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Welcome to the 2012 Billings Clinic Annual Report. Each year we summarize the accomplishments and cancer data that made the year meaningful through our health care services and successful as a business. We highlight what is new at the Billings Clinic Cancer Center and include new providers, new programs and the services that are making our program unique in our region. Our regional approach through outreach clinics in 11 communities across Montana, Wyoming and North Dakota is a sincere commitment to keep patients and families near their homes whenever possible. We share with you those special programs that make us more academic and more patient-centered.

In addition to reviewing this 2012 annual report, we encourage you to visit our Billings Clinic Cancer Center website to familiarize yourself with all of our cancer related programs and services.

QOPI® Certification

Billings Clinic has been recognized by the Quality Oncology Practice Initiative (QOPI®) Certification Program, an affiliate of the American Society of Clinical Oncology (ASCO). Billings Clinic Cancer Center is the only QOPI® certified site in Montana and Wyoming. The QOPI® Certification Program (QCP) certifies oncology practices that meet the highest quality standards for cancer care.

To become certified, practices submit to an evaluation of their entire practice and documentation standards. The QOPI® Certification Program staff and steering group members then verify that the evaluation and documents are correct and that the practices meet core standards in all areas of treatment, including:

- treatment planning
- staff training and education
- chemotherapy orders and drug preparation
- patient consent and education
- safe chemotherapy administration
- monitoring and assessment of patient well-being

The QOPI® Certification Program provides a three-year certification for outpatient hematology-oncology practices; this certification for outpatient oncology practices is the first program of its kind for oncology in the United States. The QCP seal designates practices not only scored high on the key QOPI® quality measures, but also meet rigorous chemotherapy safety measures established by ASCO and the Oncology Nursing Society (ONS).
Unique Programs to Billings Clinic

NCCCP

The Billings Clinic Cancer Center is the only National Cancer Institute (NCI) Community Cancer Centers Program (NCCCP) in the region which includes not only Montana and Wyoming, but also Idaho, North Dakota and western South Dakota. As one of the original NCCCP pilot sites (2007-2010), Billings Clinic Cancer Center was awarded a new 2-year sub-contract with the NCI in the spring of 2012. The strict requirements for this award demonstrate the dedication of the clinic to quality of care, service to the region’s Rural and American Indian communities, clinical research, community and support programs and, most importantly, a multidisciplinary approach to cancer care. We believe strongly that cancer care requires of team of expert physicians and qualified staff so our patients experience outstanding care in a “cared for” atmosphere. The NCCCP helps Billings Clinic Cancer Center bring the quality and services traditionally only offered at an NCI Designated Comprehensive Cancer Center. Here are some of the accomplishments to date for the NCCCP in 2011 and 2012.

- Launched Rectal, Breast and Head & Neck Multi-Disciplinary Clinics
- Implemented Symptom Care Management Team and distress screening
- Translated Clinical Trials brochures to Crow and Northern Cheyenne native language
- Implemented Lung, Rectal, Lymphoma, Head & Neck, Breast and Colon Treatment Care Summaries for patients
- Utilized telemedicine to offer survivorship programs in Rural and American Indian communities
- Secured funding from Susan G. Komen to expand outreach screening programs in Rural and American Indian communities
Specialty Radiation Therapy

Respiratory Gated Deep Inspiration Breath Hold for Breast Cancer Treatment: The radiation oncology team at Billings Clinic is utilizing a new treatment entitled Deep Inspiration Breath Hold (DIBH) for left-sided breast cancer treatments. DIBH requires the patient to hold their breath to keep the target treatment area stationary, safely exposing the breast to the radiation fields while creating a displacement of thoracic anatomy favorable for treatment. During inspiratory breath hold, the expansion of the lungs and the stretching of the diaphragm pushes the heart, stomach and other structures away from the field of radiation, thus reducing the radiation dose to the heart muscle and coronary arteries.

Our specialists use respiratory gating in conjunction with DIBH to track respiratory patterns and verify reproducibility of daily treatments. This ensures that the radiation is only delivered when the breast is in the correct position. Pairing these techniques targets the cancer more accurately while minimizing the risk of radiation-induced cardiac disease later in life.
Unique Programs (Cont’d)

Site-Specific Care Navigation

The Patient Navigation program at Billings Clinic Cancer Center was initiated in 2003 as a central component of our comprehensive cancer center concept, bringing the first interdisciplinary team approach to cancer treatment to a vast underserved rural population. The overall program goal is to ensure seamless, coordinated care throughout the comprehensive care continuum through patient navigation services. Over the past nine years, Billings Clinic has implemented a systematic and organized expansion of the navigation function from a single navigator and presently employs 8 site-specific navigators (as well as a diagnostic navigator and a soon-to-be lay navigator).

The primary focus of the site-specific Patient Navigation program is to provide one-on-one support and coordination of services for cancer patients and their families as they move through the care pathway. The site-specific navigators at Billings Clinic are registered nurses with specific duties which include:

- Assessing for clinical, emotional, spiritual, psychosocial, financial and other needs
- Facilitating access to clinical trials
- Coordinating the timely scheduling of tests, procedures, appointments and treatments
- Ensuring patients receive a treatment plan that is understandable and feasible
- Reinforcing patient education and directing patients and their families to resources and supportive services
- Compiling a treatment summary and survivorship care plan at completion of treatment

The success of our Patient Navigation program is measured on an ongoing basis through program metrics that include patient satisfaction, provider and staff satisfaction, program volume, referrals initiated, timeliness of care and appropriateness of care. Additionally, documentation templates within the electronic medical record have been refined to establish a program of ongoing quality improvement and quality studies related to site-specific program initiatives.

ACS Lay-Navigator

Billings Clinic is excited to partner with the American Cancer Society (ACS) to support the addition of an ACS lay navigator at Billings Clinic. The primary focus of the lay navigator is to facilitate the social needs of regional cancer patients and caregivers, such as transportation, financial assistance, housing, and other resources. While our site-specific navigators will continue to coordinate the medical aspects of treatment, the ACS lay navigator will collaborate with our nurse navigators to identify barriers to care and facilitate linkage to ACS, Billings Clinic, and community-based patient resources. In addition, the ACS lay navigator will invite cancer patients, caregivers, and survivors to become engaged with the cancer survivor community through the ACS Survivors Network, Relay for Life, and other Billings Clinic-sponsored wellness programs.
**Genetic Counseling**

While most cancers occur sporadically, approximately 10% of cancers result from inherited mutations to cancer predisposition genes. Billings Clinic employs a certified genetic counselor to provide genetic counseling for oncology patients. The primary goal of genetic counseling is to identify individuals and families at increased risk of cancer for the purpose of promoting awareness, early detection and cancer prevention. Genetic counseling referrals are most commonly received for patients with breast, ovarian, and endometrial cancers diagnosed at a young age, as well as those with colorectal cancers diagnosed under the age of 50. In addition, patients with polyposis and other cancers, including pancreatic, thyroid, renal, and neuroendocrine are also referred for genetic counseling services.

Over the last two years, Billings Clinic has been privileged to participate in the Montana Telegenetics Project: Improving Access, Educating Providers and Consumers. One of the primary objectives of this project is to increase access to genetic counseling services in a time- and cost-effective manner by implementing and expanding telemedicine genetic counseling for oncology patients. The project provides genetic counseling to oncology patients in four states - Montana, Wyoming, North Dakota, and South Dakota. Through numerous educational outreach activities to providers and communities, and building on the existing telemedicine infrastructure of the Eastern Montana Telemedicine Network, the project has increased the number of genetic counseling visits provided via telemedicine for patients and families living in rural communities. Telemedicine allows easier access of genetic services to patients who live remotely by decreasing costs for travel, time between referral and counseling, and interruption of the patient's work and life schedules.

In addition to identifying those at increased risk for cancer, the genetic counselor at Billings Clinic also provides fertility preservation counseling. Cancer and cancer treatments may have long-term effects on fertility, and therefore, it is important for patients interested in fertility preservation to consider their options as soon as possible. Through a shared visit model with the genetic counselor and a licensed clinical social worker, patients are provided with information on oncofertility options, the potential impact of cancer treatment on fertility (as well as the potential impact of fertility preservation on cancer treatment), and patient advocacy resources to facilitate informed decision-making and treatment planning.
Unique Programs (Cont’d)

Specialty Support Programs – Survivorship Services

In 2006, the Institute of Medicine released recommendations to improve the quality of care for cancer survivors, and truly established survivorship care as an integral component of comprehensive cancer care. Survivorship services support cancer patients in establishing their “new normal” after completion of cancer treatment. Since 2008, Billings Clinic has offered a 9-week educational series, Partners in Survivorship, throughout the year to provide structured education and support to survivors as they transition into life after cancer treatment. These sessions are offered on-site, as well as through teleconference and telemedicine technology.

In addition, as part of our participation in the NCCCP network, a pilot study was funded through the American Recovery and Reinvestment Act (ARRA) to provide navigation services to breast and lymphoma survivors. Study objectives were to determine patient, caregiver and primary care provider satisfaction with survivorship plans, method of delivery, and differences related to demographics, clinical characteristics, post-treatment symptomology and symptom severity.

Survivorship plans were developed with cancer-related diagnostic and treatment information, therapy effects, surveillance, and wellness strategies and were tailored to the needs of the survivor. Patients and their primary care providers received this individualized survivorship plan following adjuvant cancer treatment. In addition to facilitating communication between patients and providers, survivorship plans empower survivors to manage their ongoing health needs through anticipatory guidance and a clear surveillance plan.

Results of the pilot demonstrated the value of providing these survivorship plans to patients and primary care providers. However, the pilot model with a single survivorship navigator, while valuable in being able to launch survivorship plans at Billings Clinic, was not deemed to be sustainable in providing all patients completing the first course of cancer treatment with a survivorship plan. Thus, the survivorship navigator position was converted to a site-specific navigator role, and now with new navigation tools developed within the EHR which auto-populate into a treatment summary template, each site-specific navigator assists the oncologist in compiling the survivorship plan document. Currently, patients (and their primary care providers) with the following types of cancer completing the majority of their first course of cancer treatment at Billings Clinic receive a survivorship plan: breast, lung, colorectal, head/neck, and lymphoma. In addition, Billings Clinic plans to continue survivorship program development and further expansion as processes become more efficient.
Unique Programs (Cont’d)

Symptom Management

Early palliative care interventions in the outpatient cancer setting have been shown to reduce physical and psychosocial symptoms, improve quality of life, and reduce costs related to unnecessary emergency department and hospital admissions. A weekly Symptom Management clinic was implemented in July 2011 at Billings Clinic to provide early palliative care interventions within the cancer program for patients suffering from moderate to severe physical or psychosocial distress. Advantages of this model include close alignment of program goals to that of the Cancer Center and the ability for patients to access palliative care across the disease trajectory.

The Symptom Management clinic is coordinated by a Registered Nurse (RN), with additional interdisciplinary team members including a Nurse Practitioner, Physician Assistant, Social Worker, Pharmacist, Dietitian and Physical Therapist. The team meets weekly to review referrals, discuss plans of care, and identify patients who would benefit from further evaluation. Outside the weekly meetings and clinics, the Symptom Management RN responds to referrals utilizing clinic protocols, developed according to the most common sources of distress, to triage patients. Additionally, the Symptom Management team offers assistance to patients with advance care planning and provides ongoing continuing education to healthcare professionals utilizing the Oncology Nursing Society’s End-of-Life Nursing Education Curriculum (ELNEC), which is available both on-site as well as through telemedicine.

Through these comprehensive symptom management services, Billings Clinic strives to create peace of mind for cancer patients and their families, by reducing uncertainty, confusion, and conflict regarding desired care.

Pediatric Oncology

The Billings Clinic Pediatric Oncology program experienced growth this year as Dr. Courtney Lyle joined Dr. Paul Kelker in July 2012. Three new treatment rooms were added in the pediatric oncology office and the Inpatient Cancer Care unit is now treating patients ages six and older. This expanded program now has the capability of providing more comprehensive pediatric oncology care, right here at Billings Clinic.

The outpatient Pediatric Oncology Infusion Center, located in the pediatric center, provides infusion services such as chemotherapy, hydration therapy and transfusion services. The area is child friendly, with colorful murals on the walls, books and toys for all ages, and child-friendly electronic games.

Our Billings Clinic Pediatric Oncology program has enjoyed a long-term, established relationship with the Children’s Hospital Colorado Center for Cancer and Blood Disorders in Denver, Colorado. It looks forward to future collaboration to enable our patients to have access to research protocols.

Sarah Blackburn, meets with pediatric oncology nurses Kory Funk, BS, RN, and Mandy Miller, BS, RN, to review patient treatment information.
Stem Cell Transplantation

The Billings Clinic Cancer Center is the only facility in the region providing stem cell transplantation. Stem cell transplantation is the standard of care for certain types of cancers: Multiple Myeloma, Lymphoma, and Acute Myeloid Leukemia. This means it has been proven to provide the patient with the best outcome for treating their cancer. Stem cell transplant allows the physician to integrate the use of high dose chemotherapy with the strategies that preserve bone marrow function. Transplant expertise includes the use of mobilized peripheral blood stem cells and bone marrow growth factors to promote recovery from high dose chemotherapy. The Billings Clinic team performs Autologous Stem Cell Transplantation services, where the donor is the recipient (patient). The team has five transplant patients for 2012. Historically, cancer patients receiving high-dose chemotherapy have been required to enter the hospital for lengthy periods. Today, continuing advances in cancer research and treatment make it possible for patients to receive much of their treatment on a closely monitored outpatient basis.

The stem cell transplant program at Billings Clinic is currently preparing for FACT accreditation. This designation recognizes stem cell transplant programs devoted to providing exceptional service in all aspects of cellular therapy.

Recent education and competency monitoring have increased the ability and commitment for providing this outpatient service with an emphasis on safety and quality for the highest outcome for the patient.

Research Program

Billings Clinic remains a leader in Cancer Research in our region striving to have a clinical trial for all our patients. In partnership with pharmaceutical companies, Montana Cancer Consortium, Moffitt Cancer Center, Scripps Cancer Center, University of Colorado and Gynecology Oncology Group we offer all phases of trials I-IV, supportive care, and biospecimens. Our staff of 5 RN Coordinators, 3 Data Managers, 1 Regulatory and a Manager work to manage the many complexities of the clinical trials. We were very excited to have received the Conquer Cancer award from the American Society of Clinical Oncologist and the National Cancer Institute Gold Certificate of Excellence for clinical trial accrual.

We also are proud of the number of articles that our investigators have authored. It is exciting for cancer patients to be able to participate in what will be the cancer care of the future.
New Programs at Billings Clinic

Cody Oncology and Infusion Center

Billings Clinic Cody expanded services in September to provide infusion services, and in late October to provide full time medical oncology coverage in the North-Central Wyoming region. With an estimated 500 new cancer patients being diagnosed per year in the Big Horn Basin area, Billings Clinic Cody Cancer Program will provide care for the specific needs of patients with cancer. That cancer care team includes a medical oncologist, mid-level provider, and certified oncology registered nurse, all experienced in providing oncology care. This team will work closely with the Billings Clinic team to provide services available at the Billings Clinic site, including case presentations at the multidisciplinary tumor board via telemedicine and access to trials approved for off-site delivery. Patients are being referred to the infusion center for chemotherapy, as well as a multitude of infusion treatments.

Billings Clinic Cody Oncology and Infusion services will serve as a regional “hub” for the Big Horn Basin region, providing services closer to patients’ home, thereby eliminating some of the extensive travel for these patients.

Artist in Residence

Creating art has long been shown to effectively reduce cancer patients’ stress and promote emotional processing, all of which benefit physical healing. Artistic expression provides a therapeutic opportunity to heal the spirit, to create, to focus on more than the illness, and to empower patients during a time when so much is beyond their control. Art can be a source of strength and self-discovery.

Billings Clinic Cancer Center understands this and has implemented an Arts-in-Medicine pilot program which is dedicated to bringing people with cancer --through all stages of life-- a way to help meet the challenges of diagnosis, treatment and survivorship. Started in April, the pilot program introduced a variety of arts programs to cancer survivors, families and friends. For two months, volunteer artists met with patients to share ideas and conversation while engaged in the creation of art: jewelry, earthenware clay forms, paper creations, and writing projects.

This summer, Billings Clinic was awarded a $15,000 LIVESTRONG grant to sustain the pilot efforts and bring the first-in-Montana, Artist-in-Residence program to Billings Clinic. The grant funds will be utilized over a 12-month period for artist supplies, as well as 9 paid hours per week of artists’ time to work directly with cancer patients while receiving cancer treatment in both the inpatient and outpatient settings. While the program’s primary focus is on cancer patients and survivors, the artists will also host art offerings for Cancer Center staff members as well.
Inpatient Pain Resource Nurse Program

Pain is a significant problem in patients with cancer and is often the most feared aspect of the disease. A recent systematic review of over 52 studies indicates that pain occurs in approximately 53% of patients with cancer, but the experience is highly variable and dependent upon the stage of disease, goals of treatment, and type of cancer. A multitude of pain guidelines exist to guide the management of cancer pain, but despite these guidelines, a recent study from 326 hospitals revealed that hospitalized patients with cancer experienced a mean pain level of 6, an unacceptable level. Several barriers exist in managing pain in hospitalized patients including lack of knowledge about management strategies, poor attitudes that may appear judgmental to patients and families, and lack of prompt analgesic administration due to nursing care delays.

In February 2012, a Pain Resource Nurse (PRN) program was initiated at Billings Clinic. The Inpatient Cancer Care (ICC) team selected two nurses to attend the February training and an additional five ICC nurses attended the June 2012 training. PRN meetings commence monthly, and nurses share successful case studies, challenges, and systems issues that can interfere with optimal pain management. Positive deviants who successfully manage pain and who encourage excellence in pain management are identified. Since the initiation of the program, patient satisfaction scores have increased by over 10% on the ICC.

Questions: During this hospital stay…
1. How often was your pain well controlled?
2. How often did the hospital staff do everything they could to help you with your pain?
Welcome New Physicians

We want to extend a grand welcome to a couple of new physicians who joined the Billings Clinic in 2012. The clinical contributions they bring to cancer care in the region are outstanding.

**Ala’a Muslimani, MD**

Billings Clinic Cancer Center welcomed Dr. Ala’a Muslimani as a medical oncologist and hematologist in July 2012. Dr. Muslimani completed his medical training at Cleveland Clinic Hospital in Ohio and his fellowship in hematology and oncology at Beaumont Medical School at Oakland University in Royal Oak, Michigan. Dr. Muslimani specializes in the diagnosis, treatment and research for all types of cancer, as well as diseases of the blood in the adult population.

**Courtney Lyle, MD**

Billings Clinic Cancer Center welcomed Dr. Courtney Lyle to our Pediatric Specialty Medicine Team as a pediatric oncologist and hematologist. Dr. Lyle graduated from medical school at Emory School of Medicine in Atlanta, Georgia, and finished her residency at University of Colorado in Denver. Her Fellowship in Pediatric Hematology and Oncology was completed at the University of California San Diego. She also received a Master of Advanced Studies (MAS) degree in Clinical Research. Dr. Lyle specializes in the diagnosis, treatment and research for childhood cancers and diseases of the blood in infants, children, teens and young adults.

In Memory of Dr. Donald Twito

In April 2012, we lost our beloved, trusted friend and colleague Donald Twito, MD, medical oncologist. As the first oncologist in the State of Montana, Dr. Twito built a reputation for excellence in cancer care. His dedication to his patients, the science of medicine and to Billings Clinic will always be in our memory. We dedicate this Annual Report to him and to his vision for outstanding cancer services.

We miss you, Don!
Colorectal Cancer

The Billings Clinic Cancer Center embarked on a study in 2012 to evaluate all colorectal cancer cases excluding those patients younger than 18 and those patients with a previous cancer diagnosis. This included 182 cases between 2007-2011. The Billings Clinic colorectal cancer cases were compared with the National Oncology Data Base for overall survival and with the American College of Surgeons’ Cancer Program Practice Profile Report (CP3R) for concordance with lymph node evaluation.

Background

Colorectal cancer is the third most common malignancy (not including skin cancer) diagnosed in men and women. It is also the third leading cause of cancer-related death in both men and women. (Figure 1) These statistics shed light onto the importance of continued improvement in outcomes from this deadly disease.

Quality Measures and Outcomes

In an effort to assess our quality and improve our outcomes, a review of the number of lymph nodes evaluated was undertaken. Further, we looked at our survival compared to the national averages.

Number of Lymph nodes evaluated

The current national benchmark for lymph node evaluation following resection of a colorectal cancer is 12; with the goal of attaining 12 or more lymph nodes in at least 90 percent of cases. The Intergroup Trial INT-0089, showed a correlation that patients who had more lymph nodes removed seemed to have improved survival and further studies have suggested similar results. (Le Voyer TE, Sigurdson ER, Hanlon AL, et al. Colon Cancer survival is associated with increasing number of lymph nodes analyzed: a secondary survey of intergroup trial INT-0089. J Clin Oncol 2003;21:2912-2919) The NCCN panel recommends examining at least 12 lymph nodes and the AJCC staging manual similarly recommends evaluation of at least 10-14 lymph nodes. It is known that the number of lymph nodes varies and the harvest relies on adequacy of surgical resection, the extent of pathologic review as well as the age of the patient, tumor characteristics and gender.

Graphs 1-7 show patients with stages I, II, III colorectal cancers diagnosed during the years 2007-2011. These include patients > 18 years of age with epithelial cancer and their first or only cancer diagnosis.
**Patient Care Evaluation Study (Cont’d)**

**Lymph Node Dissection Comparison**

When looking at Billings Clinic’s CP3R performance in comparison to Montana, the American College of Surgeons West Division, the Mountain Region, the CoC Comp Cancer Centers, and all CoC Programs, our percentage of cases with at least 12 lymph nodes harvested equals or exceeds those of comparing institutions.

**Graph 5:** This demonstrates the percent of surgeries performed at Billings Clinic by pathologist whereby less than 12 lymph nodes were dissected. In addition, further investigation revealed no correlation between gross dissection completed by pathology assistant versus pathologist.

**Graph 6:** This identifies the distribution by type of surgery performed at Billings Clinic when less than 12 lymph nodes were removed.

**Graph 7:** This identifies the number of lymph nodes removed with non-emergent surgeries performed at Billings Clinic when the number was less than 12.

**Table 1:** This depicts the CP3R comparative data for Billings Clinic, Montana, the ACS Great West Division, Mountain Region, CoC Comprehensive Cancer Centers, and all CoC programs.
A few discrepancies in concordance rates were noted between this quality study and the results reported through the CP3R. In each case, these discrepancies were investigated and can be explained as follows:

- This quality study reported results by year of definitive surgery, whereas CP3R results are reported based on year of diagnosis. There were 9 cases whereby definitive surgery was performed in a year subsequent to the year of diagnosis.

- This quality study reported results of all colorectal patients meeting the criteria of Stage I, II, or III colorectal cancer, whereas 7 cases included in the quality study were excluded from CP3R because the cancer site involved the rectosigmoid junction.

- This quality study identified one case whereby more than 12 lymph nodes were examined, but the case was recorded within CP3R as only having 7 lymph nodes; a registry update has been completed and submitted.

- This quality study identified one case whereby more than 12 lymph nodes were examined, but the case was recorded within CP3R having 0 lymph nodes. Upon investigation, this case was determined to involve more than 1 separate colon cancer, but coding rules dictate that lymph nodes are counted once. Unfortunately, in this case, CP3R chose to count the primary with 0 nodes listed, whereas if they would have included the others, they would have found 46 were examined. This is being pursued by the Billings Clinic Registry Coordinator with the American College of Surgeons.

- This quality study identified one case that should have qualified for CP3R, but was previously not included due to incorrect coding of previous cancers; a registry update has been completed and submitted.

- Two cases were counted twice in CP3R due to their sequence number, when actually there is only one colorectal cancer to be included. This problem has occurred because when the patients were first diagnosed with colorectal cancer, the assigned sequence number was 00; when a subsequent cancer was diagnosed, the first cancer was recoded with a 01 sequence and the second cancer is coded with sequence number 02. However, in CP3R, both the 00 sequence and the 01 sequence are reported (the system does not remove the duplicate sequence of 00 when it adds sequence 01). This issue is being pursued by the Billings Clinic Registry Coordinator with the American College of Surgeons to determine how to correct.

- Seven cases were included in CP3R, but not in this quality study because the definitive surgery was not performed by a Billings Clinic surgeon (3) or there was documentation of a previous cancer in physician notes (4).

**Survival Comparison**

Graph 8 depicts Billings Clinic overall survivorship for Stages I, II, and III colorectal cancer compared to the National Oncology Database. Survival is broken down based on Stage of the disease and plotted out to 60+ months. Although Billings Clinic overall survival for Stage I colorectal cancer falls below the national comparative overall survival, additional statistical analysis was completed to confirm the difference is not statistically significant.
**Conclusions**

Thus, Billings Clinic Cancer Center outcomes for the treatment of colorectal cancer overall compare favorably to national comparatives. Our procurement of lymph nodes typically exceeds the regional and national efforts. In addition, no relationship or trend was found based on individual surgeon or pathologist in those cases with less than 12 nodes harvested. Interesting findings were noted when investigating discrepancies between this quality study and CP3R reported outcomes; registry follow-up has been conducted with corrections submitted and appropriate follow-up with the American College of Surgeons initiated.

Graph 8: This demonstrates the 5-year survival rate by stage of disease for Stages I, II, and III colorectal cancers diagnosed in 2007 as compared with the National Oncology Data Base (NODB).
Cancer Registry Milestones

This has been a year of growth and new initiatives within Billings Clinic Cancer Registry.

In May, Billings Clinic Cancer Center Registry staff hosted a 2-day educational workshop for 31 Cancer Registrars from Montana and Wyoming in coordination with The Montana Cancer Registrars’ Association (MCRA). As the host site, Billings Clinic took the lead in program planning and development, speaker recruitment, agenda setting, preparation of workshop materials and handouts, registration, and various other host logistics such as conference room/media availability, accommodations, and meals. Workshop speakers included representatives from the National Cancer Registrars Association (NCRA), the Montana Cancer Registrars’ Association (MCRA), the Montana Cancer Control Commission (MTCCC), and the Montana Central Tumor Registry (MCTR) as well as oncologists and ancillary health professionals from Billings Clinic Cancer Center. Clinical presentations included topics in medical and gynecologic oncology, radiation oncology, surgery, pharmacology, genetic counseling, and cancer research. The workshop was exceedingly successful, and participants returned to their home communities with a better understanding of what’s possible and available within our region.

In July, the Registry began exploration of a new software system (AIM’s E-Path) to partner with the Registry’s primary data management software (METRIQ). The new system utilizes artificial medical intelligence to electronically review pathology reports and automate case-finding for data abstraction. As this report goes to press, the Registry is in the midst of software implementation. The new software promises to reduce case-finding time significantly, improve workflow, thus freeing-up valuable registrar time for the essential activities of data abstraction and entry.

The Registry continues to participate in the Commission on Cancer’s Rapid Quality Reporting System (RQRS) as well as other quality initiatives. One such initiative, sponsored by the National Cancer Institute’s Community Cancer Center Programs (NCCCP), is a multi-center research study looking at outcomes and processes associated with multidisciplinary cancer care.

A total of 1,781 cases were accessioned in 2011. Of that number, 1,594 were determined to be analytic and 187 were defined as non-analytic. Analytic cases include those who are diagnosed at this institution and/or receive part or all of first course treatment at this facility. Non-analytic cases include those who have received their primary cancer care elsewhere and are seeking either follow-up treatment or care for recurrence. Details regarding non-analytic cases are not included in the primary site table.

(Back row) Kerrie Robertson, Lori Frank, and Technical Assistant Lee Ann Carranco. (Front row) Marcia Schermerhorn and Barb Shevela

(I-r) Cancer Registrars

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Exclusions: Not Male and Not Female

* Analytic: Patients diagnosed and/or received any of first course treatment at Billings Clinic.

*** N/A: Case is not eligible for staging. An AJCC staging scheme has not been developed for this site or histology is excluded from an AJCC site scheme.

**** Unk: Cases that do not have enough information to stage or the physician considered it unstageable.
According to the most recent and available national data from SEER (Surveillance Epidemiology and End Results for years 2000-2009 inclusive), the median age at diagnosis for all cancer sites is age 67 for men and age 65 for women. The data above for Billings Clinic (accession year 2011) shows a similar pattern; however, the median age at diagnosis for women in the Billings Clinic data is slightly younger, 63 years. Further study of this variance may provide a better understanding of our population.

The graph shows a consistent increase in analytic cases (orange bar) over time, reflecting the continuing growth of the Billings Clinic Cancer Center program. Analytic cases are those diagnosed and/or receiving part of or the entire first course of treatment at Billings Clinic. Non-analytic cases (blue bar) include those who may only receive follow-up care or treatment for a recurrence at Billings Clinic. The total number of cases for each year, inclusive of analytic and non-analytic cases, is noted above each bar.
The bar graph above shows a changing pattern over time for the primary diagnosis of breast cancer for women at Billings Clinic. The numbering at the right end of each bar indicates actual number of cases for this cancer for each year. The number within the left end of each bar shows the number as a percentage of total female cancers at Billings Clinic.

The bar graph above shows fluctuation over time for the primary diagnosis of prostate cancer for men at Billings Clinic. The numbering at the right end of each bar indicates actual number of cases for this cancer for each year. The number within the left end of each bar shows the number as a percentage of all male cancers at Billings Clinic.
Cancer Registry (Cont’d)

Top Five Cancers - Female

National data from the American Cancer Society (years 2010-2012), indicate that the leading cancers for women remain breast (28-31%), lung (14%), and colorectal (9-10%) cancers. Billings Clinic data for the last 5 years (2007-2011) for women is shown in the pie charts. While breast cancer remains our primary female cancer, representing approximately 22-29% of all female cancers at Billings Clinic, uterine cancer is second (9-13%) followed by lung cancer (8-12%). This variation from national statistics is likely reflective of our widely recognized expertise in gynecologic cancers, having the only such program in Montana, Wyoming and North Dakota.
Cancer Registry (Cont’d)

Top Five Cancers - Male

A review of the most recent national data available from the American Cancer Society (years 2010-2012) indicates that the primary 3 cancers for men have remained unchanged with prostate cancer in the lead for men (28-29% of all male cases) followed by lung (14-15%) and colorectal (9%) cancers. Statewide data over a five year period (2006-2010) from the Montana Central Tumor Registry reflects a similar pattern. Billings Clinic data shown in the pie charts for years 2007-2011 indicates a break from this pattern. While prostate cancer remains the primary male cancer at Billings Clinic, melanoma takes second place followed by lung cancer for men. This variance from national and state trends is likely a function of our recognized expertise as a resource and referral site for dermatology and specialized skin cancer therapies including Mohs surgery.

Year 2007
Based on Analytic Cases N = 633

Year 2008
Based on Analytic Cases N = 677

Year 2009
Based on Analytic Cases N = 646

Year 2010
Based on Analytic Cases N = 688

Year 2011
Based on Analytic Cases N = 749
Awards, Publications and Recognitions

Grant Awards
- Spirit of Eagles Grant to supporting Men’s Events on Colorectal Cancer on Crow Reservation
- Spirit of Eagles Grant to support Cancer 101 and the making of moccasins on Crow and Northern Cheyenne Reservation
- LIVESTRONG Community Impact Grant to support an Artist in Residence program to work with cancer patients and staff
- Montana Telegenetics Project: Improving Access, Educating Providers and Consumers to support increased access to genetic counseling services

Excellence Awards
- American Society of Clinical Oncologists (ASCO) clinical trial award
- National Cancer Institute (NCI) certificate of excellence

Certifications
- American College of Surgeons’ Commission on Cancer Certification since 2004
- Quality Oncology Practice Initiative (QOPI) Certification 2012
- Certified Nurses
  - 70% of the outpatient RNs who qualify are certified
  - 100% of inpatient RNs who are qualified take the OCN exam are certified or are registered to take the exam in the next few months
  - 19% of IP RNs are nationally certified in two specialties (oncology and medical/surgical nursing)
  - 100% of GYN/Oncology RNs who qualify are certified in Women’s Health
- 100% of Cancer Registrars are certified
- One oncology dietitian became a Certified Specialist in Oncology Nutrition
- One employee became a Board-Certified Pharmacotherapy Specialist (BCPS)
- One social worker is certified in oncology social work

Operational Excellence/Quality
- 100% of cancer leaders are certified Yellow, Green or Black Belts within the Lean Six Sigma, Operational Excellence program
- One black belt and over 10 yellow belt projects were performed in 2012 to improve processes reduce waste in areas of patient care
- 19% of the IP RNs are certified Yellow Belts in Lean Six Sigma; 3 projects were completed by the yellow belts in 2012: decreasing variation in the time from admit to chemo administration, RN bedside report, and CNA bedside report

National Committee Membership and Appointments
- Society of Gynecologic Oncology 2011-2012 Council, Ex-Officio-Clinical Practice, Committee Chair, Randall K. Gibb, MD
- Society of Gynecologic Oncology 2011-2012 Council, Quality and Outcomes Committee, Member, Randall K. Gibb, MD
- Society of Gynecologic Oncology 2011-2012 Council, Clinical Practice Committee, Chairperson, Randall K. Gibb, MD
- NCCCP Principle Investigator, John Schallenkamp, MD
- NCI U54 Grant Principle Investigator, Jorge Nieva, MD
- Editorial Board Journal of Advanced Practice in Oncology, Caroline Deigert, PA
- Alliance for Clinical Trials in Oncology, Radiation Oncology Committee, Christopher Goulet, MD
- Alliance for Clinical Trials in Oncology, Health Disparities Committee, Christopher Goulet, MD
- Alliance for Clinical Trials in Oncology, Community Oncology Committee, Christopher Goulet, MD
Awards, Publications and Recognitions (Cont’d)

Publications

- Brant J.M. (2012). Drug approval: The long and bumpy road to market (fentanyl nasal spray commentary), Journal of the Advanced Practitioner in Oncology, 2(6), 405-408
- Marinucci D., Bethel K., Luttgen M., Breuce R.H., Nieva J., Kuhn P., Circulating Tumor Cells from well-differentiated Lung Adenocarcinoma retain Cytomorphologic Features of Primary Tumor Type. Arch Pathol Lab Med 2009 Sep:133(9):1468-71
Awards, Publications and Recognitions (Cont’d)

Publications (cont’d)


Presentations

Grand Rounds Presentations

- **Breast Cancer Update 2012**
  Presented by: Brock Whittenberger, MD, Medical Oncology; Christopher Veale, MS, Medical Physicist, Radiation Oncology; Larry Herbert, MD, Radiology; Terry Housinger, MD, General Surgery
- **Novel Cancer Immunotherapies**
  Presented by: Jorge Nieva, MD Chair, Department of Hematology & Oncology
- **Challenging Cancer Genetics Cases**
  Presented by: Susan C. Landgren, MS, Certified Genetics Counselor
- **Heparin-Induced Thrombocytopenia: The Challenge of Diagnosis & Treatment**
  Presented by: Alaa Muslimani, MD, Department of Hematology & Oncology
- **Kids with Clots - Who? Where? Why?**
  Presented by: Courtney Lyle, MD, MAS, Pediatric Hematologist/Oncologist

National Presentations

Karyl Blaseg, RN, MSN, OCN
- **Speaker:** AONN, 3rd annual conference, Practice-Site Specific Navigation, Phoenix, AZ
- **Speaker:** ONS National Research Connections Conference, Patient and Caregiver Satisfaction with Cancer Survivorship Plans, Phoenix, AZ

Jeannine Brant, PhD, RN, AOCN
- **Keynote Speaker:** ONS Regional Pain Conference, Cancer Pain Management State of the Science, Atlanta, GA
- **Speaker:** ONS Orange County Chapter Meeting, Updates in Lung Cancer Management, Santa Ana, CA
- **Speaker:** ONS National Research Connections Conference, Pain Care Quality in U.S. Inpatient Oncology Units, Phoenix, AZ
- **Speaker:** National Magnet Conference, Pain Care Quality in U.S. Hospitals, Los Angeles, CA
- **Speaker:** ONS Chapter Meeting, Management of Nonsmall Cell Lung Cancer, Albuquerque, NM
- **Keynote Speaker:** Regional Oncology Nursing Conference, Making the Case for Pain Management and Palliative Care, Binghamton, NY
- **Poster:** Quality of Life Trajectories of Breast Cancer and Lymphoma Survivors Enrolled in A Survivorship Program. Oncology Nursing Society, Phoenix, AZ

Randall Gibb, MD
- **Speaker:** The American Congress of Obstetricians & Gynecologist, Montana Section Annual Clinical Meeting, Gestational Trophoblastic Disease, Big Sky, Montana
- **Speaker:** The American Congress of Obstetricians & Gynecologist, Montana Section Annual Clinical Meeting, Pap Smear Screening Intervals: What Does the Science Tell Us?, Big Sky, Montana
- **Speaker:** Billings Clinic Women's Health Symposium, October 12, 2012: “Endometrial Cancer Update”
Presentations (Cont’d)

National Presentations (cont’d)

Roberta Harris
• **Poster:** Roberta Harris, Disparities in Cancer Prevention and Control: Moving Toward Improved Outcomes (2012), Center for Disease Control (CDC) National Cancer Conference, Washington, DC

Dona Oliver, RN, MSN, MBA
• **Panel:** Distress Screening within a Community Cancer Center – Challenges and Opportunities. Oncology Nursing Society, Phoenix, AZ

Sarah Porter Osen
• **Panel Speaker:** American Cancer Society Symptom Surveillance Study, National Cancer Institute Community Cancer Centers Program Meeting, Arlington, VA

John Schallenkamp, MD
• **Speaker:** GE Healthcare Multimodality Educational Symposium, Plenary Session Presentation, New Brunswick, CA

Deb White, RN, BSN, OCN
• **Speaker:** ONS Annual Congress, Developing a Patient-Centered Navigation Program, New Orleans, LA

Nancy White, RN, MSN
• **Panel:** Colorectal Cancer (CRC) Awareness in Indian Country: The Role of the NCI Community Cancer Centers Program (NCCCP) Nurse Navigator
Billings Clinic

For questions about cancer or if you need a physician, please call HealthLine nurses at (406) 255-8400 or 1-800-252-1246.

For the Physician/Provider Line, please call (406) 255-8411 or 1-800-325-1774.

www.billingsclinic.com/cancer