



Virginia Piper Cancer Institute

OVERVIEW AND OUTCOMES REPORT 2008



Overview and Outcomes Report 2008

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Letter from the Medical Director

TIMOTHY D. SIELAFF, MD, PHD, MBA, FACS
 MEDICAL DIRECTOR OF THE VIRGINIA PIPER CANCER INSTITUTE



I am very proud to introduce this first annual Overview and Outcomes Report on the quality and outcomes afforded by the Virginia Piper Cancer Institute programs.

The most important ethic of the physicians, nurses and allied health care providers at the Virginia Piper Cancer Institute is to offer each patient comprehensive care in the most compassionate setting. The Virginia Piper Cancer Institute care model was established more than 10 years ago in the Piper Breast Center™

as a result of the work of health care providers, patients and community members. The model is focused on multidisciplinary specialized care. This means that members from all relevant care and support specialties meet on a regular basis to review the care of new and existing patients. We now have eight different organ-focused programs. Each team is lead by a medical director and RN coordinator, and is composed of specialists from a wide variety of fields who work together to facilitate the diagnostic process, to consider all available therapeutic options, establish a care plan and monitor progress.

Our partner in medical oncology is Minnesota Oncology Hematology, PA. These exceptional physicians and nurses drive innovative care and clinical research in all of our programs. The physician leaders bring to bear national reputations and connections to ensure that patients at the Virginia Piper Cancer Institute are afforded the most advanced therapies. Likewise, Minnesota Radiation Oncology offers the most technologically advanced therapies in the region—including respiratory gated stereotactic radiosurgery, selective internal radiation therapy, prostate seed implantation and high dose rate brachytherapy.

Patient-centered care requires significant resources, and the Virginia Piper Cancer Institute functions to assist its independent care partners in this process. Nurse coordinators are central to the care teams. These nurses are highly trained and specialized in their specific areas. The coordinators work with patients and referring physicians from the first contact with the Virginia Piper Cancer Institute through all aspects of care and recovery. Their attention to the whole process of cancer care greatly enhances patient satisfaction and helps anticipate and avoid therapy-related complications and duplication of services. Our teams also endeavor to work very closely with the primary physician. We believe the nurse coordinators and the implementation of the Excellian electronic medical record and MyChart will facilitate timely follow up and coordination of all aspects of care both on and off our campus.

Cancer is being cured in an increasing number of patients; for some, it is becoming a chronic disease. For these patients, cancer rehabilitation and survivorship are essential. Through collaboration with the Sister Kenny® Rehabilitation Institute and Abbott Northwestern's Penny George Institute for Health and Healing, we are able to bring together substantial resources to restore our patients' health and function.

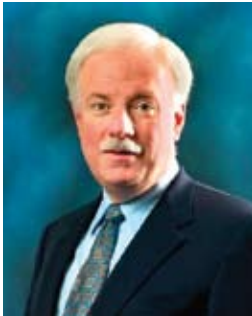
Objective measures of our exceptional care model include being named one of the 2007 US News & World Report's Best Hospitals for Cancer Care, and a Blue Cross Blue Shield Blue Distinction Center for Complex and Rare Cancers, focusing on complex inpatient and surgical care. This complex and rare cancer designation was given to only 85 hospitals nationally. Criteria for selection included exceeding volume thresholds for annual surgical cases treated, using multidisciplinary team input for treatment planning (including sub-specialty trained teams), participating in ongoing quality management and improvement programs for cancer care, committing to the use of clinical data registries and participating in relevant clinical research. The Virginia Piper Cancer Institute is also a Teaching Hospital Cancer Program and member of the American College of Surgeons' Commission on Cancer, and was recently approved with commendation.

The Institute has close ties to the community and its members are humbled by the support received through the Vision Campaign. Over the past three years as a result of the generous support of more than 4,000 donors and Allina Hospitals & Clinics, we have nearly reached our \$33 million goal. This philanthropic support provides the "margin of excellence."

What follows is a description of the programs at the Virginia Piper Cancer Institute. Our goal is to provide you with quantitative information that reflects the excellence of the work of our physicians, nurses and allied health professionals. Quality, of course, can be difficult to define and quantify. Yet we all know quality when we see it. As the largest cancer center in the Twin Cities, we are striving to take a lead in redefining cancer care in all its forms. We believe the Virginia Piper Cancer Institute care model facilitates the most efficient and cost effective evaluations and the right care. I trust this document will demonstrate how the members of the Virginia Piper Cancer Institute are dedicated to improving the care of both today's and tomorrow's patients.

Letter from the President of MOHPA

THOMAS P. FLYNN, MD
PRESIDENT OF MINNESOTA ONCOLOGY HEMATOLOGY, P.A.



The physicians at Minnesota Oncology Hematology, PA (MOHPA) are proud to work with the Virginia Piper Cancer Institute. The physicians who practice at our clinic in the Piper Building at Abbott Northwestern Hospital work particularly closely with the medical leadership and personnel of the Virginia Piper Cancer Institute. MOHPA's medical oncologists and gynecologic oncologists partner with other specialists affiliated with the Virginia Piper Cancer Institute to provide the highest quality, state-of-the-art care for patients

with a wide range of malignancies.

MOHPA physicians are active participants in the multidisciplinary care teams for several types of malignancies including breast, lung, gastrointestinal, head and neck, gynecologic and prostate cancers. We participate regularly in the multidisciplinary tumor conferences that are held several times a month. While we contribute to the care and treatment of these patients in a number of ways, a particular role that we often serve is to act as the primary physician for the cancer care being delivered, functioning as the coordinator of the overall cancer treatment plan and managing the side effects of treatment. We provide hospital consultations when appropriate and are involved in the inpatient management of cancer patients.

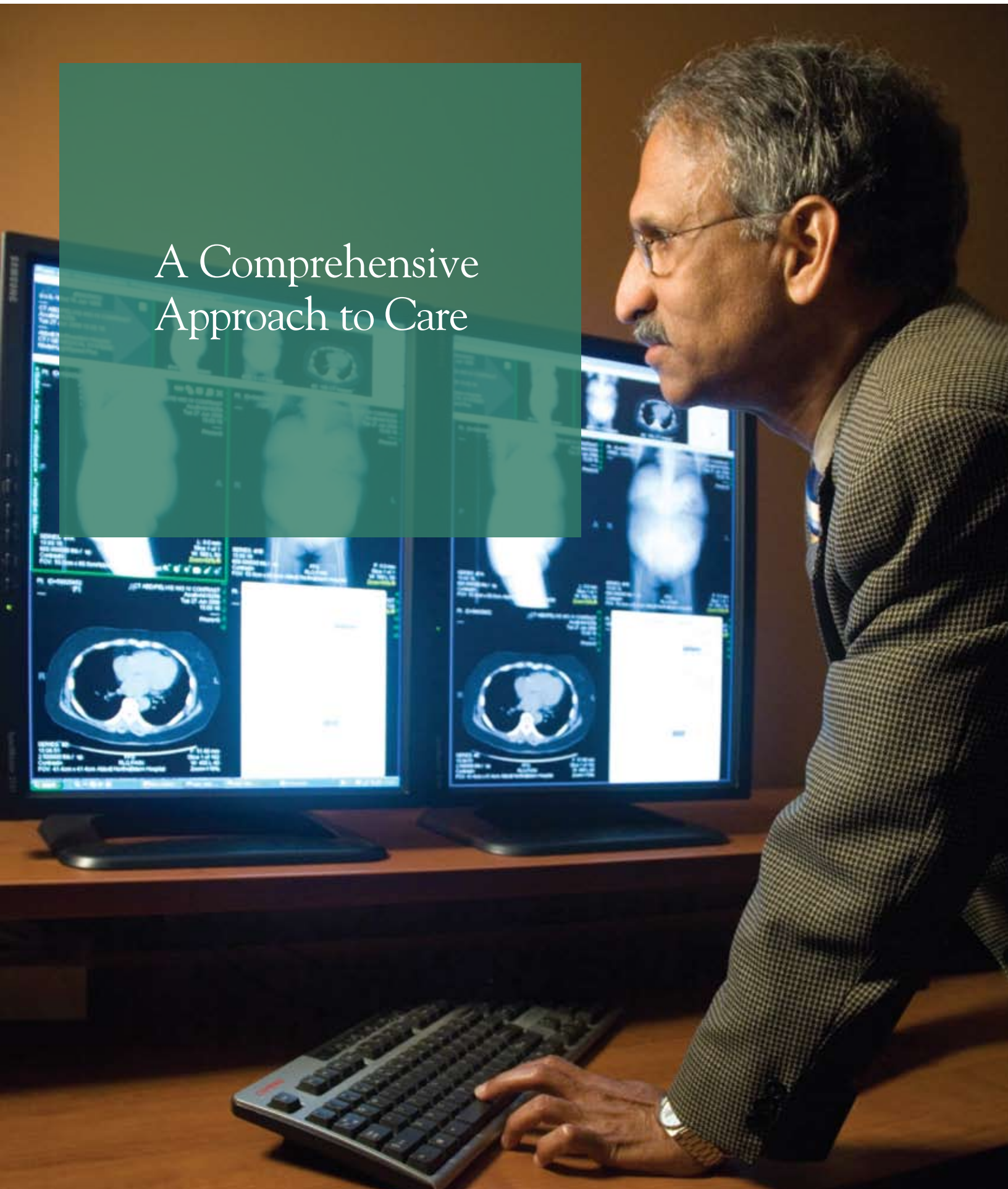
As part of the multidisciplinary care teams, we interact regularly with physicians in other specialties including surgery, pulmonology, gastroenterology, surgical subspecialists (hepatobiliary and colorectal surgery), urologists, head and neck surgery, and radiation oncology. The contributions of the RN coordinators for the various tumor types are critical to our ability to deliver the highest quality of care for these patients, and we welcome the opportunity to work with them closely.

MOHPA physicians established and continue to lead the autologous blood and marrow stem cell transplant program, which provides a unique and effective treatment approach for a selected group of patients. The physicians involved in this program work closely with the nurse coordinator, social worker, dietitian and pharmacists, as well as with the physicians and technical personnel of the Memorial Blood Center who collect and store the stem cells.

Recognizing the importance of additional resources and the contributions they make to the comprehensive treatment of the cancer patient, we collaborate with physicians and programs in the Sister Kenny Rehabilitation Institute as well as the many professionals in Abbott Northwestern's Penny George Institute for Health and Healing.

By collaborating with the medical leadership and programs of the Virginia Piper Cancer Institute, its exceptional personnel and the other physician groups who dedicate their time and talent to these efforts, MOHPA's ability to deliver world class cancer care is immeasurably enhanced.

A Comprehensive Approach to Care



Multidisciplinary Care and the Tumor Conference

AT THE VIRGINIA PIPER CANCER INSTITUTE, MULTIDISCIPLINARY CARE IS A DAILY REALITY.

Multidisciplinary care models were first developed in the Piper Breast Center. A dedicated group of physicians, nurses and, importantly, patients came together with a goal of doing things better. Out of their groundbreaking work evolved the standard for breast health care in the region—the Piper Breast Center. As a result of this work, the Piper Breast Center has become a regional leader in breast care, and its paradigm has been emulated by many other institutions.

It soon became clear that this type of patient-centered, multidisciplinary care was essential for optimal cancer care across the spectrum of diseases. Over the past five years, the Virginia Piper Cancer Institute has developed a total of eight multidisciplinary, organ-specific treatment programs for:

- breast cancer
- prostate/ genitourinary cancer
- gastrointestinal cancer (colorectal, esophageal/gastric, liver/pancreas)
- neuro-oncology
- lung cancer
- head and neck cancer
- gynecological oncology
- hematology/lymphoma and autologous stem cell transplant.

Each program was built around a core of energetic, specialized providers who were driven by the desire to better serve their patients and advance cancer care. The programs' members include a medical director who oversees the program, a nurse coordinator, and multiple specialists and allied professionals with special interest and training. The programs include medical and radiation oncologists, surgeons, physiatrists, palliative care physicians, radiologists, pathologists, research nurses and other allied health fields, e.g., nutrition.

The tumor conferences are held regularly so that team members can discuss management recommendations for new patients as well as evaluate the progress of current patients. In addition to treatment planning, tumor conference discussions may include the oncology social worker's management of social concerns, the genetic counselor's identification of possible risks to family members, or a palliative care plan for patients who are experiencing chemotherapy-related complications. A wide variety of resources are brought together for the care of each patient.

As a result of these concentrated, management-focused tumor conferences, we are able to actively screen patients for potential clinical trial participation. Our research nurses attend all the different team conferences with a complete list of available trials. We believe the only way to advance cancer care for the future is to learn about the care we provide now. Clinical research is a key priority of the Virginia Piper Cancer Institute cancer care teams. At any one time we have more than 80 trials open for enrollment. Our multidisciplinary care culture promotes clinical research.

Multidisciplinary care ensures our patients are afforded comprehensive consideration of all potential treatment options. These clinical trials, some developed as part of collaborations with national research consortiums, ensure that our patients have access to the most current therapeutic agents.



There were 170 tumor conferences in 2007. Ninety-seven percent of the conferences were attended by a medical oncologist and radiation oncologist. Ninety-nine percent of the conferences were attended by surgeons, pathologists and radiologists.



Marie Kramer, RN, meets with family members.

Care Coordination

The nurse coordinators are essential members of our cancer care teams. These individuals are experienced registered nurses who meet with patients and families to provide support and assist in efficiently navigating the complex medical system, from diagnosis through cancer treatment. The role of the nurse coordinator ranges from communicating with referring physicians to providing patients and their families with information regarding their treatment plan and support programs. They ensure that the specialists involved have complete records, teach patients about their disease process, and address concerns and expectations. They are essential in helping patients through the initial high-stress time so they feel prepared for the steps involved in their diagnosis and treatment.

The Virginia Piper Cancer Institute has nurse coordinators for the following programs:

- Piper Breast Center
- Neuro-Oncology Program
- Esophageal/Gastric Cancer Program
- Head and Neck Cancer Program
- Lung Cancer Program
- Pancreatic/Liver Cancer Program
- Prostate Cancer Program
- Stem Cell Transplant Program
- Cancer Rehabilitation.

Radiation Oncology

LETTER BY CAROL M. GRABOWSKI, MD, MEDICAL DIRECTOR



Our participation in multidisciplinary programs continues to grow, such that we are present at weekly breast, lung, gastrointestinal, pediatric, neuro-oncology, genitourinary, head and neck, and gynecologic oncology working conferences. We enjoy the support of nurse coordinators who aid the patients in coordinating their care and managing their treatment-related side effects in many of these groups.

We look forward to continued growth within our department in the coming year, both as it relates to space and to the acquisition and implementation of new cancer technologies. Our primary goal will be to provide the best available radiation care in a comfortable, supportive and safe setting for our patients.



The Radiation Oncology Department has enjoyed tremendous growth in the past three years, initiating a number of new programs and enriching existing programs.

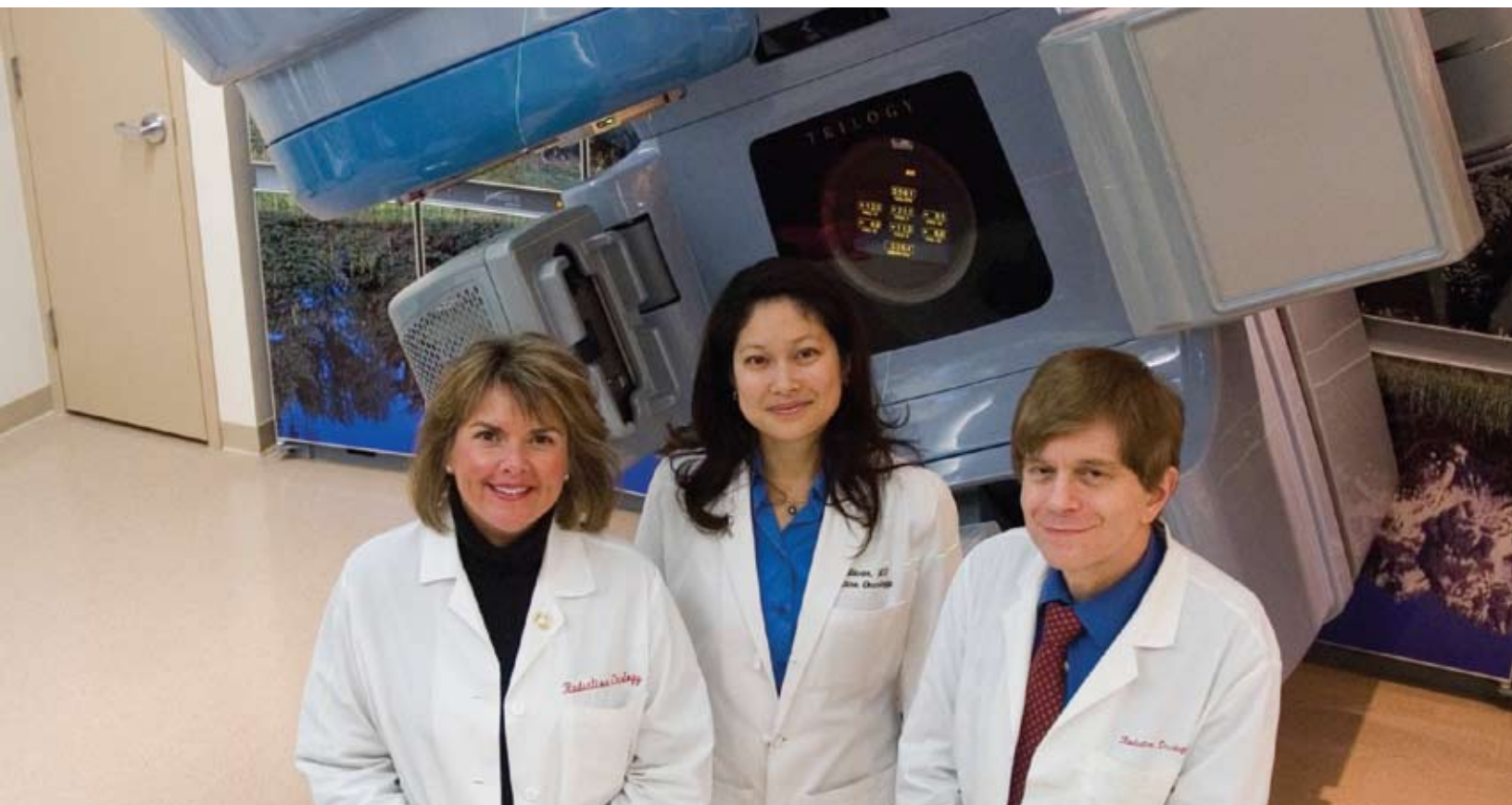
In September 2006, the Varian Trilogy® linear accelerator was commissioned, and with it came a range of new capabilities. We have expanded our cranial stereotactic radiosurgery programs, both single treatment and multiple treatment regimens. We have implemented image guidance,

having both kilovoltage and CT fusion ability for the highest possible field placement accuracy. Respiratory gating—the ability to coordinate a patient’s breathing cycles with the treatment beam activation—was initiated with the aid of a generous grant from the Randy Shaver Cancer Research & Community Foundation. This feature allows us to offer extra-cranial stereotactic treatment, giving high doses of radiation accurately to tumors.

High dose rate brachytherapy volumes have steadily increased for all tumor types, most significantly for gynecological cancers. We have the ability to perform selective internal radiation therapy (SIRT) delivery for patients with residual liver disease after treatment for metastatic colorectal cancer. The Virginia Piper Cancer Institute was an early adopter of this technology, and we have now performed more than 100 cases.

Overview

Our patient-focused Radiation Oncology Department team is defined by its dedicated, passionate staff and highly experienced physician leadership. All of our nurses are oncology-certified registered nurses; all radiation therapists are also certified. The department has a superb reputation in the community due to its strong combination of staff expertise and state-of-the-art clinical technology. The department boasts remarkable patient satisfaction scores, and the staff live and breathe by the philosophy that each patient is treated as if he or she were our family member. We embrace the use of cutting-edge treatment techniques by adapting new technology early and aggressively to improve survival outcomes with minimal side effects for a broad range of cancer types. We have a strong appetite for ongoing growth so that we can continue to offer the latest in radiation therapy treatments to our patients. Our computerized treatment planning is highly sophisticated and often uses PET-CT data and/or CT-MRI fused data. Our Trilogy linear accelerator allows for a variety of image-guided treatment options to implement these complex, computerized treatment plans.



(Left to right) Radiation oncologists Carol Grabowski, MD; Patsa Sullivan, MD; and David Monyak, MD.

Highlights of our program include:

- We were the first high dose rate (HDR) brachytherapy program in Minnesota. We have performed more than 1,500 treatments using this technology.
- We have more than eight years of experience in using IMRT (intensity modulated radiation therapy) for a wide variety of cancers.
- We have more than 15 years of experience using linear accelerator-based SRS (stereotactic radiosurgery) and SRT (stereotactic radiotherapy), successfully treating more than 350 patients.
- We perform respiratory gating, IGRT (image-guided radiation therapy), CBCT (cone beam computerized tomography) and marker-to-marker match radiation therapy treatments.
- Other specialty treatments include ECR (endocavitary radiation), prostate seed implants, Gliasite® or Iotrex, Mammosite® HDR, Quadramet®, Metastron® and Zevalin® isotope treatments.

The year 2007 brought the advent of SBRT (stereotactic body radiation therapy) to the department, using the Bodyfix system®. Special SBRT cases also employ respiratory gating with this new treatment technique.

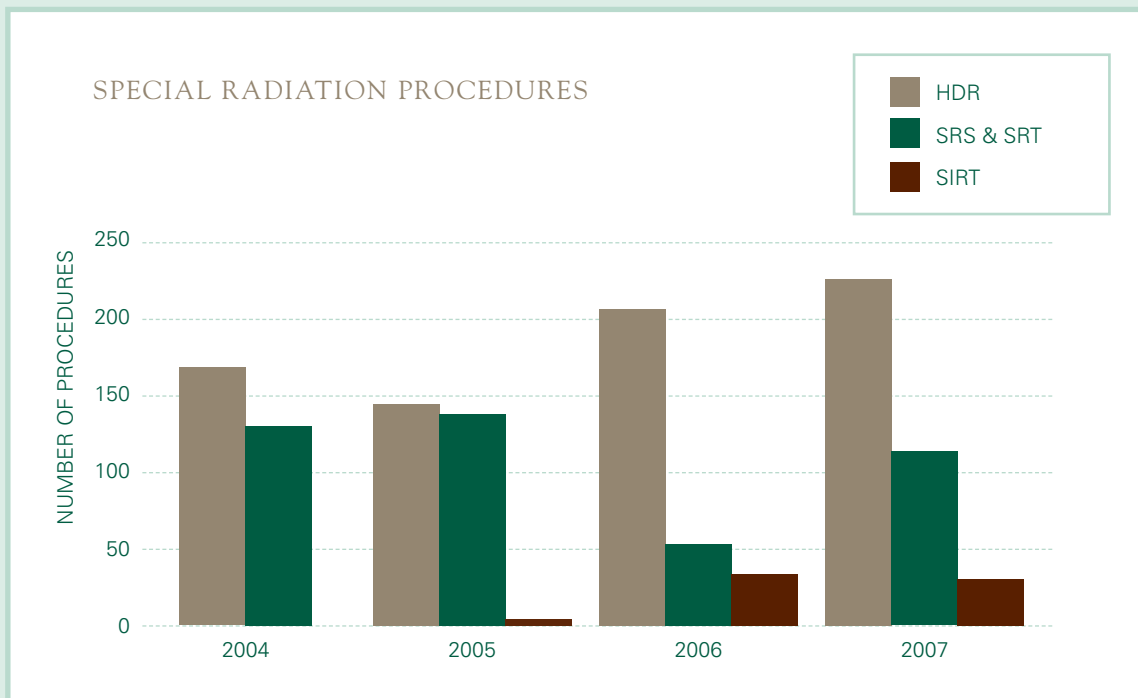
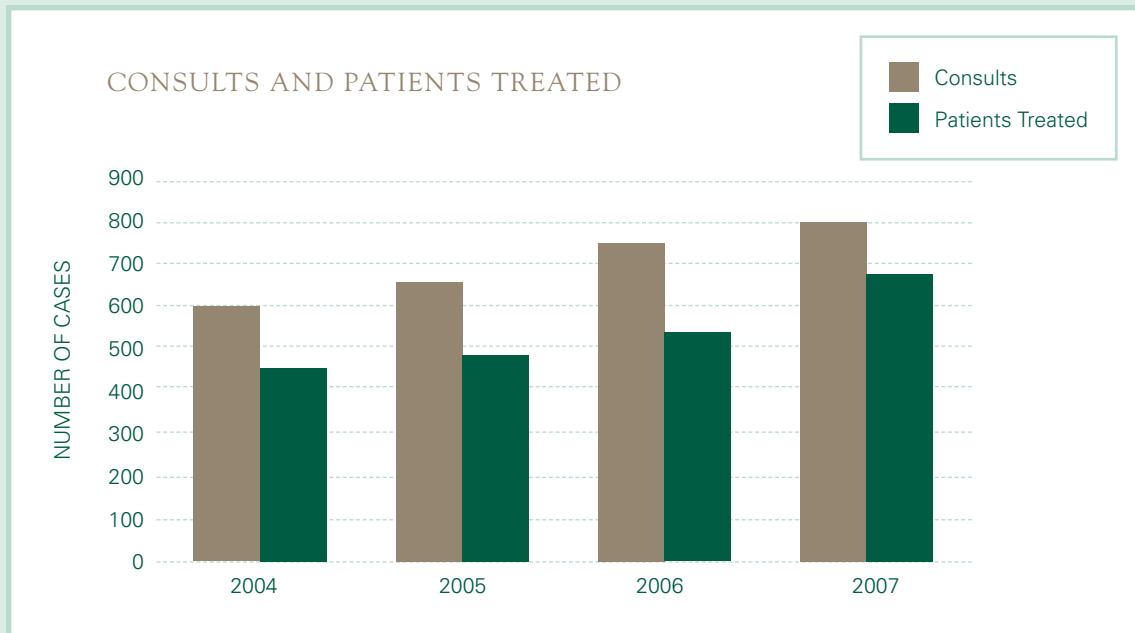
The department operates one of the most active SIRT programs in the upper Midwest and is in the top five in the U.S. for SIRT treatment volumes for the same period.

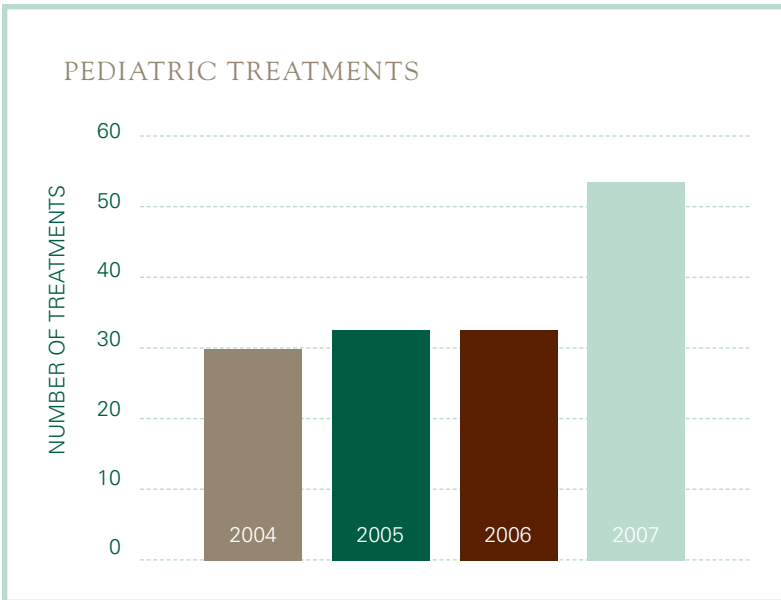
Clinical Trials

The department actively participates in a variety of cancer research groups:

- CCG (Children's Cancer Group)
- GOG (Gynecology Oncology Group)
- CCOP (Community Clinical Oncology Program)
- CGOP (Cooperative Group Outreach Program)
- RTOG (Radiation Therapy Oncology Group)
- ECOG (Eastern Cooperative Oncology Group)
- NWTSG (National Wilm's Tumor Study Group)
- NCCTG (North Central Cancer Treatment Group)
- NSABP (National Surgical Adjuvant Bowel and Breast Project).

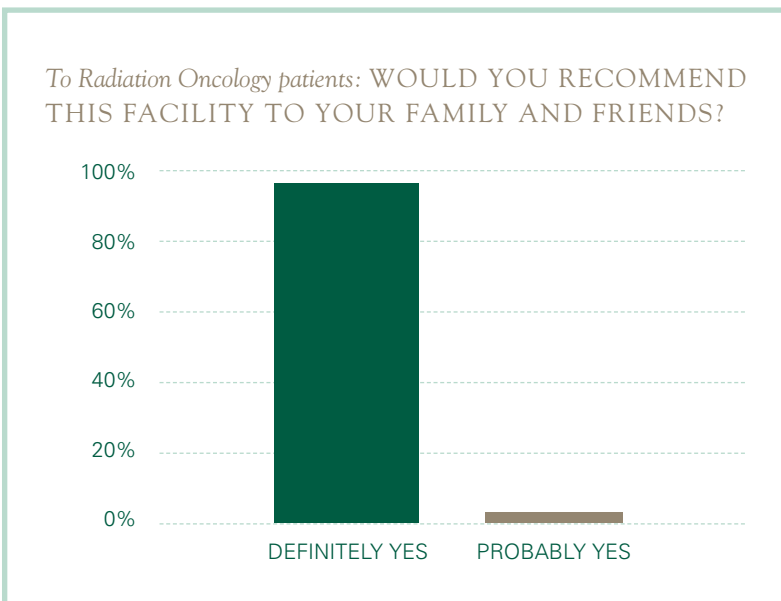
Volume, Quality and Outcome Measures





PEDIATRIC RADIATION ONCOLOGY

Virginia Piper Cancer Institute physicians are experts in pediatric radiation oncology. They collaborate with physicians and staff from Children’s Hospitals of Minnesota’s Hematology/Oncology Program. Abbott Northwestern’s Radiation Oncology Department serves pediatric patients with a wide range of pediatric solid tumors and cranio-spinal malignancies, using radiation therapy services including the Varian Trilogy linear accelerator for SRS and SRT treatments, and standard 3D-CRT, IGRT and IMRT approaches. The treatment of pediatric patients requires special communication skills, compassion and patience. Our work with this patient group and their families comprises some of our proudest moments.



Patient Satisfaction Survey Results

Ninety-five percent of our patients responded “Definitely Yes” in response to the survey question: “Would you recommend this facility to your family and friends?”





Kenneth Batts, MD, and Tamera Lillemoe, MD

Cancer Pathology

Overview

The Virginia Piper Cancer Institute's pathology needs are served by Hospital Pathology Associates, PA, (HPA), a 35-pathologist group based in the Twin Cities. By virtue of its size—it is by far the largest private pathology group in the region—HPA has assembled a number of pathologists with subspecialty interests that mesh with the Virginia Piper Cancer Institute's multidisciplinary model of patient care. The pathologists are actively involved with patient care through the direct interpretation of patient specimens and through the co-direction of patient management conferences, at which they participate in discussions of diagnosis and management of diseases. In addition, they play a vital role in educating physicians, nurses and other staff about diseases and leading various Virginia Piper Cancer Institute research initiatives. John Reinartz, MD, serves as medical director of Cancer Pathology.

BREAST PATHOLOGY Tamera Lillemoe, MD, and Leslie Diaz, MD, support the pathology needs of the Virginia Piper Cancer Institute's Piper Breast Center and play a vital role in patient care, education and research. Lillemoe has 17 years of experience in breast pathology at Abbott Northwestern Hospital and has been with Virginia Piper Cancer Institute since the inception of the breast program. She has participated in several studies involving breast cancer patients at the Piper Breast Center, most of which have centered around sentinel lymph node biopsies and outcome studies on breast cancer patients. Diaz joined HPA in 2005 after serving as a breast pathologist and completing a fellowship in breast pathology. He has published extensively on breast carcinoma, with a special interest in prognostic markers and the "triple negative" form of breast carcinoma.

GASTROINTESTINAL PATHOLOGY (including liver, biliary system and pancreas) The Virginia Piper Cancer Institute's gastrointestinal pathology services are served by Kenneth Batts, MD; Lawrence Burgart, MD; and Harrison Dilworth, MD. Batts and Burgart completed gastrointestinal pathology fellowships, are both former heads of the gastrointestinal pathology working group of the Mayo Clinic, and each have more than 16 years of experience in gastrointestinal pathology. Batts has a particular interest in liver and biliary cancer, has published more than 100 articles and several book chapters, and has co-authored a textbook. Recent publications involve serrated colorectal neoplasia, hepatocellular carcinoma and esophageal carcinoma. Current projects include examining the Virginia Piper Cancer Institute's experience with gastroesophageal junction cancers and complications of liver radiation therapy. Burgart has a particular interest in

colorectal neoplasia and hereditary non-polyposis colon cancer, has published more than 100 articles and several book chapters, and serves on national committees involving colorectal neoplasia. Recent publications and current projects focus on colorectal neoplasia. Both Batts and Burgart speak extensively locally, regionally and nationally. Dilworth began working with the Virginia Piper Cancer Institute in 2004 after he completed a fellowship. He has a general interest in gastrointestinal neoplasia, has spoken nationally on precursors of gastric cancer, and leads pathology resident education at Abbott Northwestern Hospital.

GENITOURINARY PATHOLOGY Milton Datta, MD; Lisa Lyons, MD; and Anil Tadavarthy, MD; make up the HPA genitourinary pathology service and are actively involved in the pathology needs of the Virginia Piper Cancer Institute's Prostate Cancer Program. These roles include clinical care, patient education and prostate cancer clinical research for this rapidly expanding program. Tadavarthy and Lyons form the basis of the HPA genitourinary program. Datta arrived at HPA in 2005 and brings seven years of academic faculty experience to the Virginia Piper Cancer Institute's Prostate Cancer Program. The team's work includes more than 50 academic publications, many in prostate cancer. A particular research focus has been the identification of new biomarkers for prostate cancer detection and tracking.

NEUROLOGIC PATHOLOGY The Virginia Piper Cancer Institute neuropathology needs are served by William McDonald, MD, and Mark Arnesen, MD. McDonald completed anatomic and clinical pathology residencies, a surgical pathology fellowship and a neuropathology fellowship and joined HPA in 2004. His principle goals are applying the best available traditional and molecular tools to diagnostic neuropathology, teaching neuropathology, and developing collaborative research projects in the study of infiltrating gliomas and pituitary neoplasms. His current projects include developing a tissue microarray to validate immunohistochemical stains used to diagnose pituitary adenomas, and collaborating with neuro-oncologist John Trusheim, MD, to bring many multi-center neuro-oncology studies to Abbott Northwestern. Other interests within the field of neuropathology include CNS infections, muscle and nerve pathology, and neurodegenerative disease.

GYNECOLOGIC PATHOLOGY Mark Arnesen, MD, and Saied Mohavedi, MD, provide the pathology support for Virginia Piper Cancer Institute's gynecologic tumor program. Arnesen has had an interest in gynecologic pathology throughout his 27 years at Abbott Northwestern Hospital. He led the gynecologic pathology program at the Virginia Piper Cancer Institute at its inception, and is a member of the International Society of Gynecologic Pathology. Movahedi began serving at the Virginia Piper Cancer Institute in 2005 after completing a fellowship in gynecologic pathology. He provides expertise in all areas of gynecologic pathology and has a special interest in ovarian neoplasms, having published several articles on ovarian stromal neoplasms. He is also active nationally as member of the College of American Pathologists (CAP), having co-authored several of the CAP cancer protocols and checklists, whose content is required for pathology reports. He is currently the chairman of the CAP Histotechnology Committee.

HEAD AND NECK PATHOLOGY

Jorge Ferreiro, MD, has published multiple articles on head and neck pathology. He has been the lead pathologist for the Virginia Piper Cancer Institute's Head and Neck Cancer Program from its inception.

LUNG PATHOLOGY John Jones, MD, has headed up the Lung Pathology Program at the Virginia Piper Cancer Institute since its inception. As a member of Abbott Northwestern's Institutional Review Board, he provides oversight of all research involving human subjects at Abbott Northwestern Hospital and the Virginia Piper Cancer Institute.

HEMATOPATHOLOGY John Strickler, MD, and Kevin Stieglbauer, MD, are HPA's lead hematopathologists. Strickler, who has a special interest in lymph node pathology, has been with HPA for eight years, and has held academic appointments at the University of Minnesota for three years. Strickler received hematopathology fellowship training and has written more than 75 peer-reviewed articles. Stieglbauer, who trained in general pathology and hematopathology, has a special interest in bone marrow pathology.

HPA hematopathologists and their subspecialty expertise include Stan McCormick, MD, (flow cytometry of hematologic neoplasms); John Reinartz, MD, (molecular hematopathology); Sue Wheaton, MD, (bone marrow pathology); Anil Tadavarthy, MD, (bone marrow pathology); Mark Arnesen, MD, (coagulation); and Chris Chong, MD (coagulation). Current research interests involve molecular studies of acute myeloid leukemia.

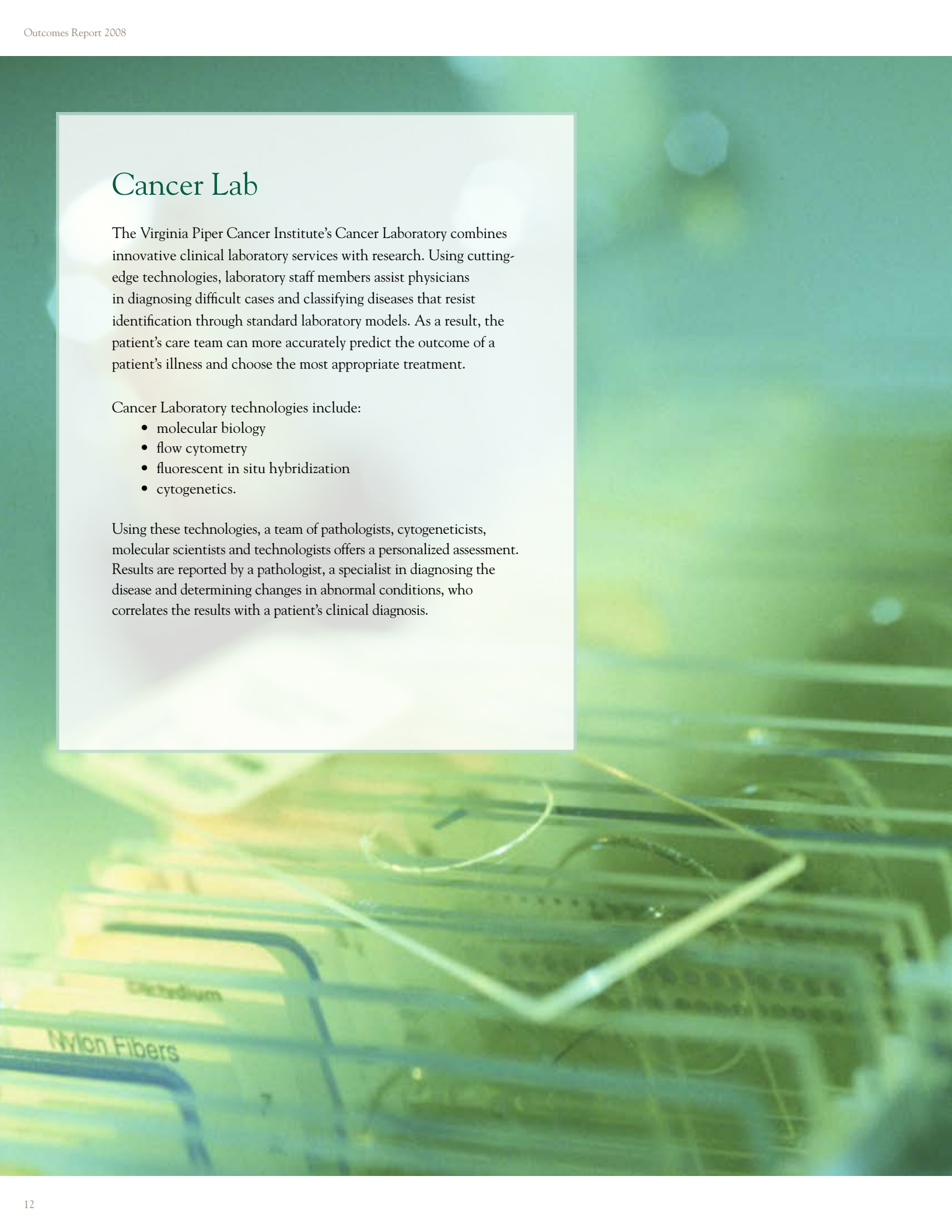
Cancer Lab

The Virginia Piper Cancer Institute's Cancer Laboratory combines innovative clinical laboratory services with research. Using cutting-edge technologies, laboratory staff members assist physicians in diagnosing difficult cases and classifying diseases that resist identification through standard laboratory models. As a result, the patient's care team can more accurately predict the outcome of a patient's illness and choose the most appropriate treatment.

Cancer Laboratory technologies include:

- molecular biology
- flow cytometry
- fluorescent in situ hybridization
- cytogenetics.

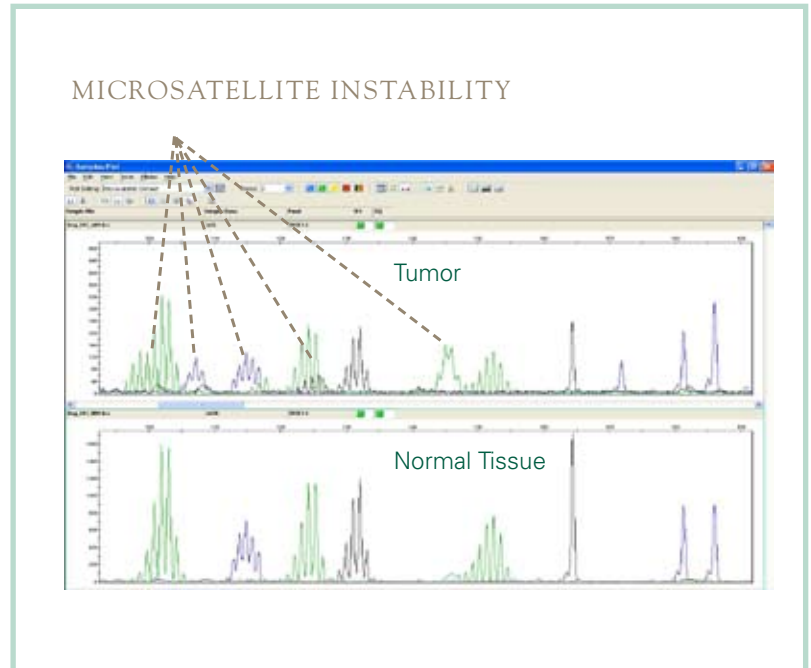
Using these technologies, a team of pathologists, cytogeneticists, molecular scientists and technologists offers a personalized assessment. Results are reported by a pathologist, a specialist in diagnosing the disease and determining changes in abnormal conditions, who correlates the results with a patient's clinical diagnosis.



Microsatellite Analysis

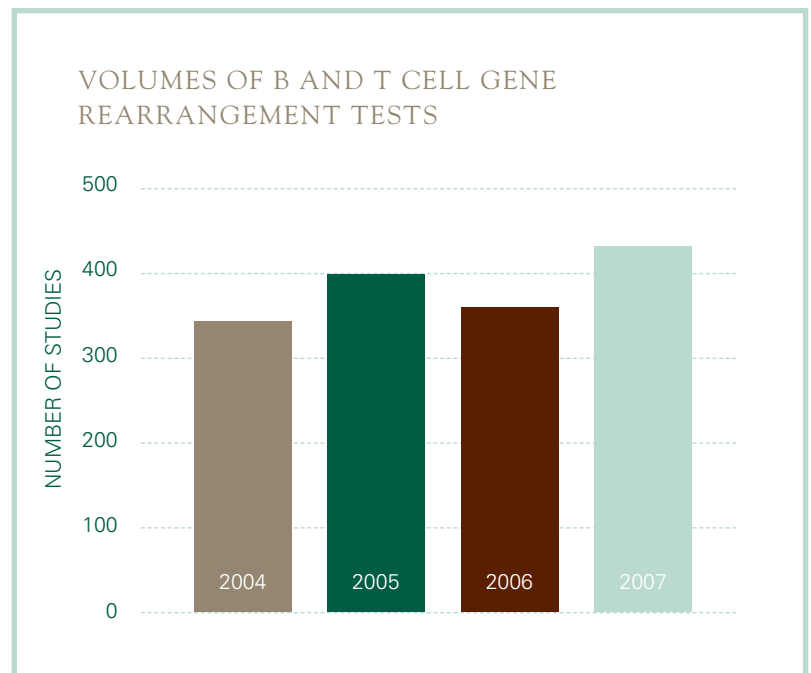
An example of clinically-relevant molecular testing is the evaluation of DNA mismatch repair function by PCR analysis of repeat DNA segments in chromosomes called microsatellites. One type of familial colon cancer (Lynch Syndrome) is characterized by an unusual expansion of banding patterns in microsatellites, as illustrated in the adjacent chromatography traces (tumor DNA in the top panel and normal DNA from the same patient in the bottom panel).

This testing carries treatment and prognostic information for the cancer patient. More importantly, it can be used in conjunction with other laboratory tests to determine if the patient has a hereditary form of colon cancer. For those patients whose colon cancer is identified as hereditary, family members can then be informed and given options for genetic testing to assess their own risk of colon and other types of cancers.



B and T Cell Gene Rearrangement

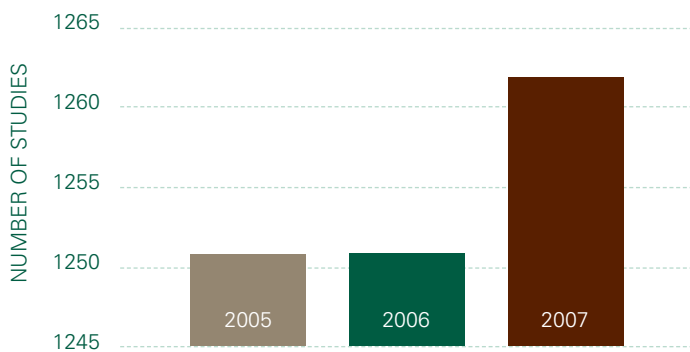
This testing is a prime example of molecular biology applied to clinical diagnostics. This set of tests is used to help resolve diagnostically difficult cases of lymphoma and leukemia. Our laboratory performs polymerase chain reaction (PCR) screening tests and Southern blot confirmation. In the majority of cases, we have been successful in obtaining results using both of these techniques on paraffin-embedded tissues. This latter service is not available in other molecular laboratories.



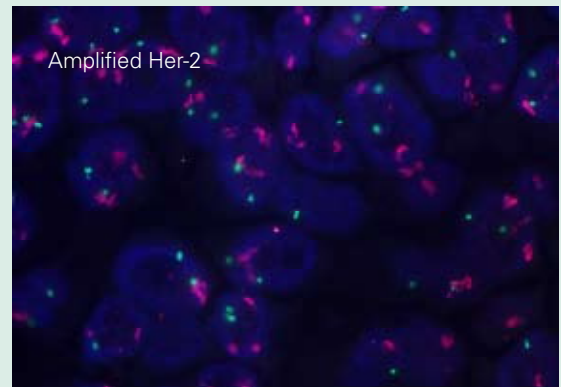
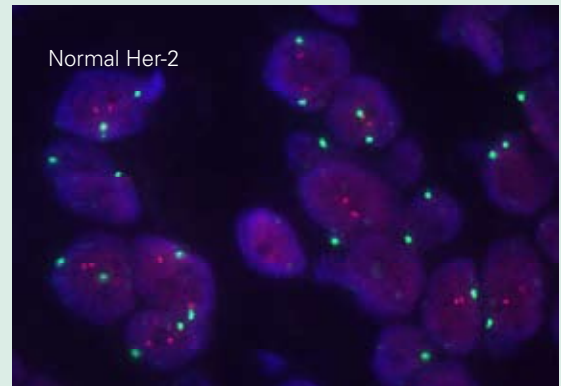
Cytogenetics

The Molecular Diagnostics Cytogenetic Service is one of the largest cytogenetics laboratories in the Midwest. Both classic chromosome analysis and the more recently developed fluorescent in situ hybridization (FISH) techniques are routinely used to enhance our services to the clinician. The most important and well known of the FISH assays performed in the Virginia Piper Cancer Institute's Cancer Laboratory is the evaluation of the HER2 cancer gene. Accurate assessment of this gene is necessary to provide optimal treatment choices to breast cancer patients.

VOLUME OF ONCOLOGY CHROMOSOME STUDIES



VOLUME OF ONCOLOGY FISH STUDIES





Genetic Consultation

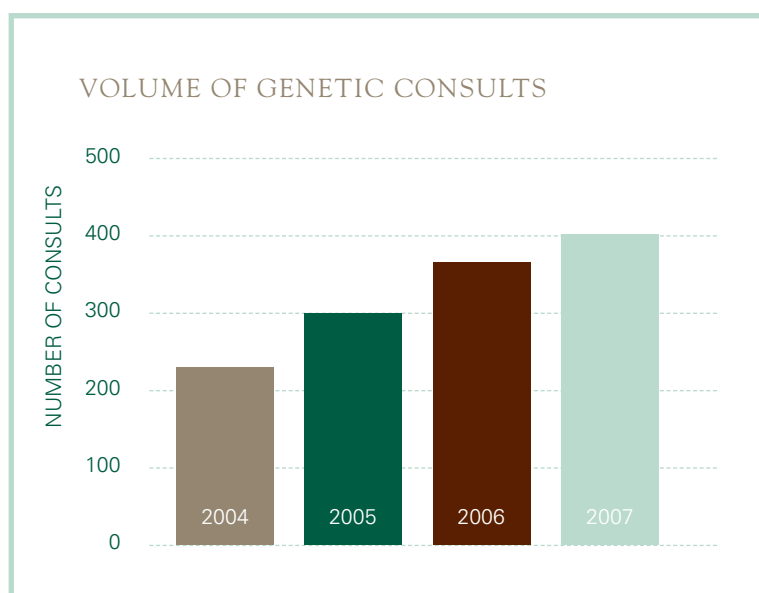
The Virginia Piper Cancer Institute's genetic counseling and testing program supports all of the specialty clinics. More than 350 patients are seen each year by staff who help clarify their risks for cancer and create individualized management plans for them and their families, so they can make informed decisions about genetic testing. The genetic counseling team also participates in five specialty tumor conferences to add their expertise to patient care plans.

Our senior genetic counselor, along with a team of medical and surgical specialists, established a High Risk Breast Cancer Clinic. The goal of the clinic is to create an individualized management plan for patients who are at high risk for developing breast cancer, one that is tailored to individual patients' unique set of risks. The process includes a breast cancer risk assessment, surveillance and preventative strategies.

The consultations incorporate:

- an evaluation of the patient's personal and family history
- specialized clinical breast examination
- appropriate breast imaging, including digital mammography, ultrasound and breast MRI
- patient education attuned to her personal and family situations
- information on medical and surgical prophylaxis to help prevent cancer
- genetic counseling and testing, when indicated.

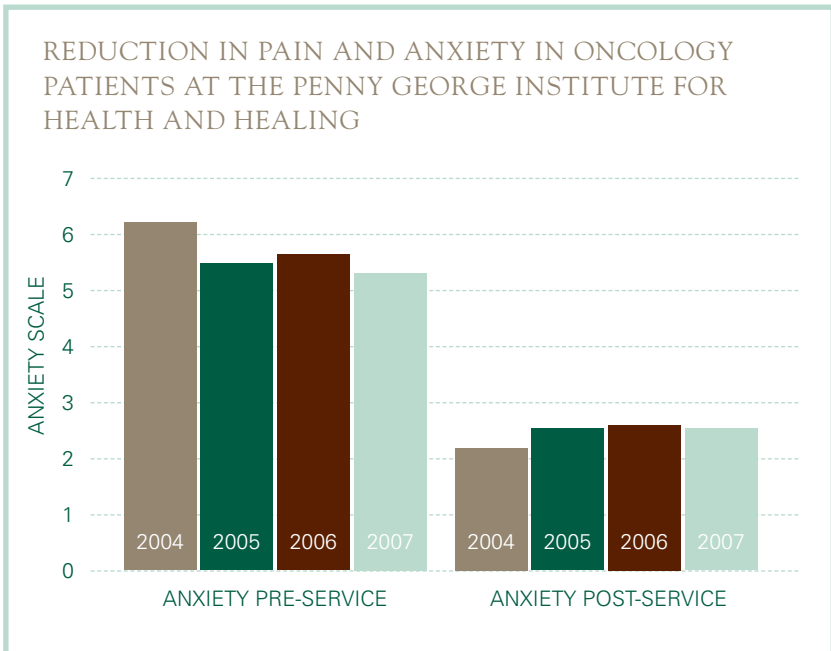
The genetic counselors also facilitate participation in national research trials for high risk patients. We are working on developing a decision tool for those with BRCA mutations.



Partnership with the Penny George Institute for Health and Healing

The staff and physicians of the Virginia Piper Cancer Institute believe in the patient as a whole person. For this reason, the Virginia Piper Cancer Institute is proud to collaborate with its integrative medicine partner, Abbott Northwestern's Penny George Institute for Health and Healing. From 2004 to 2007, more than 2,900 oncology patients were served by the George Institute's integrative care teams, with customized care that included acupuncture, biofeedback, guided imagery, massage therapy, energy work and more. The George Institute's outpatient clinic offers persons with cancer individualized consultations with a healing coach, an interventional nutritionist, Ayurvedic and Asian practitioners, and exercise physiologists.

Innovations for enhanced cancer care include therapeutic yoga, integrative nutrition and restorative fitness programming as well as the multiple approaches to mind-body skills development. To receive the George Institute's newsletter, please call 612-863-6122.



Nancy Cox, RN (left) meets with a patient.





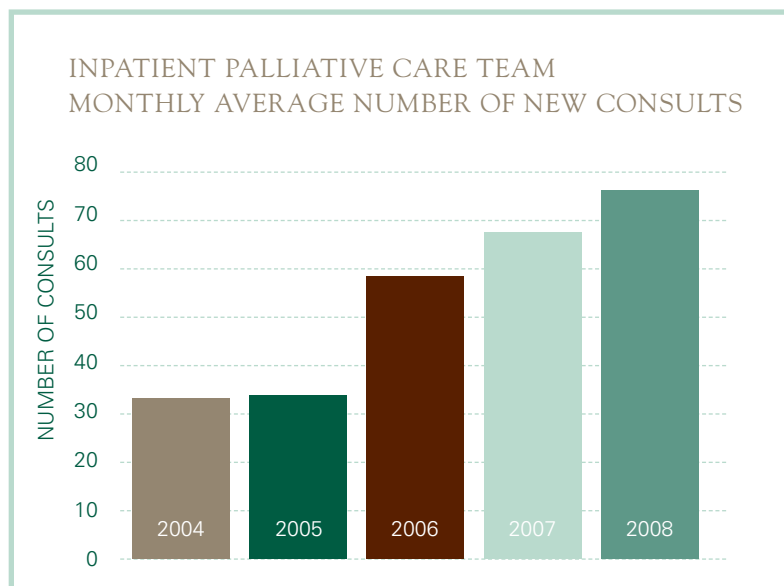
Palliative Care Services

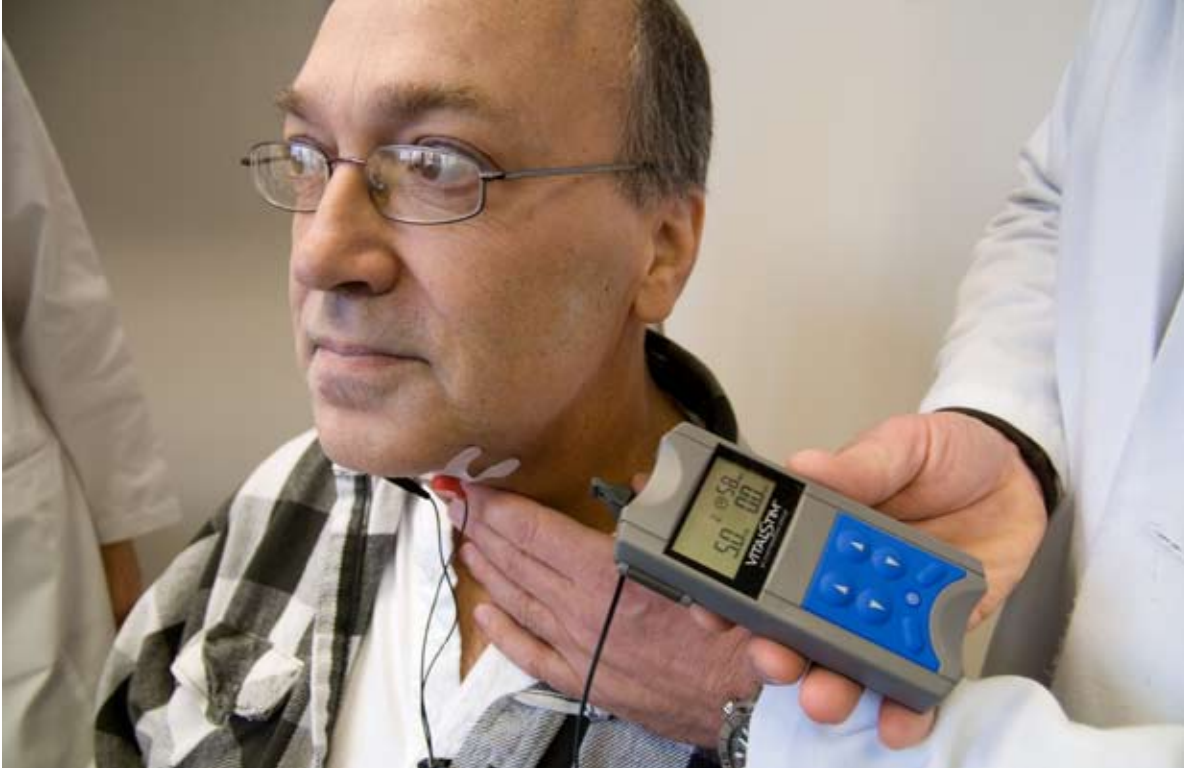
The palliative care specialists at Abbott Northwestern have expertise in treating pain and other symptoms of serious or life-threatening illness. Our interdisciplinary care optimizes quality of life so that treatment is better tolerated. The team includes physicians certified by the American Board of Hospice and Palliative Medicine, advanced practice nurses certified in hospice and palliative care, and a chaplain. The Palliative Care staff is complemented by other support staff including a social worker, pharmacist, dietitian and mental

health counselor. The team provides consultation to the hospitalist, intensivist or the patient's primary care physician, who manages the patient's overall care.

The Palliative Care team can help increase a patient's ability to cope with the rigors of therapy and maintain the best possible physical and emotional functioning. They can help find relief of symptoms such as pain, nausea, breathlessness, emotional and social challenges, anxiety, depression, mouth sores, constipation, diarrhea, fatigue, poor appetite and spiritual distress.

Palliative care specialists offer practical support by helping patients navigate the health care system and taking the time to thoroughly explain the illness and possible treatment outcomes. They also provide guidance and support in helping patients and family members with difficult treatment choices and assist with the transition to hospice care, if needed. The goal is to help the patient live life to the fullest with quality and dignity.





VitalStim® electrical stimulation swallow therapy is one aspect of the cancer rehabilitation program.

Cancer Rehabilitation

Our cancer rehabilitation services include a rehabilitation physician (known as a physiatrist) from Sister Kenny Rehabilitation Institute who specializes in cancer care. Nancy Hutchison, MD, works closely with each patient's cancer treatment team to provide seamless care delivery.

A thorough evaluation of the physical effects of the type of cancer, the treatment (surgery, radiation therapy or chemotherapy) and its impact on life functions is done for each patient. The Virginia Piper Cancer Institute has partnered with Sister Kenny Rehabilitation Services to create a comprehensive eating and swallowing rehabilitation program that uses VitalStim® electrical stimulation swallow therapy. Rehabilitation services for individuals with cancer include lymphedema management by certified lymphedema therapists, physical therapy, occupational therapy, speech and language therapy, psychology services, nutrition services, and vocational consultation and referral. The physiatrist consults with other members of the health care team as appropriate (e.g., nutrition services, psychologists, etc.)

Cancer rehabilitation includes consultation for fitness and exercise programs individualized for cancer survivors. The physiatrist evaluates patients and refers them to the Cancer Fitness Program at the LiveWell Fitness Center, which is a part of Abbott Northwestern's Penny George Institute for Health and Healing.

Cancer rehabilitation is integrated into the care of cancer patients to enhance the quality of their lives, and increase their independence and ability to complete their cancer treatments. The goal is to help patients bring more control to their lives and restore function.

Special recognitions include:

- Top Doctor designation
- board of directors of the Lymphology Association of North America
- designation as a certified lymphedema program by the National Lymphedema Network.

Cancer Survivorship and Support Services

Cancer survivorship has become an important focus in cancer care. The term “cancer survivor” includes those people who have been diagnosed with cancer and the people in their lives who are affected by the diagnosis, including family members, friends and caregivers. The Virginia Piper Cancer Institute strives to take a holistic approach in addressing cancer survivorship. An interdisciplinary cancer survivorship committee has been formed to ensure that survivorship needs are prioritized and addressed.

Support Programs

The Virginia Piper Cancer Institute staff recognizes the value of people being able to share thoughts and feelings with others who have similar experiences. With that in mind, several support and education groups are available to help address some of the psychosocial needs of people with cancer and their families. A psychologist or social worker and a registered nurse co-facilitate each group. In 2007, more than 800 patients attended the following support programs:

- American Cancer Society’s *Look Good, Feel Better* Program
- Brain Tumor Support Group
- Coping With Change—esophageal, gastric, and head and neck cancer support group
- American Cancer Society’s *I Can Cope* program
- program for Women Newly Diagnosed with Breast Cancer
- Breast Cancer Support Group
- Pancreatic/Liver Cancer Education Program

Psychosocial Counseling

Dedicated oncology social workers and psychologists provide individual and family counseling to help individuals develop coping strategies as they navigate their cancer experience.

Smoking Cessation

The Virginia Piper Cancer Institute hopes to decrease the number of people who develop cancer from smoking by providing access to a free smoking cessation program. Further efforts to promote smoking cessation are currently being studied, including dedicated counseling to inpatients. One hundred twenty-five people completed the smoking cessation program in 2007.



The Living Room Cancer Resource Center

The Living Room Cancer Resource Center offers patients and their families a comfortable place to learn. Professional staff members and volunteers create a supportive environment by guiding visitors through our inventory of current information on cancer prevention, diagnosis, treatment options and support services. Cancer-related information is available through books, videos, audiocassettes, brochures, articles and the Internet.

Other Abbott Northwestern Services Key to the Cancer Program



Patients at the Virginia Piper Cancer Institute and the physicians and nurses who treat them have access to a variety of services offered across the hospital.

Surgical Services

With 33 operating rooms and more than 250 pre- and post-surgical staff, Abbott Northwestern Hospital's Surgical Services Department is one of the largest and most technically advanced in the area. Surgery patients are cared for by teams of highly specialized physicians and nurses. These caregivers have access to the most advanced tools modern technology has to offer.

Inpatient Oncology

E3000, Abbott Northwestern's dedicated oncology unit, is a 33-bed unit staffed by specially trained nurses who care for people with a hematology or oncology condition. Twenty-three percent of the unit's nurses have oncology certification. Treatment for E3000 patients may include chemotherapy, radiation therapy, stem cell transplant or symptom management (for pain, nausea, shortness of breath, low blood counts, etc.) Care on E3000 is designed to respect the individual's history, current situation, values and hopes for the future.

Rehabilitation

Sister Kenny Rehabilitation Institute is a CARF- (Commission on Accreditation of Rehabilitation Facilities) accredited inpatient rehabilitation hospital on the campus of Abbott Northwestern Hospital. Inpatient rehabilitation is available to oncology inpatients who need comprehensive inpatient rehabilitation and therapies to be able to return home after hospital care. In addition, Sister Kenny Rehabilitation Institute has a wide range of outpatient services for oncology patients. Some of the services include balance therapy for chemotherapy-related neuropathies, swallow therapy, lymphedema therapy, a Brain Injury Clinic for patients with cognitive difficulties after chemotherapy or radiation therapy, and physiatry care for comprehensive outpatient rehabilitation.

Infusion Services

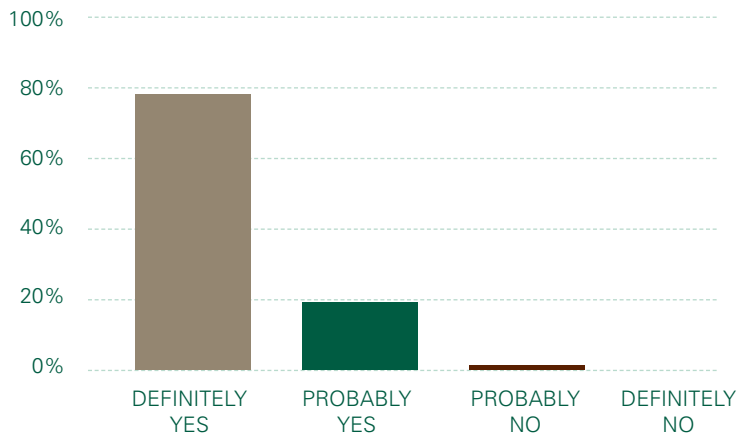
The Infusion Center's primary function is to provide treatment to patients who need oncology and infusion-related care and other specialized procedures. These may include chemotherapy, infusion therapies, blood transfusion, central line lab draws, bone marrow biopsies and injections. Our Infusion Center offers a relaxed atmosphere that promotes patient comfort and supports a total healing environment.

Outreach Program

As part of the Allina Oncology Outreach Program, the Virginia Piper Cancer Institute brings the most current concepts in oncology care to several communities in Minnesota. The program is designed to foster partnerships with health care providers in communities across the state and help those providers offer cancer services as part of their local health care system. Daniel Frenning, MD, provides oncology care to patients in Hutchinson and Buffalo, Minn.



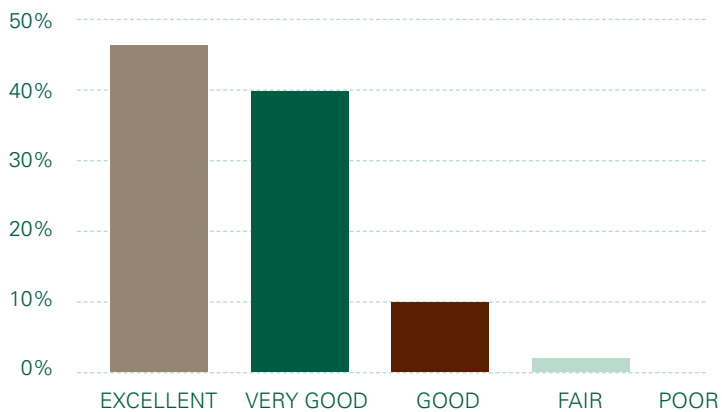
To hospital inpatients: WOULD YOU RECOMMEND THIS HOSPITAL TO YOUR FRIENDS AND FAMILY?



Inpatient Patient Satisfaction Survey

Abbott Northwestern's regular inpatient satisfaction survey instrument is HCAHPS (Healthcare Consumer Assessment of Hospital and Provider Services), which is recommended by the Centers for Medicare & Medicaid Services (CMS) and administered by the Allina Performance and Analysis Department. The HCAHPS survey allows direct comparison of our patients' experience to results from other institutions.

HOW WOULD YOU RATE THE OVERALL QUALITY OF CARE AND SERVICES?





Disease-Specific Programs

Piper Breast Center

A leader in breast cancer care in the region, Abbott Northwestern's Piper Breast Center was created with the goal of providing comprehensive breast health care. Our multidisciplinary team includes surgeons specializing in breast surgery, medical oncologists, pathologists, radiologists, radiation oncologists, plastic surgeons, and a physical medicine and rehabilitation specialist. In addition, readily available health specialists include registered nurses, technologists, genetic counselors, psychologists, a healing coach, integrative medicine specialists, nutritionists, social workers, and physical and occupational therapists.

HIGHLIGHTS OF THE PIPER BREAST CENTER INCLUDE:

- Founded in 1994, the Piper Breast Center was the first comprehensive breast center in Minnesota.
- The Piper Breast Center is the leader in Minnesota in performing sentinel lymph node biopsies for patients with breast cancer.
- The Piper Breast Center model has become a benchmark for new breast centers throughout the Midwest and for treatment of other cancers in clinical settings.

SERVICES AND SPECIALIZED SKILLS INCLUDE:

- screening digital mammography
- diagnostic digital mammography
- ultrasound, stereotactic biopsy, and MRI evaluation and biopsy
- dedicated breast radiologists
- surgical consultations
- oncology consultations
- reconstructive surgery consultations
- genetic counseling
- high risk clinic
- a lymphedema clinic with services including rehabilitation for patients recovering from reconstructive surgeries and radiation therapy
- physical medicine and rehabilitation consultations that address the musculoskeletal concerns of breast cancer patients including shoulder and chest wall muscle dysfunction
- highly skilled nurse coordinators
- research protocols
- complementary therapies.

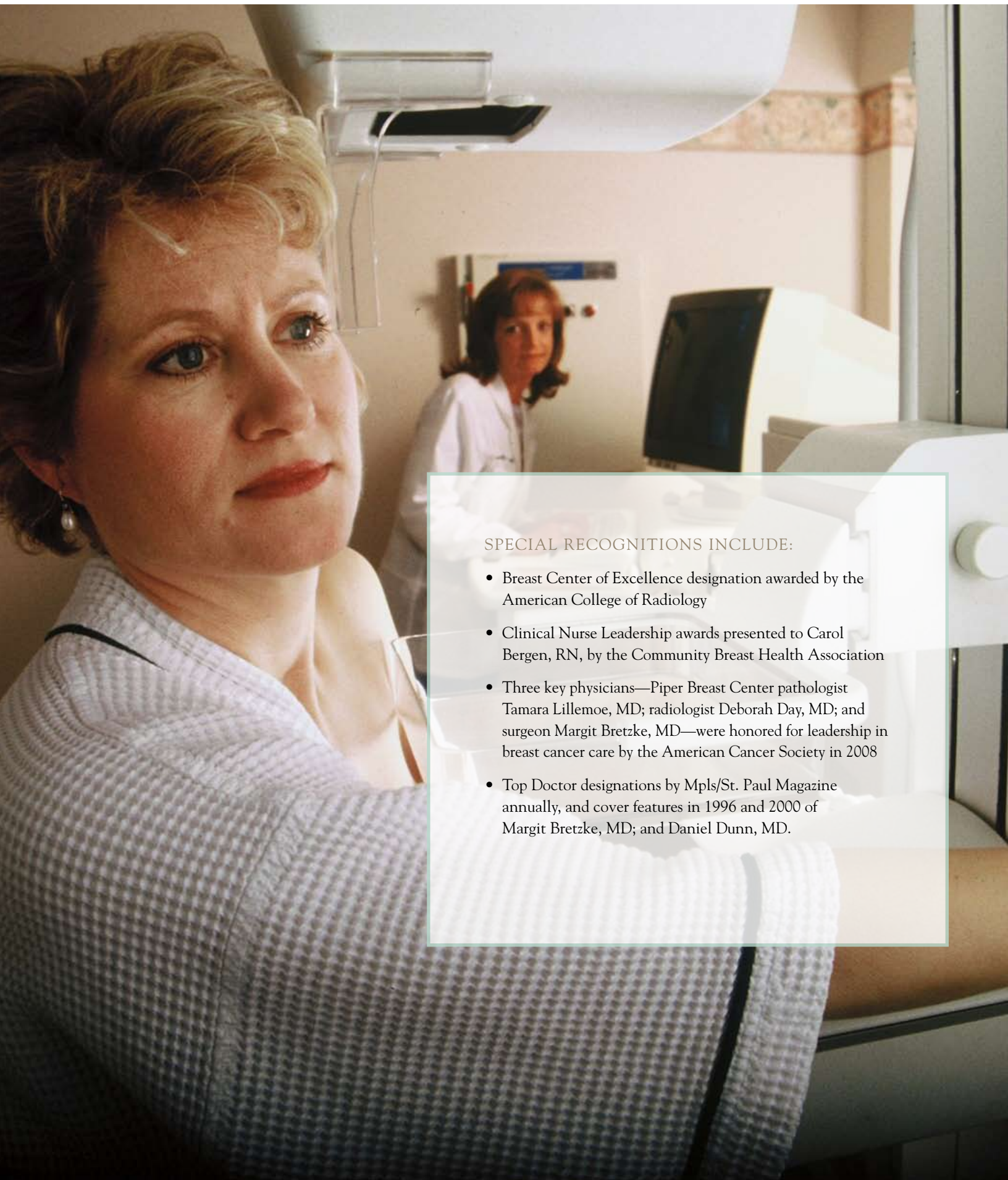
DIAGNOSTIC EQUIPMENT INCLUDES:

- full field digital mammography systems with multi-modality work stations
- dedicated breast ultrasound systems
- stereotactic biopsy system
- MRI imaging and biopsy system
- a bone mineral density (DXA) scanner.

CERTIFICATIONS AND ACCREDITATIONS INCLUDE:

- voluntary accreditation by the American College of Radiology for mammography, breast ultrasound and stereotactic biopsy
- certified mammography technologists
- certified breast sonographers
- DXA operators certified by International Society of Clinical Densitometry (ISCD)
- radiologists certified by ISCD
- oncology-certified nurses.





SPECIAL RECOGNITIONS INCLUDE:

- Breast Center of Excellence designation awarded by the American College of Radiology
- Clinical Nurse Leadership awards presented to Carol Bergen, RN, by the Community Breast Health Association
- Three key physicians—Piper Breast Center pathologist Tamara Lillemoe, MD; radiologist Deborah Day, MD; and surgeon Margit Bretzke, MD—were honored for leadership in breast cancer care by the American Cancer Society in 2008
- Top Doctor designations by Mpls/St. Paul Magazine annually, and cover features in 1996 and 2000 of Margit Bretzke, MD; and Daniel Dunn, MD.

Quality and Outcome Measures

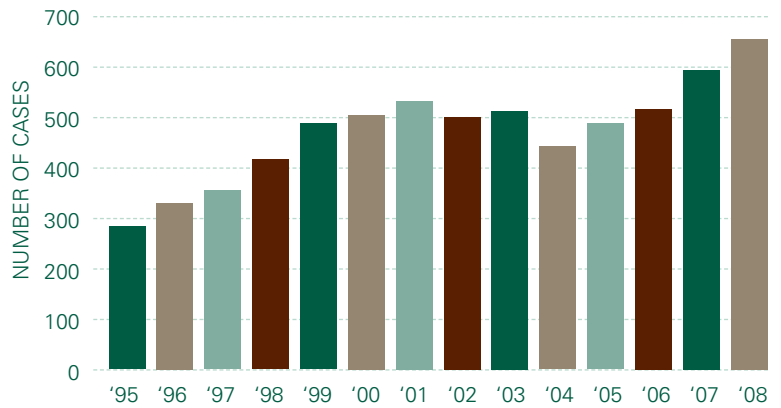
Caring for an average of 500 patients each year with new breast cancer diagnoses, Piper Breast Center is one of the largest breast centers in the state.

Abbott Northwestern's survival rates for breast cancer patients are among the very highest in the nation. For example:

- The unsurpassed, disease-specific, five-year survival rate is 99 percent for patients with Stage I breast cancer.
- Five-year survival rate is 96.3 percent for Stage II breast cancer.
- Breast cancer recurrence rates at Piper Breast Center are two percent at five years, far lower than the national average of 10 percent.
- Piper Breast Center exceeds national benchmarks for the percentage of patients receiving lumpectomy, radiation, hormone and chemotherapy when indicated, and for timeliness of pathology evaluation, diagnosis and treatment.

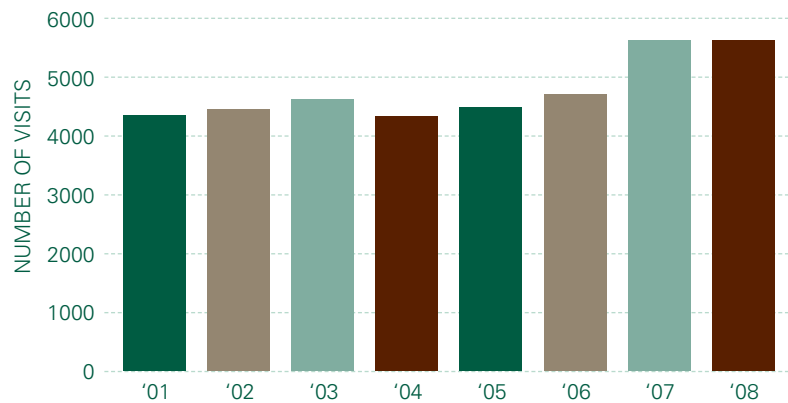


INCIDENCE OF NEWLY DIAGNOSED BREAST CANCER



Data from the Virginia Piper Cancer Institute Registry.

PIPER BREAST CENTER CLINIC VISITS

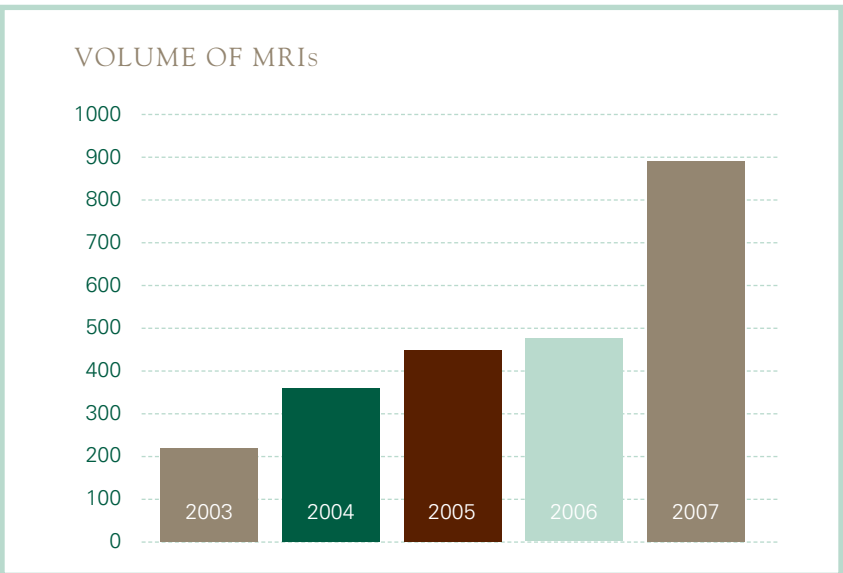
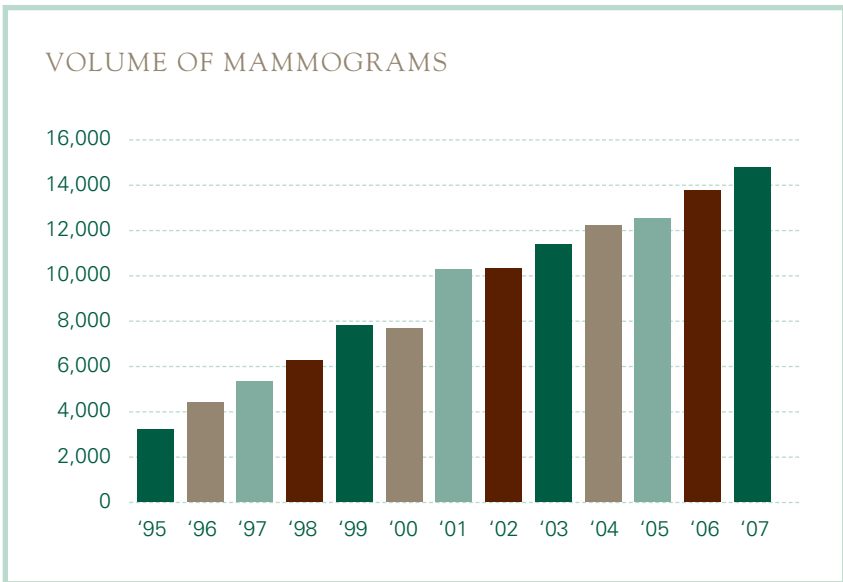
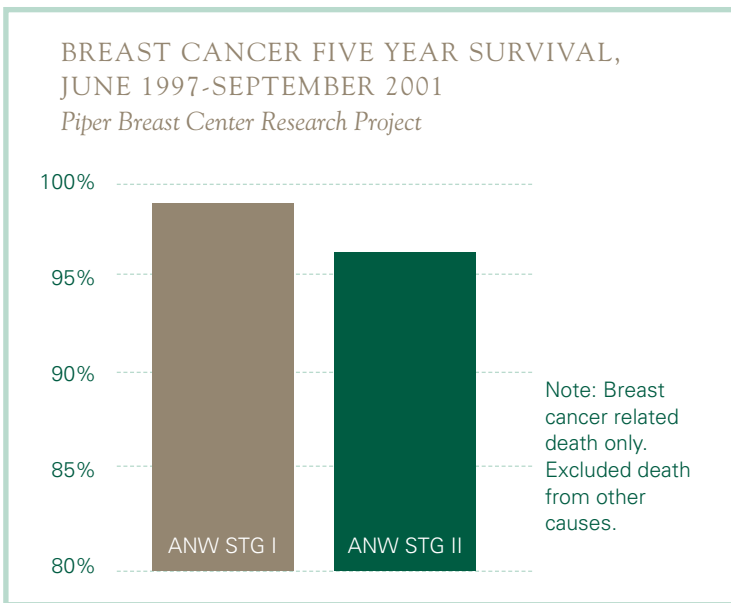




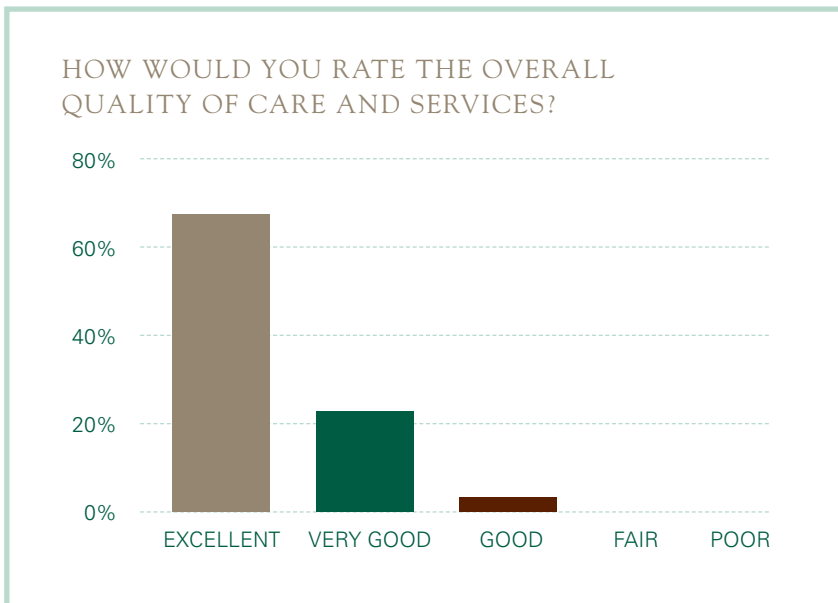
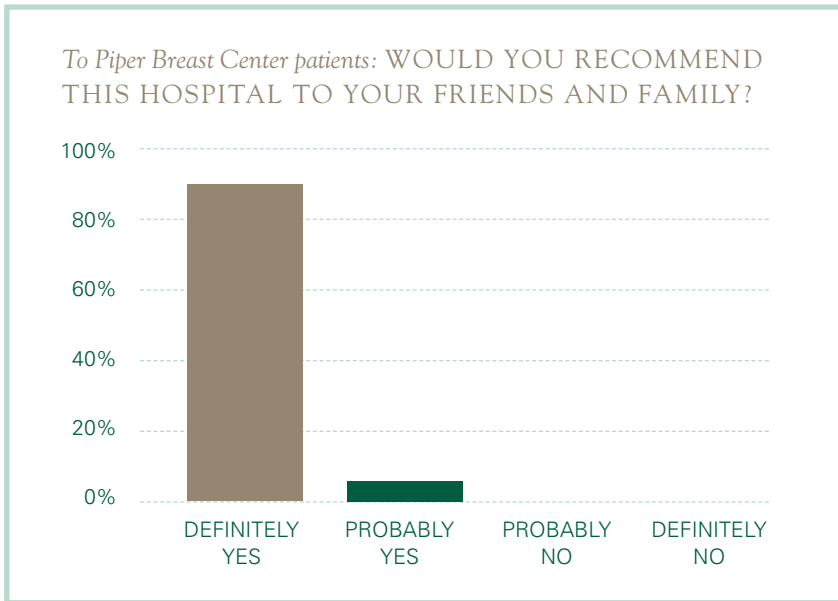
Deborah Day, MD, reviews a mammogram with a patient.

The Piper Breast Center is fully digital. Digital mammography has been shown to be more sensitive in detecting cancer in women with dense breasts, women under the age of 50 and pre-menopausal women. The digital mammogram decreases the radiation dose, eliminates film processing and storage requirements, decreases a patient's time to obtain a routine mammogram, and allows electronic transfer of mammograms from one facility to another.

Piper Breast Center's current imaging technologies include MRI (magnetic resonance imaging) to stage newly diagnosed breast cancer, detect cancer in high risk women, evaluate cancer response to neoadjuvant chemotherapy, and evaluate for residual cancer after a lumpectomy. The Piper Breast Center was the first in the area to offer MRI-guided biopsies, which can be especially beneficial when the abnormality cannot be seen by ultrasound or mammogram.



Piper Breast Center Patient Experience (Allina Patient Satisfaction Survey)



“Like most women I know (and as all women should), I have an annual mammogram. Making the experience a good deal more bearable is the way you’re treated at the Piper Breast Center at Abbott Northwestern Hospital in Minneapolis. Everyone I encounter there is unfailingly kind. Coffee and tea are offered in china cups. Best of all, instead of the usual stiff paper gown, each patient is given a soft cotton robe to wear before the exam. You can actually relax while waiting (briefly) for your procedure. I’ve written thank you notes to the staff, and if the Center’s patient list is growing, I’ll take some credit for encouraging so many friends and family members to go for their exams.”

*Bette Sack, “What I Know Now”
Mpls St. Paul magazine, October 2007*

Genitourinary and Prostate Cancer Program

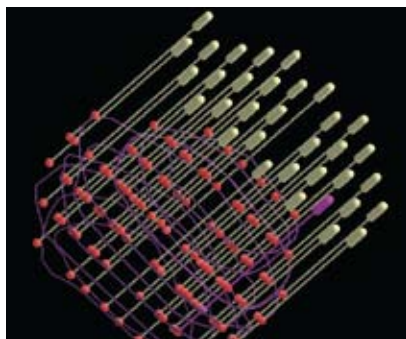


The genitourinary and prostate cancer health care team includes skilled urologists, medical oncologists, radiation oncologists and pathologists. They offer diagnosis and treatment of prostate and genitourinary cancers including bladder, kidney, penile, transitional cell, testicular and urethral cancer.

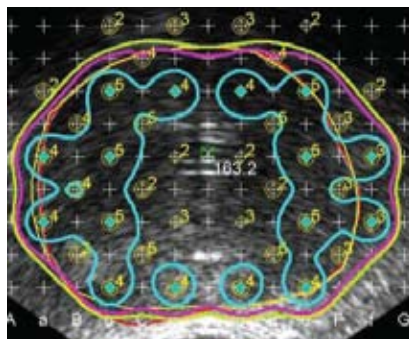
The Virginia Piper Cancer Institute's Prostate Cancer Program combines all elements of treatment to help individuals maintain their quality of life and find ways to live with and beyond cancer. Programs in penile and continence rehabilitation are available for patients after surgery to provide the best outcomes for erectile function and urinary control.

One of the most common treatments for prostate cancer involves surgical removal of the prostate gland, known as a radical prostatectomy. Over the past year, the Virginia Piper Cancer Institute's prostate cancer program has incorporated the da Vinci® Surgical System into the tools used for the treatment of prostate cancer. The da Vinci Surgical System provides surgeons with an alternate to traditional open surgery and conventional laparoscopy. The da Vinci System enables surgeons to perform even the most complex and delicate procedures through very small incisions and allows a surgeon greater visualization, enhanced dexterity, precision and control.

Brachytherapy is another treatment option, involving the implantation of tiny radioactive seeds into the prostate to deliver high doses of radiation. Prostate brachytherapy offers high cure rates for patients with localized prostate cancer. The images (at left) illustrate needle and seed placement and distribution.



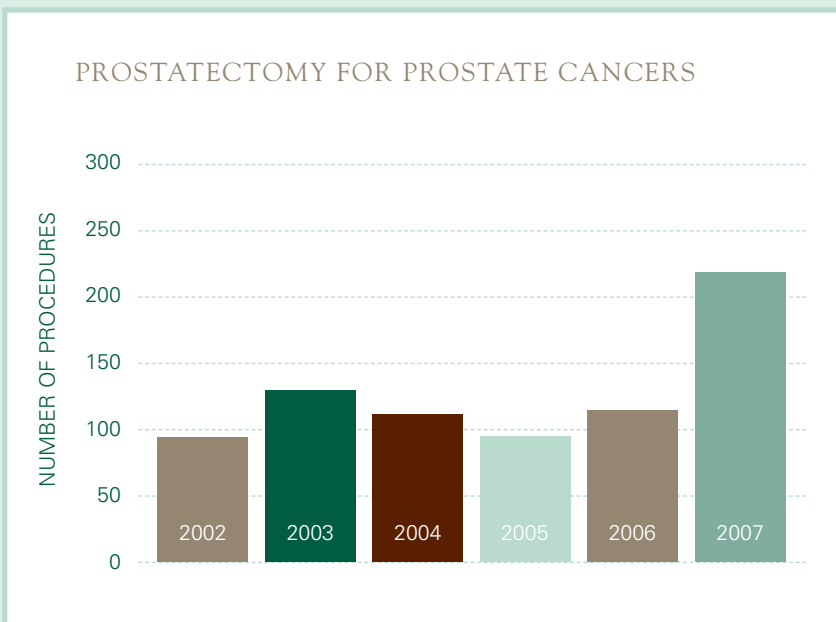
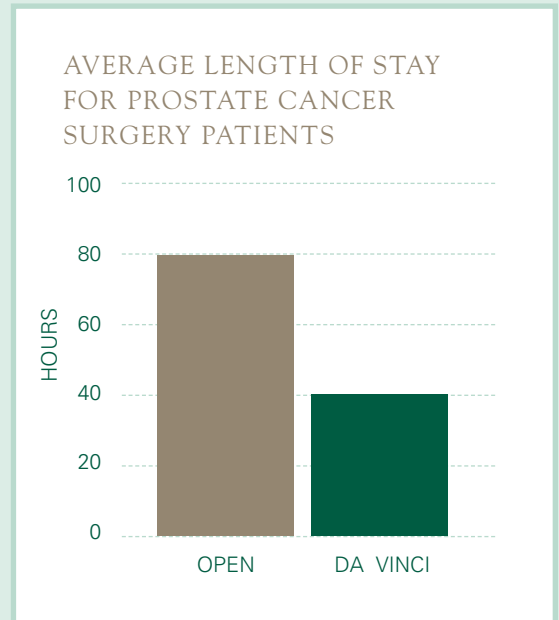
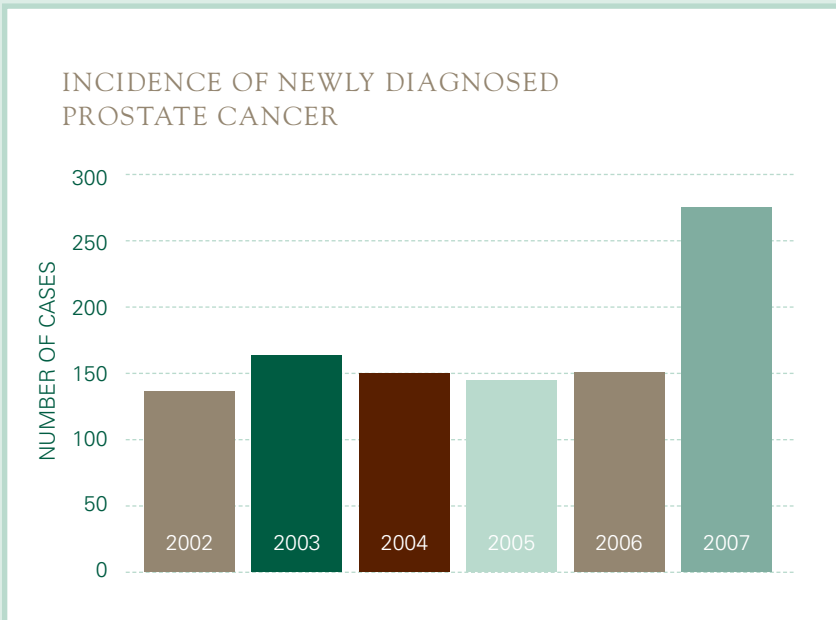
Seed brachytherapy dose distribution



Needle and seed placement in three dimensions

Quality and Outcome Measures

Careful quality tracking of the initiation of da Vinci Surgical System at Abbott Northwestern Hospital has shown no complications nor infections related to the use of this system and has demonstrated decreased blood loss and length of stay for the patients.



Gastrointestinal Cancer Program

Multidisciplinary Care

At Abbott Northwestern Hospital, the Virginia Piper Cancer Institute's Gastrointestinal Cancer Program is composed of surgeons, oncologists, gastroenterologists, pathologists, radiation oncologists, nurses, nutritionists and integrative medicine practitioners dedicated to gastrointestinal cancer care. They work together to provide comprehensive care for patients with cancers of the esophagus, stomach, pancreas, liver, bile ducts, small bowel and colon. Team-specific clinical nurse coordinators ensure the integration of care, keeping the patient, referring doctors and treatment team working together for the best outcome. Our research nurse coordinators work with physicians to offer our patients access to innovative, relevant clinical research trials. All members meet for a bi-weekly gastrointestinal tumor conference to discuss patient care and formulate treatment plans.

Program Teams

LIVER AND PANCREAS TEAM

Timothy Sielaff, MD, PhD, is a hepatobiliary surgeon and the medical director of the Virginia Piper Cancer Institute. His group treats patients with pancreatic neoplasms, adenocarcinoma, islet cell tumors, IPMN, primary and metastatic liver tumors, gallbladder cancer, and benign and malignant lesions of the bile ducts. We offer a full spectrum of novel therapies including radiofrequency ablation, laparoscopic resections, Selective Internal Radiation Therapy (SIRT), and neoadjuvant strategies in pancreatic and metastatic colorectal cancers. We also participate in the Pancreatic Cancer Research Team to advance research in pancreatic cancer, and offer the most advanced treatments to our patients available anywhere in the country.

ESOPHAGEAL/GASTRIC TEAM

Our surgeons and gastroenterologists are leaders in minimally invasive approaches to esophageal and gastric diseases. The group uses breakthrough endoscopic, surgical and radiation oncology techniques to optimize the outcome for patients with all stages of disease. Neoadjuvant strategies are employed under the direction of our medical oncologists to promote the potential for surgical therapy for patients with locally advanced tumors.



Minimally invasive technologies like the da Vinci are used by surgeons like Dan Dunn, MD, for esophageal and other cancers.

COLORECTAL TEAM

The colorectal team is dedicated to the prevention, early diagnosis and management of colorectal cancer. Surgeons perform minimally invasive colon resections and transanal endoscopic microsurgery for rectal tumors. The Colon Cancer Risk Evaluation Clinic is staffed by gastroenterologists, surgeons, expert gastrointestinal pathologists and genetic counselors to help identify and care for high-risk families.

Advanced Diagnostics and Treatment

MINIMALLY INVASIVE THERAPIES

Our surgeons have exceptional experience with all aspects of complex gastrointestinal surgery and have a particular interest in laparoscopic approaches. Our outcomes in pancreatic and liver surgery are excellent (e.g., mean length of stay is eight days for Whipple operations), and laparoscopic approaches are employed for many liver and pancreas resections. Minimally invasive colectomy and esophagectomy are now standard surgical approaches and are associated with reduced length of stay, more rapid recovery and equivalent oncologic outcomes.

ENDOSCOPIC THERAPIES

The Center for Advanced Endoscopy provides the most comprehensive diagnostic and therapeutic techniques in gastrointestinal care. The center is a leader in advanced endoscopic therapies for Barrett's esophagus including Barrx, photodynamic therapy and endomucosal therapy. Advanced diagnostic techniques such as endorectal ultrasound, endoscopic ultrasound and ERCP are also used as compliments to our state-of-the-art diagnostic radiology services. This includes CT, MRI, PET/CT and percutaneous interventions, such as radiofrequency ablation.

ENDOSCOPIC ULTRASOUND

Endoscopic ultrasound is a minimally invasive method used to diagnose and stage all forms of pancreatic neoplasms. Endoscopic ultrasound is performed only by specifically trained gastroenterologists with a special interest and expertise in the care of pancreatic disorders. The fidelity of the images is exceptional, and the technique allows for image-guided biopsies of tumors, lymph nodes, peritoneal fluid and even liver lesions. Endoscopic ultrasound with FNA biopsy is highly accurate and is more effective in determining surgical resectability than CT alone. This is especially true with confirmation of metastatic disease not seen on CT. With endoscopic ultrasound, the following information is obtained to help direct surgery:

- tissue diagnosis
- presence of regional and distant lymphadenopathy (including low volume ascites and small liver metastases)
- tumor invasion and relationships with blood vessels.

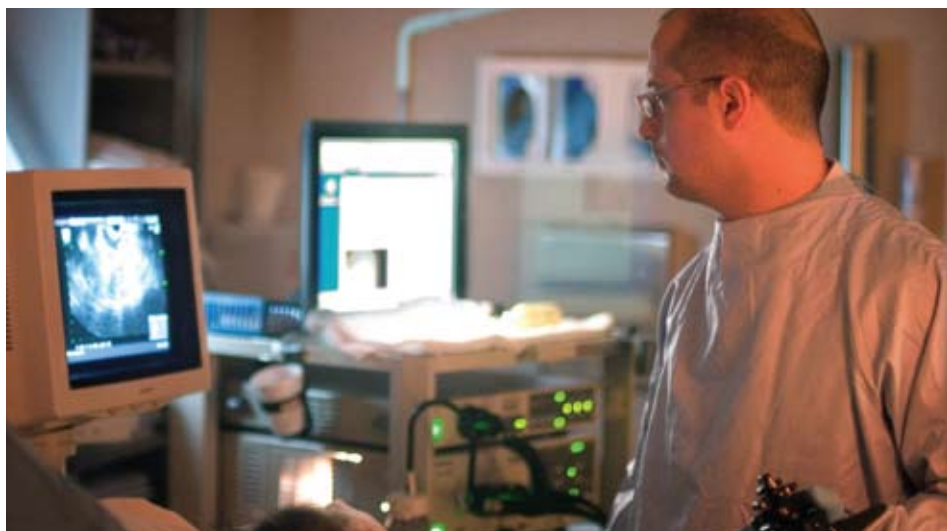
Endoscopic ultrasound should be considered for all patients with pancreatic neoplasms for whom surgery is might be an option and for whom a tissue diagnosis is needed to direct therapy.

RADIATION ONCOLOGY

Radiation oncologists at the Virginia Piper Cancer Institute use state-of-the-art technology to provide comprehensive radiation therapy options including IMRT, stereotactic radiosurgery, external beam radiation and brachytherapy for bile duct cancer and selective internal radiation therapy (SIRT) for unresectable liver tumors.

Clinical Trials

The Virginia Piper Cancer Institute is committed to promoting clinically relevant research to the benefit of our current and future patients. Under the leadership of Tim Sielaff, MD, PhD, and John Serg, MD, we work with the Pancreatic Cancer Research Team, making leading-edge, basic science and therapeutic protocols available to our patients with pancreatic cancer. We also conduct national cooperative group trials and locally generated research.



Frederico Rossi, MD, performs an endoscopic ultrasound at Abbott Northwestern.



Abbott Northwestern's Intra-operative MRI was installed in 2007.

Neuro-Oncology Program

Overview

A PARTNERSHIP OF STRENGTHS IN THE TREATMENT OF BRAIN TUMORS

The management of brain tumors is complex, requiring the full expertise of a large team of specialists, sub-specialists and dedicated staff. Abbott Northwestern Hospital's nationally recognized Neuroscience Institute and the Virginia Piper Cancer Institute partner to offer the hospital's Neuro-Oncology Program. This unique service provides comprehensive care for patients with tumors of the brain and spine. In addition to a highly specialized group of neurosurgeons, our team includes neuroradiologists, neuropathologists, neuro-oncologists and radiation oncologists.

NEUROSURGERY – ADVANCED TECHNOLOGY FOR IMPROVED PRECISION

Neurosurgical expertise is required for the successful management of nearly all brain tumors. The neurosurgeons associated with the Neuro-Oncology Program build on their depth of experience through ongoing training and education.

Our neurosurgeons have the advantage of working in one of the world's most advanced intra-operative MRI suites. This allows surgeons to use the resolution of MRI to guide an operation, enabling unparalleled precision of resection while maintaining a critical margin of safety.

The neurosurgeons are also supported by sophisticated diagnostic imaging, including functional MRI scans, allowing pre-operative mapping of critical structures to be preserved during surgery. As greater precision allows more of the tumor to be safely and accurately removed, the patient benefits from more complete resections. Further treatment, when required, can then be directed at a smaller target.

RADIATION THERAPY— EQUIPMENT AND EXPERTISE FOR INCREASING PRECISION

No organ requires greater precision in the delivery of radiation than the brain. At Abbott Northwestern Hospital, highly precise stereotactic radiosurgery and stereotactic radiotherapy are performed with the most current technology for the treatment of brain tumors: the Varian Trilogy linear accelerator. As radiotherapy techniques evolve, the neuro-oncology program will continue to use the most innovative and effective means of treatment.

CHEMOTHERAPY—A NEW FRONTIER FOR TARGETED TREATMENT

Chemotherapy has been used for decades in the treatment of brain tumors, but with only modest success in most cases. Recent research has begun to show the promise of new drugs specifically developed for use in brain tumors, rather than adopted from regimens for other cancers.

We have entered the era of investigating individual tumor characteristics and genetics to allow the potential tailoring of therapies to specific patients. Abbott Northwestern's Neuro-Oncology Program is one of the leaders in this new phase of investigation, partnering with industry leader Translational Genomics Research Institute of Arizona for the genetic analysis of tumors. Patient tumor samples are submitted for state-of-the-art gene array review, with the hope of developing a database of important genetic abnormalities which may be targeted with specific new chemotherapies.

We currently enhance the delivery of chemotherapy to brain tumors by intra-arterial administration. This technique allows the effective concentration of a drug within the tumor to be substantially increased without increasing the systemic toxicity of the agent. We combine this targeted delivery of tumoricidal therapy with the most recently proven drugs to limit the development of blood vessels within a tumor, thereby stunting its growth.

NEURORADIOLOGY—BETTER IMAGING FOR BETTER UNDERSTANDING

Imaging of the brain or spinal cord is central to all informed discussions in neuro-oncology, whether it is during preliminary diagnosis and initial planning prior to surgery or during assessment of the patient's response to ongoing therapy. Neuro-imaging today is multifaceted, providing highly accurate views of tumor location and morphology but also demonstrating (by functional MRI) the relative proximity of critical brain functions which should not be placed at risk during surgery. Additional sophisticated MRI techniques demonstrate chemical composition (spectroscopy), blood flow or water shifts (perfusion and diffusion studies) and the interruption or displacement of key brain circuits (diffusion tensor imaging) within or adjacent to tumors.

PUTTING IT ALL TOGETHER—CLINICAL CARE CONFERENCES

The Neuro-Oncology Program holds bimonthly care conferences which provide focused discussion of individual cases. This results in thoroughly informed patient care, as each subspecialty contributes perspectives about optimal treatment and the potential benefits and risks of any proposed intervention. These conferences include a full review of pathology results and imaging studies, as well as assessments from a variety of involved services ranging from rehabilitation to genetic counseling.

COMPREHENSIVE RESOURCES FOR PATIENTS AND CAREGIVERS

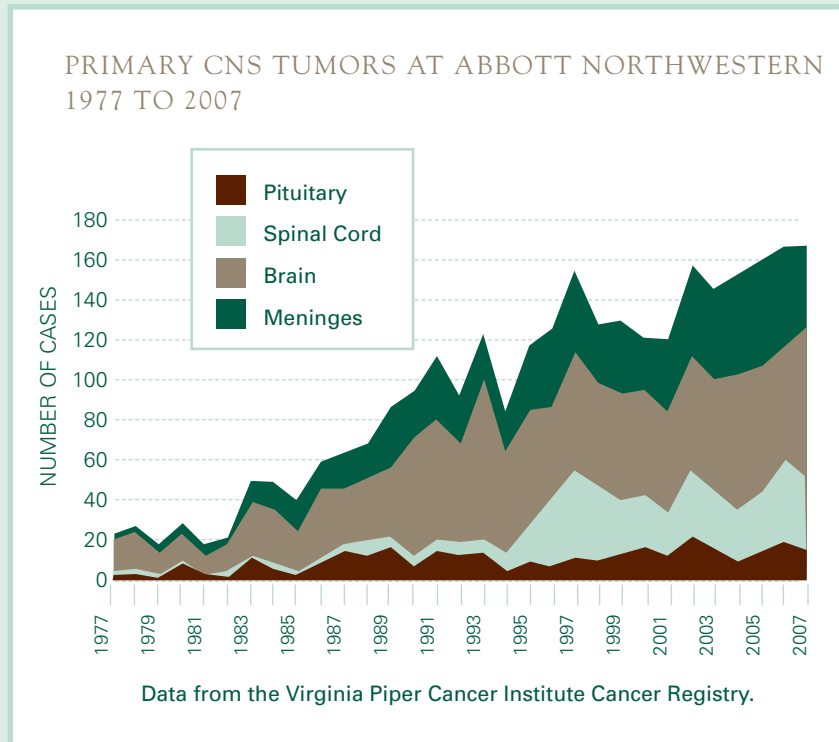
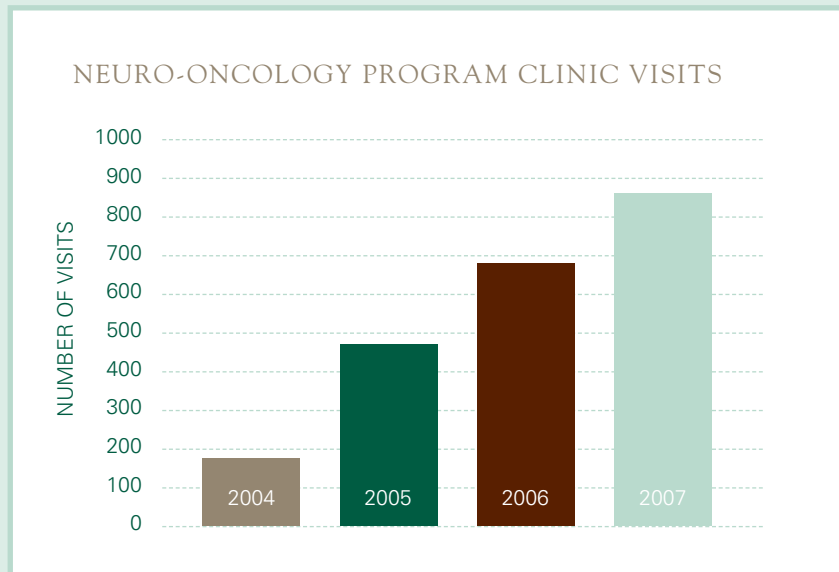
A comprehensive Neuro-Oncology Program must provide for the ongoing needs of the patient and the patient's caregivers. Patients benefit from the skill and efforts of rehabilitation specialists, dedicated social workers and a fully committed staff of specialized neuro-oncology nurses and nurse practitioners.

The Neuro-Oncology Program offers a dedicated social worker to help patients and their families manage the complexity of initial diagnosis, treatment discussions, and restructuring of abilities and expectations. Another important resource is our well established support group, which sponsors frequent gatherings of our patients and their families for mutual encouragement, education and discussion of a wide variety of topics addressing their needs.

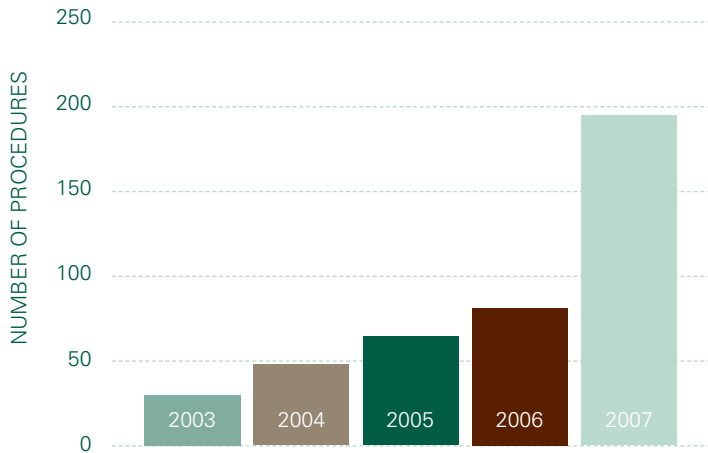
Our staff also is also recognized for expertise and compassion in providing aftercare and hospice coordination. This resource eases the burden of patients and families as they move through uncertain territory. Knowing that the staff will provide support and services throughout the entire course of illness is an important source of reassurance and comfort for patients and their families.

Volume, Quality and Outcome Measures

The Neuro-Oncology Program at Abbott Northwestern Hospital continues to grow.



INTRA-ARTERIAL CHEMOTHERAPY PROCEDURES FOR BRAIN TUMOR PATIENTS



Patient Satisfaction Survey

NEURO-ONCOLOGY PROGRAM, 2007



BRAIN TUMORS 2007

Diffuse astrocytoma, grade 2	2
Oligoastrocytoma, grade 2	2
Anaplastic astrocytoma	3
Craniopharyngioma - 3	3
Ependymoma, grade 2	3
Neurofibroma	3
Capillary hemangioblastoma	4
Medulloblastoma	5
Oligodendroglioma, grade 2	5
Lymphoma	6
Other	6
Pilocytic astrocytoma	7
Pituitary adenoma	15
Schwannoma	16
Metastases	23
Recurrent tumors, all types	35
Meningioma, all grades	36
Glioblastoma and variants	41
TOTAL	215

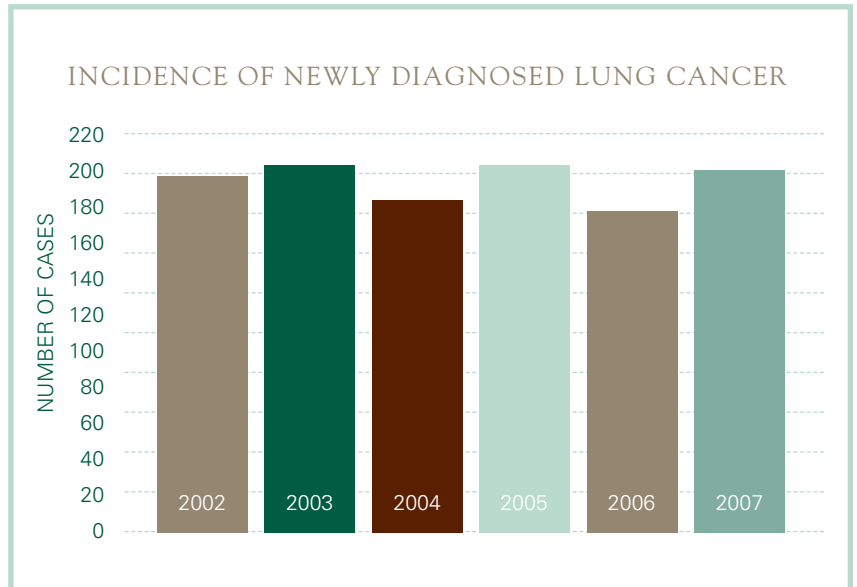
Piper Lung Cancer Program

The Piper Lung Cancer Program addresses the physical, psychosocial and spiritual needs of those with lung cancer and their families. Experienced physicians from a variety of specialties, including medical oncology, radiology, pathology, pulmonology, thoracic surgery, radiation oncology and palliative medicine actively participate in this dynamic program. These dedicated physicians are involved in the inpatient and outpatient care of lung cancer patients and work closely with the patient’s primary care physician.

The lung cancer nurse coordinator ensures that there is integration of care for each patient. She keeps the patient, referring physicians and treatment team working together for the best outcome.

Several innovative lung cancer technologies are available at Abbott Northwestern, including electromagnetic navigation bronchoscopy, bronchial and esophageal endoscopic ultrasound, advanced spiral CT scans, respiratory gating and

intensity modulated radiation therapy (IMRT). Video-assisted thoracoscopic surgery is also available and allows for a less invasive procedure than traditional thoracotomy, leading to quicker recovery and the ability to start other treatments sooner. Abbott Northwestern also offers radiofrequency ablation. Abbott Northwestern was the top enrolling institution in the landmark National Cancer Institute’s National Lung Screening Trial.



Head and Neck Cancer Program

The Virginia Piper Cancer Institute's Head and Neck Cancer Program provides each patient with exceptional care, offering the latest advances in the treatment of head and neck cancers. Our multidisciplinary team of health care professionals, including surgical oncologists, radiation oncologists, medical oncologists, pathologists and radiologists is committed to providing patients with the most advanced, seamless, comprehensive cancer care. In addition, the Virginia Piper Cancer Institute offers post-treatment, specialized rehabilitation services to patients provided by physical medicine physicians and voice and swallowing rehabilitation specialists.

A multidisciplinary, head and neck tumor board and treatment planning conference is held on the second and fourth Monday of each month. Teleconferencing allows physicians from other hospitals to participate in outlining customized care plans for each patient. Seventy-four patient cases were presented at these conferences in 2007.

Advanced Treatments and Clinical Expertise

- Photodynamic Therapy—Merrill Biel, MD, medical director of the Head and Neck Cancer Program, is world renowned for his research into the use of photodynamic therapy for the treatment of early head and neck tumors.
- Radiation Therapy—Stereotactic radiosurgery is available for head and neck cancer patients along with more commonly used therapies such as intensity modulated radiation therapy, image-guided radiation therapy, and three-dimensional conformal radiation therapy.
- Surgeons involved in the Head and Neck Cancer Program have special interest and fellowship training in treating patients with cancer using the most advanced surgical techniques for tumor removal and reconstruction. Experience with high volumes of complex, head and neck cancer surgeries results in surgeons with exceptional technical expertise and the best outcomes.



Research

A research protocol is being developed to study human papillomavirus (HPV) infection as one of the causes for the rising rates of head and neck squamous cell carcinoma (HNSCC) in individuals with no known risk factors. The study is focused on:

- determining whether there has been an increased rate of HPV positive tumors over the past seven years in patients with HNSCC diagnosed at Abbott Northwestern
- evaluating the prevalence of HPV DNA in HNSCC to determine if HPV-positive patients represent a younger age group in comparison to HPV-negative patients
- determining which specific oropharyngeal sites have a higher propensity for viral presentation
- comparing the treatments that patients received to their outcome and HPV status to determine whether a certain group of patients have a favorable prognosis and may be spared the grave consequences of aggressive therapies.

Cancer Rehabilitation for Head and Neck Cancer

The Virginia Piper Cancer Institute's Head and Neck Cancer Program includes the services of a physician cancer rehabilitation specialist who works with patients before and after surgery, during treatment and after treatment with chemo radiation. Functional losses associated with these cancers and their treatment are addressed and appropriate interventions including rehabilitative therapies and integrative therapies are prescribed. The head and neck cancer program is offered in conjunction with the Sister Kenny® Rehabilitation Institute.

Speech pathologists in the Cancer Rehabilitation Program work with a physical medicine cancer rehabilitation physician who has specialized training in the mechanical alterations of surgery, reconstruction, radiation and chemotherapy that can lead to speech, chewing, eating and swallowing difficulty. Comprehensive swallow rehabilitation includes VitalStim® electrical stimulation therapy.

Physical therapists in the Cancer Rehabilitation Program are certified lymphedema therapists with training in musculoskeletal and neurologic physical rehabilitation. They work with a physical medicine cancer rehabilitation physician to combine treatment of swelling with muscular strengthening and release of tight tissues and joints. This physician also makes referrals for other needed interventions including acupuncture, a healing coach, nutrition therapy, exercise physiology and exercise trainer services from the Penny George Institute for Health and Healing, and psychology and support groups.

We work closely with ear, nose and throat physicians, nurse care coordinators, radiation oncologist and medical oncologist to provide an individualized multidisciplinary treatment program.



Comprehensive swallowing rehabilitation can help patients deal with issues that result from surgery, reconstruction, radiation and chemotherapy.

Support Programs

HEAD AND NECK CANCER SUPPORT GROUP: "COPING WITH CHANGE"

This support group helps patients and their families dealing with the physical and social changes that many have personally experienced following surgery and treatment of their cancer. This group is facilitated by a licensed psychologist and a certified oncology nurse.

NUTRITIONAL SUPPORT

Patients with cancer of the head or neck may have nutritional concerns during any phase of their treatment or follow up. Registered dietitians are available to provide diet and nutritional education and support.

SOCIAL SERVICES

A social worker is available to assist patients and their families. The social worker provides help with emotional support, financial issues including assistance acquiring the necessary approvals from insurance companies, and community resources.

Gynecologic Oncology

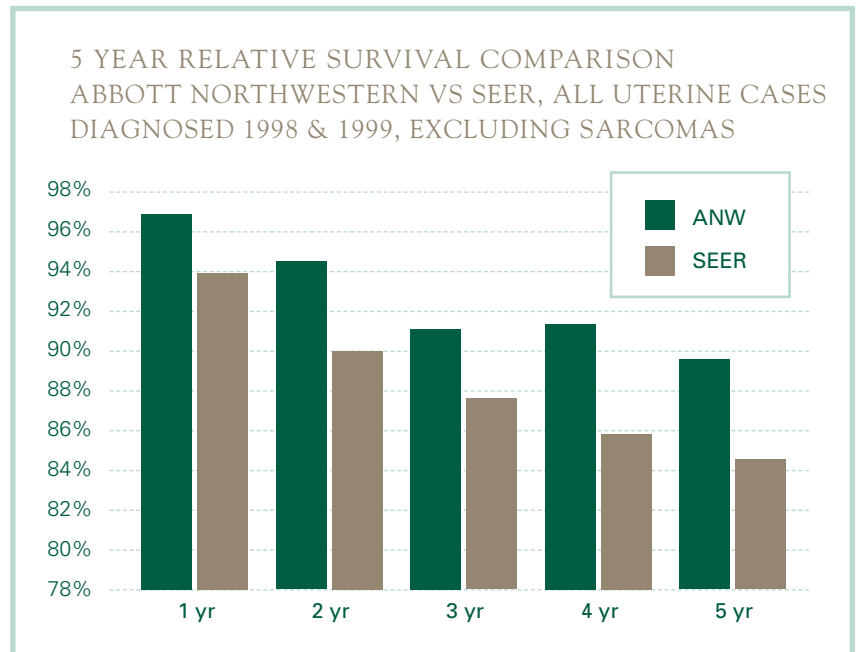
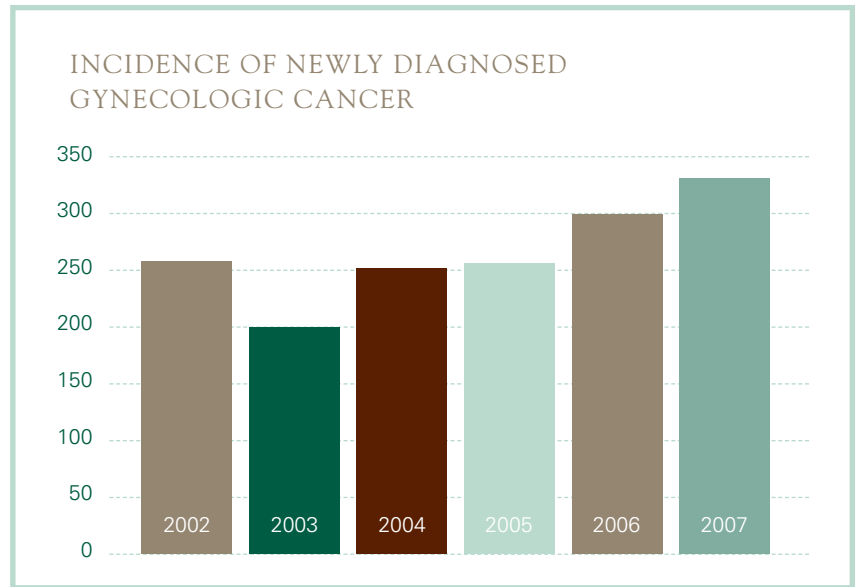
MOHPA's Gynecologic Oncology Program provides comprehensive gynecologic care for women with cervical, ovarian and uterine cancers, as well as less common cancers. Our team includes gynecologic oncologists, radiation oncologists, pathologists, radiologists, genetic counselors, oncology nurses and social workers. The team is committed to improving a woman's quality of life and minimizing side effects while she undergoes therapy.

With the recent availability of the da Vinci® Surgical System at Abbott Northwestern, some patients with gynecologic cancers are now eligible to receive a new minimally invasive surgical procedure. The da Vinci Surgical System enables surgeons to perform even the most complex and delicate procedures through very small incisions and allows a surgeon greater visualization, enhanced dexterity, precision and control.

Quality and Outcome Measures

The Gynecologic Oncology Program at Abbott Northwestern continues to grow. With the use of all available national trials, an exceptional Pathology Department with special interest in gynecologic pathology, a well-organized tumor conference, a high quality Radiation Oncology Department and four board-certified gynecologic oncologists on staff, we continue to deliver excellent medical care to women with gynecological cancers.

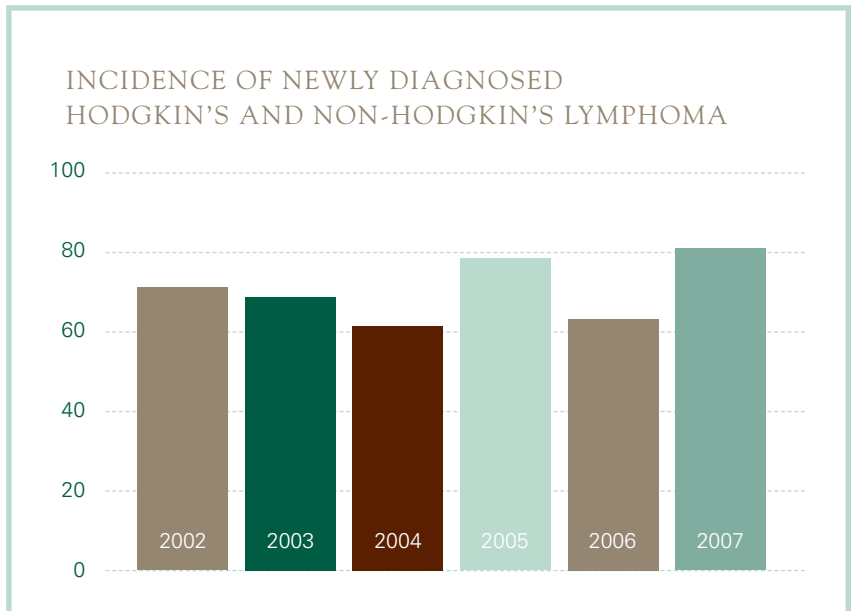
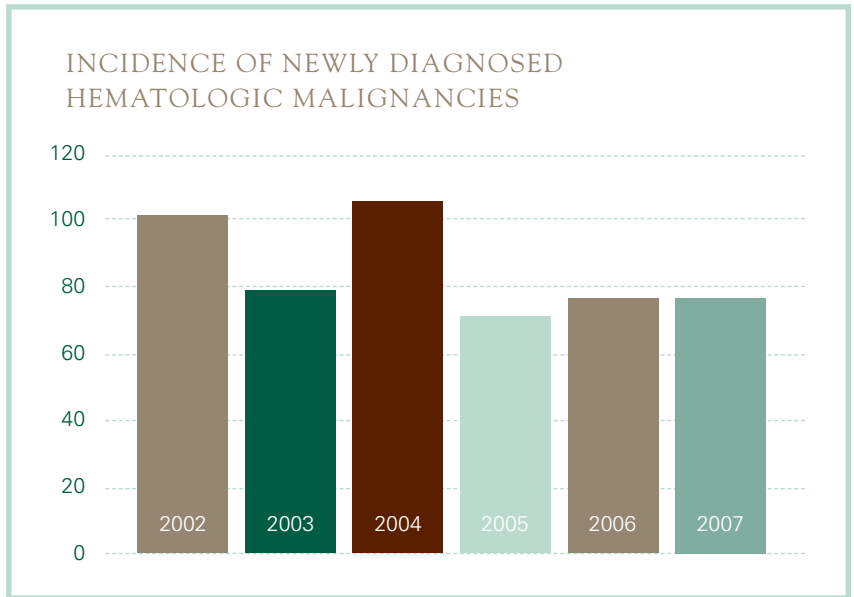
Abbott Northwestern's data compares favorably to relative survival data of the National Cancer Institute's Surveillance, Epidemiology and End Results (SEER) Program, a national source of cancer incidence and survival, and the observed survival data of the National Cancer Data Base, a nationwide oncology outcomes database. This comparison is shown at right.



Hematology/Lymphoma Program

Our Hematology/Lymphoma Program is led by eight hematologists/oncologists through our partnership with Minnesota Oncology/Hematology, P.A. (MOHPA). This group of specialized physicians uses a team approach to offer the best possible clinical care and strives to continually improve standards of care. The multidisciplinary team consists of hematologists/oncologists, pathologists, radiation oncologists, nurses, nurse practitioners, nutritionists, pharmacists, research staff and support staff.

Diagnoses treated in this program include chronic and acute leukemias, Hodgkin's and non-Hodgkin's lymphoma, multiple myeloma, Waldenström's macroglobulinemia and myelodysplastic diseases.



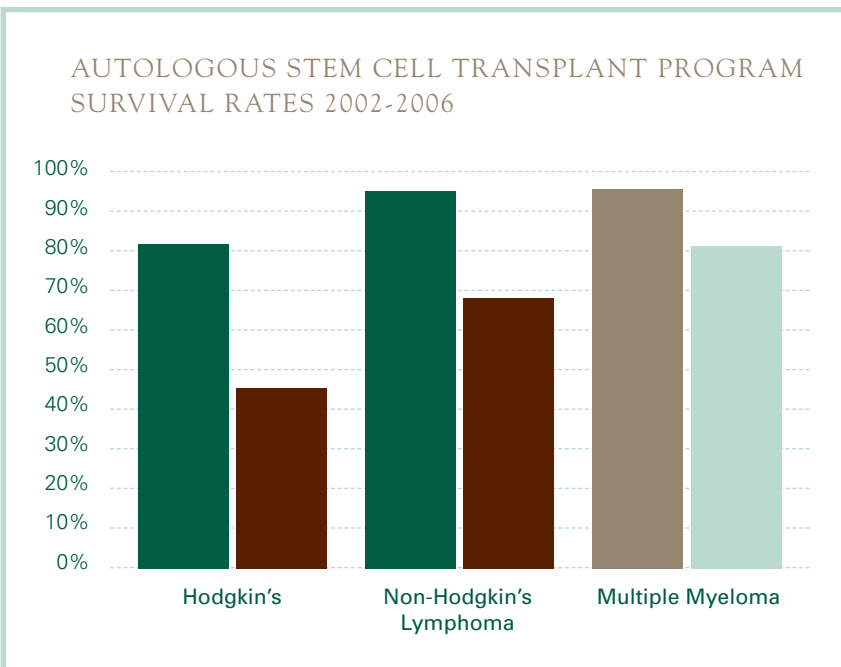


PJ Flynn MD, medical oncologist, MOPHA, meets with a patient

Autologous Stem Cell Transplant Program

Abbott Northwestern Hospital was the first Twin Cities community hospital to perform adult autologous blood and stem cell transplants. The program is accredited by the Foundation for the Accreditation of Cellular Therapy (FACT) which promotes quality patient care by setting standards for collection, processing and transplantation of stem cells.

Stem cell transplant is a treatment approach that involves using high doses of chemotherapy, with or without radiation therapy. The high doses of chemotherapy offer people with certain types of cancer the possibility of a cure or remission that delays progression of their disease. Some of the cancers treated with autologous stem cell transplant are Hodgkin's disease, non-Hodgkin's lymphoma and multiple myeloma.





Research and Innovation

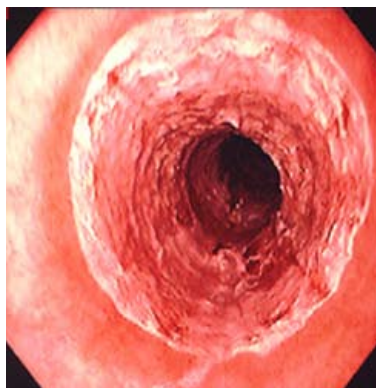
The Virginia Piper Cancer Institute is dedicated to advancing cancer care through clinical research. The research infrastructure at the Virginia Piper Cancer Institute supports national cooperative groups, independent consortiums, and industry- and locally-designed research trials. Our research nurses attend all of our multidisciplinary conferences, and clinical trial eligibility is part of every encounter.

More than 80 cancer-related clinical trials are open for enrollment at any given time at the Virginia Piper Cancer Institute. We consistently exceed the American College of Surgeons' Commission on Cancer's requirements for research study enrollment.

Relationships that support research and innovation at the Virginia Piper Cancer Institute include those with:

- National Cancer Institute
- Cooperative Group Outreach Program (CGOP)
- Community Clinical Oncology Program (CCOP)
- Pancreatic Cancer Research Team
- Eastern Cooperative Oncology Group
- North Central Cancer Therapy Group
- National Surgical Adjuvant Breast & Bowel Project
- Gynecologic Oncology Group
- Radiation Therapy Oncology Group
- US Oncology Network
- industry
- universities.

The Virginia Piper Cancer Institute is a member of the American College of Surgeons Commission on Cancer. The Commission on Cancer establishes benchmarks for cancer care processes and outcomes. The Virginia Piper Cancer Institute also contributes to the National Cancer Database, a valuable national resource that is widely used to research cancer care across the country. Virginia Piper Cancer Institute researchers and clinicians are also able to use this resource to track outcomes and trends in survival, and use the results to develop new quality and research initiatives.



Barrett's radiofrequency ablation of the distal esophagus

Piper Breast Center

Researchers at the Piper Breast Center began studying the outcomes of early stage breast cancer 10 years ago. This large, single institution study has demonstrated objectively the excellent results achievable through multidisciplinary care and careful follow up. This work is leading to a better understanding of the importance of immunohistochemically positive, nonsentinal lymph nodes and triple negative (ER, PR and Her-2neu) breast cancers.

Barrett's Esophagus

Developed by Robert Ganz, MD, the Barrx device treats Barrett's esophagus with depth-controlled radiofrequency thermal ablation. Collaborative research with Virginia Piper Cancer Institute pathologists documented the efficacy of this technique that offers hope for definitive therapy of this pre-malignant disease without the morbidity of surgery.

Esophageal cancer

As physicians of one of the fewer than 20 institutions nationwide performing minimally invasive esophagectomies, Virginia Piper Cancer Institute surgeons are participating in an ECOG-sponsored study of the efficacy and long-term outcomes of this new technique. The esophageal and gastric team also employs neo-adjuvant chemo-radiotherapy trials to promote resectability in locally advanced tumors.



Head and Neck Program

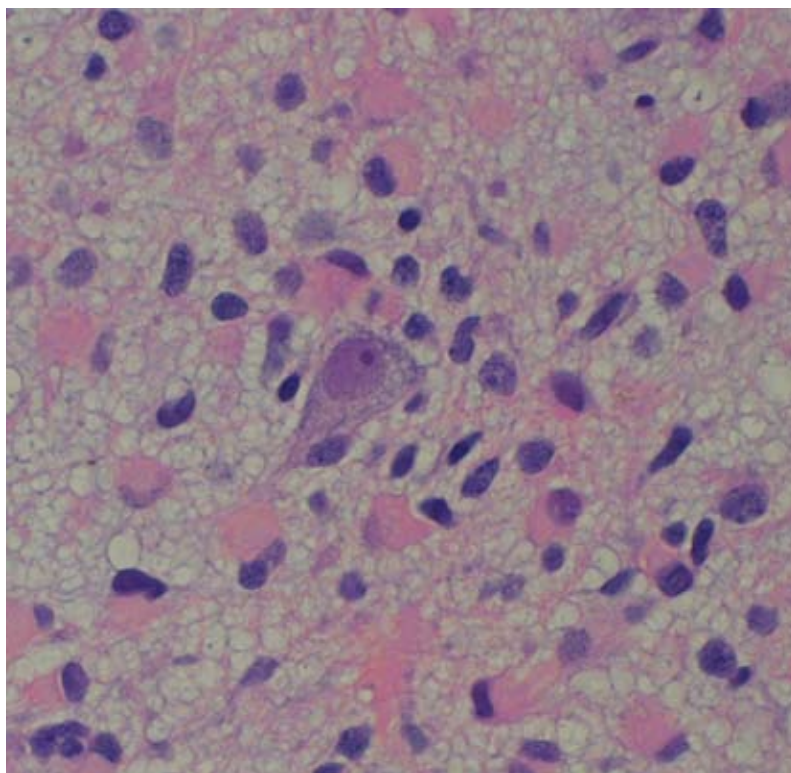
Squamous cell carcinomas of the head and neck have multifactorial etiologies and Virginia Piper Cancer Institute researchers are participating in a study determining if human papillomavirus infection is a possible contributor.

Neuro-Oncology

On the forefront of innovative therapies, the Neuro-Oncology Program is pushing the boundaries of care through innovative approaches including blood-brain barrier disruption protocols and novel targeted therapies. The Virginia Piper Cancer Institute pathologists and neurosurgeons also participate in basic research studies in tumor invasiveness by sharing surgical resection specimens with basic scientists and collaborators at the Translational Genomics Research Institute.

Pancreatic Cancer

Physicians and staff from the Virginia Piper Cancer Institute's Pancreatic Cancer Program work closely with an international consortium of basic science and clinical researchers—the Pancreatic Cancer Research Team. Virginia Piper Cancer Institute contributes to one of the world's largest serum banks of pancreatic cancer specimens and to human tissue-based research into local immune lymph node responses in normal and metastatic tissue from surgical specimens. Our therapeutic trials span all stages of the disease, and every patient is evaluated for trial eligibility.



Gemistocytic astrocytoma infiltrating gray matter (H&E).

PANCREATIC CANCER PROTOCOLS OPEN OVER THE LAST 12 MONTHS

BASIC SCIENCE

- Pancreatic cancer serum and DNA repository
- Pancreatic cancer biospecimen repository

NEO-ADJUVANT

- Multiagent (cis-platin, 5-FU, INF) chemotherapy and radiation therapy in locally advanced pancreatic cancer
- Phase II study of Oxaliplatin, continuous 5-fluorouracil and external beam radiation in patients with locally advanced pancreatic cancer

ADJUVANT

- Phase 2 double blind, placebo-controlled, adjuvant trial of GI-4000 or placebo, combined with Gemcitabine in patients with post-resection R0/R1 pancreatic cancer with tumor sequence confirmation of Ras mutations

METASTATIC

- Phase I open-label, dose-finding study of intravenous BI 2536 administered in repeated four-week cycles as repeated doses on day one and day 15 in combination with Gemcitabine administered on day one, day eight and day 15 in patients with locally advanced or metastatic pancreatic cancer
- Phase II, multicenter, open-label study of CS-1008, a humanized monoclonal antibody targeting death receptor 5 (DR5), in combination with Gemcitabine in chemotherapy naïve subjects with unresectable or metastatic pancreatic cancer
- Phase II trial of PTK787/ZK222584 in patients with advanced or metastatic pancreatic adenocarcinoma who failed first-line Gemcitabine therapy
- A phase II evaluation of the monoclonal antibody RAV12, in combination with standard Gemcitabine in the treatment of patients with metastatic pancreatic cancer who have not been previously treated for metastatic disease
- Phase II, randomized, open-label of 2 regimens, Gemcitabine plus Enzastaurin and single-agent Gemcitabine, in patients with locally advanced or metastatic pancreatic cancer
- A phase 2, open-label, single-arm trial of TPI 287 in patients with advanced, unresectable pancreatic cancer after prior treatment with a Gemcitabine-based therapy



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Presentations



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Biel MA Invited Speaker, *Photodynamic therapy and the treatment of head and neck cancers*. Biomedical Optics SPIE Meeting. San Jose, California. January 26, 2007.

Biel MA Presentation of multi-institutional clinical trial: *Photodynamic therapy of early laryngeal cancers*, Radiation Therapy Oncology Group, Philadelphia, PA, June 23, 2007.

Biel MA Invited Speaker, *Photodynamic therapy of head and neck cancers*, Biomedical Optics Meeting, San Jose, California, January 24, 2008.

Biel MA Grand Rounds Speaker, *Photodynamic therapy and the treatment of head and neck cancers*, University of Pittsburgh, Pittsburgh, PA November, 14, 2006.

Biel MA Keynote Speaker, *Photodynamic therapy treatment of cancer*, Case Comprehensive Cancer Center, University Hospitals of Cleveland, Case Western Reserve University, Cleveland, OH, July 28, 2006.

Biel MA Invited Speaker, *Photodynamic therapy and the treatment of head and neck cancers*, University of Iowa, Department of Otolaryngology. Iowa City, Iowa, June 17, 2006.

Biel MA Invited Speaker, *Photodynamic therapy and the treatment of head and neck cancers*. Biomedical Optics SPIE Meeting. San Jose, California. January 23, 2006.

Biel MA Invited Speaker, *PDT and the treatment of head and neck cancer. PDT applications in oncology*. University of Tennessee, Knoxville, Tennessee. April 1, 2005

Biel MA Invited Speaker, *Photodynamic therapy and the treatment of head and neck cancers*, Minnesota Academy of Medicine, Minneapolis, MN, March, 1, 2005.

Biel MA Invited Speaker, *Photodynamic therapy and the treatment of head and neck cancers*. Biomedical Optics SPIE Meeting. San Jose, California. January 23, 2005.

Brosam A, Lucido M, Lai R, Sielaff T, Greeno E, Bardales R, Mallery S. *Repeat endoscopic ultrasound (EUS) following neoadjuvant chemoradiation (ChemaXRT) for pancreatic adenocarcinoma*. Presented to Digestive Disease Week, Chicago, IL, May 14-19, 2005.

Brown M, Johnson D, Pruitt R, Ganz R, Radwin M, Mendolia T, Vakil N, et al: *Enteryx procedure: 12-month follow-up of GERD symptoms and treatment satisfaction*. ACG Annual Meeting, Honolulu, Hawaii, October 31, 2005.

Dunn D, Lillemoe TJ, Bretzke J, Johnson E, O'Leary J, Stoller D, Fraki S, Pearson S, Diaz LK. *Five year results of detection of axillary lymph node metastases from breast carcinoma, from sentinel lymph node mapping*. American Society of Breast Surgeons meeting, 2007.

Evans, R, Sielaff TD, Freeman M, Mallery JS, Batts K. *Biliary papillomatosis: A detailed clinicopathologic assessment of a rare entity*. Presented to the 7th Meeting of the International Hepato-Pancreatico-Biliary Association Bi-annual Meeting, Edinburgh, Scotland, September 4-7, 2006.

Humar A, Linden BC, Sielaff TD, Payne WD. *Split liver transplant for two adult recipients—Surgical technique*. Presented to the American Transplant Congress, Seattle, WA, May 21-25, 2005.

Ganz R: *Who cares about competency?* ASGE Topic Forum on Quality in Endoscopy. DDW, Chicago, IL, May 17, 2005.

Ganz R: *Regulatory update on ambulatory surgery centers*. ASGE Special Interest Group—ASCs, May 16, 2005.

Ganz R: *Endoscopic endoluminal anti-reflux devices—The future*. ASGE Special Interest Group—GERD, May 23, 2006.

Ganz R: *Value-based purchasing and price transparency in the AEC*. Presented at the ASGE Annual Course, ACG Meeting, Philadelphia, PA, October 12, 2007.

Ganz R: *Adapting to the advent of new and disruptive technologies*. Presented at the ASGE Annual Course, ACG Meeting, Philadelphia, PA, October 12, 2007.

Ganz R: *Barrett's esophagus and adenocarcinoma of the esophagus*. Presented at the SGNA Regional Meeting, St. Louis Park, MN, October 10, 2005.

Ganz R: *Political and financial drivers for change in endoscopic practice*. Presented at the Frontiers in Endoscopy Meeting, Charleston, SC, October 15, 2005, Peter Cotton and Rob Hawes, Coordinators.

Ganz R: *The future of GI practice*, Presented at the 1st Seattle GO (Gastroenterology Outlook) Meeting, Seattle, WA, November 12, 2005.

Ganz R: *Barrett's esophagus and the halo-360 ablation system*; Minneapolis VA GI Grand Rounds, April 26, 2007.

Ganz R: *Barrett's esophagus and the BARRX ablation system*; Evanston-Northwestern Hospital GI Grand Rounds, August 15, 2007.

Ganz R: *Political and financial drivers 2008-2012*. Presented at the Frontiers in Endoscopy Meeting, Charleston, SC October 5, 2007, Peter Cotton and Rob Hawes, Conference Directors.

Ganz R: *Financial survival for academic EASCs*. Presented at the Frontiers in Endoscopy Meeting, Charleston, SC October 5, 2007, Peter Cotton and Rob Hawes, Conference Directors.

Ganz R: *Barrett's esophagus and the halo ablation system*. Presented at the annual SGNA Regional Meeting, Minneapolis, MN, October 14, 2007.

Ganz R, Wittchow T, Klein D: *Endoscopic injection of duraspHERE for the treatment of GERD – Long-term human pilot study*. Presented at DDW May 23, 2006, Los Angeles, CA.

Ganz R, Gostout C, Sheridan T, Ziegler T, Meyer R: *Assisted colonoscopy using a clip-on propulsion device*. Presented at DDW May 23, 2006, Los Angeles, CA.

Ganz R, Gostout C, Berg T: *Use of an artificial sphincter for the treatment of GERD*. Oral Presentation at DDW, ASGE Topic Forum—New Treatments for Esophageal Disease, May 22, 2006 Los Angeles, CA.

Ganz R, Overholt G, Panjehpour M, DeMeester S, Urayama S, Freeman S, Savides T, Eysselein V, Sharma V, Branch M, Fleischer D: *Treatment of Barrett's esophagus and high-grade dysplasia using the halo-360 ablation system: A multi-center experience*. Presented at DDW May 21, 2006 Los Angeles, CA.

Ganz R, Overholt G, Sharma VK, Panjehpour M, DeMeester SR, Bohorofoush A, Freeman S, Eysselein V, Gress F, Branch S, Chang K, Muthusamy R, Pace S, Pruitt R, Fleischer D, Shaheen N, Triadafilopoulos G: *HALO360 Circumferential ablation is safe and effective for the treatment of Barrett's esophagus and high-grade dysplasia: A U.S. multi-center registry*. Presented at DDW May 20, 2007, Washington, DC.

Ganz R, Wittchow T, Klein D: *Successful treatment of chronic GERD using duraspHERE: Long-term results of a pilot study*. Presented at DDW May 22, 2007, Washington, DC.

Ganz R, Wang K, Krinsky ML, Singh S, Sievert C: *Dysplasia detection in Barrett's patients using the optical biopsy system*. Presented at DDW May 20, 2007, Washington, DC.

Jie T, Hering BJ, Ansite JD, Gilmore TR, Fraga DW, Beilman GJ, Dunn DL, Najarian JS, Sielaff TD, Sutherland DER. *Pancreatectomy and auto-islet transplant in patients with chronic pancreatitis*. Presented to the American College of Surgeons Surgical Forum San Francisco, CA, October 16-20, 2005.

Jie T, Kosari K, Sielaff TD. *Decision analysis supports the use of diagnostic laparoscopy in hepatobiliary and pancreatic malignancies*. Presented to the American Hepato-Pancreato-Biliary Association Americas Congress, Miami Beach, Florida, March 8-12, 2006.

Johnson D, Pruitt R, Ganz R, Radwin D, Mendolia S, Brown M, Vakil N, Gostout C, DeLegge M, Cattau E, Chen D: *GERD Symptoms and treatment satisfaction among enteryx procedure patients*. Presented at DDW, May 18th, 2005, Chicago, IL.

Kosari K, Castro C, Sielaff TD. *The utility and cost of diagnostic laparoscopy with liver ultrasound in patients with hepatic metastases of colorectal cancer*. Presented to the American Hepato-Pancreato-Biliary Association Americas Congress, Fort Lauderdale, Florida, April 14-17, 2005.



Lehman G, Aisenberg J, Cohen L, Foley R, Ganz R, Johnson D: *Endoscopic Implantation of Enteryx for the Treatment of GERD: 36 month Follow-Up in 46 U.S. Subjects*. Presented at DDW, May 18, 2005, Chicago, IL.

Lehman G, Aisenberg J, Cohen L, Foley R, Ganz R, Johnson D: *Enteryx procedure for the treatment of GERD symptoms: 36-month follow-up in 60 patients*. ACG Annual Meeting, Honolulu, Hawaii, October 31, 2005.

Lillemoe TJ, Dunn D, Bretske M, Johnson E, O'Leary J, Stoller D, Fraki S, Pearson S, Diaz LK. *Detailed pathologic evaluation of non-sentinel axillary lymph nodes following identification of sentinel lymph node metastases by cytokeratin immunohistochemistry and/or permanent section H & E levels*. Presented at the 2007 San Antonio Breast Cancer Symposium, San Antonio, Texas.

Linden B, Sielaff T, Humar A. *Technique for in-situ split liver donation for two adults*. Presented to the American Hepato-Pancreato-Biliary Association Americas Congress, Fort Lauderdale, Florida, April 14-17, 2005.

Mitlyng B, Batts K, Crowder C, Naslund L, Ganz R: *Adenocarcinoma of the GE junction region: A critical appraisal*. Presented at DDW May 20th, 2007, Washington, DC.

Sielaff TD, *Ablative therapies for liver tumors*. Presented to the 70th Annual University of Minnesota Surgery Continuation Course, Minneapolis, Minnesota, June 14-17, 2006.

Sielaff TD, *Ablative therapies for primary and metastatic liver tumors*. Presented to the 71st Annual University of Minnesota Surgery Continuation Course, Minneapolis, MN, June 14-16, 2007.

Sielaff TD, *Advances in Hepatobiliary and Pancreatic Cancer Care: A multidisciplinary approach and the central role of the radiologist*. Presented to the Minnesota Radiological Society Spring Meeting, Bloomington, MN, April 14, 2007.

Sielaff TD, Daniels J, Kosari K, Coad J. *Clinical and hormonal characteristics of biliary cystadenomas*. Presented to the American Hepato-Pancreato-Biliary Association Americas Congress, Fort Lauderdale, Florida, April 14-17, 2005.

Sielaff TD, *General surgery course—Pancreas*. Presented to the 93rd Annual Clinical Congress American College of Surgeons, New Orleans, LA, October 7-11, 2007.

Sielaff TD, *Minimally invasive hepatobiliary and pancreatic surgery*. Presented to the Minnesota Surgical Society President's Address. Two Harbors, MN, October 27, 2007.

Sielaff TD, Payne W, Humar A. *Liver resection for laparoscopic cholecystectomy associated bile duct injuries*. Presented to the 7th Meeting of the International Hepato-Pancreato-Biliary Association Bi-annual Meeting, Edinburgh, Scotland, September 4-7, 2006.

Sielaff TD, *Surgical management of pancreatic cancer*. Presented to the Minnesota Cancer Registrars Association. Edina, MN, April 29, 2005.

Virtue M, Ganz R: *Barrett's esophagus—Are we looking too late?* Presented at DDW, May 15, 2005, Chicago, IL.

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About Abbott Northwestern Hospital

Abbott Northwestern Hospital is the largest not-for-profit hospital in the Twin Cities area, with 633 available beds and 65 bassinets. Each year, the hospital provides comprehensive health care for more than 200,000 patients and their families from the Twin Cities area and throughout the Upper Midwest. More than 5,000 employees, 1,600 physicians and 550 volunteers work as a team for the benefit of each patient served.

Abbott Northwestern Hospital is a part of Allina Hospitals & Clinics, a family of hospitals, clinics and care services in Minnesota and Western Wisconsin.

For more than 125 years, Abbott Northwestern has had a reputation for quality services. The hospital is well known for its centers of excellence:

- cardiovascular services in partnership with the Minneapolis Heart Institute®
- Mental Health Services
- medical/surgical services
- Neuroscience Institute
- Orthopaedic Institute
- physical rehabilitation through the Sister Kenny Rehabilitation Institute
- Spine Institute
- Virginia Piper Cancer Institute
- perinatology, obstetrics and gynecology through WomenCare.

To Admit a Patient to Abbott Northwestern Hospital

PHYSICIAN-TO-PHYSICIAN PROGRAM

One number access to:

- telephone and telemedicine consultations
- hospital admissions and specialist appointments
- transportation to Abbott Northwestern Hospital and affiliated physician clinics
- the Hospitalist Program
- specialty services that might not be available in your community.

1-800-828-8900. Available 24 hours a day, seven days a week.

EMERGENCY DEPARTMENT-TO-EMERGENCY DEPARTMENT (ED TO ED)

For urgent consultation and transfer assistance call 612-863-4233. This program includes:

- E.D. to E.D. transfers
- E.D.-facilitated direct admissions
- E.D. physician triage and consultation

MINNEAPOLIS HEART INSTITUTE® AT ABBOTT NORTHWESTERN

For referring physicians, we offer:

- one of the largest cardiology outreach and mobile diagnostic programs in the US, with regular cardiology consultations in more than 30 communities across Minnesota and the Upper Midwest
- physician follow-up with primary care or referring physicians to help them ensure patients are receiving a continuum of quality care before, during and after their experience with the Minneapolis Heart Institute®.

To make an appointment at our Minneapolis location or to determine which Minneapolis Heart Institute® location is most convenient for your patient for a cardiology consultation or diagnosis, please call the Minneapolis Heart Institute® at 612-863-3900 or toll-free at 1-800-582-5175.

Abbott Northwestern and its Medical Staff are dedicated to providing outstanding care and service to patients and their families. We're proud of what we offer the community: exceptional physicians, nurses and support staff; a commitment to research, education and outcomes; a foundation of clinical partnerships that span the region; and a cultural enthusiasm for growth and improvement. Brought together in one institution, these factors create an energetic and sophisticated environment that inspires caregivers to collaborate in new ways for the benefit of patients.

Our passion for finding new and better approaches to care drives extensive research efforts in clinical areas across the hospital. This ensures that new treatment advances benefit patients as quickly as possible, supports a dynamic environment for medical and nursing education, and is the catalyst for our outcomes measurement program.

To learn more about
Abbott Northwestern Hospital,
visit www.abbottnorthwestern.com
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IN APPRECIATION

Our sincere thanks go to the Abbott Northwestern Hospital Foundation for its support of Abbott Northwestern's Outcomes Institute and the production of this Overview and Outcomes Report. The commitment of the Foundation and Abbott Northwestern's generous donors to improving patient care through these efforts is greatly appreciated.

The Vision Campaign

Community leaders play a unique role in improving cancer care. In fact, the Virginia Piper Cancer Institute is named for a leader who exemplified the kind of partnership that can arise among a community, doctors and patients. Virginia Piper understood that to continue growing and advancing the front lines of care, a hospital needs continual input from people outside the organization.

All of the cancer programs within the Virginia Piper Cancer Institute regularly invite patients and their families to share their observations about health care and what we might do as caregivers to best help people. It is in this way that our programs are responsive and ever-evolving.

Community members have stepped forward with their gifts to meet the needs of Abbott Northwestern Hospital and the Virginia Piper Cancer Institute. This is particularly evident in the many memorials and honorary gifts that the Virginia Piper Cancer Institute receives. The support of donors has made possible:

- new cancer research studies
- nurse training and education programs
- investments in patient care
- key improvements for patients and families on the Virginia Piper Cancer Institute inpatient unit.

Today, the legacy of Virginia Piper carries on. We are grateful that members of the Piper family continue to invest in the hospital to help it become the best it can be. They are joined by other community leaders who play a pivotal role in supporting initiatives such as the Virginia Piper Vision Campaign, which has raised \$33 million in philanthropic contributions.



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