2008 Cancer Committee Membership Roster

Ralph Aye, M.D.  
*Thoracic Surgery*

Janet Bagley, R.N.  
*Manager, Medical and Surgical Oncology*

David Beatty, M.D.  
*Surgical Oncology/special emphasis on breast problems*

Candy Bonham, CTR  
*Cancer Registry*

Patricia Dawson, M.D.  
*General Surgery/limited to disease of the breast*

Albert Einstein Jr., M.D.  
*Executive Director*  
*Swedish Cancer Institute*

Stephen Eulau, M.D.  
*Radiation Oncology*

Sylvia Farias, MSW  
*Social Services*

Daniel Flugstad, M.D.  
*Orthopedic Surgery*

Greg Foltz, M.D.  
*Neurosurgery*

Philip Gold, M.D.  
*Medical Oncology*

Patra Grevstad, R.N.  
*Research*

Paula Hallam, M.D.  
*Diagnostic Radiology*

David Haseley, M.D.  
*Diagnostic Radiology*

Linda Hohengarten, MBA, OCN  
*Director of Oncology Nursing*

Walter Holder, M.D.  
*General Surgery*

Gordon Irving, M.D.  
*Medical Director, Pain Services*

Sandra Johnson, LICSW  
*Oncology Social Work*

Mary Kelly, M.D.  
*Diagnostic Radiology*

Barbara Kollar, BS, CHES  
*Patient Education/Integrated Care*

Daniel Labriola, N.D.  
*Naturopathic Services*

Michael Milder, M.D.  
*Medical Oncology*

Jay Parikh, M.D., FRCP  
*Diagnostic Radiology*

Bruce Porter, M.D.  
*Diagnostic Radiology*

Robert Resta, M.S., CGC  
*Hereditary High Risk Clinical Program*

Carlotta Reynolds, R.N.  
*Nurse Manager Oncology*

Sara Rigel, BS, CHES  
*Community Education*

Janice Stracener, M.D.  
*Diagnostic Radiology*

Nancy Thompson, R.N., AOCNS, MSN  
*Outpatient Clinical Nursing*

Ronald Tickman, M.D.  
*Pathology*

Dan Veljovich, M.D.  
*Gynecology Oncology*

Stephanie Wichmann, MSW, ACS  
*Patient Navigator*

John Wynn, M.D.  
*Psycho-Oncology*

Jim Yates, MSPH, MBA, FACHE  
*Administrative Director*  
*Swedish Cancer Institute*

John Younger, M.D.  
*Internal Medicine/Hospice Director*

John Zarek  
*System Clinical Manager, Pharmacy*
Letter From Cancer Leadership at Swedish

The Swedish Cancer Institute (SCI) continued to strive for excellence throughout 2008, with a focus on providing the comprehensive, high-quality patient care that allows us to effectively treat the disease while simultaneously maximizing quality of life. Our success in meeting this goal is illustrated in numerous ways, most recently by the important recognition we received in late 2008.

In November, the American College of Surgeons, Commission on Cancer (CoC), awarded us its Outstanding Achievement Award with commendation. This is the highest level of achievement possible for a hospital cancer program, and the SCI has now earned this commendation for the second survey cycle in a row (each cycle lasts three years).

The CoC looks at 36 different standards, including Cancer Committee leadership, research, data management, clinical services, community outreach and quality improvement. By surpassing all 36 standards, we’ve earned the designation as one of the nation’s top treatment facilities for cancer care.

Other successes of the past year include recruiting and retaining the best physicians, nurses and other clinical providers. We remain on the cutting edge in acquiring and developing the latest technologies, such as VMAT, or volumetric modulated arc therapy, which you’ll read about later in this report. And we constantly promote excellence in cancer care by incorporating quality improvement programs. The SCI’s Quality Oncology Practice Initiative (QOPI™) is the latest example.

The Swedish Cancer Registry, with its extensive 12-year record of all SCI analytic cancer cases, is upgrading to a more efficient software program. When the process is completed, site-specific cancer registries — such as the breast-cancer registry — will be more easily integrated into the main registry. The result: a more efficient and accurate cancer registry with data that has maximum value to SCI researchers.

We are constantly using our registry to help develop clinical research studies that evaluate new forms of treatment and give patients access to the latest drugs and technologies. In addition, SCI physicians regularly share their research at the regional and national levels, as detailed in the bibliography included in this annual report.

The comprehensive continuum of care that is a cornerstone of the SCI’s success is placing a growing emphasis on survivorship, and a key component is integrating and embedding the survivorship concept into our overall cancer program. This allows us to better help cancer survivors address their unique needs and concerns, which include medical, psychosocial and financial.

A first-rate cancer program is never content with the status quo, and it will reach out in as many ways as possible to both the people it already serves and the people who may one day need its services. The SCI in 2008 continued to expand into North Seattle and the Eastside, to make our services easily available to as many Puget Sound residents as possible. We also added a second mobile mammography coach that will help provide mammograms to women throughout Western Washington.

Our vision at the Swedish Cancer Institute is to remain a regional and national leader in all aspects of cancer care. It is a vision that is driven by an unyielding commitment to the health and well being of our patients.
The overall goal in cancer care is to not only offer each patient the best available options for diagnosis and treatment, but to also provide the services that enhance quality of life and make each individual’s cancer experience as free of stress as possible. The Swedish Cancer Institute (SCI) has long excelled in all of these areas – and in 2008 we made a number of exciting advances.

Radiation Technologies

The SCI has an extensive history of innovation, development and clinical implementation of new radiation oncology technologies, dating back three-quarters of a century. This year is no different.

VMAT

In July, Swedish became the first cancer center in the United States to introduce a novel radiation therapy delivery technique called VMAT, or volumetric modulated arc therapy. This advanced form of radiation treatment is the most precise and efficient delivery system for radiation treatment ever developed.

During a VMAT treatment, the radiation machine rotates around the patient in a series of arcs delivering focused beams of radiation to the cancer. The shape and intensity of the radiation beams change as the machine rotates. These features mean that in effect the beam of radiation can come from an infinite number of angles, thereby significantly reducing the dose of radiation to normal tissues while increasing the dose to the cancer.

In a series of studies that have been presented at national and international meetings, investigators at the SCI have demonstrated consistently superior treatment plans with this technique. Another advantage is that the delivery of radiation can be done up to three times faster than conventional IMRT treatments, which should be of significant benefit to patients.

Lung-Saving Brachytherapy

The SCI is participating in a national, multicenter clinical research trial through the American College of Surgeons Oncology Group (ACOSOG) that offers many potential benefits for high-risk patients with non-small cell lung cancers that are three centimeters or smaller. As they operate, surgeons are able to resect less of the lung because they lay down a mesh implanted with radioactive seeds that will deliver radiation directly to the site over a three-month period. This allows for smaller surgical margins that spare more lung tissue, as 100 percent of the radiation dose is delivered within five millimeters of the seeds. Swedish surgeons first performed this procedure in August.

Calypso® for Breast Cancer

Women with breast cancer who do not want a mastectomy often choose a lumpectomy, a reasonable option when followed by daily whole breast irradiation for a period of six to seven weeks. For some women, however, time and travel prevent this option. The result: a new breast radiation technique – APBI, or accelerated partial breast irradiation – where radiation is given in one week versus seven. However, with APBI radiation the radiation has to be more focused, which has led to problems caused by daily variations in patient setup, patient movement...
and breast deformation. These factors make precise targeting difficult, which in turn has limited the adoption of APBI.

A possible solution for the APBI targeting lies with the Calypso 4D Localization System. Calypso has traditionally been used with prostate-cancer patients, to pinpoint a tumor’s location with greater accuracy and continually monitor its position in a real-time fashion during radiation treatment. For the past year, Swedish has been conducting a clinical study to test the feasibility of using Calypso with APBI, thereby offering breast-cancer patients a new and potentially beneficial radiation option. Study results are pending.

**Swedish Breast Care Express**

In October, Swedish officially rolled out its second mobile mammography coach, to provide high-quality mammograms to women throughout western Washington. The new Breast Care Express is a 34-foot self-contained clinic on wheels that features the latest in digital technology and a wireless broadband communications system for securely transmitting mammograms from remote sites to Swedish radiologists.

With the addition of the second coach, the Swedish Mobile Mammography Program’s goal remains the same as when the first Breast Care Express launched in 2004: to provide convenient breast-cancer screening and increase access to breast-health services for women in underserved areas of western Washington.

The new Breast Care Express, as well as the original, were made possible by community donors and corporate contributors, including PACCAR, which has made a significant philanthropic commitment to the growth of the SCI’s Mobile Mammography Program.

**Cancer Survivor Program**

Widespread survivorship is largely a new phenomenon – new enough, in fact, that until recently cancer survivors had no focused support, no place they could turn for help as they faced their concerns, fears and challenges. This past summer, the SCI improved the survivorship landscape by introducing a new Survivorship Program.

Survivorship is becoming part of the total cancer experience at Swedish. It is embedded in the greater cancer program to help cancer survivors address their unique needs. The program began earlier this year with breast-cancer patients within several SCI medical oncology practices. By the end of 2008, more SCI medical oncology practices will be folded into the program, with plans for also working with the SCI breast surgeons. At the same time, development of the colorectal-cancer pilot will begin.

By summer of 2009, there will be a pilot program in place for many other Swedish cancer patients. This component of the Survivorship Program is advancing in stages while the SCI’s computer system is being upgraded to handle the treatment summaries and the survivor care plans that are integral to the overall survivorship effort.

Though the program remains a work in progress, it already offers everything from a survivor class and survivor events to support groups and the *Life to the Fullest* e-newsletter (please e-mail full.life@swedish.org to receive a copy).
Expanded Patient Navigator Program

Slightly more than two years after the SCI launched a new patient-assistance program in partnership with the American Cancer Society, the size of the program has doubled. A second navigator was added this past March to the Patient Navigator Program at Swedish, which offers guidance for cancer patients, survivors and caregivers to help them navigate the cancer experience.

Whether it is getting patients and caregivers the information they need to make treatment decisions, helping them deal with the day-to-day challenges of living with cancer, or connecting them with community resources, patient navigators can provide help throughout the disease continuum – from the time of diagnosis, through treatment and throughout survivorship. Patient navigators Stephanie Wichmann and Sarah Mathison can be reached at 206-386-2587 and 206-215-6557, respectively.

Quality Oncology Practice Initiative

The Quality Oncology Practice Initiative (QOPI™) is an all-voluntary, oncologist-led, practice-based quality improvement program that is designed to promote excellence in cancer care by helping practices create a culture of self-examination and improvement. The process, sponsored by the American Society of Clinical Oncology, began in spring 2007 at the SCI. It includes measurement, feedback and improvement tools, and examines both the science and the art of cancer care.

Twice a year, Swedish oncology nurses audit two process modules and two disease modules. Three audits have now been completed and the initiative has been very productive, reinforcing the SCI’s quality of care around breast, non-small cell lung and colorectal cancers, as well as symptom management and end-of-life care. The conclusion: the SCI is doing very well in its clinical practices and it’s measurable.

Center for Advanced Brain Tumor Treatment

With more than $3 million in philanthropic support from the community, Swedish and the Swedish Neuroscience Institute launched the new Center for Advanced Brain Tumor Treatment in July. This nonprofit research and treatment facility is the only comprehensive center of its type in the Pacific Northwest. When fully funded, the center will provide tumor patients and their families with a multidisciplinary brain tumor clinic, an integrative care coordinator, clinical trials that offer early and timely access to the latest investigational drugs and treatments, and a comprehensive brain tumor research laboratory.

Brain-tumor specialists at Swedish generally subspecialize in one or two types of brain tumors, which gives patients the benefit of specific, focused expertise. These subspecialists
then collaborate with physicians from the Swedish Cancer Institute as needed, to ensure that their patients receive the full benefit of all the expertise available.

**Lung-Cancer Screening Studies**

The SCI continues to lead the way in studying new screening technology that could potentially result in earlier detection of lung cancer, which is usually diagnosed late when treatment options are less effective. SCI physicians are currently involved in several lung-cancer research efforts designed to develop screening programs that will detect lung cancer as early as possible. These include:

- **VisionGate Cell-CT™**, a technology platform that allows for automated evaluation of lung cells in a patient's sputum. The Cell-CT measures biomarkers for abnormal cells that may be predictive of lung cancer.
- **Menssana Breath Test**, which uses a portable device to collect a patient’s breath and identify potential lung-cancer biomarkers that may be present.
- **FAMRI-IELCAP Collaborative Network**, under which non-smokers exposed to secondhand smoke are being recruited to undergo a free single low-dose CT screening of the chest.

**Philanthropic Support**

Charitable gifts play an ever-increasing and crucial role in Swedish’s ability to provide the greatest level of service to the community. Each year, more than 15,000 individuals, businesses and foundations make donations to Swedish.

Recently, Swedish has launched the largest fundraising campaign in its history, a seven-year, $100 million endeavor that will help Swedish become the one of the best integrated health-care delivery systems in the country. The SCI is a major focus of this campaign, commanding a $21 million goal to raise support for new facilities and expanded clinical programming, including:

- The creation of a new outpatient cancer-care center in the Issaquah Highlands neighborhood to better serve the one-quarter of King County’s population now on the Eastside.
- The development of a new Women’s Cancer Center, designed with a new level of multidisciplinary care and greater patient convenience.

**Research Presentations**

The excellent work and productivity of SCI clinical investigators continues to earn Swedish widespread recognition, as the results are presented at regional and national meetings and conferences. Examples include:

- Lessons learned from 110 consecutive VATS lobectomies for primary, early stage non-small cell lung cancer – Brian Louie, M.D.
- Phase IIII lapatinib plus carboplatin and paclitaxel in stage III or IV relapsed ovarian cancer patients – Saul Rivkin, M.D.
- SWOG 0415 Cetuximab as a Second Line Therapy in Patients with Metastatic Esophageal Cancer – Phase II – Philip Gold, M.D.
- Risk of loco-regional and distant recurrence in Triple Negative T1N0 Breast Cancer – Henry Kaplan, M.D.
- Management of N3 stage IIIB NSCLC: Changes in U.S. physician behavior following ASCO 2007 – Howard J. West, M.D.
- Long-term survival with gefitinib (ZD1839) therapy for advanced bronchioloalveolar lung cancer 9BAC): Southwest Oncology Group (SWOG) study S0126 – Howard J. West, M.D.
Swedish Cancer Registry 2007 Analytic Cancer Site Listing

<table>
<thead>
<tr>
<th>CANCER SITES</th>
<th># OF CASES</th>
<th>% OF CASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuro/Central Nervous System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meninges</td>
<td>65</td>
<td>1.6%</td>
</tr>
<tr>
<td>Brain</td>
<td>114</td>
<td>2.9%</td>
</tr>
<tr>
<td>Other Central Nervous System</td>
<td>42</td>
<td>1.1%</td>
</tr>
<tr>
<td>Head and Neck</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lip and Oral Cavity</td>
<td>27</td>
<td>1.0%</td>
</tr>
<tr>
<td>Pharynx</td>
<td>18</td>
<td>0.5%</td>
</tr>
<tr>
<td>Nasal Cavity/Sinuses/Middle Ear</td>
<td>6</td>
<td>0.2%</td>
</tr>
<tr>
<td>Major Salivary Glands</td>
<td>3</td>
<td>0.1%</td>
</tr>
<tr>
<td>Larynx</td>
<td>14</td>
<td>0.4%</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stomach</td>
<td>41</td>
<td>1.0%</td>
</tr>
<tr>
<td>Small Intestine</td>
<td>12</td>
<td>0.3%</td>
</tr>
<tr>
<td>Colon</td>
<td>121</td>
<td>3.1%</td>
</tr>
<tr>
<td>Rectosigmoid Junction</td>
<td>18</td>
<td>0.5%</td>
</tr>
<tr>
<td>Rectum</td>
<td>57</td>
<td>1.4%</td>
</tr>
<tr>
<td>Anus and Anal Canal</td>
<td>16</td>
<td>0.4%</td>
</tr>
<tr>
<td>Liver/Intrahepatic Ducts</td>
<td>29</td>
<td>0.0%</td>
</tr>
<tr>
<td>Gallbladder</td>
<td>1</td>
<td>0.2%</td>
</tr>
<tr>
<td>Other Biliary</td>
<td>6</td>
<td>0.2%</td>
</tr>
<tr>
<td>Pancreas</td>
<td>63</td>
<td>1.6%</td>
</tr>
<tr>
<td>Other Digestive</td>
<td>6</td>
<td>0.2%</td>
</tr>
<tr>
<td>Thoracic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Esophagus</td>
<td>36</td>
<td>0.9%</td>
</tr>
<tr>
<td>Trachea</td>
<td>1</td>
<td>0.0%</td>
</tr>
<tr>
<td>Bronchus and Lung</td>
<td>385</td>
<td>9.7%</td>
</tr>
<tr>
<td>Thymus</td>
<td>9</td>
<td>0.2%</td>
</tr>
<tr>
<td>Heart/Mediastinum/Pleura</td>
<td>16</td>
<td>0.4%</td>
</tr>
<tr>
<td>Breast</td>
<td>395</td>
<td>22.6%</td>
</tr>
<tr>
<td>GYN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vulva</td>
<td>18</td>
<td>0.5%</td>
</tr>
<tr>
<td>Vagina</td>
<td>8</td>
<td>0.2%</td>
</tr>
<tr>
<td>Cervix</td>
<td>62</td>
<td>1.6%</td>
</tr>
<tr>
<td>Uterus</td>
<td>181</td>
<td>4.6%</td>
</tr>
<tr>
<td>Ovary</td>
<td>138</td>
<td>3.5%</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>0.2%</td>
</tr>
<tr>
<td>Genitourinary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prostate</td>
<td>801</td>
<td>20.3%</td>
</tr>
<tr>
<td>Testis</td>
<td>20</td>
<td>0.5%</td>
</tr>
<tr>
<td>Kidney</td>
<td>81</td>
<td>2.0%</td>
</tr>
<tr>
<td>Renal Pelvis</td>
<td>8</td>
<td>0.2%</td>
</tr>
<tr>
<td>Ureter</td>
<td>4</td>
<td>0.1%</td>
</tr>
<tr>
<td>Bladder</td>
<td>88</td>
<td>2.2%</td>
</tr>
<tr>
<td>Other Urinary Organs</td>
<td>2</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

This site listing reflects the number of analytic cases seen at Swedish Medical Center (all campuses). An analytic patient is one who has been diagnosed or received all or part of their first course of treatment at Swedish. In 2007, Swedish also recorded 620 non-analytic cases. This means a patient has been seen for treatment or consult for persistent or recurrent diseases.
Swedish Offers Full Range of Prostate-Cancer Treatment Options

The Swedish Cancer Institute (SCI) and its affiliated physicians provide the skills, the full selection of therapies and the leading-edge technology that have elevated Swedish to a leadership position in prostate-cancer treatment and care. Combine this with the expertise that comes with diagnosing and treating the largest number of prostate-cancer cases in the Pacific Northwest, and Swedish is well positioned to offer its patients the best possible results, including survival rates.

Prostate cancer is the most common cancer in men and makes up about 20 percent of all analytic cancer cases seen at Swedish in a given year. In 2007, 801 patients were treated at Swedish for prostate cancer. In comparison to many other cancers, the mortality rate for prostate cancer is low. And this is particularly true if the disease is caught in its early stages and treated at a cancer center that offers the latest and most successful treatment options.

At Swedish, we provide all the recommended prostate-cancer therapies – and understand that the most effective, most appropriate treatment depends on the individual patient and should be decided after consultation between a patient and his physician (generally a radiation oncologist, medical oncologist and/or a urologist). PSA level, stage of the cancer, pathology scores, histologic type, co-morbidities, and the potential benefits and side effects of the different treatments should all be considered. The SCI’s prostate-cancer treatment/therapy options include:

**da Vinci® Surgical System**

Swedish acquired a second da Vinci Surgical System in late 2007, two years after being the first cancer center in Washington state to use the four-armed robot-assisted technology for removing cancerous prostate glands. The minimally invasive da Vinci system, with its four robotic arms and 3-D camera, allows urologists to operate with smaller incisions, greater precision and a better view of the prostate than with traditional surgery. Urologists now use the da Vinci technology on more than 95 percent of all radical prostatectomies performed at Swedish – 300 to 350 procedures a year. Benefits to patients include a shorter hospital stay and a quicker recovery. Frequently, delicate nerves that control bladder and sexual function can be spared.

Some men believe that if you have a cancer, then removing it is the most attractive option, says urologist and surgeon Joel Lilly, M.D. “For these men, the da Vinci system provides confidence. It’s minimally invasive and comes with all of the benefits a minimally invasive procedure offers. That, and the expertise of our surgeons, gives patients confidence that the SCI is a first-class cancer center.”

By 2007, Swedish’s da Vinci system was reportedly one of the busiest in the country, as it is also used for gynecological procedures and partial nephrectomies. This prompted the acquisition of the second, more advanced system – the da Vinci S HD Surgical System. “Swedish,” says Dr. Lilly, “now has the best available robotic technology in the country.” (See related article.)
Brachytherapy

Swedish-affiliated physicians at the Seattle Prostate Institute pioneered the use of the brachytherapy technique known as radiation-seed implantation and, at present, are treating between 500 and 600 prostate-cancer patients a year with the procedure. For their work in this field, these physicians have earned international recognition — and may soon receive more recognition for developing a new brachytherapy technology.

Radiation oncologist Peter Grimm, D.O., and his colleague, radiation oncologist John Sylvester, M.D., have been working for the past two years on a “thin strand” brachytherapy. “This is the first technological development in brachytherapy since the rapid strand was developed in 1997,” says Dr. Grimm, director of clinical research at the Seattle Prostate Institute. “It is a big step, and we’re the first in the world to use it.”

The thin strand technology utilizes a much smaller radioactive seed, but one that “packs the same punch” and offers patients potential benefits that include less trauma, improved dose distribution, better cancer control, better potency and less chance of requiring a catheter, says Dr. Grimm. This new technology is currently being used in a clinical research protocol – Assessment of Thin Radioactive Permanent Seeds for Prostate Cancer – that will be launched in early October and will enroll 100 patients through early 2009. Those patients will be tracked for up to 20 years to assess side effects and recurrence.

To date, more than 10,000 prostate-cancer patients have received their brachytherapy treatments at Swedish, where two techniques are used: permanent seed implants, which remain in place for weeks or months, and high-dose implants, where the radioactive seeds are placed within the tumor for about an hour on two consecutive days.

Calypsō® 4D Localization System

The SCI rolled out its Calypso 4D Localization System in early 2007, to become the first cancer-care program in the world to give prostate-cancer patients commercial access to precision-guided radiation therapy with continuous, objective organ-motion tracking accuracy. By mid-2008 the SCI was still leading the world in this area, having treated more patients with Calypso than any other cancer center.

Calypsō was developed in part through the collaborative effort of Seattle’s Calypso Medical Technologies and the Swedish Cancer Institute.

CyberKnife

The Seattle CyberKnife Center at Swedish is treating patients with prostate cancer as part of a clinical research study. The CyberKnife uses an advanced, robotically controlled linear accelerator to concentrate hundreds of high-energy radiation beams on the tumor. By using real-time image guidance, the CyberKnife adjusts for patient movement, targeting with 1 mm precision. “This is a very accurate method of delivering radiation, and similar to brachytherapy in terms of delivering a high dose of radiation during radiation treatment. The technology uses tiny electromagnetic sensors – about the size of a small grain of rice – that are implanted in the prostate prior to treatment. Clinicians are instantly alerted if the prostate is not properly aligned with the radiation beam.

“At the SCI, we treat as many as 20 prostate-cancer patients a day using Calypso,” says radiation oncologist Vivek Mehta, M.D. “Patients come here seeking the technology, but they also come seeking experience – SCI physicians have a proven track record using Calypso. This provides a high level of patient comfort.”

Calypsō was developed in part through the collaborative effort of Seattle’s Calypso Medical Technologies and the Swedish Cancer Institute.
with minimal or no damage to surrounding tissue,” says radiation oncologist Robert Meier, M.D. “It is surgery without a knife.”

The SCI, which has the only CyberKnife in the Puget Sound area, is currently the lead site in a clinical research trial – Prospective Evaluation of Cyberknife Stereotactic Radiosurgery for Low- and Intermediate-Risk Prostate Cancer – that will enroll 300 patients at 15 sites nationwide by 2009.

“The trial will help confirm the efficacy of CyberKnife in relation to other treatment options,” says Dr. Meier, the research trial’s principal investigator. “We believe it will show that cancer-control rates with the CyberKnife are as good or better than with conventional radiation therapy, and will also show that the side effects are quite low and that quality of life will be very good.”

Medical Oncology

It has been well established in recent years that chemotherapy, when combined with surgery, radiation and other treatments as part of a multidisciplinary approach to care, has a major role in managing prostate cancer.

“Docetaxel has become the standard chemotherapy treatment for advanced cases. It got our foot in the door,” says SCI medical oncologist Howard (Jack) West, M.D. “Now we are moving beyond the role of docetaxel and looking at other drugs that can also improve the survival rates in advanced cases. Some are conventional agents and some are novel therapies, such as antibody-based approaches.”

Dr. West is “very optimistic” that the Swedish Cancer Institute and its physicians will have more chemotherapy tools within the next few years and says that current patients will be the beneficiaries. “Now that we know chemotherapy can improve the survival rate in patients with advanced cases of prostate cancer, we can work with high-risk patients with localized disease to improve their treatment plan. We’ll be able to consider a more individualized or trial-based approach.”

At the Swedish Cancer Institute, an across-the-board commitment to offering the full selection of prostate-cancer therapies – as well as developing promising new treatment options – are key to the SCI’s leadership position in the prostate-cancer field.

<table>
<thead>
<tr>
<th>TREATMENT</th>
<th>2005 NCDB</th>
<th>2005 SWEDISH</th>
<th>2007 SWEDISH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US CASE#</td>
<td>WA CASE #</td>
<td>CASE#</td>
</tr>
<tr>
<td>Surgery Only</td>
<td>49,682</td>
<td>1,257</td>
<td>166</td>
</tr>
<tr>
<td>Radiation Only</td>
<td>26,885</td>
<td>960</td>
<td>425</td>
</tr>
<tr>
<td>Rad/Hormone</td>
<td>18,448</td>
<td>287</td>
<td>85</td>
</tr>
<tr>
<td>Surg/Hormone</td>
<td>2,753</td>
<td>73</td>
<td>12</td>
</tr>
<tr>
<td>Hormone Only</td>
<td>5,531</td>
<td>105</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>4,513</td>
<td>116</td>
<td>13</td>
</tr>
<tr>
<td>No Treatment</td>
<td>10,169</td>
<td>189</td>
<td>8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>117,981</td>
<td>2,987</td>
<td>715</td>
</tr>
</tbody>
</table>

PROSTATE CANCER TREATMENT COMPARISON DATA

FIVE-YEAR SURVIVAL RATES FOR PROSTATE CANCER (DIAGNOSIS DATE 1998-99)

<table>
<thead>
<tr>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>STAGE 3</th>
<th>STAGE 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATIONAL</td>
<td>76%</td>
<td>85%</td>
<td>87%</td>
</tr>
<tr>
<td>WASHINGTON STATE</td>
<td>76%</td>
<td>90%</td>
<td>89%</td>
</tr>
<tr>
<td>SWEDISH</td>
<td>86%</td>
<td>94%</td>
<td>97%</td>
</tr>
</tbody>
</table>

Sources: National Cancer Data Base (NCDB) and Swedish Medical Center Cancer Registry
SCI is a Leader in Robotic-Assisted Surgery

The Swedish Cancer Institute (SCI) was the first in Washington state to offer prostate-cancer patients the minimally invasive benefits of the four-armed da Vinci Surgical System. The year was 2005 – and the SCI has remained the region’s leader in robotic-assisted technology ever since.

By 2007, the number of robotic-assisted prostate procedures performed at Swedish had grown to more than 250, making Swedish’s da Vinci Surgical System one of the most productive in the country. Today, that number is closer to 350 – and the total number of da Vinci procedures performed is even greater. In 2006 Swedish became the first hospital in the Pacific Northwest to apply the technology to gynecological cancer and procedures, and to partial nephrectomies.

In what has been called the “most exciting surgical advance in GYN oncology in the past two decades,” the da Vinci system is now used at Swedish for a majority of cervical cancers, endometrial cancers and early stage ovarian cancer, as well as pelvic reconstruction and complex pelvic surgeries. It is also useful for removing benign fibroids while preserving the uterus. GYN oncology, say SCI surgeons, is now the fastest-growing area of robotic surgery.

Simultaneous to the GYN applications, the SCI became one of the few cancer centers in the U.S. to offer robotic partial nephrectomy, utilizing the improved visualization and dexterity of the da Vinci system to remove tumors and repair defects in the kidney. This is done under temporary vascular occlusion, which allows removal of the tumor in a bloodless field. Robotic partial nephrectomy is considered the “next big wave” in robotic surgery, though at this point, Swedish remains the only cancer center in the region to offer the procedure.

The multiple uses of Swedish’s da Vinci technology, and the overall volume, led to the acquisition of a second system – the da Vinci S HD Surgical System – in November 2007. 3-D high definition endoscopy is integrated with state-of-the-art robotic technology.

Under the direction of James Porter, M.D., the medical director of robotic surgery at Swedish, the number of robotic prostatectomies has surpassed the number of open procedures. The five small incisions that replace a large open incision in the lower abdomen offer patients reduced blood loss, reduced postoperative pain, a shorter hospital stay and a faster return to normal activities.

With da Vinci, SCI surgeons can virtually put their hands inside the patient. The robot’s arms bend naturally around corners and surgeon hand tremor is essentially eliminated. This precision is particularly important during prostate surgery, as it helps surgeons spare the delicate nerves that control bladder and sexual function.

This updated da Vinci system enables new, minimally invasive options for a number of complex surgical procedures and ensures that SCI patients continue to have access to the best available technology and surgical expertise.

The generous contributions of Swedish donors and the support of the Swedish Medical Center Foundation helped make Swedish’s first da Vinci Surgical System possible. The Foundation is currently seeking additional support for the second da Vinci system.
2007 Annual Report Bibliography

This bibliography features recent publications and presentations by Swedish Cancer Institute members and affiliated physicians.


Choi JY, Neuhauser ML, Barnett M, Hong CC, Kristal AR, Thorquinst M, King IB, Goodman GE, Ambrosone CB. Iron intake, oxidative stress-related genes (MnSOD and MPO), and prostate cancer risk in CARET cohort. Carcinogenesis. 2008 Feb 22; [Epub ahead of print]


