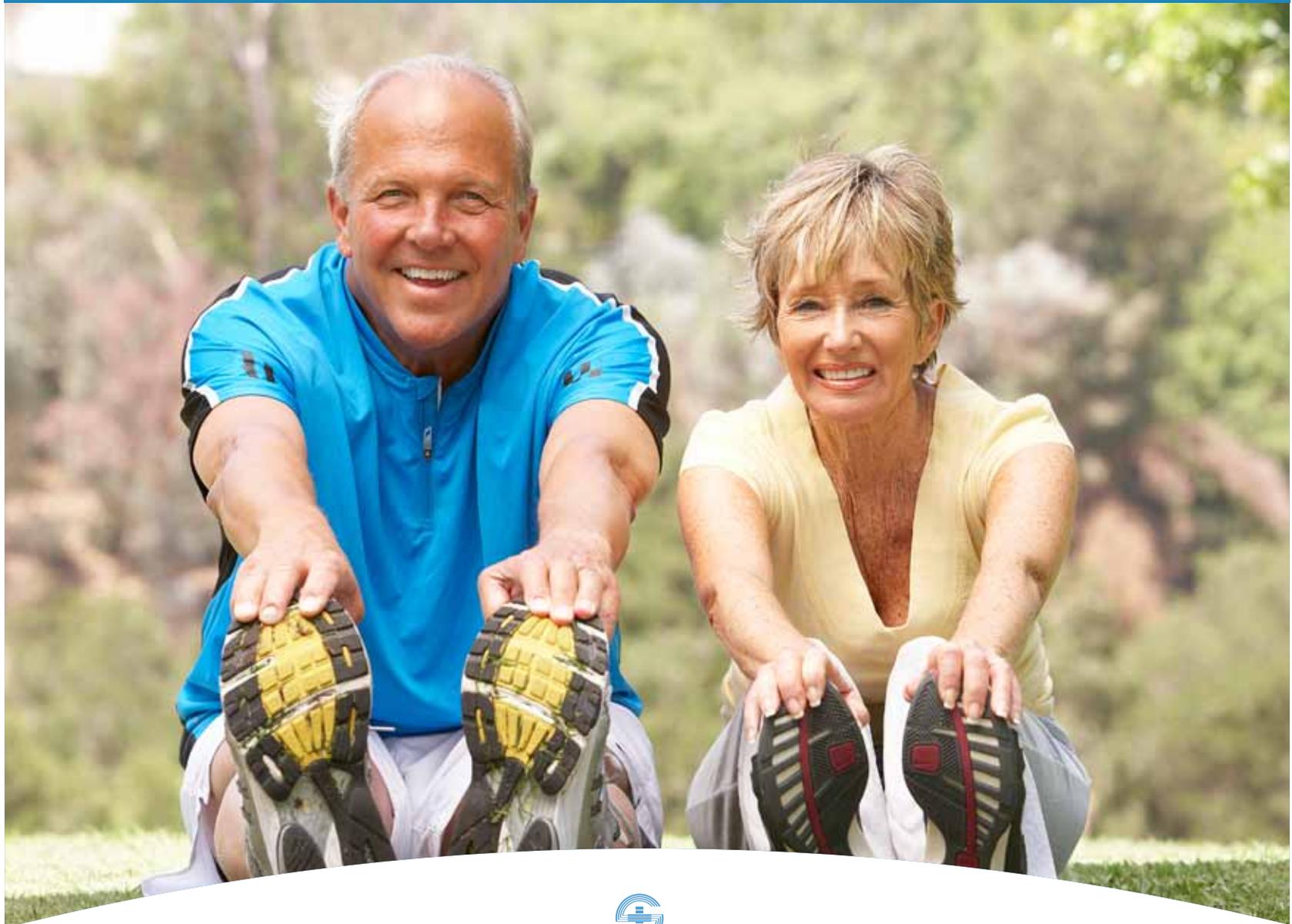


# Swedish Edmonds Hospital

Swedish Edmonds Hospital Cancer Program  
2013 Annual Report

2012 Data



**SWEDISH**

Edmonds

Extraordinary **care.** Extraordinary **caring.**<sup>SM</sup>

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# Cancer Committee Members – 2013

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|--|--|---|
| <b>Eileen Johnston, M.D.</b><br>Oncology/Hematology<br>Cancer Committee Chair  | <b>John Maldazys, M.D.</b><br>Urology  | <b>Heather Lingbloom, RHIA</b><br>Operations Manager,<br>Health Information Management  |
| <b>Robert Takamiya, M.D.</b><br>Radiation Oncology<br>Cancer Liaison Physician | <b>Daniel Markowitz, M.D.</b><br>Oncology/Hematology                                 | <b>Pam Martino, RHIT</b><br>Supervisor, Quality Management<br>and Regulatory Compliance |
| <b>Adam Balkany, D.O.</b><br>Pain Management                                   | <b>Roger Shelton, M.D.</b><br>Gynecology   | <b>Julie Norman, RD, CD, CDE</b><br>Director, Nutrition and<br>Food Services            |
| <b>Alan Boudousquie, M.D.</b><br>Pathology                                     | <b>Jeffery Ward, M.D.</b><br>Oncology/Hematology                                     | <b>Julia Rouse, MN, RN, OCN</b><br>Clinical Educator, Educational<br>Services           |
| <b>Sally Browning, M.D.</b><br>Radiology – Breast Center                       | <b>Judy Cody, BSN, CTR</b><br>Cancer Registry  | <b>Suzanne Peyster, RN</b><br>Case Manager, Case Management                             |
| <b>Carol Cornejo, M.D.</b><br>General Surgery                                  | <b>Leni Heller, OT/L</b><br>Director, Rehabilitation Services and<br>Preventive Care | <b>Jerri Wood</b><br>Quality of Life Manager,<br>American Cancer Society                |
| <b>Ernest Kawamoto, M.D.</b><br>Pathology                                      | <b>Darlene Hetrick, RN</b><br>Clinical Manager, Surgical Oncology                    | <b>Nancy Wood, RN</b><br>Chief Nurse Executive  |
| <b>Keith Luther, M.D.</b><br>Internal Medicine                                 | <b>Tawnia Kemp, CTR</b><br>Cancer Registry   |   |
|  | <b>Susanne Kromberg</b><br>Spiritual Care Manager                                    |   |



# Chairman's report 2013



**Eileen Johnston, M.D.**  
Chair, Cancer Committee,  
Swedish Edmonds Hospital

As chairman of the Cancer Committee at Swedish Edmonds Hospital, I am pleased to offer a few thoughts in review of 2013 and in anticipation of 2014. Although there have been significant changes around our campus, the most important aspect of our program remains unchanged – our commitment to the highest quality of cancer care available, close to home, in a supportive and nurturing environment. For many years we have provided an anchoring role in the communities of Edmonds and Lynnwood, with families relying on our quality and caring services. It is very gratifying to know these families return to our offices feeling secure, familiar and trusting of the care they will receive.

As we anticipated, our affiliation with Swedish Health Services has brought new ideas and new resources into our community, allowing us to further enhance the care we provide. During the past year we have become proficient with our electronic medical record system called Epic. This system is fully integrated with medical records from Swedish First Hill, Ballard and Issaquah, and we also can access records from Providence Regional Medical Center Everett. This enhanced documentation and communication tool has provided tremendous patient care efficiencies, has reduced duplication of testing and has improved

communication among care provider teams. Patients also can access test results and communicate with their providers through Epic's "My Chart" functionality, which has been a particularly popular feature.

We have begun the important work of improving our campus to better serve our patients and the community. A parking garage was completed in June and will be followed by construction of our much-anticipated new hospital expansion. Our emergency room staff has provided excellent care in inadequate facilities for far too long. They soon will have space to accommodate the most modern tools and technology and to enhance the patient experience on par with other Swedish emergency facilities, which have been recognized for their excellent and efficient delivery of care.

The Swedish Cancer Institute welcomed a new director in 2013, Thomas Brown, M.D., who brings an impressive array of experience to our program. He has been working diligently with physician leaders, administrators and community members to develop a strategic plan for Swedish Cancer Institute in the upcoming years.

The physicians and employees of Puget Sound Cancer Centers have moved into our beautiful new building and are now members of the Swedish Cancer Institute team. We have seen significant growth in our practice volumes and as a result have hired additional employees for our care teams. With this move, patients now have access to our laboratory services, physicians and chemotherapy services. A fully accredited pharmacy with experts specializing in chemotherapy admixture also is present on site. We are pleased to have oncology social workers in our offices to provide support services to our patients and their families.

Our colleagues in radiation oncology have been equally busy. The latest linear accelerator is now in place and fully operational, allowing our radiation oncologists to deliver very precise treatment to cancer areas while minimizing toxicity to nearby healthy tissues. This state-of-the-art equipment was installed as part of a major renovation of the radiation oncology space that was previously occupied by Puget Sound Cancer Centers. Additional space soon will become home to specialty care clinics and enhanced cancer support services.

The cancer program works with the larger Swedish network to bring more clinical trials to our facilities and our patients. Patients now have access to trials run by the Radiation Therapy Oncology Group, the Southwest Oncology Group, the Puget Sound Oncology Consortium, and the U.S. Oncology trials we have offered for years. This important research will help us continue to make gains in the battle against cancer.

Finally, we rely on outside cancer experts to evaluate the quality of our care. This year the Swedish Cancer Institute medical oncology practice in Edmonds once again passed our Quality Oncology Practice Initiative (QOPI) evaluation. This is a rigorous chart review to ensure we're adhering to standards of care established by the American Society of Clinical Oncology. In addition, we again were certified -- at the esteemed "silver level," which means special commendation for achieving 6 out of 7 possible measures of excellence -- by the American College of Surgeons' Commission on Cancer. This is a true testimony to the commitment of the administrators and providers in providing exceptional care to our patients with cancer.

On behalf of the care teams and administrators at Swedish Edmonds, I'm pleased to share our progress in 2013 and a look ahead to 2014. We're honored to serve our patients, their families and the greater communities in our area.



## Update to community physicians



**Robert Takamiya, M.D.**  
Radiation Oncology  
Cancer liaison physician

Greetings and welcome to our cancer program's annual report. It has been a busy year for us due to our accreditation from the American College of Surgeons Commission on Cancer. I'm pleased to report that we passed with commendation! I believe teamwork and strong leadership from Dr. Eileen Johnston and others were critically important in achieving this accreditation and commendation. Active participation and hard work from our members also were huge assets. Many thanks to everyone.

Personally, I continue to learn in my third year as the program's cancer liaison physician. During our bi-monthly committee meetings, we continue to review our cancer program's performance compared with that of our geographic neighbors and other centers around the country. We took a detailed look at our performance and outcomes in cancers of the colon, uterine, larynx and cervical malignancies. We had

productive conversations around socio-economic trends, stage at presentation, incidence within ethnic groups and treatments received.

Services offered by the American Cancer Society continue to be highly used and valued by our patients. We have significantly expanded our services and programs to our patients, and in 2013 we opened a new cancer resource center in the medical oncology building.

I look forward to the challenges ahead and to working with physicians throughout the community to provide exceptional care and service to patients with cancer. I am enthusiastic about continuing to develop and implement new programs through our cancer program at Swedish Edmonds Hospital to improve the quality of care for our patients and community.

## Medical oncology at Swedish Cancer Institute (SCI) Edmonds

### Eileen Johnston, M.D.

Chair, Cancer Committee,  
Swedish Edmonds Hospital

2013 marked the evolution of an exciting era for the medical oncology division of SCI Edmonds. Previously known as Puget Sound Cancer Centers (PSCC), we now are fully integrated members of the Swedish Cancer Institute. This was a gradual process that evolved during several years but came to full fruition April 1, 2013 when we moved into our new building.

While many of our care providers are the same, there have been some notable changes. Our valued colleague, Dr. Richard McGee, is now enjoying a life of leisure as a retired physician. Dr. McGee practiced in Edmonds for more than 30 years, and although his patients and partners miss him, we wish him all the best in his well-earned retirement.

We have added two physicians to our mix, Dr. George Birchfield and Dr. Douglas Lee. While new to Edmonds, neither is new to us nor to the practice of oncology. These two exceptional physicians have been with PSCC for more than 20 years at our Northwest office site.

In addition, we're working to hire additional providers to care for our growing number of patients. We look forward to welcoming a new physician partner, Dr. Susan Montgomery, and we also plan to hire nurse practitioners to assist in caring for our patients. This is an important development as we increase access and clinical expertise in our office.

In addition, we've expanded our nursing staff to accommodate our growing patient volumes. We have

nearly doubled the number of nurses in our office, and all of our RNs are oncology certified or are in the process of becoming certified. These talented nurses are a dedicated group of professionals with extraordinary clinical skills and compassion. Kudos also go to our schedulers, receptionists and pharmacists, all of whom are indispensable members of our team.

An important component of the care we provide our patients is our team of oncology social workers, and we're very pleased to have them on site and fully available every day. Our social workers perform many important services to support our patients, including counselor referrals, facilitating support groups, and helping patients find services and financial support from the many cancer support agencies. Providing valuable support are volunteers with the American Cancer Society who help with medical information sources, wig services, ride finding and a number of support groups such as "Look good, feel better." We also have a full-time financial counselor to help patients and their families navigate the financial aspects of cancer care, help with insurance authorizations, and contact charitable services of major pharmaceutical companies.

We owe a debt of gratitude to Swedish Health Services, which recognized the valuable care provided at our Edmonds site and offered us the necessary support and vision to bring about these and other important changes in 2013. Finally, we owe our heartfelt thanks to the communities we serve, which have entrusted us with their care during many years and especially through our transition year of 2013.

# Radiation oncology

## Robert Takamiya, M.D.

Medical director,  
SCI Edmonds Radiation Oncology

The Swedish Cancer Institute at Swedish Edmonds is committed to delivering the highest quality treatment using state-of-the-art equipment in a patient-centered care environment. A key treatment method for many of our patients is radiation oncology, and our experts provide the latest in radiation therapies in a caring, supportive environment.

One-third of our patients receive treatment with intensity-modulated radiation therapy (IMRT), a technique that improves accuracy, minimizes toxicity, and increases cure rates. The benefit of IMRT is enhanced when paired with the precision of image guided radiation therapy (IGRT). This allows us to visualize the target area with each treatment, in turn allowing for smaller treatment fields and fewer side effects than “standard” IMRT. In November of 2013, we began using a new Elekta Versa HD linear accelerator to treat patients side by side with the existing unit. The new unit offers advanced treatments, such as cone-beam CT and stereotactic body radiosurgery. It also allows faster delivery of our most complex treatment plans. Another technological advancement is called “active breathing control,” which allows acceptable levels of motion during radiation therapy.

An in-house CT-simulator helps us maintain our world-class standard of care. This provides better patient care by allowing the treatment planning visit to occur all under one roof. We use a “large bore” CT, which enhances patient comfort and supports better patient positioning during treatments. This CT has 4D radiation treatment capabilities, which factors in the patient’s respiratory motion.

We also have a robust prostate brachytherapy program at Swedish Edmonds. Our new urology operating suite includes the latest technology and equipment. Prostate brachytherapy is the implantation of radioactive seeds to cure prostate cancer by using ultrasound guidance for better precision. Long-term data confirms cure rates are equivalent to surgery but without many of the surgery-related risks and side effects. Our association with the Seattle Prostate Institute was instrumental in building this program and in offering it to our community.

We continue to offer samarium and strontium therapy, an intravenous targeted radionuclide used to relieve painful bone metastases. We soon will offer an intravenous targeted alpha-emitter called Ra-223, a significant breakthrough in treating prostate cancer. We also offer radioactive monoclonal antibody therapy for our patients with lymphoma.

Comprehensive services -- including physics and dosimetry support, radiation oncology nursing, radiation therapists, social work services, and nutritional counseling -- are available to provide personalized and compassionate care to patients and their families.

Through participation in Swedish Cancer Institute’s weekly tumor board and close cooperation with our medical oncology colleagues, surgeons and other specialists at Swedish Edmonds, we continue to offer the latest multidisciplinary treatments for our patients. Our alliance with the other Swedish Cancer Institutes, Seattle Prostate Institute, and the Tumor Institute Radiation Oncology Group allows us to offer all modern radiation oncology services. This includes Gamma Knife and Cyberknife radiosurgery, high dose rate brachytherapy for gynecologic and urologic malignancies, systemic radiation therapy, external beam radiation therapy, and the premier radioactive seed implantation program in the United States. Due to our technology and expertise, residents and fellows from the top medical training programs in the country regularly travel to Seattle to observe these therapies.

# Cancer conferences

## Tawnia Kemp, CTR

Cancer conference coordinator

The Swedish Edmonds Tumor Board and Breast Cancer Conferences are each held weekly and bring together physicians who specialize in diagnostic radiology, pathology, surgery, medical oncology and radiation oncology, as well as physicians from other specialties and allied health professionals to create a multidisciplinary group.

A case presentation at the cancer conference includes the patient’s medical history, clinical findings, diagnostic studies, pathology results and studies

related to the patient’s immune system and chemical components within the tissue. Discussions include staging workups, treatment methods, National Comprehensive Cancer Network Guidelines and research data. Cancer conferences also help evaluate and manage patients at risk for hereditary cancer.

Cases from the top five cancer sites are presented regularly, as well as other cases that bring in physicians within specific specialties to share their expertise in treatment planning. See **Chart 1** for the number of cases and types of cancers presented at cancer conferences in 2012.

Cases presented at Swedish Edmonds cancer conferences in 2012 by primary site

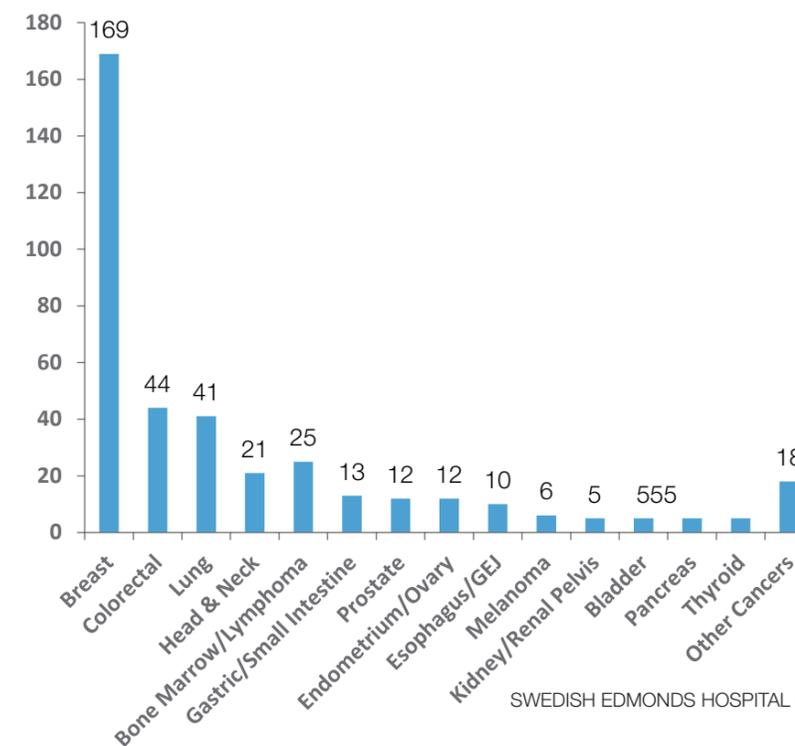
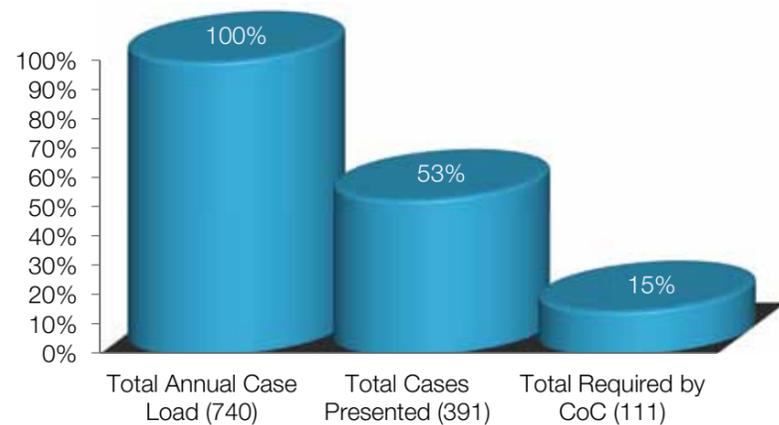


CHART 1:  
Based on 391 total cases presented

As a cancer program accredited by the American College of Surgeons, Commission on Cancer (CoC), Swedish Edmonds is required to present a minimum of 15 percent of the cancer registry's annual analytic caseload at the cancer conferences. Out of the cases presented, 80 percent must be prospective (planning treatments to achieve the best outcomes). In 2012, the Swedish Edmonds Tumor Board and breast cancer conferences presented a total of 391 cases, which represents 53 percent of the cancer registry annual analytic case load. As demonstrated in **Chart 2**, Swedish Edmonds presented well over the 15 percent required by CoC.

The goal of the Swedish Edmonds Cancer Program is to conduct meetings that hold meaningful multidisciplinary discussions that facilitate, manage and provide outstanding quality of care for our patients. Our dedicated team of physicians and members from other specialties achieve this goal by bringing their expertise and experience to the conferences each week.

Number of cases presented at cancer conference 2012



**CHART 2:** The Swedish Edmonds Cancer Team presents well over the 15% of cases required by CoC.

# Cancer registry

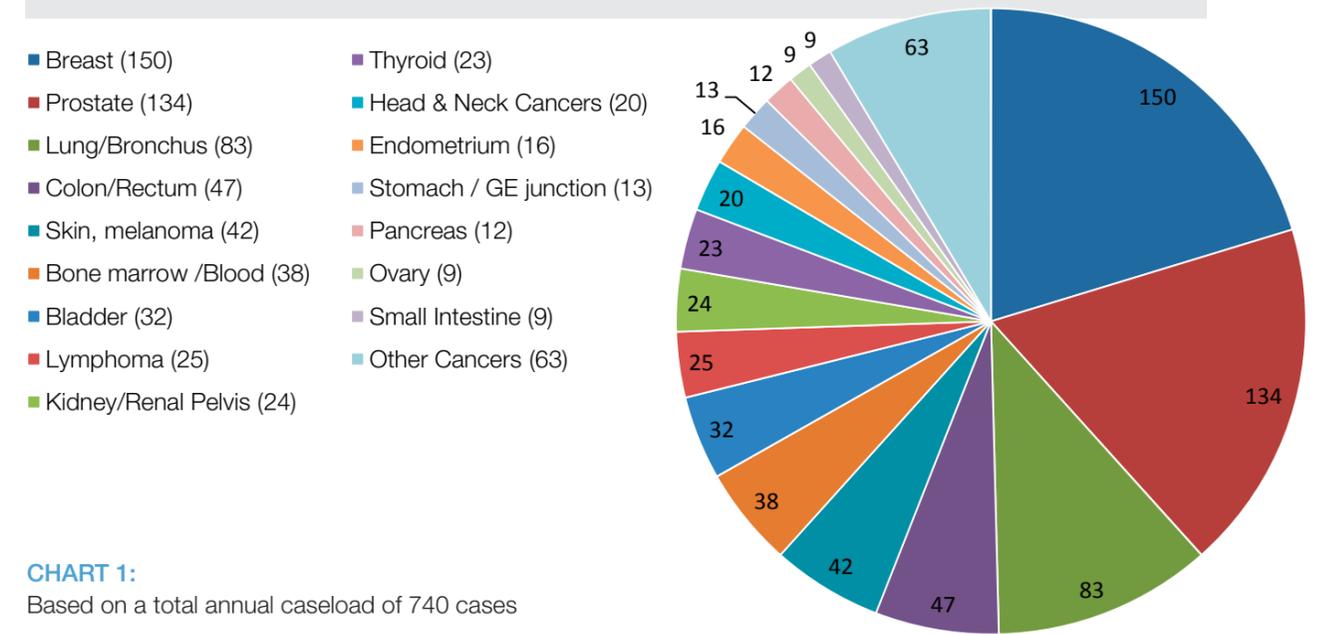
**Judy Cody, BSN, CTR**  
Cancer registrar lead

The Swedish Edmonds Cancer Registry is a major component of the comprehensive cancer program at Swedish Edmonds Hospital. The registry staff, under the supervision of the Cancer Control Committee, is responsible for meeting state and national cancer reporting requirements, coordinating cancer conferences, and providing support for all cancer program activities required for accreditation by the American College of Surgeons, Commission on Cancer (CoC).

The registry has been collecting data on all cancer patients diagnosed and/or treated at Swedish Edmonds Hospital since Jan. 1, 1974. Data collected includes patient demographics, cancer identification, and treatment and follow up documentation. This information provides important contributions to treatment planning, staging and continuity of care for patients. There have been 16,410 analytic cases collected in the registry since 1974.

The cancer registry's annual case load was 740 new cancer cases in 2012. The five most frequently reported cancers at Swedish Edmonds in 2012 included breast, prostate, lung/bronchus, colon/rectum, and melanoma as shown in **Chart 1**.

Frequency of cancers seen at Swedish Edmonds in 2012

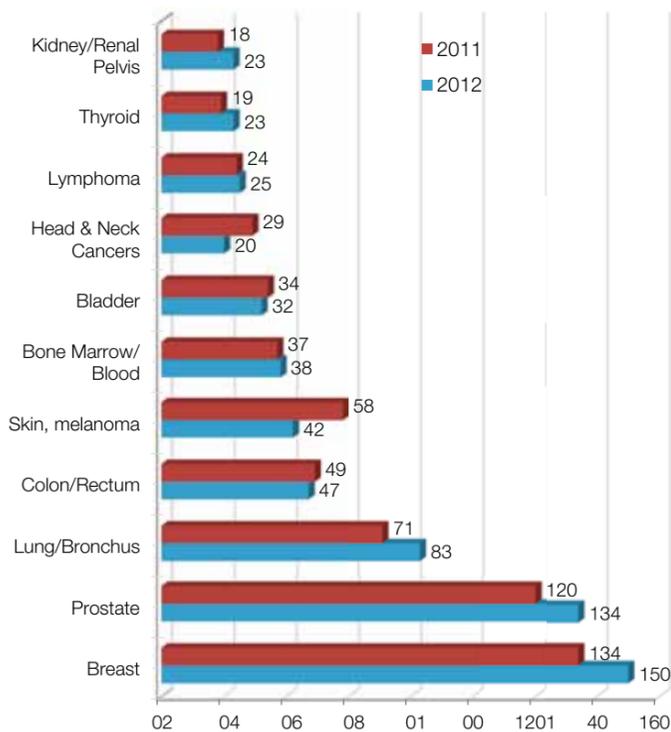


**CHART 1:** Based on a total annual caseload of 740 cases

**Chart 2** shows the growth in 2012 of our major primary sites of breast, prostate and lung as compared to 2011.

As **Figure 1** shows, Swedish Edmonds' diagnostic incidence of breast and prostate cancer continues to be higher than the national rate. Swedish Edmonds has a well-coordinated cancer team that provides diagnosis, treatment and regular follow-up to these cancer patients locally in our community. Our cancer registry connects with the clinics closely associated with Swedish Edmonds in an effort to better represent the cancer incidence in the overall community.

**2011 / 2012 comparison**  
(Not all types of cancers seen at Swedish Edmonds are included in the chart)



**CHART 2:** The annual case load for the Swedish Edmonds Cancer Registry continues to grow particularly in our major primary sites of breast, prostate, and lung.

The cancer registry performs annual follow-up for patients in the registry since our reassigned reference year of 2000. CoC requires an 80 percent follow-up rate be maintained for cases since the cancer registry began and a 90 percent follow-up rate for cases diagnosed in the last five years. Swedish Edmonds' current follow-up rate for all analytic patients in the registry since our reference year of 2000 is 98.4 percent. See Chart 3, which shows the end of year 2012 successful follow-up rate.

The Swedish Edmonds Cancer Registry shares data with the Washington Cancer State Registry, which monitors the incidence of cancer in the entire state. As part of our responsibilities as an accredited cancer program, the cancer registry also submits data to the National Cancer Data Base (NCDB). The NCDB is a nationwide oncology outcomes database that monitors changes and variations in patterns of cancer care and outcomes. The Swedish Edmonds Cancer Registry continues to strive to provide accurate and quality data that will help improve the quality of cancer care for the patients and communities we serve.



**CHART 3:** Based on 7,069 analytic cases in the registry since the adjusted reference date 01/01/2000

**2012 cancer frequencies by site and gender**

Primary sites	Swedish Edmonds* male (349 total cases)	National** male	Swedish Edmonds* female (388 total cases)	National** female
Head and neck	4%	7%	1%	3%
Colon/rectum	6%	9%	6%	9%
Liver/intrahepatic bile duct	1%	3%	1%	1%
Pancreas	1%	3%	2%	3%
Lung and bronchus	9%	14%	13%	14%
Skin - melanoma	7%	5%	4%	4%
Breast		<1%	39%	29%
Uterine cervix			2%	2%
Uterine corpus			4%	6%
Ovary			2%	3%
Prostate	38%	29%		
Testis	1%	1%		
Bladder	7%	7%	2%	2%
Kidney/renal/pelvis	5%	5%	2%	3%
Thyroid	2%	2%	4%	5%
Lymphoma	6%	5%	2%	5%
Leukemia	2%	3%	2%	3%
Other cancers	11%	10%	14%	10%

**FIGURE 1:** \*Swedish Edmonds 2012 Analytic Cases (737) \*\*Source for National Percentages: 2012 American

# Spotlight on melanoma

## Introduction by

**Eileen Johnston, M.D.**

Chair, Cancer Committee  
Swedish Edmonds Hospital

The physicians who regularly treat cancer patients at Swedish Edmonds have generated this educational article about preventing, detecting and treating melanoma, a serious form of skin cancer. We chose to write about melanoma this year in part because of alarming statistics related to this disease, and we believe public education is key.

Melanoma has the largest increase in incidence (number of new cases per period of time) of any other type of cancer in the United States in recent years. This increase in incidence is seen primarily in young women under age 35. One culprit in this trend is the increasing use of tanning beds, which are as risky as sunbathing, if not more. Other risk factors include family history, fair skin, an abundance of severe (peeling) sunburns in childhood, and periodic, as opposed to regular, sun exposure (such as that annual beach vacation).

This year more than 80,000 Americans will be diagnosed with melanoma and nearly 10,000 will die of the disease. One in 50 of us will be affected in our lifetimes. The average age at onset is 50, more than a decade younger than most other adult cancers. If caught early it's a very curable disease, but once someone has had one melanoma the risk for a second is quite high; rigorous follow-up with a dermatologist is very important.

The treatment of more advanced stages of melanoma is improving but still generates very disappointing statistics. Melanoma most often affects the skin but also can occur in the eye, the bowel, under the nails (subungal) and in the vagina. We have a lower incidence of this disease in the Pacific Northwest than

in some sunnier areas in the United States, but we're seeing the same upward trend in incidence – making this information relevant and valuable, despite our clouds and rain.

Swedish Edmonds is privileged to have a team of caring, knowledgeable experts in preventing, detecting and preventing melanoma. Below is an overview from cancer center physicians as related to their specific area of expertise:

## Dermatologic evaluation of pigmented lesions

**John L. Headley, M.D.**

Early detection of malignant pigmented growths is the key factor in improving the chances of surviving melanoma. Physicians, as well as the public through education and awareness programs, use the ABCDEs of identification. Suspicious lesions are identified with this mnemonic: A refers to asymmetry of a pigmented lesion, B is bordered irregularity, C is color variability, D is diameter greater than 6 mm, and E is an evolution or change in the appearance of a pigmented lesion. Even with these well-known algorithms for evaluating pigmented lesions with the naked eye, diagnostics alone is only 65 to 80 percent accurate. This means dermatologists must work to increase the percentage of melanomas detected while not performing unnecessary biopsies of benign lesions. Increasing the sensitivity and specificity of evaluating these lesions is a real diagnostic challenge.

Fortunately, in the last 15 years the use of dermoscopy has greatly improved diagnostic accuracy. Dermoscopy refers to the use of either magnified polarizing or non-polarizing devices to help detect skin abnormalities. Both methods of

dermoscopy help make the skin more transparent, allowing the dermatologist to better evaluate structures beneath the surface of the skin. In qualified hands, dermoscopy can increase the accuracy of detecting melanomas by 10 to 27 percent. Pattern analysis in dermoscopy can reveal variation in pigment, vascular changes, and signs of regression that help distinguish melanoma from other benign or atypical moles as well as non-melanoma lesions. As a result, melanomas can be identified and biopsied much earlier than before. Earlier diagnosis increases detection of pre-invasive and superficial melanomas, thereby sparing patients unpleasant treatments and decreasing the risk of dying of metastatic disease.

Currently more than half of American dermatologists are using dermoscopy as a routine procedure in their practices. Non-dermatologic physicians also are beginning to use this screening procedure as part of their patient evaluations. Courses are offered at the postgraduate level to help enhance the level of expertise. Several medical schools are now mandating this as part of their core curriculum. Studies have shown that using dermoscopy has reduced the ratio of biopsy of benign to malignant lesions from 17:1 down to 4:1.

### ABCDEs of detecting melanoma

- A = Asymmetry of pigmented lesion
- B = Border irregularity of lesion
- C = Color variability of lesion
- D = Diameter is more than 6 mm
- E = Evolution or change in a pigmented lesion

In addition to hand-held dermoscopy, technology now provides for total body imaging, which uses digital photography with magnification. Combined with individual lesion dermoscopy and computer-based algorithms, several in-office mole mapping devices are now available. The cost of the instruments has declined in recent years so is available in a number of medical offices. This technology is particularly valuable for people with prior history of melanomas,

individuals with many pigmented lesions (50 or more), and families with a genetic predisposition for multiple atypical moles. In the near future, an additional imaging technology called confocal microscopy will become available in offices.

Training in these methods and investment in these technologies will result in greater strides in detecting early melanomas.

## The pathologist's role

**Alan Boudousquie, M.D.**

The pathologist assists clinicians in diagnosing and treating melanoma. The initial patient contact usually is with a primary care physician or dermatologist who biopsies a suspicious pigmented lesion of skin and sends that biopsy tissue to a pathologist for examination.

That biopsy may be a shave of skin or a small circular biopsy called a punch biopsy. In some instances the first diagnosis of melanoma occurs when a different tissue type is obtained by a surgeon or interventional radiologist. This may occur either when melanoma has spread from its original skin site to a different location, or occasionally when it has originated in a different tissue such as the eye or bowel.

Because melanoma cells aren't always consistent looking and may be difficult to detect by routine microscopic examination, the pathologist frequently uses other special techniques to help identify the tumor type. A common method is immunohistochemistry, which uses specially labeled antibodies that react to specific proteins often expressed by melanoma cells. Other infrequently used techniques include looking for genetic sequences normally seen in melanomas or culturing tumor cells to look for chromosomal abnormalities.

When a tissue sample (usually skin) is received, the pathologist not only diagnoses melanoma if present, but also measures other parameters of the tumor to help guide further treatment. Important parameters

include size of melanoma and depth of invasion into skin or underlying tissue, inflammatory response to tumor, presence or absence of ulceration, and presence or absence of spread to lymphatics. If the sample is from a surgery intended for possible cure, distance of tumor to margins of healthy tissue and presence or absence of spread to the nearest lymph node receiving lymphatic material from the tumor site (i.e., sentinel node) are assessed. Like many other types of cancer, research is being done to sequence the gene expression (genome) of melanomas. The hope is this research may help develop specific therapies that can be targeted against a patient's melanoma or to treat melanoma that has spread to other locations more successfully.

## The surgeon's role

**Carol Cornejo, M.D.**

The role of the surgeon in treating patients with melanoma is to excise (remove) the melanoma and sometimes to sample or remove lymph nodes that may be involved in the disease. Unlike other forms of skin cancer, melanoma requires excising a wide area of normal skin (called the margin) surrounding the melanoma in order to decrease the risk of local recurrence. The width of the margin required depends of the depth of the melanoma, which is why it's so important to have a good biopsy of the melanoma prior to surgery. Melanoma that is not invasive requires a 5 mm margin, while melanoma that is invasive requires a 1-2 cm margin depending on the depth.

Excising these wide margins can leave a significant defect in the skin, so one of the surgeon's jobs is to close this defect either by bringing the skin edges together, moving adjacent tissue to close the defect, or doing a skin graft. This may involve a plastic surgeon depending on the complexity of the closure. Lymph nodes play an important role in how melanoma is treated.

In addition to excising the melanoma, the surgeon sometimes does surgery on the lymph nodes. These are structures located throughout the body that filter lymph fluid and are often the first place that cancer spreads when it has left the primary site. With melanoma these lymph nodes most often are located in the neck, armpit, or groin depending on the melanoma's location. If patients have melanoma in their lymph nodes without evidence of spread elsewhere, we can improve survival by removing these lymph nodes. If the patient has no obvious abnormal lymph nodes, then the surgeon decides whether to sample those lymph nodes based on the depth of the melanoma.

Melanoma that hasn't spread doesn't require any surgery on the lymph nodes, and melanoma that's very thin usually doesn't require lymph node surgery. By contrast, invasive melanoma can spread to the lymph nodes, which usually requires surgery. Melanoma that is very thick (> 4mm) usually has spread to other parts of the body, so removing the lymph nodes does not improve survival.

Melanoma between 0.75 and 4 mm in depth may have spread to the lymph nodes, and removing these nodes can improve survival. The surgeon samples the first few nodes near the melanoma. These first few nodes are called the sentinel nodes. If the sentinel nodes do not have cancer, the chance of the other lymph nodes having cancer is very small and the other nodes can be left in place. If the sentinel nodes do have cancer, the other nodes are removed because there is a higher chance that they also contain cancer. Removing the sentinel nodes first allows us to avoid removing the other healthy lymph nodes if there is no cancer involved.

The sentinel node biopsy is usually performed at the time of the wide excision of the melanoma in the operating room. Determining whether there is cancer in the lymph nodes also allows us to determine the stage of the melanoma and may help guide further treatment such as radiation or chemotherapy.

## The medical oncologist's role

**Daniel Markowitz, M.D.**

Great strides are being made managing melanoma, including treatment with interferon, an immune system "booster" offered to patients who have melanoma that has spread to lymph nodes but not beyond. This treatment encourages the immune system to destroy any remaining melanoma cells before they spread to other organs.

For decades, metastatic melanoma (melanoma that has spread beyond the site in which it developed) has been rightly feared as an aggressive and lethal form of cancer affecting young and old alike. With a median survival traditionally measured in months, a widespread melanoma diagnosis often was associated with a certain grim resignation that medical science simply did not have the molecular understanding or treatment methods to deal with it effectively. An extremely small minority of young patients could be cured by treatment with high-dose interleukin-2, but the vast majority of patients were previously offered either chemotherapy or biochemotherapy, both of which provided only modest response rates.

Fortunately, over the past decade there has been a significant expansion in our understanding of the disease's molecular basis. This has resulted in two major areas of improvement in how we treat patients with metastatic melanoma. First, in terms of diagnostics, we have all come to understand that not all melanomas are the same. In the era of personalized molecular oncology, each patient's tumor characteristics are now based upon the tumor's molecular signature. The tumor is further analyzed for the presence or absence of specific mutations in the genetic material that serve as targets for recently developed treatments.

Secondly, with our ever-increasing understanding of the key pathways driving the growth of metastatic melanoma, medical science has developed entirely new therapies, including immunotherapy as well as targeted cancer cell pathway inhibitors. Such

treatments include targeted T-cell immunotherapy, targeted BRAF inhibitors, and ipilimumab that has been associated with a 3-year survival rate of more than 20 percent (many of whom go on to survive for many years).

## The radiation oncologist's role

**Robert Takamiya, M.D.**

Radiation therapy plays an important role in successfully treating many patients with melanoma. Input from a multidisciplinary specialty board review is helpful in personalizing treatment decisions for individual patients. Although melanomas once were thought to be relatively resistant to radiation therapy, medical literature now supports using post-operative radiation to reduce the risk of local and regional recurrences. Indications for radiation include extensive perineural invasion (tumor seen by the pathologist surrounding the nerves), in-transit metastases (tumor cells seen to be growing in a pattern of migration away from the primary site), equivocal margin status (how close the cancer cells are to the edge of the excised tissue), and metastasis into regional lymph nodes.

The radiation consultation involves a thorough clinical evaluation including prophylactic management to minimize side effects. In some cases, lymphedema (chronic post-treatment swelling) risk is best managed with physical therapy. Compression garments, most often in the upper extremities, can help minimize the severity of this complication.

Modern techniques in radiation therapy planning has had a major positive impact for patients with melanoma. For example, using intensity modulated radiation therapy (IMRT) in treating head and neck melanoma allows for more precise control of radiation dose distributions, sparing nearby areas. Many publications have defined radiation dose thresholds to minimize toxicity and side effects for the patient. Studies from M.D. Anderson Cancer Center have demonstrated that hypofractionated radiation therapy can be very effective. This type of therapy delivers a high dose of radiation over a few treatment sessions.

During the course of any type of melanoma radiation treatment, the patient's side effects are carefully monitored. Patients are encouraged to maintain an adequate intake of food and fluids, and daily weights are tracked. Following treatment, the patient receives close clinical follow up. Physical rehabilitation can minimize the impact of lymphedema in the extremities. In addition, the patient receives long-term clinical monitoring to help prevent recurrence.

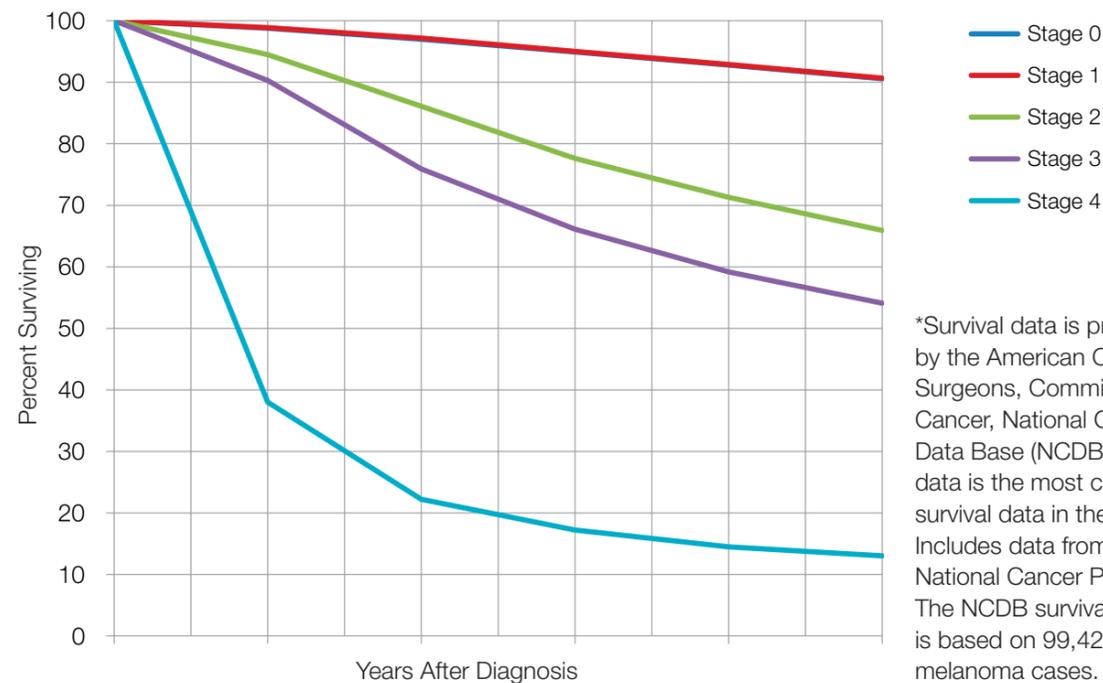
As in all areas of cancer care, advances in treating melanoma occur largely through knowledge gained as a result of clinical trials. With Swedish Edmonds' burgeoning affiliation with the Swedish Cancer Institute, patient access to clinical trials both in the metastatic, as well as in the adjuvant settings, has never been higher. The entire Swedish Cancer Institute network remains committed to giving our patients access to high quality clinic trials involving new treatment strategies and novel agents.

### Conclusion

The melanoma care team at Swedish Edmonds wants to emphasize that the most effective tools in the battle against this disease are prevention and early detection. We encourage everyone to learn the ABCDEs of pigmented lesions and when in doubt, seek medical advice.

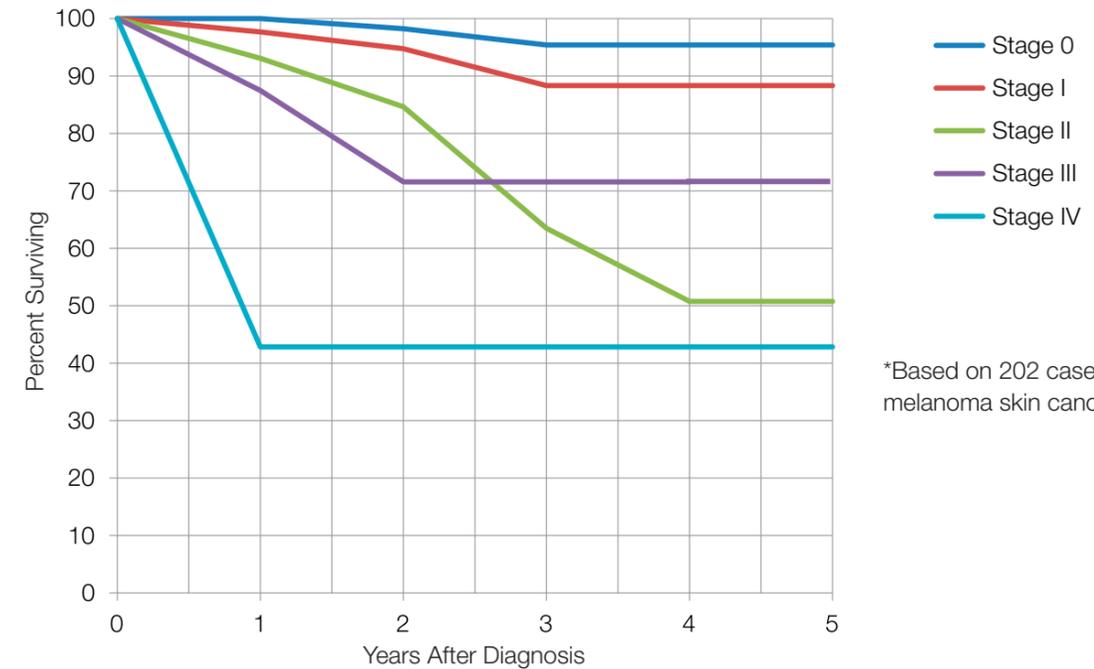
With the help of our entire team, our patients and their families, we all look forward to the day when this deadly disease will not only be treatable, but controllable and perhaps, at some point in our lifetimes, curable.

### NCDB\* observed survival for Melanoma cases diagnosed in 2003-2006



\*Survival data is provided by the American College of Surgeons, Commission on Cancer, National Cancer Data Base (NCDB). 2006 data is the most current survival data in the NCDB. Includes data from 1447 National Cancer Programs. The NCDB survival data is based on 99,428 melanoma cases.

### Swedish Edmonds 5 year observed survival for Melanoma cases\* 2008 - 2012



\*Based on 202 cases of melanoma skin cancer

# Community services

## Diagnostic services

- Radiology
- MRI/CT scanner
- Mammography/ultrasound
- Laboratory/pathology
- Sentinel lymph node biopsy
- PET scanning (Swedish Edmonds)

## Treatment planning

- Weekly tumor board
- Weekly care conference
- Weekly breast cancer conference

## Treatment

- Oncology surgery
- Chemotherapy (Puget Sound Cancer Center)
- Radiation therapy (Swedish Cancer Institute at Swedish Edmonds)
- Inpatient services
- Outpatient services
- Pain management
- Physical therapy
- Occupational therapy
- Lymphedema

## Supportive and continuing care services

- Clinical nutrition
- Spiritual care
- Social services

- Speech
- Respiratory
- Cardiology
- Neurology
- Coordination with home health and hospice
- Bereavement program
- American Cancer Society Resource Center
- Road to Recovery Program
- Patient lodging

## Survivorship programs

- Look Good Feel Better Classes, Reach to Recovery
- ABC – After Breast Cancer: What’s Next?
- Breast cancer support groups
- Cancer support group referral
- I Can Cope (free online classes)
- Free wigs/fittings

## Free community programs

- Want to Quit Smoking program
- Includes helpful guidelines for quitting, as well as information about tools such as nicotine patches and gum

## Bereavement support groups

- Includes support groups, luncheons, Service of Remembrance and lending library to assist in grief process; staffed by professional bereavement coordinator, hospital chaplains and trained volunteers



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