



SIGNS *of hope*



Our path

On the Cover: A computer-enhanced CT image demonstrates a hypodense mass (circled) known to represent pancreatic cancer.

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The Kellogg Cancer Care Centers

The Kellogg Cancer Care Centers, located at Evanston, Glenbrook and Highland Park Hospitals, offer patient-centered care from a wide array of specialists and professional health care providers. Our physicians are fellowship-trained, and board-certified specialists who are on the faculty at Northwestern University's Feinberg School of Medicine. Collaborative practice nurses, research nurses, and pharmacists are oncology certified from their respective national organizations. All other professionals have additional oncology training and experience. The Kellogg Centers use a collaborative practice model focusing on each individual's needs, providing medical, surgical, radiation, rehabilitation, and psychosocial and emotional care.



ROBERT H. LURIE
COMPREHENSIVE CANCER CENTER
OF NORTHWESTERN UNIVERSITY

The Kellogg Cancer Care Centers are affiliated with the Robert H. Lurie Comprehensive Cancer Center of Northwestern University. This is the only National Cancer Institute funded and designated comprehensive cancer center in the State of Illinois. Clinical oncologists and cancer researchers of Evanston Northwestern Healthcare actively participate in clinical and research programs of the Lurie Center.

to a cure

With Early Detection, the Enemy is Conquerable

Some were surprised when Evanston Northwestern Healthcare established its Pancreatic Cancer Program three years ago. There were those who wondered why we would invest clinical resources and research expertise in a battle that is perceived to be unconquerable.

Indeed, with a five-year survival rate of only 5 percent, pancreatic cancer is a daunting adversary. With tremendous stealth, pancreatic cancer can invade some of the body's most critical organs without triggering a single tell-tale symptom. Often, by the time a diagnosis is made, a pancreatic tumor is already declaring victory.

But in any battle, rule No. 1 is "Know the enemy." And our intelligence officers—the physicians and researchers at Evanston Northwestern Healthcare—are providing us with more information about this disease than ever before.

We are profiling our adversary with the help of our Center for Medical Genetics and our Molecular Biology Lab, where investigators are banking pancreatic tissue from patients and their family members to better understand whom this disease strikes and how it evolves over time. In our imaging laboratories, we are finding non-invasive ways to use magnetic resonance technology to provide biopsy-quality views of the pancreatic duct. This type of imaging may help us detect pre-cancerous cells before they make their deadly transformation. In the meantime, more patients diagnosed with the disease are moving from the "inoperable" category to the "operable," thanks to advances in pre-surgery chemotherapy.

Nationally, our collaborative research efforts with the Robert H. Lurie Comprehensive Cancer Center of Northwestern University are providing solid evidence that early detection may lead us to a cure. Working together, we are following the research strategy developed by a "think tank" panel convened by the National Cancer Institute. Randall Brand, MD, director of our Pancreatic Cancer Program, was part of that Pancreatic Review Group and contributed to the resulting Agenda for Action published in February 2001.

Finally, it's important to note that some of the most important soldiers in this battle never see their names in scientific journal articles. They are our patients. Their contributions of time, tissue and family history data will provide potentially life-saving information for others. When you see the stories of pancreatic cancer survivors included in this report, know that they are leaders on our path to a cure – and they've never believed that their disease was unconquerable.



Mark R. Neaman

When you see the stories of pancreatic cancer survivors included in this report, know that they are leaders on our path to a cure

A handwritten signature in black ink that reads "Mark R. Neaman". The signature is fluid and cursive, written in a professional style.

Mark R. Neaman
President and CEO

Progress on the path

We are proud to present the 2004 Annual Report for Evanston Northwestern Healthcare's Oncology Program. Each year, this report provides a good snapshot of where we stand and how far we've progressed in research and in clinical care. This year, I'd like to offer some facts and statistics that will better illustrate how our program compares to other leading cancer programs throughout the nation.

Our accomplishments are the result of a large team of professionals who deliver leading-edge patient care, where more than 96 percent of patients who are diagnosed with cancer by our physicians choose to receive their treatment here.

We regularly measure our performance against standards established by the Commission on Cancer (CoC), the recognized accrediting body for oncology programs and a division of the American College of Surgeons. I'm pleased to report that our program exceeds the CoC's established performance standards in all instances. For example:

- In the Cancer Registry, our follow-up rate is more than 96 percent, exceeding the benchmark of 80 percent. These follow-up data are critical in retrospective analyses and help us to better evaluate the effectiveness of the treatments we provide.
- We hold at least five, site-specific cancer conferences each week, far exceeding the CoC requirement of one per week for teaching hospitals. These include breast, thoracic, genito-urinary, head and neck, gynecologic oncology, sarcoma/melanoma, GI, general, and weekly hematology rounds. These conferences create an environment that ensures optimal selection of diagnostic tests, accurate staging of disease, identification of candidates for neo-adjuvant treatment and clinical trials, identification of patients and family members for genetic counseling, and staff education.
- In 2003, 56 percent of the analytic cases entered into the cancer registry were presented at our cancer conferences, exceeding the CoC benchmark of 10 percent.
- Through the National Cancer Institute, our clinical trials program maintains its designation as a Community Clinical Oncology Program. In 2003, while the CoC requires 6 percent, 40 percent of our analytic patients participated in clinical trials: 12 percent enrolled into diagnostic and treatment trials, 4 percent enrolled into cancer control and prevention trials and the remainder were enrolled into quality-of-life trials.

Evanston Northwestern Healthcare's systemwide transfer to a fully electronic medical records system dovetailed with revisions to the CoC's Standards of 2004. Our committee worked to ensure that the American Joint Commission on Cancer (AJCC) staging form was built into the new electronic system. Also, we'll soon add an oncology module that will contain nursing plans, allow for order entry of chemotherapy and provide a pathway for symptom management.



*Michael J. Liptay, MD, FACS
Chairman, Cancer Committee*

*Exceeding
established
performance
standards*

Beyond the CoC requirements, this past year saw many other improvements to oncology care at ENH. Here are some highlights:

- A spacious new Ambulatory Care Center, which holds the new Kellogg Cancer Care Center facility is rising on the campus of Highland Park Hospital and is expected to open its doors at the end of this year. The new 67,000-square-foot facility will house radiation therapy, a nuclear medicine suite, and a mammography suite.
- Touch-screen computer kiosks that help individuals learn about their inherited risks for breast cancer and provide personalized family tree printouts have been installed in three locations at ENH by our Center for Medical Genetics. The computer program, known as *MyGenerations*, allows individuals who enter basic family history information to receive a personalized risk assessment.
- The Pancreatic Clinic of the Pancreas Program has been expanded to provide multidisciplinary care twice each week at Glenbrook Hospital. The clinic brings together specialists from gastroenterology, surgery, medical oncology, medical genetics, nursing, nutrition, and psychosocial oncology. A radiation oncologist is also available for consultation. Our patients appreciate having access to all their specialists in a single visit.
- Important research into the early detection of pancreatic cancer may gain significant ground through ongoing studies. Five of these studies are described in this report.
- Findings in a *New England Journal of Medicine* study (5/13/04) have prompted an increase in the number of minimally invasive colon cancer surgery procedures being performed in our operating rooms. Prior to the publication of the study's findings, the surgery was reserved for a only small subset of patients.
- Our Neuro-Oncology Program, which is a regional referral center, now has 11 brain tumor research trials open.



Frank Facchini, MD, center, Co-Section Chief, Interventional Radiology, is assisted by Stefanie Rosenberg, PA, at left, and Michael Wilson, RN, seated, as he monitors the condition of a patient who has undergone an interventional radiology procedure. With an ever-broadening array of oncology-related indications for cancer patients, Dr. Facchini, Assistant Professor, Feinberg School of Medicine, Northwestern University, is helping to shape the new subspecialty of Interventional Oncology at Evanston Northwestern Healthcare. His group holds weekly conferences to discuss diagnostic and palliative interventional radiology options for oncology patients.

Truly, a report this size cannot hold all of the triumphs and stories of the year that has passed – but we try to give you a good glimpse of the best ones. All of us in the Oncology Program will continue to dedicate our greatest skills and direct our most sincere energies to the patients and families we serve.

Sincerely,

Michael Liptay, MD, FACS

Chairman, Cancer Committee

Assistant Professor, Feinberg School of Medicine, Northwestern University

The mission: the early detection

Despite recent advances, pancreatic cancer remains the most lethal of all GI malignancies. And yet, there is reason to be hopeful. Our growing understanding of the science of early detection for pancreatic cancer offers promise for decreasing this disease's dismal death toll.

To a large extent, the plan for gaining ground on this disease was created by an initiative of the National Cancer Institute. In 2001 it assembled a Pancreatic Cancer Review Group charged with developing a national agenda for research. The experts identified these priorities:

1. **Understand the series of changes that occur before a tumor develops**
2. **Find a tumor when it's still small and contained**
3. **Identify the onset of tumor progression in a biologic model**

The NCI group also emphasized the need for comprehensive tissue banks to help researchers detect biologic markers and to distinguish prognostic factors over time in different pancreatic tumors.

In the pages that follow, you'll read more about how we at Evanston Northwestern Healthcare are heeding the call of the National Cancer Institute with research projects aimed at **improving imaging, profiling precursor lesions** and **searching for molecular markers** to advance our knowledge of early detection.

The benefit: lives saved

You'll also meet some extraordinary people, pictured at right, who have survived pancreatic cancer. Keeping their stories in mind gives us a greater appreciation for the work we do in our offices, labs and clinics each day.

of pancreatic cancer



“My cancer was inoperable at first
–but I survived.”

Georganne Chalmers, *President, Alumnae Board, Northwestern University*
see page 10

“I’m not 100 percent back to what I was
– but I’m close.”

Aleksandar Stojanovic, *Electrical Engineer,*
see page 12



“I believe that I’m the beneficiary of two miracles:
the Miracle of God and the miracle of medicine.”

Peter Hanchar, *Fire Captain/Paramedic*
see page 14



Genetics

Goal: Identify high-risk groups



Some will recall how former President Jimmy Carter helped to raise awareness about how pancreatic cancer can move through families. His father, two sisters and his brother Billy all died of the disease.

Families like the Carters who have a genetic predisposition to pancreatic cancer can be tremendously helpful for researchers who seek a better understanding of this disease. Our knowledge of hereditary pancreatic cancer was broadened significantly by Henry T. Lynch, MD, one of the founders of the Center for Medical Genetics at Evanston Northwestern Healthcare. It was Dr. Lynch who in 1967 first described the pattern of pancreatic cancer as it occurs in families. He found that those destined to inherit this cancer are born with a germ line mutation (defect) and are more likely to be diagnosed in their 20s or 30s, instead of in their 50s or 60s.

To learn more about these families at high risk for pancreatic cancer, Wendy Rubinstein, MD, PhD, FACMG, Assistant Professor, Feinberg School of Medicine, Northwestern University, and Dr. Randall Brand, MD initiated the Pancreatic Cancer Family Registry study (PCFR) at ENH. This registry includes researchers and clinicians from a variety of disciplines including internal medicine, gastroenterology, pathology, surgery, genetics, oncology, and molecular biology. The project is intended to help us identify high-risk groups; look for novel genes associated hereditary pancreatic cancer; identify pancreatic tumor markers; and study environmental exposures that may be related to the development of pancreatic cancer.

In its first year, the Pancreatic Cancer Family Registry has enrolled about 100 individuals nationwide. Asymptomatic members from many of these cancer-prone families travel to our hospital to participate in our pancreatic cancer surveillance program.

Armed with information contained in the registry, researchers have begun seeking ways to screen for these mutations with molecular diagnostic testing. By gaining a better understanding of the genetics at work in families at high risk for the disease, researchers will better understand how pancreatic cancer emerges in the general population. ■

Wendy Rubinstein, MD, PhD, FACMG, Director of the Center for Medical Genetics, studies hereditary cancers, including cancers of the breast, colon and pancreas. Her team helps to identify individuals in the family tree who are at highest risk for these diseases.

Molecular Markers

Goal: Stopping the cancer before it officially starts

Our best hope for a cure for pancreatic cancer may come from understanding the molecular changes that occur before pancreatic cancer begins to spread. Researchers have found that when pancreatic cancer cells are still in their pre-malignant state, they gradually acquire abnormal proteins that eventually transform them into malignant cancer cells.

At Evanston Northwestern Healthcare, patients who undergo surgery to remove pancreatic cancers are contributing to this research study. Pancreatic tissue and juice from the pancreatic duct are brought to our Molecular Diagnostics Lab so that the cells contained within can be banked and analyzed for diagnostic markers. At this time, it is believed that a panel of markers will be needed to establish a screening profile.

Light-scattering fingerprints

Samples are also provided to the team of investigators led by Vadim Backman, PhD, Assistant Professor, Biomedical Engineering Department, Northwestern University. In collaboration with our researchers, Dr. Backman has been involved in the development of a novel optical technique, Four-Dimensional Elastic Light-Scattering Fingerprinting (4D-ELF). This method allows researchers to obtain information about nano/micro-architecture of living tissue. 4D-ELF provides quantitative information about structures that are 10-20 times smaller than those detectable with conventional microscopy. Light-scattering fingerprints are extremely sensitive to even minor alterations in the nano/micro-architecture of living tissue. This method has recently been tested in a lab model for studies of colorectal cancer in cooperation with our researchers Hemant Roy, MD; Ramesh Wali, PhD, and Michael Goldberg, MD. That study found that 4D-ELF may allow detection of colorectal cancer much earlier than it is feasible using conventional methods. As a result, we are looking into whether 4D-ELF may potentially offer a new screening method for pancreatic cancer. ■

Vadim Backman, PhD



Karen Kaul, MD, PhD, (back) Director of Molecular Diagnostics, and Professor, Feinberg School of Medicine, Northwestern University, along with Mary Ann Regner, MS, (front) research associate, and Kathy Mangold, PhD, (reflected image in front left) Research Assistant Professor, Northwestern University, survey some pancreatic tissue samples that are being banked in their lab. In many cases, this tissue will yield new information as time passes.

What's in the bank, anyway?

Banking tissue is an idea that is more than a decade old. Our researchers are hopeful that as medical knowledge progresses, banked samples will be helpful in confirming new findings. The tissue bank at Evanston Northwestern Healthcare has been collecting breast tissue since the early 1990s; lung tissue since 1998; pancreas and prostate tissue since 2001; and colon tissue since 2003.

Richard Knop, MD, PhD, seated, and Alice Wyrwicz, PhD, have embarked on an investigative journey that will usher in the next generation of magnetic resonance imaging. Their study, done in collaboration with Paul Grippo, MD, of Northwestern University, uses a 14T MR imager to detect minute differences in the cellular structure of biologic models.

MRI Research

Goal: Identify microscopic changes in the pancreatic cancer cells

A magnetic resonance imager that is more than ten times as powerful as the devices commonly used in diagnostic centers today is making it possible to see microscopic images without a surgical biopsy procedure.

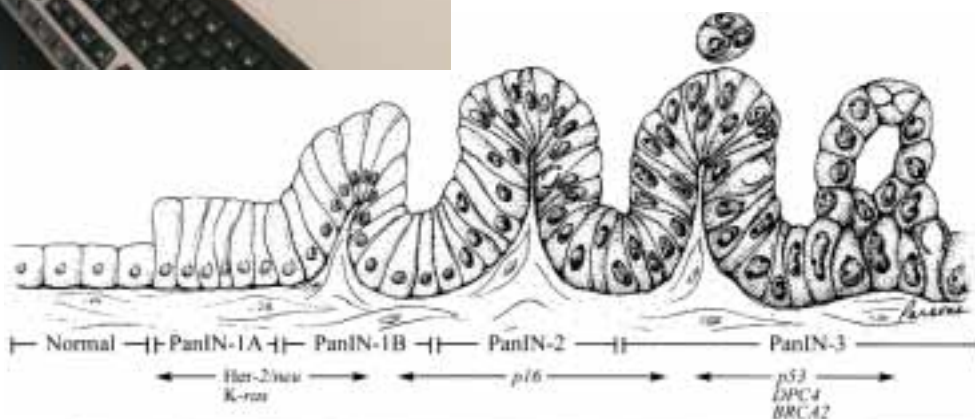
The 14T MRI allows magnification levels of 10-50 microns. At this level, researchers Richard Knop, MD, PhD and Alice Wyrwicz, PhD, Associate Professor, Feinberg School of Medicine, Northwestern University, are attempting to see the formation of pancreatic cancer cells (Pan IN I, II and III) using in vivo biologic systems where pre-malignant lesions develop. The investigators will look at the characteristics structurally and then correlate their observations with genetic markers.

Morphologic changes observed over time in this lab will be documented and used to direct early-detection imaging studies in high-risk individuals.



Pancreatic Carcinoma Progression Model

This model shows the genetic changes and progression from normal pancreatic cells, at left, to increasingly abnormal cells.



Source: Hruban RH, Goggins M, Parsons J, Kern SE. Progression Model for Pancreatic Cancer. Clinical Cancer Research 6: 2969-2972 (2000)

3T MRI

Goal: Reveal Hidden Areas of the Pancreas

To see the pancreatic duct, the presumed birthplace of all pancreatic cancers, you've got to locate the narrow passage that runs through the center of the organ like the delicate central vein of a leaf. To get there, you first must traverse the crowded geography of the digestive tract, where the pancreas is snugly sheltered by the stomach and the protective arm of the duodenum.

Clearly, the pancreas does not enjoy the limelight – and that's a problem when it comes to finding pancreatic cancers early, before they grow to an advanced stage.

However, a new tool, the 3T Whole-Body MRI, which offers twice the imaging power of the standard 1.5T MRI, may make this problem go away. Randall Brand, MD, director of our Pancreatic Cancer Program, and world-renowned imaging expert Robert Edelman, MD, Chairman of our Department of Radiology, are joining forces to determine how the 3T MRI can be used to provide high-resolution views of the pancreas and biliary tract.

The two are exploring new imaging techniques to better visualize the pancreas and identify the earliest changes in pancreatic cancer development.

They are also collaborating on the development of a method that will combine MR with endoscopy. As a leader in the use of endoscopic technology for the early detection of pancreatic cancer, Dr. Brand is hopeful that this convergence of treatment and research will result in a technique that allows tumors to be endoscopically detected and perhaps even treated with this MR-focused technology. ■



Evanston Northwestern Healthcare is one of only a handful of research centers in the nation to own a 3T MRI. Randall Brand, MD, left, and Robert Edelman, MD, Professor, Feinberg School of Medicine, Northwestern University, are using this high-powered instrument to image the pancreatic ducts of those who are at high risk for pancreatic cancer.



Twice the power, twice the clarity

When the magnetic strength of the standard 1.5 MR imager is doubled, the results are strikingly clearer. Note the more well-defined structures visible in the image created by the 3-T imager, at right.

a remarkable comeback



Georganne Chalmers, 72
President, Alumnae Board,
Northwestern University
3 years post surgery

“I’m often asked to tell my story to someone who has been recently diagnosed. I tell them that my cancer was inoperable at first – but I survived.”

Before her diagnosis in August of 2000, Georganne Chalmers never thought that cancer would enter her life.

“I’m as healthy as a horse,” she says. “There is no cancer in my family and I’ve always been a healthy, active person.”

When she began to notice symptoms, she surmised that maybe they were an after-effect of the gallbladder surgery she had had earlier in the year. That theory was quickly disproved after a full battery of hospital tests.

“Dr. (Steve) Sener gave me the news along with my internist, Dr. Anne Neidental. I was surprised at the amount of time they spent with me going over all the options. It’s a good thing I was lying down,” she says.

But Georganne didn’t stay down for long.

“I was determined that I was not going without a fight. Dr. Sener had told me my tumor was inoperable, but that I could have radiation and chemotherapy beforehand, and that this therapy might reduce the tumor to an operable size. I told him I wanted to start right away,” she recalls.

The results were dramatic. After six weeks of radiation, and two rounds of chemotherapy, the tumor was already shrinking. More chemotherapy followed (Gemzar) and, after eight months, Georganne got the hoped-for call from Dr. Sener. Surgery, a Whipple procedure, was possible.

That was in April 2001. The recovery wasn’t exactly easy. Internal swelling prevented Georganne from retaining food for 5 weeks. However, a physician working in Hospice, Dr. Alan Smookler, devised a medication that dealt with the problem quickly.

Physically, Georganne is back – walking the golf course, playing tennis, and whenever called upon, caring for grandchildren. Earlier this year, she spent a month in New Zealand, hiking and sightseeing.

Georganne regularly attends the Pancreatic Cancer Support Group meeting at the Cancer Wellness Center in Northbrook.

She recalls, “When I was going through my crisis, I received tremendous support from my church and friends and acquaintances in the area. Now I try to use my story to help others. I think a positive attitude helped keep me going. Plus, I have four grandchildren. That’s a real incentive to stay alive.”

Building a Strategy

Early Diagnosis And Targeted Treatment To Defeat Pancreatic Cancer



Randall Brand, MD



Malcolm Bilimoria, MD, FACS



Richard Knop, MD, PhD

By Randall Brand, MD, Associate Professor, Feinberg School of Medicine, Northwestern University
Malcolm Bilimoria, MD, FACS, Assistant Professor, Feinberg School of Medicine, Northwestern University
Richard Knop, MD, PhD, Assistant Professor, Feinberg School of Medicine, Northwestern University

Pancreatic cancer is the fourth-leading cause of cancer death in the United States. This year alone, it's estimated that 31,860 Americans will be diagnosed and 31,270 will die of the disease. Nationally, the five-year survival rate for pancreatic cancer is 5 percent. At ENH, the five-year survival rate is just a little better at 6 percent.

Early symptoms rarely cause alarm. They may include non-specific abdominal discomfort, nausea, vomiting, sleeping difficulties, anorexia and generalized malaise. Pain that is centered in the solar plexus is often explained away, when it can be a sign of advanced disease. The more common presenting symptoms are jaundice related to obstruction of the bile duct from the pancreatic tumor, epigastric pain and weight loss. Currently, CA 19-9 is the only serum marker in use for pancreatic cancer and its role in diagnosing pancreatic cancer is limited.

We use several different imaging methods for the diagnosis and staging of a pancreatic adenocarcinoma. In most instances, we obtain a CT scan of the abdomen from patients with suspected or known pancreatic cancer. Recent advances in this technique have improved visualization of the pancreas and blood vessels (CT angiography). In addition, MRI of the pancreas is rapidly improving and, once advances in molecular imaging are incorporated, MRI may bring us greater diagnostic accuracy. In our research, we are using an MR imager that has double the standard power, which we hope will provide us with more detailed images of the pancreas and the ability to spot tumors at a smaller size and with better resolution.

Endoscopic ultrasound (EUS) may detect smaller lesions (tumors) in the pancreas. This tool has the advantage of being able to biopsy a tumor at the time it is first seen. EUS may play a role in screening for pancreatic neoplasia (pre-cancerous tumors) in high-risk individuals. An endoscopic retrograde cholangiopancreatography (ERCP) remains a useful diagnostic and therapeutic procedure. It can aid in diagnosis by providing cytologic brushings; and in the therapy of biliary obstruction by stent placement. Positron emission tomography (PET) may be most useful in patients for whom the suspicion of carcinoma remains high and when CT scan and EUS are not diagnostic.

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back in the swing

“I don’t think you should settle. I’ve gone back to golf. I’ve gone back to weightlifting. I ride my bike. I go to the gym. I’m not 100 percent back to what I was – but I’m close.”

**Aleksandar
Stojanovic, 29**
Electrical Engineer
1 year post surgery



When the pain started in April 2003, Alex didn’t think much about it.

“As a 28-year-old, I think you really feel invincible. I had ulcers as a kid and the pain I felt in my side was similar, so I didn’t worry about it” he recalls.

Besides, life had just dealt him a severe blow with the loss of his mother to brain cancer. He figured that his pain was connected to his grief and that he’d start to feel better in time. He brushed off his symptoms and waited for relief to come naturally.

It wasn’t until June – when his friends intervened, pointing out his startlingly rapid weight loss (about 30 pounds) – that Alex sought medical attention. He agreed to have a CT scan. The results were troubling.

“They kept calling it ‘a mass’ or ‘a lesion.’ When I asked if it was cancer, they said I’d need more tests and didn’t want to jump to that conclusion. But I knew. I had just been through my mother’s cancer treatment. I was a very educated patient – and I’m sure at times it was pretty annoying for my doctors,” Alex laughs.

Alex was scheduled for two more scans and given antibiotics. A physician who is a family friend encouraged him to meet with a surgeon right after the scans provided a clear diagnosis.

“My surgeon, Dr. [Malcolm] Bilimoria, told me I had neuro-endocrine cancer – and that that’s the ‘best’ kind of pancreatic cancer to have. I liked it that Dr. Bilimoria was talking about an aggressive approach and that he thought I’d have a good chance of getting through this.”

Alex had his surgery – a Whipple procedure – within two months after being diagnosed. He recovered in the hospital for three weeks.

Alex’s family and friends rallied around him. His cousin moved in to be his helper, dog-walker and friend. His parents’ friends sent meals. His employer gave him the time he needed to recover. The woman whom he had hired to watch his mother was now caring for him. “I tend not to accept help from people – so this was a big change for me. But my friends were great,” Alex says.

Last October, while convalescing at home, Alex got an invitation that he still counts among the most important of his life.

“My friend called to say, ‘My dad and I are going golfing. Why don’t you come with us?’ I was still feeling pretty tired and weak so at first I said ‘no.’ My friend said, ‘Why won’t you try to get out and enjoy yourself? You can’t be in a box anymore.’ I worked up my energy and went. It turns out I never had more fun than that day. I consider that day the turning point in my recovery.”

In August, Alex celebrated the one-year anniversary of his surgery by hitting the links – hard. He laughs, “I played 36 holes. Ten hours of golf. You couldn’t wipe the smile off my face that day.”

A team approach to pancreatic cancer surgery means that patients benefit from greater expertise and a shorter time in the operating room. Our oncology surgeons, all on the faculty of the Feinberg School of Medicine, Northwestern University, from left, Stephen F. Sener, MD, David J. Winchester, MD, and Malcolm Bilimoria, MD, operate with a well-practiced team. Nationally, the average operating time for a Whipple procedure is 9 hours. However, the team approach used at Evanston Northwestern Healthcare is reducing that time to 5 hours or less.



Building a Strategy

(continued from page 11)

Pancreatic surgery as treatment

Surgical resection is the best treatment option if the pancreatic cancer is contained or very localized and remains the best hope for cure. The Pancreatic Surgery Program at Evanston Northwestern Healthcare has evolved over the past decade to the multidisciplinary diagnostic and treatment program that it is today. With recent studies showing that the complication rates from pancreatic surgery are greatly decreased at high-volume centers, it is important that pancreatic surgery programs provide efficient care to a large surrounding area. The number of pancreas surgeries performed at Evanston Hospital triples that of most high-volume centers. Our success lies in our ability to operate as a team, and in our low surgical complication rates, which remain below the national averages.

The volume of pancreatic surgery has also allowed for expansion of the criteria for resection. By employing special techniques to resect and reconstruct portions of major blood vessels invaded by a pancreatic tumor, we have been able to safely remove tumors in patients who had been turned away by other centers. Patients who have come to us with tumors that are more locally advanced have been treated initially with chemotherapy and radiation therapy to shrink the tumor, followed by a complete resection. With emphasis on patient care, minimizing complications, expanding the criteria for resection and research, our Pancreatic Surgery Program is one of the nation's leaders in pancreatic surgery.

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heroes & miracles

Peter Hanchar, 53
Fire Captain/Paramedic
2 1/2 years post surgery

“You can beat this. But you’ve got to have a positive mental attitude”

“I diagnosed my own jaundice,” says Peter, who recalls seeing his reflection in the mirror one morning in March of 2002. “My face and eyeballs were yellow.”

Lab tests ruled out hepatitis, so Peter was referred to a gastroenterologist who performed a procedure to check for obstructions in the bile duct. The test revealed his diagnosis: pancreatic cancer.

“I knew very little about pancreatic cancer except that it is fatal. My perception was ‘I’m a dead man,’” Peter recalls.

Peter wanted to delay surgery until after his granddaughter was born, but his surgeon told him there was no time to lose. Within 2 weeks after his diagnosis, Peter underwent a Whipple procedure to remove the cancer.

“I know that my health will never be what it was before,” says Peter. But the fact is, there is life after a Whipple – and I went back to work,” he says.

Peter has been told that he is the first firefighter with pancreatic cancer ever to return to full duty. It hasn’t been easy. Peter’s work involves lifting and carrying heavy equipment and carrying people out of buildings and into waiting ambulances – a daunting task when all of your abdominal muscles have been cut.

But Peter is not complaining. “The way I see it, I’m fortunate to still be alive. Statistically, I’m not supposed to be here. I believe that I’m the beneficiary of two miracles: a miracle of God and a miracle of medicine.”

Peter draws an analogy between his work and his battle with cancer. “We fight fires with the attitude that we are going to prevail, regardless of the fire’s magnitude. I fight my cancer the same way. I keep a positive mental attitude and I don’t give up.”

He adds, “People refer to firefighters as heroes. “The doctors, nurses and staff of Evanston Northwestern Healthcare are my heroes. I have no doubt that they saved my life.”

Building a Strategy

(continued from page 13)

Making pancreas cancer treatable

The major therapeutic advances in 2004 draw from the science of “directed therapy.” This refers to non-chemotherapy medications that kill tumor cells more selectively and, in some malignancies, have changed a cancer diagnosis into a “chronic,” treatable disease.

From the perspective of patient management, the goal of improved survival has never before had so much potential for success. Moreover, we believe that it is only through the multidisciplinary method—using clinicians and scientists together—that we are likely to achieve any improvement in curing and preventing pancreatic cancer. ■

The Pancreatic Cancer Care Team



A dedicated team of specialists meets to discuss the care plan for every patient diagnosed with pancreatic cancer. Our team members are, first row, from left, Janis Benzuly, research administrator, Center for Medical Genetics; Vathsala Raghavan, MD, radiation oncology; Debbie Polidoro, RN, OCN, collaborative practice oncology nurse; Suzanne O'Neill, PhD, research assistant professor, Northwestern University, FSOM, developer of MyGenerations tool for determining inherited cancer risk; Devanshi Patel, genetic counselor; Scott Weissman, genetic counselor. In the second row are Randall Brand, MD, director, Pancreatic Cancer Program; Irmna Valinovic, clinical research coordinator (partially hidden); Ewa Gliwa, clinical research coordinator; Kathleen Bonnefoi, RN, OCN, surgical oncology nurse; Elita Fine, RN, OCN, GI Oncology Program coordinator; Marjorie Van der Veen, LCSW, Psychosocial Oncology Program; Wendy Rubinstein, MD, PhD, FACMG, Director, Center for Medical Genetics. In the far back, Curtis Hall, MD, Pathologist. Not pictured Cindy Rheinegruber, RD, LD Oncology Dietician at Glenbrook Hospital.

Three clinical trials are ongoing for pancreatic cancer patients at the Kellogg Cancer Centers:

1. Gemcitabine + Iressa® for patients who are not surgical candidates and have had no prior chemotherapy
2. Gemcitabine + radiation therapy for patients with locally advanced disease
3. Gemcitabine + radiation vs gemcitabine, 5FU, and cisplatin followed by radiation therapy and 5FU for potentially operable patients.



Leading the way From left, David P. Winchester, MD, Stephen F. Sener, MD, and Edward F. Scanlon, MD, pause for a photo at an American Cancer Society Event in 1999. Although each of these physicians has been a powerful force in building Evanston Northwestern Healthcare's surgery department and oncology programs, each also has a reputation that extends beyond the boundaries of ENH. Dr. Sener was just installed as national President of the American Cancer Society; Dr. Winchester is currently Medical Director, Cancer Programs, Commission on Cancer, American College of Surgeons; and Dr. Scanlon, now retired, was national president of the American Cancer Society in 1981.



*Stephen F. Sener, MD, FACS
Professor, Feinberg School of Medicine,
Northwestern University*

Leadership

From resident to president

In 1982, Edward Scanlon, MD, then Chairman of the Department of Surgery at Evanston Hospital and immediate past president of the American Cancer Society, had to choose a resident to be the American Cancer Society Fellow. He chose a young doctor named Steve Sener, just four years out of medical school. "I looked for ability and compassion," recalls Dr. Scanlon. "I could see that Steve had both."

Now, more than 20 years later, Dr. Sener still draws inspiration from his early mentor as he steps into the national presidency of the American Cancer Society. During his term, Dr. Sener will lead a two-year prioritization process so that the Society can accomplish its 2015 goals for the nation. Those goals are to reduce cancer mortality by 50 percent; to reduce cancer incidence by 25 percent; and to measurably improve the quality of life for cancer patients. He adds, "On a personal note, I would like to see our research and international programs be enhanced, within the context of the 2015 goals."



Ermilo Barrera, Jr., MD, FACS

New President of ACS Illinois Division wants better information, care for all

Oncologic surgeon Ermilo Barrera, Jr., MD, FACS, Assistant Professor, Feinberg School of Medicine, Northwestern University, has just begun serving his term as President of the Illinois Division of the American Cancer Society. He has two goals: to work harder on the disparities that affect certain underserved populations in the state and to make the state's Patient Navigator System (PNS) the best in the country so that it serves as a template for a

national Navigator System. American Cancer Society Patient Navigation Services provides cancer information and social services support for cancer patients and their families. These navigational services are available to all Illinois residents, regardless of geographic location and socioeconomic status.

"The Society's all-encompassing program seeks to achieve measurable improvement in quality of life from the time of diagnosis and for the balance of life of all cancer survivors," says Dr. Barrera.

Patients who choose our system of care have numerous support options available to them. Whether a patient needs intensive rehabilitation or just a compassionate friend to listen when the path hits a rocky patch, no one has to go it alone.

Meeting emotional, practical and spiritual needs

Our Psychosocial Oncology Program is staffed by psychologists, oncology clinical social workers, a bereavement counselor, and post-doctoral fellows. The staff recognizes that managing emotional and practical needs is a vital part of coping with illness and promoting quality of life. Our **Psychosocial Oncology** team strives to meet the special needs of each individual oncology patient. When the needs are spiritual, the ENH **Pastoral Care** staff is present for all patients and their loved ones, encouraging hope, healing, and wholeness. Pastoral Care also offers the **Music and Medicine Program**, which brings live music to public areas of the hospital and to patients on an individual basis. Patients with pancreatic cancer and their loved ones often seek support from the **Pancreatic Cancer Action Network**, PanCAN, which offers patient education and decision-making tools and advocates for new research.

Making difficult changes easier to digest

When treatment-related changes require patients to make changes in their diet, we provide help from **dietitians who are dedicated to the care of oncology patients**. Dietitian services are available at all outpatient settings as well as for patients who have been admitted for care. Cindy Rheingruber, RD, LD serves patients at Glenbrook Hospital. Colleen Takagishi, RD, LD cares for oncology patients at Evanston and Highland Park Hospitals. These dietitians counsel patients on dietary modifications to relieve symptoms related to treatment, provide advice on good nutrition after major surgery that may involve the GI tract, and offer information for healthy eating after the diagnosis of cancer.

Returning to life after cancer treatment

Evanston Northwestern Healthcare's Department of Rehabilitation and Physical Medicine offers services for many special situations that confront our oncology patients as they complete cancer treatment. **Lymphedema treatment** for the upper and lower limbs and the head and neck area, under the direction of department physiatrists, are available at three locations. **Speech and swallowing therapy** is available from therapists who have had extensive training in these areas. **General rehabilitation** is offered for oncology patients who need **reconditioning, energy conservation, and fatigue management**. **Intensive inpatient multidisciplinary rehabilitation** is offered for those who have become severely functionally debilitated by disease and treatment. **Enterostomal therapy** by an advanced practice enterostomal therapy nurse provides preoperative planning and postoperative care for both inpatients and outpatients. ■

Support



Oncology nurse Bona Kang offers a compassionate hand to a patient during his chemotherapy treatment. Shortly after she began her nursing career, Bona learned that she, herself, had ovarian cancer. After completing her treatment, she decided to become an oncology nurse. "I was grateful for the help I got – and am happy to be able to help my patients today," she says.

Breast Cancer: *New Research Brings*

A diagnosis of breast cancer compels a woman to make some difficult decisions about her treatment, her relationships and her life's work. Receiving such news has always been accompanied by a lot of questions. However, thanks to new research findings and technologies that have emerged in the past year, many more of these questions are now honored with confident responses.



From left to right, breast team members Douglas Merkel, MD, and Kathleen Havlin, MD, both Assistant Professors, Feinberg School of Medicine, Northwestern University, Beth Weigel, RN, OCN; Luke Theilken, MD, Resident; and Theresa Smith, Patient Support Associate

A better understanding of inherited risk

The Center for Medical Genetics this year unveiled *MyGenerations*, a tool which allows individuals to enter family health information into a secure computer program at a touch-screen kiosk and, in turn, receive a free **family tree printout and personal breast cancer risk assessment**. This initiative supports the Center's goal to demystify medical genetics and to help individuals understand that shared family knowledge about inherited risk can quell fears and save lives by encouraging diligence in early-detection strategies. *MyGenerations* kiosks are located at three locations within the ENH system: in the lobby of the Kellogg Cancer Care Center at Evanston Hospital; in Mammography Suite 860 in the Graham Medical Office Building at 1000 Central, Evanston; and in the main lobby at Glenbrook Hospital.

Screening mammography: the gold standard

Our mammography volume remains high – in the year 2003, **a total of 40,506 screening mammograms were performed at our seven screening sites**. All were read by radiologists who specialize in breast imaging. Women seeking mammograms can call a toll-free phone number, 1-888-ENH-6400 or schedule their appointment online at www.enh.org.

Mammograms: a key to better survival rates

Data from Evanston Northwestern Healthcare's **breast cancer database** reveal that women whose cancer was found only by screening mammography had a better survival rate than those whose cancer was detected with palpation, with or without mammography. These findings support ENH's systemwide support for the aggressive use of early detection techniques.

Promise in the research pipeline

New findings from a Canadian Cancer Society trial, which involved more than 5,000 women—including 40 of our own patients—are changing the way that we are treating post-menopausal women with hormone-sensitive breast cancer. Physician researchers found that when the drug **letrozole was used after the completion of standard tamoxifen** treatment, disease-free survival was significantly improved. The results were so compelling that the trial was terminated early so that results could be communicated to the participants promptly.

New Answers

Understanding the building blocks of breast cancer

Nearly a quarter of women diagnosed with invasive breast cancer do not survive their initial struggle with the disease. Hamid Band, MD, PhD, Director, Division of Molecular Oncology, is hoping to find out why and to turn those numbers around. Dr. Band is working on an NIH project that is **seeking a better understanding of the function of ErbB2**, the growth factor receptors that are overexpressed in nearly one-third of all breast cancer cases that are associated with poor long-term survival. Using molecular and cell biological studies, Dr. Band is hoping to determine if a protein known as CHIP may help to down-regulate the ErbB-2 receptor. His findings could help to develop strategies that would enhance the efficacy of current treatments, such as Herceptin® (trastuzumab), in patients who are in the “poor prognosis” group.

Seeking prognostic markers for breast cancer

Under the direction of Vimla Band, PhD, scientists in our Division of Cancer Biology are studying novel markers and pathways in the early diagnosis and progression of breast cancers. Recently, her team has focused on a **tumor-fighting protein known as NES1**. She and other investigators have learned that when a biopsy specimen of ductal carcinoma in situ (DCIS) shows little or no NES1, it predicts a high risk of invasive cancer. Dr. Band is studying this marker in samples provided by the ENH Tissue Bank to determine whether NES1 expression can be a diagnostic and/or prognostic marker in other cancers as well.

Largest breast cancer prevention trial reaches enrollment goal

The Study of Tamoxifen and Raloxifene (STAR) reached its enrollment goal of 19,000 women in June of this year. The largest North American breast cancer prevention trial ever undertaken, STAR randomly assigned women to take tamoxifen or raloxifene for five years. Evanston Northwestern Healthcare has 59 participants enrolled in the STAR trial, says Douglas Merkel, MD, principal investigator.



Vimla Band, PhD and Hamid Band, MD, PhD, Professors at Feinberg School of Medicine, Northwestern University



Ruth Lupu, PhD, Associate Professor, Feinberg School of Medicine, Northwestern University

A new clue into the development of breast cancer

An enzyme that plays a key role in the digestion of carbohydrates appears also to be involved in the development of breast cancer, according to a report in the *Proceedings of the National Academy of Sciences of the United States of America* (PNAS), co-authored by Ruth Lupu, PhD, a member of the research team and Director of Translational Breast Cancer Research in the ENH Department of Medicine. Researchers here have identified a **molecular link between the enzyme fatty acid synthase (FAS), which converts carbohydrates to fatty acids, and HER2, a gene that is overexpressed in 30 percent of breast and ovarian cancers**. “We’ve shown that FAS plays an active role in the development of cancer by regulating the proteins in the body that are involved in transforming healthy cells to malignant cells,” Dr. Lupu explains. She believes this finding should encourage the development of therapies that target FAS in cancers that overexpress the *HER2* gene. ■

▶ Colon Cancer: *New Treatments Show Promise*



Kinder, gentler surgery for colon cancer

Joseph Muldoon, MD, Assistant Professor, Feinberg School of Medicine, Northwestern University, assisted by Resident Kelly Maxwell, MD, perform a laparoscopically assisted colectomy. Although surgeons here have been performing this procedure for several years, the procedure is being done with added frequency after a landmark study declared that laparoscopically assisted colectomy is equivalent to traditional open surgery when performed by experienced, credentialed surgeons.

New treatments recently approved for colon cancer are showing better patient response and providing new hope for those diagnosed with the disease. Two new **targeted therapies**: Avastin® (bevacizumab) and Erbitux® (cetuximab), used for our patients with advanced disease, and a **new chemotherapy regimen**, FOLFOX (5 FU, leucovorin, oxaliplatin), are providing some dramatic responses.

Colon checks offered at four centers

In the GI labs of Evanston Northwestern Healthcare, a total of **15,691 colonoscopy examinations were performed** during fiscal year 2003. These screenings are offered at Evanston Hospital, Glenbrook Hospital, Highland Park Hospital, and in the Specialty Care Center in Vernon Hills. Patients are able to call a single toll-free number to schedule colonoscopies, 1-888-ENH-6400. ■

▶ Lung Cancer: *Hopeful new findings expand options*

The Thoracic Oncology Clinic, which brings together at one time and one location all of the specialists who are part of a patient's thoracic cancer care team, continues to be well received by patients and their loved ones. The Thoracic Oncology team has continued its participation in the International Early Lung Cancer Action Program (I-ELCAP), which will verify whether the use of new CT screening technology can dramatically **improve the early detection of lung cancer** among people at high risk.

Use of adjuvant chemotherapy broadens for lung cancer patients

Support for treating patients with Stage IB-IIIa lung cancer was strong at this year's meeting of the American Society of Clinical Oncologists. Newer drug options are also providing new hope. Patients who have had surgery for Stage IB-IIIa lung cancer now have the option to take part in a clinical trial that is evaluating an oral targeted therapy, epidermal growth factor receptor (EGFR) tyrosine kinase inhibitor, Iressa®. The drug is given post-operatively. Also, a newly opened clinical trial for patients with advanced lung cancer will compare a new EGFR tyrosine kinase inhibitor Tarceva® (erlotinib) with two-drug chemotherapy. ■

Gynecologic Oncology:

Top accruer in ovarian cancer study

Under the direction of gynecologic oncologist Gustavo Rodriguez, MD, Associate Professor, Feinberg School of Medicine, Northwestern University, our patients are participating in GOG-199, a national Ovarian Cancer Screening Study overseen by the Gynecologic Oncology Group (GOG). It seeks to identify improved methods of prevention and detection of ovarian cancer. Of the 80 sites involved in the cooperative study nationally, **Evanston Northwestern Healthcare has the highest number of women participants**, with 57 of the 400 patients accrued so far. The total accrual goal for this study is 3,400. ■

Hematology:

Self-donated stem cells can restore post-chemo blood counts

Hematologists at ENH are treating an increased number of multiple myeloma patients who are able to use self-donated stem cells, which can be re-infused after intense chemotherapy to **replenish and restore normal blood counts**. The Peripheral Stem Cell Transplant program is approved by the Foundation for the Accreditation of Cellular Therapy (FACT).

New treatments available for bone marrow problems

Azacitadine, a drug being used to treat myelodysplasia (MDS), or low-functioning bone marrow, is bringing generally favorable results to patients being treated here. Physicians also report that use of azacitadine is helping to reduce hospitalizations and transfusion requirements. A second drug, Gleevec® (imatinib mesylate) is being used in an open clinical trial to treat myelofibrosis, a disease of the bone marrow in which collagen builds up fibrous scar tissue inside the marrow cavity. ■

Bladder Cancer:

A physician's legacy of research, caring

As the year ends, physicians and surgeons will offer fond goodbyes to urologist Jeffrey Ignatoff, MD, whose career at ENH spanned 29 years. Dr. Ignatoff led several important research trials in prostate cancer and in cancers of the bladder.

Several of Dr. Jeffrey Ignatoff's patients are taking part in a clinical study of the drug valrubicin for patients with superficial bladder cancer. Dr. Ignatoff is principal investigator for the study. The Phase II study, which involved patients with superficial bladder cancer who had a recurrence after a prior course of therapy, is evaluating recurrence rate, disease-free survival and safety of the drug when administered intravesically.

New kidney surgery reduces recovery time

Increasingly in the past year, our surgeons have been using a minimally invasive surgical approach to full and partial kidney removal. Patients with kidney cancer have been grateful for this option, which cuts about two weeks from their recovery time. ■



Jeffrey Ignatoff, MD, FACS

Prostate Cancer:

Innovative research

Two ENH researchers have leading roles in collaborative research in prostate cancer that is being funded by a SPORE (Specialized Programs of Research Excellence) grant from the National Cancer Institute and the National Institute of Health.

Oncologist Daniel Shevrin, MD, Associate Professor, Feinberg School of Medicine, Northwestern University, is involved in evaluating the **anti-metastatic activity of genistein, a component of soy**. Previous research has suggested that consuming genistein is associated with a lower incidence of metastatic prostate cancer and a decrease in prostate cancer mortality. In a Phase I trial, Shevrin and his team have shown that diet containing genistein can modulate cell signaling in humans. They have now implemented a Phase II study to measure anti-metastatic activity in men with prostate cancer who consume genistein.

David Cella, PhD, Director of the Center on Outcomes, Research and Education (CORE) is focusing on quality-of-life issues related to the treatment of prostate cancer. His project, "Item Banking and Adaptive Testing in Prostate Cancer," will **"bank" quality-of-life questions related to prostate cancer** that can be compared or aggregated for future research studies. The bank will also be used for computer-adaptive testing, in which individual responses to questions help to determine further questions that a patient will be asked. ■

Urologist William K. Johnston III, MD, has joined the ENH team, bringing his skills in laparoscopic and robotic procedures of the kidney, adrenals, prostate, and reconstructive procedures for such conditions as congenital abnormalities of the kidney. He recently completed a fellowship in laparoscopy/endourology at the University of Michigan, Ann Arbor.



William K. Johnston III, MD

Neuro/Oncology:

Neuro-Onc program is referral center for region

The ENH neuro/oncology program is a regional referral center for cancers of the brain and central nervous system. Working quietly at ENH but with recognition as a top-tier program nationally, Nicholas Vick, MD, and Nina Paleologos, MD, lead a specialized team of neuro/onc nurses and support personnel. Each year, the State of Illinois reports approximately 748 brain and CNS malignancies. In 2003, our physicians consulted on 236 new cases, about one third of the state's volume. Currently, there are 11 brain tumor protocols open at ENH. Dr. Paleologos' expertise in evaluating and treating anaplastic oligodendrogliomas contributed to a landmark paper on the utility of giving chemotherapy to patients with aggressive oligodendrogliomas prior to radiation therapy. This paper, which she co-authored with Dr. Vick,

presented an approach that has become widely used. ■



*Nina Paleologos, MD,
Associate Professor, Feinberg
School of Medicine,
Northwestern University*

This past year, Dr. Paleologos was elected secretary for the Neuro Oncology Section of the American Academy of Neurology. She also serves as president of the Central Society for Neurological Research.

Head and Neck Cancer:

Team approach meets special challenges

The challenges that may accompany a cancer of the head or neck are diverse. Some patients may need therapy to re-learn basic functions, such as speaking and eating. Others may require microsurgery to restore facial structure or function. Specialists in the multidisciplinary team that comprise the ENH Head and Neck Cancer Program meet every other week to evaluate each new patient who presents with these cancers. The group includes medical oncologists, otolaryngologists (ENTs), radiation oncologists, dental medicine specialists, speech and swallowing specialists, nurses, radiologists, and pathologists. At this meeting, the group formulates a treatment plan and considers clinical trials for individual patients.

Clinical trials offer new options

A surgical trial through the American College of Surgeons Oncology Group is assessing a technique called "lymphatic mapping" and sentinel lymph node biopsy in cancers of the oral cavity. Other clinical trials being offered for patients with cancers of the head and neck involve targeted therapies, combined chemotherapy and radiation, new chemotherapy regimens, and post-radiation swallowing therapy. ■



Ernest Manders, MD

This past year, surgeon Ernest Manders, MD, has joined the Head and Neck team. Dr Manders is fellowship trained at The Ohio State University in head and neck surgery and reconstruction and has special expertise in microvascular free-flap reconstruction.

The newly constructed Charles R. Walgreen Jr. building has added 65,000 square feet of research and administrative space to the Evanston Hospital campus. Named in recognition of Charles R. Walgreen, Jr., the Honorary Chairman of The Campaign for Evanston Northwestern Healthcare, the facility provides six laboratories, including the Center for Advanced Imaging.



Interventional Radiology finds a presence here

Interventional radiology, which uses catheters and tiny instruments to: **assess tumors without surgical biopsy**, deliver cancer-fighting drugs and therapies directly to tumor sites, and provide palliative relief of symptoms caused by cancer is changing cancer treatment for many patients. Our clinic, staffed by interventional radiologists, medical oncologists, registered nurses and physician assistants ensures that each patient's care plan is discussed at a multidisciplinary conference and communicated to the patient and the referring physician. Although many interventional radiology procedures are performed on an outpatient basis, patients who may require a hospital stay are managed by the team's dedicated medical oncologist, who also communicates to the referring physician about outcomes and further plans.

Members of the Interventional Radiology Clinic invited area physicians and other health care professionals to an **Interventional Oncology Workshop** this past spring. The presentation, which reviewed common interventional radiology procedures and provided guidance on when these procedures are most beneficial, received an overwhelmingly positive response from participants. The workshop was repeated in September.

Interventional Oncology is increasingly being used by patients seeking **palliative procedures on the liver, lung, bone and extremities**. An article that details palliative benefits for a series of 59 patients is being prepared for the *Journal of Clinical Oncology*.

A new beginning for advanced imaging

The **Center for Advanced Imaging Research**, the largest such center in the Chicago area, has opened its doors on the campus of Evanston Hospital, in the newly dedicated Charles R. Walgreen, Jr. building. Occupying more than 10,000 square feet, the center is under the direction of Robert Edelman, MD, Chairman of the Department of Radiology. The Center houses a 3-T (Tesla) magnetic resonance imager, which will be used in basic MR studies that focus on the early detection of cancers and other diseases. In addition to the cancer studies being done in collaboration with Randall Brand, MD, which combine MR research with endoscopic ultrasound (see page 9), Dr. Edelman is also working with Wendy Rubinstein, MD, PhD, FACMG, in research that is evaluating breast MR as a method of early detection for breast cancer, and with interventional radiologists to help characterize cancerous tumors. Beyond cancer, the Center will be the site of other MR studies that involve arthritis, Alzheimer's disease and musculoskeletal conditions.

A permanent PET/CT scanner, capable of showing both metabolic activity and structural context, will be installed by year's end at our Ambulatory Care Center at Highland Park Hospital.

Advanced options in radiation therapy

Radiation oncologists are now providing treatment with Bexxar[®], a radiolabeled monoclonal antibody recently approved by the FDA. This radioactive targeted therapy is used as **second-line therapy for those with non-Hodgkin's lymphoma**.

Many women who are appropriate candidates continue to benefit from **accelerated partial breast irradiation**, which shortens the course of therapy by half compared to conventional radiation therapy. This method uses intensity-modulated radiation therapy (IMRT), a computer-driven technology that delivers an individualized dose of radiation to a targeted body site. ■

Evanston Northwestern Healthcare *Cancer Registry Report*

Addi Gorchow, RHIT, CTR

An integral part of the Cancer Program of Evanston Northwestern Healthcare is the Cancer Registry, which is required for approval by the American College of Surgeons Commission on Cancer. A hospital with an approved cancer program benefits patients, professional staff members and the communities that our facilities serve.

Much of what can be learned about cancer is obtained by gathering and recording information about patients with cancer. The Cancer Registry of Evanston Northwestern Healthcare compiles statistical data on patients diagnosed and/or treated with cancer at Evanston, Highland Park and Glenbrook Hospitals. The information collected is used as an important tool in improving patient care. The Cancer Registry provides the medical staff with statistical reports and information that enables the staff to see the results of their diagnostic and therapeutic efforts.

The Cancer Registry is mandated by state law to report every incidence of cancer that is diagnosed and/or treated at the hospitals. The information gathered is provided to the State of Illinois and National Cancer Data Base. Statistically, data are used for lifetime survival analysis, research, education and patient outcomes.

Lifetime follow-up is conducted annually on all analytic patients. This helps to determine the status of disease and the patient's quality of life. It also allows the registry to record further treatment for disease progression and length of survival. Follow-up helps promote continued medical care by serving as a reminder to schedule regular physical examinations.

Registry accomplishments over the last year include:

- Accessioned 2,430 new cases into the Registry for calendar year 2003, of which 93 percent were analytic.
- Maintained a 96 percent follow-up rate on all patients accessioned into the Registry.

- Participated in the "Outcomes of the 1998 Early Stage Breast Cancer PCE: Margin Width as a Determinant of Local Recurrence and/or Mortality in Patients with Breast Conservation Surgery Study" and the "Assessments and Comparisons of Quality of Care Criteria for Localized Prostate Cancer between Black and White Men Study" both conducted by the Commission on Cancer.
- Participated in numerous in-house studies conducted by Evanston Northwestern Healthcare staff physicians.
- Three members of the Cancer Registry staff earned their CTR credentials; Tatyana Batova, Fannie Woodard and Nadine Long.

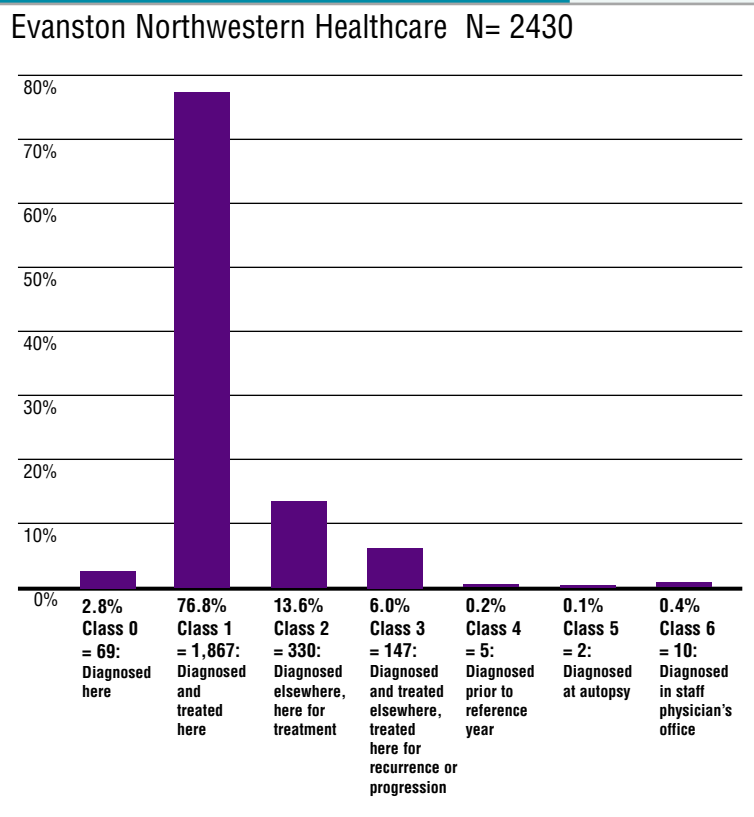
In keeping with Evanston Northwestern Healthcare's mission as a teaching institution, the Cancer Registry supports learning and development. During the past year the registry staff was awarded over 142 continuing education credits.

- Tatyana Batova, CTR, Laurel Gage, RHIT, CTR, and Daphne Smith, CTR, attended the National Cancer Registrar Association's Annual Meeting held in Portland, OR.
- Katharine Henderson, RN, OCN, attended the Oncology Nurses Society 29th Annual Congress held in Anaheim, CA.
- Addi Gorchow, RHIT, CTR, and Katharine Henderson, RN, OCN, attended the American College of Surgeons Commission on Cancer Workshop, "More Survey Savvy: Creating Best Practices and Implementing Them," held in Chicago, IL.
- Addi Gorchow, RHIT, CTR, attended the American College of Surgeons Commission on Cancer "Independent Cancer Program Consultant Training Program."
- Daphne Smith, CTR, attended an Advanced Cancer Registry Training Program held in Atlanta, GA.
- Tatyana Batova, CTR, and Lorrie Melnicoff attended the Collaborative Stage/Benign Brain Tumor Reporting Workshop sponsored by Illinois State Cancer Registry.
- Fannie Woodard, CTR, and Nadine Long, CTR, attended the Pre-Certification Workshop supported by NCRA.

2003 Cancer Data Summary

Michael J. Liptay, MD, FACS

Graph 1: Class of Case Distribution 2003



Incidence of Cancer 2003

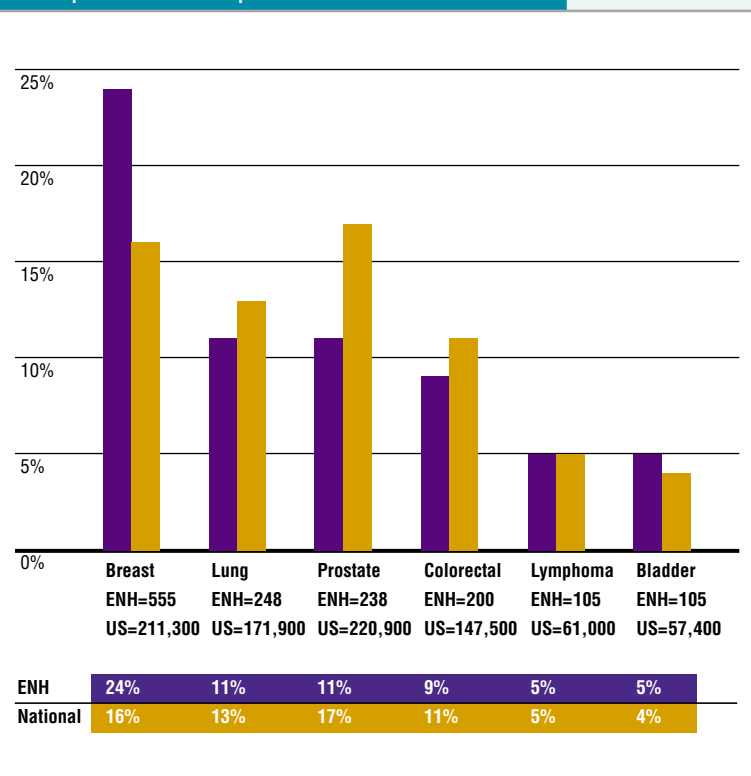
In 2003, a total of 2,430 new cancer cases were accessioned into the Evanston Northwestern Healthcare Cancer Registry. Of those 2,266 cases (93 percent) were analytic. By definition, analytic cases are those that are newly diagnosed with malignant neoplasm and/or have received all or part of their first course of treatment at one of our hospitals. The remaining 164 cases (7 percent) were non-analytic. Non-analytic cases are patients who were initially diagnosed and treated at another facility, who now are receiving treatment for progression or recurrence of their disease here. Details by site are provided in Table 1 on page 26.

Class of Case 2003

Class 0, 1 and 2 are considered analytic cases, class 3, 4, 5 and 6 are non-analytic.

Class 0 and Class 1, which account for a total of 1,936 cases, were those malignancies diagnosed at one of our three hospitals. Once diagnosed with cancer, 1,867 (96 percent) of our patients remained at Evanston Northwestern Healthcare for their treatment. Class 2, a total of 330 cases were diagnosed elsewhere and referred here for treatment. Class 3, a total of 147 cases were diagnosed and treated elsewhere and referred here for treatment of a recurrence or progression of disease. See Graph 1.

Graph 2: Cancer Incidence Comparison of Top 5 Sites



Comparison of Top 5 Sites

Breast cancer continues to be our top site representing a striking 24 percent of the total analytic cases seen at Evanston Northwestern Healthcare. The next-most-frequent cancers seen were: lung and prostate, both at 11 percent; colorectal, 9 percent; and lymphoma and bladder, both at 5 percent. Our top five sites represent 65 percent of all newly diagnosed cases. Graph 2 shows how our top five sites compare to national figures. With the exception of breast cancer at Evanston Northwestern Healthcare, the incidence of most cancers is similar to that reported nationally.

(continued on page 26)

2003 Cancer Data Summary *(continued from page 25)*

Table 1: Incidence of Cancer 2003

PRIMARY SITE	Analytic	Non Analytic	Total	Percent
Tongue	12	1	13	0.5%
Salivary Glands	7	1	8	0.3%
Floor of Mouth	4	0	4	0.2%
Gum	5	1	6	0.2%
Nasopharynx	2	0	2	0.1%
Tonsil	6	0	6	0.2%
Oropharynx	2	1	3	0.1%
Hypopharynx	2	0	2	0.1%
Other Oral Cavity and Pharynx	2	1	3	0.1%
ORAL CAVITY	42	3	45	1.9%
Esophagus	17	0	17	0.7%
Stomach	28	0	28	1.2%
Small Intestine	7	0	7	0.3%
Colon	143	2	145	6.0%
Rectosigmoid Junction	22	1	23	0.9%
Rectum	35	2	37	1.5%
Anus	10	1	11	0.5%
Liver	11	0	11	0.5%
Gallbladder	1	0	1	0.0%
Unspec Digest Organs & Parts of Biliary Tract	5	0	5	0.2%
Pancreas	54	4	58	2.4%
Retroperitoneum	1	1	2	0.1%
Peritoneum, Omentum & Mesentery	8	3	11	0.5%
DIGESTIVE SYSTEM	342	14	356	14.7%
Nasal Cavity, Middle Ear & Accessory Sinus	1	2	3	0.1%
Larynx	29	1	30	1.2%
Lung & Bronchus	248	13	261	10.7%
Pleura	1	0	1	0.0%
Trachea, Mediastinum & Pleura	1	0	1	0.0%
RESPIRATORY SYSTEM	280	16	296	12.2%
SOFT TISSUE-INCLUDING HEART	19	4	23	0.9%
Melanoma - Skin	88	10	98	4.0%
Other Non-epithelial Skin	7	1	8	0.3%
SKIN	95	11	106	4.4%
BREAST	555	28	583	24.0%
Cervix	19	2	21	0.9%
Corpus	65	3	68	2.8%
Uterus	1	1	2	0.1%
Ovary	22	4	26	1.1%
Vagina	1	0	1	0.0%
Vulva	9	0	9	0.4%
Other Female Genital	2	0	2	0.1%
FEMALE GENITAL SYSTEM	119	10	129	5.3%
Prostate	238	26	264	10.9%
Testis	10	0	10	0.4%
Penis	0	1	1	0.0%
MALE GENITAL SYSTEM	248	27	275	11.3%
Bladder	105	9	114	4.7%
Kidney	65	8	73	3.0%
Ureter	6	0	6	0.2%
Other Urinary Organs	1	0	1	0.0%
URINARY SYSTEM	177	17	194	8.0%
EYE & ORBIT	1	0	1	0.0%
Brain	54	13	67	2.8%
BRAIN & OTHER NERVOUS SYSTEM	54	13	67	2.8%
Thyroid	64	0	64	2.6%
Other Endocrine, including Thymus	3	1	4	0.2%
ENDOCRINE SYSTEM	67	1	68	2.8%
Nodal	76	2	78	3.2%
Extranodal	29	2	31	1.3%
LYMPHOMAS	105	4	109	4.5%
MULTIPLE MYELOMA	18	4	22	0.9%
LEUKEMIAS	71	8	79	3.3%
MESOTHELIOMA	4	0	4	0.2%
ILL-DEFINED & UNSPECIFIED	69	4	73	3.0%
TOTAL	2266	164	2430	100.0%

Cancer Incidence Comparison Site and Sex

Table 2 compares by site and gender, the top five leading sites of Evanston Northwestern Healthcare 2003 data to national statistics provided by the *American Cancer Society: Facts and Figures 2003*. These figures exclude in situ carcinomas, except for urinary bladder cancers.

The most common primary sites for men are genital, lung, colorectal, bladder and lymphoma. These five sites represent 69 percent of all male invasive

cancers nationally and 62 percent seen at Evanston Northwestern Healthcare.

The most common primary sites for women are breast, genital, lung, colorectal and lymphoma. These five sites represent 73 percent of all female invasive cancers both nationally and here.

Distribution by AJCC Stage for Selected Cases

Graph 3 shows the AJCC Stage at diagnoses for five of our major sites. Eighty-seven percent of our breast

(continued on page 28)

Table 2: Cancer Incidence Comparison, Site and Gender

ACS			ENH	
Female	Incidence*	Percent	Incidence**	Percent
Breast	211,300	32%	550	42%
Female Genital	83,700	13%	119	09%
Lung	80,100	12%	127	10%
Colorectal	74,700	11%	100	08%
Lymphoma	28,700	04%	56	04%
Total All Sites	658,800	73%	1310	73%

ACS			ENH	
Male	Incidence*	Percent	Incidence**	Percent
Male Genital	229,900	34%	248	26%
Lung	91,800	14%	121	13%
Colorectal	72,800	11%	100	10%
Bladder	42,200	06%	72	08%
Lymphoma	32,300	05%	49	05%
Total All Sites	675,300	69%	956	62%

Source: American Cancer Society: Facts and Figures 2002

*Excludes in situ carcinomas except bladder

**Analytic Cases only

Graph 3: Distribution by AJCC Stage for Top 5 Sites

Evanston Northwestern Healthcare, 2003 Analytic Cases

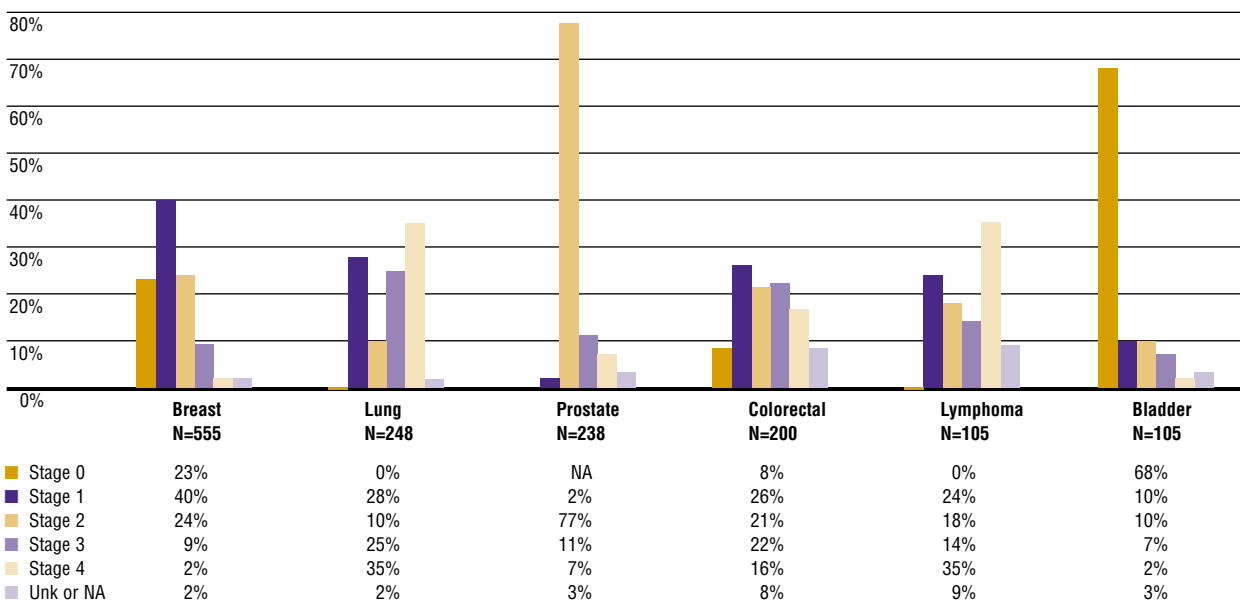


Table 3: Age at Diagnosis by Gender

Male = 956

Age	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Unk	N/A	Total	Percent
0 - 29	0	4	1	5	1	4	5	20	1%
30 - 39	2	12	5	1	1	3	4	28	2%
40 - 49	5	15	14	9	13	5	18	79	7%
50 - 59	14	29	61	24	23	2	19	172	16%
60 - 69	19	32	91	34	30	4	22	232	26%
70 - 79	21	39	73	29	60	11	44	277	31%
80 - 89	19	22	28	21	23	4	17	134	16%
90+	4	1	1	2	3	1	2	14	2%
Total	84	154	274	125	154	34	131	956	100%

Female = 1,310

Age	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Unk	N/A	Total	Percent
0 - 29	0	8	2	0	1	2	4	17	1%
30 - 39	4	23	6	5	0	1	4	43	5%
40 - 49	51	67	45	22	10	5	12	212	14%
50 - 59	36	97	40	38	19	6	24	260	21%
60 - 69	41	89	42	36	31	7	29	275	21%
70 - 79	29	101	43	42	51	6	45	317	24%
80 - 89	14	53	21	17	31	5	16	157	12%
90+	2	10	2	4	3	3	5	29	2%
Total	177	448	201	164	146	35	139	1310	100%

cancers were diagnosed at an early stage (stages 0,1 and 2), reflecting the national trend toward early detection. Seventy-nine percent of our prostate cancers, 55 percent of our colorectal cancers, 42 percent of our lymphomas and 88 percent of our bladder cancers were also diagnosed with early stage disease. Thirty-eight percent of lung cancers were diagnosed at an early stage, higher than what is seen nationally. Symptoms of lung cancer often do not appear until the disease is advanced. Nationally, 30 percent of the lung cases are found in the early stages, before the cancer has spread to nearby lymph nodes or elsewhere. The use of low-dose CT scans to screen high-risk individuals may contribute to earlier detection.

Age at Diagnoses by Gender

Table 3 shows that females are diagnosed at a younger age than males. Forty-one percent of our female and 26 percent of our male patients are diagnosed before the age of 60. Seventy-four percent of our male patients are diagnosed after the age of 60, emphasizing the need for cancer-directed checkups starting at an earlier age. Females were more often diagnosed with early stage disease than the males in all age groups. ■

What's Ahead...

A new facility for cancer care

As the new year begins, Highland Park Hospital will open the doors of its new 67,000-square-foot Ambulatory Care Center. The facility offers convenience to patients diagnosed with cancer by housing the Kellogg Cancer Care Center as well as needed services, including Nuclear Medicine with a new PET/CT scanner, Radiation Oncology with new, state-of-the-art equipment and the Breast Center all in one location. The new facility is connected to the main hospital building.



2004 Evanston Northwestern Healthcare Cancer Committee

The Cancer Committee, a standing committee defined by the bylaws of Evanston Northwestern Healthcare, coordinates all oncology-related activities. This multidisciplinary committee meets bi-monthly and has the responsibility to ensure full compliance with all the standards established by the American College of Surgeons Commission on Cancer for accreditation of the Cancer Program.

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