

SECTION OF GASTROINTESTINAL SURGERY

Faculty

Professor and Chief of Section

Walter E. Longo, M.D., M.B.A., FACS, FASCRS (New York Medical College)

Professor

Stanley J. Dudrick, M.D., FACS (University of Pennsylvania)

John P. Geibel, M.D., D.Sc. (University of Innsbruck)

Irvin M. Modlin, MBBS, Ph.D., FRCS, FACS (University of Capetown)

Professor Emeritus

Hastings K. Wright, M.D. (Harvard University)

Assistant Professor

Robert L. Bell, M.D.

Charles H. Cha, M.D.

Clinical Professor

J. E. Fenn, M.D.

S. B. Nuland, M.D.

R. B. Reinhold, M.D.

Associate Clinical Professor

M. S. Beinfield, M.D.

Andrew P. Graham, M.D. (Tufts University)

R. K. Houlihan, M.D.

William McCullough, M.D. (Columbia University)

Nicholas, N. Passarelli, M.D. (Yale University)

S. A. Stein, M.D.

Assistant Clinical Professor

H. Abrams, M.D.

Paul Barcewicz, M.D. (University of Rochester)

J. M. Brogden, M.D.

K. A. Ciardiello, M.D.

R. Garvey, M.D.

N. R. Horowitz, M.D.

E. M. Kwasnik, M.D.

H. A. Laffaye, M.D.

G. Longstreth, M.D.

G. R. Nicastrì, M.D.

Michael O'Brien, M.D., Ph.D. (Wake Forest University)

J. A. Passarelli, M.D.

Ellen Polokoff, M.D. (New York University)

T. Ponn, M.D.

R. F. Schlessel, M.D.

S. Shah, M.D.

Scott Thornton, M.D. (University of Pittsburgh)

Dennis Wasson, M.B., B.Ch. (Queens University of Belfast, Ireland)

Kaye Zuckerman, M.D. (Cornell University)

Clinical Instructor

Raymond Ippolito, M.D. (SUNY/Downstate Medical Center)

Christopher McLaughlin, M.D. (Boston University)

James Passarelli, M.D. (New York Medical College)

Overview

The Section of Gastrointestinal Surgery has continued to promote new and improved patient care, develop new educational strategies and techniques and be actively involved in translational research as it applies to digestive disease. The faculty continues to produce significant scientific and clinical publications and to organize and participate in numerous seminars, workshops and conferences. Clinical activities have focused on four areas: minimally invasive surgery, colon and rectal surgery, gastrointestinal oncology, and the treatment of neuroendocrine tumors of the gastrointestinal tract. The development of several centers of excellence is currently underway. These include a bariatric center, pelvic floor disorders center, and inflammatory bowel disease center. A strong commitment to basic science and translational research complements clinical activity.

Accomplishments

Dr. Walter Longo has joined the faculty as the Chief of the Section of Gastrointestinal Surgery. Dr. Longo is a 1990 graduate of the Yale Surgical Residency and returned after fellowship training in colon and rectal surgery at the Cleveland Clinic and a 12-year career at St. Louis University where he was professor and director of the fellowship training program in colon and rectal surgery.

Dr. Robert Bell is now into his second year as a faculty member and has made Yale into a regional referral center for both bariatric surgery as well as minimally invasive approaches to gastrointestinal reflux and abdominal wall hernias. More importantly his clinical activity has been complemented by the Endocrinology service and resulted in novel clinical investigations regarding the pathophysiology of obesity. Dr. Bell served as Acting Chief of the Section before Dr. Longo's arrival.

Dr. Irvin Modlin continues to be a national referral for carcinoid tumors and other less common neuroendocrine tumors of the gut and has played a pivotal role in resident and student education as well as fostering scholarly activity among young investigators. His research involving molecular targeting of neuroendocrine tumors of the gut is internationally well recognized.

Dr. Charles Cha has recently joined the faculty following fellowship training in surgical oncology at Memorial Sloan-Kettering Cancer Center. Dr. Cha currently has a dual appointment with Surgical Oncology and brings expertise in the treatment of benign and malignant disease of the liver, bile duct and pancreas as well as gastric, esophageal and sarcoma surgery digestive disease cancer. He is also actively involved in research of cellular mechanisms of oncogenesis at the VA Hospital.

Dr. Stanley Dudrick has moved on to director of surgical education at St. Mary's Hospital in Waterbury and directs a vigorous surgical gastroenterology educational program between Yale and St. Mary's Hospital.

Dr John Geibel continues to lead the research interests not only in the section of gastrointestinal surgery but throughout the department. Dr Geibel's research is well funded, cutting edge and internationally renowned.

Research in Progress

Robert L. Bell, M.D. has initiated a new program in obesity surgery with excellent results. He is fellowship-trained in minimally-invasive/bariatric surgery and has assumed the Director of Bariatric Surgery at Yale University. This program integrates cutting-edge surgical techniques with pre- and post-operative clinical services such as psychology, nutrition, endocrinology, radiology, and critical care. Additionally, Dr. Bell maintains an active practice, utilizing minimally invasive techniques, specializing in the surgical treatment of gastroesophageal reflux disease, achalasia, and abdominal wall hernias. Publications and presentations during 2002-2003 dealt with the current treatment of achalasia, long-term

experience with laparoscopic splenectomy, innovative surgical techniques for abdominal wall hernia repair, the surgical treatment of obesity and diabetes, and the endoscopic management of anastomotic strictures.

Charles H. Cha, M.D. began his joint faculty appointment with the Division of Surgical Gastroenterology and the Division of Oncologic Surgery in July 2003 after completing his fellowship in surgical oncology. He has established an active research laboratory studying the effects of angiogenesis on gastrointestinal malignancy using gene-silencing techniques to knockdown proliferation of hepatocellular carcinoma in vitro and in vivo. His clinical research interests include the determination of the diagnostic and therapeutic utility of angiogenic inhibitors for treatment of solid tumors. In addition, he is involved in clinical outcomes research in surgery for hepatobiliary, gastric and esophageal malignancy using the National Surgical Quality Improvement Program Database.

Stanley Dudrick, M.D. returned to St. Mary's Hospital and completed the academic year as Director, Program in Surgery, reorganizing, reinforcing and recommitting the St. Mary's Hospital/Yale School of Medicine affiliation. Dr. Dudrick remains active in advancing clinical utility of surgical nutrition and the application of total parenteral nutrition in complex critically ill patients, while mentoring and guiding the surgical residents in a wide variety of basic and clinical investigations. He was the Commencement Speaker, Bridgeport Hospital School of Nursing, Program of Surgical Technology and received the Alumni Medal for "Outstanding Volunteer Service" to Franklin & Marshall College. He served as the Distinguished Lecturer and Visiting Professor of Surgery in the Department of Surgery he founded in 1972 at The University of Texas Health Science Center at Houston and was elected to Honorary Membership in the Polish Society of Parenteral and Enteral Nutrition. He also joined the Editorial Board of the Polish Journal of Surgery. The Stanley J. Dudrick, M.D. Surgical Education and Research Fund was established by residents, students, patients and friends "In Recognition of Dr. Dudrick's Teaching and Research Accomplishments." Dr. Dudrick received multiple "Best Doctor" designations by various agencies. He continues to serve on the Board of Trustees of Franklin & Marshall College and on the Board of Directors of the Waterbury Symphony Orchestra.

John Geibel, M.D., D.Sc., Director of Surgical Research for the Department, is focused on investigations of ion transport in epithelial cells using a combination of intra- and extracellular fluorescent probes, ion channel and transport protein markers and optical techniques. Dr. Geibel's laboratory presently employs the techniques of high-resolution video image analysis, confocal microscopy and atomic force microscopy, to resolve changes in the intra- and extracellular milieu to atomic resolution. Using a variety of fluorescent probes and antibodies, researchers have been able to track changes in ion concentrations in cells in real time. Researchers have employed these techniques independently or in combinations and have been able to identify a variety of new receptors and ion channels, and have localized these proteins to their respective membranes. In addition, with the aid of intracellular probes, the laboratory has been able to study the kinetics of the transporters in control, stimulated, and genetically- altered cells and tissues from homozygotic and heterozygotic transgenic animals.

Walter E. Longo, M.D, M.B.A. arrived on April 1, 2003 from St. Louis University. At that time he assumed the position of Chief of the Section of Gastrointestinal Surgery and Director of Colon and Rectal Surgery. He also has been appointed Associate Program Director of the Yale University General Surgery Residency. He is currently treasurer of the Association of Veterans Administration Surgeons. Dr. Longo has just recently been elected to membership in The American Surgical Association. He has just finished editing the textbook, "Reoperative Colon and Rectal Surgery." Current research interests include a long-standing interest in intestinal ischemia disorders, anal malignancies in immunocompromised hosts, inflammatory bowel disease, and pelvic floor disorders.

Irvin M. Modlin, M.D., Ph.D. continues his long-standing active research laboratory studying the area of nuclear molecular regulation of neuroendocrine cell transformation. Radiolabeled gut hormone analogues as a mode of therapy for neuroendocrine tumors remains a novel and unique aspect of investigation of which Dr Modlin has been the pioneer. His international leadership in the pathobiology of the foregut has resulted in numerous national and international lectureships including the keynote address of the Japanese Gastroenterologic Society, the German Endoscopic Society, and the European Minimally Invasive Endoscopic Society. He continues to organize academic symposia, most recently two international meetings, on gastrointestinal reflux and gastrointestinal bleeding, held at

Yale University. He currently sits on the editorial boards of six major medical journals. This past year he received the Yale Chief Resident Surgical Teaching Award.

PUBLICATIONS

Cha CH, Chen H, Westra WH, Udelsman, R. Primary Thyroid Lymphoma: Can the diagnosis be made solely by fine needle aspiration? *Annals of Surgical Oncology*, 9(3):298-302, 2002.

Cha C, DeMatteo RP, Blumgart LH. Surgery and Ablative Therapy for Hepatocellular Carcinoma. *Journal of Clinical Gastroenterology*, 35(suppl. 2), 2002

Cha CH, DeMatteo RP, Ruo L, Fong Y, Jarnagin WR, Blumgart LH. Resection for Hepatocellular Carcinoma in Patients Otherwise Eligible for Transplantation. *Annals of Surgery*, 238(3), 2003.

Cha C, Fong Y, Jarnagin WR, Blumgart LH, DeMatteo RP. Predictors and Patterns of Recurrence Following Resection of Hepatocellular Carcinoma. In press, *Journal of the American College of Surgery*, 2003.

Cha C, Fong Y, Blumgart LH, Jarnagin WR. Hand-assisted Laparoscopic Distal Pancreatectomy. *American College of Surgeons Ciné Clinic Program*. 2003

Cha C, DeMatteo RP, Blumgart LH. Surgical Therapy for Hepatocellular Carcinoma. *Advances in Surgery*, 2003 (in press)

Kavic SM, Atweh N, Ivy ME, Possenti PP and **Dudrick SJ**: Renal Artery to Inferior Vena Cava Fistula Following Gunshot Wound to the Abdomen. *Ann Vasc Surg* 16:665-670, 2002

Atweh N, Lye KD, Kavic SM, Fidler PE, Possenti PP, **Dudrick SJ**: Closure of Large Abdominal Wounds with an Adjustable Suture-Tension Device, *J Am Coll Surg*, 195(2) 281-283, 2002

Kavic SM, **Dudrick SJ**: Rectocele, *Curr Surg*, 59(2): 162-171, 2002

Dudrick SJ: Foreword In: *Nutritional Considerations in the Intensive Care Unit – Science, Rationale and Practice*, (eds) Shikora SA, Martindale RG, Schwaitzberg SD, Kendall/Hunt Co., Dubuque, Iowa, 2002

Dudrick SJ, Kavic SM: Hepatobiliary Nutrition: History and Future, *J Hepatobiliary-Pancreat Surg*, 9:459-468, 2002

Dudrick SJ: Foreword In: Supplement on Home Parenteral and Enteral Nutrition, 26:S2-S3 *J Parenter Enteral Nutr*, 2003

Kirchhoff P, Wagner CA, Gaetzschmann F, Radebold K and **Geibel JP**. Demonstration of a Functional Apical Sodium Hydrogen Exchanger in Isolated Rat Gastric Glands *Am J Physiol Gastrointest Liver Physiol* 2003.

Ikuma M, **Geibel J**, Binder HJ and Rajendran VM. Characterization of Cl-HCO₃ Exchange In Basolateral Membrane of Rat Distal Colon. *Am J Physiol Cell Physiol* 2003.

Wagner CA, Lukewille U, Valles P, Breton S, Brown D, Giebisch GH and **Geibel JP**. A rapid enzymatic method for the isolation of defined kidney tubule fragments from mouse. *Pflugers Arch* 446: 623-632, 2003.

Wagner CA, Finberg KE, Stehberger PA, Lifton RP, Giebisch GH, Aronson PS and **Geibel JP**. Regulation of the expression of the Cl⁻/anion exchanger pendrin in mouse kidney by acid-base status. *Kidney Int* 62: 2109-2117, 2002.

Cheng SX, Okuda M, Hall AE, **Geibel JP** and Hebert SC. Expression of calcium-sensing receptor in rat colonic epithelium: evidence for modulation of fluid secretion. *Am J Physiol Gastrointest Liver Physiol* 283: G240-G250, 2002.

Geibel JP. Microscopy as a tool for renal research. *J Nephrol* 15 Suppl 5: S161-S169, 2002.

Wagner CA and **Geibel JP**. Acid-base transport in the collecting duct. *J Nephrol* 15 Suppl 5: S112-S127, 2002.

Egan ME, Glockner-Pagel J, Ambrose C, Cahill PA, Pappoe L, Balamuth N, Cho E, Canny S, Wagner CA, **Geibel J** and Caplan MJ. Calcium-pump inhibitors induce functional surface expression of Delta F508-CFTR protein in cystic fibrosis epithelial cells. *Nat Med* 8: 485-492, 2002.

Sangan P, Rajendran VM, **Geibel JP** and Binder HJ. Cloning and expression of a chloride-dependent Na⁺-H⁺ exchanger. *J Biol Chem* 277: 9668-9675, 2002.

Geibel J. (2003) Use of Biosensors to measure ATP release in CFTR .in "Purinergic Receptors and Signaling." *Academic Press*.

Bahadursingh AM, **Longo WE**. Colovaginal fistulas. Etiology and management. *J Reprod. Med.* 2003 Jul; 48(7): 489-95.

Bahadursingh AM, Robbins PL, **Longo WE**. Giant submucosal sigmoid colon lipoma. *Am J Surg.* 2003 Jul; 186(1): 81-2.

Margenthaler JA, **Longo WE**. Virgo KS, Johnson FE, Oprian CA, Henderson WG, Daley J, Khuri SE. Risk factors for adverse outcomes after the surgical treatment of appendicitis in adults. *Am Surg.* 2003 Jul; 238(1): 59-66.

Ng.EK, Panesar N, **Longo WE**, Shapiro MJ, Kaminski DL, Tolman KC, Mazuski JE. Human intestinal epithelial and smooth muscle cells are potent producers of IL-6. *Mediators Inflamm.*2003 Feb; 12(1): 3-8.

Bahadursingh AM, Driver M, Koenig CL, **Longo WE**. Inadvertent transmural India ink tattooing simulating intestinal infarction. *AM J Surg.* 2003 Jan; 185(1): 88-89.

Longo WE, Johnson FE. The preoperative assessment and postoperative surveillance of patients with colon and rectal cancer. *Surg Clin North AM.*2002 Oct; 82(5): 1091-108.

Ahmed HU, Smith JB, Rudderow DJ, **Longo WE**, Virgo KS, Johnson FE. Cholecystectomy in patients with previous spinal cord injury. *Am J Surg.*2002 Nov; 184(5): 452-9.

Berg DF. Bahadursingh AM, Kaminski DL, **Longo WE**. Acute surgical emergencies in inflammatory bowel disease. *Am J Surg.*2002 Jul; 184(1): 45-51.

Silverman R, Solomon H, Ramrakhiani S, **Longo WE**. Restorative proctocolectomy following orthotopic liver transplantation for primary sclerosing cholangitis. *Transplant Proc.* 2002 Jun; 34(4): 1218-9.

Dabney A, **Longo WE**, Garvin PJ. Rectal cancer following a kidney-pancreas transplant. *Transplant Proc.* 2002 June 34(4): 1189-90.

Grossmann EM, **Longo WE**, Virgo KS, Johnson FE, Oprian CA, Henderson W, Daley J, Khuri SF. Morbidity and mortality of gastrectomy for cancer in Department of Veterans Affairs Medical Centers. *Surgery.* 2002 Nat; 131(5): 484-90.

Modlin IM, Kidd M, Lye K. Carcinoid Tumors of the Stomach. *Surgical Oncology* 2003; 12:153-172.

Modlin IM, Kidd M, Lye KD, Wright NA. Gastric stem cells: an update. *Keio J Med.* 2003 Jun; 52 (2): 134-7.

Moss SF, Armstrong D, Arnold R, Ferenci P, Fock KM, Holtmann G, McCarthy DM, Moraes-Filho JP, Mutschler E, Playford R, Spechler SJ, Stanghellini V, **Modlin IM**. GERD 2003 - A Consensus on the Way Ahead. *Digestion.* 2003; 67 (3): 111-7.

Modlin IM, Kidd M, Lye KD, Murren J, Argiris A. Molecular Strategies and ¹¹¹In-labeled somatostatin analogues in defining the management of neuroendocrine tumor disease: a new paradigm for surgical management. *The Surgeon* 2003; 1(3): 137-143.

Modlin IM, Lye KD, Kidd M. A 5-decade analysis of 13,715 carcinoid tumors. *Cancer* 2003; 97:934-959.

Saikawa Y, Kubota T, Otani Y, Kitajima M, **Modlin IM**. Alteration of DNA methylation status induced by epidermal growth factor in gastric cancer cell line, MKN-74. *Anticancer Res.* 2003 Jan-Feb; 23(1A): 143-8.

Modlin IM, Kidd M, Lye KD. Historical perspectives on the treatment of gastroesophageal reflux disease. *Gastrointestinal Endosc Clin N Am.* 2003 Jan; 13(1): 19-55, vii-viii.

Modlin IM, Kidd M, Lye KD. Perspectives and reflections on integrated digestive surgery. *Pract Res Clinical Gastroenterology* 2002; 16:885-914.

Modlin IM, Kidd M, Lye KD. Amsterdam and Netherlands Gastroenterology: a historical perspective. *Pract Res Clinical Gastroenterology* 2002; 16:971-998.

Gumbs AA, Bassi C, Moore PS, Falconi M, Frigerio I, Baron A, Piemonti L, **Modlin IM**, Scarpa A. Over expression of the Sm-Like Proto-Oncogene in Primary and Metastatic Pancreatic Endocrine Tumors. *JOP. J Pancreas (Online)* 2002; 3:109-115.

Moss SF, **Modlin IM**. Summation: irritable bowel and the irritable physician. *J Clin Gastroenterol.* 2002, 35 (1 Suppl): S68-70.

Young GO, Brown S, Stemmet N, Lastovica AJ, Louw JA, Marks IN, **Modlin IM**, Kidd M. The pepsinogen releasing effect of *Helicobacter pylori* lipopolysaccharide. *Helicobacter* 2002 7:30-38.

Gumbs AA, Moore PS, Falconi M, Bassi C, Beghelli S, **Modlin IM**, Scarpa A. Review of the clinical, histological, and molecular aspects of pancreatic endocrine neoplasms. *J Surg Oncol.* 2002, 81:45-53.

Modlin IM, Kidd M, Lye K. From the Lumen to the Laparoscope. *Journal of the Royal Society of Medicine*. 2003.

Modlin IM, Kidd M, Hults C, Hinoue T. The Surgery of Chronic Pancreatitis – A chronicle of confusion and despair? *World J Surg* 2002; 12:1382-1396.

Modlin IM, Murren J, Lye K, Kidd M, Argiris A, Hinoue T, Cornelius E. ¹¹¹Indium-labeled Somatostatin Analogues: A Novel Advance in the Management of Unresectable Neuroendocrine Tumors (NETs). *Cancer* (2003) (in press).

Koelz HR, Blum AL, **Modlin IM** Costs of GERD: Facts and Fiction. *Gastroenterology* (2003) (in press).

Modlin IM, Lye K, Kidd M. A 50-year analysis of 562 Gastric Carcinoid Tumors. *Am J Gastroenterol* (2003) (in press).

Modlin IM, Kidd M, Lye K. From the Lumen to the Laparoscope. *Ann Surg* (2003) (in press).

Abir F, **Modlin IM**, Kidd M, Bell R. The Surgical Treatment of Achalasia: Current Status and Controversies. *Digestive Surgery* (2003) (in press).

Modlin IM Galen and the Properties of Foodstuffs. (Book Review) *Gastroenterology*. 2003

Modlin IM and Sachs G. *The Cellular Biology and Management of Acid Peptic Disease*. (Accepted for publication 2003). Lippincott, Philadelphia. (450 pgs)

Modlin IM and Kidd M. *The Paradox of the Pancreas: from Wirsung to Whipple*: Hanover, Germany. 2003. (430 pgs)

Modlin IM. *The Evolution of Therapy in Gastroenterology*. : Montreal, Canada. 2002. (330 pgs)

Modlin IM. *GERD-Then and Now*. Constance, Germany. 2003 (130 pgs)

Modlin IM and Kidd M. *The Art of Dutch Medicine* 2003 (Accepted for publication). Amsterdam, Netherlands. (140 pgs)

Modlin IM, M Kidd, K Lye. Radiolabeled octreotide for treatment of endocrine and other tumors. In: "Progress in Oncology" DeVita VT, Jr., Hellman S, Rosenberg SA (Eds.). Jones and Bartlett: Sudbury, 2003; 169-209.

Modlin IM, K Lye, M Kidd. Carcinoid Tumors. In: *Endocrinologic Surgery*, Marcel Dekker: New York 2003, Chapter 51: 611-639.

Hirschowitz BI, **Modlin IM**. The History of Endoscopy: The American Perspective. In *Gastroenterological Endoscopy*, Classen M, Tytgat GN, Lightdale CJ, eds. Thieme: Stuttgart, 2002: 2-16.