



NORTH SHORE MEDICAL CENTER

C. GORDON GRIFFITH CANCER CENTER



2010 Annual Report with statistical data from 2009



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The Cancer Committee at North Shore Medical Center is pleased to present the 2010 Annual Report for the Cancer program. This report highlights important statistical results, including a comparative analysis with national statistics, accomplishments, events and services that have contributed to the success of the program.

This past year has seen a rise in our low dose Brachytherapy program, we did 3 seed implants in 2009 and in 2010 ytd we have done 10 seed implants. We contribute a great part of the Brachytherapy success to the addition of H. Vincenzo Patone, M.D., who did a fellowship in Brachytherapy at Beth Israel Medical Center in New York.

We continue to benefit from the introduction of our Patient Navigator Program in conjunction with the American Cancer Society. Our Patient Navigator's role is to eliminate barriers to care for patients that have been diagnosed with cancer and to aid in finding resolution through a more timely diagnosis and treatment. This program will help patients access numerous resources, such as transportation, and guide the patients through the health care system, which will improve their quality of care and perhaps help extend or even save their lives.

In 2010 the Cancer Center has continued the monthly prostate screenings, held every 3rd Friday of the month. Year to date 19 people have been screened. In observation of "National Breast Cancer Awareness Month", in October the hospital is also giving reduced rate screenings for digital mammograms, in the Radiology department. The special price mammography was promoted via the Miami Herald, Miami Times, and flyers distributed to local community organizations and churches. In May Sheldon Sevinor, M.D. presented a Skin Cancer lecture at the Miami Shore Country Club, which was a forum for the general public and fifty four attended. His lecture covered facts about skin cancer, the types, prevention causes, etc.

The Cancer Registry staff continues to collect data on all of the newly diagnosed and treated cancer patients in the hospital and monitors the quality of care, as per the Commission's standards.

We have continued the weekly tumor boards for prospective cases held every Wednesday, at 12:30 pm now in the Boardroom in Administration. This is an opportunity for physicians to discuss newly diagnosed cancer patients in a collegial, consultative setting. A multidisciplinary team of physicians reviews data on surgery, pathology, radiology, and other diagnostic tests. They discuss the case thoroughly and recommend the best therapeutic/management options available. I encourage all the medical staff to participate and attend this valuable education, not only for themselves but also for their patients diagnosed with cancer.

I am extremely thankful of everyone involved in any of the facets of the care of our patients, including the Administration, nurses, therapists, registry and all ancillary personnel. Their commitment and their efforts to continuously improve the quality of care will pay dividends with the increased cure rates in our community.

Jaime Lozano, M.D.
Cancer Committee Chairman

JUNE 2009 TO JUNE 2010 CANCER COMMITTEE MEMBERS

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Urology
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Radiation Oncology
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Colorectal Surgery
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Urology

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COO (until March 2010)
Patricia Sechi
COO (as of May 2010)
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American Cancer Society
Celia Zapata
Certified Tumor Registrar

NORTH SHORE MEDICAL CENTER

***C. GORDON GRIFFITH CANCER CENTER
TUMOR REGISTRY DIVISION***

JAIME LOZANO, M.D.
MEDICAL DIRECTOR

JAIME LOZANO, M.D.
CANCER PROGRAM LIAISON PHYSICIAN

CAROLYN GILLELAND, MBA/MSN
ADMINISTRATIVE DIRECTOR

CELIA ZAPATA, BSHS
CERTIFIED TUMOR REGISTRAR

Tumor Registry

The Tumor Registry has been in existence since January 1982. This department is designated to capture a complete summary of patient history, diagnosis, primary site/morphology, treatment, recurrences and status for every cancer patient admitted in the institution. This information becomes a key to enable doctors, researchers, and public health professionals to best understand cancer treatment and trends.

Data maintained in our registry is electronically reported to the Florida Department of Health through the Florida Cancer Data System (FCDS). These data are held in anonymity and shared with the Surveillance Epidemiology Endpoint Registry (SEER) program of the National Cancer Institute to generate the national cancer database. In addition, the Cancer Registry produced reports throughout the year at the request of physicians, administration and ancillary departments for research and planning purposes.

On staff there are two tumor registrars, one who is an active member of the National Cancer Registrars Association and the Florida Tumor Registrars Association. They attend national and state meetings to keep abreast of the latest changes in the registry field. Registry personnel serve as staff to the Cancer Committee and Oncology Conferences/Tumor Boards and coordinate the implementation of the American College of Surgeon's guidelines.

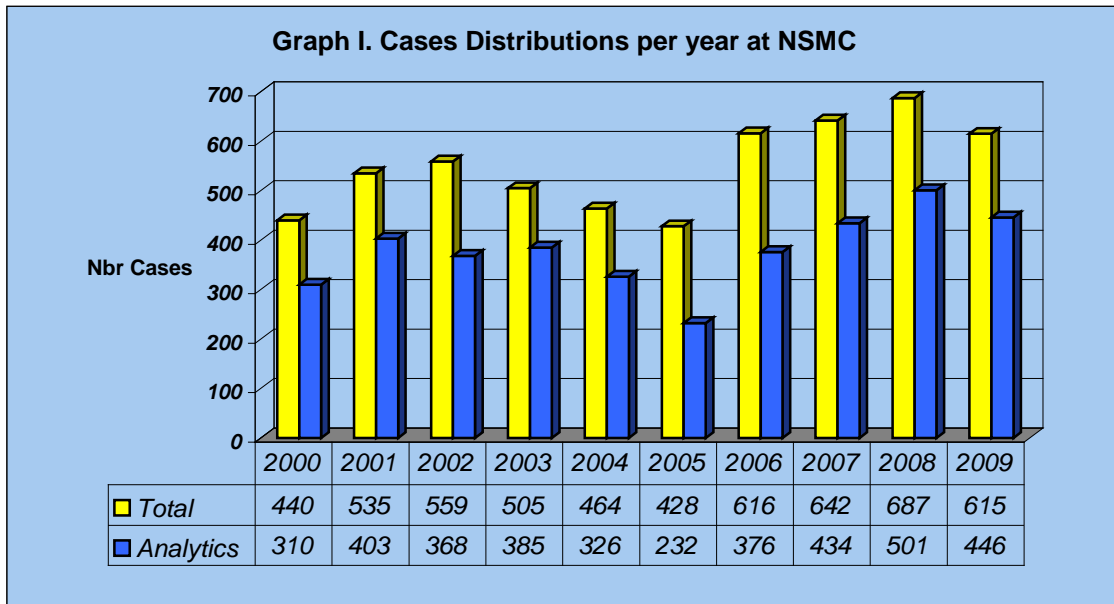
Multidisciplinary Tumor Board meetings were held weekly and 113 cases were presented in 2009 for discussion of current treatment options available and recommendations. A variety of cancer related topics were presented throughout the year with the predominance being colon and rectum cancer. Last year, 84% of all the cases were prospective cases.

The primary site table summarizes all cases entered into the NSMC Tumor Registry in 2009 by class, sex, AJCC staging (at the time of diagnosis), and shows all major organ systems as well as sub-sites, within each system. The number of cases with "Unk Stage" includes class 3 cases (Diagnosis and all first course of treatment was performed elsewhere), which explains the significantly high number.

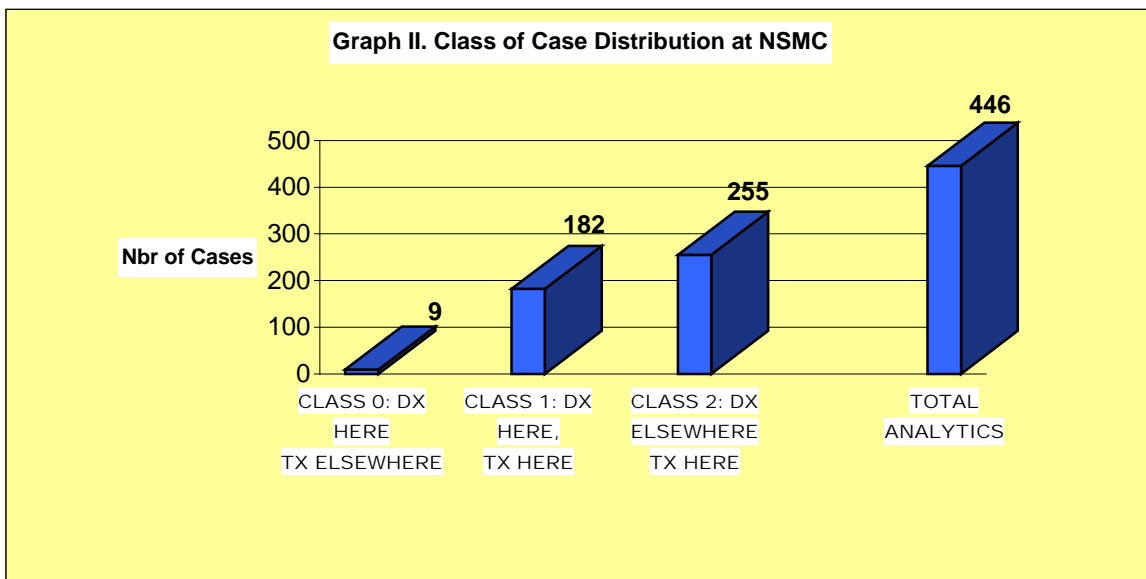
Table I.

In the year 2009, a total of 615 cases were added to the registry, 446 were analytic. A slight decrease is noticed when compared with 501 analytic cases in 2008.

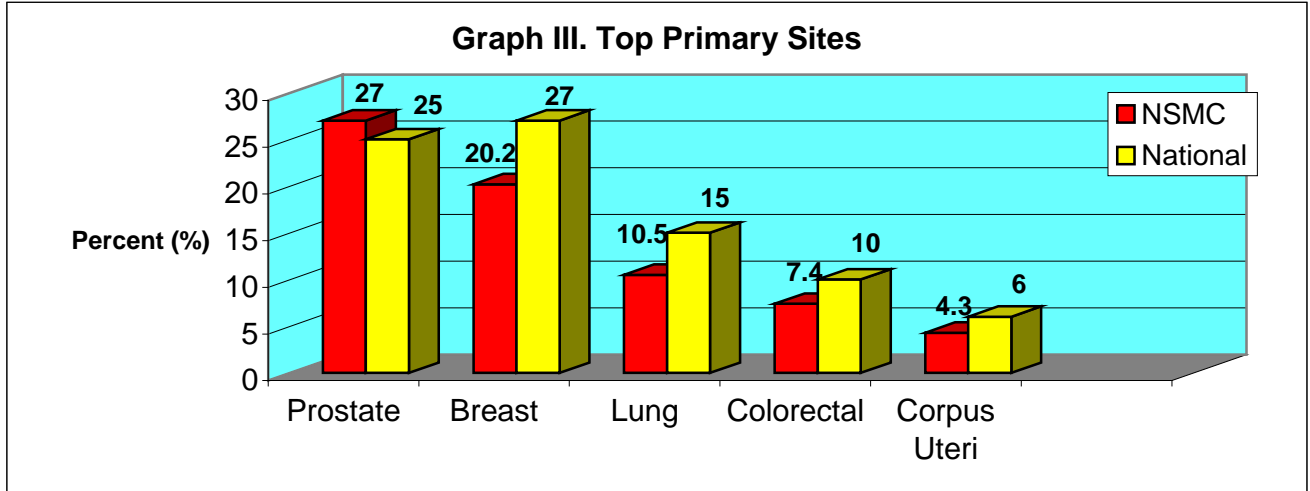
Graph I.



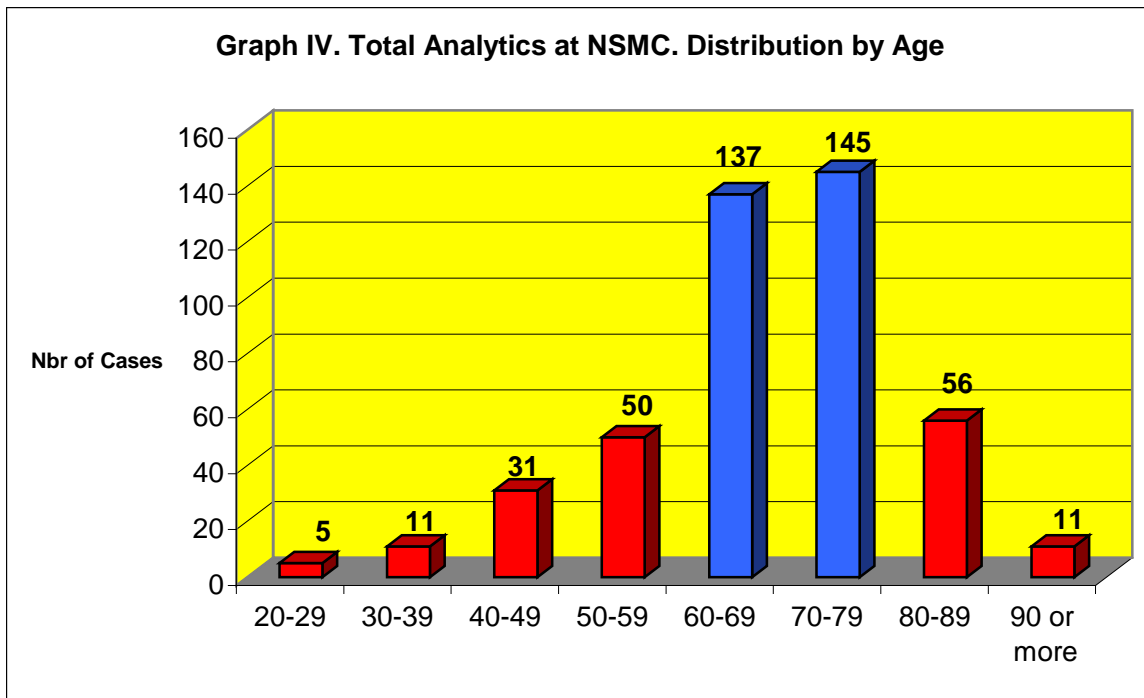
The graph on class of case displays the distribution of analytic cases. In 2009, 182 of the cases entered into the Tumor Registry were diagnosed here and treated at NSMC. Two hundred fifty five of the patients were diagnosed elsewhere, but treated in this institution. Nine patients were diagnosed here, but were treated elsewhere. **Graph II.**



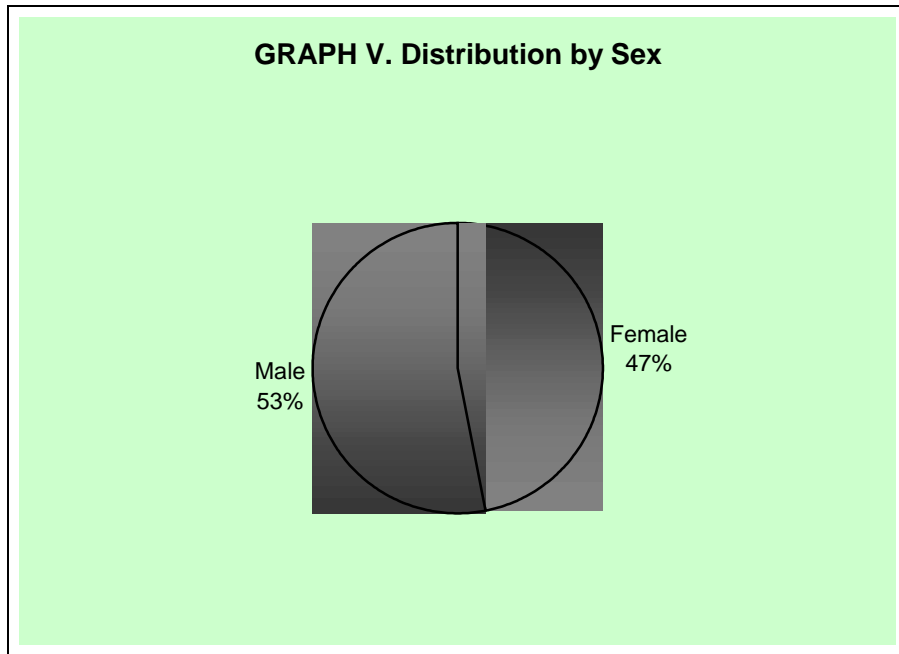
Prostate cancer was the leading cancer diagnosed and/or treated at NSMC in 2009, representing 27%, followed by breast cancer as the second most frequent cancer with 20.2%. The third primary site was lung cancer with 10.5% after that colorectal and corpus uteri complete the top five sites at NSMC. **Graph III.**



The age group at diagnosis for both sexes peaks at the 70-79 category with 145 cases followed by the 60-69 category with 137 cases. **Graph IV.**

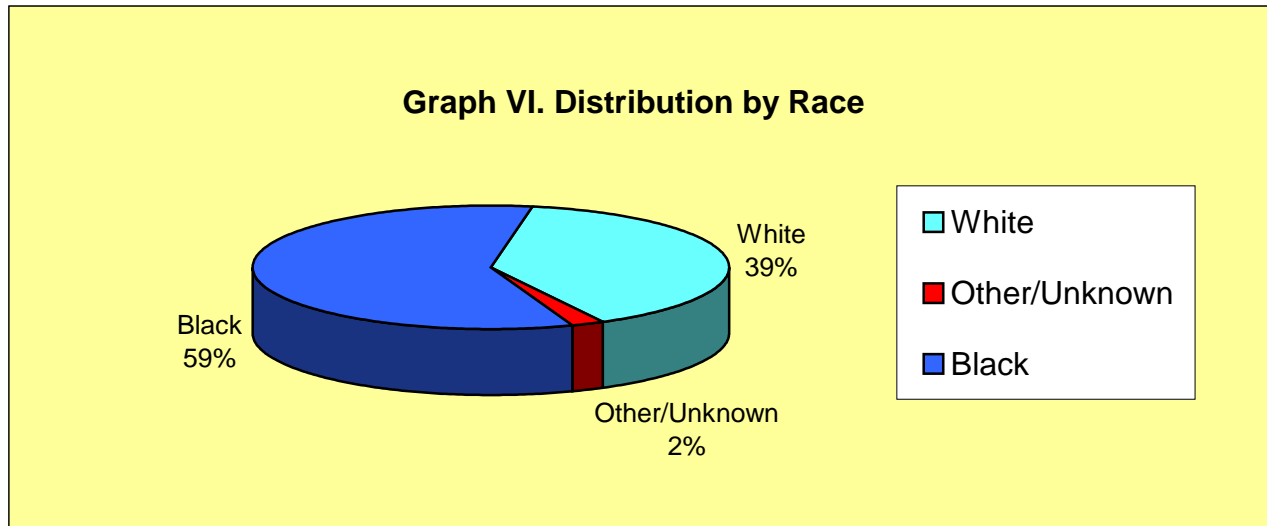


Of the analytic cases, there were more males (237) than females (209). **Graph V.**



The race distribution for 2009 indicates that 59% of the cancer patients were Black, 39% were White, and 2% was listed as other or unknown.

Graph VI.



The most frequently prescribed treatments were radiation and surgery alone, with 75 and 51 cases, respectively. Some other treatment combinations were also seen. The non-treated cases category has decreased when compared with 103 in 2008. The majority of the cases in the non-treated category are bronchus & lung cancers being diagnosed at an advanced stage. “All Others” represent patients that received any other combination not shown on **Table II**. This table excludes all benign tumors and class of case 0, which reduces the total of analytical cases from 446 to 422.

Table II. Analytic cases by first course treatment

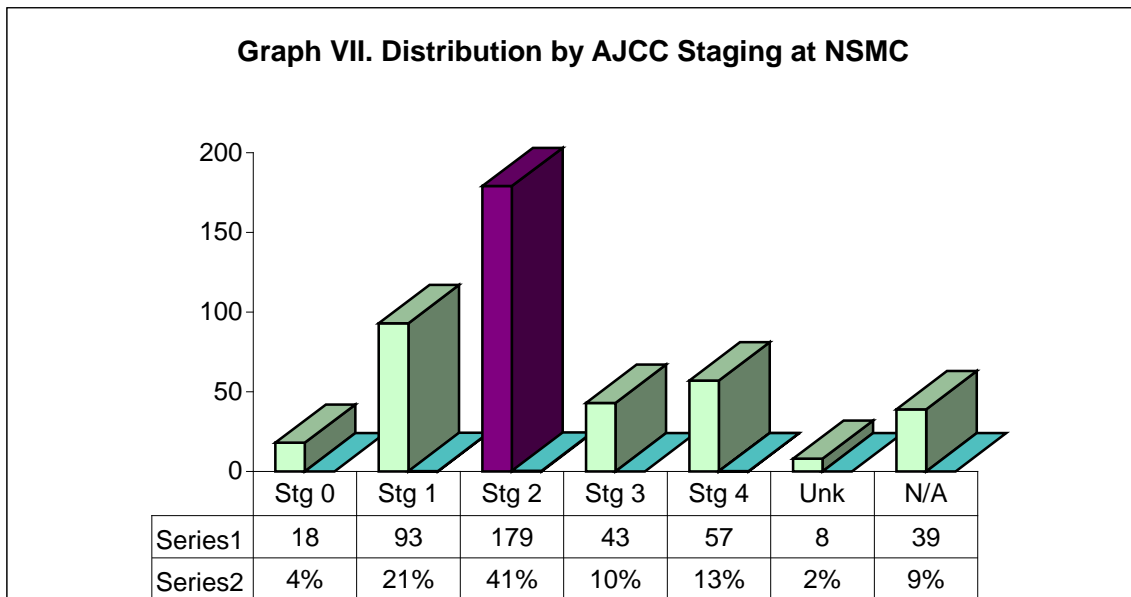
SITE NAME	TOTAL CASES	NONE	RAD	SURG	SURG/RAD	RAD/HORMONE	ALL OTHERS
BASE OF TONGUE	4	1	1	0	0	0	2
TONSIL	1	0	0	0	0	0	1
OROPHARYNX	1	0	0	0	0	0	1
NASOPHARYNX	2	0	0	0	0	0	2
ESOPHAGUS	6	1	1	0	0	0	4
STOMACH	10	3	0	3	1	0	3
COLON	18	3	0	14	0	0	1
RECTOSIGMOID JUNCTION	3	1	0	2	0	0	0
RECTUM	13	5	1	1	0	0	6
ANUS & ANAL CANAL	3	0	0	1	0	0	2
LIVER & BILE DUCTS	3	3	0	0	0	0	0
GALLBLADDER	1	1	0	0	0	0	0
OTHER BILARY TRACT	1	0	0	1	0	0	0
PANCREAS	6	3	0	0	0	0	3
LARYNX	8	0	4	0	2	0	2
*BRONCHUS & LUNG	47	23	7	0	1	0	16
HEART MEDIASTINUM							
PLEURA	1	0	0	0	0	0	1
BLOOD & BONE MARROW	9	4	0	0	0	0	5
SKIN	5	0	2	2	1	0	0
RETROPERITONIUM & PERITONIUM	1	1	0	0	0	0	0
CONNECTIVE							
SUBCUTANEOUS/OTHER							
SOFT TISSUE	1	0	0	1	0	0	0
BREAST	89	13	0	13	24	0	39
CERVIX UTERI	9	0	2	1	2	0	4
CORPUS UTERI	19	2	0	1	15	0	1
OVARY	3	2	0	1	0	0	0
**PROSTATE GLAND	120	4	54	2	0	56	4
KIDNEY	2	1	0	1	0	0	0
URINARY BLADDER	10	1	1	4	3	0	1
BRAIN	4	3	0	0	0	0	1
THYROID GLAND	3	0	1	2	0	0	0
LYMPH NODES	11	6	0	1	0	0	4
UNK PRIMARY	8	6	1	0	0	0	1
OVERALL TOTALS	422	87	75	51	49	56	104

* According to SEER statistics 56% of cases with lung cancer are diagnosed after the cancer has already metastasized (distant stage)

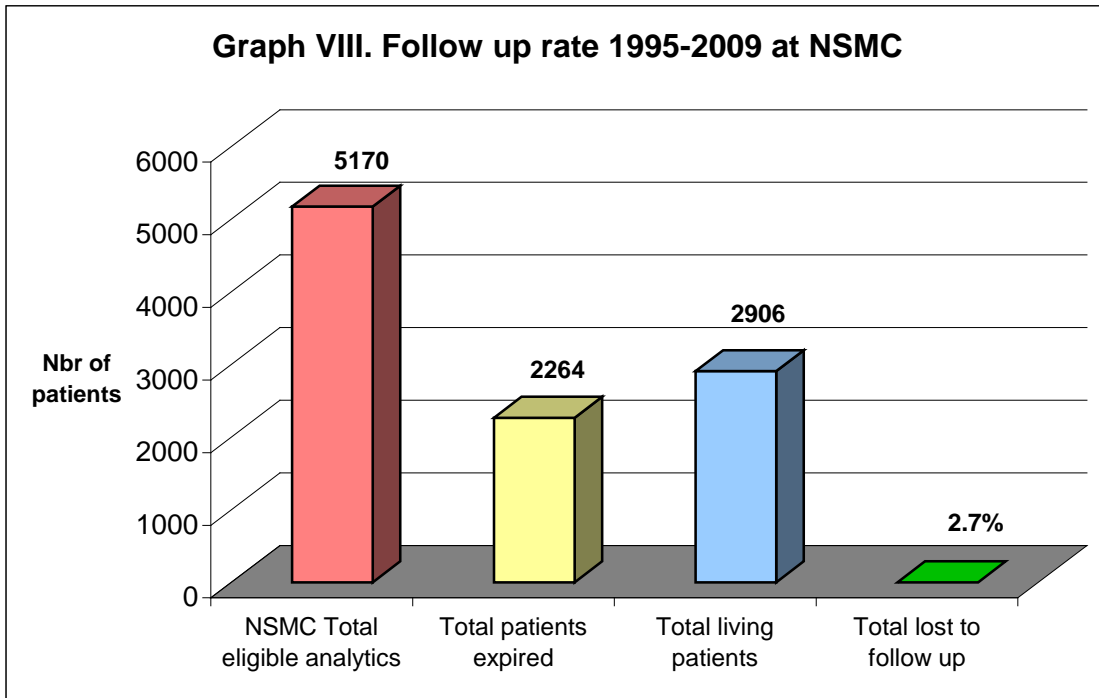
** The four prostate cases that have not received treatment may be due to watchful waiting conditions.

The American Joint Commission on Cancer (AJCC) TNM Staging System is used for all applicable cancer sites. A TNM staging form is made part of the medical records to ensure compliance and accuracy of staging.

There were 290 analytic cases that were diagnosed at Stages 0, I, or II. These are considered to be potentially curable. More advanced stages of cancers, stage III and IV, totaled 100 cases. Eight patients were staged Unknown representing cases in which certain criteria did not meet the staging standards, or there was not enough information at the time of diagnosis. Thirty-nine of the cases were staged as Non-applicable, representing cases for which there is not an AJCC staging requirement. This graph excludes class of case 0 due to the AJCC requirement guidelines. **Graph VII.**



In accordance with the American College of Surgeons and the Florida Cancer Data Systems (FCDS), each patient is provided with an annual lifetime follow-up service that is essential to evaluate cancer care outcomes. It also provides an automatic reminder to both physician and patient to schedule regular physician exams. The Cancer Registry follows over 5,100 patients annually throughout Florida and the United States where our patients reside. The registry has kept satisfactory follow up rate since 1995. **Graph VIII.**



Lung Cancer at North Shore Medical Center, 2005-2009

Lung cancer accounts for more deaths than any other cancer in the whole world. According to the American Cancer Society, an estimated 222,520 new cases of lung cancer are expected in 2010 and an estimated 157,300 deaths will occur, representing 28% of all cancer deaths. Incidence rates in men are significantly decreasing and are approaching a plateau for women after a long period of increase. Mortality rates have also seen a drop in numbers mainly because of the decrease in smoking rates over the past 40 years.

Lung cancers are classified according to the type of cell present in the tumor. There are 2 main types of lung cancer, small cell (14%) and non-small cell (85%), and they are treated differently. Non-small cell carcinoma has 3 subtypes: Adenocarcinoma (40%), Squamous cell carcinoma (25%-30%), and Large cell carcinoma (10%-15%). Other tumors can be found in the lungs too, such as sarcoma, carcinosarcoma, and carcinoid tumors.

Cigarette smoking is by far the leading risk factor for lung cancer and accounts for 85% to 90% of lung cancer deaths. Nine out of ten cases of lung cancer are caused by tobacco smoke. The risk increases with the time-span a person has smoked and amount of cigarette consumption. Discontinuation of smoking at any age lowers the risk of lung cancer and can slowly help damaged lung tissue return to normal. Cigar and pipe smoking also boost risk. Exposure to secondhand smoke either in the work place or at home may cause a higher risk for lung cancer. For instance, non-smoking spouses who live with a smoker have about a 20% to 30% greater risk of developing lung cancer than do spouses of non-smokers.

Other risk factors include radon which is a radioactive gas that is invisible, odorless and tasteless, and comes from the breakdown of uranium found in soil and rocks. Asbestos exposure particularly in smokers can greatly increase the risk of developing lung cancer or a type of cancer called mesothelioma which starts in the lining of the lungs. Certain metals, inhaled chemicals or minerals such as arsenic, cadmium and chromium, exposure to radiation, air pollution, history of tuberculosis, family history of lung cancer, and genetic susceptibility may also be contributing risk factors.

Lung cancer often takes many years to develop and in most cases without symptoms. Patients often do not develop symptoms until the cancer is at an advanced stage or has metastasized. This is primarily why lung cancer has the highest mortality rate out of all other cancers. If a case is diagnosed at an early stage it is usually discovered incidentally by a chest x-ray. Signs and symptoms depend on the location of the tumor and include persistent cough, chest pain, hoarseness, coughing up blood or sputum streaked with blood, shortness of breath and recurrent bronchitis and pneumonia. When lung cancer spreads to other parts of the body, it may cause bone pain, weakness or numbness of the arms or legs, headaches, dizziness or seizures, jaundice, or lumps near the surface of the body caused by cancer spreading to the skin or to lymph nodes in the neck or above the collarbone.

A good screening test to find lung cancer early could save many lives. Unfortunately, studies have not proven these to be useful in reducing the mortality rates in lung cancer. Screenings such as chest x-ray, analysis of cells in sputum, and fiber optic examination of the bronchial passages (bronchoscopy) has shown limited effectiveness in finding lung cancer early enough to improve a person's chance for a cure. There is a study being conducted called The National Lung Screening Trial which evaluates whether an individual at high risk for lung cancer should be screened with a spiral CT or standard chest x-ray to prevent them from dying of this disease. The study was initiated in 2002 and results are anticipated by 2010-2011.

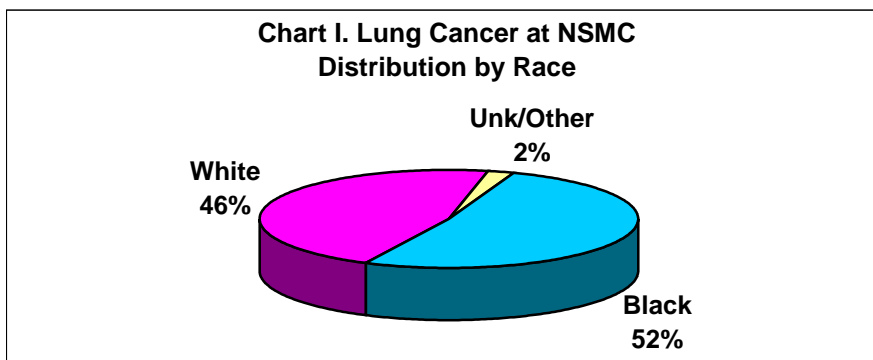
Treatment options vary depending on the histology (non-small cell or small cell), stage of cancer and overall health. They include surgery, chemotherapy, radiation therapy and targeted therapies such as Tarceva and Avastin. Surgery is usually recommended for localized non-small cell carcinoma because it offers the best chances for cure. After surgery, chemotherapy may be added to improve the survival rate of the patient. If the cancer has already spread, radiation therapy in combination with chemotherapy is used. In more advanced stages of non-small cell lung cancer, targeted therapies are often used along with chemotherapy or in cases where chemotherapy is no longer working. Targeted therapies are certain drugs that help prevent the growth of a tumor either by stopping the formation of new blood vessels in a tumor or by blocking a specific receptor that signals cells to grow and divide. For small cell carcinoma the treatment of choice is chemotherapy alone or combined with radiation therapy.

For the past ten years lung cancer has been one of the top primary sites diagnosed and/or treated at North Shore Medical Center. From 2005-2009, a total of 222 analytic lung cases were seen at this institution, 87% were non-small cell carcinoma and 8% were small cell carcinoma (**Table I**). According to SEER, the national 5- year relative survival rate is 15.8% for years 1999-2006. For North Shore Medical Center, the 5-year relative survival rate is 11.9% (**Chart VII**).

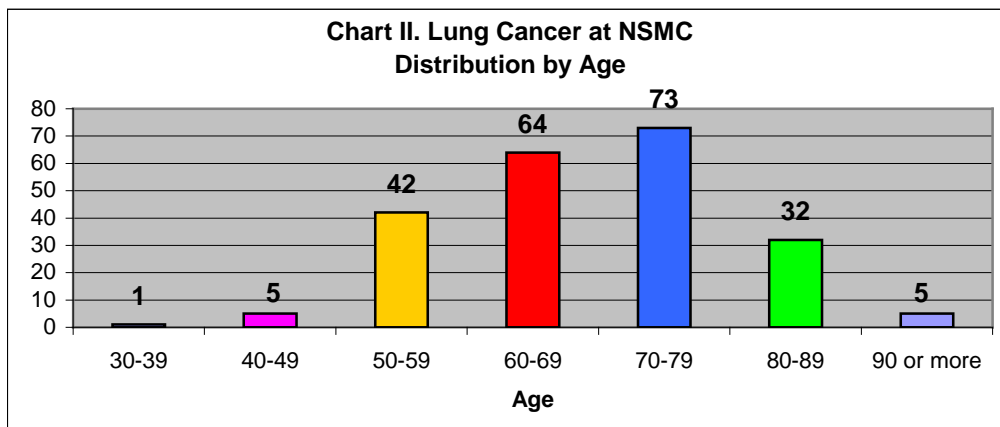
TABLE I.

<i>Table I. Histology</i>	<i>Number of Cases</i>
Non-Small Cell Carcinoma (87%)	
Adenocarcinoma nos	71
Adenosquamous ca	3
Bronchiolo-alveolar ca	2
Carcinoma nos	11
Large cell ca	5
Non-small cell ca nos	61
Squamous cell ca nos	41
Small Cell Carcinoma (8%)	
Small cell ca nos	17
Others (5%)	
Carcinoid tumor nos	2
Malignant neoplasm nos	8
Neuroendocrine ca	1
Total	222

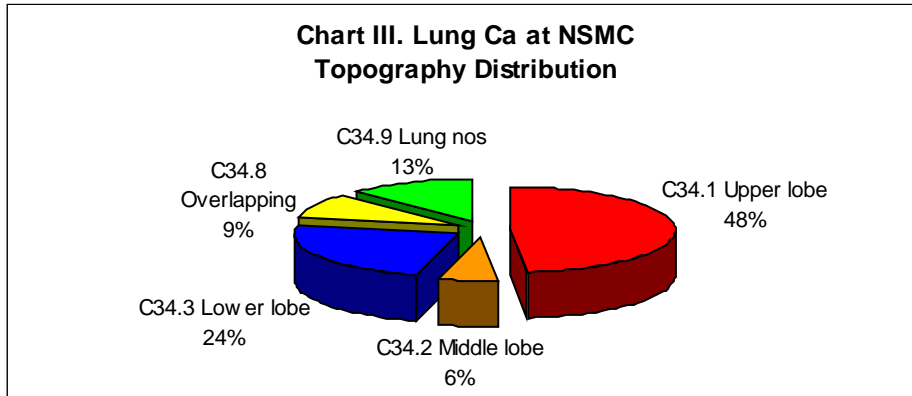
The majority of cases (52%) were among the black population. The white population was represented by 46% and unknown/other was 2%. **Chart I.**



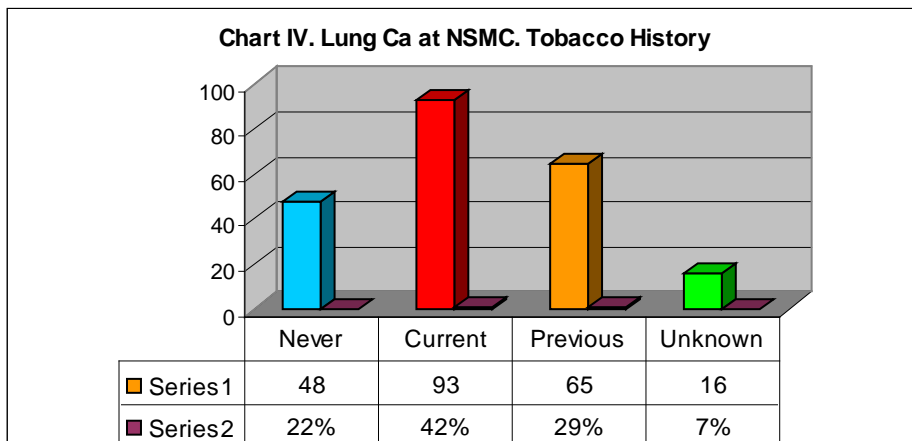
The age of presentation at diagnosis was highest from 70-79 years old with 73 cases. Followed by, 64 cases between 60-69 years old. **Chart II.**



The predominant topography was in the upper lobe with 48% of the cases. Followed by, lower lobe with 24%. **Chart III.**



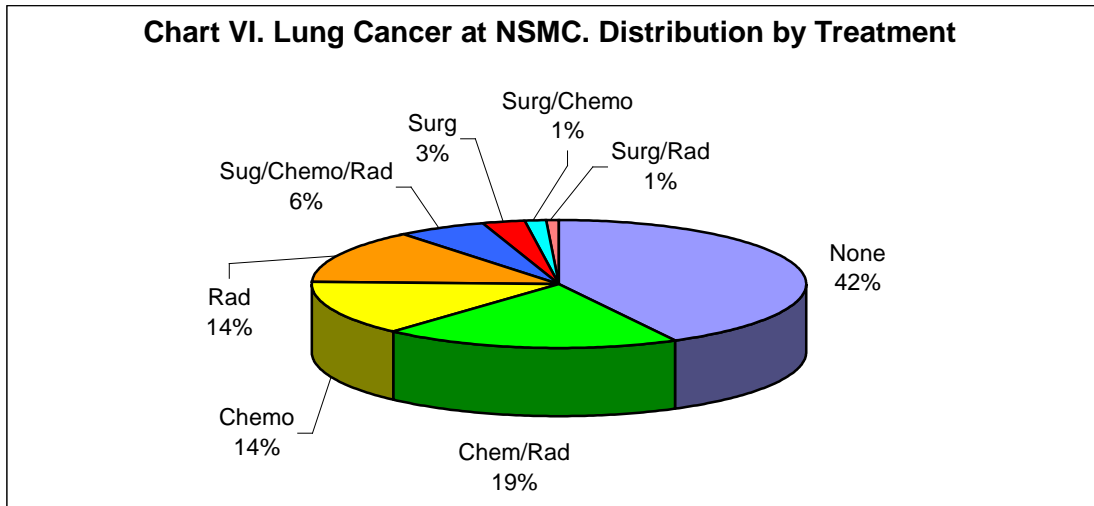
The majority of cases (42%) were current smokers at the time of diagnosis and 29% admitted to previous tobacco use. Only 22% said they never smoked and 7% were unknown. **Chart IV.**



Overall, 20% of our lung cancer patients had localized stage disease. There were 70 patients (32%) with regional stage, 102 patients (46%) with distant stage. Two percent of the cases were unknown. **Chart V.**

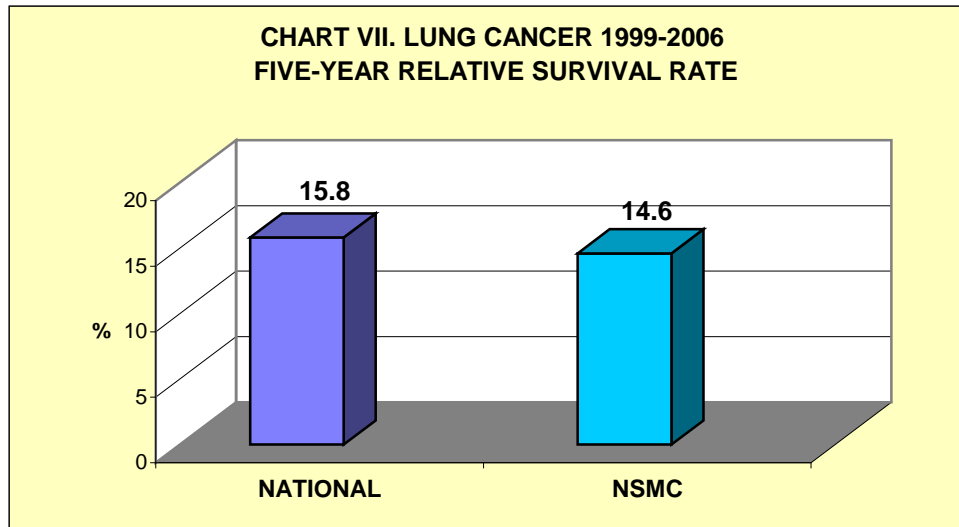
Chart V. Lung Ca at NSMC. Distribution by Stage		
Stage	N0.	%
Local	45	20 %
Regional	70	32 %
Distant	102	46 %
Unknown	5	2 %

Treatment distribution shows that radiation therapy combined with chemo was the treatment most frequently utilized with 19% (43 cases). The second most popular treatment was chemo alone with 14% (31 cases). The non-treated cases represent 42% that did not receive any treatment either because they decided to be treated at another facility or they had advanced stage. **Chart VI.**



North Shore Medical Center's overall five-year relative survival rate, diagnosed from 1999-2006 was 14.6%. This number is very similar to the nationwide statistics of 16% according to SEER (Surveillance Epidemiology and End Results).

Chart VII.



*Source: Surveillance Epidemiology and End Results.

The five-year relative survival rate by stage revealed a drop to 74.2% in the first year for stage I. For stage II and III it reaches a plateau after year four with 18% and 8.3%. Stage IV begins to level off in year three with 22.1%. **Chart VIII.**

Definitions

Analytic: A case that was either initially diagnosed or received all or part of the first course of treatment at the reporting institution.

- **Class 0:** Diagnosed at the reporting facility and all first course of treatment was done elsewhere.
- **Class 1:** Diagnosed at the reporting facility, and all or part of the first course of treatment was performed at reporting facility.
- **Class 2:** Diagnosed elsewhere, and all or part of the first course of treatment was performed at the reporting facility.

Non-analytic (includes Class 3): Patient diagnosed and received all first course of treatment at another institution, patients diagnosed at autopsy, and patients diagnosed and treated at the reporting facility before the registry's reference day.

Stage: The Tumor Registry collects the staging by using the Tumor, Nodes and Metastasis (TNM) system from the American Joint Committee on Cancer, and Local, Regional or Distant from (SEER) Surveillance, Epidemiology and End Results Program. **Stage 0** = In-situ, **Stage 1** = Local, **Stage 2** = Regional/Direct Extension, **Stage 3** = Regional/Nodes Only, **Stage 4** = Regional/Direct Extension & Nodes.

First course of treatment: Includes all methods of treatments recorded in the treatment plan and administered to the patient before disease progression or recurrence.

Survival: Survival is calculated from the date of best confirmation of diagnosis to the date of last contact for analytic cases.

Successful follow up: Is the percent of dead and living patients that were contacted by the Tumor Registry in the last 12 months. It is required to use registry data for survival analysis.

Lost to follow up: Is the percent of patients that have not been contacted by the Tumor Registry in the last 15 months. They are also known as "delinquent cases".

References:

- American Cancer Society Cancer Facts & Figures 2009
- Website information:
http://www.cancer.gov/cancer_information/,
<http://www.cancer.org/docroot/home/index.asp>,
<http://seer.cancer.gov/>

