

# *innovation*

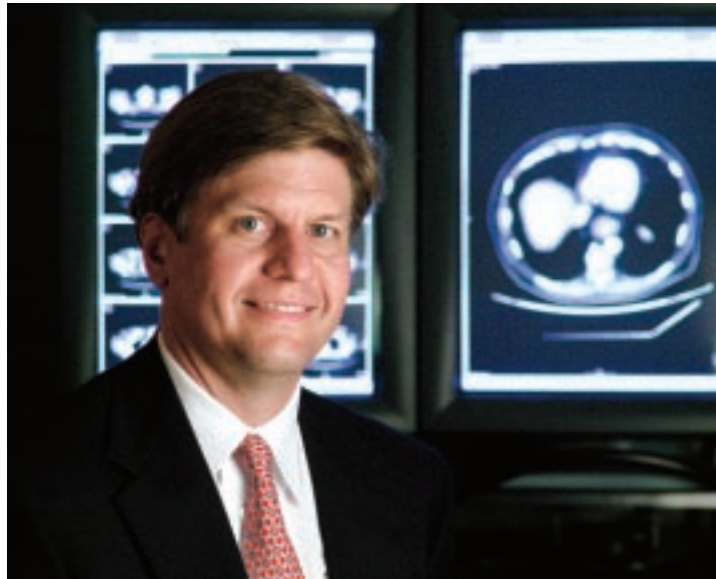


Evanston Northwestern Healthcare Oncology Program \* 2005 Annual Report

Innovation defines  
everything we do.

*innovations*

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**AN OVERWHELMING MAJORITY OF PATIENTS—97 PERCENT—** diagnosed at Evanston Northwestern Healthcare choose to stay here for their treatment. Many patients have returned even after going great distances to seek medical opinions from the country’s most renowned cancer centers. They discovered that in their own community they have access to international cancer specialists, compassionate and knowledgeable clinical staff, cutting-edge research, and emerging treatment options.

A multi-specialty team convenes on behalf of the patient to design and support their treatment plan. The team includes their clinician to guide their care and researchers who are working behind the scenes to improve treatment options. And their primary care physician is an integral part of the team, who is informed every step of the way.

ENH is providing the highest level of care backed by excellence in research. To continue translational research for our patients, philanthropy is crucial. Such support helps to recruit and retain outstanding clinician scientists, to provide them with laboratory space and support them with the latest technology.

Innovation defines everything we do. We are finding new ways to treat cancer and learning why it strikes some families more than others. We are providing the highest level of care backed by excellence in research to benefit patients today and for generations to come.

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael J. Liptay". The signature is fluid and cursive, written on a white background.

Michael Liptay, MD, FACS  
Chairman, Cancer Committee  
Assistant Professor, Feinberg School of Medicine,  
Northwestern University

*breast*

## ENH is taking the lead in research of breast tumors of women with hereditary breast-ovarian cancer.

Using the breast tissue repository Dr. Wendy Rubinstein, Director of the Center for Medical Genetics, is conducting the study through gene expression profiling, a method of studying the activity of all genes at once within a given tissue— the first time BRCA tumors have been studied with microarrays spanning all of the genes in the human genome.

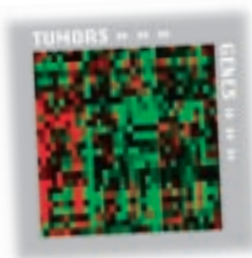
**Fighting cancer through genetics:** Dr. Rubinstein is developing methods to identify BRCA1 and BRCA2 carriers sooner using genetic signatures in their breast tumors. Each tumor has a unique signature, shown by the red and green pattern in the microarray below.



### ONE GOAL OF THE PROJECT

is to identify hereditary breast cancer at the time of initial diagnosis. This information will help play a role in the type of surgical treatment that is used and allow women to make the best choices based on being thoroughly informed about their risks. Early data from the study suggest that further research of breast stem cell genes in BRCA1 tumors may lend insight into the biology of non-hereditary breast cancers, hopefully shedding insight into better treatments. In addition, this work is geared to clarify the clinical significance of genetic variants whose importance—benign or harmful—is currently unknown.

Dr. Rubinstein's team has joined a large, international collaborative study of women who carry mutations in



the BRCA1 or BRCA2 genes, called the PROSE study. These women currently have relatively few clinical options to reduce their high risk of breast and ovarian cancer. Their options include increased screening such as breast MRI, surgery to remove healthy ovarian or breast tissue, and chemopreventive medications. Now, ENH patients who have had positive gene test results for BRCA1 or BRCA2 can enroll in this international study. The ongoing study aims to determine which other genes protect against cancer or heighten the risk, to study the health effects of hormone use after surgical induction of menopause, and to examine the influence of such lifestyle factors as diet and exercise on cancer risk.

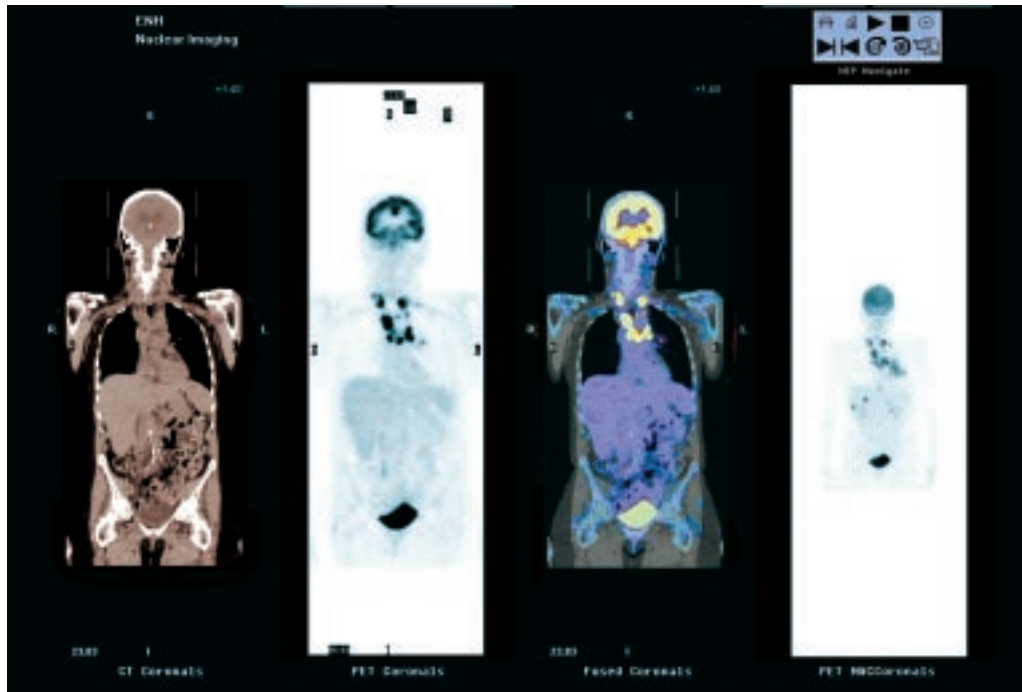
For more information on the program and the research, please call (847) 570-1029.

*lung*

**Dr. Michael Liptay is leading a national study into a novel method for staging lung cancer.**

By injecting the tumor with technetium 99, the surgeon is able to follow the pattern of lymphatic drainage to surrounding sentinel lymph nodes. Staging that is more accurate may help identify patients at highest risk for recurrence.

**Innovation in lung cancer staging:** The fused images below combine anatomical information from CT with functional information from PET, adding more precision to the diagnostic study and staging work-up.



**MICHAEL J. LIPTAY, MD, HEAD OF** the Division of Thoracic Surgery and co-chair of the Thoracic Oncology Program, is studying a novel way to accurately stage lung cancer, which is important in determining the most effective treatment plan after surgery. More accurate staging techniques may assist in identifying patients at highest risk for recurrence and perhaps most likely to benefit from additional therapies. By injecting the tumor with technetium 99, the surgeon is able to follow the pattern of tumor drainage to surrounding sentinel lymph nodes. The nodes that “take up” the tracer are thoroughly examined by the pathologist to determine whether cancer cells are present. The option of adjuvant therapy is based on this information.

Thomas Hensing, MD, co-chair of the Thoracic Oncology Program, is the principal investigator for a

clinical trial of cisplatin and pemetrexed with concurrent radiation for patients with locally advanced non-small lung cancer. He is also partnering with researchers at the University of North Carolina, studying the combination of carboplatin and docetaxel for patients who are surgical candidates. His research includes a trial of carboplatin and pemetrexed with a novel VEGF inhibitor, bevacizumab, for patients with metastatic disease.

The thoracic oncology team collaborates with world renowned cancer centers to bring cutting edge treatment to the North Shore. Currently, ENH researchers are working with Dana Farber Cancer Institute and Harvard Medical School scientists studying gene expression in lung cancer and their unique prognoses.

For more information on the program and the research, please call (847) 570-1370.

# *gastrointestinal*

Researchers at ENH and Northwestern University have teamed up to develop optical technology to detect colorectal cancer in its earliest stages.

Four Dimensional Elastic Light Scattering Fingerprinting allows researchers to obtain information about nano/micro-architecture of living tissue, providing quantitative information about structures that are 10-20 times smaller than those detectable with conventional microscopy.



Identifying colon cancer risk earlier, less invasively: Drs. Roy and Backman developed a probe that examines the microarchitecture of precancerous colon cells during colonoscopy.



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**HEMANT ROY, MD, EVANSTON  
NORTHWESTERN HEALTHCARE  
AND VADIM BACKMAN, PHD, OF  
NORTHWESTERN UNIVERSITY**

are conducting research to enable physicians to detect subtle changes in the microarchitecture of precancerous colon cells at far earlier stages than current technology allows. The findings may lead to the introduction of a reliable screening tool that will help identify individuals at increased risk for colorectal cancer and reduce risk with regular colonoscopy screening.

The research is being conducted using a new generation of advanced optical technology developed by Dr. Backman—Four-Dimensional Elastic Light-Scattering Fingerprinting (4D-ELF). This new technology provides information about objects 20 to 50 times smaller than what conventional microscopy can provide—and allows researchers to detect the beginning stages of colon cancer.

Dr. Roy recently developed a prototype of a probe that can be inserted through the colonoscope to assess risk less invasively. Researchers studied more than 100 patients undergoing colonoscopies and were able to determine with greater accuracy which patients would develop polyps in the colon. This was done by conducting biopsies of the colon tissue. However, in order to make this approach clinically practical, researchers must assess colon cancer risk without taking biopsies.

With support from the National Cancer Institute, ENH researchers will use the probe to predict the presence of polyps and cancer in more than 1,000 patients undergoing colon-oscopy. Researchers will evaluate the ability of these spectral markers to assess an inherited predisposition to colon cancer by collaborating with Dr. Henry Lynch, a pioneer in the genetics of colon cancer.

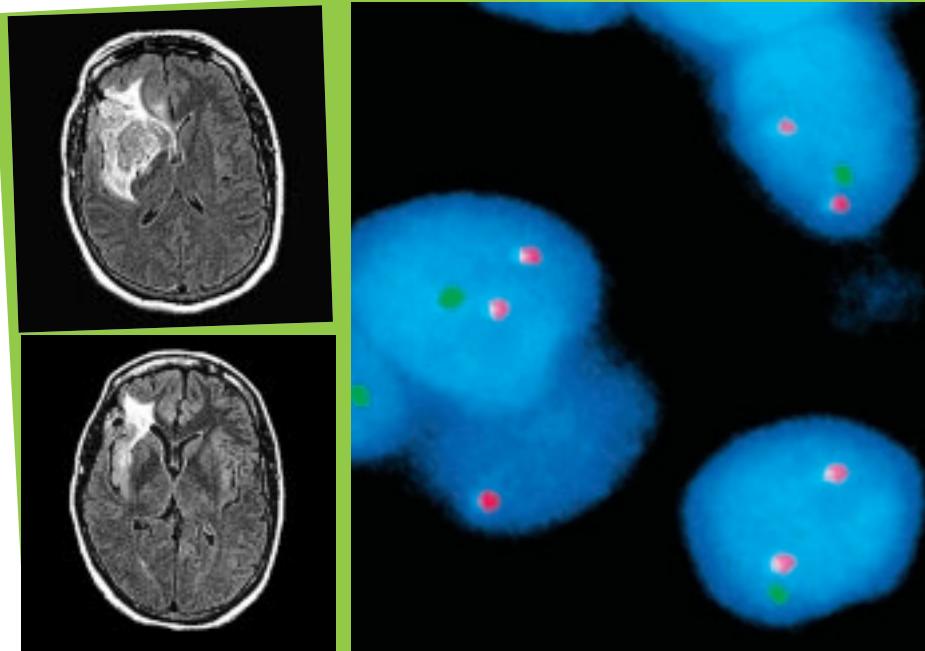
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For more information on the program and the research, please call (847) 570-2195.

# *neuro-oncology*

Convection enhanced drug delivery, peripheral stem cell/chemo protocols, Stealth Navigator, and the latest in radiation techniques are some of the innovations that draw patients to the ENH Neuro-oncology Program.

Patients who have oligodendrogliomas and whose tumors are characterized by chromosomal deletions of 1p and 19q as shown by the fluorescence in situ hybridization (FISH) studies below, predictably respond to chemotherapy. The MRI scans are an example of the dramatic response that can be seen, thus allowing some patients to defer radiation therapy. Nina Paleologos, MD, Director, Neuro-oncology Program pictured below.



## THE NEURO-ONCOLOGY PROGRAM OF EVANSTON NORTHWESTERN HEALTHCARE

is the most established and experienced such program in the greater Chicagoland area—and one of the largest in the country. Our patients are evaluated using state-of-the-art diagnostics and are treated with innovative therapeutic methods designed to prolong survival while improving function and quality of life.

The Neuro-Oncology Program at Evanston Northwestern Healthcare provides diagnosis and comprehensive management for patients with brain and spinal cord tumors, CNS metastases, paraneoplastic syndromes and neurologic complications of cancer treatment. Compassionate and experienced care, counseling and education are delivered by our team of neuro-oncologists, neurosurgeons, radiation oncologists, neuro-oncology nurses and a social worker.



Magnetic resonance imaging (MRI) is the best imaging method for the diagnosis of a primary brain tumor. Standard treatment begins with biopsy or resection of the tumor with the goal of preserving neurologic function. Further treatment is determined based on a number of factors including cell type, grade of the tumor, and extent of resection.

Our neuro-oncologists have taken part in many pivotal studies that have helped bring new therapies to our patients. The ENH Neuro-Oncology Program is a member of the Central Neuro-Oncology Group, and participates in multiple clinical trials evaluating novel treatments including convection therapy and angiogenesis inhibitors. The program was a major contributor to trials that evaluated the only new drug (temozolomide) approved within the last 20 years by the FDA for use in patients with malignant brain tumors. The program is also a founding member of the Oligodendroglioma Tumor Study Group, an international

group evaluating such treatments as high-dose chemotherapy coupled with autologous stem cell transplant for these highly chemosensitive tumors. Convection enhanced drug delivery, a novel method designed to deliver highly selective treatment directly to the tumor bed—is being evaluated in three clinical trials.

Patients with recurrence of Glioblastoma Multiforme, the most aggressive malignant primary brain tumor, are eligible. Therapy involves stereotactically placing catheters into the brain. The biological therapy is then slowly infused over a few days. This therapy consists of a delivery molecule that attaches to cancer cells and not to normal brain cells. The molecule delivers a therapeutic toxin directly to the cancer, sparing normal brain cells and avoiding systemic toxic effects.

ENH neurosurgeons are internationally recognized for their skills in successfully treating brain tumor patients. They have participated in numerous national and international trials to develop new and advanced guidance techniques to make brain surgery safer and more precise. Surgery done with monitoring of language and motor function allows for removal of tumors in eloquent areas of the brain while preserving function. MRI guided biopsy is commonly used for obtaining tissue for diagnosis in patients whose tumors cannot be removed.

The Division of Neurosurgery supports a Skull Base Lab to design and research new surgical approaches and techniques, allowing neurosurgeons greater flexibility in tailoring operations to each patient's unique condition.

ENH radiation oncologists develop treatment plans for each patient to produce the best response with the least damage to normal tissue, using techniques such as stereotactic radiosurgery (SRS), IMRT, and external beam radiation. Recent

equipment acquisitions at all ENH hospital sites ensure the latest innovations in radiotherapy are available.

Evanston Hospital is installing a new stereotactic radiosurgery (SRS) system, the Novalis® platform, manufactured by BrainLAB, which has advanced shaped beam capabilities powered by sophisticated robotic and software technology and a dedicated linear accelerator.

The diagnostic acumen of neuro-oncologists and the precision of neurosurgeons are naturally linked to the quality of the neuro-imaging that is available to them. The Department of Diagnostic Radiology is dedicated to providing images using the latest innovations to best characterize brain lesions. A team of expert neuro-radiologists provides the keen critical eye to interpret these images.

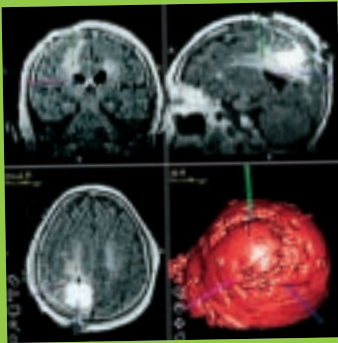
A bimonthly multi-disciplinary conference is held to review and discuss difficult cases to create a comprehensive plan tailored to the specific needs of the patient. Quality of life is factored into all of these treatment plans, adding a significant positive dimension to patient care.

Given the nature of brain tumors it is vital that patients and families be prepared for continual adaptation and role changes. Comprehensive support service encompasses individual and family counseling, resource utilization, and emotional and educational support led by a social worker. Support groups are available for patients and caregivers as an important part the program.

The ENH Neuro-oncology Program is recognized throughout the country for its extraordinary level of expert care, which is why 40% of its patients are referred from beyond the ENH service area and as far away as Florida, Texas, Iowa, and New York. By comparison with American Cancer Society data, the ENH program sees seven times the usual number of brain and CNS tumors as elsewhere in the U.S.

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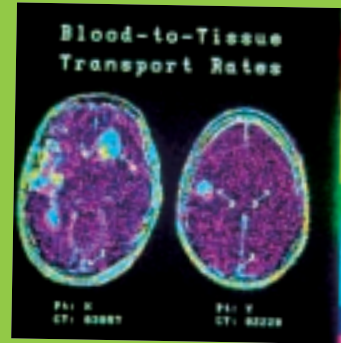
For more information on the Neuro-oncology Program including trials, please call (847) 570-1808.



Computerized stereotactic planning for insertion of catheters for convection enhanced drug delivery is pictured above. With this method, a biological therapy is slowly infused over a few days directly to the tumor bed. The therapy consists of a delivery molecule that attaches only to the cancer cell and delivers a therapeutic toxin, sparing normal cells.



Dr. Jeffrey Cozzens, Head, Section of Neurosurgical Neuro-oncology, is pictured here with the Stealth Navigator, which allows the surgeon to perform safer brain surgery with decreased incidence of neurological deficits.



The difficult issue of drug delivery has been a focus of study in the Neuro-Oncology Research Laboratory. One aspect of this involves blood to brain transport of drug. Convection enhanced delivery is one way to circumvent the blood/brain barrier.



Patients benefit in many aspects of their care from the guidance of a support staff dedicated solely to neuro-oncology.

*genitourinary*

ENH is helping redefine surgical treatment for prostate cancer using innovative technology to prevent the most devastating side effects of the disease.

In an effort to spare nerves and prevent impotence and incontinence from occurring, researchers are studying the latest in optics and light technology to improve visualization during laparoscopic and robotic prostate cancer surgery.

**Lifesaving surgery with fewer side effects:** Wu, Walsh and Johnston (from left) study use of light technology to highlight and visualize nerves (below) to prevent devastating side effects.



### ONE OF THE MOST AGONIZING

decisions faced by men diagnosed with early prostate cancer is whether to have surgery. While studies show surgery saves lives in men younger than 65, the potential side effects include incontinence and impotence. William K. Johnston III, MD, Director of Laparoscopy and Minimally Invasive Urology, is using groundbreaking technology to improve and refine surgical treatment for prostate cancer.

The goal of Dr. Johnston's study is to improve the technology used to see prostate tissue and better preserve nerve tissue during laparoscopic and robotic surgeries. To date, the cameras used for laparoscopic surgery remain rather basic, using only standard white light for imagery. Dr. Johnston,



working in collaboration with Northwestern University Biomedical Engineering's Professor Jay Walsh, PhD, Raheel John, MS, and Paul Wu, PhD, hopes to apply recent advances in optics and light technology to enhance nerve visualization and thereby spare nerves and provide wider and safer surgical margins.

Unlike white light that produces an image based primarily on the light reflected off the surface, other light sources applied during laparoscopy produce an image based on the internal structure and composition below the surface of the tissue, allowing greater appreciation of intricate detail and separation of structures.

Ultimately, this technology will be applicable to many other surgical procedures.

For more information on the program and the research, please call (847) 475-8600.

*gynecologic*

Nationally known Gynecologic Oncology researcher Gustavo Rodriguez, MD, has made a significant discovery in the fight against ovarian cancer.

Currently there is no simple preventive measure to significantly reduce ovarian cancer risk and there is no gold standard screening exam for early diagnosis. Dr. Rodriguez is working to find both.



**A pharmacologic weapon against ovarian cancer:** Dr. Rodriguez is developing new approaches using his own breakthrough discovery about the preventive effects of birth control pills.



## DR. RODRIGUEZ HAS PIONEERED

groundbreaking studies into the area of ovarian cancer prevention, where he seeks to develop pharmacologic approach to preventing ovarian cancer. Routine use of oral contraceptives reduces ovarian cancer risk by 30 to 50 percent, suggesting that a pharmacologic preventive approach is feasible. Dr. Rodriguez's recently published discovery in the Journal of the National Cancer Institute signifies a major step in the battle against ovarian cancer. Dr. Rodriguez's research concludes that the progestin in the birth control pill is turning on molecular pathways in the ovary that have been strongly implicated as normally protecting living organisms from developing cancer, and are believed to indirectly cause the protective effects of other cancer preventative agents such as the breast cancer

drug tamoxifen. These findings open the door both toward development of progestins for ovarian cancer prevention, and non-progestin compounds that selectively activate similar cancer preventive pathways in the ovarian epithelium as potential ovarian cancer preventive agents. Other agents under investigation at ENH, include hormonal agents such as Vitamin D, and non-hormonal agents such as the non steroidal anti-inflammatory drugs (NSAIDs).

It is Dr. Rodriguez's hope that if routine use of oral contraceptives can reduce ovarian cancer risk by 50%, that a pharmacologic strategy could achieve even greater protective effects leading to prevention of most ovarian cancers.

For more information on the program and the research, please call (847) 570-2639.

Highland Park Hospital  
Ambulatory Care Center



In January of 2005, Highland Park Hospital opened its new Ambulatory Care Center. This 67,000-square-foot facility houses the Kellogg Cancer Care Center, a breast imaging center, CT/PET imaging, a CT simulator and a linear accelerator.

Electronic Medical  
Records System



This year, we worked with our technology vendor, Epic Systems, to develop a new module for medical oncology that moves documentation and order entry into the electronic medical record. This oncology module joins clinical care with technology to provide clear, comprehensive treatment plans featuring nursing communication, dosing parameters, standard treatment protocols, and physician access at all points of care.

# 2004 Cancer Data

IN 2004, ENH WAS ONE OF ONLY TWO hospitals in the state of Illinois to receive the American College of Surgeons Commission on Cancer (CoC) Outstanding Achievement Award. Our program exceeds the national standard in providing quality care to cancer patients. For example:

- ENH holds at least six site-specific cancer conferences each week, far exceeding the CoC requirement of one conference per week for teaching hospitals.
- Through the National Cancer Institute, our clinical trials program has been designated a Community Clinical Oncology Program since 1983.
- Accrual to clinical trials from 2004 totaled 955. This represents 42 percent of accessioned cases in 2004, which is well above the 6 percent benchmark set by the CoC for teaching hospital programs.
- In the Cancer Registry, our follow-up rate is 97 percent for all analytic patients diagnosed within the last five years, exceeding the benchmark of 90 percent.
- Our follow-up rate is 95 percent for all analytic patients in the registry, exceeding the 80 percent benchmark for this category.

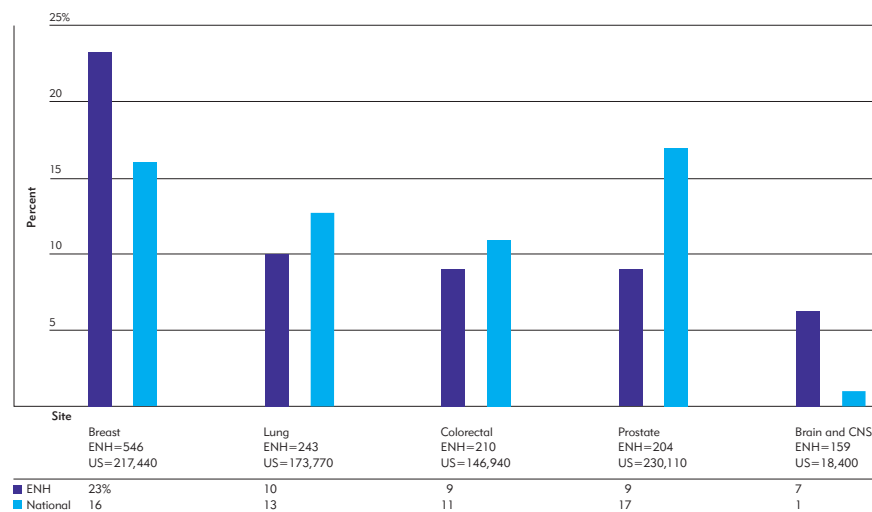
## INCIDENCE OF CANCER 2004

In 2004, a total of 2,587 new cancer cases were accessioned into the Evanston Northwestern Healthcare Cancer Registry. Of those, 2,400 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 187 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.

## COMPARISON OF TOP 5 SITES

Breast cancer continues to be our top site, representing a striking 23 percent of the total analytic cases seen at Evanston Northwestern Healthcare. The next most frequent cancers seen were: lung (10 percent), colorectal (9 percent), prostate (9 percent) and brain and other nervous system at 7 percent. These top five sites represent 58 percent of all newly diagnosed cases. Graph 1 shows how our top 5 sites compare to national figures. With the exception of breast and brain and other nervous system tumors at Evanston Northwestern Healthcare, the incidence of most cancers is similar to that reported nationally.

graph one: cancer incidence comparison of top 5 sites



SOURCE: American Cancer Society: Cancer Facts and Figures, 2004

# 2004 Cancer Data (continued)

table one : incidence of cancer 2004 data summary

Primary Site	Analytic	Non-Analytic	Total	Percent
Tongue	7	3	10	0.4%
Salivary Glands	2	1	3	0.1%
Floor of Mouth	3	0	3	0.1%
Gum and other mouth	3	0	3	0.1%
Nasopharynx	0	2	2	0.1%
Tonsil	4	0	4	0.2%
Oropharynx	1	0	1	0.0%
Hypopharynx	2	0	2	0.1%
<b>Oral Cavity</b>	<b>19</b>	<b>6</b>	<b>25</b>	<b>1.0%</b>
Esophagus	22	0	22	0.9%
Stomach	28	2	30	1.2%
Small Intestine	11	0	11	0.4%
Colon	165	10	175	6.8%
Rectosigmoid Junction	13	0	13	0.5%
Rectum	32	2	34	1.3%
Anus	4	0	4	0.2%
Liver	19	0	19	0.7%
Gallbladder	3	0	3	0.1%
Unspec Digestive Orgs & Pts of Biliary	9	0	9	0.3%
Pancreas	56	2	58	2.2%
Retroperitoneum	3	2	5	0.2%
"Peritoneum, Omentum & Mesentery"	4	0	4	0.2%
<b>Digestive System</b>	<b>369</b>	<b>18</b>	<b>387</b>	<b>15.0%</b>
"Nasal Cav, Middle Ear & Accessory Sinus"	1	1	2	0.1%
Larynx	16	3	19	0.7%
Lung & Bronchus	243	10	253	9.8%
<b>Respiratory System</b>	<b>260</b>	<b>14</b>	<b>274</b>	<b>10.6%</b>
<b>Bones &amp; Joints</b>	<b>4</b>	<b>2</b>	<b>6</b>	<b>0.2%</b>
<b>Soft Tissue-Incl Heart</b>	<b>21</b>	<b>3</b>	<b>24</b>	<b>0.9%</b>
Melanoma—Skin	105	12	117	4.5%
Oth Non-epith Skin	6	0	6	0.2%
<b>Skin</b>	<b>111</b>	<b>12</b>	<b>123</b>	<b>4.8%</b>
<b>Breast</b>	<b>546</b>	<b>22</b>	<b>568</b>	<b>22.0%</b>
Cervix Uteri	14	0	14	0.5%
Corpus Uteri	71	3	74	2.9%
Ovary	33	5	38	1.5%
Vagina	4	0	4	0.2%
Vulva	5	0	5	0.2%
Oth Female Genital	1	0	1	0.0%
<b>Female Genital System</b>	<b>128</b>	<b>8</b>	<b>136</b>	<b>5.3%</b>
Prostate	204	18	222	8.6%
Testis	21	0	21	0.8%
Oth Male Genital	1	0	1	0.0%
<b>Male Genital System</b>	<b>226</b>	<b>18</b>	<b>244</b>	<b>9.4%</b>
Bladder	96	8	104	4.0%
Kidney	58	3	61	2.4%
Ureter	5	1	6	0.2%
Oth Urinary Organs	2	0	2	0.1%
<b>Urinary System</b>	<b>161</b>	<b>12</b>	<b>173</b>	<b>6.7%</b>
<b>Eye &amp; Orbit</b>	<b>8</b>	<b>3</b>	<b>11</b>	<b>0.4%</b>
Brain	101	39	140	5.4%
Cranial Nerves Oth Nerves	58	5	63	2.4%
<b>Brain &amp; Oth Nervous System</b>	<b>159</b>	<b>44</b>	<b>203</b>	<b>7.9%</b>
Thyroid	52	7	59	2.3%
"Oth Endocrine, incl Thymus"	35	4	39	1.5%
<b>Endocrine System</b>	<b>87</b>	<b>11</b>	<b>98</b>	<b>3.8%</b>
Nodal	90	6	96	3.7%
Extranodal	46	0	46	1.8%
<b>Lymphomas</b>	<b>136</b>	<b>6</b>	<b>142</b>	<b>5.5%</b>
<b>Multiple Myeloma</b>	<b>15</b>	<b>0</b>	<b>15</b>	<b>0.6%</b>
<b>Leukemias</b>	<b>64</b>	<b>6</b>	<b>70</b>	<b>2.7%</b>
<b>Mesothelioma</b>	<b>7</b>	<b>0</b>	<b>7</b>	<b>0.3%</b>
<b>III-Defined &amp; Unspecified</b>	<b>76</b>	<b>2</b>	<b>78</b>	<b>3.0%</b>
<b>Total</b>	<b>2400</b>	<b>187</b>	<b>2587</b>	<b>100.0%</b>

table two: top 5 sites site comparison by gender 2004 data

	ACS		ENH	
	Incidence*	Percent	Incidence*	Percent
<b>Female</b>				
Breast	215,990	32%	405	35%
Lung	80,660	12%	142	12%
Female Genital	82,550	12%	128	11%
Colorectal	73,320	11%	104	8%
Lymphoma	29,070	4%	60	5%
Total	668,470	72%	1401	72%

	ACS		ENH	
	Incidence*	Percent	Incidence*	Percent
<b>Male</b>				
Prostate	230,110	34%	203	22%
Lung	93,110	14%	101	11%
Colorectal	73,620	11%	95	10%
Bladder	44,640	7%	71	8%
Brain	10,540	2%	52	6%
Total All Sites	669,560	68%	926	56%

Source: American Cancer Society: Facts and Figures 2004

\*Analytic Cases only, excludes in situ except bladder

## CANCER INCIDENCE COMPARISON SITE AND SEX

Table 2 compares Evanston Northwestern Healthcare 2004 data to national statistics provided by the American Cancer Society: Facts and Figures 2004, by site and gender for the national top 5 leading sites. These figures exclude in situ carcinomas except urinary bladder.

The most common primary sites for men are prostate, lung, colorectal, bladder and brain. These five sites represent 68 percent of all male invasive cancers nationally and 56 percent seen at Evanston Northwestern Healthcare.

The most common primary sites for women are breast, lung, genital, colorectal, and lymphoma. These five sites represent 72 percent of all female invasive cancers both nationally and here.

## DISTRIBUTION BY AJCC STAGE FOR SELECTED CASES

Ninety percent of our breast cancers were diagnosed at an early stage (stages 0, 1 and 2), reflecting the national trend toward early detection. Eighty percent of our prostate cancers, 56 percent of our colorectal cancers, 49 percent of our lymphomas and 88 percent of our bladder cancers were also diagnosed with early stage disease.

Thirty-two percent of lung cancers were diagnosed at an early stage, significantly higher than what is seen nationally. Symptoms of lung cancer often do not appear until the disease is advanced. Twenty percent of the national lung cancer cases are found in the early stages, before it has spread to nearby lymph nodes or elsewhere.

*National data supplied by the NCDB, Commission on Cancer, ACoS Benchmark Reports v3.0.*

## 2004 Cancer Data (continued)

### CLASS OF CASE 2004

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 2,025 cases, were those malignancies diagnosed at one of our three hospitals. Once diagnosed with cancer, 1,958 (97%) of our patients remained at Evanston Northwestern Healthcare for their treatment. Class 2, a total of 375 cases were diagnosed elsewhere and referred here for treatment. Class 3, a total of 182 cases were diagnosed and treated elsewhere and referred here for treatment of a recurrence or progression of disease.

### 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 31 percent of our male patients are diagnosed before the age of 60. Sixty-nine 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.

table three: age and stage at diagnosis by gender

Male = 994	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Unk	N/A	Total	Percent*
0 - 29	0	5	4	1	2	0	13	25	2.5%
30 - 39	0	13	3	3	4	0	11	34	3.4%
40 - 49	6	20	15	11	12	7	20	91	9.2%
50 - 59	15	22	50	17	24	3	32	163	16.4%
60 - 69	13	37	61	27	35	4	32	209	21.0%
70 - 79	35	56	77	31	42	6	40	287	28.9%
80 - 89	20	30	37	15	27	10	26	165	16.6%
90 +	5	4	4	2	3	0	1	20	2.0%
<b>Total</b>	<b>94</b>	<b>187</b>	<b>251</b>	<b>107</b>	<b>149</b>	<b>30</b>	<b>176</b>	<b>994</b>	<b>100.0%</b>
<b>Percent*</b>	<b>9.5%</b>	<b>18.8%</b>	<b>25.3%</b>	<b>10.8%</b>	<b>15.0%</b>	<b>3.0%</b>	<b>17.7%</b>	<b>100%</b>	

Female = 1,400	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4	Unk	N/A	Total	Percent*
0 - 29	2	5	2	0	0	0	13	22	1.6%
30 - 39	9	24	14	2	1	0	17	67	4.8%
40 - 49	41	67	30	13	10	1	26	188	13.4%
50 - 59	41	95	47	31	28	2	46	290	20.7%
60 - 69	36	96	42	22	34	5	36	271	19.4%
70 - 79	36	108	40	39	44	9	56	332	23.7%
80 - 89	18	62	28	25	32	6	28	199	14.2%
90 +	2	8	6	7	1	4	3	31	2.2%
<b>Total</b>	<b>185</b>	<b>465</b>	<b>209</b>	<b>139</b>	<b>150</b>	<b>27</b>	<b>225</b>	<b>1400</b>	<b>100%</b>
<b>Percent*</b>	<b>13.2%</b>	<b>33.2%</b>	<b>14.9%</b>	<b>9.9%</b>	<b>10.7%</b>	<b>1.9%</b>	<b>16.1%</b>	<b>100%</b>	

\*May not add up to 100 due to rounding

## 2005 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. All academic appointments are to Northwestern University's Feinberg School of Medicine.

### MEMBERS

#### chairman

Michael J. Liptay, MD, FACS  
Assistant Professor  
Surgery, Cardiothoracic

#### vice chairman

Bruce E. Brockstein, MD  
Assistant Professor  
Medicine, Hematology  
Oncology

#### physician liaison

Richard S. Berk, MD, FACS  
Assistant Professor  
Clinical Surgery, General

#### medical staff

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Medicine, Gastroenterology

Leon Dragon, MD, FACP  
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Surgery, Otolaryngology

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Professor of Surgery  
Surgery, General

### ANCILLARY MEMBERS

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Records Services

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Care Center

Doreine Carson, CCRP  
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Laurel Gage, RHIT, CTR  
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