

PHYSICIAN Update



Lucile Packard Children's Hospital
STANFORD UNIVERSITY MEDICAL CENTER

A publication for Referring Physicians

Fall 2002

Craig T. Albanese, MD, Minimal Access Surgery Expert joins Lucile Packard Children's Hospital

CRAIG T. ALBANESE, MD, BELIEVES THAT SMALL KIDS NEED SMALL INCISIONS.

An expert in minimal access surgery and current president of the International Pediatric Endosurgery Group, Albanese says that, for many conditions, minimal access surgery can be done "as effectively, in the same amount of time and at the same cost" as traditional surgery.

"In addition, many kids can go home the same day after minimal access surgery," he says, "and some can combat their post-treatment pain with acetaminophen rather than narcotics."

"There really is no reason why many of these kids should have large, open incisions," Albanese says.

A pioneer in minimal access surgery for infants, children, and fetuses, Albanese has joined Lucile Packard Children's Hospital as the director of pediatric surgery. Albanese will also serve as chief of the division of pediatric general surgery and professor of surgery at Stanford University School of Medicine.

Other benefits of minimal access surgery include quicker recovery and potentially improved self-image due to smaller, less noticeable scars. "It's

incredibly exciting," says Albanese. "There really is no reason why many of these kids should have large, open incisions."

Fetal Therapy

Albanese comes to Packard Children's Hospital from the University of California, San Francisco, where he was the co-director of the Fetal Diagnosis and Treatment Group. His work in fetal therapy has been instrumental in standardizing the use of minimal access surgery to treat fetuses with congenital abnormalities, such as urinary tract obstruction, diaphragmatic hernia, spina bifida, and complications of monozygotic twinning. Albanese will also collaborate with pediatric cardiac surgeons Frank L. Hanley and Vadiyala Mohan Reddy of Packard's Children's Heart Center to treat fetuses with select cardiac disorders.

Advances in imaging and instrument design, coupled with increasing physician experience in fetal surgery, allow the successful resolution of congenital abnormalities previously considered to have very poor outcomes, such as twin-twin transfusion syndrome and fetuses with large congenital cystic adenomatoid malformations. "I routinely see at least one case a month where a physician recommended termination rather than appropriate treatment," says Albanese. "Often we find that, with

careful monitoring, we can delay treatment until after birth. If not, we can potentially correct the defect with fetal surgery."

Packard plans to assemble a multi-disciplinary team of experts to meet weekly to evaluate ultrasound anomalies and MRIs and discuss each case. The 20- to 30-member team will include fetal surgeons, perinatologists, neonatologists, anesthesiologists, nurses, social workers and geneticists. The group offers consultative services and designs both pre- and post-natal treatment plans for individual patients. The team can also recommend the appropriate timing and location of delivery when immediate fetal treatment is not an option.

Infants and Children

Advances in fetal treatment have expanded the range of conditions in infants and children that can be treated with minimal access surgery. Once limited mainly to the abdomen, the technique can now be used to operate in the chest and neck. Treatment of inguinal hernias, and removal of the spleen, gallbladder, appendix or lung can be successfully accomplished with minimal access surgery at Packard Children's Hospital. In addition, Albanese is one of only a few people in the country who can treat esophageal atresia through small incisions.

continued on page 2

continued: Albanese

“Minimal access surgery is approaching the gold standard for many procedures,” says Albanese. “It’s been shown that kids get out of the hospital more quickly, use less pain medication and are able to return to school sooner than if they had undergone traditional surgery.”

Often surgeries are scheduled on a Thursday or Friday in order to minimize the disruption to academic and work life and to allow kids and parents to resume their normal schedules on the following Monday.

Research, Development and Teaching

Until recently, minimal access surgery in infants was hampered by too-large instruments meant for adults. Interactive brainstorming among Albanese, his colleagues and industry experts has spurred the design of smaller, more precise instruments.

In addition to bioengineering surgical tools appropriate for children, Albanese studies pre-natal lung development and the causes of

“Minimal access surgery is approaching the gold standard for many procedures,” says Albanese.

diaphragmatic hernia. He is also interested in the potential of gene therapy for treating diseases such as thalassemia, hemophilia and cystic fibrosis.

Albanese is the principal or co-principal investigator on multiple NIH-funded clinical trials of the role of fetal therapy in altering the natural history of life-threatening congenital anomalies. He has also given Continuing Medical Education talks on minimal access surgery throughout Northern California.

For consultation, or to make an appointment with a pediatric surgeon, call (650) 724-4168.

Conditions and procedures suitable for minimal access surgery:

Fetal

- Urinary tract obstruction
- Congenital diaphragmatic hernia
- Complications of monochorionic twinning
- Select cardiac disorders

Infants and Children

- Hirschsprung’s disease and imperforate anus
- Esophageal atresia repair
- Pyloromyotomy
- Spleen/gallbladder removal
- Thymectomy
- Appendectomy
- Sympathectomy
- Inguinal hernia
- Lung resection
- Bowel resection



Craig T. Albanese, MD

Craig T. Albanese, MD, earned his medical degree from SUNY-Health Science Center, Brooklyn. He completed a residency in general surgery at Mount Sinai Medical Center, with fellowships in pediatric surgery and research and critical care at Children’s Hospital of Pittsburgh. He remained on the faculty of Children’s Hospital of Pittsburgh for several years before being recruited to UCSF in 1996. At UCSF, he was the co-director of the Fetal Diagnosis and Therapy Group and an associate professor of surgery, pediatrics, obstetrics, gynecology and reproductive sciences. He is the current president of the

International Pediatric Endosurgery Group.

Albanese’s work has been reported in over 130 publications and many book chapters. He is the co-author of the leading textbook in pediatric minimal access surgery, and he has taught an advanced course in minimal access surgery. He has chaired multiple symposia and trained many postdoctoral fellows in both clinical and research projects.

He is also the principal or co-principal investigator on multiple NIH-funded clinical trials to understand the role of fetal therapy in altering the natural history of life-threatening congenital anomalies.

Clinic Provides Treatment for Pediatric Limb Anomalies

Physicians at Packard Children's Hospital's Hand and Upper Extremity Clinic know that when parents are confronted with an unexpected congenital anomaly, answering questions, guiding expectations and providing support can be as important as designing and implementing sophisticated treatment plans. This interaction is one reason why clinic chief Amy L. Ladd, MD, values timely contact with patients.

"We like to see them early so we can establish a rapport with the family," said Ladd, associate professor of hand and orthopedic surgery. "We teach them about their child's condition and what might be done to improve or correct it."

The Hand and Upper Extremity Clinic is one of the few places in the country specializing in the treatment of children's upper limb differences. Orthopedic and plastic surgeons, including Vincent R. Hentz, MD, and James Chang, MD, join forces with physical and occupational therapists specializing in the care of special needs children. Along with geneticists, dermatologists, neurologists and physiatrists, they form a unique interdisciplinary team dedicated to all levels of patient care. This collaborative approach is one reason why families and community physicians seek out the experts at Packard Children's Hospital.

Missing or extra fingers, or abnormal development of hands or forearms, affect more than one half of the clinic's patients. Most of these anomalies have no known genetic or environmental cause. Therapists give families of these patients a booklet on children's hand differences to help them understand their child's condition and allay any feelings of guilt parents may have.

They also direct parents to a newsletter called Super Kids for families of children with limb

differences, and they help parents develop realistic expectations of outcomes if surgery is recommended.

Corrective or reconstructive surgery is usually performed when the child is about 12 to 18 months old, unless the viability of the digit is in question or normal growth is threatened. One of the most rewarding operations for the surgeons involves transforming an index finger into a thumb—an elaborate operation called pollicization—by re-orienting the finger and re-routing tendons to provide the child with the ability to pinch and grasp objects.

Most surgeries are performed as outpatient procedures or require only an overnight stay in the hospital. Occupational and physical therapists work with the physicians to fabricate splints and assist the parents in post-operative stretching, splint wear, and basic hand functions. Most children have no trouble figuring out how their new 'part' works.

In addition to correcting congenital anomalies, clinic physicians treat injuries sustained during birth. Hentz, professor of hand and plastic surgery, specializes in the microsurgical treatment of obstetrical brachial plexus palsies. Direct repair or reconstruction of the plexus may be indicated before six months.

Pediatric trauma—often the result of athletic or playground mishaps—comprises the other component of the clinic.

"Any angulated fracture, fractures that disrupt the growth plate, or

fractures that result in a rotated finger or hand should be seen by a specialist," said Ladd. "Severe cuts that sever tendons or nerves likely require surgery."

Younger children are often referred after fingertip amputations, usually due to a slamming door. Ladd and her colleagues evaluate the location of the amputation and the degree of nail involvement when deciding whether to replant the tip.

"We can put it back on using microvascular techniques," said Ladd. "However, we often perform a specialized skin graft instead."

Ladd and Chang also collaborate with dermatologists, gastroenterologists, and therapists to care for children with epidermolysis bullosa, which can leave the patient's hands encased in a cocoon of blistered skin. The surgeons perform a two-step operation involving skin grafts, casting and splinting.

"We work closely with the family as a team," said Ladd. "Educating parents about post-surgical dressing care and splinting can reduce the chance of recurrence."

Families come to Packard Children's Hospital because they want the comprehensive care offered by our team approach."

For more information or to make an appointment call: (650) 497-8201.

Super Kids newsletter available at: <http://www.super-kids.org/>



Amy L. Ladd, MD

Amy L. Ladd, MD, earned her medical degree from SUNY Upstate Medical Center in 1984. She completed her residency in orthopedic surgery at the University of Rochester and a fellowship in hand surgery at Brigham and Women's Hospital and Children's Hospital Boston.

She joined Stanford University School of Medicine in 1990 and is currently an associate professor of Orthopedics and Medicine (by courtesy).

Interdisciplinary Team treats Crainofacial Abnormalities

H. Peter Lorenz, MD, is the newest member of an interdisciplinary team of physicians at Lucile Packard Children's Hospital's Craniofacial Anomalies Clinic. The clinic draws on specialized surgical procedures, advanced diagnostic imaging and new techniques to promote bone growth in an effort to restore function and a more normal appearance to children with a variety of craniomaxillofacial anomalies.

"The majority of our patients come to us with craniosynostosis, or with cleft lips and palates," says Lorenz. The team is also skilled at correcting facial soft tissue asymmetry resulting from the removal of benign and malignant neoplasms and hemifacial microsomia. They can debulk and remove facial tumors caused by neurofibromatosis or fibrous dysplasia, and can treat and remove vascular malformations, hemangiomas, and birthmarks.

Lorenz, the former co-director of UCLA's Regenerative Bioengineering and Repair Laboratory, joined Packard and Stanford's School of Medicine in November as an associate professor of plastic and reconstructive surgery. Other members of the craniofacial anomalies team include neurosurgeons; ear, nose and throat specialists; speech therapists; dentists; orthodontists; nurses; social workers and geneticists.

Lorenz and his colleagues use CT scans and three-dimensional reconstructions of the skull to evaluate and plan treatment for individual patients. Working with neurosurgeons Stephen Huhn, MD, and Lawrence Shuer, MD, Lorenz reshapes the frontal and parietal bones as well as the supraorbital ridge when fusion occurs along the coronal, sagittal or metopic sutures.

The surgeons also treat lambdoid synostosis, bicoronal synostosis and midface retrusion.

"We reconfigure abnormal bone shapes into a normal calvarial structure," says Lorenz. Operations are normally done when infants are

*"The key is,
we're restoring abnormal
bones to normal,"
Lorenz says.*

four to six months old. Patients require blood transfusions—normally from a parent—and remain in the hospital for four to six days after surgery. Usually only one operation is needed to correct craniosynostosis, although infants with Apert or Crouzon syndromes can relapse and require further surgery for forehead and midface retrusion.

Cleft lip and palate repair, and the correction of other congenital facial anomalies, often benefit from distraction osteogenesis. This technique takes advantage of the

body's natural ability to generate new bone and tissue in response to injury. The surgeons cut bones in the jaw or skull and fasten a distraction device to the two sides of the break. Physicians or parents turn a screw on the device to slowly increase the distance between the ends of the bone.

"The patient's own body grows new bone, muscle, tendon and nerve to bridge the gap," says Lorenz. "It's endogenous tissue engineering. With this technique, we're able to get much greater bone edge separation than with a traditional operation."

Distraction osteogenesis combined with orthognathic surgery allows the surgeons to treat patients with severely hypoplastic jaws at a much younger age than they could with previous techniques. "Traditionally we surgically cut and move hypoplastic jaw bones at skeletal maturity, which occurs at about 14 to 16 years of age," says Lorenz, "but with distraction we can treat kids aged seven or eight as long as they have their first adult molars."

Lorenz and his colleagues can also perform pharyngoplasty to improve a

continued next page



H. Peter Lorenz, MD

H. Peter Lorenz, MD, earned his medical degree from the University of Michigan School of Medicine in 1987. He completed his residency in general surgery at UCSF, where he also completed research fellowships in fetal surgery and wound healing. He was a craniofacial surgery fellow at Stanford University School of Medicine in 1997 before joining the faculty at UCLA in 1998. At UCLA, he served as co-director of the Regenerative Bioengineering and Repair Laboratory and of the Gonda Wound Treatment and Clinical Tissue Engineering Center. He joined Stanford as an acting associate professor in November 2001.

Lorenz's past work involved the study of scarless wound healing as a way to reduce post-surgical repair scar formation. His recent research involves using stem cells isolated from human fat to engineer skin that could be used to accelerate healing.

continued: Crainofacial Abnormalities

cleft patient's speech, or genioplasty to give a patient a more normal chin structure. Although treatment can improve the patient's appearance, Lorenz stresses that the foundation for surgery is medical, not cosmetic.

"The key is we're restoring abnormal bones to normal," says Lorenz. "We're not taking a normal structure and making it look better." The distinction between reconstructive and cosmetic surgery is an important one, particularly for health insurance purposes. Recent legislation requires health insurance companies in California to cover cleft lip repair, and later revisions, as a medical necessity.

Although an open cleft lip clearly needs treatment, even microform clefts should be referred early, according to Lorenz. "If there's anything that looks like a scar across the lip, it could be the sign of a small cleft that could benefit from surgery, or at least a full-team evaluation," he says.

In addition to his clinical duties, Lorenz is using DNA microarray technology to identify genes that may reduce or eliminate wound scarring in children and adults. He is also attempting to accelerate healing by engineering new skin using human stem cells isolated from fat.

Lorenz's laboratory is part of the Children's Center for Surgical Research, and is supported by funding from the National Institutes of Health and the Campaign for Lucile Packard Children's Hospital launched in November 2001 by the Lucile Packard Foundation for Children's Health.

For more information, call Clinical Nurse Specialist Elaine Carson at **(650) 723-3661**.

Some conditions treated by the Craniofacial Anomalies Clinic:

Craniosynostosis (also Apert and Crouzon syndromes)	Hemangiomas
Cleft lip and palate	Vascular malformations
Hemifacial microsomia	Facial neoplasms
Microform cleft lip	Neurofibromatosis
	Facial fibrous dysplasia

KRUMMEL APPOINTED SURGEON-IN-CHIEF

Thomas M. Krummel, MD, chair of the Department of Surgery at the Stanford School of Medicine, has been named the first Susan B. Ford Surgeon-in-Chief at Lucile Packard Children's Hospital. Krummel's appointment was made possible by a gift from Ford, a long-standing supporter of the hospital and a member of the Campaign Committee of the Lucile Packard Foundation for Children's Health. The new position fills a critical need in the hospital's pediatric surgery program, which has expanded significantly in the past year. The gift also provides funds to establish the hospital's first dedicated pediatric operating rooms.



Thomas M. Krummel, MD

"Every successful children's hospital has a Surgeon-in-Chief. It is essential that Packard have a leader who understands and advocates for all children who require surgical treatment," says chief of staff Harvey Cohen, MD, PhD. "The chief will provide leadership for the hospital's surgical programs and teams, and will use the strength of the individual subspecialties to create a significant and comprehensive pediatric surgical program."

Prior to his arrival at Stanford in 1998, Krummel chaired the department of surgery at Penn State University. Krummel's research of the regenerative repair of fetal wounds has supported the emerging field of tissue engineering, and his contributions to the development of several surgical simulators and the systematic study of their efficacy led him to receive a Smithsonian Information Technology Innovators Award in 1999. Krummel has also served in leadership positions in the American College of Surgeons, the American Pediatric Surgical Association, the American Surgical Society and the American Board of Surgery/Pediatric Surgery.

As Surgeon-in-Chief, Krummel will be appointed to the hospital's executive management committee and the hospital's board of directors.

Cardiovascular Research Advances Patient Care

“Bench-to-bedside” usually refers to the translation of basic research into clinically applicable medicines or techniques. But the term works equally well to describe cardiologist and researcher Marlene Rabinovitch’s typical day.

Rabinovitch, the new director of cardiovascular research at the Vera Moulton Wall Center for Pulmonary Vascular Disease, divides her time between caring for patients and researching the causes and potential new treatments for cardiovascular disease, pulmonary hypertension and related disorders. She is one of a growing number of physicians at Lucile Packard Children’s Hospital whose commitment to patient care extends beyond the clinic and into the laboratory.

“I really believe that there will soon be new options for treating patients with pulmonary hypertension,” says Rabinovitch, professor of pediatrics and (by courtesy) developmental biology at Stanford University School of Medicine. “The hope is that we may also find treatments for systemic hypertension, coronary artery disease, and possibly even cancer.”

Rabinovitch and her husband, neonatologist Richard Bland, came to Stanford and Packard Children’s Hospital in July. Previously Rabinovitch was the director of cardiovascular research at Toronto’s Hospital for Sick Children, and Bland was the director of lung biology at the University of Utah.

Rabinovitch’s research focuses on understanding the cascade of responses induced in blood vessel walls by injury or high blood pressure. She’s found that one step of the cascade—the release of elastase—is very harmful. By degrading elastin, elastase orchestrates a series of changes that reflects the

functional deterioration seen in pulmonary hypertension and other vascular diseases. These changes include the release of growth factors that stimulate the proliferation and migration of cells and induce thickening and stiffening of the vessel wall and occlusion of the lumen.

“One of the most exciting aspects of our work is that we’ve shown that elastase inhibitors can not only prevent, but also reverse disease progression in animal models of vascular diseases,” says Rabinovitch. “We may one day be able to use a similar approach to treat not only pulmonary hypertension, but also restenosis, atherosclerosis, and post-cardiac transplant coronary artery disease and rejection.”

Rabinovitch and her team are now working on ways to specifically deliver clinically useful compounds such as the elastase inhibitor to the damaged vessels. “We’ve identified several small peptides that have different predilections for specific types of blood vessels,” says Rabinovitch. “We’ve fused them with potential therapeutic genes, and are now testing whether these new molecules will home to the target organ.”

The team has had some success with a system that expresses the prostaglandin gene in the blood vessels. This method of delivery may one day allow clinicians attempting to use the hormone to keep the ductus arteriosus open in infants with

continued next page



Marlene Rabinovitch, MD

Marlene Rabinovitch, MD, earned her medical degree from McGill University in 1971. She completed her residency in pediatrics at the University of Colorado Medical Center and served as a clinical fellow in pediatric cardiology at Texas Children’s Hospital. She completed a clinical and research fellowship in pediatric cardiology at Children’s Hospital Boston and remained on the faculty first as an instructor and then as an assistant professor in

pediatrics. She joined the Hospital for Sick Children in Toronto in 1982 and remained there as a professor of pediatrics, laboratory medicine and pathobiology. She was also director of cardiovascular research until joining Stanford University School of Medicine and Lucile Packard Children’s Hospital in July, 2002.

Rabinovitch has published more than 100 peer-reviewed publications and 60 book chapters on the cellular and molecular biology of pulmonary circulation and vascular disease. She is on the editorial board of 11 major medical journals and is associate editor of *Circulation Research*. She recently received the Award of Merit from the Heart and Stroke Foundation of Canada and the MRC Distinguished Scientist Award. She has been awarded the Paul Dudley White Lectureship for 2002 and will give the plenary lecture at the American Heart Association Annual Scientific Meeting in November, 2002.

continued: Research

congenital cardiac anomalies to prevent the toxic effects caused by systemic intravenous administration — low blood pressure, apnea and impaired bone growth.

Rabinovitch is also investigating the genetic basis of pulmonary hypertension and developmental abnormalities in pulmonary arteries by engineering laboratory animals with mutations suspected to play a role in the development of human disease. She's also looking for novel genes that cause high blood pressure.

"We're trying to learn whether congenital heart defects occur through abnormalities in the migration of progenitor cells," says Rabinovitch. Rabinovitch is collaborating with Stanford investigators with expertise in gene arrays, drug discovery and biotechnology development to answer these and other questions.

Unlike strictly academic researchers, Rabinovitch sees the human cost of these biological missteps on a regular basis. "We have patients come to the Wall Center from all over the world, with complex abnormalities related to blood vessel development and growth in the lung," she says. "The many interdisciplinary collaborations fostered by Packard Children's Hospital provide a unique vehicle for applying novel discoveries directly to patient treatment and diagnosis, and have inspired us with a new surge of energy and enthusiasm."

For clinical information,
consultation or referral to the
Wall Center:

Phone:

1-800-640-WALL (9255)

Email:

WallCenter@stanford.edu

Faculty Update

NEW APPOINTMENTS

Anesthesia

Louis Scheepers, MB, BCH, FRCPC
Komal Kamra, MD
William Feaster, MD

Cardiology

Marlene Rabinovitch, MD

Dermatology

David Fiorentino, MD, PhD

Pediatrics

Anthony Burgos, MD, MPH

Radiation Oncology

Kathy Su, MD

PUBLICATIONS

The following is a sampling of recently published articles by Lucile Packard Children's Hospital physicians.

Novel notions on newborn lung disease.
Rabinovitch and Bland. *Nature Medicine* 2002 Jul; 8(7):664-6

Overexpression of the serine elastase inhibitor elafin protects transgenic mice from hypoxic pulmonary hypertension. Zaidi, You, Ciura, Husain, Rabinovitch. *Circulation* 2002 Jan 29; 105(4):516-21

Fetal pulmonary artery diameters and their association with lung hypoplasia and postnatal outcome in congenital diaphragmatic hernia. Sokol, Bohn, Lacro, Ryan, Stephens, Rabinovitch, Smallhorn, Hornberger. *American Journal of Obstetrics and Gynecology* 2002 May; 186(5):1085-90

Reconstruction of the hand in Apert syndrome: A simplified approach. Chang, Danton, Ladd, Hentz. *Plastic and Reconstructive Surgery* 2002 Feb; 109(2):465-70; discussion 471

Rat extramedullary adipose tissue as a source of osteochondrogenic progenitor cells. Huang, Beanes, Zhu, Lorenz, Hedrick, Benhaim. *Plastic and Reconstructive Surgery* 2002 Mar; 109(3):1033-41; discussion 1042-3

Prenatal resection of a fetal pericardial teratoma. Sydorak, Kelly, Feldstein, Sandberg, Silverman, Harrison, Albanese. *Fetal Diagnosis and Therapy* 2002 Sep-Oct; 17(5):281-5

Successful fetal intervention for congenital high airway obstruction syndrome. Paek, Callen, Kitterman, Feldstein, Farrell, Harrison, Albanese. *Fetal Diagnosis and Therapy* 2002 Sep-Oct; 17(5):272-6

Microelectrical mechanical systems in surgery and medicine. Salzberg, Bloom, Mourlas, Krummel. *Journal of the American College of Surgeons* 2002 Apr; 194(4):463-76

Pediatric residents' clinical diagnostic accuracy of otitis media. Steinbach, Sectish, Benjamin Jr, Chang, Messner. *Pediatrics* 2002 Jun; 109(6):993-8

Continuous professional development: raising the bar for pediatricians. Sectish, Floriani, Badat, Perelman, Bernstein. *Pediatrics* 2002 Jul; 110(1 Pt 1):152-6

Use of an inactivated varicella vaccine in recipients of hematopoietic-cell transplants. Hata, Asanuma, Rinki, Sharp, Wong, Blume, Arvin. *New England Journal of Medicine* 2002 Jul 4; 347(1):26-34

Asthma: an epidemic of dysregulated immunity. Umetsu, McIntire, Akbari, Macaubas, DeKruyff. *Nature Immunology* 2002 Aug; 3(8):715-20

Antigen-specific regulatory T cells develop via the ICOS—ICOS-ligand pathway and inhibit allergen-induced airway hyperreactivity. Akbari, Freeman, Meyer, Greenfield, Chang, Sharpe, Berry, DeKruyff, Umetsu. *Nature Medicine* 2002 Sep; 8(9):1024-32

Important Contact Information

PHYSICIAN HOTLINE FOR REFERRAL & CONSULTATION

24-hour, immediate referral and consultation
(800) 995-5724
 (650) 843-0136 fax
 referral@medcenter.stanford.edu

CRITICAL CARE CONSULTATION & TRANSPORT

24-hour, immediate consultation for neonatal, pediatric and maternal critical care and transport issues
(650) 723-7342

HOSPITAL PAGE OPERATOR

24-hour access
(650) 497-8000

OTHER CONTACTS FOR REFERRING PHYSICIANS

Admissions

(800) 995-5724 / (650) 497-8221

Continuing Medical Education

(650) 497-8554

Diagnostic Imaging

(650) 497-8376

Radiologist Consult

(650) 497-8466

Grand Rounds

(650) 723-5168

Health Plan Services

(650) 736-1067

Medical Group Services

(650) 736-1067

Medical Staff Services

(650) 497-8566

Professional Services

Billing for Physicians

(650) 498-5785

Physician Referral Liaison Service

Coordinates referrals and serves as a communication link among hospital and referring physicians, medical groups and health plans

Monday - Friday 8 a.m. - 5 p.m.
(800) 756-5000 / (650) 498-2526 fax
 referral@medcenter.stanford.edu

CME Courses for Physicians in 2003

Joint Pediatric Conference with Kapiolani Children's Hospital Mid-March, 2003 Oahu, Hawaii

Fifth Annual Pediatric Potpourri in Alaska
June 21-28, 2003

11th Annual Pediatric Update
July 18-19, 2003
 Lucile Packard Children's Hospital

For information, call **(650) 497-8555** or visit **cme.lpch.org**



Lucile Packard Children's Hospital

STANFORD UNIVERSITY MEDICAL CENTER

725 Welch Road Palo Alto, CA 94304

www.lpch.org

Physician Update is published as part of an ongoing effort to serve the needs of physicians who refer to Lucile Packard Children's Hospital at Stanford. To share comments or secure more information, contact:

Terry O'Grady, RN, MS
 Director, Community and Physician Relations
 Lucile Packard Children's Hospital
 1520 Page Mill Road, Palo Alto, CA 94305
 (650) 497-8965
 terry.o'grady@medcenter.stanford.edu

Mary Dybdahl
 Manager, Physician Referral Liaison Service
 Lucile Packard Children's Hospital
 725 Welch Road, Palo Alto, CA 94304
 (800) 756-5000
 mary.dybdahl@medcenter.stanford.edu

Non-Profit Org.
 U.S. Postage
PAID
 Palo Alto, CA
 Permit 29