

# Physicians Update



## SPRING 2016

### Pancreas Issue

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#### ONCOLOGY

### More Treatment Options Emerging to Address Pancreatic Cancer

The incidence of pancreatic cancer in the United States has been on the rise for the last two decades, fueled in part by increasing rates of diabetes and obesity. Although some progress has been made in extending the average length of survival, the disease continues to have poor cure rates. By 2030, it is expected that pancreatic cancer will be the second-leading cancer killer in the U.S. But

not all the news is bleak, says Zev Wainberg, MD, a medical oncologist and co-director of the UCLA GI Oncology Program.

On the surgical side, it has become clear in recent years that higher-volume centers are achieving the best outcomes. “That is not the case for all tumors, but pancreatic-cancer surgery is technically challenging, and so

*continued on p. 4*

# UCLA Clinical Updates

Learn about the Latest  
Advances from UCLA

## UCLA Breast Center in Santa Monica

The UCLA Breast Center in Santa Monica offers a streamlined approach that allows newly diagnosed breast-cancer patients to see the entire team of specialists in one day, with a patient navigator to serve as a single point of contact to facilitate and coordinate care.

## Behavioral-Health Services in Woodland Hills

UCLA psychiatrists are providing medical oversight and services for the Samuel Goldwyn, Jr. Center for Behavioral Health — a 12-bed inpatient unit for adults over 55 years of age with acute mental-health needs.

## Managing Inborn Errors of Metabolism

Infants with these disorders can appear healthy, but if not properly treated, an IEM can lead to intellectual disability, organ damage, immunodeficiency, coma and death, sometimes within hours of birth.

## Safe and Effective Weight Loss

UCLA has combined its multiple obesity services into one center in order to simplify referrals and optimize patient care, including state-of-the-art programs for both surgical and nonsurgical weight loss.

## Clinical Trial for Asymptomatic Carotid Artery Stenosis Patients

CREST-2 is a multicenter randomized clinical study to determine the best way to prevent

strokes in people who have a high amount of blockage of their carotid artery but no stroke symptoms related to that blockage.

## Triage Protocol for Metastatic Brain Tumors

At UCLA, an internal triage staff immediately evaluates brain-tumor patients' needs and offers same-day or next-day appointments with a neurosurgeon, radiation oncologist or both.

## Device to Treat Mitral Valve Disease

A breakthrough percutaneous mitral regurgitation (MR) therapy significantly improves symptoms, disease progression and quality of life for people who are at prohibitive risk for an invasive procedure.

## Care for Women with Uterine Fibroids

UCLA's multidisciplinary fibroid treatment program was the first in the country to offer minimally invasive, noninvasive and robotic surgical treatments for uterine fibroids and adenomyosis.

## Improving Number and Quality of Donor Livers

Pioneering research at UCLA aims to extend the availability of donor livers by treating suboptimal organs prior to transplantation and by preventing cellular damage to donor organs.

## Rapid-Deployment Aortic-Valve System

UCLA is one of 35 sites evaluating the safety and effectiveness of the INTUITY Elite valve, which is held in place by a circular, balloon-expandable frame rather than complex suturing.

## Managing Breast-Cancer Risk

Breast density is an important factor in determining a woman's risk of breast cancer. Studies suggest women with dense breasts have a four- to six-fold increased risk of developing breast cancer.



To download these and other clinical advances at UCLA Health, go to: [uclahealth.org/clinicalupdates](http://uclahealth.org/clinicalupdates)

# News from UCLA Health

## Key to Effective Personalized Medicine

UCLA surgeons and bioengineers have taken a major step to advance personalized medicine with a revolutionary technology platform called phenotypic personalized medicine, or PPM, which can accurately identify a person's optimal drug and dose combinations throughout an entire course of treatment.

[uclahealth.org/personalizedmedicine](http://uclahealth.org/personalizedmedicine)

## Exome Sequencing Improves Diagnosis of Neurogenetic Disorders

UCLA researchers have found that a state-of-the-art molecular genetic test greatly improves the speed and accuracy with which they can diagnose neurogenetic disorders in children and adults. The test, called exome sequencing, involves determining the order of all of the genes in a person's genome.

[uclahealth.org/exomesequencing](http://uclahealth.org/exomesequencing)

## Glial Scar Tissue May Assist Spinal-Cord Regeneration

Rather than impede damaged nerve cells from regrowing after a brain or spinal-cord injury, UCLA researchers have found that the glial scar tissue that forms might actually favor nerve-cell regeneration.

[uclahealth.org/spinalregeneration](http://uclahealth.org/spinalregeneration)

**UCLA Health**

### UCLA introduces triage protocol for patients with metastatic brain tumors



Lower initiation lengths cancer care, in a single visit. UCLA Health's new triage protocol for patients with metastatic brain tumors allows patients to see the entire team of specialists in one day, with a patient navigator to serve as a single point of contact to facilitate and coordinate care.

**Noninvasive and radiation oncology in the UCLA Breast Center Program**

UCLA's multidisciplinary fibroid treatment program was the first in the country to offer minimally invasive, noninvasive and robotic surgical treatments for uterine fibroids and adenomyosis.

**Mane Children's Hospital UCLA**

### Clinic offers a comprehensive approach to immune-mediated digestive diseases



Through collaboration among Pediatric Gastroenterology, Allergy & Immunology, and Radiology, the Hospital of UCLA offers comprehensive patient centered care for children with a wide range of immune-mediated digestive diseases. It is located at the Hospital of UCLA in Santa Monica, California.

**Intensive medical digestive diseases**

UCLA's multidisciplinary fibroid treatment program was the first in the country to offer minimally invasive, noninvasive and robotic surgical treatments for uterine fibroids and adenomyosis.

**UCLA Health**

### Device treats patients with mitral valve disease who are not candidates for open-heart surgery



A breakthrough percutaneous mitral regurgitation (MR) therapy significantly improves symptoms, disease progression and quality of life for people who are at prohibitive risk for an invasive procedure.

**One in 10 people 75 and over affected by mitral regurgitation**

UCLA researchers have found that a state-of-the-art molecular genetic test greatly improves the speed and accuracy with which they can diagnose neurogenetic disorders in children and adults.



# Patients with Diabetes Stemming from Pancreatitis or Pancreas-Removal Surgery Have Special Risks

Patients who develop diabetes as a result of chronic pancreatitis or following surgery to remove their pancreas have risks and treatment indications that are significantly different from others who are diagnosed with diabetes as adults.

While approximately 95 percent of diabetes patients have insulin-resistant type 2, “diabetes related to pancreatic disease is a process that is much more like type 1 diabetes — and even then there are important distinctions,” says endocrinologist Matthew Freeby, MD, director of the Gonda Diabetes Center and associate director of UCLA diabetes clinical programs. He notes, for example, that patients with diabetes resulting from chronic pancreatitis or pancreatic surgery tend to be more susceptible to experiencing complications such as loss of consciousness and seizures from hypoglycemia.

“These patients are in an insulin-deficient state and typically lacking glucagon, an important hormone reducing hypoglycemia risk,” Dr. Freeby says. They “require intensive diabetes education and treatment by a team that is knowledgeable in the use of continuous-glucose-monitoring devices and how best to deliver insulin therapy through multiple daily injections or, potentially, using insulin pumps,” Dr. Freeby says.

Nearly half of patients with chronic pancreatitis progress to diabetes. “It’s believed that about 1-to-2 percent of the healthy pancreas is made up of beta cells that produce insulin, and these are being destroyed over time by the disease,” Dr. Freeby explains. For these insulin-deficient patients, keeping sugars under control is especially important and can be challenging. Not only are these patients prone to hyperglycemia and its immediate impact, but they also are at risk for chronic complications.

The same is true for patients who, as a result of a pancreatectomy, lose the ability to produce insulin, leading to a condition referred to as “brittle diabetes.” One reason these patients are

at a particularly high risk for low blood sugars is that they also have lost their glucagon-secreting alpha cells, which play a key regulatory role in keeping sugars sufficiently high. As a result, Dr. Freeby says, insulin must be given to these patients in lower doses to reduce the risk for hypoglycemia.

Additionally, in the period following the pancreatectomy, when a patient is experiencing significant inflammation throughout his or her body, the insulin requirements are likely to be different from what they will be further along in their recovery, Dr. Freeby adds. Thus, it is crucial to closely monitor patients to determine their insulin requirements as the inflammation is reduced and activity levels increase.

“For patients who are having pancreatic removal, it’s especially important to provide a strong education component both before and after the surgery,” Dr. Freeby says. Prior to the operation, the UCLA team explains what it will mean for the patient to develop diabetes, including the importance of blood-sugar control and how to monitor it, as well as how to administer insulin and in what doses. Following surgery, these patients are managed by a team that includes an endocrinologist, nutritionist and diabetes nurse who continue to provide education, as well as working with patients on the nuances of adjusting both long-acting and short-acting insulin.

“It’s very important to recognize that, even though these patients with pancreatic diseases are being diagnosed with diabetes as adults, this is not type 2 diabetes,” Dr. Freeby says. “With patients who have type 2 diabetes, we think about oral medications as first-line therapy, but those aren’t going to work for someone with diabetes related to chronic pancreatitis or surgical removal of the pancreas. For these patients, it isn’t about making the insulin work better; it’s about getting that insulin back.”



“For patients who are having pancreatic removal, it’s especially important to provide a strong education component both before and after the surgery.”

## COVER STORY

# More Treatment Options Emerging to Address Pancreatic Cancer

*(continued from cover)*

there is greater likelihood of removing all the cancer, with a lower risk of postoperative complications, at a large-volume center with more experience,” Dr. Wainberg explains.

The definition of which pancreatic tumors are resectable has broadened, and the ability of large centers, like UCLA, to perform more aggressive surgeries than in the past is being facilitated by advances in preoperative treatments. “It’s very important that these patients be treated in a multidisciplinary setting, where we can use chemotherapy and radiation therapy to improve the odds of getting them to resectability and successful surgery,” Dr. Wainberg says.

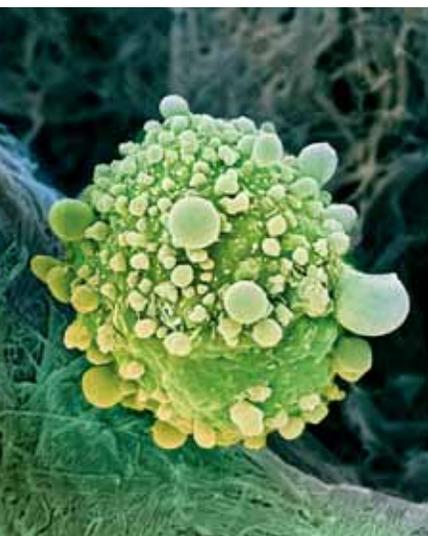
UCLA has been a leader in changing traditional thinking about when to get pancreatic-cancer patients to the operating room. “We now know that for patients who are poor surgical candidates, it is important to use preoperative therapy to treat microscopic disease that may have spread elsewhere so that we get the best results at the time of surgery,” Dr. Wainberg says. He notes that this approach has the added benefit of identifying patients who stand no chance of benefiting from surgery and sparing them the morbidity of an operation.

UCLA also is a leader in efforts to expand preoperative treatment beyond chemotherapy. Perhaps the greatest hope lies in drugs that manipulate the immune system to attack the cancer. Immunotherapy drugs have recently shown great success in the treatment of melanoma and lung cancer, among others. While the drugs have not proven effective in pancreatic cancer as single agents, Dr. Wainberg says, there is optimism about strategies that combine immunotherapy with chemotherapy, as UCLA currently is doing in a large clinical trial. Dr. Wainberg and colleagues also are involved in a major effort to capitalize on advances in nanotechnology to improve on mechanisms of drug delivery to pancreatic tumors.

“It’s very important that these patients be treated in a multidisciplinary setting, where we can use chemotherapy and radiation therapy to improve the odds of getting them to resectability and successful surgery”

The major challenge in pancreatic cancer is early detection. Endoscopic ultrasound has emerged as the single best way to detect small pancreatic tumors — in some cases finding lesions where CT and MRI, the more widely available imaging tests, are negative. “I always tell physicians that if you have a strong clinical suspicion of pancreas cancer and negative imaging, you aren’t finished until you get an endoscopic ultrasound,” says V. Raman Muthusamy, MD, director of interventional and general endoscopy and GI endoscopy at UCLA.

Beyond its value for detection, endoscopic ultrasound now is increasingly used to obtain core biopsies. “As we move toward more personalized medicine, we are now able to make an accurate diagnosis on biopsy more than 90 percent of the time, providing important molecular information to guide the treatment,” Dr. Muthusamy explains. His team also is working to identify molecular markers that can better predict the behavior of pancreatic cysts — lesions that can turn into cancer. It is estimated that 10-to-25 percent of people older than 70 have a pancreatic cyst detectable on imaging. “Most of those will never turn into cancer, so we are trying to come up with ways to predict which ones are cause for concern,”



## STORY HIGHLIGHTS

Pancreatic-cancer surgery is technically challenging and outcomes are better at higher-volume centers, with a greater likelihood of removing all the cancer with fewer complications.

Preoperative treatment has expanded beyond chemotherapy, with increasing focus on immunotherapy-chemotherapy combinations and nanotechnology to improve drug delivery.

Dr. Muthusamy says. Using an endoscopic technology Dr. Muthusamy has utilized for Barrett's esophagus patients, he and his colleagues have found that certain characteristics of pancreatic cysts can identify them as benign, thus avoiding the necessity of annual follow-up exams.

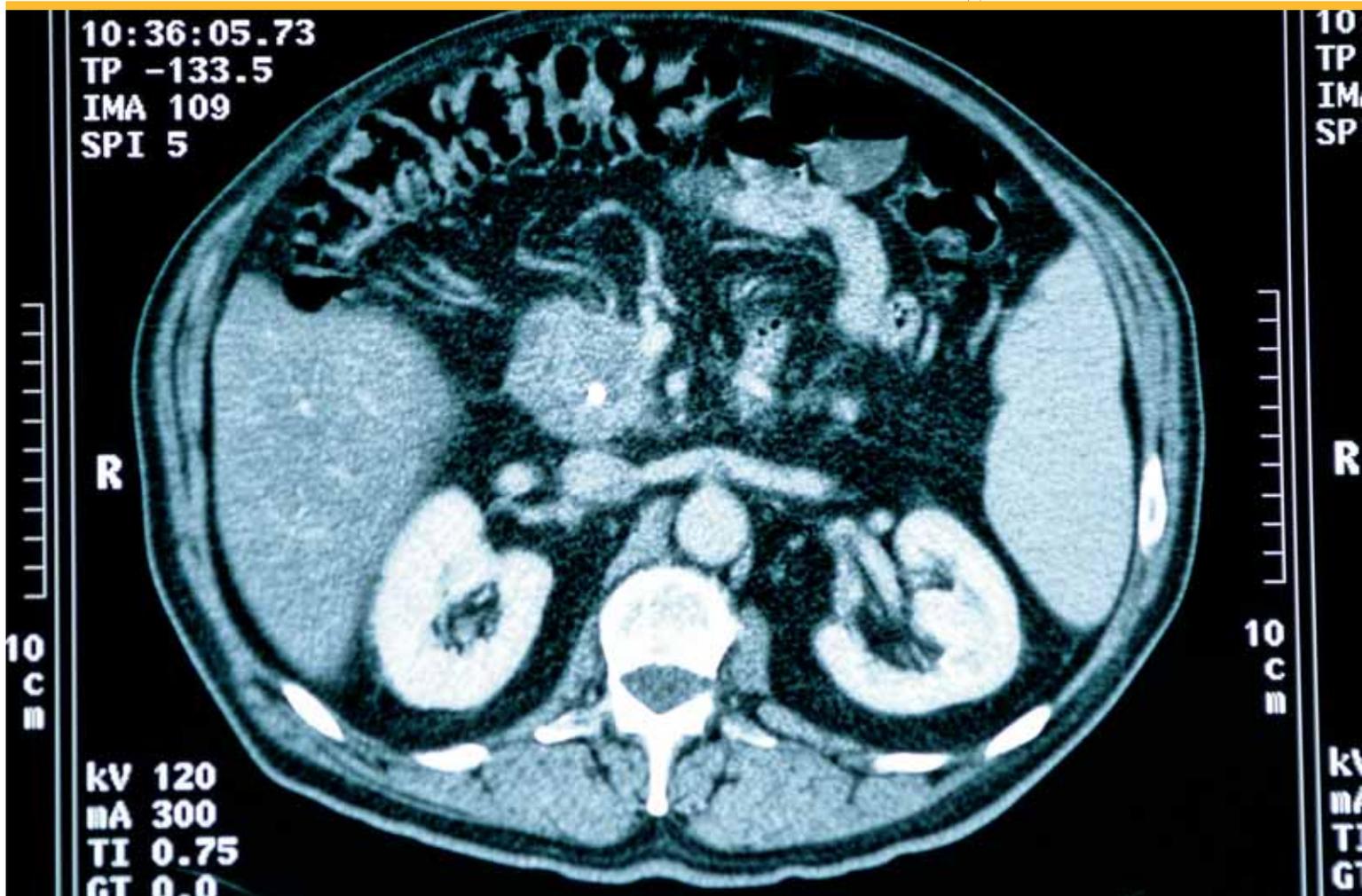
Dr. Muthusamy's endoscopy group also is working closely with UCLA's multidisciplinary pancreatic cancer team to advance treatment efforts. Patients whose tumors start in the head region of the pancreas often experience jaundice as a result of the cancer blocking the bile duct, preventing bile from reaching the intestines and building up the level of bilirubin. Using metal rather than traditional plastic stents, Dr. Muthusamy and colleagues have been able to relieve the biliary obstruction with longer durability and fewer complications. A similar approach is being used to help relieve duodenal



obstructions. For patients who experience celiac blocks, which can cause significant pain, the endoscopy team now uses endoscopy to inject medicines to deaden the nerves coming from the pancreas as a pain-relieving alternative to narcotic medications. The endoscopic group also has begun placing fiducial markers in the pancreas that help to guide, and thus maximize, the impact of radiation therapy.

"The beauty of endoscopy is that we can combine all of these approaches into a single procedure," Dr. Muthusamy adds. "That is a great advantage to the patient."

Endoscopic ultrasound has emerged as the single best way to detect small pancreatic tumors — in some cases finding lesions where CT and MRI, the more widely available imaging tests, are negative.





## STORY HIGHLIGHTS

New integrated practice unit brings experts from all different specialties together to meet to both discuss and treat patients.

Integrated approach enables a more in-depth analysis and recommendation to benefit patients.

# Pancreatic Diseases Center Brings Specialties Together Under One Roof

A newly established Integrated Practice Unit (IPU) within the UCLA Agi Hirshberg Center for Pancreatic Diseases marks a significant step forward for a program with a reputation going back nearly three decades as a leader in the research and care of pancreatic conditions. With the IPU, the center, which has among the largest volume of patients of any pancreas program in the western United States, aims to transcend traditional barriers by bringing all experts treating pancreatic diseases under one roof to provide more efficient and effective care. The two surgeons leading the IPU effort, Timothy Donahue, MD, and Joe Hines, MD, talk about the new direction.

### What was behind the decision to establish the IPU?

**Dr. Donahue:** The pancreas diseases center at UCLA is already among the best anywhere. Patients receive state-of-the-art care for pancreatic cancer and other pancreas diseases, including pancreatic neuroendocrine tumors, pancreatic cystic disease, acute pancreatitis and chronic pancreatitis, as well as other perampullary diseases such as bile-duct tumors, duodenal tumors, duodenal polyps and ampullary cancer. Before we transitioned to the IPU, though, physicians with different areas of expertise taking care of these types of patients would meet and discuss cases, but they wouldn't necessarily see patients together, wouldn't necessarily live and breathe pancreas diseases together. And that's the real push for the IPU — to take an already great multidisciplinary program and transform it so that experts from all different specialties — surgeons, medical oncologists, gastroenterologists, radiologists, pathologists, genetics counselors, dietitians and others — not only meet and discuss the patients, but also see them together in the same space. With the IPU, patients can have their cases discussed by all of the appropriate physicians in a conference immediately before they are seen in the clinic,

then be seen by the team in one setting where they are offered state-of-the-art care, including clinical trials, as recommended by these experts working in concert with each other.

**Dr. Hines:** Patients will immediately recognize this as “one-stop shopping” — the convenience of being able to have all of their appointments in a single day and at a single site. But it's more than just the convenience. When the entire team is together in the same space and together creating a treatment plan, that's better than what could be offered when a patient is seeing the same physicians in separate appointments over a series of days or weeks. It's allowing for a more in-depth analysis and recommendation.

**This is part of UCLA Health's overall emphasis on patient-centered care. Is this a trend you see continuing to gain momentum?**

**Dr. Donahue:** The future of healthcare, especially at major academic medical centers such as UCLA, is to bring experts together around disease processes rather than having them siloed in the traditional departmental or divisional structures. That's how we can reduce the cost of healthcare and make care more value-based, more efficient and more convenient for patients.

**In what way does this approach make particular sense for pancreatic diseases?**

**Dr. Hines:** The pancreas is complex and the diseases are not common. There is now a lot of good national data showing that it makes a difference when a patient goes to a place where the volume is high and the physicians are working on this every day. How we're managing these diseases is changing, and there's going to be a lot of progress, especially for patients with cancer, over the next 10-to-15 years, so it's important for centers like ours to be organized in a way that enables us to bring the most up-to-date care to the patient.

**Does having this kind of seamless integration help to bring the latest research findings to patients more quickly?**

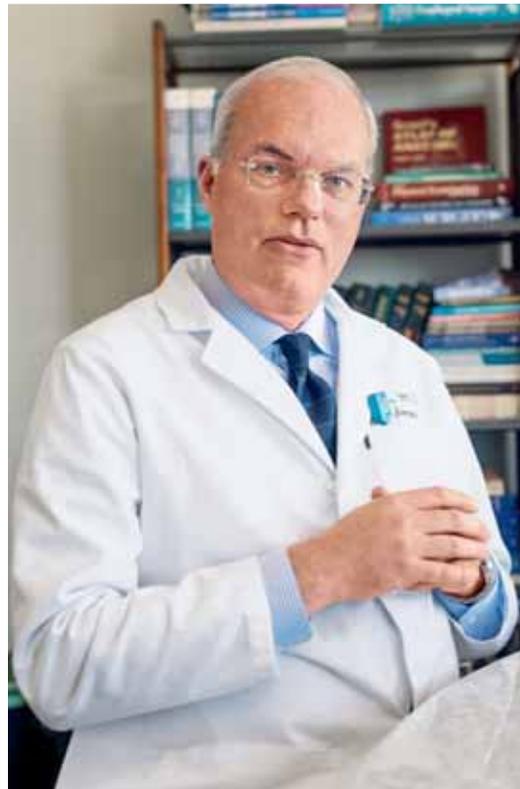
**Dr. Hines:** Exactly. It's generally thought that it takes about 17 years, on average, for a new discovery or treatment modality to permeate into the lexicon of healthcare in the United States. The people who are running this IPU

are among the ones who are making the discoveries and clinical advances. We believe that having these researchers as part of a team will lead to a significant compression of time when it comes to changes in management of these very complex diseases.

**Dr. Donahue:** Our objective is not only to provide patients efficient, convenient state-of-the-art care, but also to work to transform and change the standard of care for each of the diseases we treat in the IPU. That's a lofty goal, but with the resources of this institution, it is much more achievable for patients who are treated in the IPU. And with the IPU structure, we are better able to work together toward not only expanding on the portfolio we have in terms of care for patients, but also improving outcomes for existing treatments. We have been working with the hospital's quality team to generate data and metrics for improving our care in the treatments we currently offer so that it is more efficient and more effective.



Timothy Donahue, MD



Joe Hines, MD

## UCLA's History of Excellence in Pancreatic Disease

When Howard Reber, MD, Distinguished Professor of Surgery at the David Geffen School of Medicine at UCLA, came to UCLA, in the mid-1980s, to assemble a program to study and treat pancreatic diseases, "pancreatic surgery, and treatment for pancreatic diseases in general, was mostly done by people who did not specialize in these areas. And yet there was beginning to be a realization that the more pancreas operations you did, the better you were likely to get at doing them."

Over the next decade at UCLA, he performed almost all of the pancreatic surgeries, while recruiting and training new pancreatic surgeons, as well as attracting new faculty in other specialties who were interested in diseases of the pancreas.

"As more patients began to come here, we got better at treating these diseases, and other specialists — not only surgeons, but gastroenterologists, radiologists, interventional radiologists and others — were drawn here to develop new techniques for treating complications more effectively with nonsurgical means," he says,

In 1997, the Hirshberg Pancreatic Cancer Research Laboratory, with Dr. Reber as its director, was established. After another decade of sharp growth in the clinical and basic-science programs in pancreatic diseases, Dr. Reber was named founding director of the new UCLA Center for Pancreatic Diseases, and, in 2015, Agi Hirshberg endowed the center in perpetuity, establishing the UCLA Agi Hirshberg Center for Pancreatic Diseases.

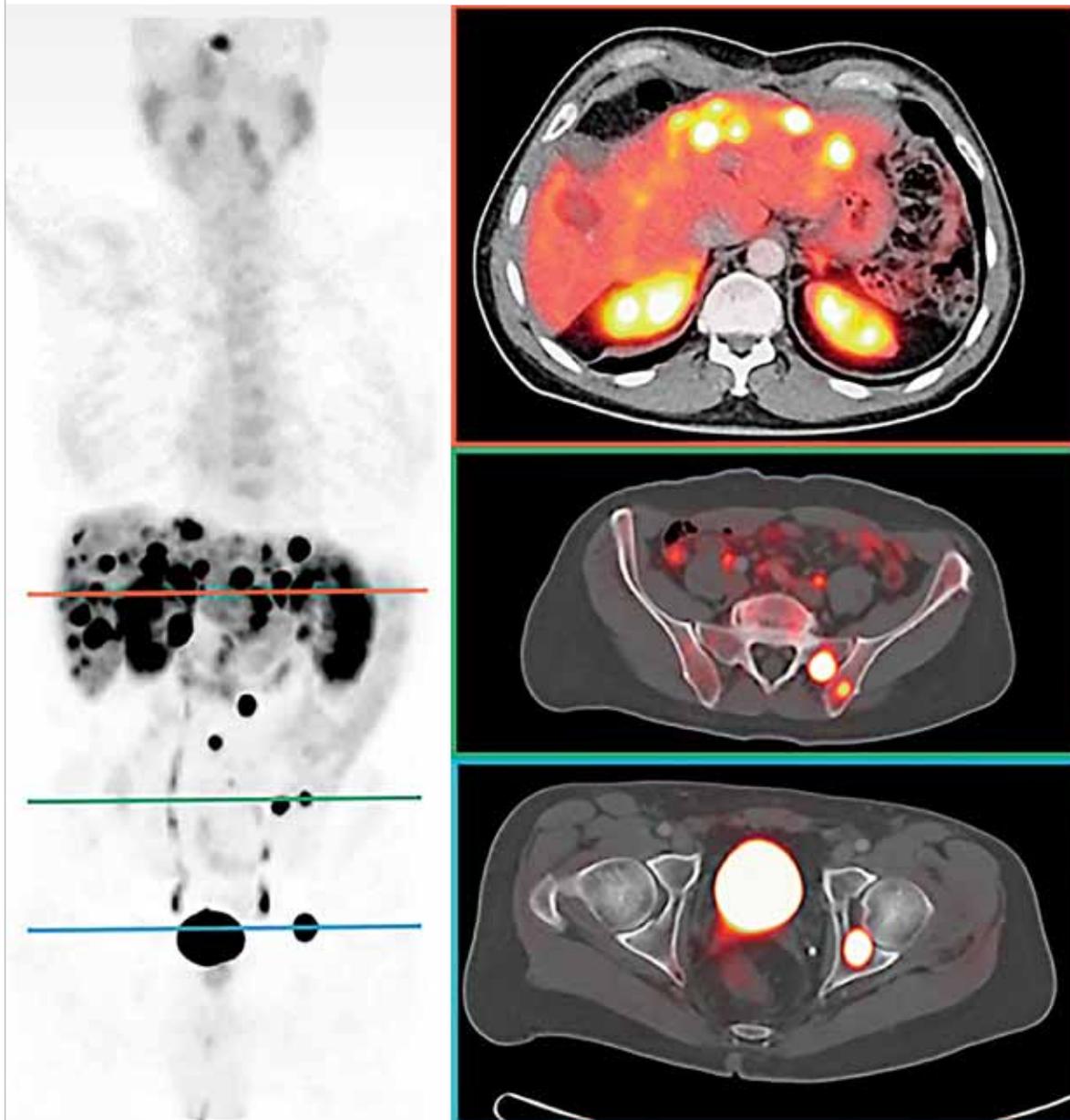
# Newest Technologies Target Neuroendocrine Tumors

## STORY HIGHLIGHTS

Diagnosis and treatment of neuroendocrine tumors, which are the second most common mass that forms in the pancreas, require special expertise and a multidisciplinary team.

Leveraging its institutional strengths in nuclear medicine, gastrointestinal and pancreatic surgery, medical oncology, endocrinology and liver surgery and transplantation, UCLA has established a dedicated program to improve the care of patients with neuroendocrine tumors. These are relatively uncommon tumors that

can arise throughout the body, but particularly affect the gastrointestinal tract, and are the second-most common masses that form in the pancreas. The diagnosis and treatment of neuroendocrine tumors require special expertise and a multidisciplinary team. While focused on many of the experimental treatments that



A patient with a pancreatic NET was referred for restaging. Corresponding 68Ga-DOTATATE scan revealed multiple bone and liver metastases as can be seen on the maximum intensity projection (left panel) as well as on the corresponding fused PET/CT images (right panel).

are coming to fruition, a driving force behind the new program is the approach known as theranostics. This approach uses a state-of-the-art PET scanner to diagnose, stage and guide targeted treatment called peptide radio receptor therapy (PRRT) for patients with certain types of neuroendocrine tumors.

Neuroendocrine tumors that start in the pancreas tend to be more aggressive than those that form elsewhere. “Up to now, the approved drug therapies in the United States for these tumors have not been very effective,” says Timothy Donahue, MD, a UCLA associate professor of surgery and molecular and medical pharmacology and a member of the UCLA Agi Hirshberg Center for Pancreatic Diseases. But for the past two decades, PRRT has been successfully used in Europe, with encouraging results, for patients with certain types of inoperable metastasized neuroendocrine tumors.

Many neuroendocrine tumors overexpress somatostatin-2 receptors on the tumor-cell surface, providing a target for both diagnostic imaging and treatment. Using the latest radiochemistry technology, researchers at the UCLA neuroendocrine tumor group are able to attach radioactive substances to ligands that selectively bind to the cells. When labeled with a certain radionucleotide, the tumor cells can be imaged more accurately than ever before, using UCLA’s Gallium 68 DOTATATE PET scan — a state-of-the-art tracer currently under FDA review that is available in only a few centers in the United States. Once the imaging identifies the target, another radionucleotide linked to the same ligand is used to kill the same cells that are imaged on the PET tracer.

“This is the most sensitive test we have for finding neuroendocrine tumors,” says Johannes Czernin, MD, vice chair of molecular and medical pharmacology at UCLA. “But beyond finding the tumor, we can use theranostics to perform diagnostic molecular imaging followed by a personalized treatment approach based on the predictive value of the scan.”

Dr. Czernin, who is conducting the PRRT work in collaboration with Dr. Donahue and Ken Herrmann, MD, an associate professor in the Department of Molecular and Medical Pharmacology, notes that PRRT began in Europe

in 1996 and is now well established there. It currently is making its way through the process of final FDA approval in the United States. A recent randomized trial found a substantial progression-free survival benefit for patients with mid-gut tumors who underwent PRRT compared with those who didn’t.

J. Randolph Hecht, MD, director of the UCLA GI Oncology Program and medical-oncology director of the neuroendocrine tumor group, says that PRRT is among the most exciting new approaches for the treatment of metastatic neuroendocrine tumors. But there are other promising treatments that Dr. Hecht and his UCLA colleagues have studied. “Over the last several years, trials with several new agents have shown that we can improve the outcome of patients with these tumors,” Dr. Hecht says. Examples include the mTOR inhibitor everolimus, as well as the VEGF inhibitor sunitinib.

Given that pancreatic and GI neuroendocrine tumors often move to the liver, UCLA’s multidisciplinary hepatobiliary group also works closely with the team on liver-directed therapies, including embolization and radio-embolization to block the blood supply to the tumors, surgery and, in some cases, transplantation.

Dr. Hecht says that because neuroendocrine tumors are relatively rare, outcomes are significantly better at major referral centers such as UCLA, where patients have access to the latest experimental therapies and can be treated by an experienced team.

“With all of our resources and expertise, we are positioned to comprehensively care for patients with neuroendocrine tumors,” adds Dr. Donahue. “By working together and taking advantage of these state-of-the-art approaches, we believe we are poised to make exciting advances in how these tumors are diagnosed and treated.”



Find more information about the UCLA Agi Hirshberg Center for Pancreatic Diseases and pancreatic endocrine tumors at: [pancreas.ucla.edu](http://pancreas.ucla.edu)

“By working together and taking advantage of these state-of-the-art approaches, we believe we are poised to make exciting advances in how these tumors are diagnosed and treated.”



### STORY HIGHLIGHTS

Patients most likely to be indicated for a combined kidney and pancreas transplant are those with brittle diabetes, patients with hypoglycemia unawareness and those whose lifestyle has been so adversely affected by their diabetes that they are willing to accept the risks of the procedure.

# Some Diabetes Patients May Benefit from Simultaneous Kidney-Pancreas Transplantation

Patients with type 1 diabetes who progress to kidney failure may be candidates to receive a simultaneous kidney and pancreas transplant. “The expectation is that when these patients leave the hospital after a simultaneous pancreas and kidney transplant, they will no longer be on dialysis and will no longer be diabetic,” says Gerald Lipshutz, MD, surgical director of the UCLA Pancreas Transplant Program.

While this provides patients the freedom from insulin therapy, the tradeoff, Dr. Lipshutz notes, is that patients must remain on medications to prevent transplant rejection post-surgery, and these immunosuppressant medications have significant side effects. Thus, UCLA physicians generally recommend the pancreas transplant only to patients who are also in need of a kidney transplant, or who already have received one.

Attention also must be paid to the potential for cardiovascular complications as a result of the underlying diabetes. “These patients need to undergo an extensive workup with a cardiologist to make sure that if they do have a heart condition, it can be treated beforehand,” Dr. Lipshutz says. “Often, these patients don’t know they have underlying heart disease and we catch it during that process.”

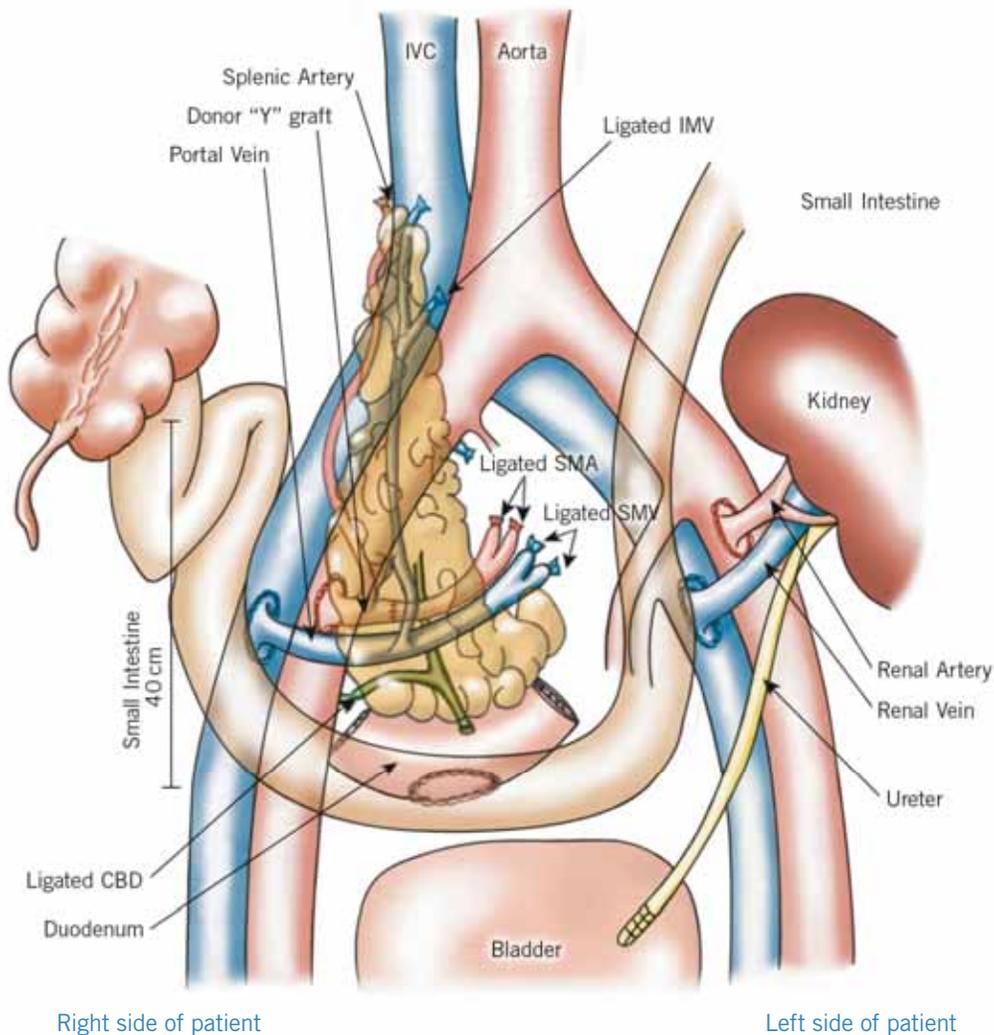
While the simultaneous pancreas and kidney transplant (often abbreviated SPK) is the most common performed at UCLA, the program also performs pancreas after kidney (PAK) transplant. The third category, pancreas transplant alone (PTA), is not commonly performed at UCLA, given the potential impact of the immunosuppressant drugs on kidneys, Dr. Lipshutz says.

On a national level, combined kidney/pancreas transplantation is being performed less frequently than in the past. “It was always appropriate only for a minority of type 1 diabetic

patients,” says Gabriel Danovitch, MD, medical director of the UCLA Kidney and Pancreas Transplant Program. “But the demand is much lower than it used to be because of advances in our ability to control diabetes with strategies ranging from new insulin preparations to better insulin pumps. Given that this is a significant and high-risk surgical intervention, being able to control the diabetes through nonsurgical methods is always preferable.”

Dr. Danovitch says that the patients most likely to be indicated for a combined kidney and pancreas transplant today are those with particularly hard-to-control diabetes — so-called brittle diabetics — and patients with hypoglycemia unawareness (a complication of diabetes in which sharp drops in blood sugar do not cause the symptoms associated with hypoglycemia, increasing the risk for seizures and other complications), as well as patients whose lifestyle has been so adversely affected by their diabetes that they are willing to accept the risks and undergo the procedure.

For patients who are candidates, Dr. Lipshutz says, the combined kidney and pancreas transplant can be life changing. “These are individuals who have faced the abyss of diabetes and dialysis,” he explains. “They can’t eat a lot of salt because of their kidney failure, and they can’t take in a lot of sugar because of their diabetes. Following the procedure, they no longer require insulin or dialysis, and in general they can eat what they want, within moderation. Our team — the social workers, dietitian, nurse coordinators, nephrologists and myself — get to know these patients very well both before and after the procedure, and in most cases, they are extremely happy with the outcome.”



The kidney transplant is placed on the left and connected to the bladder, while the pancreas is transplanted on the right with drainage of digestive enzymes to the intestine, a more physiologic approach compared to prior methods of connecting to the bladder.

“The expectation is that when these patients leave the hospital after a simultaneous pancreas and kidney transplant, they will no longer be on dialysis and will no longer be diabetic.”

## Auto-Islet Transplantation Offers Relief and Reduces Risk for Diabetes

For individuals with certain genetic disorders or anatomic abnormalities that give them chronic pancreatitis, pancreatectomy and auto-islet transplantation can bring relief to the back and abdominal pain that often sends them to the hospital for days or longer, while also significantly reducing their risk for diabetes.

“Typically, these patients would either have a portion of their pancreas removed, a total pancreatectomy or a procedure to increase the drainage of the pancreatic enzymes that are contributing to the pain. And many go on to develop diabetes because of the damage to the cells that make insulin,” says Gerald Lipshutz, MD, surgical director of the UCLA Pancreas Transplant Program. “If they come to us early enough in their disease process, they can undergo a procedure in which either part or their entire pancreas is removed and we then isolate the islet cells and deliver them to the liver. This can either prevent them from becoming diabetic

or make it so that they require less insulin than they otherwise would have after having the pancreas surgery.”

Because the islets are from the patient, immunosuppressant drugs are not necessary after the procedure, Dr. Lipshutz notes. The auto-islet transplants are performed by UCLA in partnership with an expert team at UC San Francisco, which isolates the islet cells.

The goal of auto-islet transplantation at UCLA is to relieve patients’ pain from chronic pancreatitis while preventing or reducing the severity of the diabetes resulting from the pancreatic surgery. Results at UCLA mirror those of the other major centers in the country that are performing the rare procedure, with about two-thirds of patients either not requiring insulin or requiring less than what they otherwise would have after having their pancreas removed.

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*U.S. News & World Report's*  
Best Hospital Survey ranks UCLA  
No. 3 hospital in the country  
and Best in the West.



UCLA Medical Group awarded  
Gold Level Achievement for clinical  
quality by the California Department  
of Managed Health Care.

# Save the Date

## 4th Annual UCLA Diabetes Symposium

### Saturday, December 3, 2016

Loews Santa Monica Beach Hotel, Santa Monica, California



This one-day conference focuses on providing advanced education to primary-care providers in the diagnosis and treatment of diabetes and diabetes-related complications. Experts from the UCLA Gonda Diabetes Center and UCLA Department of Medicine, as well as outside institutions, will speak and answer questions.

To enroll online, click on the event at:  
[cme.ucla.edu/courses](http://cme.ucla.edu/courses)



## Physicians Update

SPRING 2016

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Be connected 24/7 with an appropriate UCLA physician to assist with questions about your patient's care and referrals.

