

SURGERY UPDATE LEADING THE WAY

FALL 2013 • VOLUME 5, NUMBER 3



Department of Surgery

*Dedicated to Clinical Care,
Research and Education*

- Cardiothoracic Surgery
- Colorectal Surgery
- Community Surgery
- Surgical Education
- General Surgery
- Pediatric Surgery
- Surgical Oncology
- Transplant Surgery
- Trauma and Critical Care
- Vascular Surgery

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Leading the Way is written for physicians for medical education purposes only. It does not provide a complete overview of the topics covered and should not replace the independent judgment of a physician about the appropriateness or risks of a procedure for a given patient.

The Saturday Clinic for the Uninsured



HEATHER KOCH
MCW Class of 2016



NEERJA JOSHI
MCW Class of 2016

The cover of this issue of *Leading the Way* pictures a weekend at the Saturday Clinic for the Uninsured (SCU), which provides comprehensive patient-centered care to Milwaukee's uninsured regardless of their ability to pay. [Additional photos of the SCU are featured on page 11.] This completely free, student-run clinic originated in 1991 as a partnership between students at the Medical College of Wisconsin (MCW) and the Isaac Coggs Health Connection. Despite the termination of this partnership in December 2001, the strong commitment of the MCW students to serve the uninsured population of Milwaukee led them to collaborate with Columbia St. Mary's Health System (CSM). CSM allows MCW students and faculty to use its Family Health Center and equipment at 1121 E. North Avenue in order to care for patients who suffer from a wide variety of illnesses including hypertension, diabetes, acute illness, and infections of all kinds, to name a few. The clinic also offers an on-site pharmacy via participation in Milwaukee's Community MedShare Program and referrals for specialty care not provided on-site. SCU, which is open during the summer as well as during the regular school year, sees 20 to 30

patients per Saturday on a first come, first serve basis. It is not unusual for patients to form a line outside the clinic before 6:00 am to ensure that they are seen between the clinic hours of 8:00 am to 12:00 pm. The Saturday Clinic for the Uninsured is proud to provide more than 1,000 patient visits per year.

The clinic is operated and overseen by a board of 12 student managers whose duties range from operating the pharmacy and coordinating patient referrals for non-acute care to admitting patients to the clinic on Saturday mornings. Each Saturday, the volunteer staff includes approximately 25 medical students from all four years, two to four physicians, and two phlebotomists. The medical students provide direct patient care under the supervision of the physicians present. The volunteer corps for SCU includes more than 250 medical students, including one-third of the students who rotate through a required MCW Family and Community Medicine third year clerkship, and more than 25 volunteer physicians from the surrounding community, many of whom are MCW faculty. Although the first- and second-year student volunteers receive no academic credit for their participation, this experience is so popular that a lottery system is necessary for both regular clinic volunteers and volunteer phlebotomists. The clinic provides students with invaluable insights into the lives of individuals who may be of different cultural, racial, and economic backgrounds and also is often the first opportunity to examine and care for patients in an active outpatient environment. This student-operated medical clinic for Milwaukee's uninsured is a lasting symbol of why we go into medicine and how lucky we are to be in the greatest profession on earth. •

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Haiti Update



SARAH L. M. GREENBERG, MD
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The global epidemiology of disease has undergone substantial shifts over the last two decades with non-communicable disease (NCD) becoming a leading cause of worldwide morbidity and mortality. Diseases amenable to surgical intervention such as cancer, trauma, congenital anomalies, and complications from childbirth fall within this category of NCDs. However, surgery has yet to garner adequate attention from the international community, and according to the World Health Organization (WHO), two billion people worldwide have no access to emergency or surgical care.¹

In order to address this growing burden of surgical disease, The Paul Farmer Global Surgery Fellowship was created in 2008 to train leaders in the field of global surgery. This fellowship is a joint collaboration between Boston Children's Hospital, Harvard Medical School's Program in Global Surgery and Social Change, the non-governmental organization Partners In Health, and multiple partners in Rwanda and Haiti. I started this two-year fellowship in July of 2012 during my general surgery residency. Since that time, I have been engaged in a variety of global surgery research and

education projects, have been working toward a Master of Public Health degree at the Harvard School of Public Health, and helped build surgical capacity in rural Haiti.

Haiti, a country of approximately 10 million people nestled between Cuba, Jamaica, and Puerto Rico, shares the island of Hispaniola with the Dominican Republic. However, the popular resort destinations of the Dominican Republic provide a stark contrast to the abject poverty and poor health of neighboring Haiti, a nation molded by decades of political, economic, and physical strife. The health of Haiti's people is quite poor, as demonstrated by numerous measures and as compared to the status of its neighbors. For example, Haiti's life expectancy at birth is 13 years lower than the average of other Latin American and Caribbean countries.² Similarly, its under-five mortality rate is nearly seven times higher and maternal mortality ratio over three times higher than that of its neighbors.²

In order to help improve the quality and delivery of medical and surgical care to Haiti's Central Plateau, I had the opportunity to work



Left: An operating room at the older hospital in nearby Cange. There are no ceiling-mounted overhead operating lights, availability of running water and medications are inconsistent, and patients often have to wait at least six months for non-emergent surgery.

Right: One of six state-of-the-art operating rooms at the new Hôpital Universitaire de Mirebalais, which will provide advanced surgical care and education in Central Haiti.



Members of the surgery team outside the main entrance of Hôpital Universitaire de Mirebalais.

with Partners In Health in the opening of Hôpital Universitaire de Mirebalais (HUM), a new state-of-the-art hospital and teaching facility in Central Haiti. HUM staff saw their first patients in March 2013, and performed the first operation in May. HUM is a 300-bed, 205,000-square-foot facility with an emergency room and six operating theaters—more operating theaters than any public facility in the country. Estimated to see as many as 500 patients per day when fully functioning, HUM will help fill an enormous need in healthcare delivery not only for Mirebalais, but for all of Central Haiti, extending into Port-au-Prince. In addition, as a training facility for nurses, medical students, and residents, it will help train the next generation of local healthcare providers. I have spent time working with the HUM team in Haiti on getting the operating rooms up and running. I have also been working with HUM and Haiti's Ministry of Public Health and Population in developing HUM's surgical continuing medical education (CME) program, which will be the first surgical CME program in the country. Hôpital Universitaire de Mirebalais was created to serve the poor. As the most advanced public healthcare facility in the country, it will deliver quality medical and surgical care to those most in need, while at the same time creating a sustainable model of healthcare through education of the next generation of medical providers. With HUM, the citizens of Central Haiti will no longer be included in the two billion people across the world with no access to emergency or surgical care. •

FOR ADDITIONAL INFORMATION on this topic, see attached references, visit mcw.edu/surgery, or contact Dr. Greenberg at sgreenberg@mcw.edu.

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Department of Surgery Welcomes New Faculty



The Department of Surgery and the Division of Trauma and Critical Care welcome Thomas Carver, MD to the MCW faculty. Dr. Carver completed his general surgical residency at the Navy Medical Center in San Diego, California in 2008 and then served as a Ship Surgeon on the USS Dwight D. Eisenhower for one year before joining the faculty at the Advocate Condell Medical Center in Libertyville, Illinois. He went on to be a Staff General Surgeon and Department Head at James Lovell Federal Health Care Center in North Chicago. In 2010, Dr. Carver was deployed to Afghanistan and served our country for one year, and remained a Lieutenant Commander in the Medical Corps U.S. Navy until 2012. He most recently completed a fellowship in Surgical Critical Care at the Medical College of Wisconsin.

Dr. Carver will join our talented faculty in the Division of Trauma and Critical Care. He will mentor our chief residents in the administration of the Acute Care Surgery service.



The Department of Surgery and the Division of Vascular Surgery welcome Michael Malinowski, MD to the MCW faculty. Dr. Malinowski is an honors graduate of the University of Illinois College of Medicine and continued there for residency training in General Surgery, serving as the Administrative Chief Resident. He has just completed a two-year Fellowship in Vascular Surgery at Loyola University Medical Center/Stritch School of Medicine in Maywood, Illinois. His fellowship training focused on both conventional vascular surgery and complex endovascular techniques, including experience in branched aortic reconstructions.

Dr. Malinowski will join the vascular surgery programs at Froedtert Hospital, the Zablocki VA Medical Center, and the Division's off campus clinical programs at the Comprehensive Vein Clinic, West Bend Hospital, Community Memorial Hospital, and Moorland Reserve.



The Department of Surgery and the Division of Pediatric Surgery welcome Jack Schneider, MD to the MCW faculty. Dr. Schneider is a graduate of the Medical College of Wisconsin, and completed his residency in general surgery at the University of Vermont. Following residency, he obtained fellowship training in pediatric/congenital colon and rectal surgery at Cincinnati Children's Hospital. Dr. Schneider will be a major part of the Pediatric Surgery program at Marshfield Clinic. •

Clostridium Difficile: Changing Demogr



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The Medical College of Wisconsin was one of the first institutions to recognize *C. difficile* as a major health problem in patients with inflammatory bowel disease (IBD). These patients continue to be vulnerable. Around 2005, we experienced a dramatic increase in the number of IBD patients treated for *C. difficile* (1.8% in 2004 to 4.6% in 2005, $p < 0.05$).¹ Gender, age, tobacco use, or type of IBD were not significant risk factors for *C. difficile*. Ninety-one percent of the *C. difficile* positive IBD patients had colonic involvement ($p = 0.002$)¹ and 74% were maintained on immunomodulator therapy (azathioprine, 6-mercaptopurine (6MP), and methotrexate; $p < 0.02$). Interestingly, the use of biologic therapy (infliximab and adalimumab) was not associated with *C. difficile* infection. The duration of IBD was significantly shorter in these patients, with 7 of the 46 patients identified as presenting with *C. difficile* at the time of diagnosis ($p = 0.004$).¹ While *C. difficile* is commonly associated with antibiotic exposure, particularly clindamycin, 39% of IBD patients had no antibiotics in the prior two months. If they had antibiotic exposure, the most common antibiotic was the fluoroquinolone, ciprofloxacin.¹

All IBD *C. difficile* patients were treated with antibiotic therapy—oral or enema vancomycin, oral rifaximin, and oral or intravenous

metronidazole therapy. Because of the high colectomy rate in 2004, the drug of choice for therapy shifted from metronidazole to vancomycin. In addition, rapid steroid tapers were initiated in patients.

While coping with the evolution of this new onslaught of *C. difficile* colitis, the ultimate treatment was thought to be surgical intervention. Unfortunately, following total abdominal colectomy and ileostomy, six patients developed *C. difficile* enteritis. All of these patients had received a single dose of pre-operative antibiotics, 3/6 patients had undergone ileopouch anal anastomosis (IPAA) with diverting loop ileostomy. Four of the six patients had *C. difficile* colitis superimposed upon their ulcerative colitis. However, two of the affected patients had not had *C. difficile* prior to developing enteritis.² The presenting symptoms of *C. difficile* enteritis were high-volume watery ileostomy output followed by ileus, fever, elevation in the white blood count, or elevation in platelet counts with toxin isolated from the ileostomy.²

With 14 prior reports of *C. difficile* enteritis in the world literature showing mortality rates between 60 and 83%, we collected the largest series of patients ever reported and experienced no mortality. Since 2007, we have had five years of additional experience and the impact of *C. difficile* associated infection in our IBD population has declined.

2013 Eberbach Award Winners

The Eberbach Banquet is held every year to honor our graduating residents and recognize outstanding faculty and resident educators. This year, **Andrew Kastenmeier, MD** (Division of General Surgery) received both the Golden Cane Award and the Professionalism Award. The Golden Cane Award recognizes an outstanding educator, as chosen by junior and senior medical students. The Professionalism Award is presented to the faculty member who best exemplifies outstanding professionalism, as selected by all current surgery residents. The Department of Surgery established the Golden Cane Award in 1987 and the Professionalism Award in 2005. Dr. Kastenmeier is the first faculty member to be selected for both awards in the same year.

Established in 1986, the Aprahamian Faculty Teaching Award recognizes two outstanding faculty teachers (one from the full-time academic faculty, and one from an affiliated institution). This year, the graduating chief residents selected **Kathleen Christians, MD** (Division of Surgical Oncology) of the Medical College of Wisconsin and **Lyle Henry, MD** of Columbia St. Mary's to receive these awards.

Congratulations to these talented and devoted educators for their efforts in the mentoring and training of our medical students and residents. They are "leading the way" for all of us as we develop the next generation of physicians dedicated to the art and science of medicine.

Graphics in Inflammatory Bowel Disease

What have we learned? If you have IBD and new onset diarrhea, *C. difficile* must be ruled out. We treat *C. difficile* aggressively with vancomycin as the initial drug of choice, having found that half of our patients do not respond to the use of metronidazole. Metronidazole is a less expensive option for patients who are immunologically normal. It is important to keep patients in isolation to prevent this spore-forming organism from spreading. Waterless, alcohol-based hand gels are insufficient to eliminate spores, and mandatory hand washing is needed. We also now avoid the routine use of fluoroquinolones and rapidly taper steroids for our IBD patients. Probiotics may be helpful in preventing *C. difficile* infection and we use them in the clinic and hospital setting.³ Cholestyramine may be helpful to bind the toxin of *C. difficile* and prevent some of the disabling diarrhea experienced by these patients.⁴

The Future of *C. difficile* in the IBD Patient

The microbiome is the totality of the microbes, their genetic elements, and their environmental interactions within the human bowel. It has become a “hot” research topic in gastroenterology and differences have been identified in IBD. Fecal transplantation is the process of transferring fecal bacteria from a healthy individual into a recipient for the treatment of *C. difficile* colitis. A recent search of *PubMed* revealed 30 references describing this treatment option in hundreds of patients. In May 2013, the Food and Drug Administration (FDA) first ruled that Investigational New Drug application is required prior to treating a patient with a fecal transplant. In June, under public pressure, the FDA reversed its position and issued an announcement requiring that physicians utilize informed

consent and discuss the potential risks of the procedure. Ultimately, the FDA hopes to standardize procedures, insist on minimum screening for pathogens such as hepatitis, HIV, parasites, and intestinal pathogens and require follow-up and reporting to the agency.

Our own experience with *C. difficile* has become less dramatic, but we continue to be cautious and attentive to this important pathogen and a fecal transplant protocol is available. •

FOR ADDITIONAL INFORMATION on this topic, see attached references, visit mcw.edu/surgery, or contact Dr. Otterson at 414-805-5734; motterso@mcw.edu.

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DEPARTMENT OF SURGERY WELCOMES CHIEF RESIDENTS 2013–2014



Irena Gribovskaja-Rupp, MD



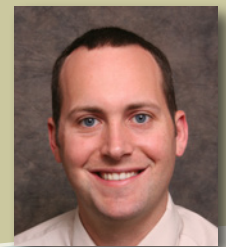
Valerie Grignol, MD



Margaret Riesenber, MD

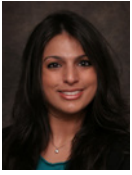


Shaina Schaetzel, MD



Thomas Wade, MD

Platelets in the Trauma Patient



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General Surgery Research Resident



KAREN BRASEL, MD, MPH
Division of Trauma/Critical Care

Platelets serve two purposes after trauma: hemostatic control and inflammation mediation.^{1,2} During vascular injury, platelets cover the exposed subendothelial matrix and mediate additional platelet and leukocyte recruitment. Immediately following vascular injury, platelets adhere to the damaged endothelium where they become activated. Activated platelets release prothrombotic factors such as thromboxane A₂ and ADP that recruit more platelets to the site of injury, forming a hemostatic plug that seals the injury. Platelets provide the surface for the binding of leukocyte-derived microparticles containing tissue factor for a localized induction of the coagulation cascade. Platelets also release microparticles that mediate leukocyte-leukocyte and leukocyte-endothelial cell interactions. Most of these mechanisms play a role in inflammation as well. Activated platelets increase leukocyte adhesion to the endothelium and promote leukocyte activation through deposition of chemokines on the endothelium. This enables leukocytes to firmly attach to the vessel wall and finally to transmigrate into the subendothelial tissue.^{3,4}

Data from military and civilian publications demonstrate a clear survival benefit in massively bleeding patients administered early high ratios of platelets and fresh frozen plasma along with a decrease in blood loss.⁵⁻⁷ However, the role of continued platelet administration or endogenous stimulation of platelets in relation to patient outcome once admitted to the ICU has not been described. Thrombocytopenia (<100,000/ μ L) is a strong negative prognostic factor and can exist even with a normal platelet count (PC) as those circulating platelets may be dysfunctional. The prevalence of thrombocytopenia ranges between 20–30% and thrombocytopenia is reported overall in 41% of critically injured patients.^{1,8} Surgical ICU patients have a higher incidence of severe thrombocytopenia, compared with medical ICU

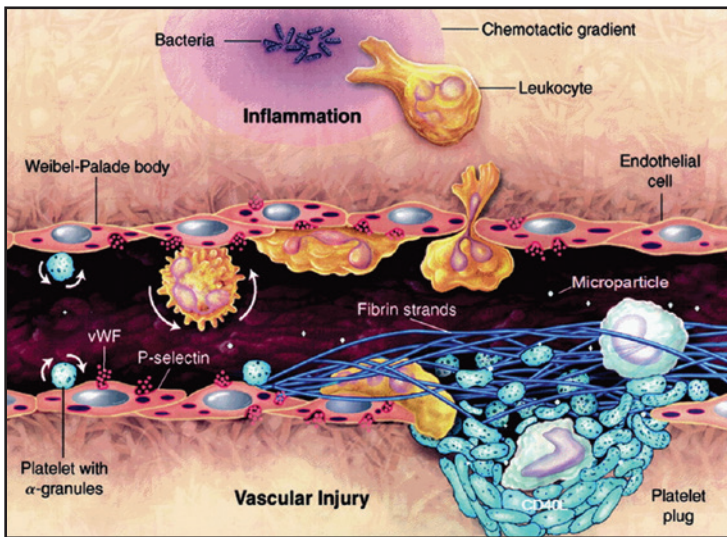
patients, but as most studies are performed in mixed surgical/medical ICUs, definitive conclusions are difficult to draw.

Higher levels of platelet count have been correlated with a decrease in mortality.² However, most trauma patients present with a platelet count within normal range, usually falling between 140–300 $\times 10^9$ /L.^{9,10} Trauma survivors tend to have an increase in platelet levels, at times to levels of thrombocytosis, after their initial decrease in platelet count associated with the trauma. Furthermore, reactive thrombocytosis is associated with a better survival than predicted by severity of illness score and patients with thrombocytosis were more likely to survive their injury.¹¹ Non-survivors do not show this thrombocytosis trend. They likely continue to consume platelets. This may further support a need for platelet transfusions and exogenous stimulation of platelet production given that thrombocytopenia is a negative prognostic marker in ICU patients.

Platelets are necessary to decrease mortality and complications in the critically ill. There is an inverse relationship between adverse events and increasing platelet count even to thrombocytosis levels. Platelet dysfunction is independently linked to detrimental effects in trauma patients both within the first 24-hour period after injury and during ICU stay. The cause of platelet dysfunction has not been confirmed; further studies are needed. Evidence suggests that regardless of the cause of platelet dysfunction in critically ill patients, the effects can be devastating, including multiple organ dysfunction syndrome (MODS).

Gando attempted to define an early detection system for MODS by reviewing 136 trauma patients admitted to the ICU who developed systemic inflammatory response syndrome (SIRS).^{12,13} The goal was to determine the accuracy of disseminated intravascular coagulation (DIC) and SIRS in predicting post-trauma MODS and to find a simple laboratory test for detecting MODS. Platelets were measured on the day of admission and on days 1 through 4 after admission. Platelet counts (80 $\times 10^9$ /L) on day 1 had a sensitivity of 83.3% and a specificity of 100% for predicting MODS and platelet counts showed significant differences among groups. The incidence of DIC, acute respiratory distress syndrome, and MODS was significantly higher in patients with SIRS for ≥ 3 days compared to those in the other groups, and they had a poorer outcome. The authors concluded the likely cause of thrombocytopenia in the group with SIRS >3 days was likely consumptive coagulopathy given that although these patients were given massive platelet transfusions, counts remained low.

Other studies have concluded that post-injury thrombocytopenia is an independent risk factor for multiple organ failure, death, and other complications. Platelet count and function are important. Future prospective studies are required to delineate the role platelets may play in the care of our trauma patients. •



Initiation of clot formation after inflammatory stimulus following trauma³

FOR ADDITIONAL INFORMATION on this topic, see attached references, visit mcw.edu/surgery, or contact Dr. Brasel at 414-805-8624; kbrasel@mcw.edu.

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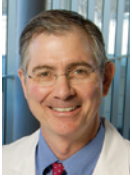
To refer a patient or request a transfer/consultation, please use the references below:

**Froedtert & The Medical
College of Wisconsin**
Referrals: 800-272-3666
Transfers/Consultations:
877-804-4700
mcw.edu/surgery

Clinical Cancer Center
Referrals: 866-680-0505
Transfers/Consultations:
877-804-4700

**Children's Hospital
of Wisconsin**
Referrals/Transfers/
Consultations: 800-266-0366
Acute Care Surgery:
414-266-7858

Multidisciplinary Care and the Emergen



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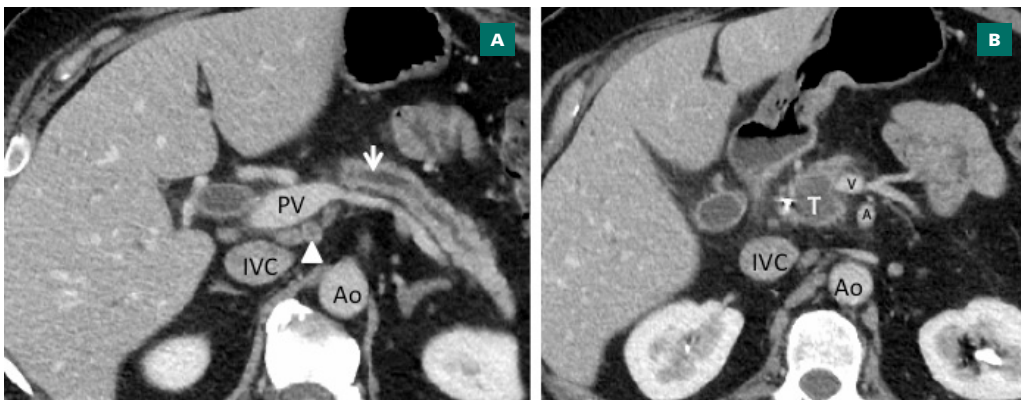
The Winter 2014 issue of *Leading the Way* will be devoted to the importance of Multidisciplinary Conferences to the optimization of clinical medicine across many specialties. This brief article serves as an example of how such a conference is used in surgical oncology; many other specialties will be highlighted in the February issue.

A 64-year-old man presented with painless jaundice and on CT imaging was found to have a mass in the head of the pancreas (Figure 1). He was referred for further evaluation, staging of disease, and consideration of our current clinical trial of personalized medicine for patients with localized pancreatic adenocarcinoma (refer to the Fall 2011 issue of this Newsletter, Volume 3, No. 3). Upon physical examination, the only abnormality was obvious clinical jaundice; his abdominal exam was unremarkable. He had no pain, was on no pain medication, had no evidence of gastric outlet obstruction and his performance status was rated an ECOG 1. However on complete radiographic evaluation, findings included an asymptomatic pulmonary embolus with a thrombus in his left iliac vein. Therefore,

he underwent placement of an inferior vena cava filter followed by endoscopic ultrasound-guided FNA biopsy of the pancreas which confirmed adenocarcinoma. An implanted vascular access port was placed for anticipated intravenous chemotherapy. Treatment included low molecular weight heparin.

His case was reviewed at our weekly Friday morning multidisciplinary pancreatic cancer conference (7:00 am each Friday in the Dean Roe Auditorium). This well-attended conference brings together clinicians involved in many aspects of the care of patients with pancreatic cancer including: radiology, oncology, radiation oncology, pathology, gastroenterology, surgery, and members of the disease site management team (nurse practitioners, physician assistants, genetic counselors, and new patient coordinators). This patient was felt to have borderline resectable pancreas cancer based upon the presence of a probable metastatic lymph node directly posterior to the portal vein which was present on CT imaging and also positive on PET (see arrowhead Fig 1A). There were no other sites of distant metastasis. He

FIGURE 1



Contrast-enhanced axial CT images demonstrating a dilated pancreatic duct in the pancreatic body (arrow in 1A) and a metastatic retroportal lymph node (arrowhead in 1A) caused by a pancreatic head adenocarcinoma (T in 1B). **Abbreviations:** Ao, aorta; IVC, inferior vena cava; PV, portal vein; T, tumor; V, superior mesenteric vein; A, superior mesenteric artery

ce of Multidisciplinary Conferences

TABLE 1: Definition of *resectability* used by the Multidisciplinary Pancreatic Cancer Working Group at the Medical College of Wisconsin

RESECTABLE	
Tumor-artery relationship:	No radiographic evidence of arterial abutment (celiac, SMA, or hepatic artery)
Tumor-vein relationship:	Tumor-induced narrowing < 50% of SMV, PV, or SMV-PV
BORDERLINE RESECTABLE	
Artery:	Tumor abutment (< 180°) of SMA or celiac artery. Tumor abutment or short segment encasement (> 180°) of the hepatic artery
Vein:	Tumor induced narrowing of > 50% of SMV, PV, or SMV-PV confluence. Short segment occlusion of SMV, PV, SMV-PV with suitable PV (above) and SMV (below) to allow for safe vascular reconstruction.
Extrapancreatic disease:	CT scan findings suspicious, but not diagnostic of, metastatic disease (for example, small indeterminate liver lesions which are too small to characterize)
LOCALLY ADVANCED	
Artery:	Tumor encasement (> 180°) of SMA or celiac artery
Vein:	Occlusion of SMV, PV, or SMV-PV without suitable vessels above and below the tumor to allow for reconstruction (no distal or proximal target for vascular reconstruction)
Extrapancreatic disease:	No evidence of peritoneal, hepatic, extra-abdominal metastases
METASTATIC	
Evidence of peritoneal or distant metastases	

was enrolled in our current clinical trial and based upon the molecular profiling of his FNA specimen he then received targeted systemic chemotherapy followed by chemoradiation. Post-treatment/preoperative restaging evaluation demonstrated an excellent response to induction therapy with a decrease in the size of his primary tumor and no evidence of disease progression. In fact, the lymph node in question was now no longer abnormal by standard cross-sectional imaging. He was brought to the operating room for pancreaticoduodenectomy at which time his primary tumor was resected.

The presentation of this patient's case at our multidisciplinary conference offered many advantages, some of which include: the ability to obtain consensus on the exact stage of disease (Table 1) through radiology re-review and discussion; the ability to evaluate this patient for enrollment into one of our active clinical trials; and the ability to thoroughly discuss and debate the management of complex clinical situations such as how to manage a pulmonary embolus with respect to the timing and form of anticoagulation. Most importantly, the weekly presentation of newly diagnosed patients at a multidisciplinary conference allows all clinicians, as well as all members of the disease

site management team, to participate and reach consensus on the stage of disease and the stage-specific therapies which are available (on- and off-protocol). In essence, it eliminates individual bias from entering into the clinical management of patients and results in evidence-based management (hopefully as part of a clinical trial) developed by group consensus. Such consensus is reached through vigorous discussion and debate incorporating references from the published literature. This conference facilitates physician continuing medical education and ensures the optimal treatment and sequence of treatments for each patient.

Multidisciplinary working groups developed in the late 1980s when it was appreciated that disease site-based patient care required physicians of multiple specialties to work together. As simple as it sounds, this observation reflected the fact that the current department structure is specialty-based but not disease site-based. For example, within the Department of Surgery there may be very little clinical interaction between a thoracic surgeon specializing in lung cancer and a peripheral vascular surgeon interested in peripheral arterial aneurysms. In contrast, the thoracic surgeon may

TABLE 2: Select Multidisciplinary Conferences and their meeting location and time

Division	Title	Schedule	Location
Cardiothoracic Surgery	Multidisciplinary Thoracic Tumor Conference	Thursdays @ 0700	CCC Room J
Cardiothoracic Surgery	M&M Conference	Wednesdays @ 0700	FH East Clinics Room E5680
Cardiothoracic Surgery	Lung Transplant Group Mtg	Fridays @ 0730	General Internal Medicine Conference Room C5407
Colorectal Surgery	Colorectal/GI Tumor Board	Tuesdays @ 1700	CCC Room M
Department of Surgery	Grand Rounds	2nd & 4th Wednesday @ 0730	FH Helfaer Auditorium
Department of Surgery	M&M Conference	Wednesdays @ 0700	FH Helfaer Auditorium
Endocrine Surgery	Multidisciplinary Disposition Conference	Thursdays @ 1700, except 3rd Thursday	FH Boardroom
Endocrine Surgery	Surgery Case Conference	3rd Thursday/mo @ 1600	FH North Tower Conference Room 2009
General Surgery	GI Case Conference	Mondays @ 1600	FH Dean Roe Auditorium
General Surgery	Multidisciplinary Sarcoma Conference (aka Musculoskeletal Tumor Board)	Wednesdays @ 0700	CCC Room M
General Surgery	Condon Hernia Institute Conference	3rd Friday/mo @ 0700-0830	FH Conference Room 3509
General Surgery	MIS teleconference	1st Friday/mo @ 0700	FH Resident Resource Room, Room 3607
General Surgery	Bariatric Surgery Patient Review	2nd and 4th Friday/mo @ 0700	FH Resident Resource Room, Room 3607
Pediatric Surgery	Fetal Concerns Weekly Conference	Wednesdays @ 0730	CHW Large 6M Conference Room
Pediatric Surgery	Fellowship Professor Rounds	Thursdays @ 0730	CHW OR Conference Room
Pediatric Surgery	Multidisciplinary Conference	Fridays @ 0730	CHW Large 6M Conference Room
Pediatric Surgery	Surgery Grand Rounds	Fridays @ 0830	CHW Large 6M Conference Room
Pediatric Surgery	M&M Conference	Fridays @ 0630	CHW Large 6M Conference Room
Pediatric Surgery	Tumor Board	Thursdays @ 0730	Children's Corp Ctr, Suite 440, Room 130
Pediatric Surgery	Clinical Research Committee	2nd Tuesday/mo @ 1600 Does not take place June–Aug., Dec.	Children's Corp Ctr, Suite 320
Surgical Oncology	Multidisciplinary Melanoma	2nd/4th Friday/mo @ 0730	CCC, Room L
Surgical Oncology	PBD Multidisciplinary Conference	Fridays @ 0700	FH Dean Roe Auditorium
Surgical Oncology	Breast Conference	Mondays @ 1200	CCC, Room M
Transplant Surgery	Transplant Hepatology Conference	Mondays @ 1230	FH, Room E5385
Transplant Surgery	Transplant Nephrology Conference	Fridays @1300	FH, Room E5385
Trauma Surgery	Trauma/ACS Conference	Tuesdays @ 0645	Bridge Building Conference Room H
Trauma Surgery	Critical Care Conference	Wednesdays @ 1200	Dynacare Lab Building, Trauma Conference Room
VAMC General Surgery	Multidisciplinary Tumor Board	2nd/4th Tuesdays @ 1600	VAMC Conference Room 3548
VAMC General Surgery	Case Conference	Tuesdays @ 0730	VAMC Clinic Conference Room
Vascular IR/ Surgical Oncology	Hepatic Tumor Conference	Mondays @ 0700	CCC, Conference Room M
Vascular Surgery	VA- Peripheral Vascular Board	Fridays @ 0730	VAMC Outpt Psych Conference Room, 3rd Fl.
Vascular Surgery	Vascular Case Conference	Tuesdays @ 0700	FH Conference Room 3509

CCC=Clinical Cancer Center; CHW=Children's Hospital of Wisconsin;
 FH=Frederick Hospital; MCW=Medical College of Wisconsin;
 VAMC=VA Medical Center

spend a great deal of time working with his colleagues in pulmonary medicine, medical oncology, and radiation oncology in the care of patients with lung cancer.

Outpatient centers which are disease site-based have partially solved this problem, allowing physicians of different specialties to work in the same environment. This also allows patients to come to a single location and see physicians of different specialties who are all participating in their care. However, an outpatient clinic or center focused on a specific disease site does not necessarily ensure that physicians of different specialties will share their practice patterns and reach consensus with regard to staging of disease and stage-specific therapy. Active participation in multidisciplinary conferences is a way to ensure that consensus is reached on how patients are treated and, most importantly, that this consensus is put into practice. By discussing the management of a newly diagnosed patient (regardless of the disease site in question) different specialties will share their opinions, debate the literature, and most importantly, reach consensus as to the optimal treatment algorithm. By reaching such consensus, it then becomes possible for patients to enter into the health system through multiple different specialties and receive the same initial evaluation and ultimately the same treatment recommendation. This optimizes the treatment of the patient of today and, equally as important, allows for enrollment of patients into exciting new clinical trials—the only way to acquire the new knowledge necessary to benefit the patient of tomorrow. The next issue of *Leading the Way* is devoted to the value of multidisciplinary conferences which are the cornerstone of how we manage patients of all different diseases. I hope you enjoy reading these articles and if possible, please attend one of the multidisciplinary conferences listed in Table 2. •

FOR ADDITIONAL INFORMATION on this topic, visit mcw.edu/surgery, or contact Dr. Evans at 414-805-5706, devans@mcw.edu; Dr. Christians at 414-805-9720, kchristi@mcw.edu; Ms. Krzywda at 414-805-5801, bethk@mcw.edu; Ms. Lahiff at 414-805-5529, slahiff@mcw.edu.

Department of Surgery 2013 Research Awards

Irena Gribovskaja-Rupp, MD, Ryan Groeschl, MD, and Paul Jeziorczak, MD, MPH, were among the recipients of the MCWAH research awards for excellence in research. They were nominated by their respective program directors and selected by this year's MCWAH Research Committee comprised of Drs. Jonathan Bock, Thomas Ebert, Ken Simons, and Tina Yen.



Irena Gribovskaja-Rupp, MD

Irena Gribovskaja-Rupp, MD:

"Extrinsic Autonomic Nerves Perform Crucial Regulation of Distal Colonic Peristalsis via a Dual Mechanism." Presented at the Academic Surgical Congress; February 7, 2013.



Ryan Groeschl, MD

Ryan Groeschl, MD: "Microwave Ablation for Hepatic Malignancies: A Multi-Institutional Analysis." Presented at the Society of Surgical Oncology; March 8, 2013.

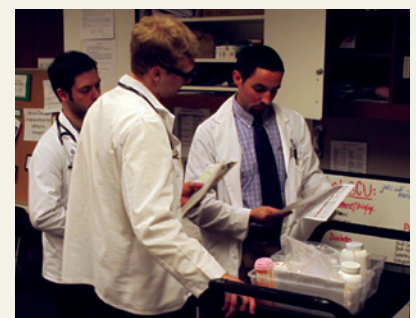


Paul Jeziorczak, MD, MPH

Paul Jeziorczak, MD, MPH:

"Glycyrrhizic Acid Does Not Reverse Microparticle-induced Pulmonary Endothelial Permeability." Presented at the American Academy of Pediatrics Annual Meeting; October 21, 2012.

MCW Saturday Clinic for the Uninsured



MCW students provide free care for the uninsured at Saturday clinic. See page 1 for story.

Ronald Burklund Eich Pancreatic Cancer

by Meg M. Bilicki, Director of Development for the Department of Surgery

“Leading off and batting for both power and a high on-base percentage, pancreatic cancer won again, with an inside-the-park home run against Ronald Burklund Eich, who pitched a perfect game all the way through the bottom of the eighth in Lake Forest.” If this sounds like the opening line of an obituary, it is. It is also a reminder of the lethality of pancreatic cancer, which is responsible for more than 35,000 deaths in the United States each year and will soon become the second leading cause of cancer death in the United States (by the year 2020). Reading an obituary like Ron’s, we reflect for a moment, hoping that the end to our own life story is different. Very different.

Ron Eich was just like us. At age 63, he embraced life, was fully engaged, and enjoyed being retired from a career in personal trust administration in Chicago. However, when his 2011 Labor Day weekend was ushered in by a diagnosis of pancreatic cancer, everything changed. A passionate baseball fan, Ron knew that beating pancreatic cancer was not a game of sitting on a lead and running plays into the line to kill the clock. He was playing major league

baseball; survival meant approaching the mound with faith and battling the disease to the final pitch.

Yet, in spite of what he understood his role to be, Ron’s battle with pancreatic cancer ended on May 13, 2013. To commemorate Ron’s life and to offer hope for other pancreatic cancer patients and caregivers, Ron’s wife, Kathryn Walker Eich, and his adult children, Matthew, Melissa, and Andy, established the Ronald Burklund Eich Pancreatic Cancer Tissue Bank Fund in the Department of Surgery at the Medical College of Wisconsin to advance research for this deadly disease.

Kathryn Walker Eich spearheaded this initiative and has galvanized friends, former clients, and family around a common goal of commemorating Ron’s life through the generation of a private fund to advance life-saving research. At a time when public money is increasingly scarce and with competition from better publicized diseases, the efforts being put forth by Ron’s loved ones play an important role in supporting the Pancreatic Cancer Research Program at MCW. Drs. Doug Evans, Susan Tsai, and the entire research team are focused on developing new and innovative treatments in the fight against pancreatic cancer.



By supporting medical research and treatment, families like the Ronald Burklund Eich Family are helping to improve the lives of others affected by cancer. If you or someone you know is interested in establishing a fund in memory or honor of someone special, please contact Meg Bilicki, Director of Development, at (414) 805-5731.

Tissue Bank Fund

“It’s up to us to stop lamenting about growing incidence levels and to flood the research banks with cash to enable a closer look at this disease from every angle. Cash flowing into capable hands is the answer to inverting the death sentence that is pancreatic cancer.”

—Kathryn Walker Eich

“It is with great pleasure that I am able to invite friends and family to join me and Ron’s kids in collaborating with Dr. Evans and his team at the Medical College of Wisconsin to find a cure for the cancer that caused not just premature death for Ron, but also tremendous pain and suffering for all of us who loved Ron so much. Sadly, the statistics indicate that we are not alone. By as early as 2015, deaths from pancreatic cancer in the United States will exceed those from breast and colorectal cancer, and will be surpassed only by the loss of life from lung cancer. Research advances that have improved the survival of patients with many other cancers have not translated into clinical benefits for pancreatic cancer patients. Only two percent of the National Cancer Institute’s annual budget is dedicated to pancreatic cancer research, yet life is very much on the line. It’s up to us to stop lamenting about growing incidence levels and to flood the research banks with cash to enable a closer look at this disease from every angle. Cash flowing into capable hands is the answer to inverting the death sentence that is pancreatic cancer,” said Mrs. Eich.

The Department of Surgery, under the direction of Susan Tsai, MD, MHS, Assistant Professor of Surgical Oncology, has made it a priority to bank all pancreatic cancer specimens removed in the operating room to study the disease and give researchers access to the samples. The Ronald Burklund Eich Pancreatic Cancer Tissue Bank Fund will expand

these efforts and advance opportunities for research among Medical College physicians and scientists.

One of the hallmarks of pancreatic cancer is the dense inflammatory tissue that surrounds the cancer cells within the pancreas. This makes the study of pancreatic cancer even more challenging, as tumors are generally small and only a fraction of the tumor mass represents the actual cancer. Therefore, one of the limitations to scientific progress in this disease has been access to human tumor tissue.

The biorepository not only seeks to bank human pancreatic cancer samples, it has adopted several innovative approaches to allow investigators to dynamically study the nature of pancreatic cancer biology. Unlike other biorepositories, the Medical College banks blood and tissue from pancreatic cancer patients during the entire continuum of their disease. This allows investigators the opportunity to assess the changes in tumor biology that occur from diagnosis through treatment at time of cancer recurrence should it occur.

“This generous support allows researchers to study the biology of pancreatic cancer from the early stages of disease to the development of metastasis that would ordinarily be inaccessible,” said Dr. Tsai. To date, the biorepository holds 274 pancreatic specimens and utilizing the xenograft model in immunodeficient mice, 18 pancreatic xenografts and cell lines have been developed and are being distributed to both internal and external collaborators. •

**Acute Care Surgery,
Trauma and Critical Care**

Marshall A. Beckman, MD
 Karen J. Brasel, MD, MPH
 Thomas Carver, MD
 Panna A. Codner, MD
 Terri A. deRoon-Cassini, PhD
 Jon C. Gould, MD
 Jeremy S. Juern, MD
 David J. Milia, MD
 Todd A. Neideen, MD
 Jasmeet S. Paul, MD
 Lewis B. Somberg, MD
 Travis P. Webb, MD, MHPE
 John A. Weigelt, MD, DVM, MMA

Adult Cardiac Surgery

G. Hossein Almassi, MD
 Wade L. Fischer, MD
 R. Eric Lilly, MD
 Robert B. Love, MD
 Zahir A. Rashid, MD
 Charles F. Reuben, MD
 Paul Seifert, MD

**Bariatric and Minimally
Invasive Surgery**

Matthew I. Goldblatt, MD
 Jon C. Gould, MD
 Andrew S. Kastenmeier, MD
 James R. Wallace, MD, PhD

Breast Surgery

Amanda L. Kong, MD, MS
 Miraj Shah-Khan, MD
 Paula M. Termuhlen, MD
 Alonzo P. Walker, MD
 Tina W.F. Yen, MD, MS

Colorectal Surgery

Lauren A. Kosinski, MD, MS
 Kirk A. Ludwig, MD
 Mary F. Otterson, MD, MS
 Timothy J. Ridolfi, MD

Community Surgery

Marshall A. Beckman, MD
 Dean E. Klinger, MD
 David J. Milia, MD

Endocrine Surgery

Azadeh A. Carr, MD
 Douglas B. Evans, MD
 Tracy S. Wang, MD, MPH
 Stuart D. Wilson, MD
 Tina W.F. Yen, MD, MS

General Surgery

Marshall A. Beckman, MD
 Karen J. Brasel, MD, MPH
 Kathleen K. Christians, MD
 Panna Codner, MD
 Matthew I. Goldblatt, MD
 Jon C. Gould, MD
 Jeremy S. Juern, MD
 Andrew S. Kastenmeier, MD
 Todd A. Neideen, MD
 Philip N. Redlich, MD, PhD
 Lewis B. Somberg, MD
 Gordon L. Telford, MD
 James R. Wallace, MD, PhD
 Travis P. Webb, MD, MHPE
 John A. Weigelt, MD, DVM, MMA

General Thoracic Surgery

Mario G. Gasparri, MD
 George B. Haasler, MD
 David W. Johnstone, MD
 Daryl P. Pearlstein, MD

**Pediatric
Cardiothoracic Surgery**

Michael E. Mitchell, MD
 James S. Tweddell, MD
 Ronald K. Woods, MD, PhD

**Pediatric General and
Thoracic Surgery**

John J. Aiken, MD
 Marjorie Arca, MD
 Casey M. Calkins, MD
 Laura D. Cassidy, PhD, MS
 John C. Densmore, MD
 David M. Gourlay, MD
 Dave R. Lal, MD, MPH
 Keith T. Oldham, MD
 Thomas T. Sato, MD
 Jack Schneider, MD
 Amy J. Wagner, MD
 Hao Zhang, PhD

Research Faculty

John E. Baker, PhD
 Charles E. Edmiston, Jr., MS, PhD, CIC
 Mats Hildestrand, PhD
 Muthusamy Kunnimalaiyaan, PhD
 Qing Miao, PhD
 Aoy T. Mitchell, PhD
 Kirkwood Pritchard, Jr., PhD
 Parvaneh Rafiee, PhD
 Mary Shimoyama, PhD
 Toku Takahashi, MD, PhD
 Yong-ran Zhu, MD

Surgical Oncology

Azadeh A. Carr, MD
 Kathleen K. Christians, MD
 Douglas B. Evans, MD
 T. Clark Gamblin, MD, MS
 Fabian Mc. Johnston, MD, MHS
 Johnny C. Hong, MD
 Amanda L. Kong, MD, MS
 Edward J. Quebbeman, MD, PhD
 Miraj Shah-Khan, MD
 Paula M. Termuhlen, MD
 Susan Tsai, MD, MHS
 Kiran K. Turaga, MD, MPH
 Alonzo P. Walker, MD
 Tracy S. Wang, MD, MPH
 Stuart D. Wilson, MD
 Tina W.F. Yen, MD, MS

Transplant Surgery

David C. Cronin, II, MD, PhD
 Johnny C. Hong, MD
 Christopher P. Johnson, MD
 Joohyun Kim, MD, PhD
 Abbey R. Kruper, PsyD
 Allan M. Roza, MD
 Stephanie Zanolowski, PhD

Vascular Surgery

Kellie R. Brown, MD
 C.J. Lee, MD
 Brian D. Lewis, MD
 Michael J. Malinowski, MD
 Peter J. Rossi, MD
 Gary R. Seabrook, MD

**Affiliated Institution
Program Directors**

Steven K. Kappes, MD
Aurora - Grafton
 Alysandra Lal, MD
Columbia St. Mary's Hospital
 Joseph C. Battista, MD
St. Joseph's Hospital
 Christopher J. Fox, MD
Waukesha Memorial Hospital



**A Disease-specific
Pilot Program for
Outpatient EPIC Referrals**

The Medical College of Wisconsin Department of Surgery has initiated a pilot program for disease-specific, outpatient EPIC referrals for those programs previously placed via either the 'General Surgery' and/or the 'Clinical Cancer Center' referrals:

Bariatric/Minimally Invasive Surgery (RFSUC.002)

Bariatric Surgery, foregut surgery (achalasia, hiatal hernia, reflux surgery)

Breast Cancer Surgery (RFCCC.003)

For benign breast conditions, use the Breast Care Referral, Undiagnosed

Colorectal Surgery (RFSUC.003)

Anorectal disease, colorectal cancers, benign colorectal disease, inflammatory bowel disease

Condon Hernia Institute (RFSUC.005)

All abdominal wall defects/hernias including ventral, recurrent, incisional, inguinal, femoral

Endocrine Surgery (RFSUC.001)

Thyroid cancer, benign thyroid disease, parathyroid disease, adrenal tumors, carcinoid tumors, carcinoid disease, inherited endocrine tumors

General Surgery (RFSUC.000)

Abdominal pain, abdominal mass, gallbladder disease, soft tissue masses/nodules, feeding tubes

Hepatobiliary Surgery (RFSUC.004)

Liver tumors (benign and malignant), gallbladder disease, biliary tree disorders, bile duct cancers

Pancreatic Surgery (RFSUC.006)

Pancreatic cancer, benign pancreatic diseases (cysts, pancreatitis), pancreatic neuroendocrine tumors

Surgical Oncology (RFCCC.002)

Melanoma, retroperitoneal sarcoma, neuroendocrine tumors, carcinoid tumors, carcinoid disease, carcinomatosis, hyperthermic chemoperfusion therapy (HIPEC)

For urgent/emergent issues requiring same-day attention, please call the Acute Care Surgery service via the Froedtert Hospital operator (414-805-3000).

LEARN MORE AT MCW.EDU/SURGERY

Students and Residents Showcase Innovative Research

Each fall, the Medical College of Wisconsin and the Department of Surgery hold Research Days to emphasize our commitment to academic achievement and our support for the patient of tomorrow through innovation and discovery.

On October 3, the Medical College of Wisconsin held the annual Medical Student Research Day Poster Session. Second-year medical students who participated in the Medical Student Summer Research Training Program presented their posters at this campus-wide event. More than 50 MCW faculty members served as judges for the contest. Of the 109 posters presented at the event, four of the 12 winning posters were from the Department of Surgery.

- **Jacob Wilson** was awarded first place for his poster, *Targeted Inhibition of the AKT Pathway in Cholangiocarcinoma by MK2206* (Faculty Mentor: T. Clark Gamblin, MD, MS).
- **Justin La** was awarded second place for *Effects of Parathyroidectomy on Sleep Patterns and Behaviors in Patients with Primary Hyperparathyroidism* (Faculty Mentor: Tina Yen, MD, MS).
- **Samuel Dillman** was awarded eighth place for his poster *Intestinal Alkaline Phosphatase Administration Decreases Intestinal Permeability and Barrier Dysfunction through the Alteration of Tight Junction Proteins* (Faculty Mentor: David Gourlay, MD)
- **Matthew Mohorek** tied for ninth place for his poster *Improving the Documentation of End of Life Discussions and Goals of Therapy after Geriatric Traumatic Injury* (Faculty Mentor: Travis Webb, MD).

The Department of Surgery held its Fourth Annual Fall Research Seminar on October 11. This annual event showcases student, resident, fellow, and faculty research from the past year. This year, the Planning Committee under the direction of Drs. Karen Brasel and Susan Tsai introduced a poster competition for students and residents. Each competitor was asked to display his or her poster and give a three-minute presentation on his or her research. Of the more than 35 posters competing, **Berry Fairchild** (M4) won the student category for her poster entitled *Sarcopenia and Frailty in Elderly Trauma Patients* (Mentors Dr. Karen Brasel and Dr. Travis Webb). **Paul Jeziorczak, MD, MPH** won the resident award for his poster entitled *Rattus Model Utilizing Selective Pulmonary Ischemia Induces Bronchiolitis Obliterans Organizing Pneumonia* (Mentor Dr. John Densmore).

In addition to the poster competition, ongoing research in the department was highlighted by four invited speakers: Terri deRoon-Cassini, Ph.D.; Thejus Jayakrishnan, MBBS; Colleen Trevino, RN, MSN, APNP, PhD; and John Densmore, MD.

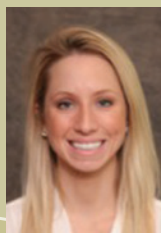


Kenneth Yu, MD, MSc

Kenneth Yu, MD, MSc, from Memorial Sloan-Kettering Cancer Center in New York, was the keynote speaker and guest judge for the Department of Surgery event. Dr. Yu's research studies the use of pharmacogenomics to optimize chemotherapeutic efficacy in cancer patients. Utilizing a gene expression profiling model first developed and validated in-vitro, the prediction modeling was transitioned into the clinic and applied to circulating tumor cells, which represent a population of tumor cells that are shed in the peripheral blood. This "liquid biopsy" of patient tumors allows researchers to perform pharmacogenomic profiling which will identify tumor vulnerabilities and match the best chemotherapeutic agent to each patient.

The extraordinary participation and excellent presentations during the Research Seminar further underscore the department's ongoing commitment to the development of physicians who will advance clinical medicine through scientific research and discovery. •

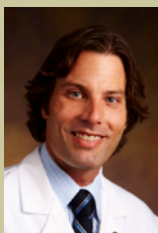
Department of Surgery Fall Research Seminar Winners and their Faculty Mentors



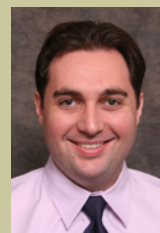
Berry Fairchild



Karen Brasel, MD, MPH
Mentor



Travis Webb, MD, MHPE
Mentor



Paul Jeziorczak, MD, MPH



John Densmore, MD
Mentor



Department of Surgery
9200 West Wisconsin Avenue
Milwaukee, WI 53226

MARK YOUR CALENDARS

Upcoming Events

March 4–5, 2014: 41st Annual Edwin H. Ellison Memorial Lecturer—Robin McLeod, MD

The Department of Surgery is honored to welcome Robin McLeod, MD as the 41st Annual Edwin H. Ellison Memorial Lecturer. Dr. McLeod is currently a Professor in the Department of Surgery and Health Policy Management and Evaluation at the University of Toronto.

April 18, 2014: Acute Care Surgery: Trauma, Critical Care, and Emergency General Surgery Symposium

This day-long educational activity will provide updates and general information regarding the practice of emergency general surgery, surgical critical care, and trauma care.

May 30–31, 2014: Medical College of Wisconsin and University of Texas M. D. Anderson Cancer Center Endocrine Surgery Symposium

The 2014 Endocrine Symposium will highlight current issues in the management of disorders of the thyroid, parathyroid, and adrenal glands through didactic lectures, panel discussions, and case presentations. Invited speakers include well-known academic surgeons who are extensively published in their respective fields and who will provide up-to-date summaries of the topics.