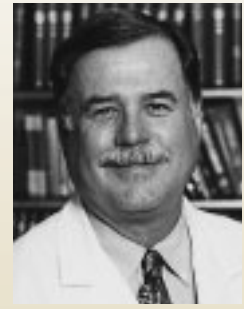


CHAIRMAN'S CORNER

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 fifth issue of the Orthopaedic Journal at Harvard Medical School. The residents continue to do an outstanding job of producing this high quality Journal and we continue to receive great compliments from our readers and alumni. I again congratulate the editorial staff and this year's editor, Don Bae, MD. They have worked very hard to produce this publication and deserve everyone's gratitude. Please make sure to let them know this the next time you see them or send an email. I would also like to acknowledge our industry colleagues who have generously and continuously supported our journal. Without their advertising commitment publication of our journal would not be possible. Please join me in thanking each and every one of our corporate sponsors.

This year, as many of you know. I have the privilege of serving as President of the American Academy of Orthopaedic Surgeons. The position brings a great responsibility in these difficult times for medicine in general and our specialty in particular, but it also brings great joy and satisfaction to me at the same time. Patient safety will be the major thrust of my efforts this year. Our Board of Directors will be devoting their entire Spring Workshop to this issue. I address the problem at each local, state and regional meeting I attend, along with other important issues facing orthopaedic surgeons. Number one of this list is professional liability reform, followed by declining Medicare reimbursements and regulatory issues – HIPAA, EMTALA and many others.

I am happy to hear from any of you about your concerns and any issues that you feel are important. If you have suggestions for improvement or change please let me know. I am available as President of the AAOS to every member.

First, I would like to recognize two special award winners from last year's Graduation Dinner. Dr. Don Bae received both the Leonard Marmor Award for academic excellence in the OITE examinations, and the William Thomas Award. This double recognition is a fitting acknowledgement of Dr. Bae's accomplishments as a resident and potential as a practicing surgeon. I would also like to acknowledge Dr. Mark Vrahas as the winner of the Golden Apple Award for outstanding teaching in our program, chosen by our residents. I applaud Dr. Vrahas for his outstanding teaching and contributions to our program.

Over the past year, the Harvard Combined Orthopaedic Residency Program has continued to improve the quality and content of the Core Curriculum, conferences and Journal Club. Information about the new HIPAA regulations and patient safety has been added to the Core Curriculum. A new session

on physician/patient communication has also been added. This year's speaker will be Dr. Gary Friedlander, Chair of the Department of Orthopaedic Surgery at Yale.

The Journal Club continues to be an important conference for resident education. Drs. James Heckman and Robert Poss continue to be tremendous mentors to the Club and its participants. Plans are currently underway to use the OREF award received last year to bring in guest speakers and to provide resources for residents in the areas of study design, biostatistics and clinical epidemiology. I would like to thank Jim O'Holleran, MD, for his leadership of Journal Club earlier this year and the current leadership of Pearce McCarty, MD. Their time commitment to this activity is much appreciated.

With regard to resident recruitment, I am pleased to announce that we had our most successful match to date this past March. Our incoming PGY-1 residents are listed in the adjacent box. I want to thank the residents for their efforts in making this a successful recruiting year. In particular, I would like to thank Renn Crichlow, MD, for his special efforts in this regard. As part of our ongoing efforts to showcase the residency program and improve information for prospective applicants, an impressive new website has been developed. The site is based on the Harvard server and linked to each of the participating hospitals. In this way the program can be found by those searching on the HMS web site, as well as those searching the Hospital web sites. The address is www.hms.harvard.edu/ortho. I would like to thank Robert O'Toole, MD, for his leadership of this effort and all who helped make this possible. I encourage each of you to visit the site. Please feel free to forward any suggestions or comments for improvement.

Certainly one of our greatest challenges over the past year has been the development of goals and objectives by service that incorporate the general competency requirements endorsed by the Accreditation Council for Graduate Medical Education (ACGME) in 2001. The general competencies are in the following areas:

- Patient Care
- Medical knowledge
- Practice-based learning and improvement
- Interpersonal and communication skills
- Professionalism
- Systems-based practice

Specific competencies in these various areas include the

expectation that residents “communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families; perform competently all medical and invasive procedures considered essential for the area of practice; and work effectively with others as a member or leader of a healthcare team or other professional group.”

Over the past year the chiefs and faculty of each service have worked hard to develop curricula that provide clear goals and objectives for each level of resident rotating on their service. These curricula also include schedules for each resident on the service, as well as clear statements about the lines of responsibility between residents, fellows and attendings. With few exceptions, we now have written a curriculum for each of the subspecialty services at the BWH and MGH, as well as a curriculum for the six-month pediatric orthopaedic rotation at Children’s Hospital. Over the coming year we will be getting feedback from residents and working to refine these curricula in advance of our RRC site visit in 2004.

An important part of the ACGME Outcome Project is the requirement that programs develop evaluation tools that will provide objective measure of residents’ performance on the

Harvard Combined Orthopaedic Residency Program Core Curriculum 2002 – 2003 Academic Year

SUBSPECIALTY BLOCK	FACULTY	RESIDENT
Trauma (excluding spine)	Mark Vrahas	Paul Appleton
Business	Dan Estok	John Abraham
Pediatrics	John Emans	Travis Matheny
Tumor	John Ready	Joe Czarniecki
Spine (including trauma)	Frank Pedlow	Renn Crichlow
Adult Reconstruction (including shoulder)	Andrew Freiberg Richard Scott Arun Shanbhag Bill Tomford	Hutch Huddleston
Hand and Elbow	Jesse Jupiter	Brandon Earp Lauren Adey
Foot and Ankle	Chris Chiodo J Heckman, M Wilson	Karl Schultz
Communication	Gary Friedlaender	Neil Harness
Rehabilitation / Amputation	Joseph Barr	Neil Harness
Mediolegal/Ethics	Tammy Martin Philip Blazar	Samantha Spencer
Sports Medicine (including shoulder)	Peter Gerbino	Conrad Wang Pat McCulloch
Biostatistics	Dan Estok	John Abraham
Basic Science assistance	David Krebs, Ph.D	

2002-2003 Grand Rounds Speakers and Topics

9/4/02	Charles Court-Brown, MD, FRCS (Ed)	Lothian University Hospital NHS Trust	The Management of Tibia Fractures
9/11/02	Mark Vrahas, MD	Massachusetts General Hospital	Ortho Dude - An Introduction to the New Trauma Database
9/18/02	Andrew Burgess, MD	Ortho Associates of Portland	Recent Development in Highway Safety
9/25/02	John Fulkerson, MD	Orthopaedic Associates of Hartford	Patellofemoral Pain
10/2/02	Daniel Berry, MD	Mayo Clinic	Osteolysis around Total Knee Arthroplasty: A problem for the next decade.
10/9/02	Charles Engh, MD	Anderson Clinic	Pelvic Osteolysis - A Silent Disease Requiring Intervention
10/16/02	David W Altchek, MD	Hospital for Special Surgery	MCL Injuries
10/23/02	Richard Coutts, MD	San Diego	Experiences in the Tissue Engineering of Cartilage
10/30/02	Theodore Ganley, MD	Children’s Hospital of Philadelphia	OCB, ACL and Meniscus Pathology - Current Topics in Pediatric Sports Medicine
11/6/02	Charles Price, MD	Nemours Children’s Clinic	Principles of Lower Limb Deformity
11/13/02	Chitranjan Ranawat, MD	Lenox Hill	PFC Rotating Platform For all Commerce: Technique and Results
11/20/02	Todd Albert, MD	Rothman Institute	Novel Therapies for Lumbar Degenerative Disc Disease
11/27/02	Richard Berger, MD	Chicago	Minimally Invasive Hip Replacement
12/4/02	Brian Grottkau, MD	Mass General Hospital	Compartment Syndrome in Children
12/11/02	William F Crowley, MD	Massachusetts General Hospital	The Future of Human Genomics
12/18/02	Henry Mankin, MD	Mass General Hospital	My Heroes and Their Deeds
1/8/03	Richard Laskin, MD	Hospital for Special Surgery	Total Knee Replacement 2003 - New Techniques and Material
1/15/03	William Harris, MD	Mass General Hospital	Three Revolutions on Acetabular Revision Surgery
1/22/03	Thomas Gill, MD	Mass General Hospital	The Posterior Cruciate Ligament: Separating Fact from Fiction
1/29/03	John E Lonstein, MD	Twin Cities Spine Center	Neuromuscular Scoliosis
2/12/03	Janet Barnes, RN	Brigham & Women’s Hospital	Common Issues in Liability Claims
2/19/03	Jorge Orbay, MD	Miami Hand Center	The Management of Complex Distal Radius Fractures and the Extended FCR Approach
2/26/03	Richard Bohmer, MD, MPH	Harvard Business School	Teams and Team Learning in Health Care Delivery
3/5/03	Scott Kozin, MD	Shriners Hospital for Children	Tendon Transfers and FES in Tetraplegia
3/12/03	Roy Sanders, MD	Tampa General Hospital	Pilon Fractures: Treatment & Results
3/19/03	Cynthia Fisher	BioMed 20/20 Technologies, Inc.	Massbiotech 2010 - Achieving Global Leadership: Opportunities for Collaboration, Research Translation and Clinical Trials
3/26/03	Keith Bridwell, MD	Washington University School of Medicine	Revision Adult Spinal Deformity Surgery
4/2/03	David Felson, MD	Boston University School of Medicine	New Insights into Pathogenesis and Nonsurgical Treatment of Osteoarthritis
4/9/03	Charles S Neer, II, MD	Professor Emeritus, Columbia University	The Purpose and Reliable Use of the 4-Segment Classification of Proximal Humerus Fractures
4/16/03	Gary Friedlaender, MD	Yale Univ School of Medicine	Bone Grafts and Graft Substitutes
4/23/03	Michael Pinzur, MD	Loyola Univ Medical Center	Transosseous vs. Disarticulation Amputation of the Lower Extremities
4/30/03	Stephen Tredwell, MD	British Columbia Children’s Hospital	Three Dimensional Aspects of Scoliosis Correction
5/7/03	Jeffrey Katz, MD	Brigham & Women’s Hospital	Volume and Outcome of Total Joint Replacement: Findings and Policy Implications
5/14/03	Thomas Trumble, MD	Univ of Washinton Medical Center	Distal Radius Fractures and Malunions
5/21/03	Scott D. Boden, MD	The Emory Clinic	Bone Graft Substitutes: update 2003
5/28/03	Leonard Marcus, Director	Harvard School of Public Health	Negotiation and Conflict Resolution for Healthcare Problem Solving
6/4/03	John R Huckell, MD	Edmonton, Alberta	The Canadian Health Care System
6/11/03	Lucian Leape, MD	Harvard School of Public Health	Patient Safety
6/18/03	Richard D Ferkel, MD	Southern California Orthopedic Institute	New Perspectives in Foot and Ankle Arthroscopy

general competencies. Toward this end, we have revised our existing rotation evaluation forms and added several new forms and approaches. One of the new approaches is a resident self-assessment, asking residents to describe particular situations they have faced in the past six-months. The types of situations queried include shared decision-making, surgical decision-making, end-of-life discussions, ethics and dealing with personal limitations. Residents are being asked to respond in writing to one of four questions and to come prepared to discuss their response with me as part of their individual, semi-annual evaluation meetings. I am pleased to report that these discussions have been excellent, raising issues that before now have not been addressed. A second new approach that is being initiated is a 360-degree evaluation of each resident. As a start, information will be gathered from nursing staff on the floors and in the OR, as well as patients. The scope of this evaluation will be expanded as the process proceeds. In addition, each subspecialty service has been encouraged to include evaluation strategies specific to their rotations. In particular, each subspecialty service has been asked to develop a test based on questions from the Orthopaedic In-Service Exam and self-assessment exams. Residents will also be encouraged to utilize self-assessment tools, e.g. JAAOS, OKO and OKUs made available through the Academy of Orthopaedic Surgeons. Each resident in the United States now receives a free subscription to the JAAOS and OKO from the AAOS.

In addition to work on the curriculum, we are also in the midst of dealing with the resident work hour issue at each of the hospitals. As endorsed by the ACGME, residents can no longer be involved in patient care the day after being on call in the Hospital. The specific work hour requirements include:

- No more than 24 hours on duty.
- No more than 80 duty hours per week
- One day off each week.
- No more than every third night on call.

It is important to note that adherence to this rule is not at the discretion of individual residents who might prefer to work

the next day. Our initial plan for dealing with this requirement is to have a PGY-2 night float for in-house patient coverage and the OR at the MGH and BWH; increase the number of physician extenders and RNs; request to increase residents from the RRC to 12 per year (our previous size). Children's has already implemented a PGY-3 night float position. In addition, many services will need to re-deploy the efforts of fellows and physician extenders, where available. While we are hopeful that these arrangements will be sufficient, we will be monitoring this situation closely over the coming year.

Beginning in July 2003, the Harvard Orthopaedic residency will no longer include a six-month chief residency. The decision to eliminate the chief residency requirement from our program reflects the strong preference of the younger residents coming up who are anxious to start their fellowship programs or pursue other educational opportunities. I want to commend the Executive Committee for making this difficult decision. Residency training is definitely long and almost all of our residents take fellowships. This change will also allow us to provide trauma care by specialists and not trainees.

I would like to provide you with a brief update on the search that is underway at the Beth Israel Deaconess Medical Center for a full-time Chief of Orthopaedic Surgery. Dr. Joseph Fisher, Chief of the Department of Surgery at the BIDMC, is directing the search. Drs. Kasser, Thornhill and I serve on the Search Committee. As part of the search, the Hospital has committed to re-establishing a Department of full-time faculty who are committed to the educational mission, as well as research and service. It is also clear that the new chief must move quickly to recruit a chief of orthopaedic trauma. Because this process is well underway with a clear commitment to establishing an academic department of orthopaedic surgery, the Executive Committee will be requesting an increase in residents.

Promotions and appointments across Harvard Orthopaedics over the past year include:

Professor: **Julie Glowacki, PhD**, and **Mark Gebhardt, MD**
 Assistant Professor: **Tamara Martin, MD**, **Scott Martin, MD**,
Phil Blazar, MD

Graduating resident plans

Name	Fellowship specialty	Institution	City	Director
Paul Appleton	Trauma	Royal Infirmary of Edinburgh	Edinburgh, Scotland	Charles Court-Brown
Donald Bae	Hand/Upper Extremity	Brigham and Women's Hospital	Boston, MA	Barry Simmons
Robert Hurford	Spine	Washington Univeristy	St. Louis, MO	Keith Bridwell
Ajeya Joshi	Spine	Baylor Medical Center	Houston, TX	Stephen Esses
David Kim	Sports	Kerlan-Jobe Orthopaedic Clinic	Los Angeles, CA	Frank Jobe
Kai Lewandrowski	Spine	Cleveland Clinic	Cleveland, OH	Robert Mclain
Brent Ponce	Shoulder	Massachusetts General Hospital	Boston, MA	Jon J.P. Warner
J. Scott Price	Spine	Rush-Presbyterian-St. Luke's	Chicago, IL	Howard An
E. Ken Rodriguez	Trauma	Maryland Shock Trauma	Baltimore, MD	Cliff Turen

In my role as Chairman of the Partners Department of Orthopaedic Surgery, I would like to commend Tom Thornhill and Harry Rubash on their leadership of orthopaedic surgery at the Brigham and Women's and Massachusetts General Hospitals. I direct you to their respective "Chief's Corners" for an overview of the accomplishments of their Departments over the past year. Both Departments underwent an external review in February/March, organized by Harvard Medical School on behalf of the Dean and the Hospital Presidents. The purpose of the review was to assess the quality and vitality of the Departments' programs with particular emphasis on the status and accomplishments of their academic programs. The Medical School invited six leaders in orthopaedic surgery from across the country to participate in this process, three at each institution. In addition to their review of an extensive written report prepared by each Department, the reviewers met with the Hospital leadership, the chiefs and a cross section of faculty and residents. The reviewers' final reports are shared with the Dean Martin and the hospital presidents. Insights and recommendations will then be shared with each Chief. The initial results from the reviewers were quite positive and complimentary.

In closing, I want to share with you my plans for the coming year. As many of you may know, I will be stepping down as Chairman of the Partners Department of Orthopaedic Surgery effective at the end of 2003. However, I am pleased to announce that I will continue as Program Director for the Harvard Combined Orthopaedic Residency Program. Given our need to fully comply with the ACGME requirements, request additional residents and prepare for an RRC review next year, I expect this to be a very challenging but productive year for our Program. I look forward to continuing to work with our Executive Committee, faculty and residents on resident education.

Congratulations and best wishes to our graduating residents as they leave for fellowship training and practice. I would also like to thank the chief residents who will finish in June. 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.



The 49th Annual Meeting of the Orthopaedic Research Society 2003

PODIUM PRESENTATIONS

Paper # 1

Effect Of Contact Area On The Wear Of Ultrahigh Molecular Weight Polyethylene In Bidirectional Pin-On-Flat Articulation

Mazzucco D, Spector M

Paper #120

The Effect of the PCL on Knee Function in High Flexion Angles

Li G; DeFrate L; Most E; Suggs J; Gill T; Freiberg A; Rubash H

Paper #126

Kinematics of the Knee at High Flexion Angles

Li G, Zayontz S; DeFrate L; Most E; Suggs J; Rubash H

Paper # 127

Hydrostatic Pressure Stimulates Extracellular Matrix Accumulation By Swine Articular Chondrocytes In 3d Collagen Sponges

Mascarenhas AC, Kusanagi A, Blahut EB, Johnson J, Berlowitz-Tarrant L, Mizuno, S

Paper # 150

The Pectoralis Major Tendon As A Reference For Retroversion Improves The Quality Of Arthroplasty For Proximal Umeral Fractures

A Gerber, M Apreleva, F Harrold, J J Warner

Paper # 219

Motile Chondrocytes: Migration Properties and Synthesis of Collagen Type II

Morales, T.I., Chang, C. and Lauffenburger, D.A.

Paper # 280

Gene-expression clustering using self-organizing maps: analysis of the macrophage response to particulate biomaterials

Garrigues GE, Rubash HE and AS Shanbhag

POSTER PRESENTATIONS

Poster # 389

A Quantitative Technique to Assess Bone Density from Micro-Computed Tomography

A Nazarian, D von Stechow, D Zurakowski, R Mueller, B Snyder

Poster # 475

Dependence of Joint Development on Limb Motion: An In-vitro Model of Knee Morphogenesis in the Chick Embryo

Rodriguez E K; Munansinghe J; B Snyder

The 49th Annual Meeting of the Orthopaedic Research Society

- Poster # 482
Adult Canine Synovial Cells Express Alpha-Smooth Muscle Actin And Can Contract
Vickers SM, Johnson LL, Yannas IV, Gibson LJ, Spector M
- Poster #634
Effects Of Medium Flow Rate On Extracellular Matrix Accumulation By Swine Articular Chondrocyte In Collagen Sponges
Blahut EB, Kusanagi A, Mascarenhas AC, Johnson J, Berlowitz-Tarrant L, Mizuno, S
- Poster # 636
Calcium Influx Stimulated By Hydrostatic Pressure In Chondrocytes In Vitro
Mizuno, S
- Poster # 761
Dendrimer-Linked Nitroxides As Contrast Agents For Cartilage
Shortkroff, S; Winalski, CS; Mulkern, R; Chatha, A; Schneider, E; Rosen, GM
- Poster #827
Importance of the Effective Length of an Achilles Tendon Graft on its Structural Properties
DeFrate, L; van der Ven, A; Suggs, J; Gill, T; Li G
- Poster #844
Variation of Patello-Femoral Joint Contact Pressures after Posterior Cruciate Ligament Reconstruction
Gill, T; DeFrate, L; Carrey, J; Zayontz, S; Gordon, D; Zarins, B; Li G
- Poster # 873
Bisphosphonates enhance osteoblastic recruitment from human bone marrow stromal cells in vitro
von Knoch F, Kowalsky M, Weissbach L, Im G, Puskas B, Fishman F, Rubash HE and AS Shanbhag
- Poster # 890
Use Of Direct Bmp-2 Gene Delivery To Enhance The Healing Of Segmental Bone Defects: Evaluation In The Rat Model
Betz OB, Betz VM, Fajardo R, Gouze E, Gouze JN, Palmer GD, Pascher A, Liew V, Vrahas MS, Ghivizzani SC, Gerstenfeld LC, Einhorn TA, Evans CH
- Poster # 952
Contractile Forces Generated By Articular Chondrocytes In Collagen-Glycosaminoglycan Matrices
Kinner B , Zaleskas JM, Freyman TM, Yannas IV, Gibson LJ, and Spector M
- Poster # 956
Biosynthetic Activity Of Articular Chondrocytes In Type I And Type Ii Collagen Matrices
Veilleux NH, Spector M
- Poster #995
Metastatic Cancer Bone Tissue Behaves Mechanically as a Rigid Porous Foam
D von Stechow, A Nazarian, D Zurakowski, R Mueller, B Snyder
- Poster # 1130
Effects Of Collagen Type On The Behavior Of Annulus Fibrosus Cells In Collagen-Glycosaminoglycan Matrices
Saad L, Spector M
- Poster # 1142
Ivd Annulus Cells Seeded Into Matrices Of Type I, Type Ii, And Type I/Ii Collagen
Hastreite, D, Spector M
- Poster # 1179
A Novel Osteotomy Technique Improves Restoration Of Humeral Head Geometry In Shoulder Arthroplasty
Ariane Gerber, Fraser Harrold, Maria Apreleva, Jon J Warner
- Poster #1282
A Computational Simulation Of The Effect Of Graft Stiffness On Anterior Cruciate Reconstruction
Suggs, J F; Wang, C; Gill, T; Li, G
- Poster #1327
An In-Vitro Investigation of Posterior Substituting (fixed and mobile) TKAs Flexion Angles
Li G, Most, E; Zayontz, S; Schule, S; Park, E; Freiberg, A; at High Rubash, H
- Poster #1362
Interface Temperatures in Total Hip Replacement Simulators as a Function of Head Size
Nathaniel E Hawkins, Charles R Bragdon, Brian R Burroughs, Daniel O O'Connor, Orhun K Muratoglu, William H Harris
- Poster # 1375
Effects of bisphosphonates (alendronate and zoledronate) on bone ingrowth in rabbit model: A radiographic and histomorphometric analysis.
von Knoch F, Cho MR, Garrigues G, Kowalsky M, Rubash HE and a AS Shanbhag
- Poster #1379
The Effect of Calcium Phosphate Bone Substitute on Bone Defect Healing and Ingrowth in a Canine THR Model
Arin M Doherty, Charles R Bragdon, Murali Jasty, Harold E Bone Rubash, William H Harris
- Poster #1388
Quantification of Scar Formation in a Cruciate-Retaining Total Knee Testing Using Both Gravimetric and a New CMM Volumetric Methods
Orhun K Muratoglu, Rebecca S Perinchief, Alisa V Grubbs, Brian R Burroughs, Gordon Plank, Matthew Sargent, William H Harris
- Poster # 1409
Effect of high pressure crystallization on the morphology of crosslinked molecular weight polyethylene
Mary E. Turell, Anuj Bellare, Philippe Scherrer, Thomas S. ultra-high Thornhill

Poster #1413
Ultrasonic Radiation: An Unsuccessful Method for Eliminating Residual Free Radicals in Irradiated UHMWPE

Evan S Greenbaum, Orhun K Muratoglu, Stephen H Spiegelberg, William H Harris

Poster #1414
The effect of cross-path motion on the wear rate of ultra-high molecular weight polyethylene

Mary E. Turell, Aiguo Wang, Anuj Bellare

Poster #1429
True Wear Rates and True Creep with One Type of Highly Crosslinked and Conventional UHMWPE Tibial Knee Inserts

Orhun K Muratoglu, Rebecca S Perinchief, Daniel O O'Connor, Charles R Bragdon, Daniel M Estok III, Matthew Sargent, William H Harris

Poster #1430
RSA Evaluation of Wear of Conventional Versus Highly Crosslinked Polyethylene Acetabular Components in Vivo

Geogios Digas, Johan Karrholm, Henrik Malchau, Charles R Bragdon, Peter Herberts, Jonas Thanner, Daniel M Estok III, Gordon Plank, William H Harris

Poster # 1436
Effects of bisphosphonates on interleukin-1 β and tumor necrosis factor- α in osteolysis

Kaneko S; Chaudhary S; von Knoch F; Rubash HE and AS clinical Shanbhag

Harvard Combined Orthopaedic Residency Program Incoming PGY-2 Residents



George Dyer, M.D.
Harvard Medical School



Michael N. Fehm, M.D.
Yale University School of Medicine



Brian Forsythe, M.D.
University of Pennsylvania School of Medicine



Andrew Jawa, M.D.
University of Pennsylvania School of Medicine



Stefan R. Jibodh, M.D.
Johns Hopkins University School of Medicine



Alexander P. Sah, M.D.
Jefferson Medical College of Thomas Jefferson University



Maximillian C. Soong, M.D.
Columbia University College of Physicians and Surgeons



Michael A. Vazquez, M.D.
Columbia University College of Physicians and Surgeons



Howard B. Yeon, M.D.
Harvard Medical School



Bojan B. Zoric, M.D.
University of California Los Angeles School of Medicine