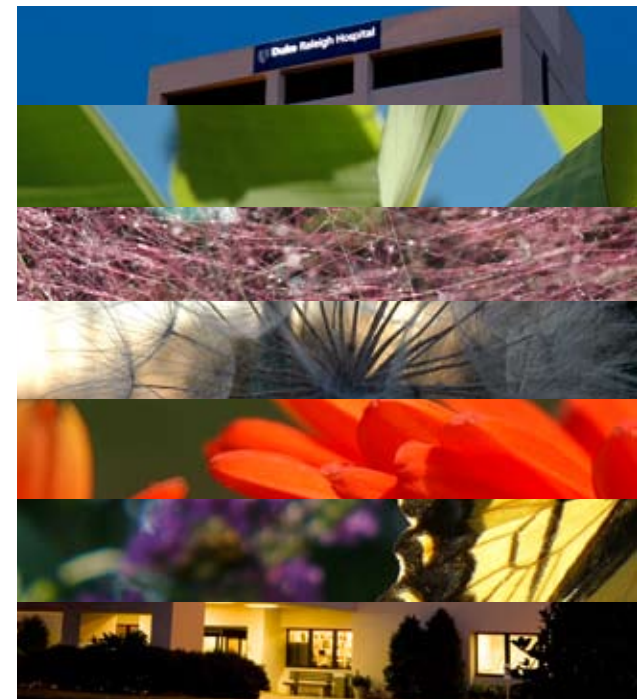




Duke Cancer Center
Raleigh

2007 Annual Report



Design by DANA KUBLIN

Photography by DUKE PHOTOGRAPHY, ROBERT MATTESON

services & resources

Inpatient Oncology Unit

Duke Radiation Oncology

Outpatient Medical Oncology Services

Cancer Registry

Diagnostic Imaging Services

Psychology Services

Patient Support Services

Rehabilitation and Lymphedema Management Services

Hospice and Home Care Services

Multidisciplinary Cancer Care Team

Oncology Clinical Quality Improvement Team

Community Events and Charitable Support

Forums and Conferences





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2007 Cancer Committee

YALE PODNOS, MD, MPH*	Medical Director, Surgical Oncology	BORIS CVETKOVSKI, MD	Gastroenterology
DOUGLAS VINSEL	CEO, Duke Raleigh Hospital	SCOTT GERSH, MD	Hospitalist, Inpatient Medicine
RICHARD GANNOTTA	COO, Duke Raleigh Hospital	TRACEY KRUPSKI, MD	Urology
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CAROL HAHN, MD	Medical Director, Radiation Oncology	PAUL RIEKER, MD	Anesthesia, Pain Clinic
DAVID WHITE, MD	Thoracic Oncologic Surgery	KIM BJURSTROM, RN	Oncology Nurse Manager, Cancer Center
RICARDO MORENO, MD	General Surgery	CHERYL BLALOCK, RN, CTR	Cancer Registry Supervisor
CHRISTOPHER WATTERS, MD	General Surgery	JULIE MCQUEEN, CHES	Patient Navigator
SHARON TAYLOR, MD	Hematology Oncology	GENE WOODALL, R.PH	Director, Pharmacy Services
GINA VACCARO, MD	Hematology Oncology	PAUL DAVIS, RN, OCN	Oncology, Clinical Nurse Specialist
YURI FESKO, MD	Hematology Oncology	SUZANNE IRVIN, MSW	Social Worker
LINDA SUTTON, MD	Medical Director, Duke Oncology Network	TRACEY SMITH	American Cancer Society
MARGARET DEUTSCH, MD	Hematology Oncology	CARRIE BYRNS, RN	Nurse Manager, Inpatient Oncology
NEERAJ AGRAWAL, MD	Hematology Oncology	ELDINA IBRAHIM, CURN, CNOR	Team Leader, Surgical Services
ROBERT WEHBIE, MD	Hematology Oncology	LINDA LLOYD	Chief Therapist, Radiation Oncology
SARAH HODGES, MD	Otolaryngology	MAUREEN WALLACE, RN	Wake County Coordinator, Duke Home Health & Hospice
CAROL FILOMENA, MD	Medical Director, Laboratory Services		
ROBERT VOGLER, MD	Diagnostic Radiology		
AARON WOEFFTER, MD	Gastroenterology		

*Cancer Committee Chairman

Welcome



It is with great pride and pleasure that I present the Duke Raleigh Cancer Center Annual Report for 2007. Since becoming Medical Director January 1, I have had the pleasure of overseeing many significant changes to our Cancer Center. None of these would have been possible without the excellent stewardship of my predecessor, Dr. Kirk Faust.

Without his forward-thinking vision and commitment, our Cancer Center would never have come to fruition.

In the spring, we received another 3 years of accreditation from the American College of Surgeons Commission on Cancer, achieving a near perfect score on the audit. Accolades go to Cheryl Blalock and the entire Cancer Center staff that made our success possible. The reviewer was particularly impressed by the breadth of cases presented and large, active attendance at our multidisciplinary tumor board. Occurring every Friday morning, this series has recently been expanded to include reviews of the most current topics from various surgical and medical oncology meetings and overviews of clinical trials available at Duke Raleigh Cancer Center.

In addition to my taking over as Medical Director,

we have also expanded our faculty, bringing in several key people who are uniquely qualified to further our patient care programs. Dr. Michael Spiritos came from Pennsylvania to become Chief of Medical Oncology at Duke Raleigh Cancer Center. He brings more than twenty years of experience in treating cancer patients and a mandate to increase research and clinical trial opportunities for our patients in Raleigh.

Lori Pickens recently became director of cancer services at Duke Raleigh Hospital. She comes to us after serving as CEO of the Missouri chapter of the American Lung Association. With her comes an administrative acumen and patient related vision to offer our patients more comprehensive services in Raleigh. With these key appointments, we are very excited about our abilities to continue to bring cutting edge, comprehensive cancer care to Raleigh.

As a Surgical Oncologist, I am particularly proud of our expanded use of minimally invasive surgical techniques in treating many abdominal and thoracic malignancies. These advanced techniques are less painful and result in shorter hospital stays. The end result, and the only one that really matters, is that patients are treated in a manner that maximizes their long-term outcomes and quality of life.

As we look into 2008, we strive to continue to provide exemplary, state of the art care to our patients in a manner that focuses on the human aspects of cancer care. We are adding Gynecologic Oncology services

to augment our already substantial abilities to care for women with cancer. Multidisciplinary clinics, where patients have “one stop shopping” to their physicians and support services, are also being expanded to include breast, genitourinary, and thoracic diseases.

I hope that after you read through this report, you are as convinced as I am that we continue to serve patients, their families, and physicians in an advanced, informed, caring environment. We look forward to continuing our service to the community.

A handwritten signature in black ink that reads "Yale D. Podnos".

Yale D. Podnos, MD, MPH
Medical Director



Cancer Program and Resources

Together, a multidisciplinary team of Duke physicians, nurses, radiation therapists and other health care professionals provide a full range of services to patients with cancer at Duke Raleigh Cancer Center.

MULTIDISCIPLINARY TEAM

A team of Duke Oncologists provide radiation and medical oncology treatments for nearly every type of cancer. Working with them in close collaboration are Duke Cancer specialists representing Thoracic Surgery, Surgical Oncology, Urology, Pulmonology, Gastroenterology, Gynecologic Oncology, ENT and Neurology, all of whom are committed to providing the cancer patients at Duke Raleigh Cancer Center the best cancer care available. A team of Pathologists and Radiologists complement the care team utilizing the most current technologies available for diagnosing and determining disease characteristics for all types of cancers.

CANCER CONFERENCE

Once a week this multidisciplinary team of cancer care physicians, pathologists and radiologists come together to review complex cancer cases identified through pathology reports. Joining the physicians are representatives from palliative care, patient navigators, genetic counselors, oncologic nurses, allied health profession-

als, and visiting physicians and specialists from other institutions. Cancer patients benefit greatly through the collective expertise of this group of specialists as they discuss various aspects of each case and determine the best course of action for the patient.

ADVANCED TECHNOLOGY

Duke Raleigh Cancer Center has the most current technologies available for diagnosing and treating cancer. Diagnostic imaging technologies include Computed Tomography (CT), CT/Simulator and Magnetic Resonance Imaging (MRI), Mobile Positron Emission Tomography (PET/CT) scanning, endoscopic ultrasound, mammography, nuclear medicine, and stereotactic breast biopsy.

In Medical Oncology, treatment therapies include:

- ▶ Chemotherapy administration
- ▶ Non-chemotherapy drug administration
- ▶ Biological therapies such as IVIG, Neupogen, growth factors
- ▶ Supportive therapies such as antiemetics and IV fluids
- ▶ Blood and blood product administration
- ▶ Central access care and maintenance

In Radiation Oncology, treatment therapies include:

- ▶ External Beam on state-of-the-art linear accelerator
- ▶ Intensity Modulated Radiation Therapy
- ▶ Brachytherapy (Beginning in January 2008. See page 5 for a focus on brachytherapy.)

DUKE CLINICAL TRIALS

Duke Raleigh Cancer Center is actively involved in on-site clinical trials through Duke Medicine. There are dozens of trials open at any given time at the Cancer Center. These trials include brain, breast, lung, gastroenterologic, urologic and many other types of cancer and cancer sites. All new Hematology Oncology patients are screened for possible inclusion in a clinical trial at Duke. Participation is entirely voluntary. If study drugs are involved, these drugs are provided at no cost to enrolled patients.

GENETICS COUNSELING

Genetics consultation, testing and counseling services are provided at Duke Raleigh Cancer Center by a certified Duke Genetics Counselor. This service is available to oncology patients and appropriate family members needing access to this exciting new field of expertise. Genetic counseling shows great promise in helping physicians and their patients make decisions that influence screening and treatment choices.

INPATIENT ONCOLOGY UNIT

Duke Raleigh Hospital has a dedicated inpatient unit with 13 beds for oncology patients. Patients are cared for by oncology certified nurses. The nurses are specially trained by nursing leadership and oncology specialists at Duke and other hospitals and include courses ranging from symptom management to chemotherapy administration.



Patient navigators Brenda Wilcox and Julie McQueen.

PATIENT NAVIGATORS

Duke Raleigh Cancer Center provides a unique service to cancer patients through our patient navigators. The navigators provide a vital connection to the myriad of resources available to patients and their families. While their primary role is to coordinate the many tests, appointments and procedures needed for comprehensive cancer care, our navigators also provide educational and emotional support and encouragement.

SOCIAL SERVICES AND DIETARY SUPPORT

The social worker at Duke Raleigh Cancer Center identifies emotional, financial, logistical and spiritual needs of each patient and coordinates hospital and community resources for patients and their families. A dietician also provides support to our cancer team by screening patients and following them through their care to ensure they receive the appropriate dietary guidance.

REHABILITATION AND EXERCISE

Duke Raleigh Cancer Center offers comprehensive rehabilitation services to cancer patients. Inpatient and outpatient physical therapy, occupational therapy, speech therapy and lymphedema management services are often needed to assist patients back to functional status following cancer treatments. The Cancer Calisthenics program is offered to patients who could benefit from exercise during their treatment and recovery.

HOSPICE AND HOMECARE SERVICES

It is sometimes necessary for patients to enroll in a hospice or homecare program. Patients are assisted into these programs by Duke Raleigh Cancer Center nurses, social workers, patient navigators and case managers.

EVENTS AND FORUMS, SUPPORT GROUPS AND RESOURCES

Duke Raleigh Cancer Center is committed to the education and promotion of health to the communities we serve. Each year we conduct disease specific educational and screening events. We also participate in many fundraising activities and events to support programs and research for all types of cancers. Support groups are also very important to our patients. Every month, Duke Raleigh Cancer Center offers a support group for breast cancer patients and survivors to assist them through treatment and ongoing issues related to survivorship.

CANCER REGISTRY

The registry is responsible for identifying cancer patients receiving any portion of care at Duke Raleigh Cancer Center, abstracting appropriate clinical information from charts into cancer databases, and following up on the disease status of all patients receiving cancer services at Duke Raleigh Hospital. 🌊



Prostate Brachytherapy

CAROL HAHN, MD



In early 2008, Duke Raleigh Hospital will initiate an on-site program in prostate brachytherapy, performing permanent seed implants. Brachytherapy is a current option utilized in the curative treatment of prostate cancer.

Permanent seed implants (also called PSI or prostate seed implants) are performed by inserting small metal seeds of radioactive iodine, palladium or cesium directly into the prostate gland under anesthesia. The seeds are temporarily radioactive and deliver radiation to the prostate over several weeks. After losing their radioactivity, the seeds remain in the prostate and are harmless. Multiple studies of brachytherapy demonstrate excellent disease control and quality of life results for prostate cancer patients. Brachytherapy is delivered as a single outpatient procedure, which makes this form of radiotherapy a preferred option for many cancer patients.

To date, this program has been offered within the Duke University Health System through our programs in Durham but this will be the first brachytherapy procedure available for Duke patients in Wake County. The procedures will be performed by Dr. Carol Hahn, medical director of radiation oncology who has served as a founding member of the PSI program for the Duke University Health System in Durham, and Duke Urologists, Drs. Tracey Krupski and Gregory Bianchi. Offering brachytherapy at the Duke Raleigh Cancer Center will give patients additional therapeutic options here in Wake County.

DRAH Lung Cancer Study

PREPARED BY CHERYL BLALOCK, RN, CTR

By 2015, cancer is expected to become the leading cause of death in North Carolina and the nation, surpassing heart disease.

Cancer is the second leading cause of death in North Carolina and in the United States. In 2007, 16,405 persons in North Carolina are expected to die from cancer and 1000 of those will come from Wake County. It is estimated that nearly four in ten, or 40%, of North Carolinians will develop cancer during their lives.

Lung cancer is the leading cause of cancer deaths in both men and women. This need not be the case, as lung cancer is one of the most preventable cancers.

It is generally accepted that over 60% of all cancers are related to personal lifestyle or environmental factors, such as smoking and diet, and are therefore preventable. Other factors such as age, gender, and family history of a specific cancer are also associated with the development of cancer and aid in the identification of people at high risk. Early detection is stressed, but for some cancers, prevention is much more beneficial. Lung cancer is a disease that takes many years to develop and often spreads to other parts of the body before it is detected. Early detection options are limited. At this late stage, treatment options are also limited and patients with advanced lung cancer may die within months of diagnosis.

Smoking is the leading cause of preventable death in the United States and is by far the leading risk factor for developing lung cancer.

It is estimated that 80-90% of lung cancers result from smoking. Cigar and pipe smoking are almost as likely to cause lung cancer as cigarette smoking. Non-smokers who breathe in second-hand smoke are also at increased risk. Air pollution and increased age are factors, and women who smoke seem at greater risk for developing cancer than men who smoke. Stopping smoking at any age lowers the subsequent risk of developing lung cancer.¹

Current and Former Smokers: NC Adults, 2006

AGE	CURRENT SMOKER	GROUP RESPONDENTS	FORMER SMOKER
18-24	625	27.8%	9.8%
25-34	862	26.4%	15.9%
25-44	2,662	22.7%	17.6%
45-54	3,083	25.7%	25.9%
55-64	3,084	19.6%	35.7%
65+	4,141	9.9%	41.1%
ALL AGES	15,569	22.1%	24.1%

Source: Behavioral Risk Factor Surveillance System, NC 2006

¹ North Carolina Central Cancer Registry Cancer Profiles 2007, Department of Health and Human Services, Division of Public Health State Center for Health Statistics

² National Lung Cancer Partnership, NationalLungCancerPartnership.org

Note: All Duke Raleigh Hospital statistics provided by the Cancer Registry.

Smoking kills more people than car crashes, alcohol, illegal drugs, AIDS, murders and suicides combined.²

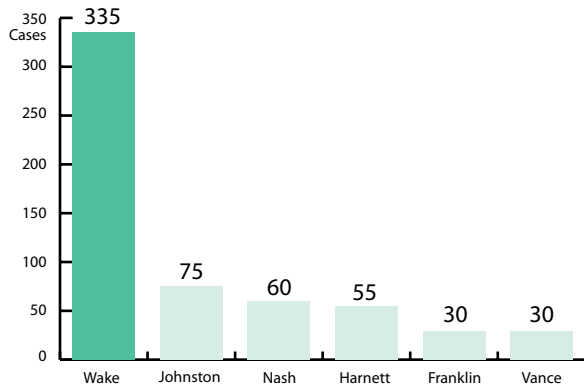
This astounding finding and current cancer statistics have prompted the North Carolina Advisory Committee on Cancer Coordination and Control to develop serious objectives for the state of North Carolina in the coming years. They include:

- ▶ Increase smoke-free environments across the state
- ▶ Decrease areas where citizens are exposed to second hand smoke
- ▶ Encourage organizations and businesses to offer “Quit Assist” programs to decrease smoking rates

Duke Raleigh Cancer Center sponsored the inaugural “Free to Breathe” 5K and 1 Mile Run/Walk & Rally on November 3, 2007. The Cancer Center partnered with a group of dedicated survivors, advocates, and healthcare professionals called North Carolinians Against Lung Cancer. Proceeds benefitted the National Lung Cancer Partnership, which raises awareness and funds needed for lung cancer research. To assist in the NC plan to decrease smoking in public places, Duke Raleigh has a tobacco-free campus and employees and their families are offered smoking cessation classes.

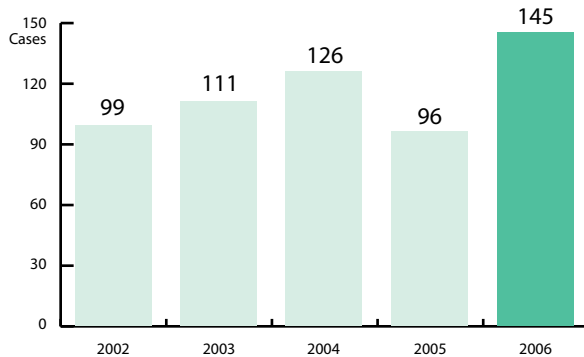
The American Cancer Society projects there will be approximately 6,300 new cases of lung cancer diagnosed in North Carolina alone in 2007. The North Carolina Cancer Registry projects that 335 of those cases will be in Wake County. 280 lung cancer patients are projected to die in Wake County this year.

Projected 2007 New Lung Cancer Cases by County



More lung cancer patients are being seen at Duke Raleigh Hospital each year. The following charts reflect the number of patients seen in the years of 2002-2006 with invasive lung cancer.

DRAH Lung Cancer Cases, 2002-2006

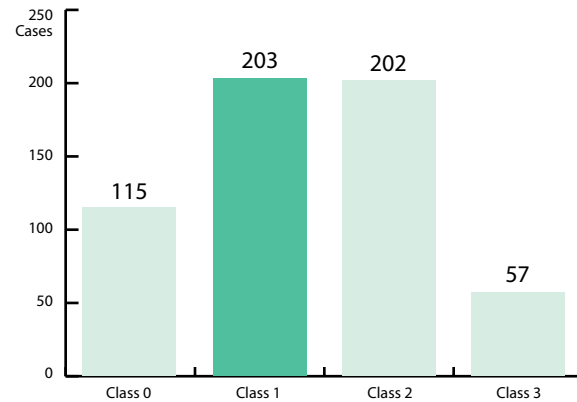


PATIENT CLASSIFICATIONS

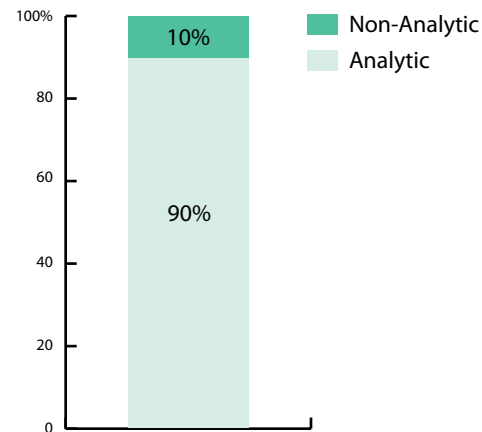
- Class 0** Some of the patients were diagnosed at DRAH and were treated elsewhere.
- Class 1** Patients who were diagnosed here and also received treatment here.
- Class 2** Patients who were diagnosed elsewhere but received initial treatment here.
- Class 3** Patients who received no initial treatment here but had treatment later in their course.

Duke Raleigh Cancer Center treats all classes of patients with the majority being classes 1 and 2. Class 3 patients are classified as non-analytic because they receive no part of their first course of treatment at our hospital. 90% of cases seen at DRAH are analytic.

DRAH Lung Cancer Cases by Class, 2002-2006

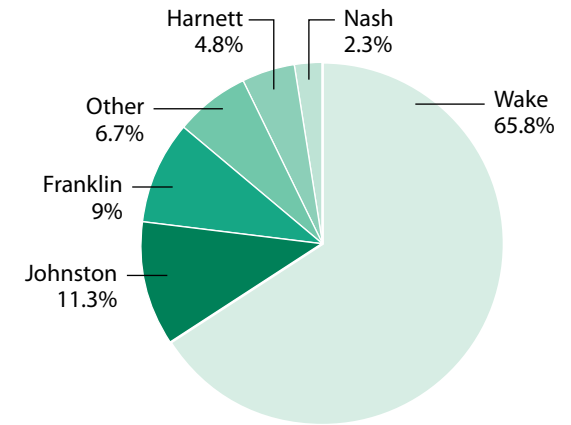


DRAH Lung Cancer Cases by Type, 2002-2006



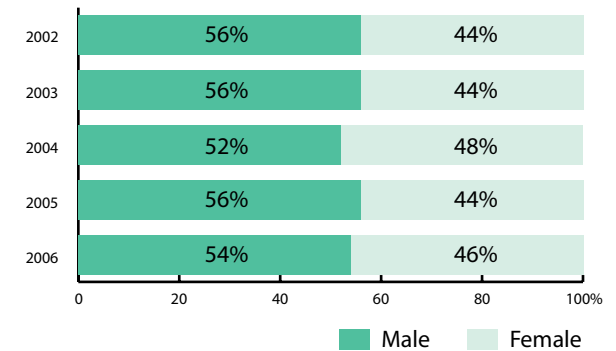
Most patients seen at Duke Raleigh live in Wake County, with the remainder coming from surrounding counties. With the recent population growth in Johnston County, there has been an increase in patients seen from that county.

DRAH Patients by County



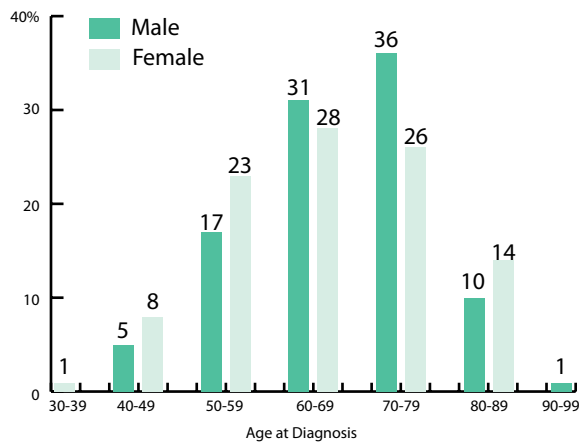
Lung cancer affects both men and women, and both sexes are represented almost equally at Duke Raleigh. There were 8% more men than women seen in the 5 years 2002-2006. Of the males, 81% were Caucasian, and 19% were African American, and there was one Asian male. Of the women, 85% were Caucasian and 15% were African American.

DRAH Analytic Lung Cancer Patient Distribution by Sex, 2002-2006



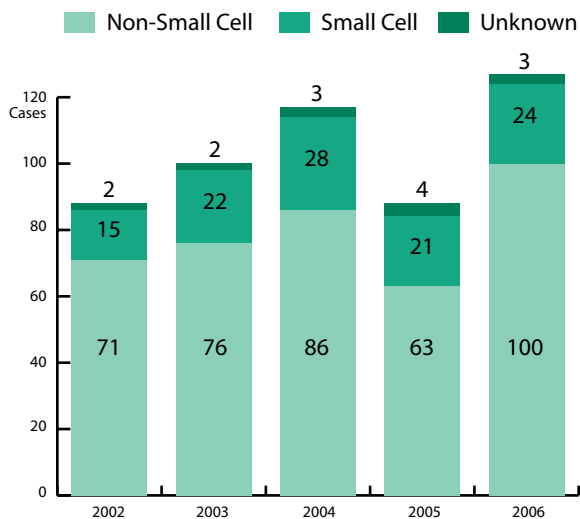
The average patient age at the time of first diagnosis was 67 years of age; women 66 and men 68. However, the range of ages of analytic patients treated at DRAH in 2002-2006 was 37-93 years of age. The trends show that women initially presented at a younger age than men.

DRAH Analytic Lung Cancer Cases, Age at Diagnosis by Sex, 2002-2006



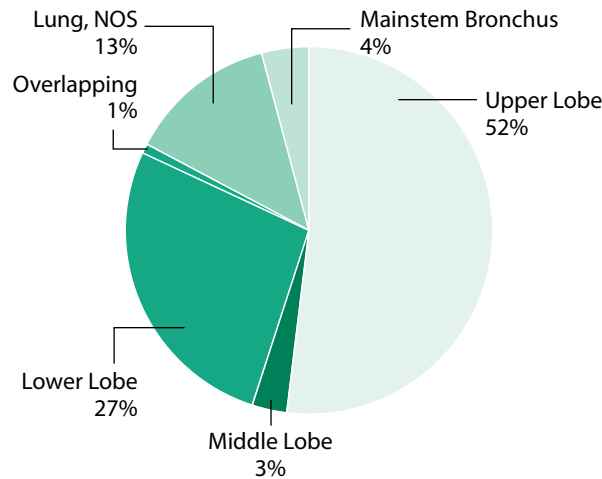
While there are many varied cell types of lung cancer, they can be broken down into two major groups, and each is treated differently. Small Cell Lung Cancer usually represents 10-15% of cases diagnosed, and Non-Small Cell Lung Cancer represents 85-90%. For 2002-2006, DRAH treated 76% Non-Small Cell and 21% Small Cell lung cancer. The few unknown types were patients who refused biopsy or treatment.

DRAH Analytic Lung Cancer Cases by Cell Type, 2002-2006



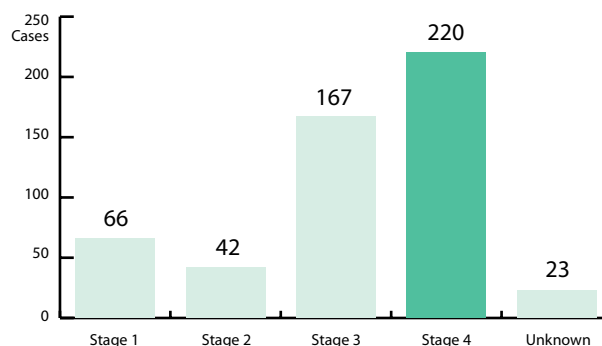
Cancer can grow anywhere in the lungs or bronchi. The right lung has three lobes, and the left has two. Most cancers are found in the upper or lower lobes.

DRAH Analytic Lung Cancer Sites, 2002-2006

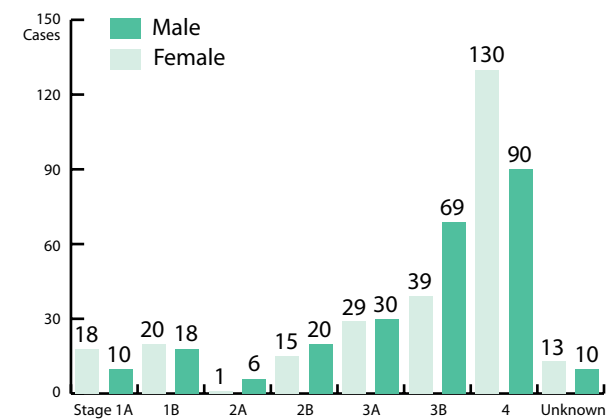


Unfortunately, most lung cancer is diagnosed after it has spread from the lung to the lymph nodes or to other organs or tissues in the body. These late stages have a much poorer prognosis than early stage cancer which is more localized in the lung area in which it began. By the time symptoms occur, the disease may be advanced. As in hospitals around the country, most lung cancer cases at Duke Raleigh present at the late stages, Stage III or Stage IV. The stages are further broken down to treat each case more specifically.

DRAH Analytic Lung Cancer, AJCC Stage at Diagnosis



DRAH Analytic Lung Cancer Cases, AJCC Stage at Presentation by Sex



Depending on the stage at diagnosis, treatment varies from a single treatment option to combination therapies with several different modalities. The intent of treatment also depends on the stage at diagnosis, the patients' overall health status, age, and other conditions that would affect the ability of the patient to tolerate and recover from therapy.

Surgical resection offers the best chance of a cure for those with early-stage lung cancer. Duke Raleigh Hospital offers a minimally invasive surgery known as VATS (video-assisted thoracic surgery) for patients with a small primary tumor that has not spread beyond the lungs. Because there are only several small incisions and the ribs are not spread, patients having thoroscopic surgery usually experience a more rapid recovery, reduced hospital stay, and less pain. A small video camera (thoroscope) and surgical instruments are inserted into the incisions. Images from the camera are projected onto a computer monitor for the surgeon.

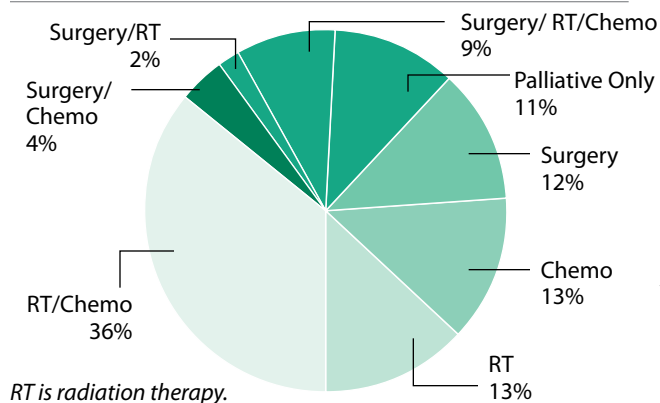
In 2005, two thoroscopic resections were performed here at Duke Raleigh Hospital, and in 2006, seventeen resections were performed without converting to open procedures. There was no significant difference in the number of lymph nodes removed in the thoras-

copric surgery and the open procedure. With a thoracic oncologic surgeon on staff at Duke Raleigh Hospital, this program will continue to grow.

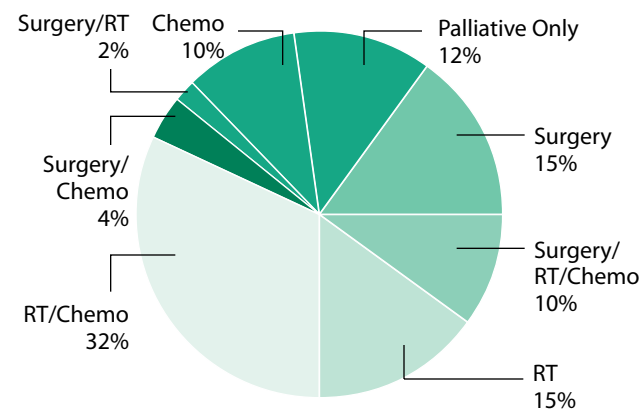
The traditional open-chest approach is called a thoracotomy and is still done for more advanced stages of cancer or for patients who have had a previous chest surgery. All patients are not candidates for video-assisted surgery. A surgeon evaluates each patient individually and performs the least invasive surgery possible to achieve the best removal of the tumor.

Below, the graphs show both the treatment modalities of all lung cancer patients at DRAH during a 5-year study period, and specifically for patients with non-small cell lung cancer.

Analytic Lung Cancer Treatment, 2002-2006

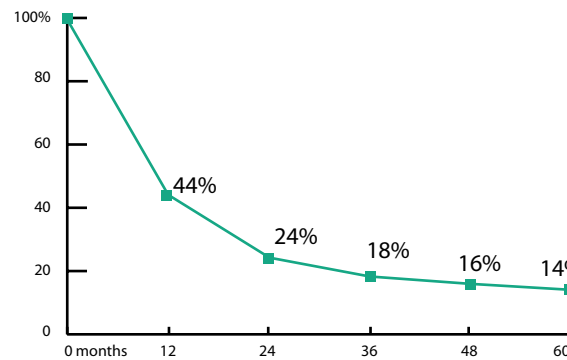


Analytic Non-Small Cell Treatment, 2002-2006



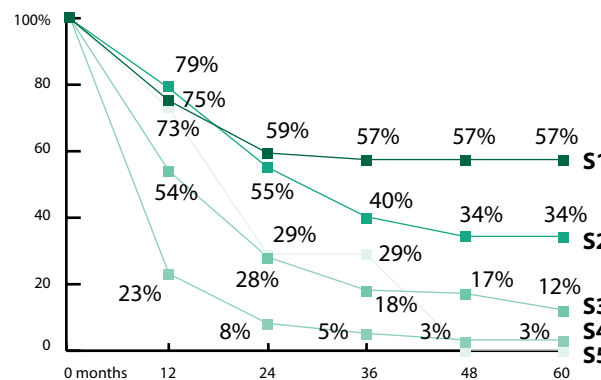
The national one year relative survival for lung cancer has slightly increased, but only from 37% to 42-46% in the last thirty years, and only for non-small cell lung cancer. This slight increase is largely due to improvements in surgical techniques and combined therapies as are offered here at Duke Raleigh. The following graphs show relative survival for class 1 and class 2 analytic patients treated at Duke Raleigh Hospital over a 5-year period. Overall relative 1-year survival is 44%.

5-Year Relative Survival for All Stages, Analytic Lung Cancer, 2002-2006

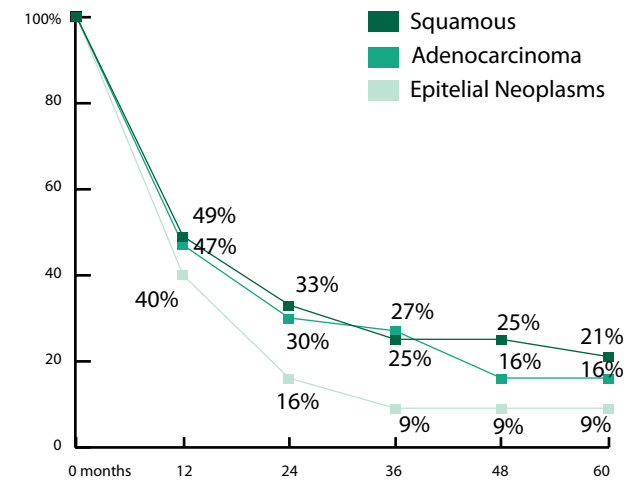


As discussed earlier, patients with lower stages of lung cancer survive longer than those presenting at late stages and non-small cell patients usually do better than small cell patients.

DRAH Analytic Lung Cancer Relative Survival by AJCC Stage, 2002-2006

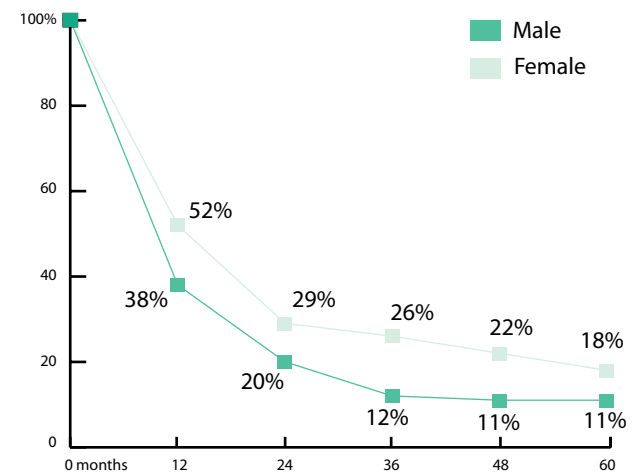


DRAH Analytic Lung Cancer 5-Year Relative Survival by Morphology, 2002-2006



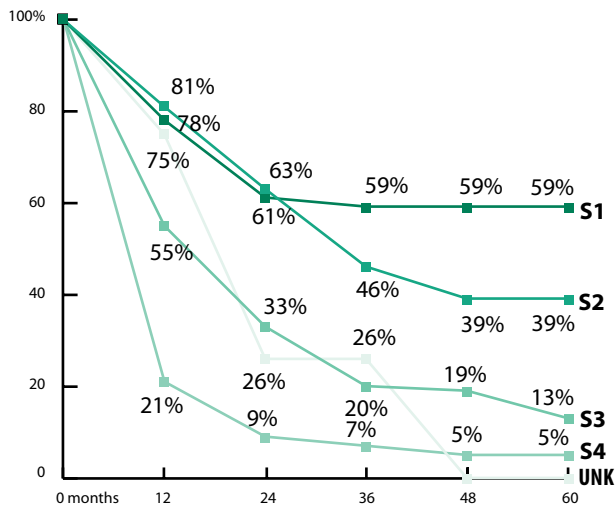
Females generally survived slightly longer than men as they generally presented at an earlier stage.

DRAH Analytic Lung Cancer, 5-Year Relative Survival by Sex, 2002-2006

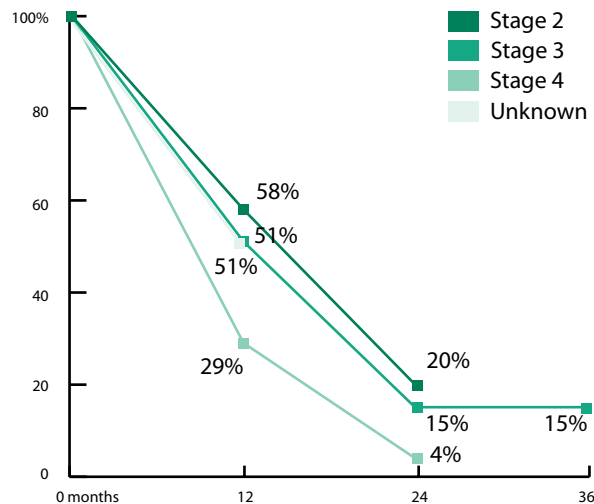


Of the 127 analytic patients that were diagnosed or treated with lung cancer in 2006 at Duke Raleigh Hospital, 50% have expired and 50% are alive. Of the 64 that are alive, 32 are disease free at this time, and 32 are with disease.

DRAH Analytic Non-Small Cell 5-Year Relative Survival by AJCC Stage, 2002-2006



DRAH Small Cell Relative Survival by AJCC Stage



Patients may have multiple types of cancer throughout their lifetime. One patient had lung cancer as the first of two cancers, twenty-five had lung cancer as their second cancer, and two had lung cancer as their third cancer.

In cooperation with Duke University Medical Center, Duke Raleigh Hospital offers clinical trials to patients with advanced, relapsed, and new onset lung cancer. Currently offered are trials for Stage III NSCLC, Adenocarcinoma of the lung in non-smokers or former light smokers, and tissue analysis to test the effects of chemotherapy drugs directly on cancer cells.

The American Cancer Society estimated that in 2005 lung cancer fatalities were higher than colorectal, breast and prostate cancers combined, yet the National Cancer Institute research funding per lung cancer death was the lowest of them all. Tremendous advances can be achieved through patient awareness, research, and funding. We can all help save the lives of current and future lung cancer patients by supporting the American Cancer Society, the American Lung Association, and the National Lung Cancer Partnership with monetary donations for lung cancer research, and through volunteering to assist with fund raising and educational events in our communities. 🌟

IMPORTANT FACTS TO REMEMBER:

- ▶ Lung cancer kills almost twice as many American women as breast cancer annually.
- ▶ Approximately 90% of lung cancer is associated with cigarette smoking.
- ▶ 1 in 12 men and 1 in 16 women will get lung cancer in their lifetime.
- ▶ The lifetime risk of developing lung cancer is 17% in smoking men, and 1% in nonsmoking men.



Thoracic Surgery Services

DAVID WHITE, MD



Joining the services available through Duke Raleigh Cancer Center in 2007 is Duke Thoracic Surgery of Raleigh. The thoracic surgery team includes David White, MD and Katherine Gillis, PA-C. The new service provides high quality

surgical evaluation and treatment for the full spectrum of thoracic disease, including minimally invasive lobectomy biopsies, lung cancer, esophageal cancer, pulmonary nodules, mediastinal masses, chest wall lesions and benign and malignant effusions/emphysema.

Dr. White is the Clinical Assistant Professor of Surgery at Duke University Medical Center in the Division of Cardiothoracic Surgery. After attending undergrad at Princeton University, Dr. White went to medical school at the University of Virginia School of Medicine. He completed both his internship and residency at Duke University Medical Center. He is certified by both the American Board of Thoracic Surgery and the American Board of Surgery.

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2006 Tumor Board Report

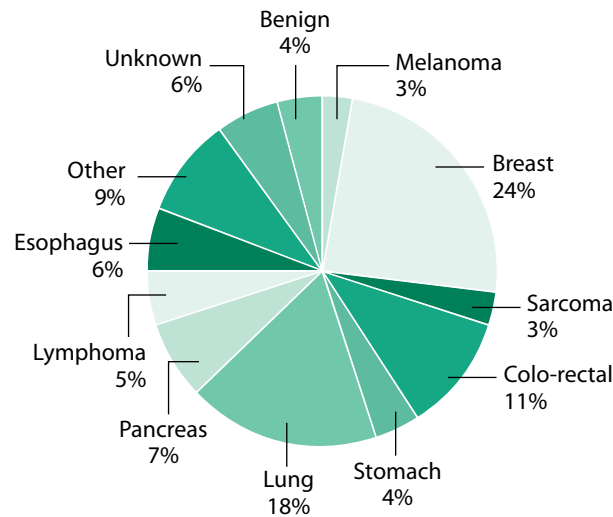
PREPARED BY CHERYL BLALOCK, RN, CTR

Weekly educational cancer conferences are held every Friday morning at 7 a.m. at Duke Raleigh Hospital to facilitate a multidisciplinary approach to cancer diagnosis, staging and treatment. The conference is attended by physicians representing oncologic, general, thoracic, urologic, plastic and reconstructive surgery, medicine, pulmonology, medical oncology, radiation oncology, GYN oncology, diagnostic radiology, pathology and gastroenterology. Also included are representatives from nursing, palliative care, patient navigators, dietary, and genetic counseling. Occasionally visiting physicians and specialists from area hospitals attend and present educational topics of interest. Cases for discussion can be scheduled by faxing a case presentation form to the registry (862-5406) or calling the Cancer Registry (954-3090).

Each week cases of various types of malignant disease are selected for presentation on the basis of complexity, unusual manifestations of the disease, clinical course, or special interest. Occasionally benign tumors of special interest or unusual pathology will be discussed. Each presentation includes an outline of pertinent patient medical history, physical findings, clinical course, radiographic studies and pathological interpretations. Open discussion follows regarding treatment options, available clinical trials, and published literature or research pertinent to the case.

In 2006 a total of 49 conferences were held with 194 cases presented. 97% of the cases were prospective presentations, discussing diagnosis, treatment, or follow-up care. Average attendance per conference was 22 members. Surgery, diagnostic radiology, pathology, medical oncology, and allied health disciplines maintained 100% attendance; radiation oncology 96%. The major sites of presentation were breast, colorectal, esophagus, lung, pancreas, and the lymphatic system.

Duke Raleigh Cancer Registry Accessions



The overall goal of the conference is to offer patients the very best and most current therapy that medicine has to offer through the sharing of information and ideas in a confidential manner. To increase physician awareness of the most current standards of care for oncology patients, physicians attend national conferences and report changes in protocol or advances in diagnostics or therapeutics to the tumor board.

Dr. Gina Vaccaro, the cancer conference sub-committee chair, organizes these educational activities and sponsors a “First Friday Clinical Trial Update” to inform physicians of clinical trials that are available at Duke Raleigh, Duke University, or other area institutions.

It has been inspiring to watch our conference grow each year, and we anticipate continued growth and expansion for the future. We send a special thank you to all who participate in our conference. 🐦



The Cancer Registry

PREPARED BY CHERYL BLALOCK, RN, CTR

The Cancer Registry is the data system designed to collect, manage, analyze, and report information on patients newly diagnosed and/or treated for cancer at Duke Raleigh Hospital, a member of Duke University Health System. Duke maintains one of the largest tumor registries in the country. Statistical information gathered from this data is used by area physicians, the American Cancer Society, the North Carolina Central Cancer Registry, the National Cancer Database, and local hospitals to review trends and outcomes for cancer patients. Monitoring survival statistics and disease recurrence helps to improve the standard of care for patients who have cancer, certain diseases of the blood and lymphatic system, and non-malignant brain tumors, as well as providing data to prompt new research studies and clinical trials.

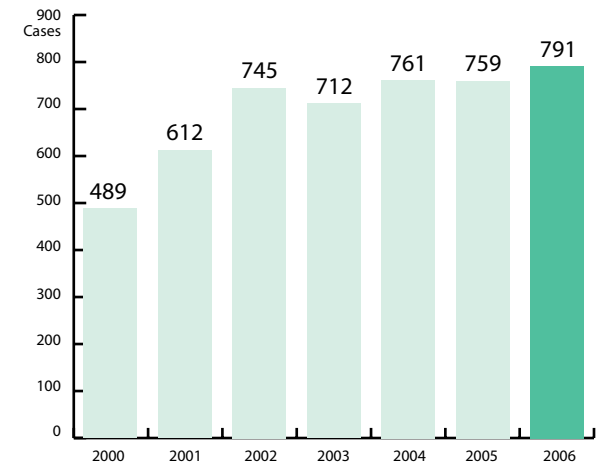
Under the supervision of the Cancer Committee, the registry maintains a complete database of all cancer cases diagnosed and/or treated since January 1, 2000, the reference date for Duke Raleigh. 4,900 cases are accessioned through September 2007 with greater than 775 cases added annually. In order to encourage continued medical surveillance and provide valid end results, every patient who is initially diagnosed and treated at this institution with a diagnosis of cancer is followed on an annual basis until death. Nearly 2,900 cases are currently under active follow-up with a 94% current rate.

In addition to cancer cases, the North Carolina Central Cancer Registry (NCCCR) requires non-analytic cases to be reported through the registry. Non-analytic cases are those that are neither diagnosed nor receive any first course therapy at the reporting facility, such as presentations for recurrence or progression of disease.

The first full-time registrar was hired in December 2002 and currently the registry employs two full-time registrars. In addition to case abstraction, the registry coordinates case presentations at the weekly Cancer Conference, physician quality review of registry data, pathology review of CAP compliance, and quality review of the cancer program. Statistical and focus studies review care provided to our cancer patients and compare the results to statewide and national standards. Dr. Yale Podnos, Cancer Committee Chairman, and other appointed committee members, reviewed more than 10% of newly diagnosed cases, verifying accurate recording of the class of case, primary anatomic site, histology, stage of disease, and treatment by comparing the completed abstract with the patient's medical record. Additionally, the registry software, IMPAC, has internal edits that run prior to case completion and again before data submission to the NCCCR. Additional edits are provided by the National Cancer Database and run prior to submission of data. Currently, the registry maintains a 0% error rate on data submitted nationally.

2007 goals for the registry include maintaining a low level of unknown staging, increasing the quality of physician staging, decreasing the time from diagnosis to data abstraction, and generating quality reports for physicians and hospital administration, which will be used to establish clinical guidelines, measure outcomes, and assist with marketing and financial considerations. Current studies include breast cancer care, pathology reporting, appropriate nodal resections in colon and breast cancer surgery, surgical margin status, and lung cancer.

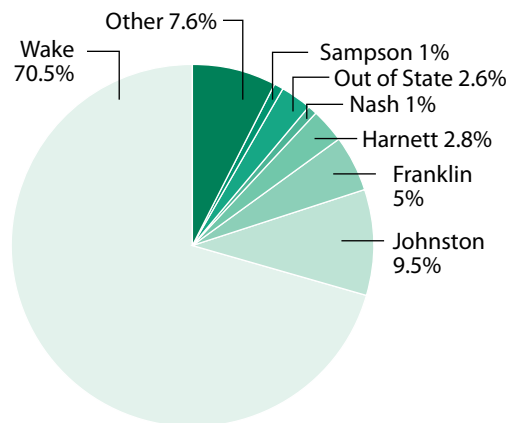
Duke Raleigh Cancer Registry Accessions



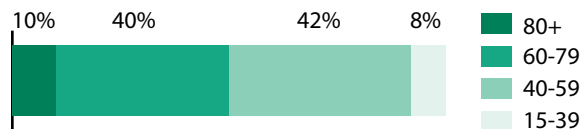
The following graphs represent the patient demographics, age distribution at the time of diagnosis, and cancer occurrence at Duke Raleigh for analytic cases. As in previous years, the majority of patients were from Wake County.

Patients are being diagnosed at a younger age with improved technology and better screening programs. 16% of patients were between 40-49 years of age, 25% between 50-59, 24% between 60-69, and 16% between 70-79. In correlation with the county population, 77% of patients were white. 62% were females.

County Distribution, 2006



Analytic Cases by Age at Diagnosis, 2006



Patients diagnosed and/or receiving first course therapy at our hospital are analytic patients.

Class 0 Only diagnosed at our hospital, no treatment given here.

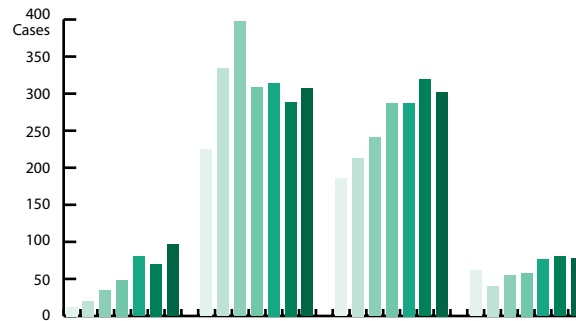
Class 1 Diagnosed and received part or all of first course treatment at our hospital.

Class 2 Diagnosed elsewhere and received all or part of first course treatment at our hospital.

Patients that receive no first course treatment but present after recurrence or progression for treatment are non-analytic patients.

Class 3 No first course treatment given at our hospital.

Duke Raleigh Accessions by Class



YEAR	CLASS 0	CLASS 1	CLASS 2	CLASS 3
2000	13	225	186	62
2001	21	334	213	41
2002	36	397	241	56
2003	49	308	287	59
2004	81	314	287	77
2005	71	289	319	81
2006	97	307	302	78

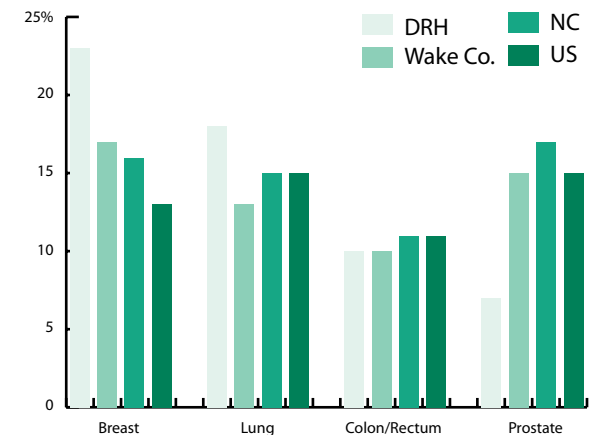
As in previous years, the majority of patients presented with breast, lung, and colorectal cancer. Early detection and treatment improves long-term survival in cancer patients. In 2006, 53% of patients were diagnosed in the earlier stages of cancer; Stages 0, 1, or 2. For breast cancer, 59% were diagnosed in the early stages 0 or 1, and 89% in stages 0, 1, or 2. With better patient education regarding screening for colorectal cancer, more cases are presenting at an earlier stage. In 2005, 38% presented with Stage 0, 1, or 2, and in 2006 that number has increased to 51%.

Analytic Cases by Site Group, 2006

SITE	PERCENTAGE	n = 706
Breast	23%	
Digestive System	19%	
Respiratory System	18%	
Brain & CNS	7%	
Endocrine System	6%	
Lymphoma	5%	
Male Genital	5%	
Urinary System	3%	
Melanoma & Skin	4%	
Female Genital	4%	
Hematopoietic	2%	

The following chart compares the actual incidence of cancer diagnosed in 2006 at Duke Raleigh compared to the number of cases projected for Wake County, North Carolina and the United States for 2006. State and national percentages are provided by the North Carolina Central Cancer Registry.

Comparison of Major Sites, 2006



A Year in Review

Strength Through Involvement

CLASSES AND SUPPORT GROUPS

► Look Good, Feel Better

This support group works with cancer patients to improve not only their outward appearance, but self-confidence and personal perception as well. Many patients comment on the marked improvement in their mental and physical health once they felt like they looked normal. This ongoing support group is offered with the American Cancer Society at the Cancer Center.

► Breast Cancer Support Group

This ongoing support group provides support to all breast cancer survivors, regardless of where or when you were treated. Patients meet to share stories, express hopes and fears and just to know that they are not alone.

► Lymphedema Management Program

Duke Raleigh Cancer Center offers pain management to cancer patients that have experienced painful swelling due to the removal of lymph nodes during surgery. With the proper treatment, patients can control the swelling and pain. The lymphedema program works with patients to teach them the proper technique in disease management.

EDUCATION SEMINARS AND SCREENINGS

► Colorectal Cancer Program and Screening

Duke Raleigh Cancer Center hosted a discussion on early detection, screening and prevention on colorectal cancer, the third most common cancer in the United States in both men and women. A panel of experts also discussed treatment and management of colorectal disease and participants received free home screening kits. The Endoscopy Department held a Colorectal Cancer Awareness Fair in March with informational materials about the disease and screening and physicians available to answer questions.

► Skin Screening

Duke Raleigh Cancer Center hosted a skin screening to more than 80 participants on May 5, 2007. Dr. Eric Challgren and Dr. Gregory Wilmoth, both from The Dermatology and Skin Cancer Center took part in the screening.

► Prostate Screening

Duke Raleigh Hospital offered a free screening and PSA test to 80 participants on September 16, 2007 in recognition of National Prostate Cancer Awareness Month.

► Gynecologic Cancers Discussion

This talk was led by Dr. Fidel Valea, Duke Gynecologic Oncology, on the symptoms, detection, diagnosis and latest treatment options of gynecologic cancers.

Thirty-two women attended the talk on September 19, 2006 in honor of Gynecologic Cancer Awareness Month to learn about the symptoms, detection, diagnosis and treatment of gynecologic cancers.

► Lung Cancer Community Seminar

As part of lung cancer awareness month, Duke Raleigh Hospital hosted a free community education event on November 14, 2007 led by Dr. Jennifer Garst, Associate Professor of Oncology at Duke University Medical Center and Dr. David White of Duke Thoracic Surgery of Raleigh. The program included the latest in the debate over lung cancer screening as well as the most modern treatment options and clinical trials for lung cancer. Additionally, on July 4, 2007, Duke Medicine and Duke Raleigh Hospital became 100 percent tobacco free.



The Cancer Center sold daffodils in March to raise money for the American Cancer Society.

COMMUNITY EVENT SPONSORSHIPS

► Race for the Cure

Duke Raleigh Cancer Center participated in the annual Race for the Cure and was a sponsor of the survivor's pavilion in 2007. The hospital raised money for the Susan G. Komen Foundation through a very successful Craft Bazaar, individual pledges and race participants. Led by 12 team captains, the hospital had a team of more than 150 walkers and raised more than \$5,000 for the event. Duke Medicine received an award for the largest corporate team in 2007.



The Duke Raleigh Team at Race for the Cure.

► Daffodil Days

Duke Raleigh Hospital raised money for the American Cancer Society through Daffodil Days. Daffodils are the first flower of spring, and a symbol of hope that one day the world will be cancer free. The hospital raised close to \$1,000 for Daffodil Days in March to support the American Cancer Society through research, prevention, early detection and support programs.

► Free to Breathe 5K/1 Mile Run/Walk

On November 3, Duke Raleigh Cancer Center was the presenting sponsor of this inaugural event to fight lung cancer. Dr. David White of Duke Thoracic Surgery of Raleigh represented Duke Raleigh Can-

cer Center addressing the importance of awareness, research and advocacy for lung cancer. More than 40 walkers joined the Duke Raleigh team, and more than 850 total walkers participated in the event. Through registrations and fundraisers, Duke Raleigh raised more than \$2,500 for the National Lung Cancer Partnership benefiting lung cancer research.

► Relay for Life

Duke Raleigh Cancer Center was a sponsor of the 2007 North Raleigh Relay for Life on May 18. Duke Raleigh Hospital had two walk teams at the event that together raised more than \$4,500. More than 1,200 participants walked in the 2007 Relay for Life. Proceeds from this walk benefit the American Cancer Society in their fight to save lives and help those that have been touched by cancer.

► Ovarian Awareness Walk

Duke Raleigh Hospital along with Duke Comprehensive Cancer Center sponsored the 5th annual Gail Parkins Memorial Ovarian Awareness Walk to raise awareness for ovarian cancer. Proceeds for the walk benefited the Duke and Duke Raleigh Hospital Gyn/Onc programs. More than 30 walkers registered with the hospital, raising more than \$1,000. In total, \$282,000 was raised to benefit the Duke and Duke Raleigh oncology programs.



The Duke Raleigh Team at Relay for Life.



The Duke Raleigh Team at the Ovarian Awareness Walk.



The Duke Raleigh Team at the Free to Breathe 5K



Walkers sign the Wall of Hope at the 2007 Race for the Cure.