



2012 Cancer Program Annual Report

 Advocate
Christ Medical Center

Inspiring medicine. Changing lives.

*Our constant purpose is to bring the best treatments and services
to our patients and their families.*

A Message from the Cancer Committee Co-Chairs

Introduction by Thomas M. Hoeltgen, MD and James L. Weese, MD, FACS

The last year has been one of significant accomplishments. One of the most exciting achievements is that the Cancer Program achieved Host Affiliate status with MD Anderson through the MD Anderson Physicians Network®—requiring a rigorous evaluation of the quality of our hospital services and physician practices. In addition, Advocate Christ Medical Center is pleased to have been rated by *US News and World Report* in July 2011 as a high-performing hospital in cancer. We are very pleased to be able to offer superb quality and comprehensive services to our patients and their families.

We are proud to present the 2012 Annual Report, highlighting 2011 data and the accomplishments of our team in providing progressive, innovative and leading-edge care for the sole benefit of our patients and community. We are most fortunate in having been able to attract nationally known physicians to our program to help strengthen our ability to diagnose, treat and care for our patients in the best possible way.

Highlighted below are some of the Cancer Program's accomplishments:

- Received a three-year accreditation with commendation from the American College of Surgeons (ACoS) Commission on Cancer (CoC) in the 2012 survey.
- Recruited Drs. Adam Riker (surgical oncologist-melanoma, sarcoma, and breast), M. Patrick Lowe (gyne-onc and robotics surgery), Richard Belch (gyne-onc), and Eloise Chapman-Davis (gyne-onc).
- Received delivery on the "Mobetron," an intraoperative radiation therapy machine that will expedite care by delivering a radiation treatment during the procedure thereby eliminating the need for follow-up, daily radiation therapy for select patients.
- Established a multidisciplinary clinic for patients with breast cancer.
- Established patient navigators for GI, lung, and our multi-disciplinary clinics which complement our previous breast navigation program.
- Hosted an annual symposium, featuring advances in gynecologic cancers, with keynote speakers from MD Anderson.
- Hosted an annual pediatric oncology symposium.
- Offered free monthly educational programs to the community, as well as some screening programs.
- Participated in the Great American Smokeout, partnering with the Respiratory Therapy department.
- Underwent a successful audit as a member of the Eastern Cooperative Oncology Group (ECOG).
- Partnered with the American Cancer Society to bring a Masters-prepared social worker to the program to provide navigation services for patients and families.
- Collaborated with and was a major sponsor of the American Cancer Society Relay for Life and Making Strides against Breast Cancer events.
- Hosted "Paint the Town Pink"—a breast health community education program offering Marissa Weiss, MD, a renowned leader in the field of breast cancer and founder of BreastCancer.org, as the featured speaker.
- Hosted an annual Survivor's Day Luncheon Celebration with more than 450 participants in 2011.
- Expanded the Genetics High Risk Assessment Program to Tinley Park at the Advocate Christ Medical Center Southwest campus and to Advocate South Suburban Hospital.



- Significantly increased the availability of new clinical trials and patient enrollment in those trials.
- Oncology EMR approved as a system-wide initiative as a result of Advocate Christ Medical Center's cancer program.
- Initiated the "Surviving and Thriving" Survivorship Education series and received a \$4,000 grant from Livestrong to lead "Cancer Transitions," a specialized 6-week series of educational program offerings for survivors.
- Tumor boards were expanded from breast, lung and CyberKnife to include neuro-onc, hematologic malignancies, GI, GU and gynec-onc, in addition to a weekly MD Anderson Physicians Network® video-conferenced tumor board.
- Received a \$240,000 grant from The Coleman Foundation to support the development of a Survivorship Clinic.
- The Center for Breast Care received recognition as a Center of Excellence by the American College of Radiology.
- The Hospital continues as an active participant in the Chicago Breast Cancer Quality Consortium.
- Received approval for a dedicated dietitian for oncology outpatients to complement the dietitian for oncology inpatients.
- Received a grant from Southwest Airlines to assist patients in need with transportation to tertiary and quaternary health care facilities for second opinions or subsequent care—augmenting our relationship with MD Anderson Physicians Network®.

Lastly, we are looking forward to an exciting year ahead of us with the planned expansion of our campus and an entire floor dedicated to the Cancer Institute in the new outpatient services building, scheduled to open in early 2014. We sincerely look forward to the next year of challenges in meeting our patients' needs and providing world-class care.

We congratulate and thank the medical staff, nurses, ancillary staff members and cancer registry team on their accomplishments during the past year. Our constant purpose is to bring the best treatments and services to our patients and their families. We hope you enjoy reading this report, which underscores our relentless commitment to state-of-the-art personalized and individualized care.

Sincerely,

Thomas M. Hoeltgen, MD
Co-Chair, Cancer Committee

James L. Weese, MD
Medical Director, Cancer Institute

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Advocate Christ Medical Center has become the first and only hospital in Illinois to establish an exclusive affiliation with MD Anderson Physicians Network®. MD Anderson Physicians Network is a supporting organization of The University of Texas MD Anderson Cancer Center, one of the world's most respected leaders in cancer care. MD Anderson Cancer Center has been ranked No. 1 in cancer care in the United States by *U.S. News & World Report's* "Best Hospitals" survey for six consecutive years and nine of the past 11 years.

The MD Anderson Physicians Network affiliation is provided selectively only to hospitals and their medical staffs who have successfully undergone an extensive evaluation process, guided by evidence-based treatment standards and quality management. In October 2011, shortly after the affiliation with Christ Medical Center was announced, a group of medical center physicians representing seven medical and surgical specialties—hematology/oncology, radiation oncology, thoracic surgery, general surgery, surgical oncology, gynecologic oncology and urology—was recognized for meeting the criteria necessary to achieve approval by MD Anderson Physicians Network.

The affiliation with MD Anderson Physicians Network provides approved physicians access to the evidence-based guidelines, treatment plans and concordance studies developed by the experts at The University of Texas MD Anderson Cancer Center. These are disease-specific guidelines for cancer treatment, cancer prevention, early detection and follow-up care. They offer important, advanced options for patients.

Recently, as part of its relationship with MD Anderson Physicians Network, the Cancer Institute underwent its first concordance review. The network randomly selected charts of cancer patients treated between Nov. 1, 2009 and Feb. 28, 2011. Twenty-five charts each from patients with breast, colon, prostate and non-small-cell lung cancers and nine charts from patients treated for rectal cancer were reviewed to determine compliance with MD Anderson clinical practice guidelines, which are very similar to NCCN (National Comprehensive Cancer Network) guidelines. Meeting these guidelines indicates an organization engages in evidence-based practices.

The review searched for source documents in all aspects of care of the cancer patients selected. All available records, including hospital records, laboratory and radiology studies and physician office records, were evaluated by a team sent from MD Anderson Physicians Network. Overall, results of the review were positive and were presented to physician and administrative leadership at Christ Medical Center. Cancer Institute staff created performance enhancement plans for areas where there were opportunities for improvement. Those plans were submitted to MD Anderson Physicians Network for review and comment.

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The University of Texas
MD Anderson Cancer Center

The Cancer Institute uses an Electromagnetic Navigation Bronchoscopy (ENB) system that enables physicians to diagnose, stage and prepare to treat distal lung lesions in a single procedure.

Clinical Programs

Breast Cancer Program

Advocate Christ Medical Center's breast cancer program has been treating patients for more than 10 years and is led by breast surgeon, Dr. Barbara Krueger. The team features medical oncologists, radiation oncologists, plastic surgeons, a breast health specialist/advanced practice nurse, genetic counselors and nationally renowned professionals like Dr. Adam Riker, a surgical oncologist specializing in breast surgery, melanoma and sarcoma.

Nowhere is the breast cancer program's coordinated and integrated approach to care more apparent than in the multidisciplinary clinic where patients can be referred to obtain a primary cancer evaluation, receive a second opinion, or discuss the option of participating in clinical trials. The goal is to ensure that patients receive a complete consultation with every specialist in one day and that the results are communicated to the referring physicians.

The Advocate Christ Center for Breast Care is recognized for its successful use of the SAVI™ applicator for accelerated partial breast irradiation. The technology, which has become an alternative to traditional, external-beam radiation, delivers a form of radiation therapy—breast brachytherapy—from inside the breast, shortening treatment time and reducing exposure of healthy tissue to radiation. The SAVI™ applicator offers important advantages for women with early-stage breast cancer.

Thoracic Oncology Program

The thoracic cancer program combines use of minimally-invasive techniques and leading-edge technology with extensive knowledge of cancer treatment options. The weekly interdisciplinary lung conference enables a team of specialists, including board-certified pulmonologists, medical oncologists, radiation oncologists, thoracic surgeons, pathologist, research nurse and an advanced practice nurse, to review each case and outline a course of treatment. Using evidence-based recommendations and approved national guidelines, the team creates a customized plan for each patient. The thoracic

oncology program is led by Paul Gordon, MD, FACS, a board-certified thoracic surgeon.

In the United States, lung cancer is a leading cause of cancer-related deaths, but early diagnosis offers hope. For example, the Cancer Institute uses an Electromagnetic Navigation Bronchoscopy (ENB) system that enables physicians to diagnose, stage and prepare to treat distal lung lesions in a single procedure. The technology is comparable to GPS devices found in automobiles. The Christ Medical Center Cancer Institute combines Electromagnetic Navigation Bronchoscopy and CyberKnife® radiosurgery in the treatment of lung cancer patients.

Gastrointestinal (GI) Cancer Program

Under the leadership of nationally renowned surgical oncologist, James Weese, MD, Advocate Christ Medical Center's gastrointestinal cancer program provides patients with numerous options, depending upon the state of their disease and medical condition. From gastroenterologists and interventional radiologists to surgical and medical oncologists to radiation oncologists, the highly trained physicians at Christ Medical Center work together to create for each patient a customized treatment plan that can include evidence-based therapy and participation in clinical trials.

Gastrointestinal cancer refers to malignancies of the gastrointestinal tract, including the esophagus, stomach, duodenum, pancreas, liver, gall bladder, biliary tract, small bowel, colon, rectum and anus. As is the case with colorectal cancer, the most prevalent gastrointestinal cancer and the third most commonly diagnosed cancer in the United States, early detection of gastrointestinal cancers can lead to better patient outcomes. Using cutting-edge technology, such as endoscopic ultrasound, gastroenterologists can detect and stage esophageal, pancreatic, stomach and hepatobiliary tumors that are less than a centimeter in size and that would otherwise be invisible on a Computed Tomography (CT) scan or Magnetic Resonance Imaging (MRI) image.

Gynecologic Oncology Program

The gynecologic oncology interdisciplinary team treats cancers of the uterus (endometrium), ovary, cervix, vulva, vagina, peritoneum, and fallopian tube. The team, guided by Yvonne Collins, MD; Patrick Lowe, MD (noted robotics gynecologic-oncology surgeon); Eloise Chapman-Davis, MD; and Richard Belch, MD, provides comprehensive, multidisciplinary care for women with known or suspected gynecologic cancer. Treatment plans offer placement of brachytherapy devices and other innovative modalities, as well as surgical procedures like radical pelvic exenteration, and gastrointestinal, urological, and reconstructive surgery.

The Cancer Institute participates in the Gynecologic Oncology Group (GOG), a national research organization funded by the National Institutes of Health to provide patients access to cutting-edge therapies.

Genitourinary (GU) Cancer Program

At Advocate Christ Medical Center's Cancer Institute, patients have access to the full spectrum of treatment for genitourinary cancers, including prostate, kidney, testicular, penile and bladder cancers. When a patient is diagnosed with a genitourinary cancer, experience matters. Fellowship-trained urologists at the Cancer Institute see more newly diagnosed cases and perform more procedures than most medical centers in this area—more radical prostatectomies, more laparoscopic nephrectomies and more cystectomies. High volumes translate into better patient outcomes. Among a wide range of minimally invasive procedures performed in the genitourinary cancer program are laparoscopic and robotic resections, laparoscopic cryoablations and radiofrequency ablations to treat kidney tumors without large surgical incisions. Advanced technologies, such as the CyberKnife® Radiosurgery System and brachytherapy (radioactive seed implants), offer patients much more targeted treatments without major surgery and long recovery times. High-intensity-focused ultrasound is another minimally invasive treatment that is available and involves no incisions.

Neurologic Oncology Program

In collaboration with Christ Medical Center's highly advanced Neurosciences Institute, the Cancer Institute's neurologic oncology program offers a unique combination of advanced diagnostics, evidence-based care, clinical trials and cutting-edge treatment technology. The program's exceptional interdisciplinary team of neurologists, neurosurgeons, medical oncologists, radiation oncologists, advanced practice nurses in oncology, and a neuropathologist treat a wide range of neurologic cancers in both adult and pediatric patients—from primary and metastatic brain tumors to spinal cord and nervous system cancers, as well as the neurologic complications of cancer. Neurologic-oncology case conferences are held regularly in order for the clinical caregivers to share findings, discuss collectively different approaches to care and coordinate a plan for the best treatment options for patients.

Melanoma Program

The melanoma program specializes in the comprehensive management of patients with cancers of the skin, including melanoma, basal and squamous cell carcinoma and rarer types, such as Merkel cell carcinoma and dermatofibrosarcoma protuberans of the skin. Our physicians, who represent a variety of specialties—surgical oncology, medical oncology, radiation oncology, interventional radiology, dermatology, dermatopathology and plastic surgery, bring a team-approach philosophy to the treatment of skin cancer patients.

Under the leadership of Adam I. Riker, MD, a Fellow of the American College of Surgeons and founding member of the Society for Melanoma Research, the melanoma program combines its extensive team experience in skin cancer treatment, including sentinel lymph-node mapping procedures, complex surgical approaches and plastic surgical reconstruction, with early diagnosis and prevention of melanoma and other skin cancers. The program also offers a growing portfolio of melanoma-specific clinical trials for patients in stages III and IV of disease.



As part of its comprehensive care programs for cancer patients, the Cancer Institute uses the latest technologies designed to enhance diagnosis, make treatments more effective, reduce pain and speed recovery.

IOERT

In 2011, planning was already underway to install and operate an advanced system for delivering radiation therapy by late-2012. Called intraoperative electron radiation therapy (IOERT), the technology delivers a concentrated beam of radiation directly to a tumor site during cancer surgery, while sparing healthy tissue. Until now, patients needing radiation therapy would first undergo surgery and then be transported to another area for radiation treatment. This technology will allow a surgeon and a radiation oncologist to deliver a full dose of radiation into the tumor bed in the operating room immediately after the tumor has been removed.

Use of IOERT not only is timesaving, but lifesaving in its effectiveness in treating cancer patients. Physicians can move normal tissue out of the field during surgery, allowing them to give intense radiation to the tumor bed without damaging a lot of normal tissue. In selected cases, neither radiation nor chemotherapy would be required following the surgery.

Initially, IOERT technology will be used to treat early breast cancer; eventually it will be used for other cancers, including cancers of the stomach and pancreas.

CyberKnife®

Like IOERT, CyberKnife® is capable of delivering highly precise doses of radiation. However, the technology is utilized by physicians on an outpatient basis to treat patients who have hard-to-reach tumors, complex vascular malformations and other disorders that are difficult to treat using more standard therapies. The technology consists of a lightweight linear accelerator and image-guided system that delivers multiple, high-energy beams from various points outside the body. These beams become powerfully effective when they converge with pinpoint accuracy at the site of the tumor. Because of the technology's effectiveness, the number of required radiation treatments often can be dramatically reduced.

Patients undergoing CyberKnife® therapy normally do not require anesthesia and can return to work or other everyday activities almost immediately without a required hospital stay. The technology is proving particularly invaluable for elderly patients who, because of age or other medical conditions, will not tolerate standard surgery. It also is giving options—and hope—to patients whose conditions have been untreatable in the past.

Although the technology may eventually prove effective in delivering radiation to abnormalities found almost anywhere in the body, including the stomach, pancreas, head and neck, physicians at the Cancer Institute currently are using the system primarily to treat lung cancers. In fact, results of the Institute's work indicate that CyberKnife® is 85 percent to 90 percent effective in controlling local lung tumors.

Interventional Radiology (IR)

Interventional radiology is a medical specialty that integrates clinical and imaging-based diagnosis with minimally invasive therapy. The specially trained teams of board-certified physician subspecialists, nurses and technologists in interventional radiology perform minimally invasive diagnostic tests and targeted therapies using X-ray, computed tomography (CT), ultrasound, and magnetic resonance imaging (MRI). Many of the procedures done in IR today required traditional surgeries only a few years ago.



Applying state-of-the-art techniques, interventional radiologists guide needles, small tubes (catheters), laser devices or other tiny instruments to deliver treatments to specific areas throughout the body. These treatments are generally easier for patients to tolerate because the procedures require no large incisions, pose reduced risk, cause less pain and generally result in reduced recovery time. Many of these treatments can be done on an outpatient basis.

In cancer treatment, interventional radiology is proving useful in cryoablation therapy (freezing tumor cells) in kidney and lung cancers; radiofrequency ablation (delivering cell-killing heat) in treatment of lung, liver and kidney cancers; chemo-embolization (delivering high-intensity chemotherapy treatment to a tumor); yttrium transarterial radiation therapy (using minimally invasive techniques to deliver radioactive microspheres to liver tumors); and port placement. Most IR therapies are performed either for patients who are not good candidates for surgery or in conjunction with operative procedures.

Robotic Surgery

Robotic-assisted surgery has had a significant impact on the minimally invasive surgical approach to patients with gynecologic malignancies in the United States. The *daVinci Surgical System* was cleared for use by the U.S. Food and Drug Administration in 2005 for gynecologic surgery. Robotic technology incorporates three-dimensional stereoscopic vision and wristed instrumentation that allows for better dexterity and precision than can be achieved with traditional laparoscopy. Robotic surgery has applications in the treatment

and management of uterine, cervical, and some ovarian cancers. Peer-reviewed medical journals have reported improved surgical outcomes when a robotic surgical approach is used to treat uterine, cervical, and some ovarian cancers as compared to the traditional open surgical approach. A robotic surgical approach is associated with a shorter hospital stay, less blood loss, fewer surgical complications, and a quicker recovery.

The Cancer Institute at Advocate Christ Medical Center has two state-of-the-art da Vinci Si Surgical Systems with a dual console system. The hospital is one of a few across the country to also have a da Vinci Surgical Simulator system. This system allows surgeons to incorporate advanced surgical simulation training to enhance patient safety and outcomes. Utilizing this technology, approximately 425 robotic surgical procedures were performed at Advocate Christ Medical Center in the specialties of gynecology, urology, and thoracic surgery.



Multidisciplinary Oncology Clinic

Decisions about cancer treatment present a difficult challenge for patients, primary care physicians and specialists. When a patient feels a lump, has systemic symptoms, notes blood in their sputum or stools, or is given a definitive diagnosis of cancer, the patient's anxiety level increases markedly. It is at this time that the option of a multidisciplinary oncology clinic becomes important to our patients, their families and physicians.

In 2009, we established the first of our multidisciplinary oncology clinics (MDOC) with a focus on breast cancer. This evaluation clinic provides the services of all cancer specialists in a one-stop-shop approach that helps the patient get the best possible treatment decision in the timeliest fashion. The patient is offered a multidisciplinary evaluation that includes diagnosis confirmation, staging of disease and evidence-based treatment plan options. Additional goals of the MDOC are to provide opportunities to explore appropriate clinical trials and second opinions per request.

The patient is also introduced to an Advanced Practice Nurse (APN) Navigator, specific to the cancer specialty, providing support and education to the newly diagnosed cancer patient and family. This APN Navigator will assist patients to access and chart a

course through the health care system, overcoming barriers to quality care.

In the upcoming year, other site-specific clinics will be established in the areas of gastrointestinal, lung, gynecologic and genitourinary cancers. Nowhere is this coordinated approach to care more evident than within a multidisciplinary clinic setting.

The visit to the clinic is coordinated by an advanced practice nurse (APN) who has expertise in oncology care. She ensures that the patient is evaluated in a timely manner by appropriate specialists. In addition, she confirms contact information, presents available treatment guidelines and clinical trials to physicians, and contacts the research nurse in order to discuss clinical trials when appropriate. The APN also assures that the referring physician is contacted at the conclusion of the clinic visit, and a preliminary report of the visit and recommended treatment plan are faxed or e-mailed to the referring physician's office.

The introduction of multi-disciplinary clinics is designed to provide a patient-centered, coordinated approach that will decrease time from diagnosis to definitive treatment, enable good communication among all treating physicians and reduce the anxiety level of the patients and families going through this challenging journey.

Genetic Cancer Risk Assessment Program

Genetics has a powerful role to play in the prevention and treatment of cancer. The causes and origins of cancer are multifactorial, involving the interaction of lifestyle, medical, environmental and genetic factors. The base of knowledge being gained in cancer genetics helps improve our understanding of cancer biology, assists us in identifying individuals at risk for cancer, and aids in increasing our ability to characterize different cancers and establish treatment tailored to those findings. In summary, cancer genetics has an impact on all aspects of managing cancer—prevention, detection and treatment.

With this in mind, the Cancer Institute established a genetics division and a Genetics High Risk Assessment Program to support our cancer patients and their family members. For people who have a personal or family history of cancer,

understanding and managing their risk for cancer is extremely important. Our program offers hereditary cancer risk assessments, genetic counseling and genetic testing performed by our specially trained and licensed genetic counselors. We provide information needed to make medical decisions about how to manage the risk for cancer.

In 2011, the genetic counselors saw more than 200 new patients and provided consultation to those patients and their physicians. They attended the breast, gynecologic-oncology and gastrointestinal case conferences and offered expert opinions during case reviews. In addition, they provided 17 educational offerings throughout the year to a variety of audiences, including medical students, residents, physicians, support groups, nurses and the community at large.



A diagnosis of cancer brings many challenges for patients and their loved ones. It is common to feel overwhelmed by the amount of new information and decisions to be made. Understanding of the “What comes next?” is where the disease-specific clinical nurse specialists at Advocate Christ Medical Center come into play. These advanced practice nurses, who have a disease-site-specialty, are available to assist and navigate the patient with one-on-one support through the cancer experience. They can help steer patients and their families to appropriate care and treatment that could dramatically improve patients’ chances of getting the best care and have an opportunity to live with cancer as a manageable disease.

Some of their clinical responsibilities to patients include, but are not limited to:

- Streamlining the patient’s care
- Assessing clinical, emotional, spiritual, psychosocial, and financial needs
- Guiding through the complex treatment “maze” and lessening any confusion about the processes involved

- Eliminating barriers to care
- Ensuring patients receive a treatment plan that is understandable, feasible and within national guidelines
- Providing patient education and directing patients and families to available and reliable resources
- Facilitating access to clinical trials and second opinions upon request
- Providing information, history, screening and diagnostic testing, films/discs, and pertinent reports for multi-disciplinary conferences
- Helping to provide hands-on care and referrals for support services

The Cancer Institute has three “Advanced Practice Patient Navigators,” who act as liaisons between patients and the patient care team in order to help coordinate care and ensure all health care needs are met. These nurses include a breast health specialist, gastrointestinal health specialist, and a lung health specialist. The Multidisciplinary Oncology Clinic (MDOC) is also coordinated by an Advanced Practice Oncology Nurse (APON).



Patricia Mullenhoff, APN
Lung Cancer



Deborah Stlaske, APN
Gastrointestinal Cancer



Patrice Stephens, APN
Breast Cancer

American Cancer Society Clinical Patient Navigator

Since positioning a clinical patient navigator in an office on Advocate Christ Medical Center's Oak Lawn campus in October of 2011, the American Cancer Society (ACS) has added a personal touch to the services that it provides patients through its partnership with the Cancer Institute.

The ACS clinical patient navigator, who is available full time Monday through Friday and has a background in clinical psychology and counseling, meets personally with cancer patients and their families, including all of the chemotherapy and radiation patients receiving treatment on an outpatient basis, as well as many of the patients who are hospitalized in the medical center's cancer unit. As the liaison between the

ACS and the patient, the navigator provides patients with educational and resource materials about available ACS services, and, upon request, a list of Christ Medical Center cancer support groups.

ACS' creation of an on-campus navigator position has strengthened its partnership with the Cancer Institute. In the past, patients interested in ACS services would complete a registration form and then fax it to the ACS Illinois Patient Service Center. Center staff would then follow up with the patient by phone. Now, the ACS navigator staffs a desk in the medical center's Cancer Registry Office and is able to meet face-to-face with patients and families.

Pediatric Hematology/Oncology Program



Advocate Hope Children's Hospital is home to one of the largest, most comprehensive outpatient pediatric cancer programs in the Midwest. The pediatric hematology/oncology division at Hope Children's Hospital provides diagnostic and treatment services for all childhood cancers, including leukemia, brain tumors, non-Hodgkin's and Hodgkin's lymphomas, neuroblastoma, tumors of the kidney and sarcomas. As a member of the Children's Oncology Group (COG), an international research organization sponsored by the National Cancer Institute, the cancer division at Hope Children's Hospital is able to offer patients the latest available, state-of-the-art treatment options and leading-edge therapies. Treatments can include chemotherapy, radiation, surgery and non-commercial investigational agents available only through the National Cancer Institute.

In addition to cancer care, the division's highly trained physicians treat all forms of pediatric hematological disorders, including thrombocytopenia, hemophilia, Von Willebrand Disease, coagulopathies, hemoglobinopathies, leukopenia, neutropenia and all anemias. Through its comprehensive Sickle Cell Clinic, the division offers community outreach, education, leading-edge treatment and care management to children and teens diagnosed with sickle cell disease.

The division is under the direction of nationally renowned, board-certified physicians in pediatric hematology and oncology, namely Sharad Salvi, MD, and Ammar Hayani, MD, Jason Canner, DO, and Rebecca McFall, MD. We believe in and provide family-oriented, comprehensive care to our children through our multi-disciplinary team, which includes physicians, nurses, social workers, child life specialists, an in-hospital teacher, spiritual care support, psychosocial resources and several innovative programs. These programs include "Planting Seeds of Hope," which addresses the unique needs of the siblings of cancer patients, and a Pediatric Oncology Survivorship in Transition (P.O.S.T.) clinic, one of the most extensive pediatric cancer survivors support programs in the Midwest. It addresses the needs of patients who were treated for pediatric cancer who are survivors and have been off treatment for two to three years.



Research

The Advocate Christ Medical Center Cancer Institute's involvement in clinical trials provides access to a wide range of new, experimental drugs or treatments without having to leave the community for cancer care. Christ Medical Center manages a robust portfolio of clinical trials covering a vast number of disease sites and cancers. Most patients are referred to these clinical trials through their physician or disease-specific conferences, which are held on a regular basis. These meetings provide a forum where cancer care team members discuss patients and identify those who might potentially benefit from a clinical trial. Once the potential clinical trial is discussed with the patient, the patient makes the final decision about whether or not to participate.

The Advocate Christ Medical Center Cancer Institute participates in studies sponsored by the National Cancer Institute through groups such as the Eastern Cooperative Oncology Group, the Radiation Therapy Oncology Group, the Gynecological Oncology Group, the National Surgical Adjuvant Breast and Bowel Project, and the American College of Surgeons Oncology Group.

The Cancer Institute strives to use research as a tool to increase its patient's options through clinical trials and increase the level of care through process improvement studies and evidence-based practice. By participating intensively in clinical trials, the Cancer Institute is advancing the body of knowledge in cancer medicine and making a difference in the lives of cancer patients.

Education and support services have become increasingly available to cancer patients both during and after treatment.

Survivorship Program

As the number of patients successfully treated for cancer grows, so also does the need for services to help these patients adapt to life after cancer. That is why, in August 2011, the Cancer Institute launched a Surviving & Thriving monthly educational series for cancer survivors, providing information on such topics as nutrition, fitness, fatigue and the “chemo brain.” That initiative was later bolstered by a second educational and support program, Cancer Transitions: Moving Beyond Treatment, thanks to a 2011 Community Impact Project grant to the medical center from the Lance Armstrong Foundation. Cancer Transitions, a six-week, model educational program for post-treatment cancer survivors, was held in the fall of 2011 and is expected to be offered again in 2012.

Patients undergoing treatment in the Cancer Institute have been benefiting from the multidisciplinary clinics staffed by advanced practice nurses (APNs), who serve as patient navigators by coordinating communication among a team of cancer specialists and guiding patients through diagnosis and treatment. At the same time, education and support services have become increasingly available to cancer patients both during and after treatment. To enhance this service further, the Cancer Institute’s vision of a comprehensive cancer survivorship program has included the creation of a new position, staffed by a post-treatment care coordinator who develops a cancer care summary and after-care plan for each survivor in coordination with the patient’s team of providers.

This vision was given a major boost in the fall of 2011 when the Cancer Institute announced receipt of a major \$240,000 grant from The Coleman Foundation to create the position of post-treatment care coordinator. To be appointed in 2012, the post-

treatment coordinator will meet with each patient in a formal clinic visit to explain the patient’s after-care needs, communicate with a patient’s physician to ensure that care coordination continues even as the patient makes the transition out of active cancer treatment, establish a cancer-specific surveillance plan tailored to each patient, provide education and information, assess a patient’s post-treatment challenges, and identify patient needs for post-treatment psychosocial support and other services.

The post-treatment care coordinator will not replace the current cancer-specific APN patient navigators. They will continue to respond to patient questions and requests for assistance related to a patient’s cancer diagnosis and treatment. Instead, the new coordinator will address patient concerns and needs following cancer treatment.

In addition to the new coordinator position, key components of developing the survivorship program in the Cancer Institute either include or are anticipated to include:

- Patient support services, such as stress management, genetic counseling, nutritional/healthy living counseling and occupational and physical therapy
- Survivor forums on financial concerns, survival strategies, living with treatment side effects, fear of cancer recurrence and healthy living
- Web-based support that includes general survivor information, program contact information, on-line discussions and an event/support group calendar
- Continued staff education, including education for local health providers in community practices and integration of survivorship curricula into current training programs



Ground was broken in 2011 for construction of an ultra-modern Outpatient Pavilion with high-tech treatment areas and soothing, patient- and family-friendly open spaces. Patient-centered care will be at the core of the new, nine-story facility, which will be connected to Christ Medical Center's main hospital and is expected to open at the end of 2013. In addition to multidisciplinary outpatient clinics, the building will contain 14 operating suites for outpatient procedures, endoscopy laboratories, advanced imaging technology and administrative office space.

The pavilion will provide important treatment and patient support areas for the medical center's Cancer Institute, including:

- Multidisciplinary clinics for breast, thoracic and genitourinary cancers, and planned clinics for patients with gastroenterology (GI) and gynecologic cancers
- Cancer registry
- Genetic counseling
- Offices for advanced practice nurses who serve as Cancer Institute navigators for patients with cancers

- Survivorship clinic
- Research laboratory
- Gilda's Club
- Specialty boutique with image enhancement specialty items including camisols, skin creams and swimsuits
- Office and wig fitting room for an American Cancer Society patient navigator

Advocate Christ Medical Center-employed physicians and staff, Advocate Medical Group (AMG) physicians and private practice physicians will see and treat patients in the new facility's cancer clinics. AMG physician practices in breast surgery, surgical oncology and gynecologic oncology will be located in the Outpatient Pavilion.

As part of the project, a 640-space parking structure was completed and opened in 2012 immediately across the street from the Outpatient Pavilion to help make outpatient visits and parking far more convenient for patients and their families. The new pavilion will help the medical center meet the community's growing needs for outpatient care, especially the treatment of cancer.

Advocate Charitable Foundation builds relationships and partnerships to inspire charitable giving by individuals, foundations, corporations and organizations to Advocate Christ Medical Center and other Advocate hospitals. The Cancer Institute's Foundation Council raises philanthropic funds specifically to advance the medical center's clinical, educational, research, patient-support and outreach programs. The council comprises physician leaders, community members and business owners who serve in an advisory capacity.

Philanthropic support of the Cancer Institute continues to increase year after year, due to the loyal support of our community. During the past three years, the Cancer Institute Foundation Council and the Cancer Institute have hosted two major fund-raising events, featuring the award winning shows, Billy Elliot and Memphis, and plan to host a series of intimate donor receptions in 2012. Generous charitable donations, as well as event proceeds, have been utilized to support new services and programs for cancer patients. What follows are several highlights of how philanthropic funds were used to support the Institute's mission in 2011:

- Thanks to a campaign gift from Laverne Fredericks and the support of Cancer Institute Foundation Council members, State Representative Renee Kosel and Jon Freeman, our Cancer Institute has become the first facility in Illinois to acquire Mobetron intraoperative radiation therapy (IOERT). Laverne's husband, Warren, received care at the medical center for nearly 15 years after suffering a spinal-cord injury, and Laverne became a loyal volunteer and generous donor following his 2004 passing. "What has always stood out to me is the dedication of the caring and compassionate staff at the hospital," Laverne has told us. "Their attitude is always, 'What can I do for others?' I wanted to give back."
- Through a grant request made by the Cancer Institute, Christ Medical Center was approved for participation in the Southwest Airlines 2012 Medical Transportation Grant Program, which provides complimentary roundtrip air tickets to patients who qualify for free or discounted care under Advocate's charity care guidelines and who otherwise would not be able to access medical center services without transportation support.
- The Cancer Institute was awarded a grant of \$240,000 from The Coleman Foundation to establish a Survivorship Program for patients. The survivorship program is intended to improve a patient's quality of life by offering a comprehensive follow-up program that ensures continuity of care between cancer specialists and primary care providers post-treatment.
- The Cancer Institute was able to purchase a microscope camera with Internet capability that enables surgical teams to send "live" video images between operating suites and pathologists in remote locations for immediate interpretation. A second camera enables pathologists to take still photos of tissue samples for use in PowerPoint presentations, publications and other educational materials.
- Women coming to the Institute's breast center now can use computer notebooks to complete a questionnaire about their family history with cancer. A special software program allows staff to analyze the results and identify women who may be at higher risk for breast cancer and who are then educated about measures they can take potentially to extend their lives.
- More than 200 area residents attended the Cancer Institute's annual breast-health awareness and education event, "Paint the Town Pink," which is offered free to the public. Funds in 2011 were used to support the cost of the keynote speaker, Marissa Weiss, MD, president and founder of breastcancer.org, and to develop handouts and materials needed for the event
- More than 450 families and friends attended the annual Cancer Survivor's Luncheon celebration—also a free program for our community and funded by numerous donors.
- Patients of the Infusion Center and 3 South can enjoy the benefits of comfort with the two blanket warmers made possible by donated funds.



“I’m fine. I am in a good place. Let’s say a prayer.”

Those were the words of Stanley Rakauskas as family members and nurses gathered around his bedside minutes before he was to be wheeled into the operating room for major surgery to treat his esophageal cancer in August 2007.

“Everybody was crying then, except me. It was to be a five-hour or six-hour operation, but I had already accepted what was to happen, and I felt very confident about [the skill of] Drs. Paul Gordon and Jack Roberts, who were doing the surgery,” said Stan, who serves as a deacon at his church, St. Christina, on Chicago’s Southwest Side.

Actually, Stan’s journey to finding that “good place” in his life began as early as 2005 when he unexpectedly fell while walking the family dog. “I thought that I had simply tripped on the sidewalk, but then I fell again about a week later while I was attending my daughter’s choir recital.” His wife suggested that he contact his Advocate Christ Medical Center physician, Salem Makdah, MD, specialist in internal medicine, just to check things out.

That trip to the physician’s office embarked Stan on an odyssey of testing by neurologist, Abid Ali MD, of Christ Medical Center, and others in an effort to determine the source of his leg weakness. “Doctors were looking for everything from muscular dystrophy to Lou Gherig’s disease to myasthenia gravis,” he said.

Turns out, he had none of those. Instead, he had developed what only about 500 other people in the world have—a disorder known as Lambert-Eaton myasthenic syndrome (LEMS), which is the result of faulty communication between nerves and muscles. “I keep telling people only 500 people in the world have it, and I am number 501,” Stan laughed.

In 40 percent of cases, cancer—like cancer of the lung or prostate—is either present or discovered shortly after LEMS symptoms appear. Stan, a former smoker who quit years ago, had neither, but a PET scan—medical center physicians were keeping a close tab on him—found a “hot spot” deep in the esophageal area. It turned out to be cancer. Ironically, the LEMS had prompted the discovery of cancer before it had progressed too far.

The surgery to remove the cancer proved successful, but Stan experienced some complications afterwards, including a dramatic loss of weight, which he was unable to regain for awhile. However, adjustments in his medication are proving helpful. His goal is to get back to 150 pounds. If successful, “there are about 15 friends at my church who have promised to get tattoos” in celebration of Stan’s return to health.

Stan still has LEMS, but his esophageal cancer is gone. He credits “all my physicians at Christ Medical Center” for their lifesaving efforts, but also is a “firm believer in the power of prayer. That is what has sustained me. At one point [in my course of treatment], one of my neurologists told me, ‘Whomever you are praying to, keep doing it.’”

She laughs. “The treatment is excellent, the communication with me is wonderful; the team just works well together.”



Never mind that Laverne Fredericks is a cancer patient at the Advocate Christ Center for Breast Care. She has bigger concerns—such as the need to expand and enhance the Advocate Christ Medical Center emergency department. “I had to be treated in the emergency department in 2011. The care there was excellent, but the facility needs a lot of updating,” she said.

That focus—on “giving back” to the hospital rather than worrying about her own disease—is really what 79-year-old Laverne is all about. “The ministry of Jesus Christ”—the hospital’s namesake—“was very much medical in nature,” she said, referring to the many cures that the Bible reports Christ effecting during his brief life. “The hospital’s ministry is also one of healing, and I support that.”

And, support is what this retired kindergarten and elementary school teacher has provided—both in personal time and dollars—since her husband, Warren, died in 2004, years after suffering a spinal cord injury. In fact, it was her husband’s “excellent care” in the rehabilitation department that prompted her intense interest in helping rehabilitation staff and patients.

For example, she purchased a piano for the hospital, and then put it to use by playing it for patients in the rehabilitation and cancer units. She found the sixth-floor hospital pedestrian bridge leading to the rehabilitation unit “sterile,” so she contributed to the installation of stained-

glass windows there. She donated dollars to the acquisition of advanced technology for treatment of cancer, namely intraoperative electron radiation therapy (IOERT), which delivers a concentrated beam of radiation directly to a tumor site during cancer surgery. She bought a bus for the physical medicine and rehabilitation department to ensure safe transport of patients, helped get calligraphy to decorate the family waiting area in the surgery department, and supported the hospital’s acquisition of a lift to move bariatric patients without injury to the patients or staff.

“I have always had a close relationship with Advocate,” Laverne says. “In fact, I was born at the hospital (Evangelical Deaconess Hospital in Chicago) before it became Advocate Christ Medical Center.”

Now, she is a patient at Christ Medical Center—being treated for an early-stage breast cancer by surgeon, Barbara Krueger, and the Center for Breast Care team—a breast cancer discovered after she began feeling “a little tenderness” in the breast. “I had it checked out right away.”

She laughs. “The treatment is excellent, the communication with me is wonderful; the team just works well together.”

Those are a few of the reasons why it is so important for Laverne to do “whatever I can to help the staff and patients at the hospital.”



Bad enough when you have to undergo colorectal surgery. Worse when you have to complete all your night-before preparations in a hotel room and then get picked up in a blizzard by a four-wheel-drive jeep to get you to the OR.

But, Jerry Myrick was as determined as his surgeon, Dr. James Weese, to undergo the necessary operation to treat his Stage II rectal cancer and arrived on time for surgery in the midst of one of Chicago's worst-ever blizzards in early February 2011. After an estimated 6.5-hour procedure in which physicians removed the malignant tumor and, while they were at it, the portion of his colon that had been causing him diverticulitis—"they took care of that, too", he was transported to the hospital's intensive care unit where his wife, Pauline, kept one eye on Jerry and one eye on the window. The blizzard had abated by then, and the sun was peeking out, but the Chicago area had a whole lot of digging out to do. So, Pauline ended up spending that next night at the hospital—near Jerry—sleeping on a gurney that nurses had corralled in an effort to keep her as comfortable as possible.

But, for Jerry, who does not remember much about the blizzard aftermath because "I was pretty much

out of it that day after my surgery," battling a blizzard was actually just a more minor bump in a tough journey that started with several tests at other hospitals, including a cystoscopy and colonoscopy, to determine the source of his symptoms, followed by a course of chemotherapy and radiation to shrink his rectal tumor before undergoing surgery at Christ Medical Center. Surgery was followed by more chemotherapy and radiation, "but I never really got sick from the treatment; didn't lose my hair," Jerry said.

What finally did get his hair was a third course of chemotherapy and radiation—this time to treat a non-Hodgkins lymphoma, which he later developed.

Jerry credits much of his recovery to the Christ Medical Center nurses and therapists, "who made me get up and walk" during his 10-day stay in the hospital even when he did not feel like walking; to his surgeon, "who found me a walker with wheels;" and to his wife, who "always kept me busy; she didn't let me sit around and feel bad."

"If it weren't for the care he received, the surgeon he had and the doctor who got him to that surgeon, I am not sure how we would have made it," Pauline Myrick said.

Program Statistics

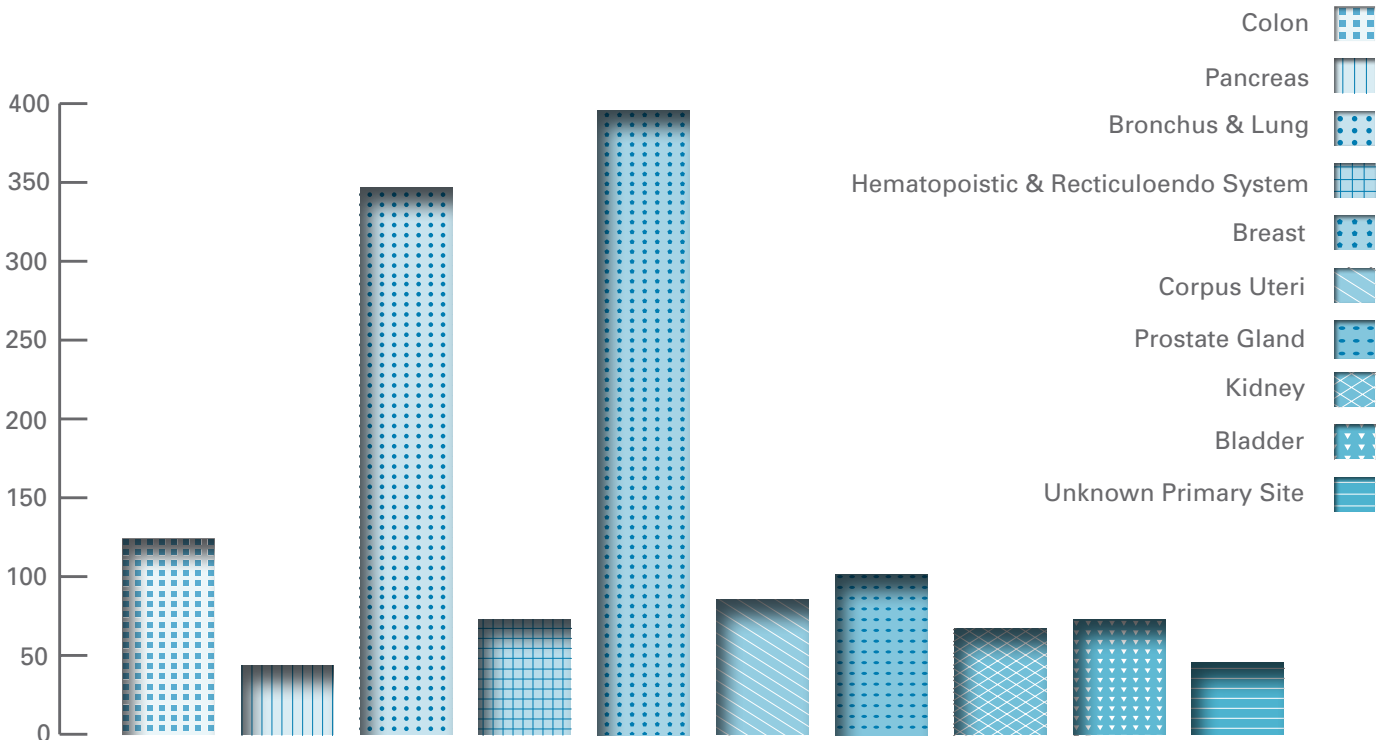
Cancer Registry Data 2008 – 2011

Primary Site	2008	2009	2010	2011
Breast	397	376	377	398
Lung	336	374	356	344
Colorectal	190	163	169	171
Prostate	90	92	80	100
Brain	86	105	78	85
Hematopoeitic	87	74	83	59
Other	623	654	713	756
Total	1,809	1,838	1,856	1,913

Cancer Incidence by Site: Comparison 2011

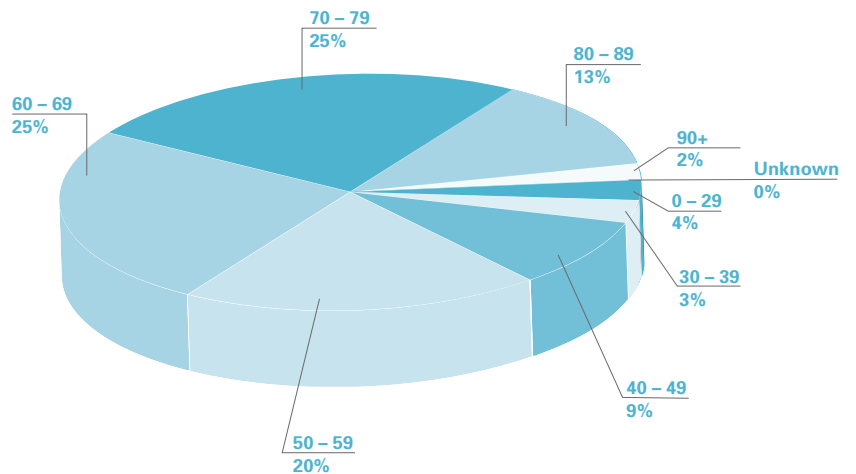
Female	Christ Medical Center	National
Breast	33%	30%
Lung/Bronchus	17%	14%
Colon/Rectum	7%	9%
Uterine Corpus	7%	6%
Non-Hodgkin's Lymphoma	2%	4%
Melanoma Skin	1%	4%
Thyroid	2%	5%
Ovary	3%	3%
Kidney/Renal Pelvis	3%	3%
Pancreas	3%	3%
All Other Sites	22%	19%
Male	Christ Medical Center	National
Prostate	14%	29%
Lung/Bronchus	20%	14%
Colon/Rectum	13%	9%
Urinary Bladder	7%	6%
Non-Hodgkin's Lymphoma	4%	4%
Melanoma Skin	3%	5%
Kidney/Renal Pelvis	4%	5%
Leukemia	3%	3%
Oral Cavity	3%	3%
Pancreas	3%	3%
All Other Sites	26%	19%

Top 10 Primary Sites – 2011



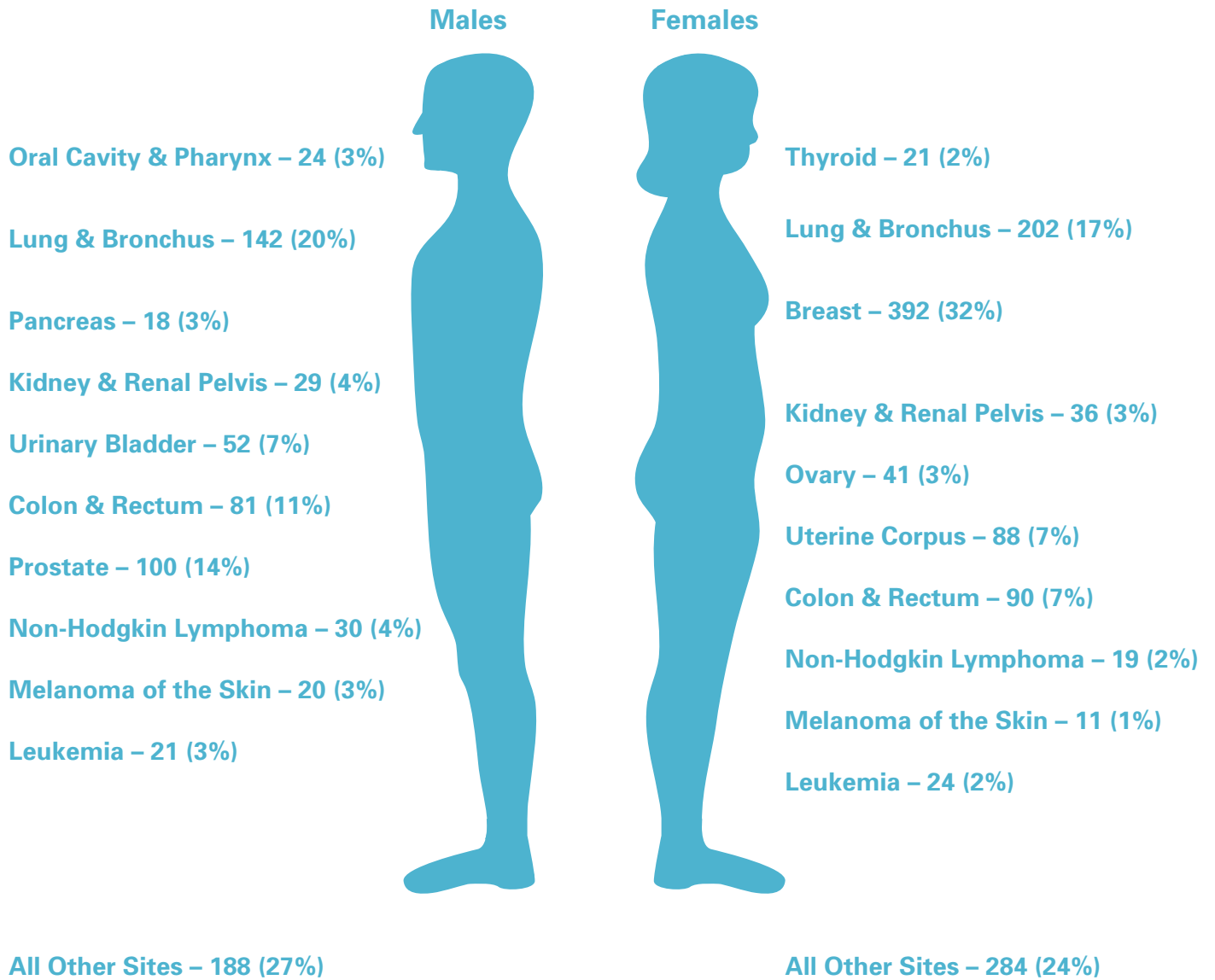
Age at Diagnosis

Age at Diagnosis (in years)	Count (N)	Percent (%)
0 – 29	64	3.35%
30 – 39	55	2.88%
40 – 49	142	7.43%
50 – 59	351	18.36%
60 – 69	537	28.09%
70 – 79	454	23.74%
80 – 89	277	14.49%
90+	32	1.67%
Unknown	0	0.00%
Total	1,912	100.00%



Range: 0 to 97

Mean: 64



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Trends in the Current Management of Pancreatic Cancer

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Pancreatic cancer is the fourth leading cause of cancer-related deaths in both men and women, with more than 200,000 people dying worldwide annually (1). In the United States, the incidence of pancreatic cancer is 3% of all cancer cases in both males and females (22,090 cases in males, 21,830 cases in women), with a mortality of 6% of all cancer deaths in males (18,850 deaths) and 7% in women (18,540 deaths) (2). The incidence overall is increasing steadily, attributed to a number of possible etiologies, such as cigarette smoking, pre-existing diabetes, alcohol use with concomitant pancreatitis and obesity. The last factor has recently been shown to be at least partially responsible for the increased incidence of pancreatic cancer in the United States (3).

The national trends in 5-year survival rates for pancreatic cancer have remained relatively unchanged for the period from 1992-2007 (1). Although there appears to have been some slight improvement in 5-year survival rates for localized disease (15.4% in 1992 to 21.9% in 2007), the remaining survival rates have been poor for regional and distant disease. The latter is likely attributable to a delay in initial presentation, with concomitant identification of locally advanced or metastatic disease that is not amenable to resection. Other factors that may contribute to a poor prognosis are the lack of effective agents and relative resistance to chemotherapy and radiation therapy. For those who initially present with truly resectable disease (15-20% of all patients), the 5-year survival rates remain poor despite an attempt at curative resection (15%-20% at 5-years) (Figure 1).

The high rate of local recurrence despite attempted curative resection leads us to believe that there is micrometastatic disease present at the time of operation, providing the rationale for the utility of adjuvant chemotherapy and radiation therapy. There have been at least nine randomized, controlled trials completed between 1985 – 2009 that have examined the role

of adjuvant chemotherapy and chemoradiation (CRT) in resected pancreatic cancer patients (4). In Europe, the consensus of most medical oncologists has been in favor of adjuvant chemotherapy versus CRT, whereas in the United States, there has been more of a focus placed upon CRT, with or without the addition of gemcitabine, as the preferred method to downstage borderline resectable lesions to make patients candidates for secondary resection.

Methods: Between 1998 – 2002, we have reviewed our outcomes data at Advocate Christ Medical Center for patients treated with pancreatic cancer. There was a total of 165 cases of pancreatic malignancies, subdivided based upon histology, with 104/165 (63%) representing adenocarcinoma, with 26 cases of pancreatic cancer that had no histologic subtype identified, representing an additional 16% of all cases (Figure 2). We then compared our survival data for the 1998-2002 time period for those pancreatic cancer patients treated (surgery, radiation, chemotherapy, combined modalities) to the National Cancer Data Base (NCDB) for pancreatic cancer survival (Figure 3). Lastly, we examined the total number of pancreatic cancers treated at Advocate Christ Medical Center during 5-year increments, ranging from 1992 through 2011, further comparing the observed overall survival based upon the first course of treatment (Figure 4 and 5).

Results: Overall, stage-by-stage, the survival of patients with pancreatic cancer treated at Christ Medical Center is comparable to national trends in survival as reported through the NCDB data and published literature. At best, the comparative data sets can give us a generalized idea of several important aspects of treatment for patients with pancreatic cancer. First, there is really no striking difference in long-term survival of patients with pancreatic cancer. This is best explained with several possible hypotheses, such as the presence of advanced disease at

initial presentation, the intrinsic tumor biology of pancreatic cancer, genetic factors and a lack of effective chemotherapy and combined treatment modalities. All of these may contribute to the overall poor survival in these patients, underscoring the need to develop more effective treatment modalities.

Discussion: Although the trends in 5-year survival rates have not significantly changed in more than five decades, the multimodality approach has shown promise for patients with pancreatic cancer (5). Examining the trends in survival over the years from 1992-2011, it is apparent that stage per stage, the overall survival continues to be dismal for those with advanced disease. These trends parallel the national trends in the United States, highlighting the lack of truly effective therapies for this disease. Examining the survival based upon the first course of treatment, it is evident that surgical resection plays a key role if the attempt is to achieve a long-term cure, noting that a combined treatment approach has some of the highest survival rates when combined with surgical resection.

Most of the major cancer centers across the United States now have incorporated a multidisciplinary, team approach, often discussing optimal approaches to treatment within the confines of a multidisciplinary clinic or conference. The obvious advantage of this approach is to involve the cancer specialists and to discuss the optimal treatment approach for each patient, as well as incorporating the available clinical trials for which the patient may be a candidate. For example, the pre-operative use of chemoradiation may be the better approach for those patients deemed borderline resectable, with the goal to treat the patient and downsize the tumor to the point where it becomes resectable. The indications for adjuvant therapy are less convincing, although most patients will be offered chemotherapy alone or combined with radiation therapy. Currently, there is no optimal approach to treatment for patients with pancreatic cancer, highlighting the need for evidence-based guidelines and continued research and clinical trials in order to develop more effective treatment options.

References:

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3. Simianu VV, Zyromski NJ, Nakeeb A et al. Pancreatic Cancer: Progress made, *Acta Oncologica* 2010; 49: 407-417
4. Moss RA, Lee C. Current and emerging therapies for the treatment of pancreatic cancer 2010: 3, 111-127
5. Kim CB, Ahmed S, Hsueh EC. Current surgical management of pancreatic cancer, *J Gastrointest Oncol* 2011; 2: 126-135

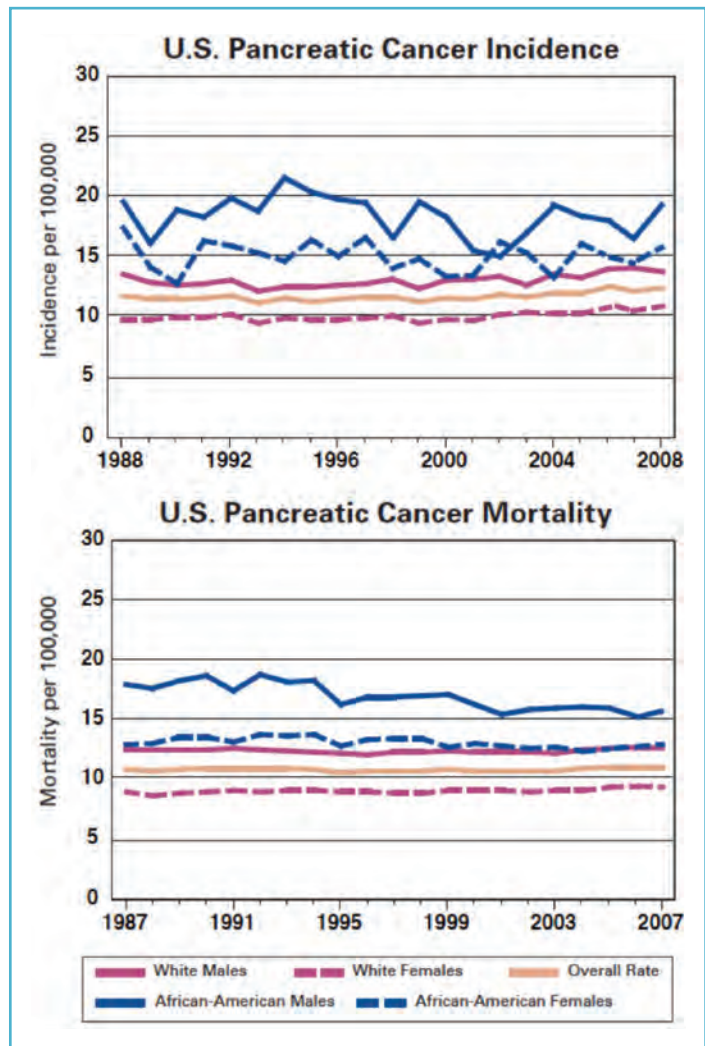


Figure 1. Incidence and mortality of pancreatic cancer in the United States (2).

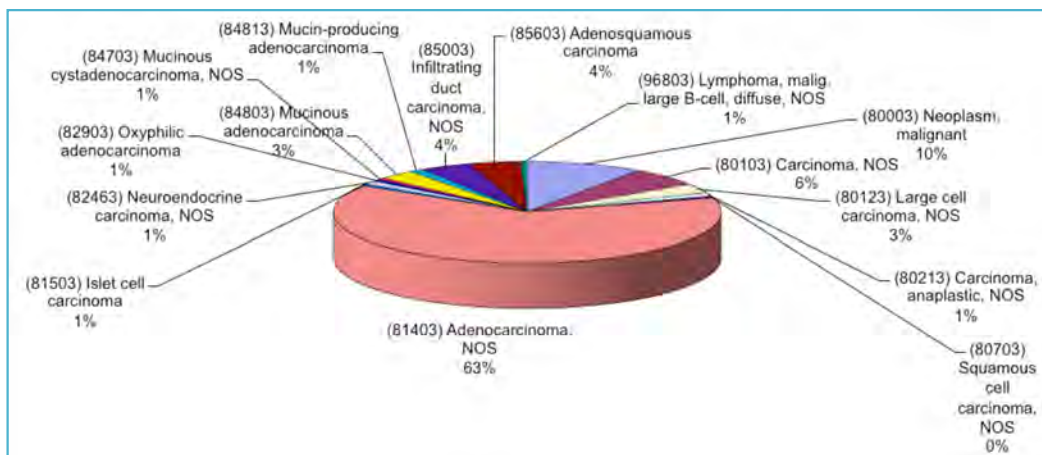


Figure 2. Pie-chart showing the various histologies of pancreatic cancer during the time period 1998 – 2002.

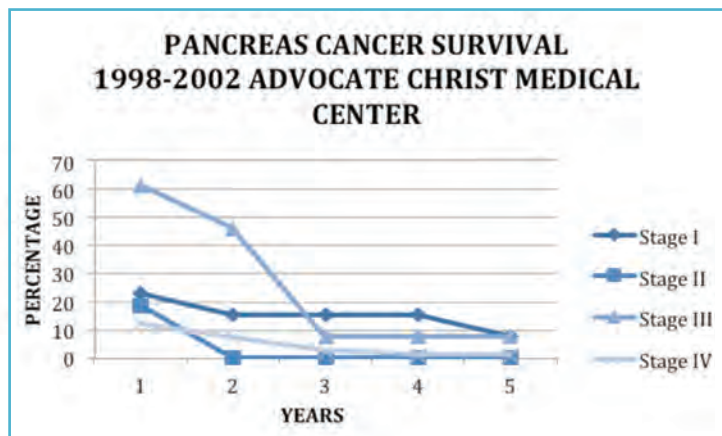
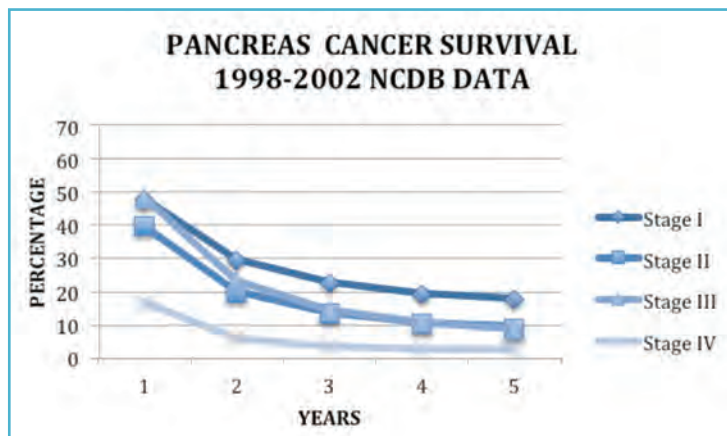


Figure 3. A comparison of pancreatic cancer survival rates at Advocate Christ Medical Center and the National Cancer Data Base (NCDB) for the years 1998 – 2002.

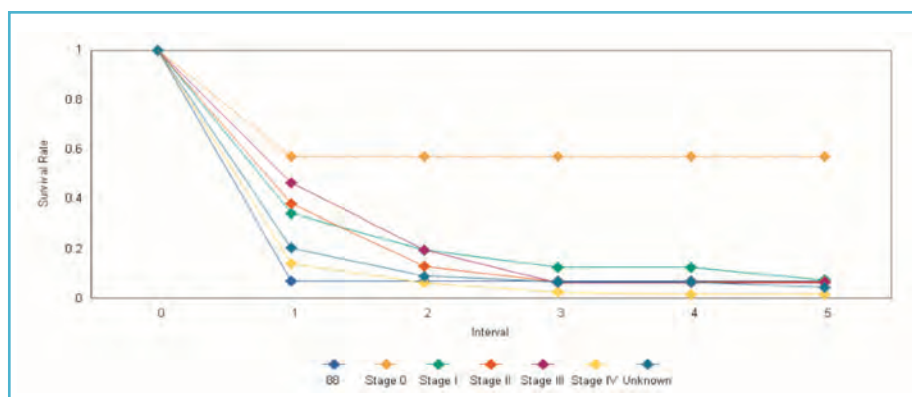


Figure 4. Observed survival for pancreatic cancer at Christ Medical Center, by stage, 1992 – 2011.

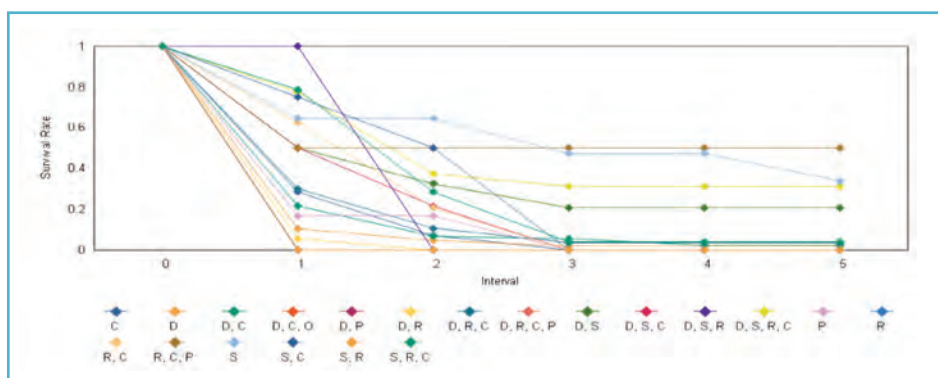


Figure 5. Observed survival by first course of treatment at Christ Medical Center, 1992 – 2011. (C=chemotherapy, D=Diagnosis/Biopsy, P=Palliative, O=Other, S=Surgery, R=Radiation)

 Advocate Christ Medical Center

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