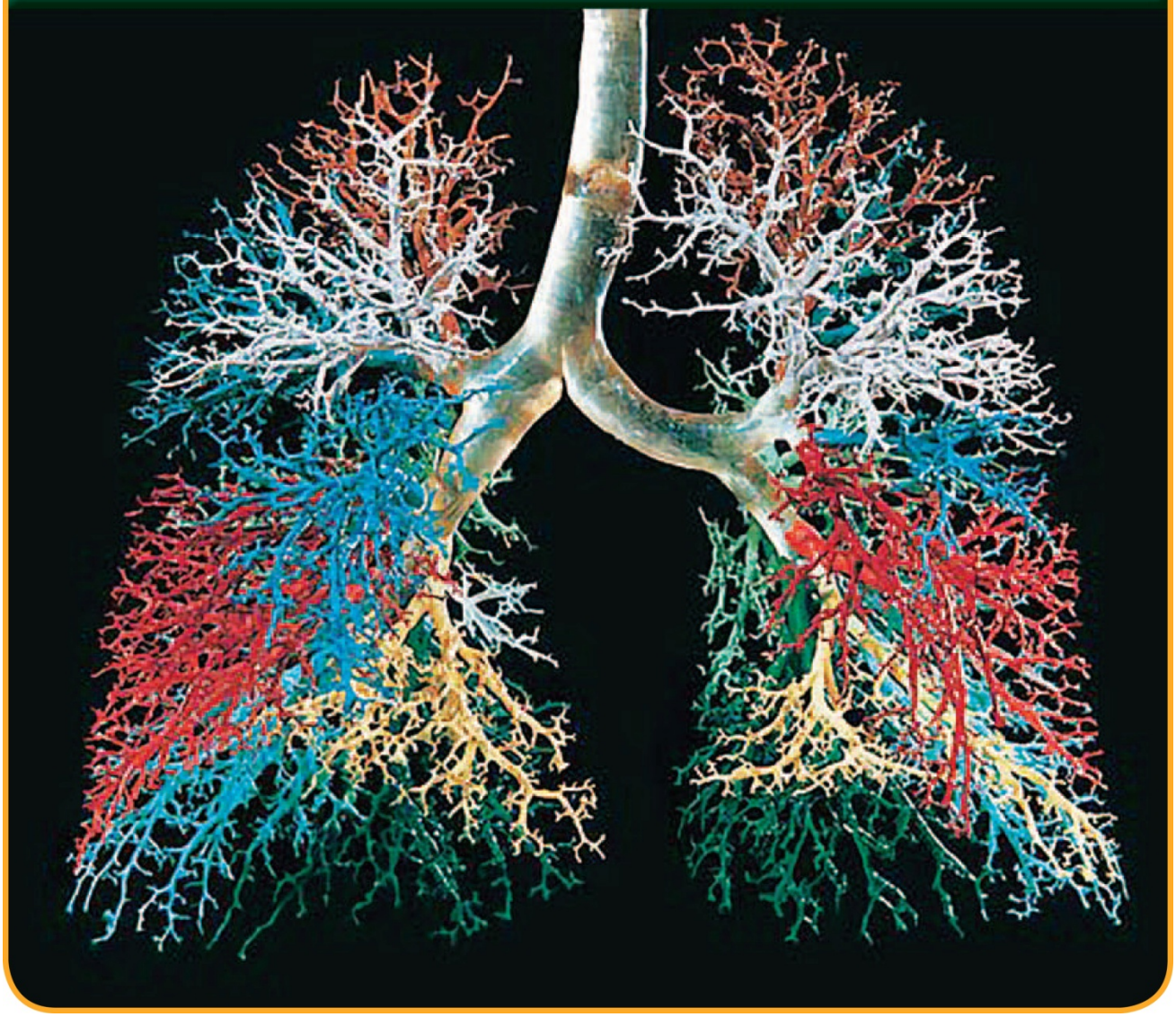
Cabell Huntington Hospital

Edwards Comprehensive Cancer Center

Oncology Committee Annual Report 2011



ONCOLOGY COMMITTEE - 2011

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Chairman's Report 2011

Gerard Oakley, MD
Chairman, Cancer Committee
Cabell Huntington Hospital/Edwards Comprehensive Cancer Center

When Darwin published his "Theory of Evolution" in 1859, he applied his ideas to living things. As acceptance and understanding of his theory grew, the ideas have been applied to organizations as well. The path of progress that the Edwards Comprehensive Cancer Center has taken and continues to take is a sterling example of organizational evolution.

In six short years, the Edwards Comprehensive Cancer Center has grown from a small group of oncologic specialists and support staff to a thriving, bustling enterprise providing services across a wide spectrum of specialties. As community needs have been identified, changes have been incorporated into the structure of the center to meet those needs. New services, new programs and new specialists are being added as changing conditions require. New talents are developed or recruited to fill identified needs. As our evolution moves the cancer center forward, we are constantly mindful of our need to remain a cancer center for the community, for our community, and we strive to maintain a comfortable and welcoming environment for patients and family alike.

The cancer center has progressed from its inception when services were somewhat limited by personnel and space constraints to a center where seemingly all things are possible. Medical oncology and hematology, gynecologic oncology, orthopedic oncology, pediatric oncology, radiation oncology, surgical oncology and urologic oncology specialists daily provide care for an ever-increasing community of patients stricken with cancer. The Breast Cancer Center has achieved special recognition for its programs and dedication to excellence by a national accrediting agency. The Radiation Therapy Program provides the full range of state-of-the-art radiation treatments from external therapy to implants, including high dose internal therapy under the direction of our two radiation therapy physicians. An expanded state-of-the-art chemotherapy infusion center allows patients to receive their treatments in comfort, administered by trained and

caring professionals. Genetic testing and counseling for patients deemed at risk or who are concerned that they might be at risk for a genetically determined cancer are available within the cancer center. A new program to help patients manage and better cope with the problems of lymphedema has been established. Through weekly multidisciplinary cancer conferences, in-depth discussions of new therapy options and possibilities are greatly facilitated. In essence, each patient is afforded the benefit of the collective experience and knowledge of the entire staff of the cancer center in designing their treatment program. Our goal is to provide our patients with the latest, most successful therapies available.

Without doubt, the largest and most notable step in our evolution to date occurred this year with the creation and dedication of the Charles H. McKown Jr. Translational Genomic Research Institute located on the second floor of the cancer center. This new institute will provide an opportunity to merge basic science research and the clinical environment so that a more clear understanding of and insight into the genetic basis of cancer can be realized. The creation of the institute represents not only a major milestone in the cancer center's evolution, but also provides a pathway for expansion of the center into as yet unexplored terrain, opening up new opportunities for research within the center and the medical school.

This was the year to shine for the cancer center in other ways though. After a thorough review and evaluation of the cancer center by the American College of Surgeons Commission on Cancer, we were accredited with multiple accolades, including receiving commendations in not just some, but all areas of review. The Edwards Comprehensive Cancer Center was also recognized by Carechex to be in the top 3% of cancer programs in the country, rated higher than many more well known and recognized centers. That is quite an array of impressive achievements for a program that has only been in existence six short years.

These accomplishments are due in large part to the generosity of the Edwards family, continued support from Cabell Huntington Hospital and the Joan C. Edwards School of Medicine at Marshall University, and the continued daily efforts and dedication of the cancer center staff. While without doubt the building in which we are housed is beautiful, it is the people within that make the center what it is. To a person, there is a dedication to making everyone feel welcome.

There is a sense that going the extra mile for patients and family is not the exception, but the expectation. That is why that not a day goes by without hearing from someone just how special the people that are the cancer center have been, how patient's lives have been touched and how much the staff of the center mean to our patients.

Just as Darwin recognized that the process of evolution is ongoing and constant, the importance of maintaining our efforts to search out and implement improvements remains paramount. The needs of the community for new programs or expansion of current programs are of constant concern. Our tireless efforts to provide the highest quality of care and state-of-the-art therapies to patients with cancer have brought us to this point in our evolution, and there is yet much to do. The need for an expanded and dedicated Palliative Care Program to ease the effects of cancer and treatment as well as deal with end-of-life issues is being addressed. As our success with a variety of cancers improves, and the numbers of patients surviving their cancers increases, the need to address the special situations of survivors, a Pathway to Survivorship, is also a priority.

As Yogi Berra is often quoted as saying, "The future ain't what it used to be." For patients who are dealing with or who have dealt with cancer, the future is very definitely not what it used to be. The diagnosis changes everything, impacts all aspects of one's life, literally creating a new and very different future than had previously been envisioned. We at the Edwards Comprehensive Cancer Center accept as our challenge the fact that even if the future "ain't what it used to be," by working together, we can make the future better.

Lung Cancer: Perspective from a Cardiothoracic Surgeon

Dr. Rebecca Wolfer is board-certified in both general surgery and cardiothoracic surgery. Her interests include general thoracic surgery, thorascopy, trauma surgery and surgical critical care. She is a fellow of the American College of Chest Physicians and a Fellow in the American Colleges of Surgeons. Dr. Wolfer serves as Professor at Marshall University's Joan C. Edwards School of Medicine and is a valued member of the lung cancer multidisciplinary team.

Dr. Wolfer, is surgery a treatment option for all patients with lung cancer?

The option for surgery is dependent on the type of lung cancer, the location of the tumor, the stage of the disease and the condition of the patient.

Surgery can be the definitive treatment for early stage non small cell lung cancer (NSCLC). For patients with Stage I NSCLC, surgery is usually the only treatment needed. Five-year survival rates for these patients are nearly 70%.

Patients with Stage II disease may need adjuvant treatment of radiation or chemotherapy to ensure that all microscopic disease is destroyed after the tumor has been removed by surgery. Some patients with Stage III disease may be able to have surgery first, followed by chemotherapy or radiation. However for many patients with Stage III NSCLC, surgery is an option only after the tumor shrinks with chemotherapy or chemotherapy/radiation therapy.

Surgery is not a treatment option for patients with Stage IV, or wide-spread disease. Unfortunately, in this region of the United States, many patients are diagnosed with lung cancer at late stages and therefore surgery is not an option for them.

Surgery is also not an option for patients with multiple underlying medical problems or when the tumor is located near vital structures. The patient must be able to withstand the surgical procedure and must be able to breathe and maintain their oxygen exchange with a portion or a whole lung removed. Many lung cancer patients have advanced disease or other diseases (co-morbidities), that prevent us from offering surgery as a treatment option.

When surgery is an option, what type of procedure is performed?

There are several surgical procedures that can be done, based on the location of the tumor with the goal of removing the smallest portion of the lung possible. A thoractomy is an open incision. Through this open incision, we can perform a

pneumonectomy, lobectomy or wedge resection. A pneumonectomy involves the removal of an entire lung, while a lobectomy involves the removal of the lobe of one lung. A wedge resection takes a small, wedge-like section out of one lobe. This is often done for a biopsy or when the tumor is very small.

Many of these procedures can be done through an open incision or through a procedure called minimally invasive video-assisted thoractomy (VATS) with smaller incisions.

Can you describe VATS surgery?

VATS surgery may involve several small incisions through which video cameras and instruments are inserted. The surgeon's view of the procedure is limited to the video screen. Some patients are not candidates for this type of surgery, depending on the tumor size and/or location as well as their underlying medical condition.

Is VATS better for the patient?

There is very little conclusive evidence that VATS is any better for patients in terms of length of stay or recovery. Today, the incisions for thoractomies are very small. The post-op experience is the same for the patient regarding pain and total time for recovery. Because of the specialized equipment required and time needed, VATS surgery is more expensive and time-intensive.

With short-term and long-term outcomes equal, I believe each patient's surgical treatment needs to be individualized for their cancer and underlying physical condition. I do what I believe is best for each patient.

Lung Cancer: Perspective from a Medical Oncologist

Dr. Rajesh Sehgal, a medical oncologist/hematologist at Edwards Comprehensive Cancer Center, is board- certified by the American Board of Internal Medicine, with subspecialty certifications in both medical oncology and hematology. He serves as Assistant Professor with the Joan C. Edwards School of Medicine at Marshall University and as a member of the lung cancer multidisciplinary team.

Dr. Sehgal, there is not much attention in the media regarding lung cancer. Should we still be concerned about lung cancer?

Yes, we should. While lung cancer rates are decreasing nationwide, lung cancer remains the leading cause of cancer deaths in the United States among both men and women. Lung cancer claims more lives each year than colon, prostate, ovarian, lymphoma and breast cancer combined.

And while rates of lung cancer are decreasing in other areas of the country, in Appalachia, the rates are staying high. The high rates speak directly to lifestyle and the risk factors for lung cancer. As long as West Virginia continues to have high rates of smoking, the rates of lung cancer will not decrease. We know this is true because in other parts of the country where there are strict indoor clean-air laws and significant decreases in personal smoking habits, the rates of lung cancer also decreased. However, this has not happened in our local area.

What is lung cancer?

Lung cancer is a type of cancer that begins in the lungs. The lungs are an important organ in the chest cavity and are vital to our ability to breathe and supply our body with oxygen. Because the lungs are so important, damage to the lungs is life threatening.

Lung cancer is divided into two major categories, based on the appearance of lung cancer cells under the microscope. The two types are very different and so are the treatments. Treatment decisions differ based on the type of lung cancer diagnosed.

- **Small cell lung cancer** (SCLC) occurs almost exclusively in heavy smokers and is less common than non-small cell lung cancer. This cancer occurs in the airways from chronic irritation.
- **Non-small cell lung cancer** (NSCLC) is the term used for several types of lung cancers that behave in a similar way. Non-small cell lung cancers include squamous cell carcinoma, adenocarcinoma and large cell carcinoma.

What are the causes or the risk factors for lung cancer?

While there are people who develop lung cancer with no known risk factors, most lung cancers are caused by inhaling material that damages the cells lining the lungs. At first, your body may be able to repair this damage but over time, each repeated exposure causes increasing damage to the normal cells, causing these cells to become abnormal and, eventually, the abnormal cells become cancer.

Smoking remains the greatest risk factor in the development of lung cancer. The risk of lung cancer increases with the number of cigarettes smoked and the number of years you have smoked. In fact, multiplying the number of years times the number of packs smoked each day gives us a number we call “pack years.” The greatest risk of lung cancer occurs after 30 pack years. Marijuana smoke contains more tar and cancer-causing

substances than tobacco smoke. Because marijuana use is not legal, we do not have good research available to predict the amount of lung cancer caused by marijuana use.

Exposure to secondhand smoke also increases the risk of lung cancer, even if you don't smoke. Living with a smoker or working in a smoke-filled environment increases your risk of lung cancer.

Exposure to radon gas increases a person's risk of lung cancer. Unfortunately, we live in area that can have high levels of radon gas. Radon testing can determine whether levels are safe inside your home.

Exposure to asbestos and other chemicals can also increase your risk of lung cancer, especially if you are also a smoker. Workplace exposure to asbestos and other substances— such as arsenic, chromium, nickel and tar — can increase risks of cancer. Employers must make safety devices available for workers to reduce the risk.

There are **certain lung diseases**, such as chronic obstructive pulmonary disease, that may increase the risk of lung cancer. People with this disease should maintain close contact with their physicians.

People with a **family history of lung cancer**— lung cancer in the parent, brother or sister— have an increased risk of the disease. The exact cause or gene has not been identified, and some researchers believe the family-related risk is linked merely to smoking and second hand smoke.

How does this area of WV compare to the nation in regard to lung cancer incidence?

West Virginia has high rates of lung cancer and will have high rates of lung cancer for years to come because West Virginia ranks first among all the states in the percentage of adults who smoke. In West Virginia, 26.8% of adults smoke (Kaiser Family Foundation, 2011).

The average rate of lung cancer in the US is 67.9 cases per 100,000 residents. In West Virginia this number is higher at 90.9 cases per 100,000 residents. The map shows the incidence of lung cancer per county in West Virginia. We live in an area of the state where the incidence of lung cancer is nearly double that of the national average.

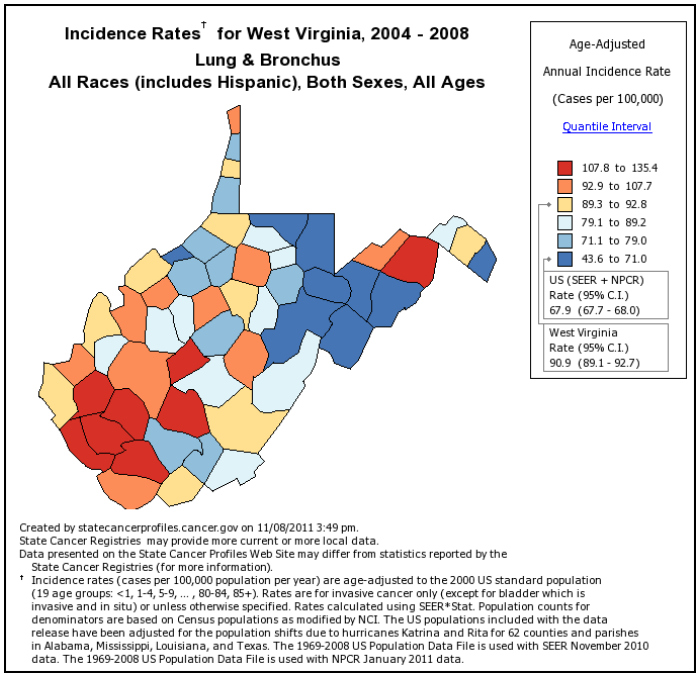

Figure 1. Incidence rates of lung cancer in WV (http://statecancerprofiles.cancer.gov)

What is the typical age for people to be diagnosed with lung cancer?

People at highest risk for lung cancer are usually those over the age of 55, with a 30 year pack history. At Cabell Huntington Hospital, the majority of patients diagnosed with either SCLC or NSCLC are between 50 and 80 years of age, as noted in Table 1. However, we do see patients at younger ages, even as young as in their 20s. People who start smoking at a young age are at risk to develop lung cancer at a young age.

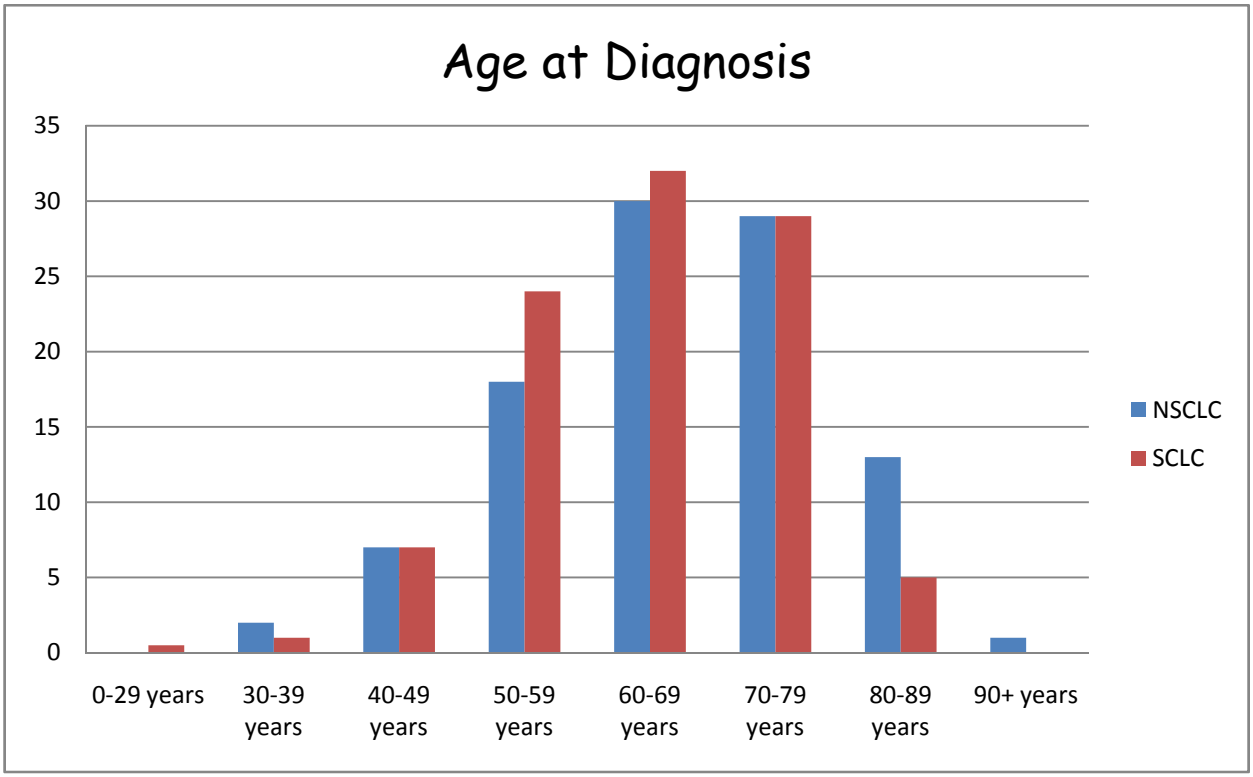

Table 1. Age at diagnosis, comparing NSCLC and SCLC. Data is compiled from CHH Registry from 1995-2010.

Does the risk for lung cancer decrease if you stop smoking?

Yes. If you stop smoking, you can significantly reduce your chances of developing lung cancer. Your doctor can recommend strategies for quitting, such as counseling, medications and nicotine replacement products. You can reduce your risk of second-hand smoke by not allowing people to smoke indoors at your home, and by avoiding smoke-filled rooms.

What is the treatment for lung cancer?

The treatment for lung cancer is specific to the type of lung cancer, the stage of disease and the overall health of the patient. While there are excellent screening tests for other cancers, screening for lung cancer has been difficult. The data from some recent clinical trials shows the benefit of early detection in the survival rates at five years. Dr. Chowdhary describes lung cancer screening in *Lung Cancer Screening: Perspective from a Medical Oncologist*, which follows.

Because it is necessary to have enough information to make the treatment decision, the patient may be required to undergo further tests before a treatment plan can be developed. A biopsy is needed to determine the exact type of lung cancer and additional tests can confirm if the cancer spread outside of the lung (metastasized). Treatment decisions should be made by the patient and the doctor. Families also play an important role in the treatment decision.

Treatment for SCLC

SCLC grows quickly and often spreads quickly. Surgery is not usually an option for SCLC. Chemotherapy and/or radiation therapy is the optimal treatment for SCLC and should be started as soon as possible after confirming a diagnosis of SCLC. Chemotherapy can be given as a single agent, but most commonly is given as combination therapy (two or more chemotherapy drugs given together) every few weeks for several months.

The doctor will check after every few cycles to see how the disease is responding to treatment. Dr. Freeman discusses the use of radiation therapy in *The Role of Radiation Oncology in Treating Lung Cancer*, in this Annual Report.

Treatment for NSCLC

For early stage NSCLC, surgery may be the only treatment required. Dr. Wolfer describes the surgical options in *Lung Cancer: Perspective from a Cardiothoracic Surgeon*, in this Annual Report.

The treatment also depends on the specific type of NSCLC, but usually chemotherapy and/or radiation therapy will be considered. The type of chemotherapy, the dose, and the schedule of doses will depend on the type of NSCLC, the stage of cancer, and other health problems (co-morbidities). Newer therapy, often called targeted therapy, is also an option for some NSCLC cancers.

CHH/ECCC also participates in a wide range of Clinical Trials. In Clinical Trials you can receive the newest treatment that is not yet available. All the best treatments were once only available in clinical trials.

Does the stage of lung cancer affect the survival rate?

Survival is directly related to the stage at diagnosis. Changing lifestyle to reduce risk factors is necessary, but finding cancer early is the key. See Table 2 for the stage of lung cancer found at diagnosis. Tables 3 and 4 show the five-year survival rates from SCLC and NSCLC at ECCC, using 1995-2010 registry data.

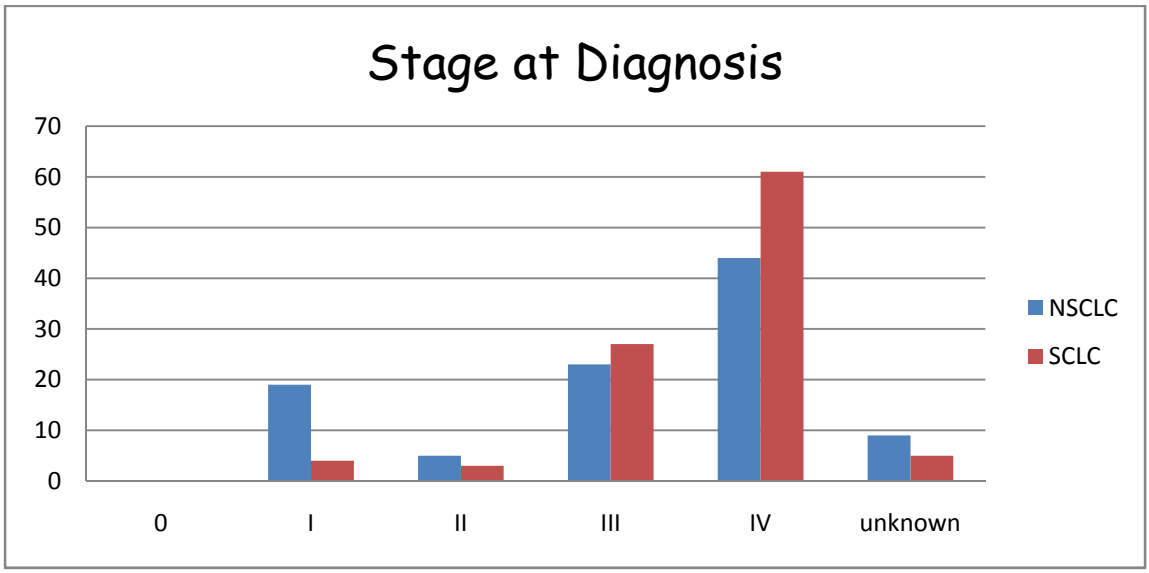

Table 2. Stage of lung cancer at diagnosis. Data is compiled from CHH Registry from 1995-2010.

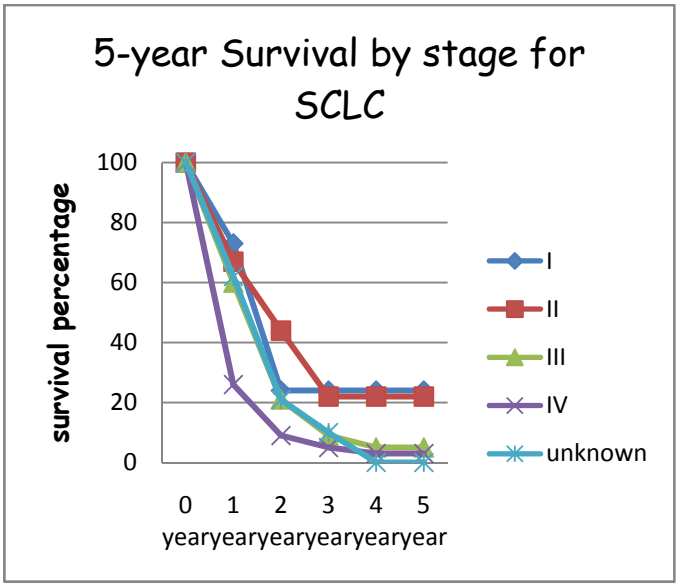

Table 3. 5-year Survival from SCLC by stage. Data is compiled from CHH Registry from 1995-2010.

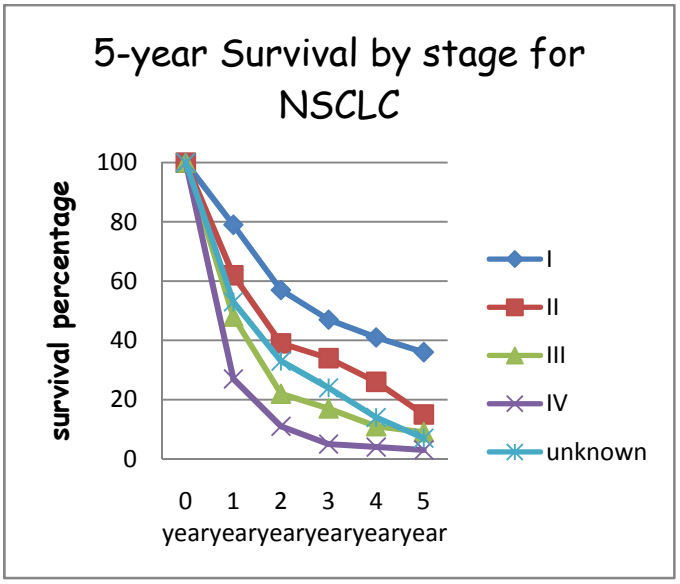

Table 4. 5-year Survival from NSCLC by stage. Data is compiled from CHH Registry from 1995-2010

As you can see from Table 4 and Table 5, the survival rates from lung cancer are best when the disease is found early. The problem is in finding the cancer early.

How does the survival rate from lung cancer at the ECCC compare with the national or regional survival rates?

Cabell Huntington Hospital and the Edwards Comprehensive Cancer Center have five-year survival rates that are very comparable to national and regional survival data and, at some points, even a bit better than other areas of the country. The national data is compiled by the Commission on Cancer from 1281 accredited facilities across the country using 2003 data. The regional data is compiled from 2003 data by the COC from 247 accredited facilities in the Mid-Atlantic Region. The CHH/ECCC survival data were compiled from 1995-2010 registry data.

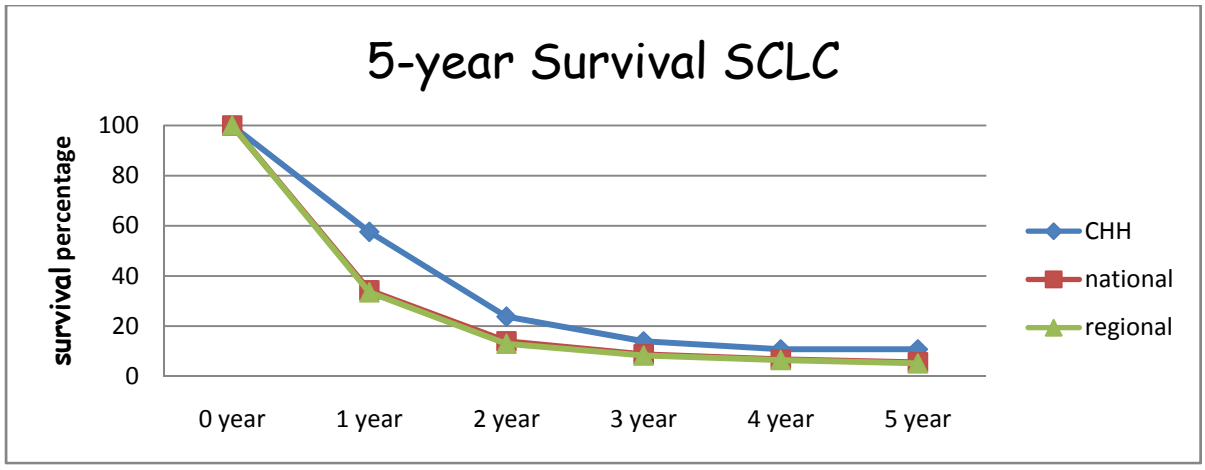

Table 5. 5-year Survival for all stages compared to national and regional data for SCLC.

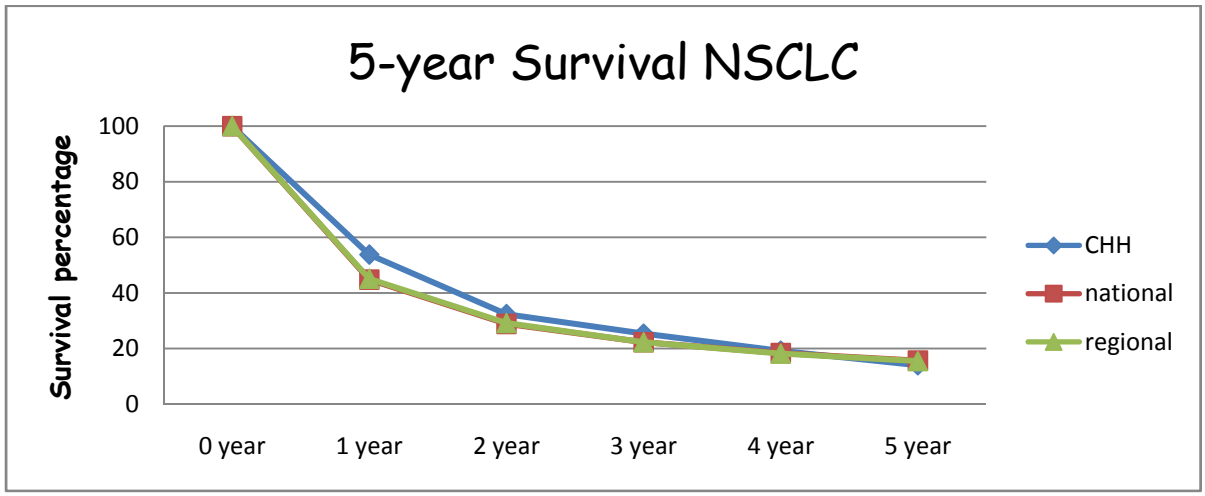

Table 6. 5-year Survival for all stages compared to national and regional data for NSCLC.

Lung Cancer Screening:
Perspective from a Medical Oncologist

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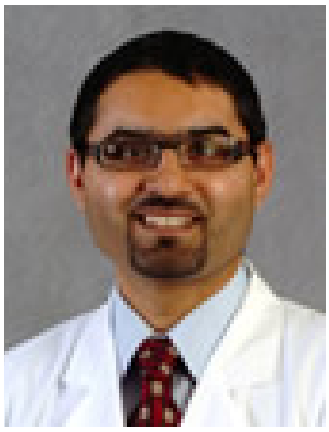


Aneel Chowdhary, MD, medical oncologist at the Edwards Comprehensive Cancer Center, is board-certified by the American Board of Internal Medicine with a subspecialty certification in medical oncology. He serves as Assistant Professor at Marshall University's Joan C. Edwards School of Medicine and as a member of the lung cancer multidisciplinary team

Counties in our area have some of the highest incidence rates of lung cancer in the nation. High death rates associated with lung cancer make this a devastating diagnosis. And while we have been successful in reducing the mortality of other cancers by finding the disease early when treatment is most effective, this has not occurred with lung cancer. Even with early detection, the five-year survival rate for Stage I lung cancer is 60-70%. However, the majority of patients with lung cancer are diagnosed at advanced stages: Stage III or Stage IV.

Recently, the results from a large, randomized clinical trial for lung cancer screening, the National Lung Screening Trial (NLST), were published in the *New England Journal of Medicine (*Aug 4, 2011*).* This trial compared three years of annual screening with either low-dose CT scan or chest X-ray in 53,454 people (aged 55 to 74) at high risk for developing lung cancer due to present or past heavy smoking (30 pack-years). In this high-risk population, the trial showed a significant reduction in mortality from lung cancer using low-dose CT screening. In fact, there was a reduction in lung cancer mortality in the low-dose CT group by 20.3% over the chest X-ray group.

While these results are very encouraging and the National Comprehensive Cancer Network has adopted these screening guidelines, there are several issues associated with an aggressive screening program that must be taken into consideration.

First, it should be noted that the screening trial found a high number of false positive results. This means that misleading findings were noted in many people who did not have lung cancer. In fact, nearly 40% of the people screened were found to have suspicious findings. These people were asked to undergo additional testing, surgical procedures and emotional distress to find that 96% of these positive findings were not cancerous. The false positive rate was higher in the CT scan group than in the chest X-Ray group.

Second, overdiagnosis is another major concern when screening for cancer. Aggressive screening might detect pre-clinical cancers which will not become symptomatic or be life

threatening. These patients would otherwise never have known they had lung cancer, would not have faced the distress of a cancer diagnosis and would never have required treatment.

Third, lead-time bias may be a factor. Lead-time bias results in patients knowing they have the disease long before symptoms occur with increased short-term survival but no difference in overall survival. While a significant difference has been found in five-year survival, not enough time has elapsed to show long-term or overall survival.

Last, even with low-dose CT scans there is a danger from repeated exposure, especially with the unnecessary additional testing resulting from false positives. The authors also note that low-dose CT scanning is not the standard of care, and while more advanced CT scanning techniques are now available, the impact is unknown in screening. In addition, the mortality from definitive surgery at the centers participating in the NLST was 1%, whereas the average mortality rate in community settings is higher, at 4%.

While the results from the NLST are very exciting, the risks and benefits must be weighed. The authors themselves conclude that even though there is a 20% reduction in the five-year mortality from lung cancer in this trial, we still need to wait for more data to be available from European studies as well as cost-effective analysis.

It is very important to note that screening is never a substitute for smoking cessation. Smoking remains the most significant modifiable risk in the development of lung cancer.

The Role of Radiation Oncology in Treating Lung Cancer

Andrew Freeman, MD, is a radiation oncologist and the medical director of the Radiation Oncology Program at the Edwards Comprehensive Cancer Center. He serves as Assistant Professor at Marshall University's Joan C. Edwards School of Medicine and as a member of the lung cancer multidisciplinary team.

Radiation therapy plays an important part in the treatment of lung cancer. Of those patients with lung cance

r, more than half will receive radiation therapy as part of their treatment. Radiation can be used to produce a cure, to supplement other treatments or to reduce symptoms even if a cure is not possible. In small cell lung cancer, radiation is also used to reduce the risk of cancer cells spreading to the brain. This treatment is called prophylactic cranial irradiation.

The state-of-the-art technology and the dedicated, professional staff at the Edwards Comprehensive Cancer Center provide optimal treatment for lung cancer patients.

Radiation therapy is provided through a linear accelerator, which provides image-guided therapy and uses multiple fields to deliver precise doses of radiation to the cancer while minimizing the amount of radiation received by surrounding healthy cells. IMRT (Intensity Modulated Radiation Therapy) modifies the treatment and allows even greater sparing of the normal tissues. In addition, Image-Guided Radiation Therapy (IGRT) provides the accuracy needed to ensure the treatment fields are set daily to within 1mm accuracy of the original treatment plan.

Lastly, respiratory gating or Real-Time Position Management (RPM) adds another important benefit in the treatment of lung cancer. The expansion and deflating of the lungs during respiration can change the position of a tumor during treatment. Gating capabilities allow the machine to only treat when the tumor is in the center of the field. This allows sparing of more normal lung tissue, as opposed to traditional fields that would have to be larger due to inspiration and expiration.

A dedicated radiation physicist and dosimetrist ensure the treatment planning and daily delivery of radiation treatments, is accurate and tailored to the specific needs of lung cancer patients. The trained and certified radiation therapists, oncology nurses, and other staff, provide individualized education and support to assist patients through their treatments.

Clinical Trials at Edwards Comprehensive Cancer Center: Moving Forward

by Leann Ross, RN, OCN, CCRP

Since the opening of the Edwards Comprehensive Cancer Center, the ability to offer patients quality treatment options through participation in clinical trials has been a priority of the administrators and physicians. There are many challenges inherent to building a successful clinical trials program. Among the most challenging for a young institution is gaining access to quality clinical trials and achieving annual enrollment goals. With the support of physicians, investigators, administrators and strategic collaborations, the ECCC Clinical Trials Program is meeting these challenges.

Early on, the ECCC developed an affiliation with the Cancer Trials Support Unit (CTSU) a National Cancer Institute (NCI) sponsored program that gave institutions new to research the ability to access select NCI sponsored cooperative group clinical trials. This relationship was vital to the growth of the ECCC Clinical Trials Program. An affiliation with the American College of Surgeons Oncology Group in 2006 also served to provide expanded access to trials. In 2010 as annual enrollments grew, ECCC was accepted as an associate member of the North Central Cancer Treatment Group (NCCTG), a national clinical research cooperative group sponsored by the National Cancer Institute and located at Mayo Clinic. This membership represented a big step forward in clinical trial access. The end of 2011 brought more change and opportunity as the NCCTG, Cancer and Leukemia Group B (CALGB) and the American College of Surgeons Oncology Group (ACOSOG) merged to form the Alliance for Clinical Trials in Oncology. This merger represents an exciting opportunity as a broader menu of trials will soon be made available to the patients at the ECCC.

The Clinical Trials Program also provides support to ECCC investigators initiating individual research projects. Investigator-initiated research projects have increased and successfully enrolled a significant number of patients over the last few years. This interest has been further enhanced by the recent opening of the Marshall University Charles H. McKown, Jr. Translational Genomic Research Institute, located within the ECCC. This facility provides a unique environment for collaboration, as basic science researchers and clinicians are now proximally located under the same roof. The goal of translational research is to move new cancer therapies from the bench to the bedside. This goal is being realized at the ECCC. The partnering of basic scientists and ECCC physicians has already resulted in one currently enrolling clinical trial, with another ready and awaiting funding.

The prevalence and impact of cancer is devastating. It is imperative that better methods of prevention and treatment are found; this will only happen through research.

As Anthony Robbins aptly stated, “If you do what you’ve always done, you’ll get what you’ve always gotten.” It is clear that in cancer care, one cannot continue to do what has always been done. Though cancer treatment has come a very long way over the years, the ECCC cancer care providers are aware that more needs to be done to prolong the lives of cancer patients as well as improving their quality of life. They understand that it is only through continuing research that one can achieve these important goals. The ECCC will continue to offer quality clinical trials, foster scientific curiosity and forge vital collaborations in order to lessen the impact of cancer in this community.

Clinical Trials Currently Enrolling at ECCC

Study	Description
CALGB 40502	A Randomized Phase III Trial of Weekly Paclitaxel Compared to Weekly Nanoparticle Albumin Bound (Nab)-Paclitaxel or Ixabepilone Combined with Bevacizumab as First-Line Therapy for Locally Recurrent or Metastatic Breast Cancer.
NSABP B43	A Phase III Clinical Trial Comparing Trastuzumab Given Concurrently with Radiation Therapy and Radiation Therapy Alone for Women with HER2-Positive Ductal Carcinoma in Situ Resected by Lumpectomy
NSABP B47	A Randomized Ph.III Trail of Adjuvant Therapy Comparing Chemo Alone (6 cycles of AC or 4 cycles of AC Followed by Weekly Paclitaxel) to Chemo Plus Traztuzumab in Women With Node Positive or High Risk Node Negative HER2 Low Invasive Breast Cancer.
NO733	A Randomized Phase II Trial of Capecitabine and Lapatininb with or without IMC-A12 in Patients with HER2 Positive Breast Cancer Previously Treated with Traztuzumab and an Anthracycline and/or a Taxane
N1031	A Randomized Phase II Study of Two Does of Pixantrone in Patients with Metastatic Breast Cancer
S1007	A Phase III, Randomized Trial of Standard Adjuvant Endocrine Therapy =/- Chemo in Patients with 1-3 Positive Nodes, Hormone Receptor Positive and HER2 Negative Breast Cancer with Recurrence Score of 25 or Less
CALGB 80405	A Phase III Trial of Irinotecan / 5-FU / Leucovorin or Oxaliplatin / 5-FU / Leucovorin with Bevacizumab, or Cetuximab (C225), or with the Combination of Bevacizumab and Cetuximab for Patients with Untreated Metastatic Adenocarcinoma of the Colon or Rectum
CALGB 80702	A Phase III Trial of 6 vs. 12 Treatments of Adjuvant FOLFOX Plus Celecoxib or Placebo for patients with Resected Stage III Colon Cancer

CALGB 90203	A Randomized Phase III Study of Neo-Adjuvant Docetaxel and Androgen Deprivation Prior to Radical Prostatectomy in Patients with High-Risk, Clinically Localized Prostate Cancer
BMS- CA184-043	A Randomized, Double Blind, Phase 3 Trial Comparing Ipilimumab vs. Placebo Following Radiotherapy in Patients with Castration Resistant Prostate Cancer that has Received Prior Treatment with Docetaxel.
CALGB 90601	A randomized double-blinded phase III study comparing gemcitabine, cisplatin, and bevacizumab to gemcitabine, cisplatin, and placebo in patients with advanced transitional cell carcinoma
CALGB 90802	Randomized Ph III Trial Comparing Everolimus plus Placebo verses Everolimus plus Bev for Advanced RC Carcinoma Progressing After Treatment with TKI
GOG 0252	A Phase III Clinical Trial of Bevacizumab with IV Versus IP Chemotherapy in Ovarian, Fallopian Tube, and Primary Peritoneal Carcinoma
E1305	A Phase III Randomized Trial of Cisplatin and Docetaxel with or without Bevacizumab In Patients with Recurrent or Metastatic Head and Neck Cancer
E1505	A Phase III Randomized Trial of Adjuvant Chemotherapy With or Without Bevacizumab for Patients With Completely Resected Stage IB - IIIA Non-Small Cell Lung Cancer (NSCLC)
CALGB 30801	A Randomized Ph III Double Blind Trial Evaluating Selective Cox-2 Inhibition in Cox 2 Expressing Advanced NSCLC
CALGB 30607	Randomized, Phase III Double Blind Placebo Controlled Trial of Sunitinib as Maintenance Therapy in Non Progressing Patients Following an Initial Four Cycles of Platinum-Based Combination Chemo in Advanced, Stage IIIB/IV NSCLC
S0819	Phase III Randomized Study of Carbo/Taxol or Carbo/Taxol/Bev with or without Concurrent Cetuximab in Patients with Stage IV or Recurrent NCSLC
BMS CA204-006	A Phase III, Randomized, Open-Label Study of Lenalidomide/Dex with or without Elotuzumab in Subjects with Previously Untreated Multiple Myeloma
B1931008	An Open Label, Randomized, Phase3 Study of Inotuzumab Ozogamicin Administered In Combination with Rituximab Compared to Defined Investigator's Choice Therapy in Subjects with Relapsed or Refractory CD22-Positive Aggressive NHL Who are Not Candidates for Intensive High Dose Chemotherpay
HLMCC 0806	Phase II Placebo Controlled Trial of Lisinopril and Coreg to Reduce Cardiotoxicity in Patients with Breast Cancer Receiving (Neo)Adjuvant Chemotherapy with Herceptin
Tissue Procurement	Collection and Banking of Tissue for Cancer Research

E1609	A Phase III Randomized Study of Adjuvant Ipilimumab Anti-CTLA4 Therapy Versus High Dose Interferon in Patients with Resected High Risk Melanoma
N07C2	The Use of Wisconsin Ginseng to Improve Cancer Related Fatigue: A Randomized, Double Blind, Placebo Controlled Phase III Study.
N08CA	The Use of Glutathione (GSH) for Prevention of Taxol/Carbo Induced Peripheral Neuropathy: A Phase III Randomized, Double-Blind Placebo Controlled Study.
9315-Muto	Molecular Genetics Studies of Cancer Patients and Their Relatives
ECCC-Jensen	A Questionnaire Based Study of Outcomes Related to the Treatment of Prostate Cancer
2008P-000285	Biomechanics of Metastatic Defects in Bones
ECCC- Cheung	Gait Analysis for Patients with Musculoskeletal Tumors
ECCC- Cheung	Outcome Surveys for Patients with Musculoskeletal Tumors
ECCC-Claudio	Chemotherapy Resistance and Sensitivity Testing in Lung Cancer Tumors

***Pediatric Trials are also available through an affiliation with the Children's Oncology Group.**

Education Programs at the ECCC

by Margaret Wagnerowski, MSN, RN, CNS-BC, AOCN®, AOCNS®

Grand Rounds

The Edwards Comprehensive Cancer Center offers a monthly Grand Rounds program featuring a variety of oncology/hematology topics. Distinguished speakers from around the country are invited to present evidence-based programs. Continuing Medical Education (CME) credit is available for this program. Interdisciplinary attendance is encouraged and nurses receive continuing nursing education (CNE) credit for participation.

Regional Cancer Nursing Symposium 2011

Cabell Huntington Hospital and the Edwards Comprehensive Cancer Center hosted the fifth annual Regional Cancer Nursing Symposium in March, 2011. Participants included 90 nurses and other healthcare professionals, who attended one or both days of the two-day conference. Five continuing nursing education credits were provided each day of the conference. Evaluations from both days of the conference were very positive and demonstrated that content presented met the stated objectives of the program.

Symposium topics included risk factors, diagnosis, treatment, tracheostomy care, communication and swallowing issues and nutritional issues of patients with head and neck cancer. Other topics included an overview of evidence-based management of central venous catheters, an overview of radiation therapy, pharmacology, and symptom management and integrative therapy. Presenters included a Marshall University Joan C. Edwards School of Medicine physician, an advanced certified cancer nurse, an oncology specialist pharmacist, respiratory therapist, speech therapist, registered dietitian, and two nationally recognized cancer nurse practitioners.

This two-day program was funded in part by an educational grant from Mountains of Hope (the West Virginia Cancer Coalition).

Cancer Update for the Primary Care Physician

Cabell Huntington Hospital, the Edwards Comprehensive Cancer Center and the Marshall University Joan C. Edwards School of Medicine hosted the first annual Cancer Update for the Primary Care Physician Conference in April 2011. Participants included primary care physicians, residents and medical students from Internal Medicine and Family Practice as well as nurses and other healthcare professionals. Participants could receive as many as 7 AMA PRA Category 1 Credits™ for physicians and 7 nursing continuing education (CNE) credits for nursing.

Conference topics included non-malignant hematology, management of bone metastases, advances in lymphoma, overview of multiple myeloma, symptom management, survivorship issues and screening issues in prostate and colorectal cancers. AJCC staging and mention of the National Comprehensive Cancer Network (NCCN) guidelines were addressed when appropriate. Presenters included Marshall University Joan C. Edwards School of Medicine at Marshall University physicians and faculty and nationally recognized experts in oncology.

Breast Cancer Basics and Beyond

Cabell Huntington Hospital and the Edwards Comprehensive Cancer Center hosted the third annual conference dedicated to educating allied healthcare providers about breast cancer in October 2011. Participants included 61 nurses and other healthcare professionals. 5.5 nursing continuing education (CNE) credits were provided for nursing and the American Society of Radiologic Technologists approved 6.5 CE credits for radiology technicians.. Evaluations demonstrated that the objectives and purpose of this conference were met. Comments regarding the program were very positive.

Conference topics included discussion of the various types of breast cancer, the role of radiation therapy, management of lymphedema, overview of hormone therapy, update on the role of plastic surgery and impact of the diagnosis from a survivor's perspective.

This one-day conference was funded in part by a grant from the West Virginia affiliate of Susan G. Komen for the Cure.

Cancer Nursing Expertise

Cabell Huntington Hospital and the Edwards Comprehensive Cancer Center support the growth and development of oncology nurses in both the inpatient and the outpatient departments. The organization funds nurses seeking oncology certification or re-certification and provides the continuing education necessary to maintain the certification. There are presently 21 oncology-certified nurses in the organization. Certifications include OCN®, CPON®, CBCN™, AOCN® and AOCNS®. Both the inpatient and the outpatient nurses attend the two-day Oncology Nursing Society chemotherapy/ biotherapy course taught by the oncology clinical nurse specialist. The course is provided free, nurses are given paid time to complete the initial class, and the renewal fee for maintaining the provider credential is reimbursed by CHH and the ECCC. Successful completion of each course is a requirement for the administration of chemotherapy/biotherapy agents in both the inpatient and outpatient areas.

The Multidisciplinary Lung Cancer Program

by Beth Perrine, RN, Lung Nurse Navigator

In this inaugural year, the Multidisciplinary Lung Cancer Program has effectively carved its path in the realm of disease-specific care. Proud to be the first of its kind in the region, this program offers patients a "one-stop shopping" experience for lung cancer treatment, which includes a cutting-edge clinic appointment and mini Tumor Board that allows patients to be seen by all of the pertinent subspecialties in one visit and expedites a collaborative treatment plan for their disease. Specialists from medical oncology, radiation oncology, pulmonology, radiology, and surgery come together on a weekly basis to collaboratively evaluate, assess and initiate treatment for patients newly diagnosed with lung cancer. This collaboration saves the patients weeks of traveling to different appointments and follow-ups, and gives the patients comfort in knowing that not just one physician, but a whole team of physicians, gave input on their course of treatment.

Since the official start of our weekly clinic on March 16, 2011, we have had the pleasure of caring for nearly 40 patients with this exciting approach. All of the patients and their families have given us positive feedback regarding the amount of time we have been able to save them in the process of starting treatment. The referrals have come from all over the region and include patients from West Virginia, Ohio and Kentucky. Anyone with a newly diagnosed lung cancer is a potential candidate.

Months of discussion, planning and research went into developing the program and bringing it to fruition. The program is still evolving. We recently had the pleasure of welcoming an interventional pulmonologist and two new staff radiation oncologist to our team. The Edwards Comprehensive Cancer Center is proud to offer this service and hopes to expand to add similar programs for other common cancers. An integral feature of the program is that of the Nurse Navigator.

Dedicated to guiding patients through the many appointments, tests, questions, financial issues and psychological stress that, unfortunately, often accompany serious illness, the nurse navigator is the liaison for the patients so that they never have to wonder who they should contact or how they can get answers. Being a nurse navigator is one of the most rewarding experiences that I have had as a nurse. Cancer patients are special people. You come into their lives in possibly their darkest hours, and yet they are so grateful and humbled by the smallest of tasks that you perform. Sometimes it's challenging, sometimes it comes easy, sometimes it's heartbreaking, but it is always rewarding.

The Comprehensive Lung Nodule Program:

The Lung Nodule Program has been up and running for several years under the direction of Dr. Alejandro Lorenzana, and has established a huge referral base reaching all over the Tri-State area. This program is designed to help patients who have been diagnosed with a lung nodule, mass or lesion to be seen and diagnosed quickly. The patients are offered an appointment with a pulmonologist within just a couple of days and will be given options for getting their nodule diagnosed. Radiology, endoscopy, surgery, pathology and oncology work together to get testing scheduled quickly, and a diagnosis is usually made within a two-week period.

Coordinating this program as the lung navigator allows me to establish a relationship with the patients early in the process, so that if they are later diagnosed with lung cancer, there is an existing relationship and they know where to turn and who to contact..

CANCER REGISTRY REPORT – 2011 ANNUAL REPORT

Edwards Comprehensive Cancer Center/Cabell Huntington Hospital

by Phyllis Edwards, RHIT, CTR, CCS, WVCRA President

The Cancer Registry collects data on each patient at Cabell Huntington Hospital or the Edwards Comprehensive Cancer Center who has been diagnosed with and/or treated for cancer at our facility. These data are compiled for statistical purposes and shared with the National Cancer Database and the West Virginia Cancer Registry. Statistical data assist in locating cancer clusters and in determining the best treatment outcomes. Ensuring complete treatment information is vital for the future of cancer treatment protocols. Registrars have found the changes in data collection methodology very challenging. When patients do not receive treatment at the same facility where they were diagnosed, it is necessary for the registrar to obtain as much information as possible regarding their cancer treatment from physicians and registrars in outlying facilities. HIPAA has prevented the registrar from being allowed to communicate with some government facilities. Compiling accurate data will assist with reimbursement in the future and will demonstrate our facility's commitment to state of the art treatment.

The five major sites for 2010 are breast, lung, prostate, corpus uteri, and colon. Please refer to the Frequency Report that follows.

We have had a busy year in the registry beginning in March by attending the COC Survey Savvy in Chicago. In May, I attended the National Cancer Registrar's Association Annual Convention in Orlando, Florida, representing the West Virginia Cancer Registrar's Association as its President. In September, the ECCC was successfully awarded the COC Accreditation with Commendation as well as receiving commendations in each commendation standard. The registrars played an integral role in successfully attaining NAPBC accreditation for the Breast Program. In October, Cabell Huntington Hospital/ECCC hosted the WVCRA Annual Convention, welcoming registrars from across West Virginia.

The cancer registry workload is driven by casefinding and the ever-changing criteria affecting reportability decisions. In 2010, the COC changed the class of case codes.

FORDS MANUAL:
All accessioned cases are assigned a *Class of Case* (NAACCR Item #610) based on the nature of involvement of the facility in the care of the patient.

Analytic Cases (Table 1)

Cases diagnosed and/or administered any of the first course of treatment at the accessioning facility after the registry's reference date are analytic (*Class of Case* 00-22). A network clinic or outpatient center belonging to the facility is considered part of the facility. Analytic cases *Class of Case* 10-22 are included in treatment and survival analysis. Analytic cases *Class of Case* 00, diagnosed on or after January 1, 2006, are not required to be staged or followed. *Class of Case* 00 is reserved for patients who were originally diagnosed by the reporting facility and received all of their treatment elsewhere or a decision not to treat was made elsewhere. If the patient received no treatment, either because the patient refused recommended treatment or a decision was made not to treat, the *Class of Case* is 14. If there is no information about whether or where the patient was treated, the *Class of Case* is *10*.

Nonanalytic Cases (Table 2)

Nonanalytic cases (*Class of Case* 30-99) are not usually included in routine treatment or survival statistics. The CoC does not require registries in accredited programs to accession, abstract, or follow these cases. However, West Virginia Cancer Registry requires reportability of nonanalytic cases.

Table 1. Analytic Classes of Case	
Class	***Description***
	Initial Diagnosis at reporting facility
00	Initial diagnosis at the reporting facility AND all treatment or a decision not to treat was done elsewhere
10	Initial diagnosis at the reporting facility or in a staff physician's office AND part or all of first course treatment or a decision not to treat was at the reporting facility, NOS
11	Initial diagnosis in staff physician's office AND part of first course treatment was done at the reporting facility
12	Initial diagnosis in staff physician's office AND all first course treatment or a decision not to treat was done at the reporting facility
13	Initial diagnosis at the reporting facility AND part of first course treatment was done at the reporting facility
14	Initial diagnosis at the reporting facility AND all first course treatment or a decision not to treat was done at the reporting facility
	Initial diagnosis elsewhere
20	Initial diagnosis elsewhere AND all or part of first course treatment was done at the reporting facility, NOS
21	Initial diagnosis elsewhere AND part of first course treatment was done at the reporting facility
22	Initial diagnosis elsewhere AND all first course treatment or a decision not to treat was done at the reporting facility

Source: Facility Oncology Registry Coding Standards (FORDS): Revised for 2010.

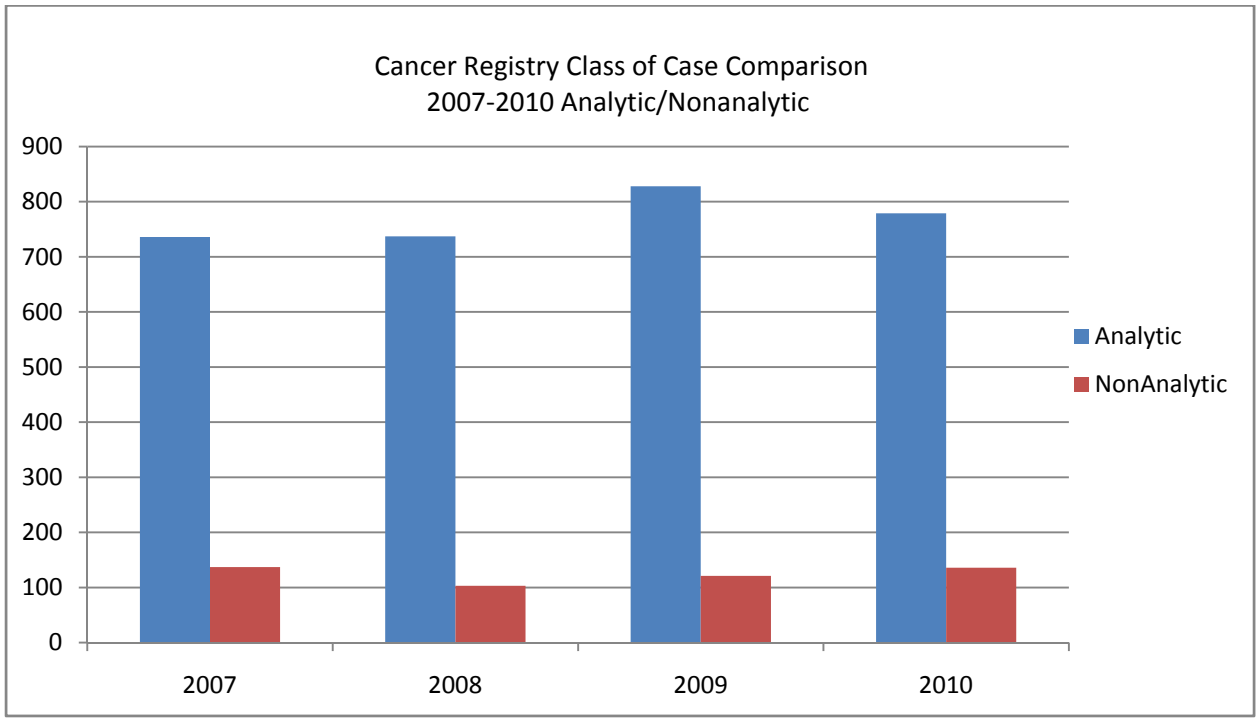
Table 2. Nonanalytic Classes of Case	
Class	***Description***
Patient appears in person at reporting facility	
30	Initial diagnosis and all first course treatment elsewhere AND reporting facility participated in diagnostic workup (for example, consult only, staging workup after initial diagnosis elsewhere)
31	Initial diagnosis and all first course treatment elsewhere AND reporting facility provided in-transit care
32	Diagnosis AND all first course treatment provided elsewhere AND patient presents at reporting facility with disease recurrence or persistence
33	Diagnosis AND all first course treatment provided elsewhere AND patient presents at reporting facility with disease history only
34	Type of case not required by CoC to be accessioned (for example, a benign colon tumor) AND initial diagnosis AND part or all of first course treatment by reporting facility
35	Case diagnosed before program's Reference Date AND initial diagnosis AND all or part of first course treatment by reporting facility
36	Type of case not required by CoC to be accessioned (for example, a benign colon tumor) AND initial diagnosis elsewhere AND all or part of first course treatment by reporting facility
37	Case diagnosed before program's Reference Date AND initial diagnosis elsewhere AND all or part of first course treatment by facility
38	Initial diagnosis established by autopsy at the reporting facility, cancer not suspected prior to death
Patient does not appear in person at reporting facility	
40	Diagnosis AND all first course treatment given at the same staff physician's office
41	Diagnosis and all first course treatment given in two or more different staff physician offices
42	Nonstaff physician or non-CoC accredited clinic or other facility, not part of reporting facility, accessioned by reporting facility for diagnosis and/or treatment by that entity (for example, hospital abstracts cases from an independent radiation facility)
43	Pathology or other lab specimens only
49	Death certificate only
99	Nonanalytic case of unknown relationship to facility (not for use by CoC accredited cancer programs for analytic cases).

Source: Facility Oncology Registry Coding Standards (FORDS): Revised for 2010.

Modifications to Class of Case in 2010

Class of Case was redefined for use beginning in 2010. The codes in this manual allow differentiation between analytic and nonanalytic cases and make additional distinctions. For analytic cases, the codes distinguish cases diagnosed in a staff physician's office from those diagnosed initially by the facility and patients fully treated at the facility from those partially treated by the reporting facility. Nonanalytic cases are distinguished by whether the patient received care at the facility or did not personally appear there. Patients who received care from the facility are distinguished by the reasons a case may not be analytic: diagnosed prior to the patient's reference date, type of cancer that is not required by CoC to be abstracted, consultation, in-transit care, and care for recurrent or persistent disease. Patients who did not receive care from the reporting facility are distinguished by care given in one or more staff physician offices, care given through an agency whose cancer cases are abstracted by the reporting facility but are not part of it, pathology only cases and death certificate only cases.

Data collection for nonanalytic cases is more time consuming. Determining where and/or what course of treatment and where first course of treatment was initiated may require the registry to make several phone calls to outlying facilities. Below is the cancer registry's percentage of analytic/nonanalytic cases. With our facility increasing recognition as a referral center, the number of nonanalytic cases is expected to increase.



Resources and References:

1. *Facility Oncology Registry Coding Standards (FORDS): Revised for 2010*

2. *Article in Journal of Registry management 2010 Volume 37 Number 3, Jerri Linn Phillips, MA, CTR*

Cabell Huntington Hospital/ECCC Frequency Report 2010

Summary by Body System, Sex, Class, Status and Best CS/AJCC Stage Report

		Sex		Class of Case		Status		Stage Distribution - Analytic Cases Only							
Primary Site	**Total (%)**	**M**	**F**	**Analy**	**NA**	**Alive**	**Exp**	**Stg 0**	**Stg I**	**Stg II**	**Stg III**	**Stg IV**	**88**	**Unk**	**Blank/Inv**
ORAL CAVITY & PHARYNX	13 (1.4%)	9	4	12	1	8	5	0	1	3	3	4	0	1	0
Lip	2 (0.2%)	0	2	2	0	2	0	0	0	1	1	0	0	0	0
Tongue	2 (0.2%)	2	0	2	0	1	1	0	1	0	0	1	0	0	0
Salivary Glands	1 (0.1%)	1	0	1	0	0	1	0	0	0	0	1	0	0	0
Floor of Mouth	1 (0.1%)	1	0	1	0	1	0	0	0	1	0	0	0	0	0
Gum & Other Mouth	6 (0.7%)	5	1	5	1	4	2	0	0	1	2	1	0	1	0
Nasopharynx	1 (0.1%)	0	1	1	0	0	1	0	0	0	0	1	0	0	0
DIGESTIVE SYSTEM	99 (10.8%)	53	46	87	12	65	34	7	17	17	22	22	0	2	0
Esophagus	8 (0.9%)	6	2	6	2	3	5	0	1	2	2	1	0	0	0
Stomach	8 (0.9%)	5	3	7	1	1	7	0	1	1	1	4	0	0	0
Small Intestine	5 (0.5%)	4	1	5	0	5	0	0	0	2	3	0	0	0	0
Colon Excluding Rectum	32 (3.5%)	13	19	27	5	27	5	5	7	5	6	3	0	1	0
Cecum	9	5	4	8	1	7	2	2	2	2	2	0	0	0	0
Appendix	4	2	2	4	0	4	0	0	2	1	0	1	0	0	0
Ascending Colon	6	3	3	4	2	4	2	0	2	0	1	0	0	1	0
Hepatic Flexure	3	0	3	2	1	3	0	0	0	0	1	1	0	0	0
Descending Colon	2	1	1	2	0	2	0	0	0	1	1	0	0	0	0
Sigmoid Colon	5	1	4	5	0	5	0	2	1	0	1	1	0	0	0
Large Intestine, NOS	3	1	2	2	1	2	1	1	0	1	0	0	0	0	0
Rectum & Rectosigmoid	21 (2.3%)	11	10	19	2	15	6	2	2	3	5	7	0	0	0
Rectosigmoid Junction	5	1	4	5	0	4	1	1	1	2	0	1	0	0	0
Rectum	16	10	6	14	2	11	5	1	1	1	5	6	0	0	0
Anus, Anal Canal & Anorectum	3 (0.3%)	1	2	3	0	2	1	0	0	1	1	1	0	0	0
Liver & Intrahepatic Bile Duct	8 (0.9%)	7	1	7	1	4	4	0	4	0	0	2	0	1	0
Liver	7	6	1	7	0	3	4	0	4	0	0	2	0	1	0
Intrahepatic Bile Duct	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0
Gallbladder	1 (0.1%)	0	1	1	0	1	0	0	0	0	1	0	0	0	0
Other Biliary	2 (0.2%)	1	1	2	0	2	0	0	0	1	1	0	0	0	0
Pancreas	8 (0.9%)	4	4	8	0	4	4	0	1	2	1	4	0	0	0
Retroperitoneum	1 (0.1%)	0	1	1	0	0	1	0	1	0	0	0	0	0	0
Peritoneum, Omentum & Mesentery	1 (0.1%)	0	1	1	0	1	0	0	0	0	1	0	0	0	0
Other Digestive Organs	1 (0.1%)	1	0	0	1	0	1	0	0	0	0	0	0	0	0

RESPIRATORY SYSTEM	155 (17.0%)	91	64	126	29	72	83	0	30	7	27	55	1	6	0
Larynx	7 (0.8%)	5	2	3	4	4	3	0	1	1	1	0	0	0	0
Lung & Bronchus	146 (16.0%)	86	60	122	24	67	79	0	29	6	26	55	0	6	0
Trachea, Mediastinum & Other Respiratory Organs	2 (0.2%)	0	2	1	1	1	1	0	0	0	0	0	1	0	0
BONES & JOINTS	6 (0.7%)	4	2	4	2	6	0	0	1	2	0	1	0	0	0
SOFT TISSUE	6 (0.7%)	2	4	5	1	4	2	0	2	0	1	2	0	0	0
Melanoma -- Skin	21 (2.3%)	12	9	15	6	16	5	1	6	3	1	4	0	0	0
BREAST	142 (15.5%)	1	141	130	12	136	6	15	54	40	15	6	0	0	0
FEMALE GENITAL SYSTEM	123 (13.5%)	0	123	115	8	110	13	10	70	10	16	5	3	1	0
Cervix Uteri	16 (1.8%)	0	16	13	3	14	2	0	8	2	2	1	0	0	0
Corpus & Uterus, NOS	72 (7.9%)	0	72	70	2	66	6	0	55	5	5	1	3	1	0
Ovary	17 (1.9%)	0	17	14	3	13	4	0	2	2	7	3	0	0	0
Vagina	1 (0.1%)	0	1	1	0	1	0	0	0	0	1	0	0	0	0
Vulva	16 (1.8%)	0	16	16	0	15	1	10	5	0	1	0	0	0	0
Other Female Genital Organs	1 (0.1%)	0	1	1	0	1	0	0	0	1	0	0	0	0	0
MALE GENITAL SYSTEM	136 (14.9%)	136	0	110	26	131	5	0	10	80	12	7	0	1	0
Prostate	130 (14.2%)	130	0	106	24	125	5	0	6	80	12	7	0	1	0
Testis	5 (0.5%)	5	0	4	1	5	0	0	4	0	0	0	0	0	0
Penis	1 (0.1%)	1	0	0	1	1	0	0	0	0	0	0	0	0	0
URINARY SYSTEM	52 (5.7%)	31	21	46	6	39	13	6	16	4	9	10	1	0	0
Urinary Bladder	22 (2.4%)	16	6	18	4	16	6	5	2	3	5	3	0	0	0
Kidney & Renal Pelvis	28 (3.1%)	13	15	26	2	22	6	0	14	1	4	7	0	0	0
Ureter	1 (0.1%)	1	0	1	0	1	0	1	0	0	0	0	0	0	0
Other Urinary Organs	1 (0.1%)	1	0	1	0	0	1	0	0	0	0	0	1	0	0
EYE & ORBIT	1 (0.1%)	0	1	1	0	1	0	0	0	0	0	0	1	0	0
BRAIN & OTHER NERVOUS SYSTEM	32 (3.5%)	16	16	27	5	27	5	0	0	0	0	0	27	0	0
Brain	16 (1.8%)	11	5	13	3	12	4	0	0	0	0	0	13	0	0
Cranial Nerves Other Nervous System	16 (1.8%)	5	11	14	2	15	1	0	0	0	0	0	14	0	0
ENDOCRINE SYSTEM	32 (3.5%)	8	24	30	2	30	2	0	19	2	2	3	3	1	0
Thyroid	28 (3.1%)	7	21	27	1	26	2	0	19	2	2	3	0	1	0
Other Endocrine including Thymus	4 (0.4%)	1	3	3	1	4	0	0	0	0	0	0	3	0	0
LYMPHOMA	30 (3.3%)	10	20	23	7	27	3	0	3	3	5	12	0	0	0

Hodgkin Lymphoma	6 (0.7%)	3	3	4	2	5	1	0	0	2	1	1	0	0	0
Non-Hodgkin Lymphoma	24 (2.6%)	7	17	19	5	22	2	0	3	1	4	11	0	0	0
NHL - Nodal	21	5	16	16	5	19	2	0	3	1	3	9	0	0	0
NHL - Extranodal	3	2	1	3	0	3	0	0	0	0	1	2	0	0	0
MYELOMA	7 (0.8%)	4	3	6	1	4	3	0	0	0	0	0	6	0	0
Myeloma	7 (0.8%)	4	3	6	1	4	3	0	0	0	0	0	6	0	0
LEUKEMIA	30 (3.3%)	20	10	22	8	23	7	0	0	0	0	0	22	0	0
Lymphocytic Leukemia	16 (1.8%)	12	4	11	5	14	2	0	0	0	0	0	11	0	0
Acute Lymphocytic Leukemia	4	3	1	4	0	4	0	0	0	0	0	0	4	0	0
Chronic Lymphocytic Leukemia	11	8	3	7	4	9	2	0	0	0	0	0	7	0	0
Other Lymphocytic Leukemia	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0
Myeloid & Monocytic Leukemia	13 (1.4%)	7	6	10	3	8	5	0	0	0	0	0	10	0	0
Acute Myeloid Leukemia	9	5	4	7	2	4	5	0	0	0	0	0	7	0	0
Chronic Myeloid Leukemia	4	2	2	3	1	4	0	0	0	0	0	0	3	0	0
Other Leukemia	1 (0.1%)	1	0	1	0	1	0	0	0	0	0	0	1	0	0
MESOTHELIOMA	1 (0.1%)	1	0	1	0	1	0	0	0	0	1	0	0	0	0
Mesothelioma	1 (0.1%)	1	0	1	0	1	0	0	0	0	1	0	0	0	0
MISCELLANEOUS	28 (3.1%)	13	15	18	10	16	12	0	0	0	0	0	18	0	0
Miscellaneous	28 (3.1%)	13	15	18	10	16	12	0	0	0	0	0	18	0	0
Total	914	411	503	778	136	716	198	39	229	171	114	131	82	12	0