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Vice President of Patient Care Services/  
Chief Nursing Officer
It has been my pleasure to assume responsibility as chairman of the Stevens Hospital Cancer Committee in 2009. I follow in Dr. Jeffery Ward’s difficult-to-fill shoes and thank him for his many years of service in this capacity. I am proud to provide you with the Stevens Hospital Annual Cancer Report with a special focus on lung cancer.

This year has been one of growth and development for our cancer program. It marks our first full year of collaboration with Swedish Hospital in managing our breast imaging facilities and our first year with our invaluable breast cancer nurse navigator program. This summer Stevens Hospital will begin operation of our new, state-of-the-art PET/CT scanner, which will provide better information regarding cancer growth and response to treatment than our previous technology while providing greater convenience to our patients. The Stevens Emergency Department has completed a major reconfiguration with a fully electronic medical record, new management and physical remodeling. These changes are just a few of many. Perhaps the most important changes are the steps Stevens is taking to finalize an affiliation with Swedish. It is hoped this partnership will be finalized by the end of the year. We anticipate a long and fruitful collaboration with Swedish and are confident that we will see great growth in all our programs with the help of Swedish.

The physicians at Stevens continue to collaborate in two weekly tumor board conferences in which the management of our new cancer patients is discussed and optimized. We look forward to our fall review with the American College of Surgeons Commission on Cancer (COC) in which we expect to once again receive full accreditation for our program. We expect to see continued growth in our cancer support program which is administered by our friends at the American Cancer Society (ACS) and includes services such as “Look Good, Feel Better.” This program along with the ACS’s “Road to Recovery” program, provides volunteer transportation to many of our patients and copious written and tangible support materials.

In the year ahead we face many uncertainties with regard to healthcare in our nation. Facing a cancer diagnosis in these uncertain times is undeniably difficult. We thank you for placing your trust in us, and we assure you that the physicians and staff at Stevens Hospital, and its surrounding clinics, will do all in our power to continue to provide you with quality cancer care, close to home.

Eileen Johnston, MD
Oncology/Hematology
Cancer Committee Chairman
Puget Sound Cancer Centers

Puget Sound Cancer Centers, Edmonds (PSCC) is a dynamic medical practice consisting of five board certified medical oncologists and hematologists located in Stevens Oncology Center. We see hundreds of new patients every year with diagnoses as benign as iron deficiency anemia to as serious as acute leukemia. We are honored to employ an excellent staff of nurses, pharmacy personnel, financial counselors, assistants, receptionists, transcriptionists and billing specialists. While not every one of these people is visible to our patients, all are devoted to bettering the lives of cancer patients.

The physicians at PSCC are extensively involved in Stevens Hospital and our doctors currently serve as chief of the hospital’s medical staff, chairman of the Institutional Review Board at Stevens (which serves to protect human rights in medical research), chairman of the Cancer Control Committee, Cancer Liaison Physician, and chairman of the hospital’s tumor registry. Outside the hospital our physicians also assume leadership positions as medical director of Providence Hospice of Snohomish County, president of the Washington State Medical Oncology Society and as advisors to the insurance industry.

Clinically we strive for and achieve excellence as evidenced in our commendations from the American Society of Clinical Oncology in the Quality Observation Performance Initiative.

We are confident in the availability, dedication and vast skills of our colleagues in radiology, pathology, surgery, radiation oncology and medical and surgical subspecialties. We look forward to the healthcare opportunities that will be presented to our community as Stevens moves forward with plans to affiliate with Swedish. We believe this partnership will be a tremendous boon to the quality of care and array of services that we can provide at Stevens Hospital in upcoming years.

Finally, we appreciate the trust our patients place in us every day.

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Surgical Associates of Edmonds
A Division of Proliance Surgeons

Surgical Associates of Edmonds is a group of five board certified surgeons who have a special interest in oncologic surgery. We provide surgical services for a wide range of cancers including those involving the breast, thyroid, lung, upper gastrointestinal tract, colon and rectum, pancreas and biliary system and skin. We provide comprehensive surgical care to the Stevens community, focusing on state-of-the-art technologies and compassionate service close to home. At Surgical Associates of Edmonds, we take new medical technology that has been tested and proven in medicine and surgery and apply it to our surgical practice for a minimally invasive approach. Our goal is to exceed patients’ expectations and to help coordinate their oncologic care. We work collaboratively with Puget Sound Cancer Centers and Swedish Cancer Institute at Stevens Hospital to provide multidisciplinary cancer care in order to produce outstanding therapeutic outcomes through less invasive measures. We also work closely with other medical specialties and primary care providers. The five surgeons and two physician assistants are committed to providing each patient with individual attention and expert service.

Surgical Associates of Edmonds is a part of Proliance Surgeons which is one of the largest surgical practices in the country, committed to providing the highest quality of care available.
The Swedish Cancer Institute at Stevens Hospital is committed to delivering the highest quality cancer treatments using state-of-the-art equipment in a patient-centered care environment. One third of our patients receive treatment with intensity-modulated radiation therapy (IMRT), a technique which improves accuracy, minimizes toxicity and increases radiation dose thereby improving cure rates. We perform the most advanced form of IMRT called image guided radiation therapy (IGRT). Implanted fiducial markers allow visualization of the target area with each treatment, which in turn allows for smaller treatment fields and fewer side effects than “standard” IMRT. We continue to offer samarium and strontium therapy, an intravenous targeted radionuclide used for palliation of painful bone metastases. We also offer radioactive monoclonal antibody therapy in appropriate patients with lymphoma. Comprehensive services, including physics and dosimetry support, radiation oncology nursing, radiation therapists, social services, and nutritional counseling are available to provide individualized and compassionate care to patients and their families.

An in-house CT simulator helps us maintain our world class standard of care. This provides more convenient patient service by allowing the treatment planning visit to take place all under one roof. The model is a large bore CT, which enhances patient comfort and optimizes patient positioning. This CT has 4D radiation treatment capabilities which accounts for respiratory motion.

In the summer of 2009, we started a prostate brachytherapy program at Stevens Hospital. Utilizing the new urology operating suite, we have all new, high-end equipment including a G20 Siemens ultrasound. Prostate brachytherapy is the implantation of radioactive seeds to cure prostate cancer with a high degree of precision utilizing ultrasound guidance. Long-term data confirms cure rates equivalent to surgery, but without many of the surgery related morbidities. Our association with the Seattle Prostate Institute allows us to take advantage of the expertise of that institution in building our own program.

Through participation in the weekly Tumor Board and close cooperation with our medical oncology colleagues at Puget Sound Cancer Centers, surgeons and other specialists at Stevens Hospital, we continue to offer the most up-to-date multidisciplinary treatment approaches to our patients.

The Swedish Cancer Institute at Stevens Hospital, through its alliance with the Swedish Cancer Institute, Seattle Prostate Institute and the Tumor Institute Radiation Oncology Group, offers all modern radiation oncology services. This includes gamma knife radiosurgery, high dose rate brachytherapy for gynecologic and urologic malignancies, systemic radiation therapy, external beam radiation therapy (IMRT-IGRT) and the premier radioactive seed implantation program in the United States. Through our collaboration with Swedish Cancer Institute, we have direct access to CyberKnife radiosurgery. Due to our technology and expertise, residents and fellows from the top training programs in the country regularly fly to Seattle and spend two to four weeks with us to observe these therapies at Swedish Cancer Institute at Stevens.
Tumor Board Conference

Tumor Board Conferences are held weekly at Stevens Hospital. These conferences bring together physician representatives from diagnostic radiology, pathology, surgery, medical oncology and radiation oncology, as well as physicians from other specialties and allied health professionals to discuss selected cases of patient care and treatment. A case presentation includes a patient’s medical history, clinical findings, diagnostic studies, treatment modalities and research data. The treatment recommendations established during the conference are transcribed and provided to each physician involved in the patient’s care. The Commission on Cancer requires that we discuss a minimum of 10 percent of our annual analytic cases. Seventy-five percent must be prospective presentations. In 2008, Stevens Hospital Tumor Board Conference presented 242 cases, 50 percent of our annual analytic cases, all of which were prospective presentations.
Stevens Hospital Tumor Registry Report

The Tumor Registry is one of the major components of the comprehensive cancer program at Stevens Hospital. The registry staff, under the supervision of the Cancer Control Committee, is responsible for maintaining state and national cancer reporting requirements, coordinating Tumor Conferences, and providing support for all cancer program activities required for accreditation by the American College of Surgeons Commission on Cancer. The registry has been collecting data on all cancer patients diagnosed and/or treated at Stevens Hospital since January 1, 1974. Data collected includes patient demographics; cancer identification, treatment and lifetime follow-up. These data contribute to treatment planning, staging and the continuity of care for patients. Accurate and complete registry data are the underpinnings that permit Stevens to plan and optimize its cancer program.

In 2008, Stevens Hospital diagnosed and/or treated 484 new cancer patients. Our five most frequent sites are breast, prostate, lung, colon/rectum and lymphoma/leukemia. In comparison with national cancer rates, the incidence of breast cancer diagnosed at Stevens is higher than the national percentage while cases of lung cancer are slightly lower. The incidence of prostate, colon/rectum and lymphoma/leukemia are comparable to the national average.

Annual follow-up is an important function of the Tumor Registry. Lifetime follow-up provides benefits by reminding attending physicians and patients that routine medical examinations are encouraged. This process may potentially bring lost patients back under medical supervision. Continued surveillance ensures early detection of a possible recurrence or a new primary malignancy. Follow-up also provides a valid measurement of outcome. There are 14,656 cases currently maintained in our cancer registry. Follow-up is current for 98 percent of patients and two percent of patients are currently lost to follow-up.

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<th>Five Most Frequently Treated Cancers</th>
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<td><strong>Stevens Hospital %</strong></td>
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<td>Lymphoma/Leukemia</td>
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Sources of Information: Stevens Hospital Cancer Registry 2008, American Cancer Society, Inc, Surveillance Research
Lung Cancer

Lung cancer is one of the most devastating diagnoses given to any patient. More than 200,000 Americans are diagnosed with lung cancer every year according to the National Cancer Institute. Recently the incidence of lung cancer and lung cancer-related deaths has dropped for American men but not for American women. This is in large part due to women not heeding anti-smoking warnings as well as their male counterparts. While some victims of lung cancer have never been smokers, lifestyle choices that include tobacco use account for approximately 95 percent of lung cancers. Lung cancer is a highly fatal disease, taking the lives of 85 percent of individuals diagnosed. Typically, lung cancer causes no symptoms until it is at an advanced stage. Seventy-five percent of cases are identified as late stage III or IV. Another troubling fact is that smoking cessation prevents lung cancer risk from continuing to accumulate in any one individual, but the already acquired risk does not go away. Consequently, the majority of new lung cancer diagnoses are delivered to former smokers. Clearly we, as a nation, need to continue to strengthen our anti-smoking stance, especially with young people. But even if all U.S. smokers put down their tobacco products today we will still face decades of this disease in our country. This motivates the physicians at Stevens Hospital to continue to advance the level of care for this terrible disease right here in our own community.

The physicians of Stevens Hospital work collaboratively every day to diagnose and treat patients in our community with lung cancer, offering them every opportunity for cancer survivorship with a high quality of life. Patients ultimately found to have lung cancer present themselves to the medical system with a variety of complaints including cough, weight loss, bone pain, headache, shortness of breath and loss of appetite to name a few. The treating physician will perform an exam and typically order X-rays that often lead to a diagnosis. Depending on the patient’s symptom(s), that physician may be a primary care doctor, an orthopaedist, a neurologist, a pulmonologist or an emergency room doctor. Once an abnormal exam or X-ray is identified, the process of diagnosis and treatment begins. Here we will walk you through a set of typical physician encounters that a new lung cancer patient may experience emphasizing the many potential procedures the patient may endure and also the importance of collaboration between physicians.

The Radiologist

Frequently the initial abnormal findings suggesting the possibility of malignancy come from the Radiology Department. These findings may be detected on an imaging study done for symptoms of the lung cancer such as breathlessness or cough, or may be done for entirely different symptoms such as abdominal pain where a chest abnormality may be discovered incidentally. The workup for the abnormal finding then usually continues in the Radiology Department with computed tomography (CT) imaging. Once it is determined that the patient has a lung mass or nodule, they can be scheduled for a biopsy. For most lesions, the preferred method for obtaining tissue for diagnosis is a CT guided needle biopsy. This is most often an outpatient procedure unless the patient is already an inpatient for other reasons. When a lung biopsy is scheduled, the patient will need to be without oral intake (except for needed medications) for six hours before the time of the biopsy so that they can be safely sedated for the procedure. They are asked to arrive about two hours before the scheduled procedure time to be admitted to the Day Surgery unit where they will change into a hospital gown, have an intravenous line started and receive pre-procedure lab tests. The needle biopsy is explained and any questions are answered before beginning the procedure.

Once the patient is ready for the biopsy, they are brought to the Radiology Department where the interventional radiology nurse sedates and then monitors them for the procedure. After the patient is sedated, a pre-biopsy set of images is obtained to select a location for needle placement. Using sterile technique and local anesthesia, a guiding needle is advanced into the area of
abnormality. Care is used to avoid risk of complications. Once the guiding needle is in place, tissue samples are obtained and given to the pathology technologist. The pathologist provides a preliminary evaluation of the adequacy of the sample, but not the diagnosis. If additional tissue samples are needed, this can be obtained immediately. After an adequate sample has been obtained, the guiding needle is removed and the lung scanned for complications such as a collapsed lung or bleeding in the lung. If there are no significant complications the patient is then transferred back to the Day Surgery unit for observation for three hours. If needed, a post biopsy chest radiograph is obtained to evaluate complications. The patient will need a driver to go home because of the sedation medication. Complications such as a collapsed lung are relatively uncommon, but the risk is increased in patients who have emphysema. If there is a complication requiring admission, the patient is usually managed by the interventional radiologists who maintain the capacity for an inpatient service.

Either before or after the biopsy, patients may undergo a staging evaluation to determine the extent of disease. This may include undergoing a CT or positron emission tomography (PET/CT) scan and occasionally a magnetic resonance imaging (MRI) evaluation. Currently, patients are sent out of the community for PET/CT testing, but beginning in summer 2010 that technology will be available at Stevens Hospital. Additional imaging tests may be needed for evaluating tumor response post treatment and for evaluation of new symptoms.

Other cancer treatment related services provided to patients by the interventional radiology team at Stevens Hospital include the following:

- Port or other central venous access placement for chemotherapy or other medications
- Biopsy of additional lesions as needed
- Paracentesis or thoracentesis as needed

Paracentesis and thoracentesis are outpatient procedures which remove fluid that has collected in the abdomen or chest as a result of illness. It is also possible for interventional radiologists at Stevens to place gastrostomy or transgastric jejunal feeding tubes should nutrition become an issue during the patient’s illness. Additional therapeutic treatments available include radiofrequency ablation of tumors and chemoembolization of liver lesions, although these treatments are more commonly performed for cancer that comes from organs other than the lung. These procedures are directed against a specific tumor mass that is causing symptoms or threatening the patient and the specificity of this approach often spares the patient more toxic therapies. Many of these procedures can be done in other Stevens Hospital departments as well and having these options allows the care for each patient to be optimized to their individual situation.

Continued communication both on a daily ongoing basis and through scheduled conferences allow the radiology team to be a close partner with the surgical and medical oncology teams in working up and treating patients with lung and other organ malignancy. Continued investment in hospital infrastructure ensures that the patients at Stevens Hospital have the latest technology available to assist in their care.

The Pathologist

Pathologists are involved in the management of lung cancer by making the diagnoses that assist surgeons and oncologists in treating patients. The initial diagnosis of cancer is usually rendered on a small bit of biopsy material obtained by a pulmonologist during bronchoscopy or by an interventional radiologist. The diagnosis may also be based on sputum samples or fluid material obtained by other procedures such as paracentesis or thoracentesis as previously discussed. These various samples are processed and stained by different techniques (such as Papanicolaou, routine histology and immunohistochemical stains) to help confirm the diagnosis.

In addition to rendering a diagnosis of cancer, other critical issues may need to be addressed by the pathologist. Determining whether the cancer originates from the lung or other tissues with spread to the lung (metastatic disease) is foremost. Further classifying the major type of cancer present (e.g., lymphoma vs. carcinoma vs. sarcoma), and even the subtype of cancer (e.g., small cell vs. squamous cell vs. adenocarcinoma) is also critical in helping the clinician and patient make decisions regarding the best treatment options.

The pathologist may be called to assist the surgeon during the surgery in order to determine the limits of the tumor and potential spread of tumor to lymph nodes or other areas of the body. This information is used by the surgeon to determine if the cancer has been fully resected or if more tissue needs to be
removed. By evaluating the removed tissue while the patient is still under anesthesia and in the operating room, the need for a second surgery can usually be avoided.

A number of molecular studies are under investigation and available to further classify which tumors are more or less susceptible to certain treatment protocols. These data, along with a specific tumor subtype classification, allow medical and radiation oncologists to personalize treatment options for each patient.

**The Surgeon**

Once a diagnosis of lung cancer is made, many patients are referred to a surgeon for consultation. When a surgeon first sees a patient with lung cancer, the physician must evaluate the patient to determine whether the cancer can be surgically removed. There are a variety of studies that surgeons look at to help them determine this. One set of studies are pulmonary function tests which provide information about the patient’s lung function and the extent of underlying lung disease. These tests help determine whether a patient would be able to tolerate removal of part of their lung. Sometimes patients benefit from evaluation by a pulmonologist to optimize lung function preoperatively. Other tests, such as PET or CT scans, help the surgeon evaluate for metastasis or the spread of cancer to the central lymph nodes in the chest. If there is cancer in these central lymph nodes, then most patients do not benefit from resection of the primary cancer in the lung.

Often another procedure, called a mediastinoscopy, is utilized to look at the lymph nodes in the central chest. In this procedure the surgeon inserts a small scope through an incision in the neck and then identifies and biopsies the lymph nodes in the central chest. If the mediastinoscopy confirms that the lymph nodes contain cancer cells, then the patient is spared a surgical procedure that would not be expected to offer any clinical advantage. Frequently, lung cancer is also evaluated with a bronchoscopy. In this test, a small flexible scope is inserted into the trachea through the nose to evaluate the extent of cancer in the airways.

Once a patient is felt to have resectable lung cancer and adequate lung function, the surgeon plans the operation for removal of the cancer. Usually resection of cancer involves removing the lobe of the lung containing the cancer and the draining lymph nodes. Occasionally resection may involve removing only the cancer and a rim of normal lung tissue surrounding the cancer. Removal of the cancer can be performed either with an incision between the ribs called a thoracotomy or by using a scope and camera with several small incisions for operating instruments called video assisted thoracoscopic surgery or VATS. The patient’s postoperative recovery is typically much faster and less painful when VATS can be done, but not all lung cancers are technically amenable to that type of resection.
The Medical Oncologist

The medical oncologist is responsible for non-surgical and postsurgical treatment of non-small cell lung cancer (NSCLC). This field of medicine has changed dramatically over the last 20 years. With new chemotherapy, biologic drugs and a greater understanding of the biologies of the various tumor types, lung cancer treatment is an active area of ongoing research.

The treatment approach for a NSCLC patient is determined after an evaluation of histology (tumor type), stage (extent of disease), patient performance status (how sick the patient has become) and patient goals. This requires the coordination of a multidisciplinary team of providers, generally led by the medical oncologist, at all steps of evaluation and treatment. Stevens Hospital’s highly successful weekly tumor board is the bedrock of this collaboration.

Though it is a heterogeneous group of histologies that include adenocarcinoma and its bronchoalveolar subtype, squamous cell carcinoma, large cell carcinoma, and otherwise unclassifiable or poorly differentiated carcinomas, NSCLCs have historically been treated in an identical fashion. However, this differentiation of tumor type is becoming increasingly important. For instance, the chemotherapy drug pemetrexed (Alimta), a folate antagonist, is approved as a part of combination drug therapy for initial treatment, monotherapy for second line treatment, and as maintenance therapy for previously treated adenocarcinoma, but has no demonstrated benefit in other subtypes of NSCLC. Likewise, erlotinib (Tarceva) offers its greatest benefit in adenocarcinoma and bevacizumab (Avastin) toxicities include a propensity to bleed that prohibits its use in squamous cell cancers which intrinsically bleed more often on their own.

Evaluating tumor tissues beyond histology is a science still in its infancy, but it is clear that the future will be systemic therapies customized to a patient by much more robust predictors or response, such as immunohistochemistry evaluations of protein expression and genetic profiling for oncogenic mutations that can then be specifically targeted. We are fortunate at Stevens Hospital to have a robust pathology community and to be on the cutting edge in this area of cancer care.

In a given cancer, staging is the most important prognostic indicator of the chances that a cancer can be cured. Lung cancer has four stages. Stage I cancers, those found only in the lung and without lymph node involvement, are treated by surgery alone with cure rates of about 65 percent. Exciting preliminary data with gene profiling suggests that we may soon be able to divide stage I cancers into low and high risk groupings with 90 percent and less than 10 percent cure rates respectively with surgery alone that will allow us to operate on low risk patients with greater certainty of success and to target high risk groups with other or additional therapies.

Stage II cancers are either larger cancers with negative lymph nodes or smaller cancers with lymph node involvement that is still within the lung itself. These patients benefit from surgery followed by chemotherapy. Called adjuvant chemotherapy, this is the practice of administering chemotherapy to a patient whose tumor appears to be fully resected but in whom the risk of residual, microscopic tumor is high. Multiple studies have demonstrated that in appropriately selected patients, regardless of age, this approach offers an overall survival benefit of about 20 months and improved cure rates from an average of 48 percent to nearly 60 percent. Not all patients are candidates for surgery and chemotherapy in short order, but when physicians and patients partner in choosing therapies and provide optimal supportive care approaches to limit toxicities, the impact of adjuvant chemotherapy is tolerable and transient, and quality of life returns to baseline within a few months of completing treatment.

Stage III cancers are a heterogeneous group divided into IIIA and IIIB subsets. Stage IIIA cancers include those with larger tumors and lymph nodes still within the lung (N1) or that have lymph node involvement adjacent to the lung in the mediastinum on the same side of the chest (N2). The mediastinum is the space around the heart and behind the breastbone. Stage IIIB cancers have lymph node involvement in the mediastinum on the opposite side of the chest or very large tumors involving important anatomic parts in the center of the chest such as the trachea. It is in stage III of the disease, more than any other, where the close and trusting multidisciplinary relationship found in the Stevens community really pays off for our patients.

Stage IIIA is an awkward group of patients to characterize and it is likely that future staging systems will redefine patients with N2 lymph nodes as IIIB disease. As it stands now, stage IIIA patients with only N1 nodes are treated with resection of the primary
lesion by removing either a portion of the lung (lobectomy) or an entire lung (pneumonectomy.) These patients then gain a greater absolute benefit from adjuvant chemotherapy than any other stage. Radiation therapy may be offered sequentially to patients with positive or close margins, but there is no demonstrated benefit to doing it routinely and there is the potential for significant toxicity.

IIIA patients with N2 nodes may be technically operable, but are rarely cured by that approach and are most often treated like stage IIIB patients with definitive concurrent chemotherapy and radiation, an approach that is very difficult to do if a patient has had surgery. This approach (chemo and radiation therapies) has curative potential in about 15 percent of patients. When patients with stage I, II, or resected IIIA disease relapse locally in the mediastinum only, they are treated in an identical fashion with similar outcomes.

Stage IV disease includes patients with distant spread of metastases and patients with malignant pleural or pericardial effusions. These patients will not be cured. However, multiple studies have demonstrated both improved survival and quality of life when they are treated with combination cisplatinum or carboplatinum chemotherapy. Further benefit is achieved when bevacizumab is added to the chemotherapy of non-squamous cell NSCLC. Selected patients will benefit from second line agents, either single agent chemotherapy or targeted biologics such as erlotinib. Careful assessment of comorbidities and selection of patients with good performance status, but not based on age alone, is essential to good outcomes.

The future of NSCLC therapy is hopeful for continued improvement in all stages of the disease. In early stage disease we hope to be able to identify those who will benefit from more aggressive therapy while identifying patients who can be cured by surgery alone. Clinical and genetic profiling may also lead us to selection of the chemotherapy and biologic agents that will most benefit a patient. For example, we know that women, nonsmokers, adenocarcinoma histology, and Asian ethnicity predicts for erlotinib responsiveness. Early data suggests that these patients may benefit more from first line erlotinib than they would from chemotherapy. Finally, it is clear that our improvements in treating this disease stem from better supportive care and a team approach that maximizes patient tolerance and compliance with treatment.
The Radiation Oncologist

Ideally, the decision to utilize radiation therapy in the treatment of an individual with non-small cell lung cancer is made after a biopsy shows there is disease, a full staging workup is done and a multidisciplinary consultation has occurred. Radiation treatment can potentially be useful in virtually any stage of disease. Typically radiation would only be used for stage I or II disease if a patient has been declared medically inoperable, meaning they are otherwise too sick to withstand the necessary surgery. Indeed recent studies suggest stage I tumors can, in many cases, be treated as effectively with stereotactic body radiation therapy (Cyberknife) as with surgery. Such treatment is available to our patients by referral after appropriate consultation.

Much more commonly, radiation is used as part of a combined modality approach in clinically unresectable stage III disease. In this setting the surgery is not felt to benefit the patient and a program of concurrent chemotherapy and radiation is recommended. As mentioned above, systemic therapy options are many and varied and increasingly individualized to the patient and tumor characteristics. As well, the radiation therapy is individualized, primarily to the anatomic presentation of disease, but also taking into account the patient’s overall performance status and other comorbidities.

For patients with poor performance status or whose cancer has spread outside the chest, the use of radiation becomes palliative. Symptoms due to the spread of non-small lung cancer outside the chest (to bones or other organs such as the brain) can be effectively mitigated by the appropriate use of radiation, usually in ways that keep side effects to a minimum and significantly improve the quality of life for our patients.

To prepare for treatment, patients undergo “treatment planning simulation.” A CT, MRI or PET/CT scan is obtained with the patient in the treatment position (lying flat). The images from these scans are then computerized and the tumor and surrounding normal structures are contoured by the physician. Using a radiation dosimetry program, a plan of treatment using multiple beams of radiation coming in from several angles is developed in order to converge on the diseased tissue while minimizing exposure to the surrounding normal tissue as much as possible. The radiation oncologist will review and approve the final treatment plan.

Many checks and balances are built into the process in order to maximize the safety and accuracy of treatment. Prior to treatment, a “dry run” is done to ensure the planned treatment will be delivered accurately. On the first day, electrodes will measure the actual amount of radiation delivered on the patient’s body to compare with the planned dose to that area. Films are checked weekly to ensure the patient continues to receive treatments accurately through the entire course of therapy.

While the patient receives daily treatments on a Monday through Friday basis, the radiation oncology physician usually meets with the patient once a week to review the treatment, see if any side effects are developing and answer questions regarding the treatment itself. Appropriate intercommunication among all physicians involved in the patient’s care occurs regularly, often
behind the scenes. After treatment is completed, ongoing follow-up takes place to check for after effects of therapy, response of disease and the question of recurrence or metastasis.

By now it should be apparent that the successful treatment of lung cancer patients requires many physicians who can comfortably and quickly collaborate on the patient’s behalf. We are fortunate to have well trained, compassionate, skilled physicians at Stevens Hospital. Our relatively small size allows us to avoid the anonymity and bureaucracy of some institutions, so we can deliver personal, prompt care. We recognize that medicine, scalpels and radiation beams are only part of the picture for our patients, and we are honored to work with devoted nurses and staff in our offices and in the hospital. Our community offers supportive services through the American Cancer Society delivered in the Stevens Oncology Center, and we also have programs to support healthy lifestyles during and after treatment. A quick glance at the accompanying graphs will show that one can get excellent care without leaving the community and that our results stand up to or exceed national benchmarks.
Community Services

Diagnostic Services

- Radiology
- Mammography/Ultrasound
- Sentinel Lymph Node Biopsy
- MRI/CT Scanner
- Laboratory/Pathology
- PET Scanning (Puget Sound PET Imaging)

Treatment Planning

- Weekly Tumor Board
- Weekly Care Conference
- Weekly Breast Cancer Conference

Treatment

- Oncology Surgery
- Pain Management
- Physical Therapy
- Inpatient Services
- Radiation Therapy (Swedish Cancer Institute at Stevens)
- Outpatient Services
- Occupational Therapy
- Lymphedema
- Medical Oncology (Puget Sound Cancer Center)

Supportive and Continuing Care Services

- Clinical Nutrition
- Social Services
- Respiratory
- Neurology
- Road to Recovery
- American Cancer Society Resource Center
- Spiritual Care
- Speech
- Cardiology
- Bereavement Program
- Patient Lodging Program
- Coordination with Home Health & Hospice

Survivorship Programs

- Look Good Feel Better Classes
- Free Wigs/Fittings
- I Can Cope (Free Online Classes)
- Reach to Recovery
- Cancer Support Group Referral
- Breast Cancer Support Group Referral

Free Community Programs

Want to Quit Smoking Program

Helpful guidelines for quitting as well as information on the use of tools like nicotine patches and gum.

Bereavement Support Group

Includes support groups, luncheons, service of remembrance and a lending library as opportunities for assistance in the grief process. Staffed by a professional bereavement coordinator, Hospital Chaplains and trained volunteers.