Overview

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In this issue, Surgical Solutions focuses on our trauma expertise, recent progress in bench research, the contributions of Dr. Gerald Isenberg, insights from medical student Zhi Ven Fong, and pays tribute to Dr. John Moore. A very busy issue!

I was moved by a recent editorial in the *New England Journal of Medicine* dated February 16, 2012. In the piece entitled "What We Talk About When We Talk About Health Care Costs", Peter Neumann of Tufts University quotes from the *American College of Physicians Ethics Manual, 6th edition*:

"Physicians have a responsibility to practice effective and efficient health care and to use health care resources responsibly. Parsimonious care that utilizes the most efficient means to effectively diagnose a condition and treat a patient respects the need to use resources wisely and to help insure that resources are equitably available."

Webster's dictionary defines parsimony as "carefulness in the expenditure of money or resources". Synonyms are frugal, stingy or penurious.

Neumann's editorial is an important read for all in health care delivery. The debate about health care costs will continue. We recognize that non-adherence to clinical pathways, variations in how we treat patients, re-admissions, and preventable errors all drive up health care costs.

In the big picture though, Neumann nails the issue… "The problem is that no one in charge seems willing to acknowledge that getting a handle on cost growth will also involve uncomfortable trade-offs. We cannot as a society provide patients with unlimited access and unlimited choice. Providing better-quality care, though it is vital, won't change that reality."

Clinical Integration

Drs. Jordan Winter and Hwyda Arafat are key players in the world class pancreatic cancer research team that has been assembled at Jefferson over the last six years.

Jefferson Researchers Identify Potential Diagnostic, Prognostic Tools for Pancreatic Cancer

When it comes to diagnosing and treating cancer, early detection is important. While other cancers can be identified through routine screenings, pancreatic cancer has been notoriously difficult to diagnose early. After pancreatic cancer is diagnosed, the optimal course of treatment is not always clear.

Hwyda Arafat, MD, PhD, Associate Professor of Surgery at Thomas Jefferson University and co-director of the Jefferson Pancreatic, Biliary and Related Cancers Center, and Jordan M. Winter, MD, Assistant Professor of Surgery, are working to change that.

Together with Mon-Li Chu, PhD, Professor and Vice Chair of the Department of Dermatology and Cutaneous Biology, Dr. Arafat has identified a protein – Collagen 6A3 – that is highly expressed in cancerous pancreatic tissue and can be identified through a noninvasive blood test.

Based on their initial findings, Dr. Arafat and Dr. Chu were awarded a $200,000 grant from the University City Science Center's QED Proof of Concept Program. The team is using the money to validate their initial findings and to begin commercializing the test – "The COL6A3 Panel" – which is poised to become the first clinically reliable test for pancreatic ductal adenocarcinoma.

"We are exploring how this test could be used to monitor high-risk patient groups, such as those with chronic pancreatitis and those with a family history of pancreatic cancer," Dr. Arafat explains. "This noninvasive test could also help in differentiating between malignant and benign tumors identified in imaging studies, and could be used to monitor pancreatic cancer patients as they undergo treatment."

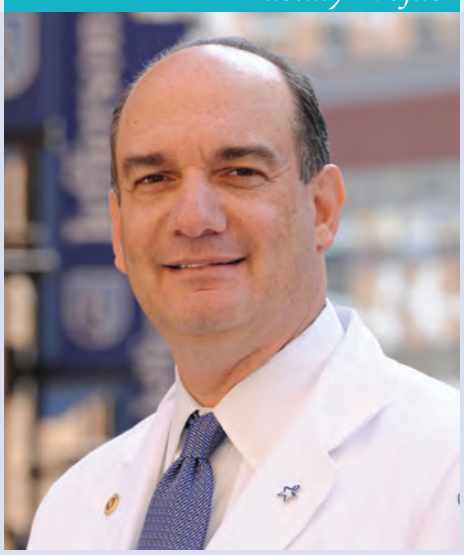
As Dr. Arafat works to develop a screening test, Dr. Winter is working to identify more effective prognostic tools. His work has explored the linkage between two proteins, MUC-1 and mesothelin, and pancreatic tumors with particularly aggressive biology. More specifically, Dr. Winter and his team are exploring a possible correlation between CA 15-3, a serum marker already used in treating patients with metastatic breast and ovarian cancer, and high expression of MUC-1.

"No one had looked at using CA 15-3 in patients with pancreatic cancer, probably because this marker won't be elevated in all pancreatic cancer patients," Dr. Winter explains. "However, if we find a reliable correlation between CA 15-3 and MUC-1, testing CA 15-3 levels may have a role in pancreatic cancer treatment."

What's more, Dr. Winter is collaborating with Jonathan R. Brody, PhD, J. Wallace Davis and Gail G. Davis Professor of Surgery, to research gene therapies targeting pancreatic cancer at a molecular level: "What we imagine is a clinical paradigm where we can identify which patients are most appropriate for gene therapy based on the results of their serum test," Dr. Winter says.

Watch Drs. Arafat and Winter discuss their research projects at last year's patient symposium: **www.jeffersonhospital.org/pancreasevent**

Faculty Profile



Gerald A. Isenberg, MD, FACS

As Professor of Surgery, Division of Colorectal Surgery; Director, Surgical Undergraduate Education, Jefferson Medical College (JMC); Program Director, Colorectal Residency Program, Thomas Jefferson University Hospital; and Chair, Curriculum Committee, JMC, Gerald A. Isenberg, MD, FACS, is equally focused on – and passionate about – clinical practice and medical education.

Indeed, as he reflects on his career at Jefferson, which spans nearly 25 years, Dr. Isenberg is appreciative of the opportunity to build a busy and vibrant colorectal surgery practice. But he clearly also values his experiences as an educator – particularly the many opportunities to lead and innovate.

In years past, Dr. Isenberg spearheaded the adoption of Problem-Based Learning, a teaching method designed to strengthen students' critical-thinking skills. He also chaired a taskforce that explored the topic of professionalism and developed a blueprint for infusing professionalism throughout the curriculum.

About 10 years ago, Dr. Isenberg created a fourth-year course, "Scientific Foundations of Clinical Medicine," in which students revisit some of the basic sciences they learned early in medical school and explore how they apply to clinical medicine. These days, Dr. Isenberg is part of a team that's exploring health information technology and its impact on medical education and the practice of medicine.

"As a teacher, I continue to emphasize the importance of critical thinking," Dr. Isenberg says. "The information explosion in medicine makes it impossible to assimilate all medical knowledge. Instead, I focus on planting seeds – teaching students how to nurture and fine-tune their reasoning skills."