When pain is a central problem and not a symptom, the Stanford Pain Management team is ready with a multidisciplinary approach centered on patient wellness.

“Pain impacts not only patients but their social environment. If we don’t deal with it, pain tends to take over the lives of patients and their families as they struggle with suffering that seemingly is out of their control,” explains Michael Leong, MD, who returned to Stanford in March as interim clinical director of the Pain Management Center.

Leong completed a residency and fellowship at Stanford and then spent a decade in research, development and pain medicine consultation. Along the way, he picked up some insights on what the referring community sees at Stanford.

“A lot of physicians would really like to refer their patients to Stanford’s pain service, but there is a bias that it will take too long just to make an appointment,” says Leong.

Referrals, he noted, have recently been streamlined and accelerated by new policies and a more robust electronic medical record (EMR) that in recent months has improved service for both patients and their referring physicians.

Sean Mackey, MD, PhD, chief of the Division of Pain Management, notes the service, which celebrates its 20th anniversary in 2010, is the only Pain Management Center in the western United States to be named an American Pain Society Center of Excellence.

Mackey, who first came to Stanford for his anesthesia residency in 1998, is pleased the service can integrate “whatever it takes” for patients, whether that is a first-in-the-nation drug or clinical trial, mindful meditation, psychological counseling — or even just a routine epidural steroid injection.

“Pain is a mind/body phenomenon, and we want to avoid the fragmented model. We don’t want to work in separate silos of excellence,” says Mackey, associate professor of anesthesia and, by courtesy, neurology and neurological sciences.

The four cornerstones are pharmacological therapies, interventional approaches, physical/occupational approaches and psychological/behavioral strategies.

Stanford’s interdisciplinary team includes specialists from anesthesiology, psychiatry, neurology, physical therapy, psychology and more.
Pain Management (from page 1)

esthesiology, neurology, physical medicine & rehabilitation, and internal medicine – all of whom are pain fellowship trained. Also key are physical and occupational therapists, pain psychologists, acupuncturists and others – including plans for a dentist specializing in oral facial pain – who all meet as a group to discuss individual patients and develop a comprehensive treatment plan.

Patients are also greatly involved in their own care. “Much of what we do is just good education – coping skills, good healthy practices, timing of activities, and learning how the body responds to pain,” Leong explains. The service also provides inpatient and outpatient perioperative services for cancer and other services’ patients.

The future of pain management

“Rather than viewing pain as simply a symptom of trauma, infection, inflammation, or surgery, we now see it as a discrete disease entity – one that fundamentally alters the entire nervous system,” says Mackey. Ultimately, the team wants to apply models to help predict a person’s unique neurophysiology to develop a personalized pain management plan.

“One of our primary philosophies is to integrate the clinical care we provide with the research enterprise,” often partnering with scientific and industry colleagues in Silicon Valley or providing innovations that are reported worldwide, Mackey says. For example, the most downloaded article published by Pain Medicine in 2009 described promising

Through the NOSE

Tear Ducts to Brain Tumors, Endoscopic Surgery Extends Beyond Sinus Repair

S
tretching the limits of endoscopic surgery, Stanford surgeons Peter Hwang, MD, and Jayakar Nayak, MD, PhD, are treating more than infected sinuses through the nose. They can repair tear ducts and brain-fluid leaks, excise sinus and nasal cancers, and remove skull base and pituitary tumors from the brain, all without making an open incision.

“Transnasal endoscopic surgery gives patients a minimally invasive approach to tumor removal, which in the past often required a craniotomy,” says Hwang, director of the Stanford Sinus Center and a professor in the Department of Otolaryngology-Head & Neck Surgery at Stanford. “We are fortunate to have terrific collaborative relationships with our colleagues in neurosurgery, head & neck oncology, and ophthalmology to make these types of surgery possible.”

Endoscopic surgery offers huge benefits for patients – no external scars, shortened hospital stays and faster recovery. And advancements in endoscope technology now give surgeons better visuals to guide them through the narrow maze within the sinus cavities, ultimately providing better outcomes for patients as well.

“We’ve come a long way in the past 20 years in terms of how we can approach the sinuses and the nasal cavity,” says Nayak, who recently joined Stanford as assistant professor. “Rather than making incisions on the face and rearranging tissues, we can do a wide array of procedures through the nostrils alone with our precise tools designed for every corner of the nasal cavity.”
results from the use of a common medication for drug dependency, naltrexone, as treatment of chronic pain for fibromyalgia. Mackey coauthored that study in the May/June issue of *Pain Medicine*.

**Referral relationships**

The Pain Management Service only sees patients referred by physician colleagues. “It’s critical that we know what a referring physician’s expectations are,” says Leong. Patients go back to their referring provider, often with a comprehensive treatment plan and recommendations they can implement near home. “Most of our colleagues are, frankly, quite pleased with the highly detailed workups their patients bring back,” adds Leong.

Generally, patients should be referred as soon as routine treatments aren’t working, but some patients, such as those suffering from nerve damage, may benefit by having a pain center intervention as soon as symptoms occur. “If your patient is having pain that is affecting his or her quality of life, if you have questions about what is causing the pain, if you have concerns that the pain is not getting better in the time you would expect, go ahead and refer,” says Mackey. “Don’t treat either patients or yourself to the point of exhaustion,” Leong adds.

To refer a patient to the Stanford Pain Management Center, fax a referral form to 650-320-9443, send an email to referral@stanfordmed.org or call the Physician Helpline at 866-742-4811. ■

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**Surgical GPS guides surgeons**

Working in a tiny space about the size of a matchbox for several hours at a time, endoscopic surgeons work at the outer limits. “Conducting endoscopic surgery through the nose frequently puts you close to the brain, eyes, cranial nerves, carotid artery and other major blood vessels” explains Hwang. “You have to be able to handle tissues delicately and be prepared to manage complex anatomy.”

continued on page 4 >
To help guide them through the tight confines of the sinus cavity, surgeons employ a CT-and MR-based navigation system called stereotaxis. Basically it’s a surgical GPS system for the sinuses that is customized for each patient. Nayak points out, “The navigation system helps us work carefully and safely around critical structures.” By pointing an endoscopic probe in the nose, surgeons can determine their precise location within the nasal cavity on computer monitors depicting the patient’s CT images.

Using advanced, angled scopes, with xenon light sources and HD cameras, surgeons can see more clearly than ever. As a result, they no longer ‘scrape the sinuses’ or pack the nasal cavity when doing sinus repair work. There is no facial swelling or bruising, and most patients having surgery for chronic sinusitis can go home on the day of surgery.

In the case of tumor removal, this enhanced visualization and instrumentation can often improve patient outcomes, says Hwang. “You don’t want to compromise the surgical resection because you have fancier tools. But if you can do the same operation and get as good, or even better, outcomes because you can see the cavity more clearly, then that’s obviously to the patient’s advantage.”

Endoscopic surgery presents an attractive alternative to typical open surgery in the area of the head and neck. “It provides a way of identifying disease that would normally be out of your view,” says Nayak.

**Collaboration expands surgical protocol**

Collaboration is a hallmark of the Stanford endoscopic surgery program. Hwang and Nayak routinely work with physicians from other disciplines within Stanford to conduct surgical procedures through the nasal cavity. Depending on which part of the sinuses we’re working on, explains Hwang, there’s a team of specialists involved in the patient’s care, from head & neck oncology, neurosurgery, ophthalmology, radiation oncology, or interventional radiology.

**Referral relationships**

Surgery to resect tumors is a growing part of the endoscopy program at Stanford, but it is not the bread and butter of Hwang’s and Nayak’s practices. About 70 percent of their time is spent on revisions of previous sinus surgeries. These secondary surgeries are often more complex, as patients may have post-surgical scarring from earlier procedures and alterations of their nasal anatomy.

Patients come to Stanford for endoscopic sinus surgery from all over the western United States. “It’s a broadly-ranged regional U.S. practice,” says Hwang. “We communicate regularly with referring doctors by cell phone and e-mail, and send images and reports using the EMR.” For patients who come from a distance, Hwang and Nayak try to find a way for them to receive follow-up care in their communities, and share their care with the referring ENT and primary care physicians.

To refer a patient, fax a referral form to 650-320-9443, send an e-mail to referral@stanfordmed.org, or call the Physician Helpline at 866-742-4811.
PROGRAM OVERVIEW

- Multi-disciplinary team that includes close collaboration between plastic hand surgeons and orthopaedic hand surgeons, as well as hand occupational therapists and physical therapists – all in one location

- 24 hours per day, 7 days per week on-call coverage for all emergency hand problems ranging from hand amputations to tendon and nerve injuries

- Care of all upper extremity problems from the shoulder to the fingertip

- Dedicated specialists for the treatment of brachial plexus injuries

- Our philosophy of optimal treatment of elbow, distal radius, wrist, and hand fractures allows earlier return to work and recreational activities

- Extensive expertise in the treatment of hand arthritis and carpal tunnel syndrome

- Microvascular techniques allow for novel approaches to difficult problems such as hand ischemia and thumb and finger absence

- Other services include shoulder and elbow replacement surgery, evaluation of work-related hand problems, and complex reconstruction

- Timely communication with referring physicians is a priority

SUPERIOR OUTCOMES

- Our surgeons are leaders in national organizations such as the American Society for Surgery of the Hand and the American Association for Hand Surgery

- Published superior outcomes for thumb CMC joint arthroplasty, replantation, nerve reconstruction, and wrist joint salvage

TRADITION OF INNOVATION AND CUTTING-EDGE RESEARCH

- One of the pioneering institutions behind CT angiography for planning complex hand reconstruction and small joint arthroscopy

- Our surgeons helped develop new treatments for Dupuytren’s contracture

- Research on tissue engineering in the hand, stem cell technology, bone graft substitutes, and clinical outcomes

- Leading innovators in anatomy and functional imaging of the hand and upper extremity

FACULTY:

James Chang, MD
Emilie Cheung, MD
Catherine Curtin, MD
Vincent Hentz, MD
Amy Ladd, MD
Subhro Sen, MD
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REFERRALS

Call 866-742-4811
Fax 650-320-9443
Email referral@stanfordmed.org
Late-life dementia is becoming increasingly prevalent as baby-boomers age, and as cardiologists and oncologists save more lives. Despite decades of research into the pathophysiology of Alzheimer’s disease, neurologists and neuroscientists have fallen short when it comes to delivering treatments that effectively slow the inexorable march of cognitive decline.

This is going to change. For the first time, rationally-designed, molecular-based therapies are starting to emerge from Phase II and Phase III clinical trials. For instance, active and passive immunotherapies directed against the beta-amyloid peptide, the main component of amyloid plaques that litter the brain in Alzheimer’s disease, show early promise in clearing the peptide from the brain. There are problems: their efficacy at slowing clinical progression remains undetermined, and there are potentially serious side effects that must be worked out. We will hear about the results of these and other trials over the next few years. Some of these trials will undoubtedly fail, but it is encouraging that a lot of good ideas are finally reaching advanced stages of drug development.

Another change will be increasingly reliable methods of early diagnosis. Not only are healthy patients starting to ask you and me about their future risk of dementia, but there is also evidence that earlier intervention may be more effective. Advanced structural and functional MRI techniques, biomarker detection in serum and spinal fluid, and genetic analysis may one day help to identify patients in the preclinical stages of a neurodegenerative illness. Early diagnosis will be essential once better drugs are available.

This is the reason to pay close attention to any patient’s complaint of mild memory loss. Mild cognitive impairment, in which subtle changes in short term memory or other aspects of cognition occur without any functional consequence, is increasingly being recognized as a prodromal phase of dementia. Alzheimer’s disease and other neurodegenerative conditions probably begin before any symptoms manifest, and patients often detect slight changes in themselves before their loved ones notice. These patients sometimes benefit more from a referral to a memory disorder clinic than advanced patients.

At the Stanford Center for Memory Disorders, we try to help patients in several ways. With the benefit of a multidisciplinary team of behavioral neurologists, psychiatrists, neuropsychologists, pharmacists, a nurse, and a geneticist, and by making full use of appropriate state-of-the-art diagnostic tools, we attempt to localize the cause of a cognitive decline, sifting through medication side effects and other potentially reversible conditions to arrive at the most accurate clinical diagnosis possible. Second, for what we currently lack in effective therapies, we make up for in education, by spending time with patients and their loved ones to answer questions, to help them to plan for the future — and most importantly to teach lifestyle skills that may slow functional decline. Finally, we provide interested patients with access to a wide variety of research opportunities, from clinical trials to tests of new diagnostic technologies. I am optimistic that we will soon have more to offer patients with age-related cognitive illnesses.

Geoffrey A. Kerchner, MD, PhD is assistant professor of neurology and neurological sciences at the Stanford Center for Memory Disorders. To contact Dr. Kerchner about speaking engagements, please send an email to outreach@stanfordmed.org. Patient referrals can be faxed to 650-320-9443 or call the Physician Helpline at 866-742-4811.
Welcoming New Physicians

Subhro K. Sen, MD
Plastic and Reconstructive Surgery

Faculty Appointment: Clinical Assistant Professor
Specialization/Clinical Interests: Plastic surgery; hand and upper extremity surgery; microsurgery
Research Interests: Peripheral nerve regeneration; lower extremity salvage; head and neck reconstruction; surgical innovation
Medical Degree: Northwestern University, Feinberg School of Medicine
Telephone: 650-723-5256
Online: http://stanfordhospital.org/profiles/Subhro_Sen/
Available for Talks on: Hand surgery including trauma/injuries, infections, arthritis, complex reconstruction, and soft tissue reconstruction; microsurgery; abdominal wall reconstruction; head and neck reconstruction; lower extremity reconstruction and salvage; wounds

Rajesh Dash, MD, PhD
Cardiology

Faculty Appointment: Assistant Professor
Specialization/Clinical Interests: General cardiology; echocardiography; cardiac MRI; coronary CTA
Research Interests: Molecular imaging to detect early onset of cardiovascular disease
Medical Degree: University of Cincinnati
Telephone: 650-725-7087
Online: http://stanfordhospital.org/profiles/Rajesh_Dash/
Available for Talks on: General cardiology; cardiac MRI, echocardiography

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**Advancements in Clinical Care – What Every Physician Should Know**

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Ten 22
Tuesday, May 25, 2010
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