7TH ANNUAL
UCSF SPINE SYMPOSIUM

June 1-2, 2012
Marriott Union Square
San Francisco, CA

COURSE DIRECTORS
Shane Burch, MD
Assistant Professor, Department of Orthopaedic Surgery; UCSF Spine Center University of California, San Francisco

Praveen Mummaneni, MD
Associate Professor and Vice-Chair of Neurological Surgery; Director of Minimally Invasive Spine Surgery; Director of Cervical Spine Surgery, Co-Director, UCSF Spine Center, University of California, San Francisco

This course is accredited for 12.5 credits in Pain Management and End-of-Life Care.
The UCSF Spine Symposium is an annual two-day event emphasizing pioneering trends in diagnostic and therapeutic strategies for patients suffering from spinal disorders. This course is designed to be interactive with talks given by leaders in the spine community. All lectures are followed by case discussions aimed at highlighting key issues in breakthrough treatments. The course is designed for neurosurgeons, orthopedists, nurses, physical therapists, physiatrists, anesthesiologists, pain specialists as well as primary care providers.

The purpose of this course is to increase competence and improve clinical practice in the management of patients with spinal pathologies. Attendees will be better equipped to:

- Evaluate and treat spinal pain in a cost effective and reliable manner based on recently published guidelines;
- Identify appropriate indications for surgery of the painful, degenerated spine, and identify the appropriate surgical approach in the painful, degenerative spinal conditions based on recently published guidelines;
- Evaluate and treat lumbar degenerative disease and deformity in a cost-effective manner and avoid perioperative complications by identifying risk factors that may predispose to morbidity;
- Discuss pain management strategies for patients with spine-related pain;
- Identify spinal instability related to spinal tumors and formulate surgical treatment plans to deal with neurological deficits and pain in spine oncology patients based on recently published guidelines.

ACCREDITATION
The University of California, San Francisco School of Medicine (UCSF) is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. UCSF designates this live activity for a maximum of 14.50 AMA PRA Category 1 Credit(s)™. Physician should only claim credit commensurate with the extent of their participation in the activity.

This CME activity meets the requirements under California Assembly Bill 1195, continuing education and cultural and linguistic competency.

Pain Management and End-of-Life Care
The approved credits shown above include a maximum of 12.50 credits toward meeting the requirement under California Assembly Bill 487, Pain Management and End-of-Life Care.

Nurses
For the purpose of recertification, the American Nurses Credentialing Center accepts AMA PRA Category 1 Credit™ issued by organizations accredited by the ACCME.

Physician Assistants
American Academy of Physician Assistants accepts category 1 credit from AOACCME, Prescribed credit from AAFP, and AMA PRA Category 1 Credit™ from organizations accredited by the ACCME.
FRIDAY, JUNE 1, 2012

7:30 am  Registration and Continental Breakfast
8:00  Welcome and Introduction  Shane Burch, MD  Praveen Mummaneni, MD

BASIC SCIENCE
8:15  P  Degenerative Disc Disease and Low Back Pain  Jeffrey Lotz, PhD
8:35  P  Quantifying the Strength of the Normal Vertebra in the Osteoporotic, Painful, Fractured Vertebra  Tony Keaveny, PhD
8:55  P  Imaging of the Painful Degenerative Disc Disease Patients  Thomas Link, MD
9:15  P  Case Discussion and Q&A  Moderator: Jeffrey Lotz, PhD
9:45  Break

INTRODUCTION TO SPINAL DISORDERS AND PAIN OF SPINAL ORIGIN
10:15  P  Low Back and Neck Pain: Anatomical Correlates  Timothy Shen, MD
10:35  P  Low Back and Neck Pain: A Psychiatrist’s Perspective  Robert Hines, MD
10:55  P  Determining the Pain Generator in Low Back Pain Patients  Conor O’Neill, MD
11:15  P  Case Discussion and Q&A  Moderator: Jeffrey Saal, MD
11:45  Lunch (included)
1:00 pm  INTRODUCTION OF GUEST SPEAKER  Praveen Mummaneni, MD
1:05  P  Low Back Pain and the Aging Spine: Federal Healthcare Expenditures  Joseph Cheng, MD, MS

NON-SURGICAL MANAGEMENT FOR PAIN OF SPINAL ORIGIN
1:45  P  Evidence for the Use of Epidural Steroid Injections in Low Back and Leg Pain  Robert Gambrud, MD
2:05  P  Evidence for the Use of Facet Blocks and RFA in Low Back and Neck Pain  Melanie Henry, MD, MPH
2:25  P  Overview of Physical Therapy and Current Practice to Treat Low Back Pain  Sarah Pawlowsky, PT, DPT, OCS

SURGICAL MANAGEMENT OF SPINAL DEFORMITY
2:45  P  Update on the Treatment of Painful Spinal Deformity in the Adolescent  Coleen Sabatini, MD, MPH
3:05  Break
3:20  P  Innovative Approaches to Painful Spinal Deformity  Vedat Deviren, MD
3:40  P  Correction of Painful Cervical Kyphosis  Praveen Mummaneni, MD
4:00  INTRODUCTION OF RITCHEY LECTURER  Praveen Mummaneni, MD/ Shane Burch, MD
4:05  P  Optimizing Safety and Correction in Spinal Deformity Surgery  Lawrence Lenke, MD
4:45  P  Avoiding Painful Complications in Spinal Deformity: An Anesthesiologist’s Perspective  Jeremy Lieberman, MD
5:05  P  Case Discussion and Q&A  Moderator: Shane Burch, MD
5:35 pm  Adjourn

GENERAL INFORMATION
Advanced registration closes one (1) business day prior to start of course. Pre-registration is preferred to ensure that we have adequate course materials.

HOW TO ENROLL
Early Bird Rates prior to 2/28/12
Tuition:  
Physicians, $300 by 2/28/12  
$325 after 2/28/12
Nurses/Pharmacists/Allied Health Professionals/Residents/Fellows  
$200 by 2/28/12  
$225 after 2/28/12
Payment can be made by American Express, Visa, MasterCard or check.

REGISTER VIA:
Online:  www.cme.ucsf.edu
Mail:  Complete course registration form and send with payment to:  
UCSF Office of CME  
P.O. Box 45368  
San Francisco, CA  94145-0368

Fax:  Fax completed registration form to:  
(415) 502-1795 (be sure to include your credit card number)

On-Site Registration:  Generally we are able to accommodate on-site registration at our courses. To register by phone or to inquire about your registration status, please call the UCSF CME Registration Office at (415) 476-5808.

REFUND POLICY
Cancellations received in writing before the first day of the course will be refunded, less a $75 administrative fee. No refunds will be made on cancellations received after that date.

CONFERENCE LOCATION
Enjoy San Francisco’s renowned attractions such as the historic cable cars, shopping in Union Square, or visit San Francisco’s culinary hub at the Ferry Building.

Marriott Union Square is just steps from Union Square and the Theatre District.
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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
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<td>Continental Breakfast</td>
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<tr>
<td>8:00</td>
<td>Minimally Invasive Treatment of Painful Spinal Tumors</td>
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<td>8:20</td>
<td>Spinal Radiosurgery: A Hybrid Approach to Treat Painful Tumors</td>
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<td>Update in Cervical Spine Trauma: Screening the Patient with Neck Pain</td>
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<td>Overview of Osteoporosis and its Association with Back Pain</td>
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<td>9:20</td>
<td>Painful Vertebral Compression Fractures: Evidence for Treatment</td>
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<td>Degenerative Disc MRI Changes: Do They Correlate to Clinical Pain Symptoms</td>
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<td>Update of Lumbar and Cervical Disc Replacement to Treat Patients with Axial and Radicular Pain</td>
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<td>11:15</td>
<td>Painful Complications of Cervical Disc Replacement</td>
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<td>Use of Spinal Stimulators and Pumps for Spinal Pain</td>
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<td>11:55</td>
<td>Discussion and Q&amp;A</td>
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<td>12:15</td>
<td>Lunch (included)</td>
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<td>1:30</td>
<td>The Core of Evidence-Based Medicine for Painful Spine Disease: Data Collection and How to Do It</td>
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<td>INTRODUCTION OF GUEST SPEAKER</td>
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<td>Use of BMP in Spinal Fusions</td>
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<td>2:35</td>
<td>INTRODUCTION OF GUEST SPEAKER</td>
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<td>2:40</td>
<td>Economics of Surgical Treatment for Painful Spinal Disease</td>
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<td>3:20</td>
<td>Break</td>
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<td>Measuring Outcomes and Value in the Treatment of Painful Spinal Deformity</td>
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<td>3:55</td>
<td>How Do We Choose Treatments for Our Patients with Painful Spine Disease: Looking at the Whole Picture</td>
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<td>Case Discussion and Q&amp;A</td>
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**SATURDAY, JUNE 2, 2012**

**TUMORS AND TRAUMA**

- **8:00** P Minimally Invasive Treatment of Painful Spinal Tumors
- **8:20** P Spinal Radiosurgery: A Hybrid Approach to Treat Painful Tumors
- **8:40** P Update in Cervical Spine Trauma: Screening the Patient with Neck Pain

**OSTEOPOROSIS AND THE AGING SPINE**

- **9:00** P Overview of Osteoporosis and its Association with Back Pain
- **9:20** P Painful Vertebral Compression Fractures: Evidence for Treatment
- **9:40** Break
- **9:55** P Osteoporosis and the Aging, Painful Spine: Implications for Surgery

**SURGICAL MANAGEMENT OF DEGENERATIVE CONDITIONS OF THE SPINE**

- **10:15** P Overview of Spinal Stenosis with Painful Radiculopathy
- **10:35** P Degenerative Disc MRI Changes: Do They Correlate to Clinical Pain Symptoms
- **10:55** P Update of Lumbar and Cervical Disc Replacement to Treat Patients with Axial and Radicular Pain
- **11:15** P Painful Complications of Cervical Disc Replacement
- **11:35** P Use of Spinal Stimulators and Pumps for Spinal Pain
- **11:55** P Discussion and Q&A

**EVIDENCE-BASED MEDICINE**

- **1:30** P The Core of Evidence-Based Medicine for Painful Spine Disease: Data Collection and How to Do It
- **1:50** INTRODUCTION OF GUEST SPEAKER
- **1:55** Use of BMP in Spinal Fusions
- **2:35** INTRODUCTION OF GUEST SPEAKER
- **2:40** P Economics of Surgical Treatment for Painful Spinal Disease
- **3:20** Break
- **3:35** P Measuring Outcomes and Value in the Treatment of Painful Spinal Deformity
- **3:55** P How Do We Choose Treatments for Our Patients with Painful Spine Disease: Looking at the Whole Picture
- **4:15** P Case Discussion and Q&A
- **4:45** pm Adjourn/Evaluations/Attendance Verification

**CONFERENCE LOCATION (CONT’D)**

A block of guestrooms has been reserved at the special UCSF conference rate of $175/night. You are urged to make your reservations early. The cut off date is May 11, 2012, or until the group room block is filled. After this date, rooms will be provided on a space-available basis only. To make hotel reservations at this rate on-line, please visit the course webpage at www.cme.ucsf.edu and scroll down to the travel and lodging section. If you prefer to telephone in your reservation, call (800) 228-9290 and reference the group code UCS to receive the special rate.

By staying at the host hotel, you help UCSF meet its contractual obligations and keep registration fees reasonable.

**RENTAL CAR**

Hertz is offering special rates for participants of this conference; simply call (800) 654-2240 and refer to convention number #03BW0131 or call your travel agent. You may also make reservations at www.Hertz.com.

**AIR TRANSPORTATION**

Special arrangements have been made with Montgomery Travel. Simply call (800) 391-2287 or complete the form on the UCSF web page at www.montgomerytravel.com. In addition to offering lower rates than published airfares, ticketed passengers may take advantage of the 24 hour emergency service. There is a $40 service fee. UCSF OCME has negotiated special fares with American and United Airlines for our course attendees. You may use the following tour codes to book on your own:

- American (800) 433-1790 code: 3352BK
- United (800) 521-4041 code: 510CF
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San Francisco, California

Mail to: UCSF Office of CME
P.O. Box 45368
San Francisco, CA 94145-0368
Fax: (415) 476-4251

Online registration: www.cme.ucsf.edu
Registration Information: (415) 476-5808
Course Information: (415) 476-4251

☐ Dr. ☐ Mr. ☐ Mrs. ☐ Ms.

Last Name   First   M.I.
Degree   Specialty
Address
City   State   Zip
Daytime Phone   Fax

Email

Address Label Code Letter (see address label: example, A, B, C, D, etc.)

Would you like to be on our priority email list?  ☐ Yes  ☐ No

Date of birth to be used as OCME registrant number: _____/_____/XX

Please indicate if you have any special needs:

Registration Fees (Receipt/Confirmation will be mailed within two to four weeks):
By 2/28/12  ☐ $300 Physicians
After 2/28/12  ☐ $325 Physicians
By 2/28/12  ☐ $200 Nurses/Pharmacists/Allied Health Professionals/Residents/Fellows
After By 2/28/12  ☐ $225 Nurses/Pharmacists/Allied Health Professionals/Residents/Fellows

Check enclosed payable to UC Regents
Please charge my credit card: ☐ Visa ☐ MasterCard ☐ AmEx for $________________________

Card #   Expiration date

Name on Card (Please Print)   Authorized Signature

Refund Policy: Cancellations received in writing before the first day of the course will be refunded, less a $75 administrative fee. No refunds will be made on cancellations received after that date. Please check our website for up to date information on the course: www.cme.ucsf.edu.

Marriott Union Square
480 Sutter Street
San Francisco, CA 94108
http://www.marriott.com/sfous
(866) 912-0973
Neurosurgery Update 2012 in the Wine Country
Thursday, August 2 – Saturday, August 4, 2012
Fairmont Sonoma Mission Inn, Napa, California
U C SF Spinal Surgery Biokills Lab:
Techniques and Advances
Thursday, November 8 – Saturday, November 10, 2012
MERIN Facility, Henderson, Nevada
Vdara Hotel, Las Vegas, Nevada

UPCOMING COURSES

COURSE DIRECTORS
Shane Burch, MD
Associate Professor of Orthopaedic Surgery; Director, UCSF Spine Center
University of California, San Francisco

Praveen Mummaneni, MD
Associate Professor and Vice-Chair of Neurological Surgery; Director of Minimally Invasive Spine Surgery; Director of Cervical Spine Surgery, Co-Director, UCSF Spine Center, University of California, San Francisco

SPECIAL GUEST FACULTY
Eugene J. Carragee, MD
Professor of Orthopaedic Surgery and Chief, Spinal Surgery Division
Stanford University School of Medicine; Director, Orthopaedic Spine Center at Stanford
Stanford Hospital and Clinics
Stanford, California

Joseph S. Cheng, MD, MS
Associate Professor of Neurological Surgery
Director, Neurosurgery
Spine Program
Vanderbilt Medical Center
Nashville, Tennessee

Lawrence G. Lenke, MD
Jerome J. Gilden Professor of Orthopaedic Surgery and Professor of Neurosurgery, Washington University Medical Center, St. Louis, Missouri

Christopher Wolffia, MD
Professor of Neurosurgery
The Medical College of Wisconsin
Milwaukee, WI

COURSE FACULTY
(All UCSF unless otherwise noted)

Igor Barani, MD
Assistant Professor of Radiation Oncology

Sigurd Berven, MD
Associate Professor of Orthopaedic Surgery; Co-Director, Spine Fellowship Program

Dennis M. Black, PhD
Professor of Epidemiology and Biostatistics

Edward F. Chang, MD
Assistant Professor of Neurological Surgery and Physiology

Dean Chou, MD
Associate Professor of Neurosurgery; Associate Director of Spinal Tumor Surgery, UCSF Spine Center

Sibel Demir-Deviren, MD
Assistant Professor of Orthopaedic Surgery

Vedat Deviren, MD
Associate Professor in Clinical Orthopaedics

Robert Gamburd, MD
Physiatrist, SOAR, Physiatry Medical Group, Redwood City, CA

Melanie M. Henry, MD, MPH,
Assistant Professor of Anesthesia and Pain Medicine

Robert Hines, MD
Co-Director, Bay Area Pain Medical Associates, Mill Valley, CA

Serena S. Hu, MD
Professor and Chief of Orthopaedic Spine Service

Tony Keaveny, PhD
Professor of Mechanical Engineering and Bioengineering, UC Berkeley, Berkeley, CA

COURSE FACULTY (CONT’D)

Jeremy Lieberman, MD
Professor and Chief of Spinal Anesthesia

Thomas Link, MD
Professor of Radiology and Biomedical Imaging

Jeffrey Lotz, PhD
Professor of Orthopaedic Surgery; Director of the Orthopaedic Bioengineering Laboratory

Conor W. O’Neill, MD
Assistant Professor of Orthopaedics

Sarah Balys Pawlowsky, PT, DPT, OCS
Assistant Professor of Physical Therapy and Rehabilitation Science

Murat Pekmezci, MD
Assistant Professor of Orthopaedic Surgery

Jeffrey A. Saal, MD
Physiatrist, SOAR, Physiatry Medical Group, Redwood City, CA; Past-President, North American Spine Society

Coleen Sabatini, MD, MPH
Assistant Professor of Pediatrics

Aenor J. Sawyer, MD
Assistant Professor of Orthopaedic Surgery

Timothy C. Shen, MD
Physiatrist, Oakland, CA

Bobby Tay, MD
Associate Professor of Orthopaedic Surgery; Co-Director, Spine Fellowship Program

Philip Weinstein, MD
Professor Emeritus, Department of Neurological Surgery