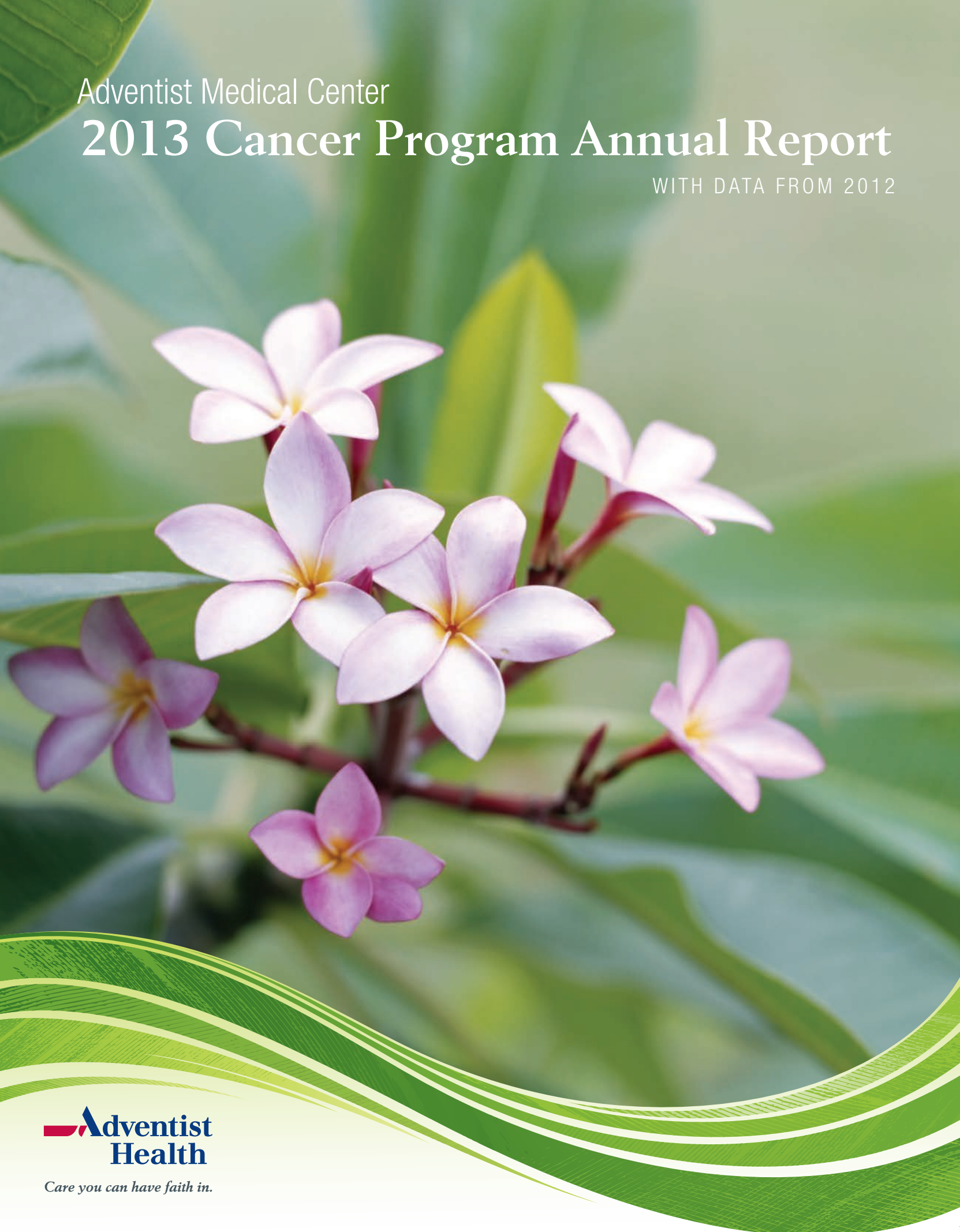


Adventist Medical Center

2013 Cancer Program Annual Report

WITH DATA FROM 2012



Care you can have faith in.

Cancer Committee Roster 2012-2013

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Acknowledgements

Special thanks to:

Rebecca Orwoll, MD

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To contact us, write to: Adventist Medical Center – Cancer Registry, 10123 SE Market Street, Portland, Oregon 97216.

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Chair's Report

It is my privilege as the Cancer Committee Chair to give you the 2013 Annual Report for Adventist Medical Center. This is our opportunity each year to highlight our efforts and success in the care of those with cancer, guided by the values of the Adventist mission; Integrity, Quality, Compassion, Wholeness, Respect, Family and

Stewardship. Our Cancer Program is American College of Surgeons (ACoS) Commission on Cancer (CoC) accredited and actively involved in prevention, early diagnosis, the treatment of cancer and providing the various support and rehabilitation services needed. The CoC distinguishes our program as providing the utmost in cancer care and in improving the quality of life of our cancer patients.

The treatment of cancer is a team effort. At Adventist, we are comprised of physicians from multiple disciplines: medical oncology, surgical oncology, radiation oncology, radiology, pathology and hospice care focused on providing the best treatment available. We achieve this goal with the aid of our associated allied health professionals of rehabilitation therapists, social workers, nurse navigators, speech therapists, nutritionists, chaplains and counselors who complete our team. Our cancer patients and their families feel the care they receive goes beyond the patient's physical illness and include their social and emotional needs.

Adventist Health also charges itself with the care of your community. Our Living Well & Wellness Services provide lectures and activities to help promote cancer-preventing lifestyles and other ways to reduce your cancer risk. We have provided cancer screening programs in the past and will carry on this tradition in the future. We also assist in community events such as Race for the Cure, Relay for Life, and National Cancer Survivors Day, and work closely with the American Cancer Society (ACS) to offer ACS sponsored programs that offer wigs and fitting services, lodging and transportation support for cancer patients in need and 'Look Good, Feel Better' classes that provide female patients with trained cosmetologists who assist patients during and after their cancer therapy.

This year we are proud to present a focused report demonstrating our efforts against Non-Hodgkin Lymphoma. Upon review of our overall patient survival data, we, at Adventist Medical Center, have done well in comparison to the rest of the nation. Dr. Rebecca Orwoll, Medical Oncologist/Hematologist and our Cancer Conference Coordinator, will also reexamine Non-Hodgkin Lymphoma and discuss the most recent advances in the treatment of this disease.

Finally, the treatment of cancer is rapidly changing. Significant progress has been made over recent decades, more and more cancer patients are living longer, and there are more survivors. The future of cancer care will continue to advance with improved data gathering, modern molecular testing and advanced therapies that will better target cancer and minimize effects on the patient. With this knowledge, we, at Adventist Medical Center, plan to continue to provide the best care possible for our patients.

Drew Chen, DO
Cancer Committee Chairman

Our Mission . . . to demonstrate the human expression of the healing ministry of Jesus Christ.

We commit to:

- Delivering whole-person care that nurtures body, mind, and spirit;
- Encouraging living well by promoting a healthy lifestyle;
- Reflecting God's love by serving with compassion, dignity and respect;
- Improving the health of the communities we serve;
- Providing services in the most medically and financially appropriate setting;
- Delivering compassionate, high quality care with technical excellence;
- Creating a safe environment of care that inspires trust and confidence;
- Serving as a faith-based health care organization consistent with the philosophy of the Seventh-day Adventist church.

Our Vision — We will be the market leader in delivering innovative, accessible, cost-effective, high quality, whole-person care. We will be recognized for exceptional service consistently demonstrating our mission and values.

Our Values — In partnership with God, we will fulfill our mission and vision by treating others in harmony with our values:

- Integrity** — Ensure our actions are consistent with our values
- Quality** — Provide care that is safe, reliable and patient-centered
- Compassion** — Reflect the love of Jesus through care, respect and empathy
- Wholeness** — Embrace a balanced life — integrating mind, body and spirit
- Respect** — Recognize the God-given dignity and individuality of each person
- Family** — Support each other in achieving our shared purpose
- Stewardship** — Serve our community through responsible resource management

Special Report: Non-Hodgkin's Lymphoma

by Rebecca Orwoll, MD

At Adventist Medical Center we last presented a focused report on non-Hodgkin's lymphoma in 2003. From 2003 through 2006 we have followed 55 patients: 8 Stage I, 15 Stage II, 6 Stage III, and 26 Stage IV, attesting to the relative infrequency of this diagnosis. In addition to stage, lymphoma will be classified by morphologic and immunochemical, as well sometimes as cytogenetic criteria, which will aid the clinician in discussions of prognosis and options for therapy. Our statistics, bearing in mind the small numbers, are entirely consistent with those in the national data bases.

First, I would like to address some of the advances in diagnosis. Hematologists will perform physical examinations, and order laboratory and radiologic testing as needed to assess the location and extent of disease. Hematopathologists and/or hematologists will study the morphology of the abnormal cells, as well as the surrounding milieu and architecture of a node, if available. B-cell lymphoma might mark for proteins (Antigens) CD19, CD20, CD79a and/or PAX5, as well as immunoglobulin light chains kappa and lambda ; T or NKT (Natural Killer) – cell lymphoma will be negative for B-cell markers, and mark for CD2, CD3, CD5, and/or CD7. Testing for these few antigens is, however, just the beginning of a large and varied list of available markers. In addition, fluorescent in situ hybridization (FISH) or cytogenetic (chromosome) studies may be performed. With thorough evaluation, most cases will be well-characterized. The importance of such a complete study will direct therapy. Two examples will make the point:

Hairy cell leukemia is a B cell neoplasm, which in addition will be: CD5-; CD10-; CD103, CD25 and CD11+; and will have a mutation in the gene BRAF resulting in a BRAF V600E abnormal protein. This abnormality seems to be responsible for both the pathogenesis (how the disease comes to be) as well as the specific targeted therapy. As little as one week of treatment with this targeted therapy will cure about 90% of patients.

Similarly, clinical cutaneous T cell lymphoma will generally be tested for CD2, CD5, CD7, CD4, CD8, CD30, CD56, betaF1, TCR γ , cytotoxic granule proteins, EBV-EBER, and perhaps CD25 and CD279. If the pattern is weakly or negative staining for CD30, and CD4+, the accurate diagnosis might be myeloid sarcoma (focal acute myeloid leukemia), or if CD56-, pseudolymphoma. Thus the complete evaluation might lead to a totally different diagnosis, and of course therapy.

The intricacies of these diagnostic tests are such that only qualified specialists, including the pathologists at Portland Adventist Medical

Center, working together with clinicians, are able to establish accurate diagnoses.

Of course, long established chemotherapy medications continue to be very important in the treatment of non-Hodgkin's lymphoma. However, advances may be directly related to a better understanding of the pathogenesis of each sub-type of lymphoma. Examples will be elucidating:

Brentuximab vedotin is a very powerful medication which is a combination (conjugate) of an antibody against CD30 (brentuximab – mab means monoclonal antibody); a medication that disrupts microtubules which are necessary for cell division (monomethyl auristatin E or MMAE); and a linker which connects the brentuximab and the MMAE, but can be disrupted by cell enzymes (proteases). This medication may be helpful in any CD30+ lymphoma, and is already in clinical use for several.

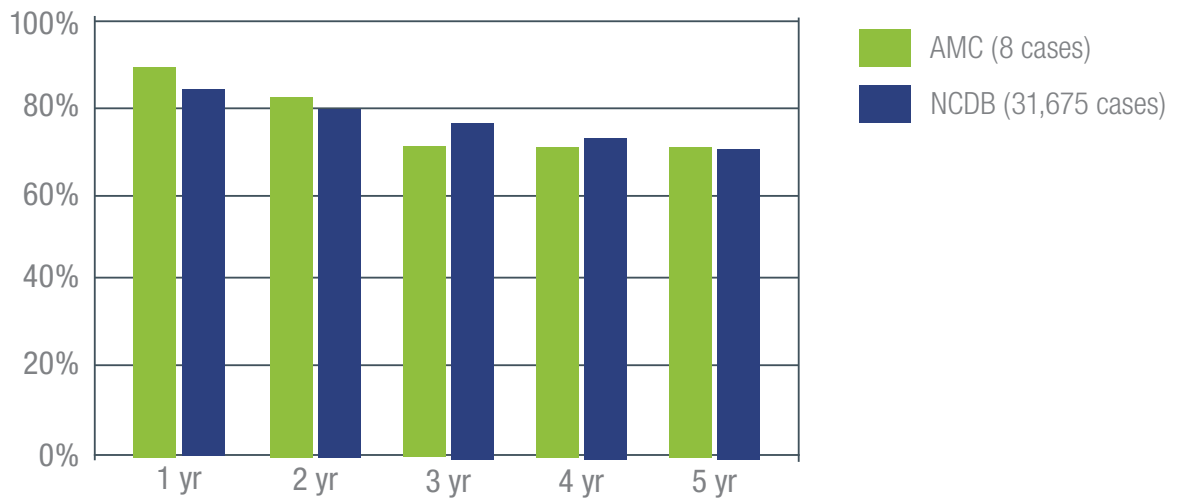
Bortezomib is a medication which inhibits the 20S proteasome, an enzyme in the ubiquitin-proteasome pathway which is a very central regulatory pathway for many cell functions. Bortezomib causes cell death (apoptosis) by its effect of bcl-2 proteins. This drug is particularly useful in the B cell neoplasm multiple myeloma, as well as mantle cell non-Hodgkin's lymphoma, making an accurate diagnosis of the latter critical.

For many years, there has not been treatment that was shown to extend life in patients with early stages of certain "low grade" lymphomas, so that "watchful waiting" has been the standard of care. Bendamustine is a relative of nitrogen mustard, and works by adding crosslinks to DNA and RNA (alkylating). In addition, it may activate a p53-dependent stress pathway, and cause cell death (apoptosis). It seems to show less drug resistance by the lymphoma. Bendamustine together with a monoclonal antibody, rituximab, is now considered first line therapy for significant Stage I and II "low grade lymphoma", with extensive remission and of overall survival.

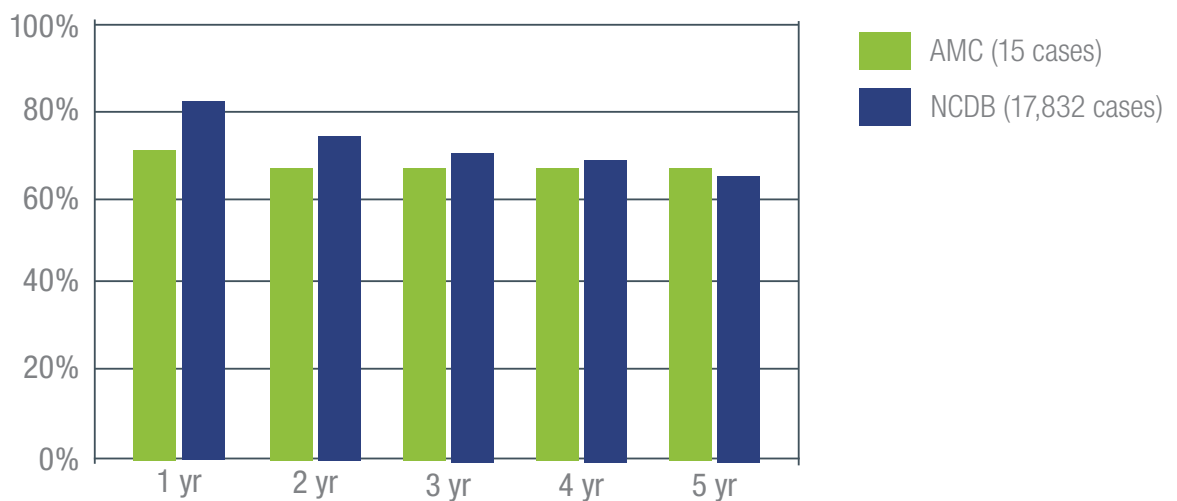
In sum, advances in accurate diagnosis couple with advances in therapy, some very specific, for an improved outcome for patients with non-Hodgkin's lymphoma in 2014. Portland Adventist Medical Center, physicians, and laboratories, are able to provide state-of-the-art therapy to our patients, in a personal, convenient manner.

Five-year Observed Survival Rates: Non-Hodgkin's Lymphoma

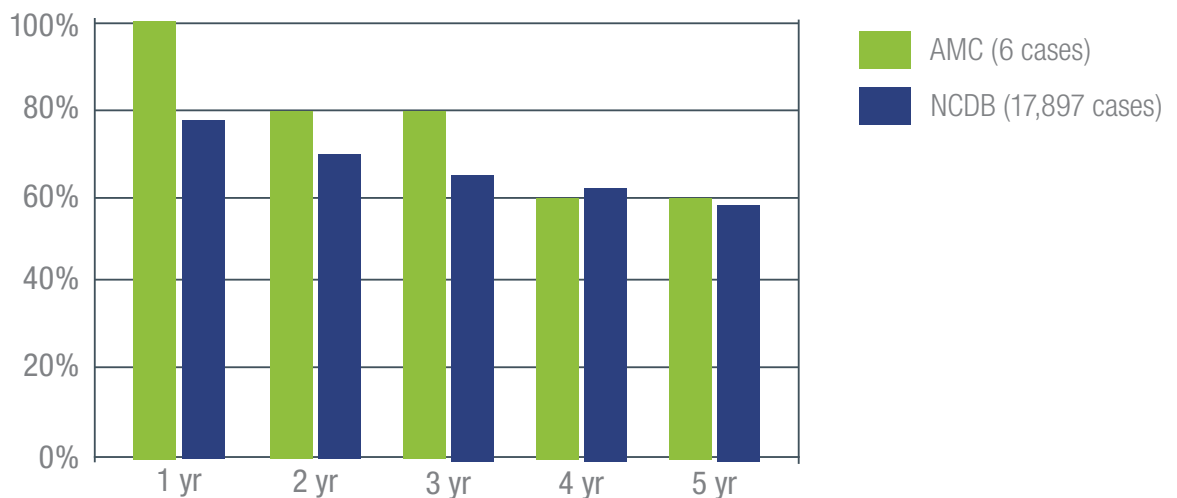
Stage I



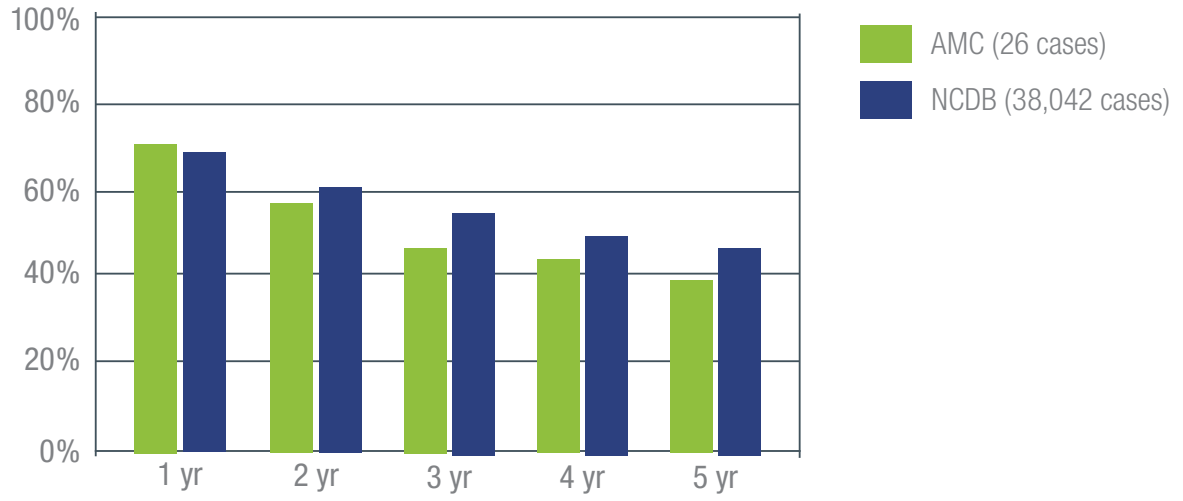
Stage II



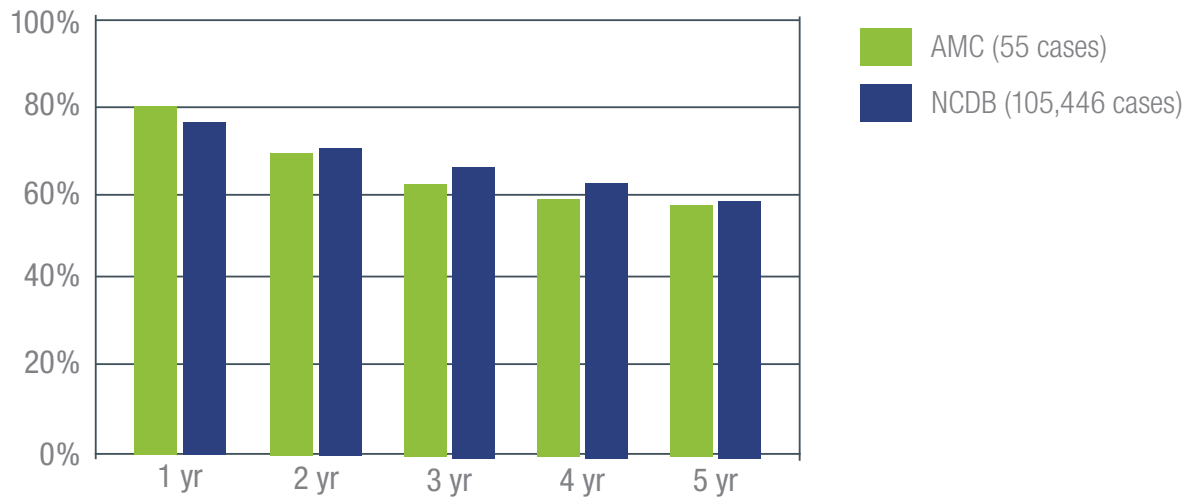
Stage III



Stage IV



Overall



Cancer Data Services: Cancer Registry

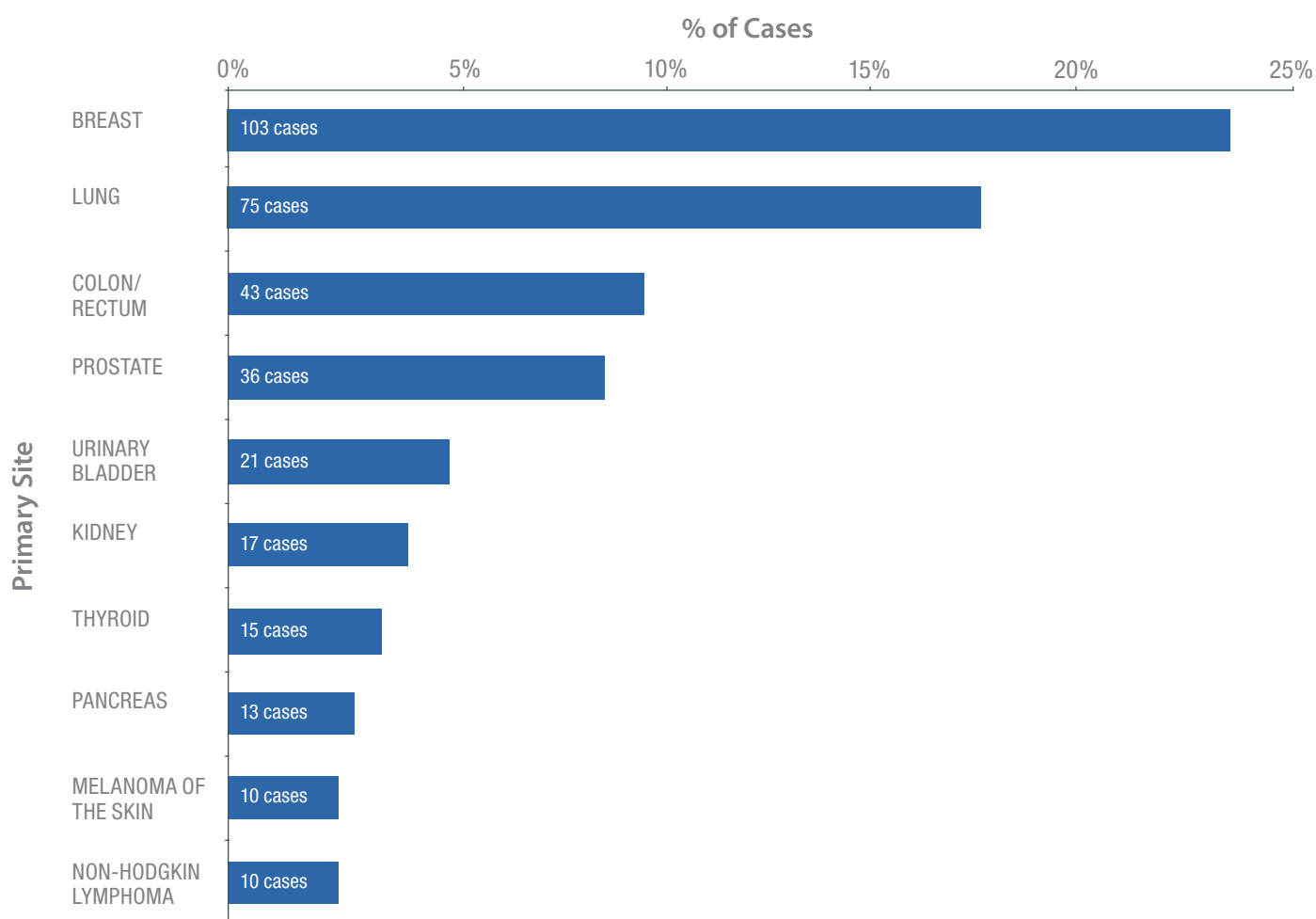
by Laura Wallace, RHIT, CTR

Adventist Medical Center's Cancer Data Services is a key component of the cancer program and is under the direction of the Oncology Services Line, the Cancer Committee and stringent compliance to the American College of Surgeons Commission on Cancer program standards.

Cancer Data Services is responsible for managing and analyzing clinical cancer data to collaborate with physicians, administrators and health care planners to provide support for cancer program development, treatment, providing cancer incidence and to ensure compliance of reporting standards.

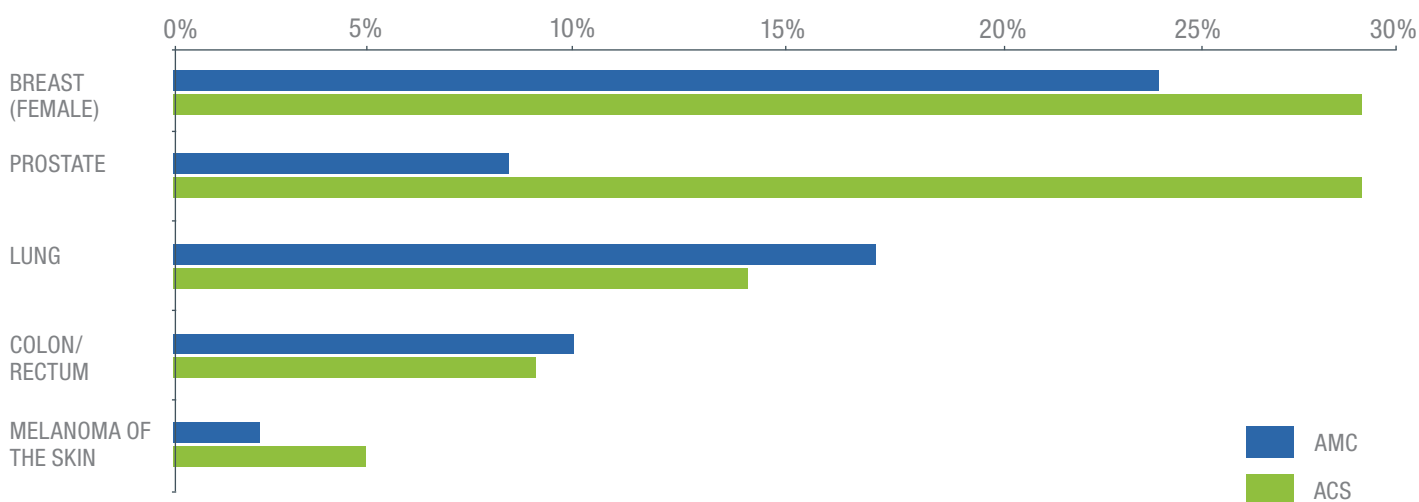
Adventist Medical Center (AMC)

2012 Top Ten Cases - 436 Cases



2012 Five Leading Sites

National Comparison - ACS & AMC



2012 American Cancer Society (ACS) Estimated New Cases

National SEER Data

How common is this type of cancer?

Common Types of Cancer	Estimated New Cases 2013	Estimated Deaths 2013
Prostate	238,590	29,720
Breast	232,340	39,620
Lung and Bronchus	228,190	159,480
Colon and Rectum	142,820	50,830
Melanoma of the Skin	76,690	9,480
Bladder	72,570	15,210
Non-Hodgkin Lymphoma	69,740	19,020
Kidney and Renal Pelvis	65,150	13,680
Thyroid	60,220	1,850
Endometrial	49,560	8,190
All Cancer Sites	1,660,290	580,350

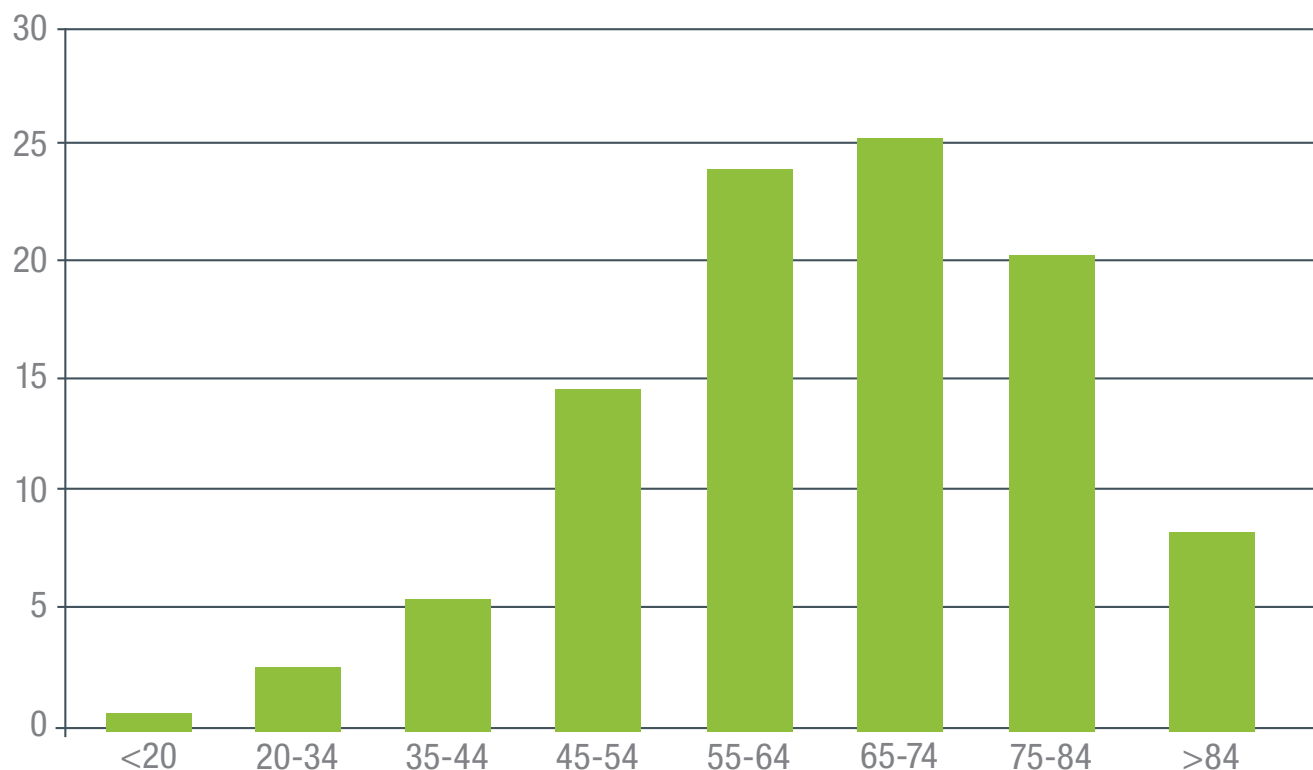
It is estimated in 2013, there will be 1,660,290 new cases of all cancer sites and a projected 580,350 people will die of this disease.

SEER Data 2013

Who Will Get This Cancer?

Overall cancer incidence rates are higher among males than females. There are more new cases among African American males and white females and fewer new cases among both genders of Asian/Pacific Islanders. The number of new cases of all cancer sites was 463.0 per 100,000 males and females per year.

Percent of New Cases by Age Group: All Cancer Sites



Cancer sites rates are highest in people age 65 - 74 years. Median Age at Diagnosis: 66

SEER Data 2013



A Special Thank You . . .

to our community, the American Cancer Society and our private donors.

Cancer Services

Treatment

Surgery
Chemotherapy
Radiation Oncology
Interventional Oncology/Radiology
Hematology Services
Cancer Specialty Rehabilitation
Clinical Trials

Diagnostic

Radiology Services
CT Imaging
MRI
PET/CT
Pathology/Laboratory
Digital Mammography
Ultrasound
Skin Cancer Screenings
Colonoscopies

Support Services

Cancer Care Coordinator
Pain Management

Wellness Services
Physical Therapy
Specialty Rehabilitation
Lymphedema Clinic
Occupational Therapy
Audiology Services
Speech Therapy
Nutritional Services
Home Health
Social Services
Hospice & Palliative Care
Nurse Specialist Ostomy Care
Management & Instruction
Cancer Treatment Transport

Staff Education

Physician Cancer Lectures
Oncology Nursing Training
Lymphology Association of
North America

Program Activities

Support Groups

Cancer Support Group
Breast Cancer Survivor Support Group
Mammography Program
Smoke Free Support
Bereavement Support Group
Hospice: Grief Support Groups & Classes

Educational Activities

Look Good, Feel Better American Cancer Society
The Latest Nutrition Discoveries
Creating Health Series
Self-Help Materials for Tobacco Cessation
Computerized Health Risk Assessments
Great Race Fitness Challenge
LivingWell with Stress Series
Web-based classes: weight, tobacco, nutrition, stress, etc.

Community Activities

American Cancer Society's Relay for Life
Race for the Cure Expo & Walk
Community & Worksite Screenings
Plant-based Nutrition Conference
Portland VegFest
Better Living Show

When it comes to providing the best care to our community, Adventist Medical Center depends on your donations. Contact the Adventist Health Foundation team at 503-251-6197.



Care you can have faith in.

Adventist Medical Center

10123 SE Market Street, Portland, Oregon 97216
503-257-2500 | AdventistHealthNW.com

Our Mission . . . to demonstrate the human expression of the healing ministry of Jesus Christ.