



MedStar Georgetown
University Hospital



Pancreatic Disease Program

Offering Hope to People Who Have Pancreatic Disease

Knowledge and Compassion
Focused on You

If you or a loved one has a pancreatic

disorder, finding the right medical care—right away—is essential. Pancreatic disorders can be difficult to diagnose with conditions quickly getting worse before the right treatments begin. The best results are usually experienced by pancreatic disease specialists who have access to a full range of services ... from advanced diagnostic technology and surgical procedures to innovative clinical trials and genetic counseling.

That's exactly what you'll find at MedStar Georgetown University Hospital's Pancreatic Disease Program.

Our comprehensive and multidisciplinary program has the largest and most knowledgeable team of pancreatic and biliary system experts in the metropolitan area. For each patient's comfort and care, we deliver fast and accurate diagnoses, combined with the best available treatment. In fact, **MedStar Georgetown cares for more people who have pancreatic disorders than any other hospital in the metropolitan area.**

Along with the hospital's Jesuit tradition of *cura personalis*—caring for the whole person—MedStar Georgetown offers many people who have pancreatic disease their best hope for the future.

Pancreatic Disorders

The pancreas is a gland deep in the abdomen, behind your stomach and in front of your spine. It produces enzymes that help break down food and hormones that help control blood sugar levels.

Problems with the pancreas usually develop gradually, and symptoms are often vague. As a result, many cases of pancreatic disease are not discovered until the condition is advanced.

Pancreatitis: This condition— inflammation of the pancreas— occurs when the enzymes that normally dissolve food get trapped in the pancreas and start breaking down the gland itself. Pancreatitis can be chronic (occurring gradually but often) or acute (striking quickly during a short time).



Today, approximately 80,000 Americans suffer from pancreatitis and other non-cancerous pancreatic problems. For about 30 percent of people who have pancreatitis, the condition can be life-threatening if not diagnosed and treated quickly.

Both acute and chronic pancreatitis can require hospitalization—from a few days to a few weeks—to reduce inflammation and let the pancreas heal. Severe cases may require surgery or other advanced treatment and admission to MedStar Georgetown’s Intensive Care Unit.

Other Non-Cancerous Pancreatic Disorders: Other problems can also affect the pancreas and may require medical attention:

- A birth defect called pancreas divisum
- Gallstones or other obstructions in the pancreatic or bile ducts
- Non-cancerous lesions caused by injury or abnormal changes such as pseudocysts, cysts or pancreatic masses
- Benign or precancerous tumors
- Injury

Pancreatic Cancer: Difficult to diagnose and treat, pancreatic cancer is rare and often aggressive.

Surgery—often along with chemotherapy and radiation—is the most effective treatment for early-stage pancreatic cancer that is confined to the gland. For inoperable or late-stage tumors, MedStar Georgetown offers the latest advances in radiation oncology and chemotherapy, including clinical trials that can improve comfort and quality of life.



With cancer experts and advanced technology, we are leaders in the care of people who have pancreatic cancer.

The Right Diagnosis

With pancreatic problems, the key to getting the right care is to first get the right diagnosis. However, the gland's challenging location requires experienced specialists who are accustomed to caring for a large volume of complex pancreatic conditions.

MedStar Georgetown's Pancreatic Disease Program features a team of board-certified radiologists and gastroenterologists—doctors who specialize in the gastrointestinal and digestive tract. They work together to assure the most accurate diagnosis and staging of any pancreatic problem. In addition to the full range of tests and procedures available today, MedStar Georgetown's experts have developed and perfected unique approaches for even greater diagnostic precision. Their experience—combined with state-of-the-art technology—lets them distinguish subtle differences in tumors so that the best treatment can begin as soon as possible.



With the right diagnosis, you can get the right treatment—all from compassionate healthcare professionals.

State-of-the-Art Tests

When your doctor suspects that you have a problem with your pancreas, you will first be referred to the Pancreatic Disease Program's radiologists. Our radiologists have completed advanced fellowships—extra training—in their specialty, and excel in imaging organs, including the pancreas and bile ducts. Depending upon how difficult it is to diagnose your condition, you may undergo several of the following tests.

Computed Tomography (CT) Scan: A CT scan, which generates three-dimensional images, can help detect a tumor and determine whether or not it can be removed surgically. Before the test, you will receive both oral and intravenous contrast agents—special dyes—so internal structures appear clearer on the scans.

Magnetic Resonance Imaging (MRI): MRI uses a powerful magnetic field and radio waves instead of X-rays. Like CT, MRI creates three-dimensional images on a computer, but at a higher contrast. As a result, MRI is often used to clarify findings from other tests.

Magnetic Resonance Cholangiopancreatography (MRCP): This diagnostic tool is a type of MRI that uses special computer software to capture detailed images of the bile ducts, pancreatic cysts and other structures or abnormalities.

Positron Emission Technology (PET) with CT: PET/CT combines two technologies to help doctors stage a cancerous tumor or determine how much it has grown and whether it has spread (metastasized) from its original location. It can also help determine how well treatments are working and monitor the body for remaining cancer cells after treatment. For the best and clearest results, PET/CT requires both specialty-trained physicians in nuclear medicine and radiologists who focus on body imaging. MedStar Georgetown features both.

Advanced Procedures

Sometimes your doctor may need more detailed information about your condition than imaging tests alone can provide. If so, you may be referred to the Pancreatic Disease Program's team of gastroenterologists. These physicians are national and international leaders in using endoscopy to evaluate, and sometimes even treat, gastrointestinal diseases.

Gastroenterology procedures for pancreatic disease involve threading a thin, flexible, lighted tube with a tiny video camera through your mouth and into the digestive tract. Although more invasive than radiology tests, these procedures give a clearer picture of your organs. In some cases, they can actually treat a problem on the spot, avoiding the need for additional tests or surgeries.

Endoscopic Ultrasound (EUS): This outpatient procedure involves technology that can navigate throughout the smallest spaces in the gastrointestinal tract, providing valuable images of the pancreas, bile duct, blood vessels and lymph nodes. Endoscopic ultrasound with fine needle aspiration can also remove tissue and fluid samples, eliminating the need for surgical biopsies. MedStar Georgetown's innovative gastroenterologists are also using EUS to:

- Drain fluid buildup from severe pancreatitis, using a unique procedure developed by our specialists
- Screen individuals who are at high-risk for pancreatic cancer

Endoscopic Retrograde Cholangiopancreatography (ERCP): ERCP helps doctors examine the pancreas and bile ducts more closely to plan the most appropriate treatments. This advanced outpatient procedure uses an endoscope, a special dye and X-rays to get the best images. ERCP can also be used to:

- Remove tissue for biopsy
- Insert a stent to open up narrow ducts that might be causing chronic pancreatitis or a blockage
- Treat pancreas divisum and other congenital anomalies
- Drain excess fluid from pancreatic pseudocysts, avoiding the need for surgery

MedStar Georgetown is also one of the few centers in the United States to use and study a newly available technique: probe-based confocal endomicroscopy (pCLE). Used during ERCP, this advanced technology allows real-life microscopic examination of suspected tumor areas in the pancreas and bile duct to help determine if they are cancerous or noncancerous.

Retrograde Cholangiopancreatography: MedStar Georgetown is one of a few institutions in the nation with more than 15 years of experience in this highly specialized procedure. It uses a tiny scope threaded through a tube that allows physicians to actually see deep inside the bile ducts. In some cases, our specialists can also use this advanced technique to:

- Treat biliary tumors with photodynamic therapy (PDT) in which light activates a drug that is injected to destroy cancer cells
- Remove large bile duct and pancreatic stones without surgery
- Remove precancerous polyps at the opening of the pancreas and bile duct

“Now I go to Georgetown for Anything I Can.”

Twelve hours before a long and difficult surgery, Cynthia Kiser learned she might have another, less invasive option. And it was available only at MedStar Georgetown University Hospital.



Cynthia Kiser

The Rockville, Md., resident suffered for nearly two years from pancreas divisum, a birth defect marked by abnormal pancreatic ducts. While the condition does not cause problems for everyone, Cynthia's affected her with a vengeance, landing her in other hospitals with multiple bouts of pancreatitis. Doctors even removed her gallbladder, suspecting it was the culprit. But her problems persisted.

Despite nearly constant pain, she was not looking forward to yet another surgery with known risks but no guarantee of resolving her problems. Her referring physician didn't want that for her, either.

In the nick of time, Cynthia's physician heard about an outpatient procedure called ERCP that could possibly fix her condition and help her avoid surgery. For the best results, this technically challenging procedure required specialized equipment and advanced expertise.

He and Cynthia found both at MedStar Georgetown, home of internationally recognized authorities on ERCP and other complex endoscopic procedures.

“Their pancreatic specialists straightened me out right away, and saved me from a lot of unnecessary pain and recuperation,” Cynthia says today. “Anyone with my condition should go to Georgetown and see if ERCP might work for them, too.”

Powerful Treatments

MedStar Georgetown offers a full array of treatments, including new and combination approaches developed by individual members of the pancreatic disease team. Some patients with pancreatic disease, especially cancer, may receive more than one type of treatment.

Complex cases are reviewed by the Pancreatic Disease Program's nationally and internationally known specialists in radiology, interventional radiology, gastroenterology, pathology, surgery, medical oncology and radiation medicine. The team regularly discusses patient test results, conditions and other factors to tailor the ideal treatment plan. The approach assures that you have a team of experts working together, and not just one physician, to give you the best possible results.



Our knowledgeable physicians develop personalized diagnostic and treatment plans—keeping you educated about each step of your care.

Surgery

Pancreatic surgery is one of the most complex abdominal surgeries, requiring an experienced and specialized center for the best outcomes. MedStar Georgetown is the metropolitan area's most experienced pancreatic surgery center, performing more procedures than any other hospital each year. Whenever possible, the team uses the most minimally invasive pancreatic surgical procedures, which result in smaller incisions, less pain, shorter hospitalizations and faster recovery periods than traditional open surgery.

Our specialized surgeons take an aggressive approach, offering the most advanced and effective treatments available for pancreatitis, structural defects and both cancerous and non-cancerous tumors of the pancreas. For patients with localized, early-stage pancreatic cancer, surgery is the first and best line of defense.

The team performs a variety of procedures, including:

- Bypass surgery to relieve obstructions
- Gallstone removal, often using a minimally invasive, laparoscopic approach
- Advanced and innovative surgeries like the minimally invasive laparoscopy-assisted Whipple and distal pancreatectomy procedures that help patients recover faster and with less pain when compared to traditional open pancreatic surgeries
- Portal vein reconstruction and other highly technical procedures



New, Minimally Invasive Approach Eases Recovery

Physically fit and younger than 30, Crystal Carpenter didn't suffer from any of the medical problems, abdominal injuries or gallstones that can cause pancreatitis.

Yet within one year, she had two bouts of the painful condition; and none of her doctors could figure out why.

That's when she was referred to the pancreatic experts at MedStar Georgetown, where specialized tests revealed a rare, early-stage cancerous tumor in her bile duct. The growth was forcing the pancreas' digestive enzymes to back up in the organ, literally eating it away. Surgery was the only answer.

The traditional approach, a Whipple procedure, is one of the most complex abdominal surgeries. It has the best results dependent upon a surgeon's knowledge and experience. Fortunately for Crystal, MedStar Georgetown's pancreatic surgical team performs more Whipples than any other hospital in the area. Even better, the hospital had just started offering a new, less



Crystal Carpenter and her husband, Kyle

invasive technique—the laparoscopic-assisted Whipple—that only requires one 4-inch incision, instead of two 10-inch incisions. While the new approach is more demanding for the surgeon, patient recovery is much easier and faster.

As one of the first in the area to have the laparoscopic-assisted Whipple, Crystal is thankful she was eligible for the new procedure.

"I was in the right place at the right time," she says. "MedStar Georgetown has the best pancreatic team in the world."

Medical Oncology

As part of your pancreatic cancer care, you will probably be treated with chemotherapy—powerful drugs that target and destroy cancer cells located anywhere in the body. Chemotherapy, often with radiation, may be used before or after surgery, depending upon your particular situation. Chemotherapy may also be used alone to treat inoperable pancreatic tumors.

MedStar Georgetown’s Pancreatic Disease Program has one of the area’s largest and most experienced teams of medical oncologists who specialize in gastrointestinal cancers. Along with today’s standard therapies, they offer newer targeted therapies and mixtures of different drugs that extend and enhance life and its quality. Physician/researchers at Georgetown’s Lombardi Comprehensive Cancer Center also participate in national clinical trials and conduct their own research. As a result, eligible patients can take advantage of the latest treatments—including vaccines and biological therapies being studied—that may not be available elsewhere.

Radiation Medicine

Radiation medicine (also called radiation oncology) uses high energy X-rays to attack cancerous tumors. People who can’t have surgery because their tumors are too big may first undergo radiation combined with chemotherapy in an attempt to shrink the tumors to operable sizes. Sometimes radiation therapy is combined with chemotherapy after surgery to rid the body of any lingering cancer cells.

MedStar Georgetown’s radiation oncologists have two options for outpatient treatment of pancreatic cancer.

Conventional External Beam Radiation Therapy: In this noninvasive approach, a machine called a linear accelerator directs radiation beams to the tumor. MedStar Georgetown employs the newest technology, including intensity-modulated radiation therapy (IMRT) and image-guided radiation therapy (IGRT), to ensure precise targeting. Treatment—usually only a few minutes long—occurs five days a week during the course of five to six weeks.

CyberKnife® Robotic Radiosurgery System: This minimally invasive technology uses robotics and image-guidance systems to deliver high doses of radiation to hard-to-reach, inoperable tumors. Before treatment begins, tiny markers must be placed around the tumor to outline the target. However, thanks to MedStar Georgetown’s innovations, the markers can often be placed through a tube that threads through the mouth (endoscopically), avoiding even minimally invasive surgery. Each CyberKnife treatment usually lasts an hour and requires about five separate sessions.

MedStar Georgetown ***is one of the first, and most experienced, hospitals in the nation to use CyberKnife against both newly diagnosed and returning pancreatic cancers.*** The Pancreatic Disease Program’s radiation medicine specialists are currently evaluating novel treatments using CyberKnife in conjunction with chemotherapy for inoperable pancreatic cancer.

Interventional Radiology

A subspecialty of radiology, interventional radiology is sometimes used to treat certain pancreatic conditions without major surgery. In these minimally invasive procedures, interventional radiologists use images from a CT scan or ultrasound to guide small needles and other tools through tiny incisions to:

- Drain blocked ducts
- Place internal markers to prepare for CyberKnife treatments
- Treat pancreatic cancer that has spread to the liver by:
 - Injecting cancer-killing drugs directly into the tumor when surgery is not an option (chemoembolization)
 - Inserting specialized instruments that use heat (radiofrequency ablation) or cold (cryoablation) to destroy cancerous cells

Special Services

MedStar Georgetown offers additional services that are especially helpful for patients and their families during hospitalization and beyond.

Pancreatic Disease Program Coordinator and Nurse Navigator

The Pancreatic Disease Program's focus is on you, the patient. At the program's core is an experienced registered nurse who oversees the program's day-to-day functioning and is dedicated to helping patients and families with all aspects of care. That includes scheduling and coordinating appointments with multiple specialists, providing health education and information, and advising eligible patients about potentially beneficial clinical



Jane Hanna, Pancreatic Disease Program Coordinator and Nurse Navigator

studies and genetic counseling. Our program coordinator/nurse navigator assures that each patient gets a diagnosis, treatment and other care when needed—quickly and smoothly. Call **202-444-5127** or **866-731-PANC (7262)** to speak with her directly.

Palliative Care and Pain Management

Between 90 to 95 percent of pain from pancreatic disease can be controlled, contributing to improved quality of life and recovery.

MedStar Georgetown's medical oncologists and other staff are trained in methods to help relieve the pain and symptoms of pancreatic cancer and its treatments. But sometimes, complex or challenging situations require extra expertise from specialists in symptom management.

That's when the hospital's integrated palliative care services can help. Dedicated to managing symptoms and pain caused by disease and/or treatments, this service provides physical, psychological and spiritual comfort—both in the hospital and at home—to help people achieve the highest possible quality of life throughout every stage of illness.

The palliative care team uses medications, physical therapy, relaxation and other approaches to help with such problems as:

- Pain
- Nausea
- Fatigue
- Loss of appetite
- Constipation
- Weakness
- Anxiety
- Sleeplessness

Genetic Counseling and Screening

According to the National Cancer Institute (NCI), an individual's chance of developing pancreatic cancer triples if a parent or sibling had the disease. A family history of breast, colon or ovarian cancer also increases the risk.

MedStar Georgetown provides genetic counseling to individuals who may be at risk for pancreatic cancer and/or other inherited cancers. By looking at age, family history and other factors, counselors can assess the likelihood of developing pancreatic cancer and provide individuals and families with disease management and support.

For people who are at a high risk, the Pancreatic Disease Program's gastroenterologists offer a screening program that includes endoscopic ultrasound (EUS), scans and blood tests to find cancer at its earliest stages, when treatment is most successful.

For more information about genetic counseling and screening services, please call **202-687-1750** or **877-687-1750**. Or visit **medstargeorgetown.org/fishercenter**.

Hope for the Future

MedStar Georgetown's physician/researchers are actively pursuing new and better ways to diagnose and treat pancreatic cancer through basic and clinical research.

Toward that end, **Georgetown's Lombardi Comprehensive Cancer Center**—the only NCI-designated comprehensive cancer center in the area and one of only 41 nationwide—regularly conducts Phase I, II and III clinical trials and other research initiatives on pancreatic disease.

In addition, the **Otto J. Ruesch Center for the Cure of Gastrointestinal Cancers**—part of Lombardi—is one of the few centers in the nation to focus exclusively on tumors of the digestive tract. Combining expertise in molecular medicine, translational research and patient-centered care, the Ruesch Center is dedicated to advancing individualized curative therapies, including those for pancreatic cancer.

For more information about how you can find a clinical trials, visit medstargeorgetown.org/clinicaltrials.



With genetic counseling and clinical research, we provide pancreatic patients with tomorrow's innovations today.

The Medstar Georgetown Difference

MedStar Georgetown's Pancreatic Disease Program offers the most comprehensive, compassionate and cutting-edge care, thanks to its:

- **Experience**—MedStar Georgetown cares for the highest volume of patients with pancreatic disease in the metropolitan area.
- **Nationally and internationally known specialists**—A program that includes recognized experts in radiology, interventional radiology, gastroenterology, pathology, surgery, medical oncology and radiation medicine.
- **Team approach**—A multidisciplinary team of highly-credentialed and experienced physicians work together to offer optimal care.
- **Minimally invasive procedures**—The program specializes in advanced techniques that are as effective as traditional approaches, but use tinier incisions for less pain and faster recovery.
- **Dedicated staff**—A full-time coordinator/nurse navigator who expedites care, answers questions and serves as an additional resource to patients and their families.
- **Georgetown's Lombardi Comprehensive Cancer Center**—The area's only NCI-designated comprehensive cancer center—and one of only 41 nationwide—assures you access to the latest research and clinical trials.

To schedule an evaluation or for more information, call:
Jane Hanna, RN, OCN, coordinator at **202-444-5127** or **866-731-PANC (7262)**.
medstargeorgetown.org/pancreas

MedStar Georgetown University Hospital is a not-for-profit, acute-care teaching and research hospital with 609 beds located in Northwest Washington, D.C. Founded in the Jesuit principle of *cura personalis*—caring for the whole person—MedStar Georgetown is committed to offering a variety of innovative diagnostic and treatment options within a trusting and compassionate environment.

MedStar Georgetown's centers of excellence include neurosciences, transplant, cancer and gastroenterology. Along with Magnet® nurses, internationally recognized physicians, advanced research and cutting-edge technologies, MedStar Georgetown's healthcare professionals have a reputation for medical excellence and leadership. MedStar Georgetown University Hospital—*Knowledge and Compassion **Focused on You.***

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