cemented Design of Femoral Component Under Simulated Stair-Climbing Loading Conditions
Duffy G, O'Connor D, Lozynsky A, Harrington M, Harris W
- # 1005 Implant Wear Precision and Reproducibility of Radiostereometric Analysis (RSA) to Determine Polyethylene Wear in a Total Hip Replacement Model
Bragdon C, Yuan X, Perinchieff R, Malchau H, Karrholm J, Harris W
- # 1009 Implant Wear Markedly Improved Adhesive Wear and Delamination Resistance with a Highly Crosslinked UHMWPE for Use in Total Knee Arthroplasty
Muratoglu O, Bragdon C, O'Connor D, Travers J, Perinchieff R, Jasty M, Rubash H, Harris W
- # 1013 Polyethylene The Use of Trans-Vinylene Formation in Quantifying the Spatial Distribution of Electron Beam Penetration: A New Characterization Tool for Highly Crosslinked UHMWPE
Muratoglu O, O'Connor D, Delaney J, Harris W
- # 1018 Polyethylene Quantitative measurement of the morphology and fracture toughness of radiation crosslinked UHMWPE
Gomoll A, Wanich T, Bellare A
- # 1030 Surface Crosslinking of UHMWPE Using Irradiation in Molten State for Total Joint Arthroplasty
Muratoglu O, O'Connor D, Bragdon C, Delaney J, Jasty M, Merrill E, Venugopalan P, Harris W
- # 1035 High Speed Mixing of Different Nanometer Barium Sulfate in Acrylic Bone Cement and its Effect on Work of Fracture
Fitz W, Gomoll A, Bellare A, Scott RD, Thornhill TS
- # 1076 The Negative Effect of Proximal Macrotexturing on the Cement Metal Interface of Cemented Femoral Components: An Experimental and Clinical Retrieval Analysis
Duffy G, Muratoglu O, Biggs S, Harris W
- # 1092 The Effect of Posterior Cruciate Retention and Substitution on Tibial-Femoral Motion in Total Knee Arthroplasty.
Most E, Li G, Otterberg E, Sabbag K, Zayontz S, Rubash H

Awards

Kappa Delta Award Presentation

Spector M

Jacquelin Perry Award

Deshmukh A, Koris M, Thornhill T, Zurakowski D

New Investigator Recognition Award

Bilateral Variation of Bone Structure of the Femur in Normal Adults Measured by Ex-vivo Orthogonal Radiography, DEXA, and QCT.

Hauser DL, Pierre MA, Snyder BD

AAOS

Podium Presentations

Instructional Course #114
Cartilage Repair Techniques

Minas T

ORS / AAOS Presentations 2001 Continued

San Francisco, CA San Francisco, CA

- # 90 Clinical And Oncologic Features of 119 Patients With Malignant Lymphoma In Bone *Demircay E, Mankin HJ, Hornicek FJ, DeGroot H*
- # 93 Pathologic Fracture In Osteosarcoma: Prognostic Significance And Treatment Implications *Ghert MA, Gebhardt MC, Zurakowski D, Thompson Jr RC, Scully SP*
- #120 Tibial Tubercle Osteotomy in Revision Total Knee Replacement *Ahluwalia S, Duffy G, Burke D*
- # 127 Clinical Outcomes In Chordoma: The Utility Of Flow Cytometric DNA Determination *Berven S, Hornicek FJ, Zurakowski D, Gebhardt MC, Mankin HJ*
- # 133 Open Reduction and Internal Fixation for Supracondylar Humerus Fractures in Children *Reitman R, Waters P, Millis M*
- Domestic Violence Symposium: Orthopaedic Aspects of Child Abuse. *Kocher MS*
- # 152 Compartment Syndromes in the Pediatric Populations *Bae DS, Kadiyala RK, Waters PM*
- # 182 Presentation Effects of Cruciate Retaining vs. Posterior Stabilized TKA on Proprioception, Balance and Quairiceps EMG: A Prospective Ramdomized Study *Swanik B, Lephart SM, Rubash HE*
- Revision in Total Hip Arthroplasty: Understanding and Management of Osteolysis. Periprosthetic Osteolysis *Jacobs JJ, Maloney WJ, McKellop HA, Rubash HE, Harris WH -Moderator Rubash HE*
- ASSH**
- Adolescent and Pediatric Throwing injuries *Waters P*
- Wrist Pathology in the Adolescent Athlete *Waters P*
- POSNA**
- The Surgical Management of Post-Traumatic Distal Radial Growth Arrest in Adolescents. *Waters P*
- American Shoulder and Elbow Surgeons**
- # 14 Revision Of Unstable Total Elbow Arthroplasty *Ring D*
- American Orthopaedic Foot and Ankle**
- Intramedullary versus Blade Plate Fixation for Tibiotalocalcaneal Arthrodesis: A biomechanical Investigation *Chiodo C, Acevedo J, Sammarco J, Parks B, Boucher H, Myerson M, Schon L*
- AOFAS**
- Operative vs Nonoperative Management of Acute Achilles Tendon Ruptures: Expected-Value Decision Analysis *Kocher MS, Luke A, Marshall R, Hawkins RJ*
- American Orthopaedic Society for Sports Medicine**
- Partial Tears of the Anterior Cruciate Ligament in Children and Adolescents. *Kocher MS, Luke A, Zurakowski D, Micheli LJ*
- American Orthopaedic Society for Sports Medicine**
- Effect of Functional Bracing on Knee Injury in ACL-deficient Professional Skiers. *Kocher MS, Sterett WI, Briggs KK, Zurakowski D, Steadman JR*
- American Orthopaedic Society for Sports Medicine**
- Functional and Radiographic Outcome of Juvenile Osteochondritis Dissecans of the Knee Treated with Transarticular Arthroscopic Drilling. *Micheli LJ, Kocher MS, Zurakowski D, Yaniv M*
- American Orthopaedic Society for Sports Medicine**
- Poster Presentation**
- Determinants of Patient Satisfaction after Anterior Cruciate Ligament Reconstruction. *Kocher MS, Steadman JR, Zurakowski D, Briggs K, Sterett WI, Hawkins RJ*
- #286 Failed Shoulder Hemiarthroplasty: Patterns of Failure and Outcome of Revision Shoulder Arthroplasty. *Ramappa AJ, Gomoll A, Zurakowski D, Koris M, Thornhill TS*
- # 292 Cerebral Palsy: Current Concepts in Orthopaedic Management *Waters P*
- AAOS Scientific Exhibit**
- #023 Orthopaedic Aspects of Child Abuse. *Kocher MS, Kasser JR*
- UHMWPE wear performance of oxidized zirconium total knee femoral components *Spector M, Ries MD, Bourne RB, Sauer WL, Long M, Hunter GB*
- Advances in bone grafting: What's New in Bone Allografts *Tomford W*
- Posters**
- # PE7 Effect of Functional Bracing on Knee Injury in ACL-deficient Professional Skiers. *Kocher MS, Sterett WI, Briggs KK, Zurakowski D, Steadman JR*
- # PE 51 Effect of Ipsilateral Femur Fracture on Clinical Outcome of Acute Compartment Syndrome of the Thigh. *K Mithoefer, DL Lhowe, DT Altman, GT Altman*
- Post-Fracture Mortality in ip Fractures Differs by Fracture Location and Type of Surgery *Vogt MT, Rubash HE, Chu CR, Scott JC, Cauley JA*
- # PE123 Diagnostic Performance of Clinical Examination and Selective Magnetic Resonance Imaging in the Evaluation of Intra-articular Knee Disorders in Children and Adolescents. *Kocher MS, DiCanzio J, Zurakowski D, Micheli LJ*
- #PE151 Advanced Web-Based Internet Site Documentation Center for Outcome Studies *Hauser D, Hoeffel D, Condon R, Lowenstein J, Barrus S, Wessinger SJ, Rubash H, Harris WH*

PE161 Repair of Bone Allograft Fracture Using Bone Morphogenetic Protein (BMP)-2 in an Animal Experimental Model

Lee FY, Storer S, Hazan EJ, Gebhardt MC, Mankin HJ

#PE367 Debonded Cemented Femoral Stems with Proximal Macrotexturing and the Generation of Cement Debris: An In Vitro Investigation and Retrieval Analysis

Duffly G, Muratoglu OK, Harris WH

#PE371 Comparison of Four New Highly Crosslinked Polyethylenes for Use in Total Hip Replacement

Muratoglu OK, Bragdon CR, O'Connor DO, Jasty M, Harris WH

PE471 Operative vs Nonoperative Management of Acute Achilles Tendon Ruptures: Expected-Value Decision Analysis.

Kocher MS, Luke A, Marshall R, Hawkins RJ

AAOS Video Presentation

Hip Arthroscopy: Indications, Technique, and Results.

Kocher MS, Sterett WI

Awards

Ranawat Award

A Rationale for Using Epicondylar Axis as the Reference for Femoral Component Rotation in Total Knee Arthroplasty

Berger RA, Miller MC, Petrella AJ, Karmas A, Rubash HE

**Harvard Combined Orthopaedic Residency Program
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