The UPMC Inflammatory Bowel Disease (IBD) Center provides specialized care for patients with ulcerative colitis and Crohn’s disease. Our team of experts includes gastroenterologists, surgeons, nutritionists, radiologists, pathologists, and clinical & research nurses and professionals.

In addition to ulcerative colitis and Crohn’s disease treatments, patients residing in the tri-state area are referred to the IBD Center for expert consultations and diagnostic techniques that include:

- new biomedical medications for immune system treatments
- innovative cancer surveillance and treatment
- women’s health concerns
- intestinal rehabilitation
- transplantation medicine
- the transitioning of care from the pediatric to adult gastroenterologist
- behavioral health concerns

IBD Center physicians and staff have access to the world-renowned services and resources provided by UPMC Cancer Centers, Magee-Womens Hospital of UPMC, the Thomas E. Starzl Transplantation Institute, Western Psychiatric Institute and Clinic, and Children’s Hospital of Pittsburgh. This integration of resources contributes to enhanced patient education and the advancement of IBD research.

Our physicians are respected as authorities in genetics, immunology, and clinical research. They direct several multi-center, international research trials, and three have been recognized as Crohn’s and Colitis Foundation of America (CCFA) Physicians of the Year. Research advances in the genetics and immunology fields have resulted in a better understanding of IBD. UPMC’s nationally recognized program provides unparalleled clinical care and promises to remain a leader in IBD research and treatment.

see Meet the IBD Center Team on page 3
Examining the molecules of suspicious cells may yield more accurate answers

**EARLY DIAGNOSIS OF PANCREATIC CANCER**

Pancreatic cancer is the fourth leading cause of death due to cancer in industrialized countries, and causes more than 31,000 deaths per year in the United States, more than even prostate cancer. Moreover, it is difficult to detect, hard to diagnose, early to metastasize, and resistant to treatment. It can be controlled only if it is found before it has spread, when it can be surgically removed. Therefore, early detection is critical to the development of effective treatments.

About 95 percent of pancreatic cancers begin in exocrine cells, those that produce digestive enzymes that are passed into the small intestine. The most common diagnostic procedure has been to use an endoscope to identify masses, cysts, and strictures, which are narrowings of the bile ducts of the pancreas. Cells extracted from these areas are then examined under a microscope for changes associated with malignancy. Unfortunately, such tests are conclusive in less than 60 percent of cases. Clearly a more reliable test is necessary, so that diagnoses can be made earlier and more accurately, and fewer patients with inconclusive results will undergo treatments that can cause serious side effects.

A team of scientists within the Division of Gastroenterology, Hepatology and Nutrition may have developed just such a test that involves looking for changes in the genes of the suspect cells. No single gene alteration can be pointed to as the culprit in any given cancer, but an accumulation of genetic damage appears to serve as a more reliable indicator of malignancy. Armed with the knowledge of which specific genes show mutation in pancreatic cancer cells, we set out to discover if representative cells from malignant strictures would show a high level of accumulated mutational damage.

Using cell samples from 18 patients, 17 with surgically proven cancer and one with an inflammatory process, the research team looked for mutations in the cells’ nuclei. All 17 samples of the cancerous cells contained high levels of genetic damage, while the one non-cancerous sample contained no abnormalities. By contrast, when the samples were examined at the cellular level, only eight of them were positively determined to be cancerous, nine of them were deemed “suspicious,” and one was called “atypical.” The findings from this study, published in the journal *Gut*, represent the types of breakthroughs that physicians need to appropriately care for their patients.

**Pancreas 101**

What is it and what does it do?

Your pancreas is a large gland – about six inches long – between your stomach and your spine. It is close to your duodenum, the first part of your small intestine. The pancreas secretes powerful digestive enzymes that enter the small intestine through a duct. These enzymes help you digest fats, proteins, and carbohydrates and change the nutrients from solids into a liquid solution that can be absorbed into the bloodstream. The pancreas also releases the hormones insulin and glucagon into the bloodstream. These hormones signal the body’s cells saying that nutrients are in the blood and can be drawn into the cells and stored or used for the body’s functions. These hormones play an important role in metabolizing sugar.

---

David C. Whitcomb, MD, PhD
Giant Eagle Foundation Professor of Cancer Genetics
Professor of Medicine, Cell Biology & Physiology and Human Genetics
Chief, Division of Gastroenterology, Hepatology and Nutrition
Richard Duerr, MD, associate professor of medicine and human genetics, is co-director of the IBD Center and head of the IBD Genetics Program. He directs a research group that aims to understand the complex genetic basis of Crohn’s disease and ulcerative colitis. Dr. Duerr’s group participated in a collaboration that identified the first Crohn’s disease gene and is working to identify other IBD genes.

Scott Plevy, MD, co-director of the IBD Center and head of the IBD Immunology Program, is a nationally known IBD immunologist and is a recognized thought leader in the field. Dr. Plevy, an associate professor of medicine and immunology, is involved in research directed at understanding the immunologic basis of IBD. He is the director of the world-class University of Pittsburgh’s Immune Mediated Inflammatory Disease (IMID) Center, located at Magee-Womens Hospital of UPMC.

Miguel Regueiro, MD, is an associate professor of medicine, co-director of the IBD Center, and head of the Inflammatory Bowel Disease Clinical Program at the University of Pittsburgh. He is also the Division of Gastroenterology, Hepatology and Nutrition’s associate chief for education and is the director of the Gastroenterology Fellowship Program. He sees over 1,000 patients with Crohn’s disease and ulcerative colitis. His research interests focus on the discovery of new therapies for inflammatory bowel disease.

Leonard Baidoo, MD, is an instructor of medicine with a strong interest in IBD. His research interests include IBD genetic studies, novel IBD treatments, extraintestinal manifestations of IBD, and IBD in the minority population.

Krista Gray, CRNP, as the IBD Center nurse practitioner, provides direct patient care, assists the physicians in the clinic, educates patients and their families, and is a co-investigator on several clinical research trials.

Kim Morgan-Waugh, RN and Marilyn Pesci, RN are the research nurse coordinators for the IBD Center. They are responsible for coordinating the Center’s clinical research trials and the delivery of novel therapeutic agents to IBD patients.

Beth Rothert, RN, is the nurse coordinator for the IBD Clinical Program. She coordinates patient care and serves as a point person for IBD patients entering UPMC.

Joann Fultz maintains the IBD registry database. Joann is responsible for helping Dr. Regueiro interview patients and for obtaining blood from patients for genetic analysis.

••••••• ••••••• M E E T T H E I B D C E N T E R T E A M •••••••

IBD Genetics Research – The Inflammatory Bowel Disease (IBD) Genetics Research Program at the University of Pittsburgh works to identify genes that predispose people to develop IBD and genes that modify the clinical behavior of IBD. Ulcerative colitis and Crohn’s disease are the two conditions covered by the term IBD. Although they are different diseases, the end result, damage to gut tissue, is similar. The large intestine and the small intestine get sores and ulcers, which can have a severe and debilitating impact on gastrointestinal function.

IBD genetics researchers work to understand how certain genes in the body interact with each other and with the environment to cause IBD. Researchers believe that environmental factors such as intestinal bacteria trigger chronic gastrointestinal tissue damage in people whose genes have made them susceptible to IBD. After taking DNA samples from hundreds of families with multiple IBD-affected members, researchers found several chromosome regions that are likely to contain IBD genes. The first Crohn’s disease gene, which was found in one of these chromosome regions, plays an important role in determining how the immune system responds to intestinal bacteria. However, more work needs to be done to fully understand the complex genetics of IBD.

Our Genetics Research Program is one of the founding members of the IBD International Genetics Consortium and the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Genetics Consortium. Researchers at the University of Pittsburgh will continue to work with other IBD genetics research groups around the world to better understand the connection between the environment and genetics, and how these factors affect people who may be susceptible to IBD.

continued on page 4
IBD Immunology Research ~ Researchers at the UPMC Inflammatory Bowel Disease Center and the Inflammatory Bowel Disease Immunology Program at the University of Pittsburgh work to understand how the interaction between the body’s immune system and the environment lead to the onset and continuation of inflammatory bowel disease (IBD).

An environmental factor that has attracted considerable attention is the discovery of a large amount of bacteria residing in the intestinal tract. A single layer of cells in the intestine separates it from other immune cells in the body. Bacteria that cross into the immune system’s layer must be rapidly eliminated. Otherwise, IBD may result. Our laboratory is actively involved in many studies to determine how bacteria set off the body’s infectious disease protection system located in the coverings of the intestinal tract. Studies are being conducted to better understand how bacteria activate irritation in the intestine and how these pathways may be blocked.

IBD research also is being conducted on a study that examines people who smoke cigarettes and reside in different geographic locations. Cigarette smoking has been described as a protective agent against the development of ulcerative colitis (a form of IBD). We are studying how the anti-inflammatory effects of cigarette smoke (carbon monoxide) affect IBD. Of course, we do not recommend that anyone smoke for any reason.

HALLER FAMILY ENDSOWS FELLOWSHIP

If I can help somebody else so they don’t have to go through what I did, then I want to do it,” says Marjorie Burns Haller, who, along with her father, Henry E. Haller Jr. (KGSB ’36) created The Henry E. Haller, Jr. and Marjorie Burns Haller Advanced Fellowship in Pancreatic Medicine. Ms. Haller became a patient of David Whitcomb, MD, PhD, chief of the Division of Gastroenterology, Hepatology and Nutrition three years ago for treatment of pancreatitis. “I had a hard time until I met Dr. Whitcomb,” she said.

Mr. Haller has been a long-time supporter of the University of Pittsburgh through the Henry E. Haller Jr. Foundation. “We started the Haller Foundation to encourage entrepreneurship and free enterprise,” Mr. Haller explained. But his daughter’s positive experience with the Division of Gastroenterology, Hepatology and Nutrition prompted the two of them to consider funding a fellowship to support pancreatic medicine.

Véronique D. Morinville, MD, is the first recipient of the Haller Fellowship. She is a pediatric gastroenterologist, whose focus is on the genetic causes of pancreatitis in children and families. Dr. Morinville graduated from McGill University Faculty of Medicine in Montreal, Quebec, Canada. She undertook post-graduate training at McGill University Health Centre and completed her residency in general pediatrics at The Montreal Children’s Hospital.

ATTENTION GOLFERS: You can support the Division of Gastroenterology, Hepatology and Nutrition, and specifically the research of Dr. David Whitcomb, and enjoy your avocation at the same time by taking part in a golf outing organized by the Wayne Fusaro Pancreatic Cancer Research Fund. The outing will be held on July 10, 2006, at Churchill Country Club.

To reserve your golf spots or for information on sponsorship opportunities, please contact Jennifer Scanlon at 412-647-8462 or Jill Fusaro at 412-828-7856. Individuals, businesses, and organizations are all welcome to participate.