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The Amazing Case of John Hill

Even six weeks after exploratory surgery for cancer of the small intestine, John Hill was vomiting and losing weight. He was still recuperating when he and his wife, Doris, drove from Buffalo, N.Y., to Bayview Medical Center with John's medical records in tow. But their hopes were faint.

"I thought we'd see the doctor for 15 minutes, and he'd tell me the same thing," says Hill, 76.

The "thing" he feared hearing was that the tumor in his duodenum, the first part of the small intestine that connects to the stomach, was too entwined with the main blood vessels to be removed. He'd be sent home again with a sober prescription for palliative radiation and chemotherapy—and with an

evasive answer about how much time he had left.

But when he met Mark Duncan, now interim chairman of surgery at Bayview, he was immediately

struck by Duncan's particular mix of warmth, curiosity and methodicalness.

"He's a nice guy, right away," says Hill. Duncan studied the scans the Hills had brought with them. "Then he went to the wall of his office and pulled down a huge book, as big as a newspaper—he called it an atlas—with



Doris and John Hill, vacationing in Canada this summer. John, 76, no longer runs marathons, but he sails, plays tennis and golf, and paints landscapes.

full-color pictures of our insides," Hill recalls. "He explained where the tumor was, what the other doctor had done, and what he could do for me. He said, If I can get two fingers under that artery, I think I can get the tumor out."

Then Duncan did something that so moved Hill, a retired art professor at the State University College in Buffalo, that he still chokes up at the memory five years later. "He turned the page to another picture, and said, Isn't this beautiful?!" He pauses before continuing, "I thought, This doctor is engaged in this work, and am I lucky to be here."

The Hills credit two close

friends—one, a surgeon, the other, a radiologist—who queried the Buffalo oncology community for the best place to treat intestinal cancer, for their luck. John admits "it took some teeth-gritting" to accept another surgery, but after he agreed, Duncan fit the nine-hour surgery into his schedule just before leaving for vacation. "He had a new baby at home, but he still came in every day to see John," recalls Doris, a retired psychologist.

The pathology report showed that Hill had Stage 3 cancer, but that the tumor was removed with the wide margins Duncan had hoped for. Before the Hills left for home, where John would

have chemotherapy and radiation, Duncan gave them his beeper number and encouraged them to use it at the first sign of trouble. "He said, I will be here for you," says Doris. "I'll never forget that."

In the realm of cancer, five years means cure, and John and Doris Hill, married 30 years with eight children and 19 grandchildren between them, have made the most of the extra time granted them. In the past year, the Hills have traveled to China, Scotland and Ireland. Every summer, they take the friends who guided them to Hopkins to dinner—and they all raise a glass to Mark Duncan. ■

The Surgeon Speaks

"This was not your average case."

I didn't know the surgeon who called me that day five years ago about John Hill.



I'm still not sure how he got my name. But when I saw the scans, I thought we might be able to get the tumor out.

It was a huge operation. We didn't just take out the tumor in his duodenum. We had to remove the bypass where the stomach had been sewn to the intestine. We took out additional lymph nodes, a new mass that had developed, his gallbladder, a segment of his small bowel, a segment of his colon and part of the peritoneum. Plus, there was scar tissue we had to get through from his initial operation. This was not your average, run-of-the-mill case. But we took a deep breath and just approached it systematically. Surgery is the cumulative effect of hundreds of tiny details.

Overwhelmingly, John Hill is the one case that sticks out in my career. He was sent to me personally, and the odds of a cure seemed remote. He'd already been told, You have a terminal disease; you've had your shot at surgery and it can't be cured. But here it is, five years later and he's totally healthy. He doesn't come in for follow-up any longer, but occasionally we still get cards from his brother, who sends money for donuts for the surgical team. I buy the donuts, and then retell the story to my new residents.

-Mark Duncan



From Julie Freischlag
Director of Surgery

Do It For the Team

Last spring, at our retreat for division chiefs to discuss strategic planning, we identified four priorities for our department. One of the things that rose to the top was the importance of teamwork. To prove our commitment, we closed operating rooms to schedule a series of mandatory teamwork training sessions attended by everyone from senior surgeons to nurses to technicians. Although there were some skeptics going in, survey results showed that the majority of people felt the effort was worthwhile.

Keeping that spirit alive, however, is the next, more difficult task, and I encourage you to share your ideas with me on how to measure whether our OR teams are working better together. It is one thing to gather data on whether errors have declined because nurses now feel free to speak up. But how do we measure non-tangibles like whether people feel valued and appreciated at work?

The combination of teamwork training and the formalized "time-out" has produced some noteworthy statistics: in May, the number of first cases started on time rose significantly to 61 percent, the highest number in five years. Now we will be examining turnover time, the time between cases, to look for similarly favorable data.

I've scheduled our next retreat for October 2 on the topic of leadership since I am asking so many new division chiefs and program directors to be leaders, and many others to be better leaders. I hope that "Leadership in Academic Medicine Today" will provide the tools to help everyone polish those skills.

Making Every Day a Good Day

To aid OR teamwork, training is prescribed.

The Project: Although it easily could be perceived as the management trend du jour, "teamwork" has proven links to lower rates of medical errors, better patient outcomes and lower nurse turnover. This spring, leadership in the Department of Surgery decided the concept was so important, it brought the training offered by Hopkins' Center for Innovation in Quality Patient Care directly to the hundreds of people who change into scrubs for work each day.

Laurie Saletnik, assistant director of surgical nursing for the operating rooms, attended the majority of the sessions, which brought multidisciplinary teams like neurosurgery or otolaryngology together for four hours of training. "It was fascinating to watch," says Saletnik, because outside of an operation, these teams had never been in a room all together to talk about the work environment. Despite their differing perspectives, everyone from technicians to physicians drew the same picture when asked to describe the roots of a bad day: it begins with an unexpected change in the day's postings that hasn't been well communicated, forcing people to scramble to play catch-up for the rest of the day.

To shed light on this phenomenon, a threesome of nurse-surgeon-anesthesiologist was selected during each session to act out an exercise using dominos. Sitting back to back, one team member had to duplicate the domino pattern that a second had arranged, but with little verbal direction. "The message from it, which is striking, is that everybody starts with an assumption about how these dominos should be arranged," says Saletnik, "and the difference is reinforced when [people] can't get them to match. So when I walk into a case in the morning, and I have an assumption about how the day will proceed, I need to realize that the surgeon has an assumption, the anesthesiologist has an assumption, and we probably all have different ones."

The Players: The sessions were run by Bill Taggart, an expert on teamwork training



The Team in GOR 18 (Back, left to right): Urology resident Jennifer Miles-Thomas, fellow Richard Link, urologist Louis Kavoussi, anesthesiologist James Schauble, nurse Stephanie Walker, urology resident Mohamad Allaf, nurse Denise Simpser; (Front): urologist Thomas Jarrett and surgical technologist Allen Forney.

ing from the aviation industry. The department made an enormous commitment—with approval from Hopkins' top leadership—to promote the training to every service that operates in the operating rooms, which had to be closed down for the morning-long sessions. People at every level were invited, totaling about 1,000, and six sessions were necessary to accommodate the group.

The Results: To make sure everyone starts the day with the same plan, the mandatory "time-outs"—during which the team is required to stop to identify the patient, procedure and site before beginning to operate—have been expanded to include anything unusual about the procedure, what time the patient got antibiotics, or to give any team member a chance to

speaking up if there are any concerns.

- One of the maxims that surfaced is that knowing co-workers' names is essential to good team communication. In many ORs, the boards used for documenting counts also list everyone's name. In addition, everyone on the OR staff is encouraged to use first names, "which is a huge culture change here," says Saletnik. "We're trying to break down the hierarchical barriers that exist in an OR."
- Traditionally, operating room nurses, surgeons and anesthesiologists have held separate Grand Rounds. Now the department has introduced joint Grand Rounds four times a year.
- The department is developing a Web-based program to follow up on the training sessions and keep the material fresh. ■

Let's Meet: Minimally Invasive Surgeon Michael Marohn



Col. Michael Marohn had a great job, pushing the envelope in surgical technology for the military, "wandering around the Beltway doing neat, minimally-invasive cases at Walter Reed, Bethesda, the Air Force and NIH," teaching his techniques to thousands of military surgeons worldwide and even flying aboard the occasional F-16.

Nonetheless, the former vice-chair of surgery at the Uniformed Services University couldn't resist a call from Hopkins to bring his skill and vision north to Baltimore.

The idea of minimally invasive surgery captured Marohn's imagination in the late 1980s, and soon the endocrine surgeon was advancing from laparoscopic gallbladder surgery to solid organ removal, from colon resection to surgical robotics. At Hopkins, where he's done 100 cases since reporting for duty on February 1, he is working with minimally invasive surgeon Mark Talamini to expand

surgical technology, has introduced video-assisted thyroid and parathyroid surgery to Hopkins with endocrine surgeon Martha Zeiger, and works with colorectal surgeon Susan Gearhart to increase the scope of minimally invasive colorectal surgeries performed here.

Meanwhile, Marohn passes on the skills of the "unforgiving universe" of minimally invasive surgery in the training lab on Blalock 12. "Your hands are not in there," he explains, "so your ability to recover is less."

Still, he does not look upon "Nintendo surgery" as revolutionary. "I think it's a transition technology." The long, chopstick-like instruments are primitive and the operative field has gone from three-dimensions to two, he explains. "When we get smart enough to integrate computer-assisted surgery, miniaturized engineering and imaging technology, that's where the future of surgery will be." ■

A Surgeon's Quest for a Cancer Vaccine

Although the Bunting ♦Blaustein Building was designed to bring cancer researchers and clinical faculty together, Rich Schulick is still a rarity among the building's occupants: he is the only surgical oncologist who parks his briefcase daily in the 10-story structure.

Schulick says that mixing it up with so many medical oncologists, and especially with his mentor, researcher Drew Pardoll, just two doors away, has made all the difference in his immunotherapy research. The young associate professor, who received his undergraduate degree, medical degree and residency training in general surgery at Hopkins, has combined his interest in immunology and skill in the operating room to develop a colorectal cancer vaccine program, which may prevent relapses in patients who have

had surgery to remove tumors.

First, Schulick created a novel mouse model of colorectal cancer that has spread to the liver (his results were published in the *Annals of Surgical Oncology* in 2003) to mimic what he saw in patients in his clinic. Schulick and Pardoll, co-director of the Division of Immunology and Hematopoiesis, then used the model to test different treatment strategies. Now they are just months

away from launching their first clinical trial of the immunotherapy in patients with colorectal cancer, which affects one in 16 Americans.

The theory behind the strategy is fairly direct. Using tumors that have been surgically removed from patients with colorectal cancer that has spread to the liver, researchers isolate individual cancer cells, radiate them to prevent long-term growth, then freeze them for later use. Once patients recover from surgery, the cells are thawed and injected back

They are just months away from launching their first clinical trial of the immunotherapy in patients with colorectal cancer.

into the patient, in combination with a cell line that has been genetically engineered to secrete large amounts of a powerful immune-stimulating protein called GM-CSF or granulocyte-macrophage colony-stimulating factor. Theoretically, the vaccine will stimulate patients' immune systems to recognize and destroy any remaining cancer cells post-surgery.



Rich Schulick (left) shows mouse liver specimens to his mentor, oncology researcher Drew Pardoll.

Hopkins clinicians and scientists have developed GM-CSF vaccines in prostate, pancreatic, breast and kidney cancers, as well as myeloma and chronic leukemia. The medical

center now has the largest concentration of people anywhere working on this vaccine platform.

In related research, Schulick's team conducts experiments in mice with liver metastases using a bacterium called *Listeria*, that tends to specifically infect the liver. They have found that adding a mild *Listeria* infection in combination with the GM-CSF vaccine strategy focuses the immune activity onto the liver. Additionally, by genetically altering the *Listeria* to make it safer for animals and humans, they can inject large numbers

of bacteria to achieve dramatic anti-cancer responses in the liver.

Unlike most surgeons, Schulick splits his time evenly between his laboratory and his patients, who inspire him to make inroads against the second leading cause of cancer death in the United States. "One in four Americans will develop cancer of some kind during their lifetime," he says, "and it's very satisfying to take care of cancer patients and figure out new ways of helping them. We've come a long way, but we have a long way to go." ■

On the Job

John Hundt: Administrator of Surgery

"We need to operate in the safest possible environment."

John Hundt helps oversee one of the biggest departments at Hopkins, one with 1,300 employees and a \$170 million budget. But as one of 11 siblings who grew up on a Texas farm, he is used to being on a big team.

What are your biggest challenges?

People don't always realize that while I'm the administrator for the Department of Surgery and do most things—from handling office space to professional fee billing—for 70 surgeons, I also work for 200 surgeons in five

other departments who use the operating rooms.

What's changed in the 3-1/2 years since you took over this job?

We've planned and implemented the new information system in the OR, called ORMIS. We've recruited 15 new surgeons in the last two years. Last March, Julie Freischlag came on board as our new chair. Also the new duty hours for residents have brought on lots of change. Two years ago, we had 62 residents working

100 hours a week. Next year, we'll have 55 residents working 80 hours a week. We've lost 1,640 hours per work week. To make up for the difference and to continue to improve the educational experience, staff has to pick up the slack. We've hired 20 physician assistants and nurse practitioners, but we still come up short.

What tough decisions do you have to make?

OR supplies is a big one. People want the latest technol-



ogy, but it's important to balance preferences with the financial reality and safety issues. Then there are the unpopular decisions like spending money to upgrade the air handling system in the

GOR. But we need to make sure we're operating in the safest possible environment.

What do you hope to improve in the future?

Having support services identify more with the department. They provide valuable services, like making sure rooms are clean and that supplies are where they're supposed to be, and it's as important to keep materials coordinators happy as to keep surgeons happy. But it's a challenge, particularly in a department this big.

Dear Johns Hopkins:

"Here is some money my brother, Spiro, and I saved to help research for pancreatic cancer. Our pappou Gregory passed away from this horrible disease. Although he excersied [sic] and grew his own vegetables [sic] and fruit trees he still got cancer."

When Christina and Spiro Billos' maternal grandfather died in March, the children tucked a letter inside his coffin. When they wanted to do more, their mother, Kathy Billos, suggested they donate money for research.

Their 73-word letter arrived with a check for \$68 – \$43 from Christina's "real job" as a mother's helper, and \$25 that Spiro, 7, had earned from walking on his uncle's back ("His back hurts," he explained). Although their "pappou" Gregory had surgery in January by Hopkins surgeon Charles Yeo for pancreatic cancer, the disease had already spread to the liver.

"There's so much we don't know about the pancreas, and we never thought it would affect us like this."

"There's so much we don't know about the pancreas, and we never thought it would affect us like this," says Kathy.

Gregory Bakalides emigrated to the United States from Greece in 1969 with his wife and two children when he was 40 years old. Intending to stay for five years, he got a job as a tailor at Sears while his wife worked at Montgomery Wards as a seamstress. In 1975, they bought their first home.

"He loved that house," says Kathy. His vegetable garden and fruit trees—figs, peaches, pears, cherries,

plums—were legendary in his residential neighborhood in Bowie, Md.

He also adored his two grandchildren with whom he'd play for hours in the sea during vacations in Greece, the last one in the summer of 2003, just before he got ill. He taught them Greek dances and songs, and let them help plant squash and tomatoes in his garden.

"He was a quiet, gentle man," says Kathy Billos. "He was athletic and he loved life. We thought he'd be around a long time." ■

To make a gift to the Department of Surgery, contact Boi Carpenter-Mellady at 410-516-5483 or bmellady@jhmi.edu. To no longer receive information about supporting the department, contact her using the information above.



Christina and Spiro Billos donated \$68 in memory of their "pappou" Gregory, who died of pancreatic cancer in March.

FACULTY NEWS

The Department of Surgery welcomed several new faculty members this summer. **David Efron**, who has spent the last 10 years at Hopkins completing his surgical residency and critical care fellowship, has joined the trauma division. Born in the Bronx, N.Y., he received his undergraduate and medical degrees from Brown University. He conducts research in sepsis and inflammation. **Elliott R. Haut** is a trauma and critical care surgeon whose research interests include the treatment of penetrating abdominal trauma. He graduated medical school and completed his fellowship at the University of Pennsylvania School of Medicine, and general surgery residency at Pennsylvania Hospital. A native of Lafayette, La., **J. Keith Melancon** was most recently a fellow in surgical transplantation at the University of Minnesota. He completed his surgical residency and medical school at Tulane University. His research concentrates on immune monitoring of transplant patients and inducing immune tolerance in transplant patients ■ **Christopher Wolfgang** joins Hopkins-trained **Gene Kennedy** and **Taylor Riall** as an assistant chief of service. He comes from Penn State, Hershey Medical Center, where he completed his surgical residency and post-doctoral research fellowship in surgical oncology. A medical graduate of Temple University School of Medicine, he is interested in the basic mechanisms of cell growth and differentiation ■ **Anthony Tufaro** has been named residency program co-director, joining **Kurt Campbell**.

DIFFERING OPINIONS

Depending on who you ask, training for residents in the Department of Surgery either has gotten vastly worse or much better since July 1, 2003, when the new standards went into effect limiting residents to an 80-hour workweek. According to an on-line survey conducted by the department, senior residents and faculty overwhelmingly perceived training to be worse overall. The majority of junior residents felt the new system was the same or better.

KUDOS

Bruce Perler, the Julius H. Jacobson II, Professor of Surgery and chief of the Division of Vascular Surgery, has been elected president of the Eastern Vascular Society, the largest vascular society in the United States. Two surgery residents, **Christopher Simpkins** and **Vincent Daniel**, have each been awarded a \$60,000 Resident Research Scholarship from the American College of Surgeons. Simpkins will use the award to conduct research into immune system regulation.

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