I began my remarks last year in this Residency Program Director’s Corner with “changes continue in the Harvard Combined Orthopaedic Residency Program”. Well – today, just as last year, changes continue in the Harvard Combined Orthopaedic Residency Program. We had our successful Residency Review Committee’s site visit in April and were approved to expand our Program to 12 residents each year from 10, bringing our total number of residents to 60. The reason necessitating the return to our previous level of twelve residents a year was essentially because of the 80 hour work rule, which has forced us to install a night float rotation at the Massachusetts General Hospital and the Brigham and Women’s Hospital. The night float system obviously removes a resident from a specialty clinical rotation during the time he or she functions as a night float. In addition, Dr. Gebhardt has been very successful in recruiting young and enthusiastic academic faculty at the Beth Israel-Deaconess Medical Center and we, the Executive Committee and residents, developed a plan to return residents to BIDMC. In fact, on Saturday, March 12, the Executive Committee, representatives of each class of residents and junior faculty from each of the main teaching hospitals met to consider the necessary clinical rotations to accommodate these new additional residents as well as return to the BIDMC. Our educational principles and goals were as follows:

1. Develop a mandatory introduction to research (rotation) within the residency program.
2. Develop an elective rotation, if possible.
3. Return residents to the BIDMC (resulting total: one each in PGY 2, 3, 4 and 5, and four PGY 1’s)
4. Increase our residents’ foot and ankle experience.
5. Increase our residents’ spine experience
6. Provide junior and senior resident rotations on all clinical services.
7. Attempt to provide longer services; that is, 10 weeks, which are more desirable than the 4-5 weeks rotations.
8. Structure the fifth year to include the clinical services that allow the residents as much surgical independence and patient responsibility as possible.

A two-month introduction to research (rotation) will begin in the PGY 4 year by 2006. The purpose of the research rotation is to provide an introduction to research as well as allow protected time for residents to complete their thesis research project. Each resident is still required to present a thesis at the end of the PGY 5 year before graduation. Some theses are about clinical issues, others involve basic science. Many of our residents have a basic science background, have already worked in some Harvard laboratories and usually complete a project in those laboratories. Others, with an interest in basic science, can start a project early in the residency program with one of our scientists in any of the four major teaching hospitals. Importantly, this two-month research block will ensure that residents receive an introduction to the scientific method, learn how to formulate a hypothesis, introduce them to laboratory methods and types of clinical research as well as the importance of clinical trials and outcomes research. We want them to learn how to determine sample size and understand power analysis to help them with both design and analysis of studies as well as to critically evaluate orthopaedic literature. We have asked our research faculty to develop a series of seminars and lectures during this rotation and supervise an orthopaedic research journal club. Our Executive Committee wants our residents to appreciate basic and clinical research and be able to critically evaluate the orthopaedic literature. Our residents are very excited about having this opportunity free of clinical obligations to devote to their research efforts. The faculty and Executive Committee are looking forward to this rotation to help further educate the residents concerning the critical evaluation of orthopaedic basic and clinical research in orthopaedic literature.

We continue to expand our evaluation of residents regarding the six new core competencies mandated by the ACGME with a 360-degree evaluation of all residents. Residents will begin to evaluate their peers as well. We will continue to ask for, in addition to the faculty, evaluations by nurses and patients themselves about our residents’ performance. In the next few months, the virtual reality arthroscopic knee simulator provided by the American Academy of Orthopaedic Surgeons will be in place (with Dinesh Patel’s oversight) for a pilot project to evaluate our residents’ performance with the simulator. It has obvious important implications not only as an educational tool, but also as an examination device.

Saturday morning breakfast with the Program Director continues. The section entitled the “Business of Orthopaedics”
has resumed this year. To date, we have discussed the following issues:

- Medicare formula and payments
- Contract negotiations
- Outsourcing
- E/M Guidelines
- Practice management systems
- Billing terminology
- Fraud Issues
- CPT/ICD-9 codes and modifiers

The most recent topic was Financial Planning (provided by the Massachusetts Medical Society.) The session was greatly appreciated by all our residents. It provided insightful information about investing for their future. Chris Chiodo also provided a CORE session on coding and participated in the Saturday Breakfast meetings with a lecture on “alternate revenue streams.”

Another change this year: We are combining Graduation and Thesis days. On Friday, June 17, we will honor our graduating residents with our traditional dinner and ceremonies which will also conclude our annual Osgood lecture and Thesis Day. The Executive Committee and I would especially like to welcome any and all alumni to return for this day’s activities. It would be wonderful if, in the future, we could combine this with a Saturday program allowing our alumni to present papers. Of course we would include some sporting activities as well and possibly enjoy a Saturday evening dinner with the faculty, residents and alumni.

This year many of the graduating residents have received awards. Brandon Earp received a resident/fellow research award from the OREF for work entitled “The Correlation of Muscle Imbalance with MRI Imaging in Children with Brachial Plexus Birth Palsy.” Reuben Gobezie received the MGH Physician Scientist Award for “Proteomic Analysis of Osteoarthritic Joints” and a Zimmer Holdings Inc/OREF Orthopaedic Career Development Award for his work: “Determining Biomarkers for Osteoarthritis Using Proteomics Technology.” David Cashen received the AOA/OREF Zimmer Resident Leadership Forum award and will attend the Resident Leadership Forum at the Annual AOA meeting in California. Kevin Bozic, Class of 1999, who is now on the faculty at the University of California in San Francisco has been selected as a North American Traveling Fellow this fall. You may get a chance to see him as he travels around the United States on this fellowship.

This year is the first time residents who have participated in the “Surgical Loupe Program” have been in practice for a year. As agreed, each resident pledged to pay back the initial cost for his or her loupes. I am asking everyone who has received these loupes and has been in practice for a year to please reimburse the residency program through Diane Sheehan. We need this money to purchase loupes for our new residents. Now that the initial seed funding has been completed the program will be self-sustaining as long as residents who have graduated and in practice return the initial cost for their loupes. The program has been very successful and I thank the Executive Committee for supporting the start up costs.

Conrad Wang will be rejoining the residency in July after a two-year leave of absence to complete his MBA at the Harvard Business School. He now faces the tough decision whether to remain in medicine or pursue a new career in the venture capital world. Either way, we wish him success as we do all our graduates.

Last month one of our recent graduates – Brent Ponce – was deployed to Iraq. We wish him a speedy and safe return home.
<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker(s)</th>
<th>Location</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/8/04</td>
<td>John F Irving, MD</td>
<td>The Orthopaedic Group, New Haven, Connecticut</td>
<td>Direct 2 Incision Total Hip Replacement</td>
</tr>
<tr>
<td>9/15/04</td>
<td>Michael Vitale, MD, MPH</td>
<td>Children’s Hospital of New York Presbyterian Hospital</td>
<td>New Opportunities for Clinical Research</td>
</tr>
<tr>
<td>9/22/04</td>
<td>William Harris, MD</td>
<td>Massachusetts General Hospital</td>
<td>Conquest of a Worldwide Human Disease</td>
</tr>
<tr>
<td>10/6/04</td>
<td>Mitchel Harris, MD</td>
<td>Brigham &amp; Women's Hospital</td>
<td>Osteomyelitis: A look at the Cellular Level</td>
</tr>
<tr>
<td>10/13/04</td>
<td>Alvin H Crawford, MD</td>
<td>Cincinnati, Ohio</td>
<td>Experience with management of dystrophic scoliosis in patients with neurofibromatosis</td>
</tr>
<tr>
<td>10/20/04</td>
<td>Mary Bouxsein, PhD</td>
<td>Beth Israel Biomechanics Lab</td>
<td>Osteoporosis</td>
</tr>
<tr>
<td>10/27/04</td>
<td>Joseph McCarthy, MD</td>
<td>New England Baptist Hospital</td>
<td>Hip Joint Pain: The Case for Arthroscopic Evaluation and Treatment</td>
</tr>
<tr>
<td>11/3/04</td>
<td>Wolfgang Fitz, MD</td>
<td>Brigham &amp; Women's Hospital</td>
<td>Metallic Hemiarthroplasty for the treatment of Knee Osteoarthritis</td>
</tr>
<tr>
<td>11/10/04</td>
<td>Reinhold Ganz, MD</td>
<td>Universitätsklinik fur Orthopedische Chirurgie, Switzerland</td>
<td>The Role of Anatomy in Joint Preserving Surgery of the Hip</td>
</tr>
<tr>
<td>11/17/04</td>
<td>Timothy Bhattacharyya, MD</td>
<td>Massachusetts General Hospital</td>
<td>Do the Study!: Five Counterintuitive Findings in Orthopaedic Surgery</td>
</tr>
<tr>
<td>11/24/04</td>
<td>Christopher G Moran, MD, FRCS</td>
<td>University Hospital, Nottingham, UK</td>
<td>Early Repair of Complex Knee Ligament Injuries Following High Energy Trauma</td>
</tr>
<tr>
<td>12/1/04</td>
<td>Louis G Denis, MD</td>
<td>New England Baptist Hospital</td>
<td>Lumbar Disk Arthroplasty</td>
</tr>
<tr>
<td>12/8/04</td>
<td>Jens Chapman, MD</td>
<td>Harborview Medical Center</td>
<td>Cranioocular Injuries: An Overlooked Entity?</td>
</tr>
<tr>
<td>12/15/04</td>
<td>Michael Rogal, MD, JD</td>
<td>Monroeville, Pennsylvania</td>
<td>Medical Malpractice - Prevention, Defense, and Recourse (Risk Management credit)</td>
</tr>
<tr>
<td>12/22/04</td>
<td>Richard deAsla, MD</td>
<td>Massachusetts General Hospital</td>
<td>Adult Acquired Flatfoot: The role of the Posterior Tibial Tendon</td>
</tr>
<tr>
<td>1/5/05</td>
<td>Frank Frassica, MD</td>
<td>Johns Hopkins University</td>
<td>Metastatic Bone Disease: What you need to know</td>
</tr>
<tr>
<td>1/12/05</td>
<td>Thomas P Ruedi, MD, FACS</td>
<td>AO International, Davos Platz, Switzerland</td>
<td>Pilon Fractures: original work to present day</td>
</tr>
<tr>
<td>1/19/05</td>
<td>Clifford Turen, MD</td>
<td>R Adams Cowley Shock Trauma Center</td>
<td>Acute Management of Pelvic Fractures</td>
</tr>
<tr>
<td>1/26/05</td>
<td>Piet De Boer, MD</td>
<td>Nether Poppleton, York, UK</td>
<td>The Evolution of Surgical Approaches in Trauma Surgery</td>
</tr>
<tr>
<td>2/2/05</td>
<td>Scott Reuben, MD</td>
<td>Baystate Medical Center</td>
<td>Recent Advances in Acute Pain following Orthopaedic Surgery</td>
</tr>
<tr>
<td>2/9/05</td>
<td>Andreas Roposch, MD MSc</td>
<td>Hospital for Sick Children</td>
<td>Got the Information but not quite sure what it means: Uncertainty in the Diagnosis of DDH</td>
</tr>
<tr>
<td>2/16/05</td>
<td>Anthony Brothers, MD</td>
<td>Bagram Air Base, Afghanistan</td>
<td>Orthopaedic War Injuries: Past, Present, Future</td>
</tr>
<tr>
<td>3/2/05</td>
<td>Christian Gerber, MD</td>
<td>University of Zurich</td>
<td>Proximal Humerus Fractures: Current Concepts and Best Approaches</td>
</tr>
<tr>
<td>3/9/05</td>
<td>Julie Glowacki, PhD</td>
<td>Brigham and Women's Hospital</td>
<td>Vitamin D: What’s New for the Orthopaedic Surgeon in 2005.</td>
</tr>
<tr>
<td>3/16/05</td>
<td>Bruce Beynon, PhD</td>
<td>McClure Musculoskeletal Research Center</td>
<td>Rehabilitation after ACL Injury and Reconstruction</td>
</tr>
<tr>
<td>3/23/05</td>
<td>Alan Gross, MD</td>
<td>Mt. Sinai Hospital</td>
<td>Revision Arthroplasty of Hip with Restoration of Bone Stock</td>
</tr>
<tr>
<td>3/30/05</td>
<td>Charles Brown, MD</td>
<td>Brigham &amp; Women’s Hospital</td>
<td>Diagnosis and Management of Posterolateral Laxity</td>
</tr>
<tr>
<td>4/6/05</td>
<td>Steven A Lietman, MD</td>
<td>The Cleveland Clinic</td>
<td>Giant Cell Tumors: Is it a matter of getNFXT</td>
</tr>
<tr>
<td>4/13/05</td>
<td>Mininder Kocher, MD</td>
<td>Boston Children's Hospital</td>
<td>Knee Injuries in the Pediatric Athlete</td>
</tr>
<tr>
<td>4/20/05</td>
<td>Joseph Vacanti, MD</td>
<td>Massachusetts General Hospital</td>
<td>An Overview of Tissue Engineering and Regenerative Medicine</td>
</tr>
<tr>
<td>4/27/05</td>
<td>Robert Hotchkiss, MD</td>
<td>Hospital for Special Surgery</td>
<td>Complex Injuries of the Elbow, Question: Does word-order matter?</td>
</tr>
<tr>
<td>5/4/05</td>
<td>Chris Chiodo, MD</td>
<td>Brigham and Women's Hospital / Faulkner Hospital</td>
<td>Hallux Valgus in the 21st Century: Beyond Roger Mann</td>
</tr>
<tr>
<td>5/11/05</td>
<td>Arun Ramappa, MD</td>
<td>Beth Israel Deaconess Medical Center</td>
<td>Shoulder Injuries in the Overhead Athlete</td>
</tr>
<tr>
<td>5/18/05</td>
<td>Christine Towle, PhD</td>
<td>Massachusetts General Hospital</td>
<td>Update from the Cartilage Biology Laboratories</td>
</tr>
<tr>
<td>5/18/05</td>
<td>Mark Randolph, PhD</td>
<td>Massachusetts General Hospital</td>
<td>New Frontiers in Meniscal Repair &amp; Regeneration</td>
</tr>
<tr>
<td>5/18/05</td>
<td>Arun Shanbhag, PhD</td>
<td>Massachusetts General Hospital</td>
<td>Gene Arrays and Protein Chips to Decipher Osteolysis</td>
</tr>
<tr>
<td>5/25/05</td>
<td>Michael R Baumgaertner, MD</td>
<td>Yale Univ School of Medicine</td>
<td>Pertrochonderic Femoral Fractures</td>
</tr>
<tr>
<td>6/1/05</td>
<td>John Carrino, MD, MPH</td>
<td>Brigham &amp; Women's Hospital</td>
<td>New Horizons in Musculoskeletal Imaging</td>
</tr>
<tr>
<td>6/8/05</td>
<td>Rosamond Rhodes, PhD</td>
<td>Mount Sinai School of Medicine</td>
<td>Refusing Patient Requests: Personal Morality and Professional Responsibility</td>
</tr>
<tr>
<td>6/15/05</td>
<td>James Herndon, MD, MBA</td>
<td>MGH &amp; BWH</td>
<td>Patient Safety - What is the fuss all about?</td>
</tr>
<tr>
<td>6/17/05</td>
<td>Frank Eismont, MD</td>
<td>University of Miami</td>
<td>Osgood Lecture: Infections of the Spine</td>
</tr>
<tr>
<td>6/22/05</td>
<td>Kelly Vince, MD</td>
<td>USC Center for Arthritis</td>
<td>Revision Total Knee Arthroplasty</td>
</tr>
</tbody>
</table>
## Graduating Residents and Fellowship Plans

<table>
<thead>
<tr>
<th>Name</th>
<th>Fellowship Specialty</th>
<th>Location</th>
<th>Fellowship Director</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travis H Matheney MD</td>
<td>Pediatric Orthopaedics</td>
<td>Boston Children’s Hospital, Boston, MA</td>
<td>James Kasser, MD</td>
</tr>
<tr>
<td>John A. Abraham MD</td>
<td>Oncology</td>
<td>Mass General Hosp, Children's Hosp, and BI Deaconess Medical Center, Boston, MA</td>
<td>Francis H HOME, MD</td>
</tr>
<tr>
<td>Raj Ahiwalia MD</td>
<td>Sports</td>
<td>Brigham &amp; Women's Hospital, Boston, MA</td>
<td>Scott Martin, MD</td>
</tr>
<tr>
<td>Jennifer L Cook MD</td>
<td>Knee</td>
<td>Lenox Hill Hospital, New York, NY</td>
<td>Drs. Insall, Scott And Kelly</td>
</tr>
<tr>
<td>Christopher L Forthman MD</td>
<td>Hand</td>
<td>The Curtis National Hand Center At Union Memorial Hospital, Baltimore, MD</td>
<td>Thomas Graham, MD</td>
</tr>
<tr>
<td>Reuben Gobezie MD</td>
<td>Shoulder &amp; Elbow</td>
<td>MGH &amp; BWH, Boston, MA</td>
<td>JP Warner, MD; Felix Savoie, MD</td>
</tr>
<tr>
<td>Andreas H Gomoll MD</td>
<td>Sports</td>
<td>Rush Presbyterian-St. Lukes Hospital, Chicago, IL</td>
<td>Bernard Bach, MD</td>
</tr>
<tr>
<td>Eric P Rightmire MD</td>
<td>Sports</td>
<td>Univ of California, San Francisco, CA</td>
<td>Mark SAFAN, MD</td>
</tr>
<tr>
<td>Patrick C McCulloch MD</td>
<td>Sports</td>
<td>Rush Presbyterian-St. Lukes Hospital, Chicago, IL</td>
<td>Bernard Bach, MD</td>
</tr>
<tr>
<td>Jeremy M Moses MD</td>
<td>Sports</td>
<td>Massachusetts General Hospital, Boston, MA</td>
<td>Bert ZARINS, MD</td>
</tr>
<tr>
<td>Samantha A Spencer MD</td>
<td>Pediatric Orthopaedics</td>
<td>Boston Children’s Hospital, Boston, MA</td>
<td>James Kasser, MD</td>
</tr>
<tr>
<td>Paper #</td>
<td>Title</td>
<td>Authors</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>126</td>
<td>The 3D kinematics of the PCL during in-vivo weight-bearing flexion</td>
<td>LE DeFrate, TJ Gill, G Li</td>
<td></td>
</tr>
<tr>
<td>222</td>
<td>Reciprocal relationship between thoracic and spinal deformity and its effect on pulmonary function</td>
<td>HP Mehta, BD Snyder, E Sun, A Jackson, C Bellardine C, K Latchen</td>
<td></td>
</tr>
<tr>
<td>240</td>
<td>Morphological, tensile and wear properties of high crystallinity crosslinked UHMWPE</td>
<td>A Bistolfi, ME Turell, YL Lee, A Bellare</td>
<td></td>
</tr>
<tr>
<td>241</td>
<td>Macrophage response to UHMWPE particles: A time sequence study using high throughput protein microarrays</td>
<td>AS Shanbhag, AM Kaufman, CI Alabre, J Decker, G Grills and HE Rubash</td>
<td></td>
</tr>
<tr>
<td>234</td>
<td>In-situ force orientation of the ACL &amp; ACL graft</td>
<td>R Papannagari, TJ Gill, LE DeFrate, JD Yoo, SE Park, G Li</td>
<td></td>
</tr>
<tr>
<td>Poster #288</td>
<td>Using nanotechnology to increase the fatigue life of acrylic bone cement</td>
<td>A Bellare, YL Lee, W Fitz, TS Thornhill</td>
<td></td>
</tr>
<tr>
<td>Poster #296</td>
<td>Enhanced and accelerated chondrogenesis of mesenchymal stem cells by combined gene transfer of IGF-1 with TGF-81 or BMP-2</td>
<td>AF Steinert, GD Palmer, OB Betz, C Pilapil, CH Evans, SC Ghivizzani</td>
<td></td>
</tr>
<tr>
<td>Poster #302</td>
<td>Cartilage repair with engineered chondrocyte constructs: a 6 month study in a swine model.</td>
<td>A Kasanagi, EB Blahut, JM Johnson, AC Mascarenhas, T Murata, A Tsuchiya, M Mochizuki, S Mizuno</td>
<td></td>
</tr>
<tr>
<td>Poster #307</td>
<td>Effect of paralysis in-ovo on chick hind limb Development: An evaluation using micro MRI.</td>
<td>C Hayashi, M Takahashi, N Fukai, KJ McCarthy</td>
<td></td>
</tr>
<tr>
<td>Poster #318</td>
<td>The Effect Of Alendronate In The Treatment Of Experimental Osteonecrosis</td>
<td>Holstetter, JC; Wang, J; Samuel, RE; Glimcher, MJ</td>
<td></td>
</tr>
<tr>
<td>Poster #335</td>
<td>Micromechanical multicyclic creep tests show increased fragility of human cortical bone with age</td>
<td>SY Tang, GP Berard, RN Alkalay, D Vashishtha</td>
<td></td>
</tr>
<tr>
<td>Poster #348</td>
<td>Hydrostatic pressure with low oxygen stimulates extra cellular matrix accumulation by human articular chondrocytes in a 3-d collagen gel/sponge.</td>
<td>A Kasanagi, A Mascarenhas, EB Blahut, JM Johnson, T Murata, S Mizuno</td>
<td></td>
</tr>
<tr>
<td>Poster #393</td>
<td>Alendronate is a potential therapeutic reagent for high grade chondrosarcoma.</td>
<td>Morii T, Yabe H, Morioka H, Anazawa U., Susa, Togaya, Yoshikawa, P., Weissbach, L.</td>
<td></td>
</tr>
<tr>
<td>Poster #560</td>
<td>In-vivo cartilage contact kinematics and cartilage thickness distribution in human tibiofemoral joint</td>
<td>G Li, SE Park, LE DeFrattre, ME Schutzer, L Ji, TJ Gill, HE Rubash</td>
<td></td>
</tr>
<tr>
<td>Poster #562</td>
<td>A dual orthogonal fluoroscopic system for determining in vivo TKA kinematics</td>
<td>GR Hanson, J.F. Suggs, H.E. Rubash, G. Li</td>
<td></td>
</tr>
<tr>
<td>Poster #570</td>
<td>Patient specific 3D analysis of in-vivo knee kinematics after cruciate retaining TKA</td>
<td>JF Suggs, GR Hanson, SM Durbanakula, R Papannagari, T Johnson, AA Freiberg, HE Rubash, G Li</td>
<td></td>
</tr>
<tr>
<td>Poster #578</td>
<td>A global optimization method for prediction of muscle forces of the human musculoskeletal system</td>
<td>G. Li, J.E. Pierce</td>
<td></td>
</tr>
</tbody>
</table>
Poster # 670
Constitutive relationships for cortical and trabecular Rat bone
A Nazarian, L Comargo, E Cory, BD Snyder

Poster # 695
Integration of engineered cartilage matrix: a confocal and light microscope analysis
Peretti GM, Campo-Raitz V, Randolph MA, Gonzalez S, Roses RE, Fraschini G and MJ Yaremchuk

Poster # 716
The prediction of the stress-strain behavior of ligaments and tendons
L.E. DeFratre, G. Li

Poster # 802
The measurement of the three-dimensional surface strain distribution of achilles tendon grafts
S.E. Park, L.E. DeFratre, J.F. Suggs, T.J. Gill, H.E. Rubash, G. Li

Poster # 816
The length change of the medial and lateral collateral ligaments during in-vivo knee flexion
S. Mizio

Poster # 827
The Effect Of Thrombin On Acl Cell Migration, Proliferation And Collagen Production
Chen F, Forsythe B, Lee SJ, Yoo JJ, Murray MM

Poster # 836
The measurement of the three-dimensional surface strain distribution of achilles tendon grafts
L.E. DeFratre, A. van der Ven, P.J. Boyer, G. Li

Poster # 873
High pressure crystallized, irradiated and α-tocopherol-stabilized UHMWPE with high crystallinity, low wear and oxidation
E Oral, K Wannomae, S Christensen, O Maratoglu

Poster # 925
Inhibition of osteolysis by bisphosphonates in a continuous particle infusion model
M Kawashita, Y Fujikawa, H Taira, C Takita, M Iwase, K Kim

Poster # 988
The length change of the medial and lateral collateral ligaments during in-vivo knee flexion
S. Mizio

Poster # 1006
Inference of cartilage repair in bone marrow clots
GD Palmer, AF Steinert, A Pascher, CG Pilapil, CH Evans, SC Gheitzzani

Poster # 1018
Beaubien, BP, Kallemeier PK, Derencek A, Buttermann GR, Lee WD, Kidder LS, Turner SS, Sein H and KB Wood

Poster # 1111
Differential Expression Of Vegf Splice Variants And Receptors In Knee Joint Menisci Under Systemic Hypoxia
Hofstaetter JG, Saad FA, Wunderlich L, Gimlich MJ and Samuel

Poster # 1146
Inhibition of osteolysis by bisphosphonates in a continuous particle infusion model
M Kawashita, Y Fujikawa, H Taira, C Takita, M Iwase, K Kim

Poster # 1158
Mid-pelvis penetration in a clinical series of patients receiving total hip replacements
J Karrholm, W Harris

Poster # 1190
Hip simulator wear of real-time aged thermally annealed and gamma sterilized irradiated polyethylene acetabular liners
B Barroughs, S Christensen, A Lozinsky, K Wannomae, W Harris, O Maratoglu

Poster # 1205
Stretching of extensor mechanism after total knee arthroplasty
G Li, R Papannagari, PJ Boyer, JF Suggs, E Most, HE Rubash

Poster # 1227
Are rotating platforms beneficial in posterior stabilized knee designs?
M Jasty, O Muratoglu, G Plank, H Malchau, H Rubash

Poster # 1248
Tibiofemoral contact mechanics after unicompartmental knee arthroplasty
J.F. Suggs, G. Li, S.E. Park, P.G. Sultan, S. Steffensmeier, H.E. Rubash, A.A. Freiberg

Poster # 1252
The tibial spine in posterior stabilized total knee arthroplasty, kinematics and mechanics
M Jasty, O Muratoglu, G Li, H Malchau, H Rubash

Poster # 1272
Response Of Articular Cartilage To Periacetabular Osteotomy For Hip Dysplasia
Kim Y, Jessel R, Cunningham T, Zurakowski D, Millis MB, Jaramillo D, Gray M, Burstein D.
Poster #1449
Activation of a distinct set of transcriptional regulators during chondroinduction of dermal fibroblasts by demineralized bone

KE Yates

Poster #1474
Effect of medium osmolality on COX-2 expression and PGE2 production in IL-1-activated articular cartilage

D Le, HJ Mankin and CA Towle

Poster #1509
In Situ IGF-1 Gene Transfer Enhances Healing Response In The Anterior Cruciate Ligament

Steinert AF, Chen F, Palmer GD, Betz O, Pilapil C, Everts CH, Murray MM

Poster #1528
In-vivo kinematics of the ACL during weight-bearing knee flexion

G. Li, L.E. DeFrute, T.J. Gill

Poster #1529
The effect of ACL reconstruction on knee joint kinematics under simulated muscle loads

JD Yoo, R Papannagari, SE Park, LE DeFrute, TJ Gill, G Li

Poster #1536
The effect of insoluble collagen morphology on fibroblast migration, proliferation and collagen production

Pulu DT, Chen F and MM Murray

Poster #1661
Two second generation highly crosslinked UHMWPEs show improved mechanical properties and fatigue strength

O Muratoglu, B Burroughs, A Malhi, S Christensen, K Wannomae, E Oral, S Spiegelberg, W Harris

Poster #1662
Cavitational mechanisms dictate fatigue resistance of irradiated and melted UHMWPE

E Oral, A Malhi, O Muratoglu

Poster #1672
Could x-rays be used to sterilize surgical grade UHMWPEs without adversely affecting their oxidative stability?

K Wannomae, O Muratoglu

Poster #1673
The effect of doping conditions of α-tocopherol stabilized irradiated UHMWPE

E Oral, K Wannomae, O Muratoglu

Poster #1674
Comparison of resins in a second generation highly crosslinked UHMWPE for high stress applications

A Malhi, K Wannomae, W Harris, O Muratoglu

Poster #1694
Shape and charge of molecules alter solute diffusion in bovine articular cartilage

S. Mizuno, K. Johnson

Poster #1696
Shape and charge of molecules alter solute diffusion in bovine articular cartilage

KD Johnson, S Mizuno

Poster #1712
A second generation highly crosslinked UHMWPE: Vitamin E stabilization does not adversely affect the wear of irradiated liners

E Oral, B Burroughs, A Malhi, S Christensen, K Wannomae, A Lozynsky, W Harris, O Maratoglu

AAOS PAPERS

Paper #046
Hip Arthroscopy in Children and Adolescents

MS Kocher, YJ Kim, MB Millis, R Mandiga, P Siparsky, LJ Micheli, JR Kasser

Paper #017
A five-year study of the femoral head penetration in THR using RSA and the Martell Method

C Bragdon, J Martell, M Greene, D Estok, J Thanner, H Malchau, J Karrholm, W Harris

Paper #058
Physeal Sparing ACL Reconstruction in Prepubescent Children

MS Kocher, S Gary, LJ Micheli

Paper #059
Functional Outcome of Juvenile Osteochondritis Dissecans of the Knee treated with Internal Fixation

MS Kocher, J Czarnecki, LJ Micheli
72nd Annual Meeting of the AAOS continued

Paper # 311
Poor Survival for Patients with Paget’s Sarcoma
HJ Mankin and FJ Hornicek

Paper # 80
A Prospective Multi-Center Study of New Fragment-Specific Locking Implants for Distal Radius Fractures
C Forthman, D Rikli, J Jupiter, H Siebert, G Lauri

Paper # 84
The Influence of Psychological Factors on Self-Reported Upper Extremity Health Status
D Ring, J Kadzielski, L Fabian, L Malhotra, JB Jupiter

Paper # 115
Limitations of Crosslinked polyethylenes and two potential second generation solutions
O Muratoglu, B Barroughs, A Malhi, S Christensen, K Warnomae, E Oral, S Spiegelberg, W Harris

Paper # 152
Reliability, Validity, and Responsiveness of the ASES Shoulder Score
MS Kocher, M Horan, KK Briggs, J O’Holleran, RJ Hawkins

Paper # 165
Treatment of Acute Traumatic Elbow Instability Without Medial Collateral Ligament Repair
Chris Forthman, MD; David Ring, MD

Paper # 229
The Value of the Dedicated Orthopaedic Trauma Operating Room
T Bhattacharya, Morrison, Wikland, Smith, Rubash, Vrahas

Paper # 227
Conflict of Interest and Positive Clinical Research Findings in Orthopaedic Surgery
MS Kocher, K Oláé, M Bhandari, C Mehjian

Paper # 250
In-vivo knee ligament function
G Li, LE DeFrate, SE Park, TJ Gill, HE Rubash

Paper # 342
Association Of Massive Rotator Cuff Tears With SSN Injury: A Not So Rare Problem / Suprascapular Nerve Dysfunction with Massive Rotator Cuff Tears
JP Warner, M Porramatikul, DT Lie, JG Costouros, TF Holovacs, PJ Millett

Paper # 384
Mechanical and Clinical Analysis of a Novel Subscapularis Repair Technique for Shoulder Arthroplasty
B Ponce, PJ Millett, R Aklawalla, AD Mazzocca, SA Santangelo, JP

AAOS POSTERS

Poster #052
Steady state wear rate of e-beam highly crosslinked polyethylene at 3.7 years
S Barrett, C Bragdon, J Martell, W Harris

Poster # 108
Five-year patient reported outcomes of total knee arthroplasty: Results From A Multinational Study
EA Lingard, RJ Wright, ID Learmonth and CB Sledge

Poster # 154
In-vitro and in-vivo investigation of a high flexion TKA
G Li, JA Argenson, RD Komistek, R Papannagari, E Most, HE Rubash

Poster # 193
The Influence of Job Satisfaction and Burnout on Outcome after Hand Injuries
David Ring, MD; John Kadzielski, BS; Leah Malhotra, BS; Jesse B Jupiter, MD

Poster # 236
Uncemented Total ShoulderReplacement in Rheumatoid Arthritis
SD Martin, D Zurakowski, TS Thornhill

Poster # 277
Fracture-Dislocations of the Elbow: Can Injury Components Be Predicted Based Upon Injury Patterns?
C Forthman, D Ring

Poster # 282
Reference Points for Radial Head Prosthesis Height: How to Avoid “Overstuffing” the Joint
J Doorsberg, D Ring

Poster # 341
Intrinsic biomechanics of ACL reconstruction- An in-vitro robotic investigation
G Li, R Papannagari, LE DeFrate, JD Yoo, SE Park, TJ Gill

Poster # 342
The effect of ACL reconstruction on knee joint kinematics under simulated muscle loads
JD Yoo, R Papannagari, SE Park, LE DeFrate, TJ Gill, G Li
The Combined Orthopaedic Residency Program
PGY-2 Residents
2005-2006

Poster # 362
Factors Associated with Meniscus Tears in the ACL Deficient Knee
MA Terry, B Maxwell, AJ Ramappa, KK Briggs, JR Steadman

Poster # 376
MR Arthrography of the Shoulder: Cartilage Loss Associated with Labral Tears and Bone Marrow Edema
G Neumann, P Lang, H Yoshiooka, JA Carrino, CS Winalski, PJ Millett

Poster # 378
Articular Cartilage in the Shoulder: Correlation of MR Arthrography and Surgical Arthroscopy
G Neumann, H Yoshiooka, CS Winalski, JA Carrino, P Lang, PJ Millett

Poster # 381
Patient Comprehension: Preoperative Instructions for Informed Consent
SD Martin, D Zurakowski, TS Thornhill
The Combined Orthopaedic Residency Program
New PGY-2 Residents during the
2004-2005 year

Robert Golden
Univ of Pennsylvania
School of Medicine
Internship: BWH Gen Surg

Ramin Ronald Tabaddor
Boston Univ School of Medicine
Internship: BWH Gen Surg

The Combined Orthopaedic Residency Program
Orthopaedic Interns
June, 2005

Arnold Alqueza
University of Florida
College of Medicine
Internship: BIDMC

Christina Boulton
Harvard Medical School
Internship: MGH

Timothy Crall
Washington University
School of Medicine
Internship: BIDMC

Courtenay Dawson
Hershey Medical Center,
Penn State University
Internship: BWH

Nicole Fetter
Duke University School of Medicine
Internship: MGH

Abigail Hamilton
Vanderbilt University
School of Medicine
Internship: BWH

Brian Haus
Stanford University
School of Medicine
Internship: BWH

Seth Jerabek
University of Michigan
Medical School
Internship: MGH

Darren Lebl
Stanford University
School of Medicine
Internship: BIDMC

Andrea Sesko
Columbia University
College of P&S
Internship: BIDMC

Manish Sethi
Harvard Medical School
Internship: MGH