

*Loving
Kindness*



Cancer Program Annual Report 2010

 **York Hospital**
Oncology & Infusion Care
YORK · WELLS · SOUTH BERWICK · KITTERY

Images of Lung Cancer 2010

(Using 2009 YH and 2008 NCDB Data)

York Hospital's Oncology Care Service is one of only approximately 25% of cancer programs around the country to be accredited by the American College of Surgeons Commission on Cancer. Our team is committed to the coordination of all aspects of specialized cancer care for patients and families. At York Hospital's Oncology & Infusion Care, we offer access to clinical trials for cancer patients through our affiliation with the Eastern Cooperative Oncology Group (ECOG) and Beth Israel Deaconess Medical Center in Boston and our membership in the National Cancer Institute's Clinical Trials Support Unit (CTSU).

According to the American Cancer Society Facts and Figures 2009,¹ an estimated 219,440 new cases of lung cancer are expected in 2009, accounting for about 15% of cancer diagnoses. The incidence is declining significantly in men, from a high of 102.1 cases per 100,000 in 1984 to 73.2 in 2005. In women, the rate is approaching a plateau after a long period of increase. Lung cancer is classified clinically as small cell (14%) or non-small cell (85%). Non small cell lung cancer can then be sub classified into adenocarcinoma, the most common subtype, squamous cell carcinoma and large cell carcinoma. Until recently these subtypes were treated the same however over the last few years clinical trials have shown that subtypes respond differently to certain chemotherapy regimens.

In 2009, York Hospital diagnosed and/or treated 33 patients with lung cancer. 24% small cell, 76% non-small cell which is consistent with national data. Lung cancer accounted for 14.4% of all analytic cancer cases at York Hospital. 19 patients were male and 14 female.

Age at DX	Non-Small Cell	Small Cell	Carcinoid
30 - 39	0	0	1
40 - 49	0	0	1
50 - 59	4	1	0
60 - 69	7	4	0
70 - 79	6	1	0
80 - 89	4	2	0
90 +	2	0	0
Total	23	8	2

²Since 1987, more women have died each year from lung cancer than from breast cancer. Lung cancer accounts for the most cancer related deaths in both men and women. An estimated 159,390 deaths, accounting for about 28% of all cancer deaths, are expected to occur in 2009.

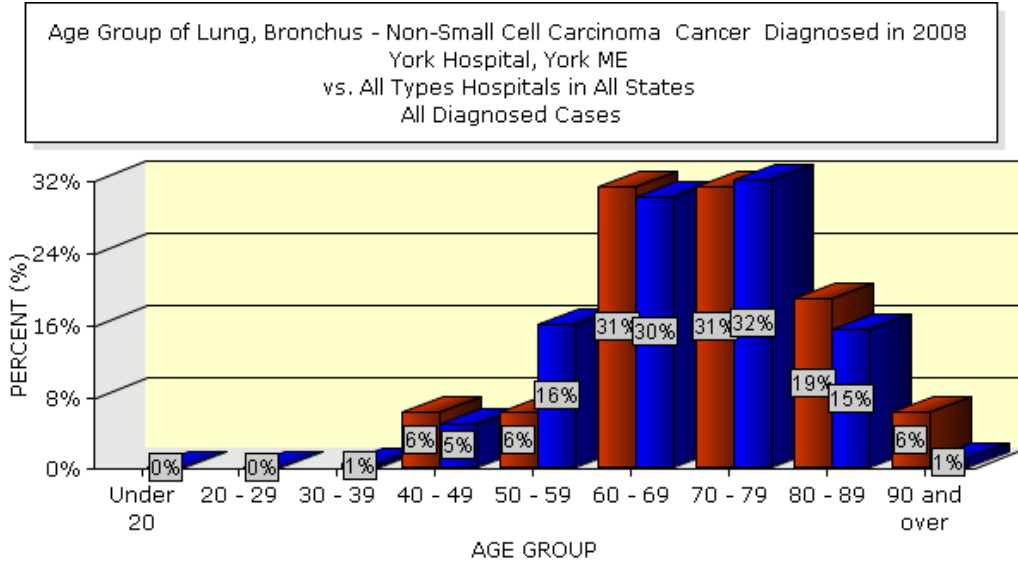
The Cancer Committee of York Hospital strives to provide the highest quality of care and is constantly looking for opportunities for improvement. As such, we have compared and analyzed our most recent data provided by the National Cancer Database to State and National data to determine any anomalies that would suggest opportunities for improvement.

For comparative purposes the National Cancer Database (NCDB) most recent data from 2008 have been used in this report.

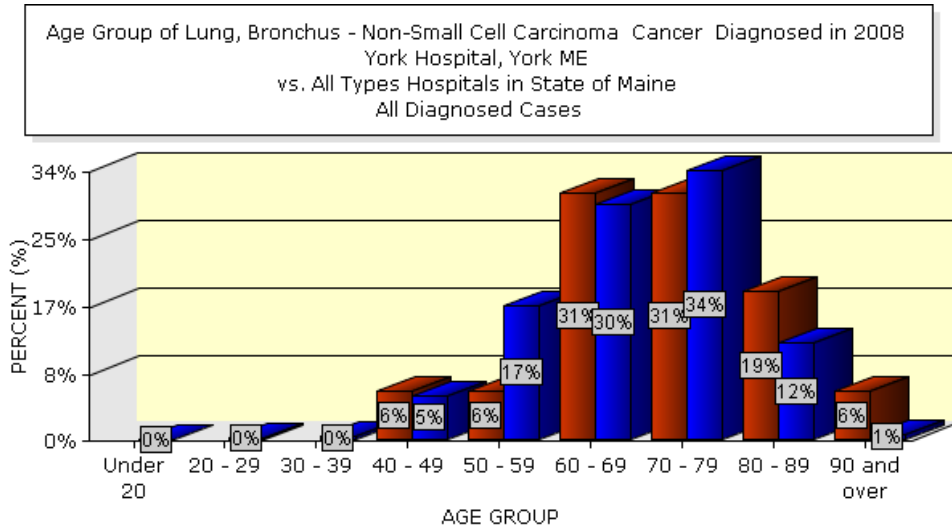
I. Demographics

A. Non-Small Cell Lung Cancer 2008

York Hospital as Compared to State and National Data According to the National Cancer Database.



	Under 20	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79	80 - 89	90 and over
My Facility				6%	6%	31%	31%	19%	6%
Other	0%	0%	1%	5%	16%	30%	32%	15%	1%

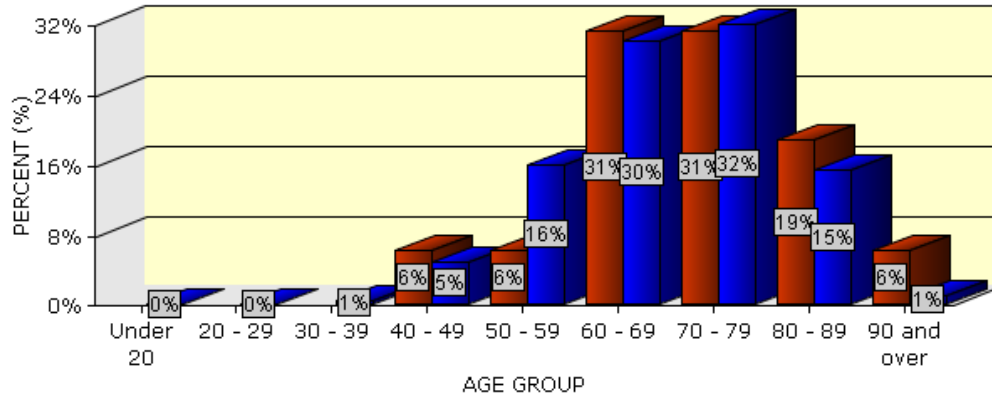


	Under 20	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79	80 - 89	90 and over
My Facility				6%	6%	31%	31%	19%	6%
Other	0%	0%	0%	5%	17%	30%	34%	12%	1%

York Hospital data is consistent with State and National data.

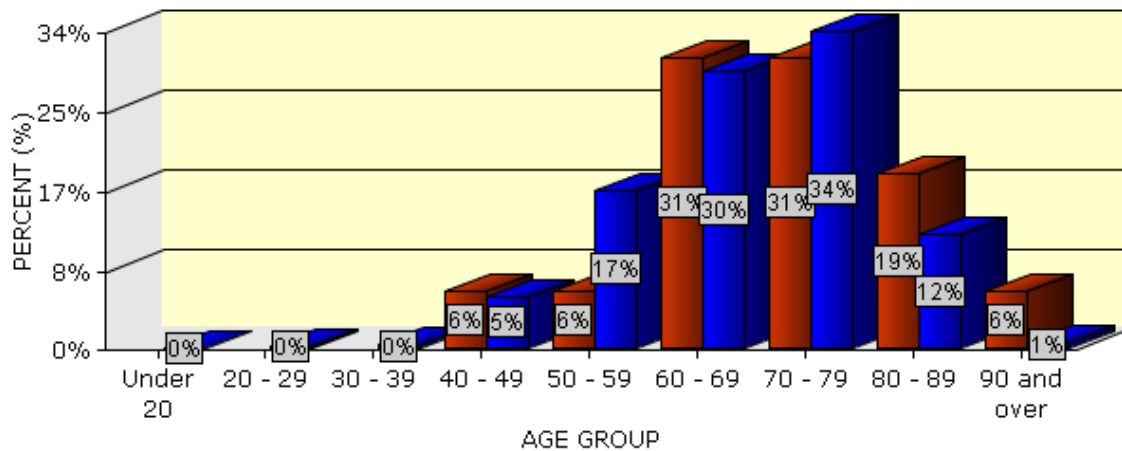
B. Non-Small Cell Lung Cancer – Stratified by Age

Age Group of Lung, Bronchus - Non-Small Cell Carcinoma Cancer Diagnosed in 2008
 York Hospital, York ME
 vs. All Types Hospitals in All States
 All Diagnosed Cases



	Under 20	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79	80 - 89	90 and over
My Facility				6%	6%	31%	31%	19%	6%
Other	0%	0%	1%	5%	16%	30%	32%	15%	1%

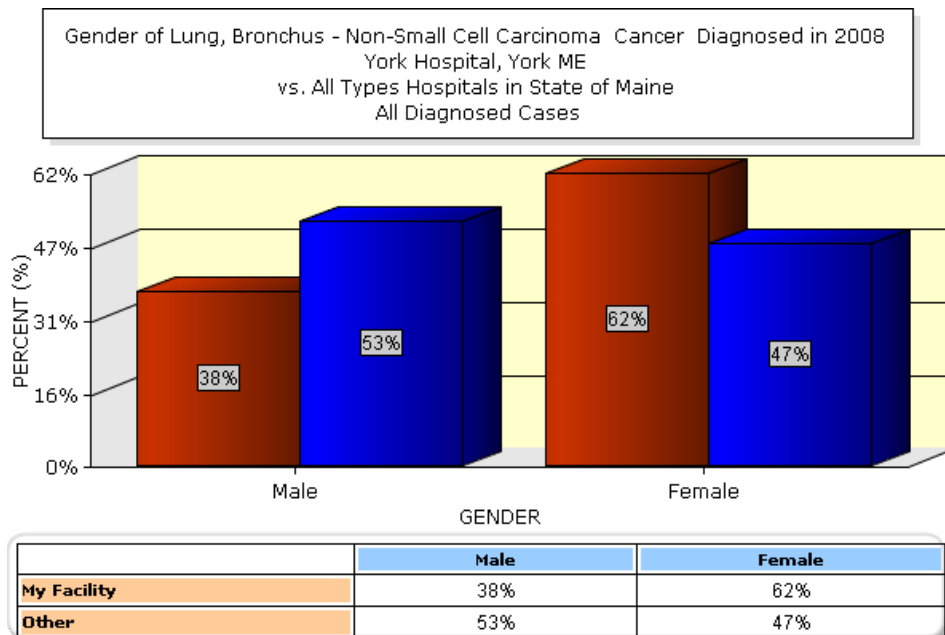
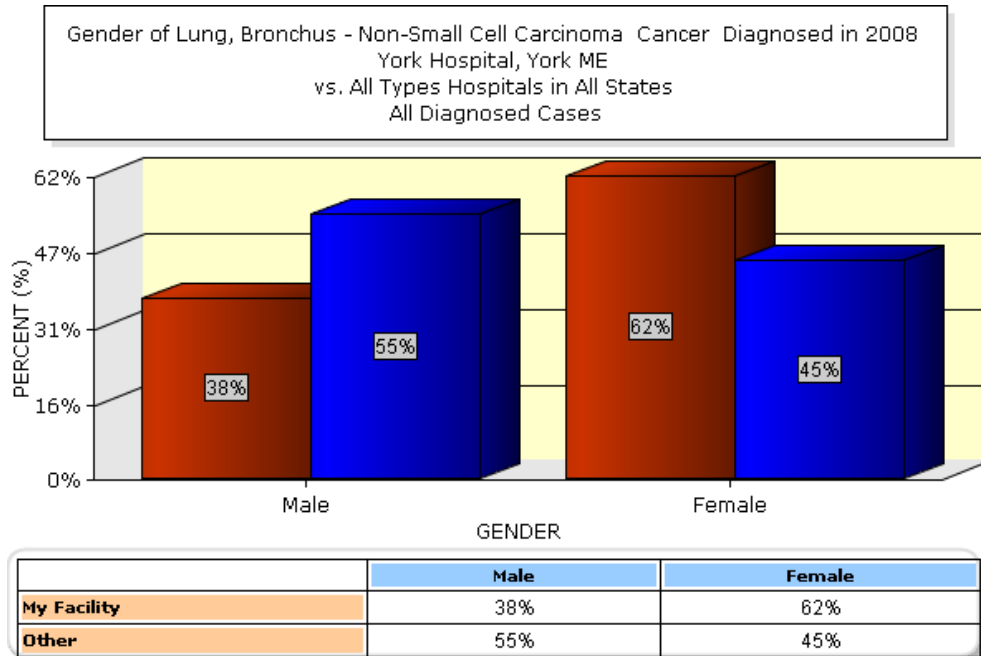
Age Group of Lung, Bronchus - Non-Small Cell Carcinoma Cancer Diagnosed in 2008
 York Hospital, York ME
 vs. All Types Hospitals in State of Maine
 All Diagnosed Cases



	Under 20	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79	80 - 89	90 and over
My Facility				6%	6%	31%	31%	19%	6%
Other	0%	0%	0%	5%	17%	30%	34%	12%	1%

York Hospital data is consistent with State and National data.

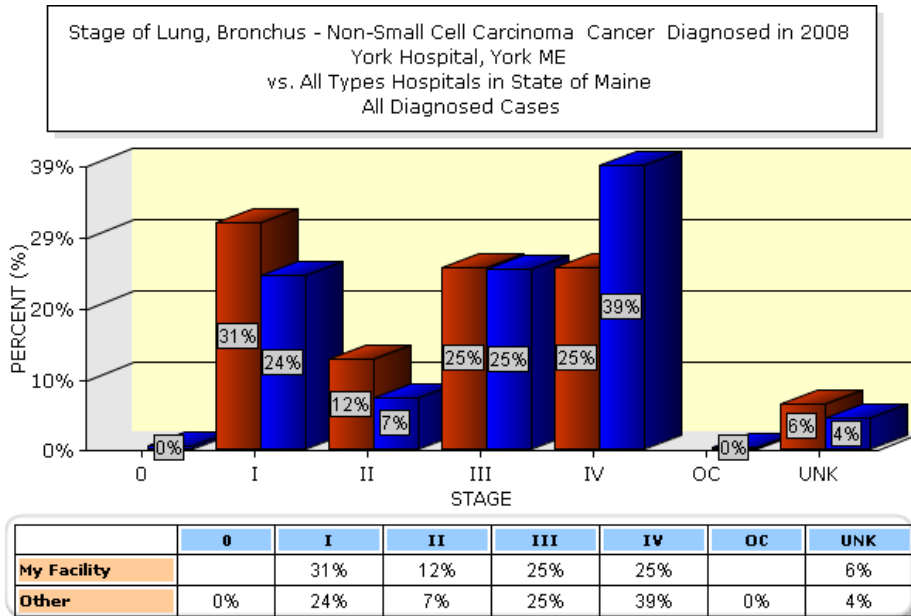
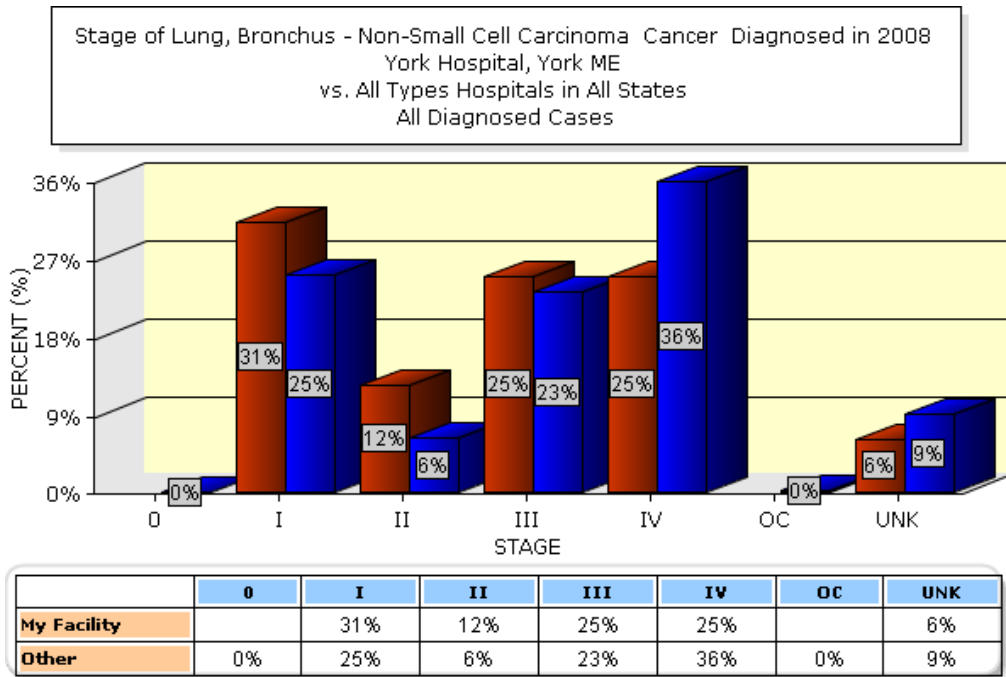
C. Non-Small Cell Lung Cancer – Stratified by Gender



York Hospital data is consistent with State and National data.

II. Tumor Characteristics

A. Non-Small Cell Lung Cancer - Stage at Diagnosis



The data reflects that York Hospital diagnosed their patients at an earlier stage of disease than as seen in State and National data.

III. First Course Treatment for Non-Small Cell Carcinoma York Hospital as Compared to Maine State Data

<i>First Course Treatment of Lung, Bronchus - Non-Small Cell Carcinoma Cancer Diagnosed in 2008</i>					
York Hospital, York ME					
vs. All Types Hospitals in All States					
All Diagnosed Cases					
#	First Course Treatment	My (N)	Oth. (N)	My (%)	Oth. (%)
1.	Surgery Only	2	26275	12.5%	21.1%
2.	Radiation Only	2	16806	12.5%	13.5%
3.	Surgery & Chemotherapy	2	5988	12.5%	4.81%
4.	Radiation & Chemotherapy	4	25750	25%	20.68%
5.	Chemotherapy Only	3	16711	18.75%	13.42%
6.	Surgery, Radiation & Chemotherapy	.	3379	.	2.71%
7.	Other Specified Therapy	.	2473	.	1.99%
8.	No 1st Course Rx	3	27121	18.75%	21.78%
Col. TOTAL		16	124503	100%	100%

Diagnosis:

The diagnosis of lung cancer typically starts with a chest x-ray or a CT scan. If a suspicious mass is seen this is often followed by a biopsy, a piece of tissue obtained either by bronchoscopy, where a small tube with a camera is inserted into the lung via the nose or a small needle is inserted directly into the mass under x-ray guidance. The location of the cancer determines which of these procedures is preferred. The tissue is then analyzed under a microscope to determine the precise diagnosis. The extent of the cancer, or the stage, is then determined by radiologic scans which may include a CT scan or a PET scan. In situations where the tumor is highly suspicious and there are no signs of distant disease surgical resection may be performed without a biopsy.

Treatment:

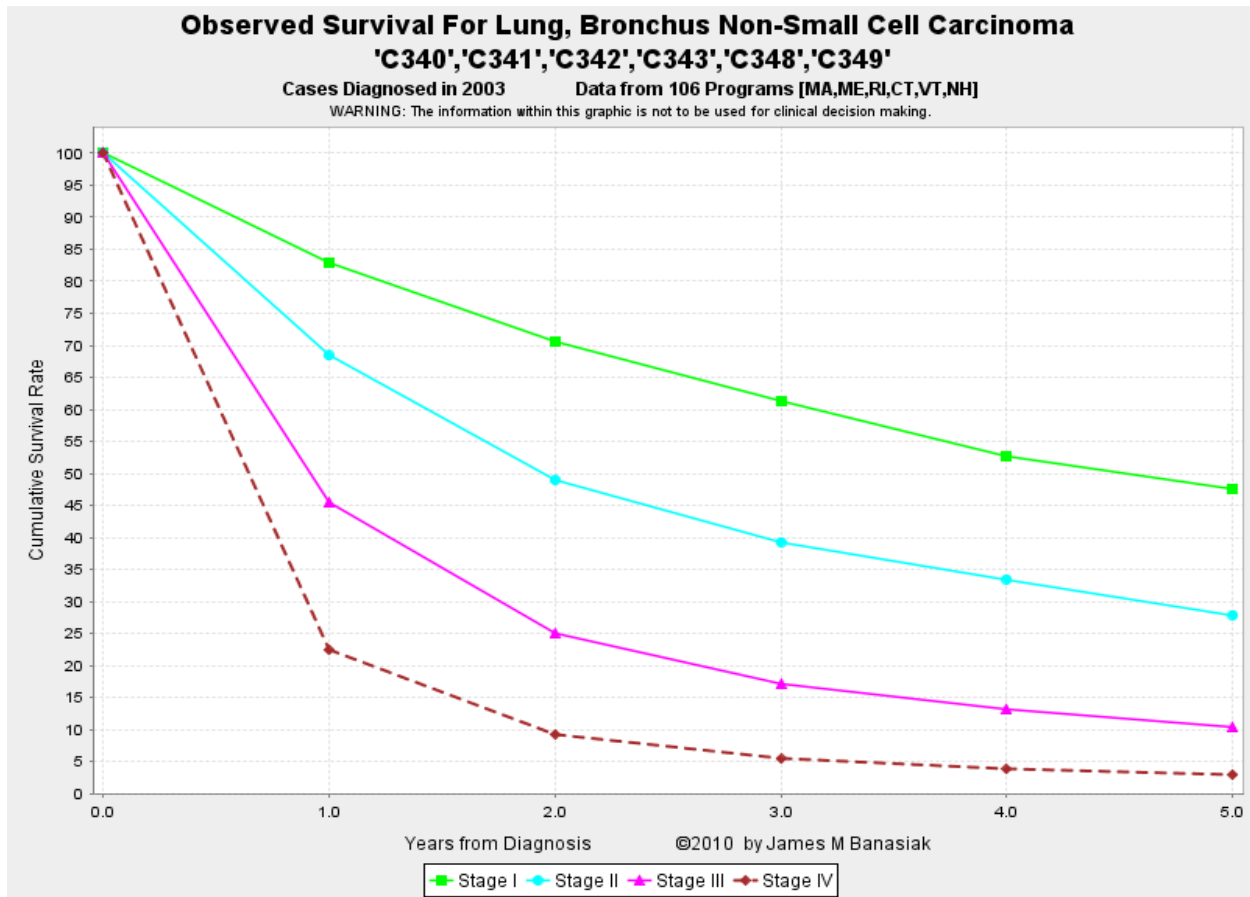
³Treatment options are determined by the type (small cell or non-small cell) and stage of the cancer. Treatment may include surgery, radiation therapy, chemotherapy, and targeted biological therapies such as Bevacizumab (Avastin) and Erlotinib (Tarceva) or a combination of these therapies. For localized cancers, surgery is the treatment of choice for patients who are able to tolerate this. Surgery generally involves removal of part of the lung, a lobectomy or in some situations the whole lung, a pneumonectomy. Chemotherapy is medicine that is delivered throughout the body that preferentially attacks rapidly dividing cells including cancer cells. The addition of chemotherapy after surgery, known as adjuvant therapy may help to increase the cure rate for patients with certain stages of non-small cell lung cancer.

In patients who are not able to tolerate surgery a combination of chemotherapy and radiation therapy may be offered as an alternative. Patients who have advanced disease at the time of presentation are often treated with chemotherapy alone with radiation reserved for areas that may become painful or symptomatic. Palliative care is also an

important part of treatment with the goal of maintaining a good quality of life as well as addressing the emotional and psychosocial aspects of this complex disease. Chemotherapy alone or combined with radiation is the usual treatment of choice for small cell lung cancer which may lead to a remission, which could be prolonged in those with earlier stage disease. Due to small cell lung cancers proclivity to spread to brain patients may be offered prophylactic cranial irradiation(PCI) with the goal of reducing the risk of the cancer spreading to this area.

IV. Survival

The number of non-small lung cancer cases diagnosed and/or treated at York Hospital did not provide statistically significant outcomes. Overall the demographics, age at diagnosis, and treatments employed are commensurate with local and national data. Below are the Survival Data for the New England Region of the United States.



⁴The 1-year relative survival for lung cancer increased from 35% in 1975-1979 to 41% in 2001-2004, largely due to improvements in surgical techniques and combined therapies and improved palliative treatments. However, the 5-year survival rate for all stages combined is only 15%. The 5-year survival rate is 50% for cases detected when the disease is still localized, but only 16% of lung cancers are diagnosed at this early stage.

Lung cancer continues to be the most common cause of cancer related mortality worldwide. Great strides have been made over the past several years with improvement in all aspects of care including surgical technique, chemotherapy and radiation therapy as well as supportive care. Despite this lung cancer continues to be a devastating disease. Here at York Hospital we continue to stay abreast of the latest technology and advancements in the field of lung cancer both in active treatment of the disease as well as palliation of symptoms. We offer several national clinical trials specific to lung cancer patients. Working closely with radiation oncology we now have the option of stereotactic radiosurgery in select patients with early stage lung cancer who are not surgical candidates. This technology offers high doses of radiation precisely targeted to the cancerous tissue while minimizing the effects on healthy tissue. Given the significant lethality of lung cancer prevention and early treatment remains key. Smoking cessation is one of the most important aspects in prevention. With aggressive antismoking campaigns and smoking cessation clinics we can remove one of the largest causes of this devastating disease.

Here at York Hospital our multidisciplinary approach encompasses physicians from thoracic surgery, pulmonary medicine, medical oncology, pathology, radiology, interventional radiology and radiation oncology. We employ the latest technologies and standards of care as put forth by national guidelines. As the field advances we will continue to offer state of the art care close to home for patients and their families faced with the complexities of lung cancer as well as other cancers.

American Cancer Society Facts and Figures 2009.

**York Hospital
Cancer Committee Members
2010**

Jonathan Eneman, MD Chairman
Medical Oncology

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Medical Oncology

Robert Horowitz, MD
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Maged Khoory, MD
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Jeffrey Thurlow, MD
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Oncology Rehabilitation