

30th Annual

Cancer Report



CENTRACARE
Coborn Cancer Center

a service of St. Cloud Hospital



Coborn Cancer Center Board Members

Nelson Adamson, MD
Radiation Oncology

Hani Alkhatib, MB, BCh
Hematology/Oncology

Ann Backes, MSN, RN, OCN
Director, Inpatient Oncology

Shawn Day, DO
Family Medicine

Marc Dvoracek, MD
Pathology

Dahlia Elkadi, MB, BCh, PhD
Hematology/Oncology

Joy Gustin, MS
Genetics

Ronald Hanson, MD
Otolaryngology

LaNae Harms-Okins, LSW, CFSW
Oncology Social Worker

Merryn Jolkovsky, MD
Palliative Care

Don Jurgens, MD
Principal Investigator,
Hematology/Oncology

Girum Lemma, MD
Hematology/Oncology

Chadd McMahon, MD
Diagnostic Radiology

Lori Pinke, MD
Urology

Nathan Reuter, MD
Surgical Oncology

Nicholas Reuter, MD, FACP
Cancer Liaison Physician

Janet Sather, CTR, RHIA
Cancer Registry

Christian Schmidt, MD
General Surgery

Cathy Tieva, BA, RN, PHN, OCN
Director, Radiation Oncology

Hilary Ufearo, MBBS
Chair, Cancer Care Center Board
Hematology/Oncology

Jane Vortherms, MHA, RN, OCN
Director, Outpatient Medical Oncology
and Chemotherapy Services

Mary Weis, APRN, CNS
Clinical Nurse Specialist

Sonya Wieber, MS, MBA
Section Director, Oncology

Traci Zenner, BSN, RN, PHN
Lung Care Coordinator

Table of Contents

Cancer Registry Statistics.....	1
Welcome.....	2-3
Continued Advancement.....	3
A New Chapter.....	4-5
Relieving Financial Stress.....	6
Diagnostic Imaging.....	7
Neurosurgical Options for Brain Tumors.....	8-9
Radiation Therapy Options for Brain Cancer.....	10
Chemotherapy Options for Brain Cancer.....	10
Clinical Research.....	11
Palliative Care and Brain Cancer.....	12-13
Oncology Nursing.....	14-15
Integrative Therapy Benefits Patients.....	16
Building a Foundation for Cancer Survivors.....	17
Surviving with Faith.....	18-19
Glioblastoma Multiforme Study.....	20-21
Clinical Achievements.....	back cover
Mayo Clinic Cancer Care Network.....	back cover



Cancer Registry Statistics

Our service area

St. Cloud Hospital is located in the heart of Central Minnesota. Its primary service area covers Stearns, Benton and Sherburne counties, with secondary service area extending to 23 counties across Central Minnesota.

Coborn Cancer Center provides comprehensive care and an extensive range of treatment options to support cancer patients and their families. We understand the importance of receiving quality cancer care and treatment close to home, and provide services in many Central Minnesota communities including St. Cloud, Alexandria, Glenwood, Little Falls, Long Prairie, Melrose, Monticello, Paynesville and Sauk Centre.

Coborn Cancer Center is a strong community supporter giving back more than \$372,496 last year through education, prevention and early detection events to meet the needs of our community. These events included the CentraCare Health Family Farmers Market, Relay for Life, various support groups and much more.

Array of services supporting cancer patients

Behavioral Health	Hematology/Oncology	Pathology
Breast Center	Home Care Services	Pharmacy
Cancer Registry	Hospice Services	Radiation Oncology
Cancer Research	Hospitalist Program	Rehabilitation Services
Center for Surgical Care	Imaging Services	Respiratory Care
CentraCare Digestive Center	Inpatient Oncology	Spiritual Care
CentraCare Wound Center	Integrative Therapies	Survivorship Services
Chemotherapy and Infusion Services	Laboratory	Volunteer Services
Gorecki Guest House	Palliative Care	

Site Incidence Data Report for St. Cloud Hospital

The data below reflects the cancer care given at St. Cloud Hospital, Coborn Cancer Center and the Alexandria Radiation Oncology Department.

	2011	2012	2013	2014	2015
ALL SITES	1603	1526	1579	1556	1619
Head and Neck	49	50	43	55	46
Lip and Oral Cavity	11	14	13	20	13
Pharynx	21	19	12	15	19
Nasal/Paranasal Cavity	2	1	1	2	1
Salivary Glands	4	4	4	6	3
Larynx	11	12	12	12	10
Other Head and Neck	0	0	1	0	0
Digestive System	253	250	294	279	280
Esophagus	15	13	13	17	20
Stomach	21	13	24	21	22
Colon	87	80	101	83	74
Rectum	41	39	52	37	38
Anus/Anal Canal	3	5	4	6	3
Liver	12	12	10	15	21
Pancreas	44	64	69	70	69
Other Digestive	30	24	21	30	33
Respiratory System	220	243	224	224	211
Lung/Bronchus-Small Cell	35	40	31	22	42
Lung/Bronchus-Non Small Cell	169	194	187	193	163
Other Bronchus and Lung	10	5	3	4	4
Other Respiratory	6	4	3	5	2
Blood and Bone Marrow	160	183	163	146	175
Leukemia	47	52	31	54	54
Multiple Myeloma	25	29	33	21	25
Hodgkin Lymphoma	5	11	13	5	11
Non-Hodgkin Lymphoma	66	66	67	52	74
Other Hematopoietic	17	25	19	14	11
Bone	2	0	3	2	2
Connective/Soft Tissue	4	8	5	13	7
Skin	35	42	43	32	45
Melanoma	34	37	40	29	41
Other skin	1	5	3	3	4
Breast	290	264	311	278	278
Female Genital	60	53	55	69	53
Cervix Uteri	4	5	2	4	0
Corpus Uteri	38	33	27	46	35
Ovary	14	10	24	17	15
Vulva	2	2	1	1	1
Other Female Genital	2	3	1	1	2
Male Genital	279	176	171	166	222
Prostate	271	164	154	157	205
Testis	7	8	12	8	10
Other Male Genital	1	4	5	1	7
Urinary System	129	117	141	167	188
Bladder	59	55	61	83	104
Kidney/Renal	66	56	73	77	77
Other Urinary	4	6	7	7	7
Brain and CNS	51	66	47	54	51
Brain (Benign)	1	2	1	0	3
Brain (Malignant)	35	28	23	26	31
Other Brain and CNS	15	36	23	28	17
Endocrine	53	49	56	43	38
Thyroid	45	45	42	35	36
Other Endocrine	8	4	14	8	2
Unknown Primary	15	14	18	21	14
Other/III-defined Sites	3	11	5	7	9

Note: The increase in bladder and prostate cases in 2015 could be attributed to Adult & Pediatric Urology in Sartell joining CentraCare Health in January 2015, resulting in an increase in prostate biopsies and bladder surgery at St. Cloud Hospital and CentraCare Surgery Center.



Hilary Ufearo, MBBS
*Physician Section Director, Oncology
Hematology/Oncology*

Sonya Wieber, MS, MBA
Section Director, Oncology

Welcome

As we embark upon the presentation of our 30th edition of the St. Cloud Hospital cancer report, we would like to pause and reflect on what differentiates the Coborn Cancer Center from other cancer programs. We are reminded of a frequently asked question, “What is your vision for the Coborn Cancer Center?” The answer to both is a fundamental belief that all we aspire to do is intricately intertwined in the strength of our relationships, not only with our patients, but with their families and their caregivers, as well as members of their care team and community. Cancer will touch each of our lives in a different way and at different times. Whether we are personally afflicted or we are impacted by someone who is going through cancer such as a loved one, a friend, a coworker, a teacher or a mentor; cancer means something different to every person.

The full scope of a person’s journey with cancer cannot always be told, but the courage and vigor for life they impart upon us is easily one of the most profound demonstrations of strength we may have the opportunity to experience. The focus of this year’s annual report, as determined by the Cancer Care Center Board, is on brain/central nervous system cancers which overall represents a small fraction, less than 4 percent, of our newly diagnosed cases each year. However, the complexity of treating such a disease involves a myriad of considerations given the potential impact to cognitive functioning and the necessary psychosocial support as patients undergo rehabilitation.

As a comprehensive cancer program, we strive to meet the patients’ needs therapeutically whether with chemotherapy or radiation therapy. We also continuously assess where we are and what we can do better to offer the supportive services our patients need. It is through this ongoing commitment to being a better partner to our health community that we find ourselves in a unique position to not only treat our patients, but their families and caregivers as well.

The time spent listening to our patients and members of their care team tells us we do a phenomenal job treating them physically, but once they are done receiving their treatment, they need more support from us moving into the next phase in their cancer journey. Their lives have been disrupted and we need to provide the necessary resources to re-establish what their life will now look like moving forward.

We introduced the Farmers Market as a part of our initiative to promote healthier food options in our community and to raise awareness of the impact healthy eating habits can have on cancer prevention. We will continue to expand our efforts as we partner with BLEND (*Better Living: Exercise and Nutrition Daily*) through the CentraCare Health Foundation as we strive to diversify our target audience and reach those who have limited access to healthy food.

The 41st annual Holly Ball event took place in December 2015. Donations received through the Fund-a-Need campaign during this event are dedicated to support Integrative Therapies to our patients at the Coborn Cancer Center which includes acupuncture, acupressure, hand massage, Healing Touch and aromatherapy. An RN integrative therapies specialist with specific training in oncology began in April 2016. These services have been shown to decrease side effects related to chemotherapy such as anxiety, fatigue and pain.

On behalf of the Cancer Care Center Board, we hope the enclosed material will provide you with a synopsis of the direction we aim to move our program which is not only a continuity of our clinical excellence and exemplary outcomes, but a dedication to our holistic approach to healing. Please visit centracare.com for a full menu of services available at Coborn Cancer Center.

Sincerely,



Sonya Wieber, MS, MBA
Section Director, Oncology



Hilary Ufearo, MBBS
Physician Section Director, Oncology
Hematology/Oncology



Thomas Schrup, MD
Physician Vice President,
Specialty Division

Kurt Otto
Vice President Operations,
Specialty Division

Continued Advancement

As executive co-leaders of the specialty division at St. Cloud Hospital, we share responsibility for the supervision and oversight of our oncology services. We support Coborn Cancer Center as they bring the organization's commitment to fulfilling the Triple Aim plus People into each and every patient's experience. This means keeping patients at the center of all we do as well as our dedication to providing top-notch quality care and value-added services in a manner which reflects the mission of our organization.

Executive leadership has formally accepted the proposal brought forward by Coborn Cancer Center to become an integrated service line for cancer care across CentraCare Health. This is important for our patients because it means they can expect the same level of quality cancer care regardless of where they receive their treatment. Our work continues as we move forward with a steadfast commitment to the value our cancer program offers.

We look forward to planning our survivorship center which will be 100 percent philanthropically supported. The Coborn Family Foundation announced their \$1-million gift in support of this work to make our vision become a reality. On behalf of the providers, staff and patients of Coborn Cancer Center, thank you to all who so graciously continue to support us!

A New Chapter

At age 47, Pam Schnettler was preparing for her oldest daughter's graduation party during Memorial weekend 2008. Through the hustle and bustle of her long to-do list, things suddenly took an unexpected turn. During a trip to the supermarket, Pam suddenly felt the grocery aisles caving in. She went home to rest, which is the last thing she remembers that day. After being awakened by her family and being in and out of consciousness, they called 911 and an ambulance arrived soon after, at their home in Sartell.

After awakening in the Emergency Room, the physician and Pam's husband, Greg, told her she had a brain tumor. She then had a brain biopsy and MRI, which showed it was cancer. After discussing her options with Harold Windschitl, MD, and Hani Alkhatib, MD, the final decision was made to not have surgery. Knowing the large size of her tumor, they stated that the surgery would not remove it all, and could result in deficits including loss of peripheral vision and a potential weakness on one side of her body. Knowing the importance of quality of life for Pam, this was the best choice.

All of this happened at a very significant time in Pam's life — her first daughter's graduation, getting her moved and settled into college and saying goodbye.

Thankfully, her family and friends stepped up to the plate not only to help her with the graduation party, but all of the emotions brought on by these new transitions of life. Pam's friends and family were a strong support network — from keeping her busy making a T-shirt quilt for her daughters, to planning fun visits and dinners to just check in. The overwhelming amount of prayers also were comforting.

In July 2008, Pam started radiation therapy. "Just like that, the day came that I had to show up for my first radiation treatment — it was a bad day. Sandy Johnson, RN, CNS, was my advocate. She already knew my emotions and what I was feeling. When you walk into the waiting room, you look around and really realize, 'Oh my God, I have cancer. Look at all these people who have cancer too.' Sandy came out and put me at ease. She made the conversation light and I was really grateful for her at that painful moment. The radiation staff were absolutely a great group of people. I saw them for six weeks. They were so friendly, supportive and timely with results and updates. I was really happy with all of that," Pam said.

Pam responded well to the treatments, and did not have a reoccurrence until April 2014. At this point, she saw Neurologist Kathleen Rieke, MD. "She was very supportive and extremely knowledgeable. Viewing MRI results with Dr. Rieke helped me see changes in the tumor," she said. Pam felt Don Jurgens, MD, her medical oncologist, did an extraordinary job at compromising and dealing with her strong-willed personality. He explained how Pam's type of brain tumor, oligodendroglioma, is rare and only found in 9.4 percent of brain cancers. He clarified that because her tumor was very slow growing, her clinical symptoms outweighed her MRI results, which put her at ease. Chemotherapy was the next option. After chemotherapy, Pam's MRI was positive and showed if anything was left, it was small. Her job going forward was to keep her immune system in tip-top shape by eating healthy and exercising.

Meditation and prayer both played a significant role in her healing process. Pam feels a connection to Mother Teresa and reflects on her life often since one of the miracles which qualified her for Sainthood was curing a person with a cancerous tumor.

Pam learned many lessons along her cancer journey, but the three most important were: Number one, "Anyone overwhelmed by illness — pick that



one person. That one person that's a good listener, has a good memory and can absorb the information for you. My greatest support was my husband, Greg. He reminded me when to eat, take my medications and when I didn't remember something, I knew I could rely on him."

Number two, "Make sure you have a primary care provider. I was very healthy and did not have one. When I first left the hospital I didn't have an advocate for me, or someone

"Diversion are a must throughout this challenging time. My daughters were my number one diversion. They have been a great support, especially in a way that I still need to be a mom to them."
- Pam Schnettler

who knew me really well in the medical field, which made it much more challenging."

And Number three, "Diversion are a must throughout this challenging time. My daughters were my number one diversion. They have been a great support, especially in a way that I still need to be a mom to them. I try to be as healthy and vibrant as I can so my daughters and family, although concerned, feel much better. Not only am I a cancer patient, but also a caregiver to my loved ones around me when it comes down to their emotions and ability to have hope for me. Diversion are important to make life as normal as possible."

Pam feels grateful to have a job that she loves surrounded by wonderful coworkers and friends. As an accounting specialist for CentraCare Health, she said, "I love what I do — it keeps my quality of life amazing. I still look forward to coming to the office. I work as much as I can because it leaves less time to dwell on cancer. I feel good when I am here because it keeps my mind occupied and I need to exercise my brain."

This challenging journey has been a life lesson for Pam. It has taught her how to be more supportive and a better friend to others that also may be struggling in life. From this experience, she feels very fortunate and realizes how important a good life is to healing and health ... and perhaps even a complete cure.

Erica, Greg, Pam and Jena Schnettler enjoying some family time in their backyard.



Relieving Financial Stress

The Coborn Cancer Center has three dedicated staff who work “behind the scenes” to support our patients through their cancer journey. The patient financial assistant (PFA) position was created to assist each patient by validating their insurance coverage for services received at Coborn Cancer Center, obtaining necessary prior authorizations and connecting them to different staff, i.e., social worker, to assist with appropriate services for financial assistance. This service is a value added service to decrease the patient stress by ensuring their insurance company is properly billed for services received.

Why is it important to have a patient financial assistant? A cancer diagnosis can be very expensive. It often is a significant source of stress and anxiety for the patient and his or her family. Some patients report that the practical and emotional impact is often harder than the medical issues they face.

A newer term in oncology is financial toxicity. This refers to the way out-of-pocket expenses can drain the wallets of cancer patients, negatively impact their quality of life and potentially become an adverse event of treatment.

The expense of cancer care goes beyond the treatment and necessary medical visits; it includes unplanned costs related to transportation/travel, medications to relieve side effects, extra care needs of family (care giving, at-home care and long-term care), and potential loss in income due to reduction in work hours. Our licensed oncology social worker works closely with patients to provide resources to patients to address many of these concerns.

Cancer patients on average are about 2.5 times more likely to declare bankruptcy as those without cancer. In fact, 62 percent of personal bankruptcies filed are due, in part, to a significant amount of medical debt. Of these, 78 percent had health insurance. In addition, on June 6, 2012, the *Star Tribune* reported 14 percent of Minnesotans are insured by high deductible insurance plans — nearly twice the national average.

The patient financial assistants (*pictured to the left*) are one part of our talented team behind the scenes supporting the cancer patient along their trajectory of care. In collaboration with our social worker, they work diligently to decrease the stress and anxiety related to the financial aspects of medical care received at Coborn Cancer Center.



(left to right)
Lisa Schmitz, Cancer Center Finance
Rebecca Noska, Cancer Center Finance
Nikki Pullins, Cancer Center Finance

Diagnostic Imaging

Neuroradiologists are licensed medical doctors sub-specialized in the radiology practice of diagnosing and characterizing abnormalities of the central and peripheral nervous system, including the brain, spine and head and neck regions of the body, using state-of-the-art imaging techniques. Neuroradiologists utilize their knowledge of anatomy and disease to interpret these images to make the diagnosis and define the extent of disease, such as for tumors, cancer treatment effects from chemotherapy and/or radiation therapy, strokes, aneurysms, genetic conditions, neurodegenerative disease and many other causes of neurological dysfunction. These state-of-the-art imaging techniques are implemented to evaluate tissues and blood vessels of the nervous system, and include:

Diagnostic Magnetic Resonance Imaging (MRI) methods:

- Contrast-enhanced techniques
- Perfusion and diffusion techniques
- MR angiography (MRA)
- Functional MRI (fMRI)
- MR spectroscopy (MRS)

Diagnostic Computed Tomography (CT) methods:

- Contrast-enhanced techniques
- CT angiography (CTA)
- Perfusion techniques
- Positron Emission Tomography-CT (PET-CT)

Diagnosis of neuropathological processes allow the treating physician — a neurologist, neurosurgeon, oncologist — to accurately counsel the patient and start the best therapy at the earliest possible time. This collaborative approach optimizes patient care and outcomes.

Advancing neuroradiology and improving patient care is a constant focus of the neuroradiologists at Regional Diagnostic Radiology. Most recently, the modalities of MR perfusion and functional MRI have been made available as additional diagnostic techniques in the already advanced neuroimaging protocols. In some cases, MR perfusion helps to more accurately characterize tumor burden and/or treatment effects. In other cases, functional MRI is useful where disease exists in more eloquent regions of the brain, such as areas responsible for speech or movement. Our fellowship-trained neuroradiologists continue to play an integral role in the diagnosis and treatment of our patients.

Tiffany Rickbeil, MD
Internal Medicine,
CentraCare Clinic —
River Campus

Chadd McMahon, MD
Interventional Radiology,
Regional Diagnostic Radiology



(left to right)
Jerone Kennedy, MD, Neurosurgery
Teri Larson-Johnson, PA-C, Radiation Oncology
Christopher Miller, MD, Radiation Oncology
Amanda Packert, APRN, CNP, Neurosurgery

Neurosurgical Options for Brain Tumors

For patients with certain types of brain tumors, oncologists and neurosurgeons may recommend surgical intervention. The most appropriate initial procedure depends upon the presumed diagnosis. This presumptive diagnosis is made after information is considered from the patient's history, neurological examination and preoperative diagnostic studies. These diagnostic studies may provide important information regarding tumor size, extent and proximity to critical brain structures. With this information, neurosurgeons are better able to design surgical approaches that are maximally safe and effective.

Neurosurgical interventions can range from minimally invasive procedures for diagnosis, to more lengthy and complex cranial surgeries for tumor removal. The typical surgical goals are to confirm diagnosis and remove as much tumor as possible. For some types of brain tumors, surgical intervention may be curative. In those cases, subsequent chemotherapy or radiation therapy may not be necessary. For other types of brain tumors, surgical intervention may be offered as a way to delay recurrence of the tumor or to improve quality of life.

At St. Cloud Hospital, the neurosurgical service offers all standard surgical procedures for brain tumors, as well as minimally invasive neurosurgical procedures that are not widely available. As a result of our large volume and long experience with brain tumors, as well as other complex neurosurgical conditions, we've been designated one of the nation's "100 Hospitals and Health Systems With Great Neurosurgery and Spine Programs" by Becker's Hospital Review. In addition, St. Cloud Hospital was ranked third in Minnesota for Neurology and Neurosurgery by *U.S. NEWS and World Report*, and was ranked "Better than expected" for mortality in hospital after cranial neurosurgery by Healthgrades.

Symptoms of a Brain Tumor

Symptoms vary greatly and depend on the brain tumor's size, location and rate of growth. They may occur gradually and become worse over time, or they can happen suddenly. Tumors in any part of the brain may cause the pressure inside the skull to rise. This can be caused by growth of the tumor itself, swelling in the brain or blockage of the flow of cerebrospinal fluid. The most common symptoms caused by this increase in pressure and attributed to a brain tumor include headaches, seizures, muscle weakness in arms and legs and cognitive dysfunction, including memory problems and mood or personality changes.

A common initial symptom of a brain tumor is headaches. Forty percent of brain tumor headaches often are accompanied by nausea and vomiting. They tend to be worse at night and may awaken the patient. Brain tumor headaches tend to get worse over time, don't respond to usual headache remedies and occur in about half of patients. Keep in mind, most headaches are unrelated to brain tumors.

As many as half of people with brain tumors will have seizures at some point. The type of seizure may depend on where the tumor is located. Sometimes this is the first sign of a brain tumor, but fewer than one in 10 first seizures are caused by brain tumors.

Types of Brain Tumors

Benign tumors (non-cancerous) and malignant tumors (cancerous) can involve the brain and spinal cord, as well as the supporting bony skull and spine. Tumors can arise directly from the brain or spinal cord (primary tumors), or can spread to the brain or spine from other parts of the body (metastatic tumors).

Benign brain and spinal tumors generally are more slow growing, and tend to be less invasive. Common types of benign brain tumors include meningiomas, grade I astrocytomas and acoustic neuromas. Common types of benign spinal tumors include meningiomas, schwannomas, and intrinsic ependymomas and grade I astrocytomas. Benign tumors typically are more easily controlled with therapy, and generally have a lower recurrence rate. Certain benign tumors can be life-threatening if they compress important brain or spinal structures. Furthermore, some benign tumors can later change to malignant tumors.

Malignant tumors are considered cancerous. They tend to grow more quickly, tend to be more invasive and are more likely to spread to other distant structures. Metastatic malignant brain and spinal tumors most commonly originate from lung, breast, kidney or skin cancers. Primary malignant tumors of the brain and spinal cord most commonly arise from supporting glial cells. The most common malignant

brain tumor types include anaplastic astrocytoma (grade III astrocytoma), glioblastoma (grade IV astrocytoma) and anaplastic oligodendroglioma.

Brain and spinal tumors can present with a wide variety of signs and symptoms. The clinical presentation is largely dependent on the location and the rate of growth of the tumor. Patients with tumors close to the areas of the brain involved in movement or speech can present with deficits in those functions fairly early in the course of tumor growth. Patients with tumors some distance from critical brain structures may present with fairly large tumors, but with few or no neurological deficits. Regardless of tumor location, however, all patients can be affected by the amount of mass, and the amount of brain deformity, associated with the tumor. The intracranial space has a fixed volume, so that gradual increase in volume or mass associated with a tumor may eventually lead to increased intracranial pressure. Common symptoms associated with increased intracranial pressure include headache, nausea, vomiting and double or blurred vision. Patients with tumors involving the spine can present with complaints of back pain, numbness, weakness, poor bowel or bladder control and difficulty with walking.

Once a physician has completed a detailed history and an initial assessment of neurological function, patients are then typically sent for anatomical and functional imaging studies. These studies are performed to confirm the clinical suspicion for a brain or spinal tumor. Typical anatomical studies, such as MRI and CT, can provide crucial information regarding the location of the tumor. Noninvasive functional studies may provide crucial information regarding the degree of involvement of critical brain and spinal areas, as well as information regarding possible risk to those areas during surgery. These studies, in conjunction with the information gleaned from the patient's history and neurological exam, help physicians form a presumptive diagnosis and design the safest initial treatment plan.

In some situations, a minimally invasive biopsy is then performed to confirm the diagnosis. In other situations, a recommendation for direct tumor resection is given. In either case, the subsequent pathological diagnosis will ultimately determine subsequent therapy and expected survival. Subsequent therapy may include various combinations of chemotherapy, radiation therapy or further resective surgery. Eventually, palliative care and hospice services may need to be offered in order to assist patients and their families with quality-of-life and end-of-life issues.

Radiation Therapy Options for Brain Cancer

Overall incidence of brain tumors has been on the rise since the mid 1900's. It is estimated nearly 78,000 new cases will be diagnosed in the U.S. during 2016.

One way brain tumors are treated is with external beam radiation. Radiation therapy uses high-energy X-ray beams to damage or kill tumor cells by targeting the cell's DNA in hopes of stopping tumor growth and help prevent cancer recurrence. Radiation may be used alone, or in combination with surgery or chemotherapy.

Depending on the type of radiation used, treatments can last anywhere from one day to several weeks. Types of external beam radiation include partial or whole brain, stereotactic, proton beam or brachytherapy.

Currently, whole brain and partial brain radiation are available at Coborn Cancer Center. Whole brain radiation therapy (WBRT) is a type of radiation used to treat patients whose brain tumor cannot be removed surgically or for individuals who have multiple brain tumors. An advantage of WBRT is the ability to treat microscopic disease not visible on imaging. This can decrease the risk of subsequent brain cancer spreading. An individual's speech, memory, or processing speed may be affected by WBRT which can impact quality of life. Partial radiation covers a smaller area of the brain. The benefits are the ability to spare healthy brain tissue with less side effects.

Significant progress has been made with brain tumor treatments to improve patients' quality of life and survival. As technology continues to evolve in the field of radiation oncology, we are constantly presented with the opportunity to be forward thinking on how these advancements can improve our patients' lives.

We are working to bring stereotactic radiosurgery (SRS) to our cancer program. SRS delivers higher doses of radiation to the tumor with precise accuracy to destroy the cancer while preserving the surrounding healthy brain tissue. In addition, SRS minimizes the risk for side effects, including memory loss, which leads to a better long-term outcome and improved quality of life.

Chemotherapy Options for Brain Cancer

Patients with brain cancer whose treatment plan includes chemotherapy can receive this type of treatment several ways. Chemotherapy, which is designed to kill cancer cells at various stages of growth, can be given orally in a pill form, through an IV into the blood stream or to the brain tumor site after the tumor has been removed using a dissolvable wafer.

A type of chemotherapy that is taken orally for brain cancer is Temodar which often is used with radiation treatment and then continues for a period of time after radiation is complete. The nursing staff at Coborn Cancer Center provide education to patients on how to obtain, take and manage side effects related to oral chemotherapy.

Carmustine, a type of chemotherapy, can be administered into the bloodstream via an IV or central line. Intravenous chemotherapy is administered by a specially trained RN in the chemotherapy infusion area at Coborn Cancer Center. Carmustine also can be used in dissolvable wafers that release the chemotherapy into the tumor bed and may help prevent the tumor from returning. These wafers are placed in the tumor bed by a surgeon.

Another type of therapy is targeted therapy such as a monoclonal antibody where antibodies are grown in a laboratory and administered to the patient through an IV. These antibodies identify proteins on cancer cells that are involved in cell growth and attach to these proteins to prevent the cancer cells from growing. A monoclonal antibody that is used for recurrent brain cancer is Avastin (bevacizumab). This monoclonal antibody binds to a protein called vascular endothelial growth factor (VEGF) which prevents the production of new blood vessels. This prevents the tumor from growing and deprives the tumor of blood supply.

Patients also may elect to participate in a clinical trial. A treatment clinical trial may be designed to improve current treatments or study new treatments for patients which then could become the standard of care. Other studies look at better management of side effects which improves that patient's ability to receive effective cancer treatment.

Clinical Research

Coborn Cancer Center offers a clinical trial research program as part of their commitment to advance the care of patients. Each new patient is screened and any potential trials are shared with his or her physician. The research team includes certified registered nurses, clinical research associates and a physician investigator with extensive education in research methods, treatment options and patient rights. At any given time, there are approximately 40 clinical trials open for individuals with many types of cancer. The research department typically has one to two research trials available for patients with brain tumors. Coborn Cancer Center is active in protocols set forth by the National Cancer Institute as well as industry-driven trials. These protocols focus on offering new therapies, reducing side effects from treatment and improving quality of life. We are appreciative of those patients who participate in trials, as they often improve care for future patients.

(standing left to right)
Don Jurgens, MD, Hematology/Oncology,
Principal Investigator
Cheryl Kelley, Clinical Research
(sitting left to right)
Stacy St. Onge, BSN, RN, OCN, Clinical Research
Stacey Nistler, Clinical Research
Katie Greb, BSN, RN, OCN, Clinical Research
Judy Jensen, BSN, RN, OCN, Clinical Research



Palliative Care and Brain Cancer

A diagnosis of brain cancer is shocking and devastating to patients and families. Brain cancer is frequently diagnosed in late stages with dramatic symptoms present at diagnosis. Patients and families are overwhelmed by the impact the diagnosis has on their function and quality of life. Palliative care is helpful in assisting patients and families in addressing and voicing their goals and wishes, treating symptoms and facilitating advance care planning.

Palliative care is a medical specialty that focuses on the physical, emotional and spiritual needs of people with serious illness. The goal is to reduce suffering, protect dignity and improve quality of life for patients and families. This care can take place at the same time as other treatments and at any time during a serious illness. Care is provided in a holistic manner that addresses all the needs of patient and family, even beyond the medical needs.

At Coborn Cancer Center, palliative care is incorporated into the care of all patients. Two levels of palliative care exist: generalist and specialist palliative care. Generalist palliative care is care provided for those affected by serious illness as an integral part of standard clinical practice by any health care professional who is not part of a specialist palliative care team. Generalist palliative care includes management of pain and symptoms, management of depression and anxiety, discussions about prognosis, goals of treatment, suffering and code status, and advance care planning. Specialist palliative care is care provided by those who have undergone specific training and/or accreditation in palliative care medicine, working in the context of an expert interdisciplinary team of palliative care health professionals. Specialist palliative care practice builds on the palliative care provided by generalist providers and reflects a higher level of expertise in complex symptom management, spiritual support, psychosocial support, cultural support and grief and loss support.

The oncology staff at Coborn Cancer Center assess patients and families frequently for palliative care needs. All patients undergoing care at Coborn Cancer Center receive generalist palliative care provided by their oncology team. If more complex palliative care needs are identified, the oncology staff will place a referral for the patient and family to see one of the palliative care specialists at Coborn Cancer Center. Patients and families also may access palliative care while hospitalized at St. Cloud Hospital through a referral to the inpatient interdisciplinary palliative care team. Some patients also may receive home palliative care services through CentraCare Health Home Care & Hospice.

An interdisciplinary palliative care team adds an extra layer of support at home to patients living with serious illness to ensure quality of life despite the challenges of the illness.

Palliative care can play a vital role in the care of patients with brain cancer, regardless of the stage of diagnosis. Many patients with brain cancer experience symptoms including headaches, seizures, fatigue and mood changes. With successful management of these symptoms, patients ideally are able to more fully participate in and enjoy daily life. Early involvement of palliative care can improve the ability to tolerate medical treatments and can help patients better understand treatment choices, which often allows them to feel an enhanced sense of control around their medical care.

More, Better, Earlier Conversations

As health care and technology evolve, people are living longer often with one or more serious illnesses. Although interventions exist to extend life for people with serious illness, sometimes these interventions negatively impact quality of life and may not align with personal goals. Research has proven that a gap exists in current health care between what people living with serious illness want in regard to their health and what they actually receive. For example, 86 percent of Medicare beneficiaries have identified that their preference is to die in their home when almost 40 percent will die in an acute care hospital. People with serious illness have identified priorities other than living longer such as symptom management and quality of life, a sense of control and completion and strengthened relationships. One of the key reasons this gap exists is because the conversations necessary between health care providers and people living with serious illness don't occur often enough, and if they do occur, it frequently is within the last months to days of life. Several barriers contribute to the delay in these conversations including lack of health care provider training and confidence, perceived time constraints and the lack of value for these conversations within the culture of medicine. Patient and family barriers also exist including reluctance to initiate discussion about goals and wishes especially if it contradicts the recommendations of the health care provider. The bottom line is that multiple factors impede meaningful conversations.

CentraCare Health and Coborn Cancer Center are committed to delivering the kind of health care that people living with serious illness want. In order to do that, we first have to ask patients about their goals and priorities.

A program currently is in development within CentraCare Health, focusing on improving the skills and training of primary and specialty health care providers to carry out goals-of-care conversations with seriously ill patients. The goal of this program is to improve the lives of all people with serious illness by increasing meaningful conversations about their values and priorities utilizing a systematic approach. Health care providers are trained in the use of the Serious Illness Conversation Guide*, which provides a structure and language to facilitate robust conversations between health care providers and people living with serious illness. The information obtained about the patient's goals and wishes are documented in the patient's medical record and are available to all providers caring for the patient. This ensures that regardless of where the patient is receiving care, their goals and priorities are accessible and acknowledged. Over the next fiscal year, the goal is continue disseminating this program throughout CentraCare Health.

* © 2015, Ariadne Labs: A Joint Center for Health Systems Innovation (www.ariadnelabs.org) and Dana-Farber Cancer Institute. Licensed under the Creative Commons Attribution-NonCommercial-Share Alike 4.0 International License, <http://creativecommons.org/licenses/by-nc-sa/4.0/>



(left to right)
Kris Gross, APRN, CNP, Palliative Care
Sara Revier, APRN, CNS, Palliative Care
Paula Lindhorst, MD, Palliative Care
Merryn Jolkovsky, MD, Palliative Care

Clinical Ladder IV Nurses

(standing left to right)

Roland Brummer, RN, OCN, Inpatient Oncology

Amy Bianchi, BSN, RN, OCN, Chemotherapy and Infusion

(sitting left to right)

Melissa Nagengast, BSN, RN, OCN, Chemotherapy and Infusion

Jill Libbesmeier, BSN, RN, OCN, Inpatient Oncology



Oncology Nursing

Oncology nursing care is provided at Coborn Cancer Center and the Inpatient Oncology Unit at St. Cloud Hospital. In partnership with Coborn Cancer Center, oncology care also is provided at regional sites in Central Minnesota under the direction of Coborn Cancer Center medical and radiation oncologists. These sites include Alexandria, Glenwood, Little Falls, Long Prairie, Melrose, Monticello, Paynesville and Sauk Centre. Nursing care is provided by registered nurses, licensed practical nurses and nursing assistant/patient care assistants. The following is a summary of the nurses' preparation to provide an exceptional patient care experience for our oncology patients.

Education Preparation (St. Cloud Campus* only)	
• Direct Care RNs with baccalaureate or higher degree in nursing	79%
• Number of advanced practice RN's	4
National Certification of Direct Care Staff (St. Cloud Campus* only) NDNQI Benchmark: 33.64% (90 th percentile)	
• Inpatient Oncology	51%
• Outpatient Oncology	77%
Oncology Nursing Society Specialty Training Completion	
• Chemotherapy/Biotherapy Certificate Course (inpatient)	89%
• Chemotherapy/Biotherapy Certificate Course (outpatient/regional sites)	98%
• Radiation Therapy Certificate Course	100%

* St. Cloud Campus: Coborn Cancer Center, Inpatient Oncology Unit at St. Cloud Hospital

Why do oncology nurses become certified?

Oncology nursing certification is a formal recognition of specialized knowledge, skills and experience. Certification helps develop specialty nursing by creating minimum competency standards for the care of the oncology patient. Regardless of the health care setting, certification benefits patients and their families, nurses and employers. Oncology nursing certification validates that nurses have met stringent requirements for knowledge and experience and are qualified to provide competent oncology care.

St. Cloud Hospital demonstrates their commitment to providing the highest quality of care to patients with cancer throughout the health and illness continuum by hiring certified nurses, supporting nurses in attaining and maintaining certification, rewarding nurses who become certified and informing patients and the public about the certification status of their nursing staff.

(Information from the Oncology Nursing Certification Corporation at oncc.org.)

Oncology Nurses in the Spotlight

Awards & Recognitions

Daisy Award

Amy Stolt, RN, BSN, OCN, Women's Care Coordinator

March of Dimes Oncology Nursing Nominee

Amanda Zierden, BSN, RN, OCN, Medical Oncology Clinic

Outstanding Achievement in Use of Evidence in Nursing Management

Catherine Tieva, BSN, RN, PHN, OCN, Radiation Oncology

Outstanding Achievement in Mentorship

Sara Revier, MSN, RN, ACNS-BC, ACHPN, Palliative Care

Outstanding Support to Enhance the Process of Evidence-Based Practice or Nursing Research Award

Joy Plamann, BSN, MBA, RN, RN-BC, Inpatient Medical Oncology

Publications in 2015

Jane Vortherms, MHA, RN, OCN, Brenda Spoden, BSN, RN, OCN, CRNI, and Jill Wilcken, BSN, RN, OCN (2015). From Evidence to Practice: Developing an Outpatient Acuity-Based Staffing Model. *Clinical Journal of Oncology Nursing*, 19 (3), 332-337.



“Oncology nurses have a sacred profession, one that utilizes specialized training to care for the body, mind and spirit of cancer patients and their families.”

- Catherine Tieva, BSN, RN, PHN, OCN,
Radiation Oncology

Exemplary Professional Practice – Evidence-Based Practice

Inpatient Medical Oncology Practice Improvement Project

Cancer patients may be at higher risk to develop infection. This risk increases if the patient has a urinary catheter or a central venous catheter (such as a PICC or port). In efforts to reduce the risk of infection for hospitalized patients, the Inpatient Medical and Oncology Unit implemented bathing with chlorhexidine for patients who have a urinary catheter or central venous catheter. Chlorhexidine has antimicrobial cleaning and protection above normal soap and research has shown a reduction in infection with daily use. Patients can clean with chlorhexidine as a solution in the shower or wipes if limited to bed. Since implementation of bathing with chlorhexidine, we have experienced no infections associated with urinary catheters and a reduction in central line associated infections.

Interdisciplinary Chemotherapy Teaching

Patients can be overwhelmed with information before they start treatment. Prior to this project, patients and their families were invited to attend a group class to learn about chemotherapy. The networking between patients was good, however, it was difficult to customize the class to each patient. An interdisciplinary group reviewed content, defined expectations and revised the class to provide individualized patient education. Patients now are scheduled for a two-hour education session to meet with a registered nurse, pharmacist, social worker and dietitian. Overall, patient satisfaction reflects an improvement in patients' understanding of side effect management and feeling less overwhelmed. Through the team effort, we can better provide an exceptional and individualized care experience for our patients.

Exemplary Professional Practice – Nursing Research

An internal nursing research study was designed to measure breast cancer patient decision making and satisfaction addressing hair loss when receiving adjuvant chemotherapy. A prospective single center descriptive study will compare decision making and satisfaction for subjects who select cooling before chemotherapy, then every month for three months and finally six months after the last cytotoxic chemotherapy. The data is being analyzed from the 44 patients who enrolled in the study. One early outcome of the study is nursing staff provide consistent education to patients regarding potential for hair loss and options available to prevent or address temporary hair loss.

Integrative Therapy Benefits Patients

**Kathi Sowada, MSAOM,
MSN, RN, LAc, HN-BC**
*Integrative Therapies Specialist,
St. Cloud Hospital*

Oncology patients now have access to evidence-based integrative therapies to manage symptoms and promote wellness during their healing journey. An RN integrative therapies specialist leads the efforts to promote and provide integrative services to patients and to educate nursing staff, providers and patients on the benefits and use of these modalities.

Integrative therapies are therapeutic, non-pharmacological treatments that support health and healing by promoting balance in body, mind and spirit. They are safe and work in harmony with standard medical care. Patients are offered these services as an adjunct to their regular medical regime. Because integrative therapies are holistic modalities, practitioners take into consideration a person's emotional and spiritual state, as well as the condition of the physical body. These therapies can affect a person on all levels, and therefore can help with a wide range of conditions or symptoms. Most commonly, they are used to enhance the healing process and deal with the common side effects of cancer treatment such as nausea, pain, fatigue or peripheral neuropathy. However, they also can be used for mental-emotional concerns, such as depression, anxiety, stress or difficulty coping with illness. Because they work by stimulating the body to heal itself, they also can be used to promote wellness and prevent illness.

Integrative therapies available include aromatherapy, Healing Touch, acupuncture, acupressure and Animal-Assisted Therapy. Nurses in both the chemotherapy infusion and radiation oncology areas have been trained in aromatherapy and the use of four essential oils that are effective in symptom management: lavender, spearmint, ginger and sweet orange. Aromatherapy can be requested by patients at any time during their cancer treatments and can help with nausea or discomfort and promote relaxation. Acupuncture, acupressure and Healing Touch are available by appointment after a referral is placed by the nurse or physician. These treatments are used alone or in combination, and can assist with many physical and emotional concerns affecting those dealing with cancer. Additionally, Animal-Assisted Therapy pets and their volunteer handlers visit with patients in the waiting areas or treatment rooms to promote social and emotional well-being.

The use of these evidence-based integrative therapies in the outpatient oncology setting can help improve the patient experience, improve health outcomes and decrease the amount of medication used for symptoms such as pain, anxiety and nausea.



Building a Foundation for Cancer Survivors

When the words “cancer” and “you” are tied together into one sentence — this challenging new reality can consume our body, our mind and our spirit. Coborn Cancer Center is offering hope to cancer patients, whose survivorship journey not only begins the day of their diagnosis, but continues into their new reality — life post treatment. Patients have voiced their concerns, telling us how supported they felt when receiving the physical treatments, chemotherapy or radiation, and how lost they felt when the treatments were over and they were sent back to their lives feeling anxious, isolated and unsure of the road ahead.

Coborn Cancer Center is taking great strides to illuminate these shadows, and we need your help. Our vision is to create a separate, refreshing space adjacent to Coborn Cancer Center where healing opportunities come in many forms. A place where integrative therapies such as mindfulness, yoga and Healing Touch help build resiliency, massage therapy and acupuncture ease muscle and joint pain, art and music therapy calm restless thoughts and support groups help connect and console. All of this in a comforting space dedicated to our patients’ well-being.

Undertaking a sizeable project such as this needs community support. The Coborn Family Foundation has generously donated a \$1-million gift to aid in establishing this space which offers a whole new level of support to cancer patients and caregivers. This 100 percent donor-funded survivorship center will cost \$3.2 million, so additional funding is needed.

Your gifts matter

Our community of survivors needs their community — YOU — to understand that “living with cancer” can be as challenging as being diagnosed with cancer. A building dedicated to meeting all the needs of our patients is everyone’s responsibility to make a difference.

If you want to be part of this amazing effort, please contact Luan Knoll, CentraCare Health Foundation, at [320-654-3687](tel:320-654-3687) or visit www.centracare.com/foundation.



Emily Coborn
Vice president of Fresh Merchandising
and president of the Coborn Family
Foundation

Surviving with Faith


The American Cancer Society describes three distinct phases associated with cancer survival, including the time from diagnosis to the end of initial treatment, the transition from treatment to extended survival and long term survival. Cancer survivorship is a dynamic process of living with, through and beyond a diagnosis of cancer, regardless of the outcome. Many organizations, including the Institute of Medicine, Commission on Cancer and the American Society of Clinical Oncology's Quality Oncology Practice Initiative, have emphasized the importance of survivorship and ensuring patients and primary care providers are given a summary of treatment and a follow-up care plan after completion of their active treatment. In 2015, Mary Weis, RN, APRN-CNS, was hired at Coborn Cancer Center to refine our process and increase patients' access to survivorship visits. Below is one patient's story of the visit.

As the dean of the School of Theology and Seminary at Saint John's University in Collegetown, Bill Cahoy had taken to heart the monastic mantra to "keep death daily before your eyes — be prepared." After a large-mass tumor was discovered in his colon at age 60, Bill's prayer wasn't just to not die, "My prayer was to not die because of my own stupidity by not getting a colonoscopy," he said. "I've spent my life fighting the consequences of ignorance." After teaching others for 34+ years about the true depth of life, Bill quickly got to experience his wisdom first-hand.

Bill's symptoms were not blatant. There was no blood in his stool or abdominal pain. His symptoms were fairly common — weight loss and feeling run down. "I assumed this is what it's like to be 60," he said. Bill was scheduled to do a lecture in Portland when he noticed a scratchy throat. He went in for a strep test to get on antibiotics and clear it up in time for his trip. However, the strep test came back negative.

After visiting Chris Wenner, MD, at CentraCare Health Paynesville – Cold Spring Clinic, his hemoglobin tests came back extremely low. Bill had a CT scan on a Tuesday, was admitted to St. Cloud Hospital Wednesday, with a colonoscopy scheduled for Thursday. Friday morning he had surgery where they removed one third of his colon. His surgeon, Stephen Sahlstrom, MD, said his grapefruit-sized tumor had been there for a long time. Luckily, his body created an abscess around the tumor encasing it from spreading to the rest of his body. After his 10-day hospital stay, Bill went home 30 pounds lighter. His main job was to eat and rest. "My wife likes to cook and I really like to eat, so that works out," he laughed.

After starting chemotherapy in April 2015, Bill experienced fatigue and neuropathy. "My chocolate and red wine just didn't taste as good," he joked. To help fight his fatigue and keep his spirits up, Bill made sure to exercise regularly using his elliptical and free weights. He didn't let his chemo pump get in the way — not even during his first few weeks back to teaching in the fall.



Bill and Jennifer Cahoy taking a break out of their busy work day at Saint John's University.

Bill has felt amazingly blessed with tremendous support throughout this unexpected journey. His wife, Jennifer, has been there for him not only daily and with every appointment, but hourly and always with great cheer. Spending time with his children and grandchildren has been uplifting. The support and accommodations from Saint John's University and his fellow staff was very heartening and helpful throughout his struggle. "I will never forget waking up in the hospital with one of my friends sitting next to me," he said. "Or receiving homemade pudding to enjoy, getting a package full of boxes from a friend — one box for each upcoming chemo treatment, visits from work friends, friends volunteering to mow my lawn and prayers. People praying for me, here, and all over the country. I felt lifted up. All of the love and support out there — it was an incredibly moving experience."

"Once my treatment was over, the support offered by Coborn Cancer Center was not over. My survivorship visit was incredibly helpful."

- Bill Cahoy

When asked what stood out the most, Bill stated, "My experience with Coborn Cancer Center was unfailingly positive. To me, it captures the spirit of the whole place and how patient-centered it truly is. The nursing staff is awesome, just incredible. They do the real work of patient care, and they are amazing. The chemo infusion staff was tremendous — I felt very well-cared for. My surgeon, Dr. Sahlstrom, was phenomenal — I can hardly see my scar," he laughed. "I liked Dr. Jurgens' style — it clicked with me. He was very knowledgeable and experienced. Everyone just really paid attention to me and my needs here."

"Once my treatment was over, the support offered by Coborn Cancer Center was not over. My survivorship visit was incredibly helpful," Bill remembers, "I had questions pertaining to my surgery and where I'm at now. This visit works through that entirety from beginning to end, wrapping up all of those loose ends. I appreciated the knowledge and being informed on what was available — it was a good experience. There may be needs going forward. To know this support is there, is a gift."

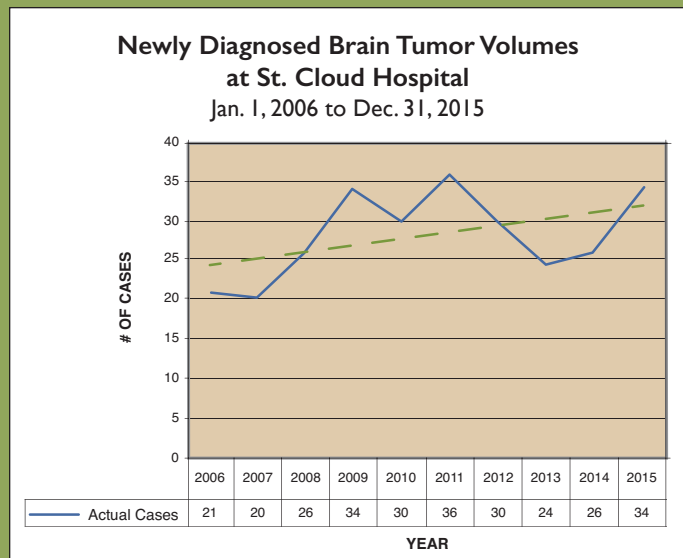
Bill described, "Coming face-to-face with his own finitude" as being his toughest challenge. "People say you need to listen to your own body," he said. "However, I always lived with the idea that my body needed to listen to me. I have always been in charge — my strength of will. However, it became clear that at a certain point, my body just said 'No.' Coming to terms with that and limitations on what I could and couldn't do was a struggle. I have learned a lot throughout this journey. I'm still unpacking what I've learned from all of this. My first and last message for everybody — get your colonoscopy."



Glioblastoma Multiforme Study

Throughout the past 10 years there has been a 62 percent increase in overall new brain tumor diagnoses. **Graph 1** illustrates all new brain tumors diagnosed and/or treated at St. Cloud Hospital, irrespective of histology, in a 10-year period.

Graph 1



Glioblastoma Multiforme (GBM) belongs to the most common and most malignant of the primary brain tumors in adults, the astrocytomas. GBM is a high-grade form of astrocytoma. A primary brain tumor is one that begins in the brain rather

than having spread there from a different part of the body. There are more than 120 types of primary brain tumors.

Treatment of brain tumors depend on the nature of the tumor, how rapidly it is growing, what symptoms it is causing and where it is located. No current treatment for GBM is curative. Standard treatment consists of maximal surgical resection, radiation therapy, concomitant and adjuvant chemotherapy.

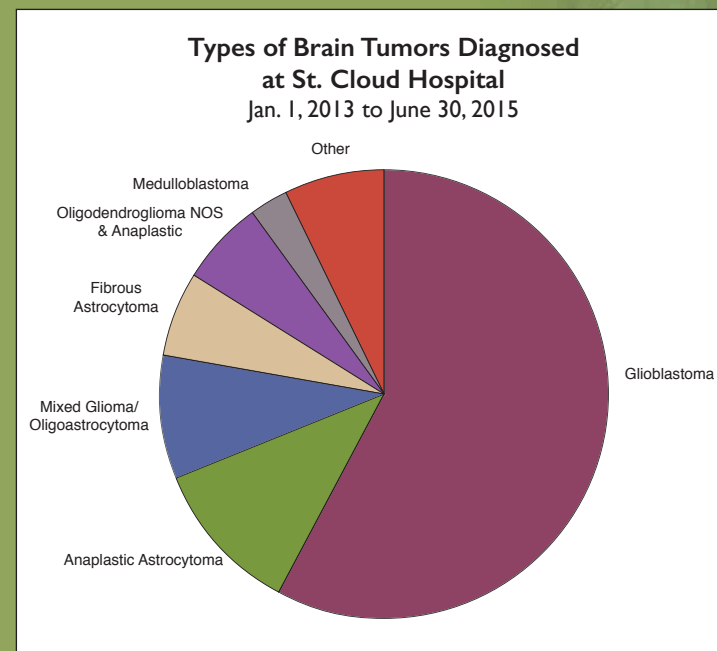
An estimated one out of every four patients with this type of tumor survives two years. Prospects are better when the patient is younger than 45, all or most of the tumor can be removed and the tumor turns out to be an anaplastic astrocytoma, which is one stage less severe than GBM.

In 2015, the Cancer Care Center Board approved an in-depth review of patients diagnosed with Glioblastoma Multiforme between January 1, 2013 to June 30, 2015 to review compliance with current National Comprehensive Cancer Network® (NCCN) guidelines. There was a total of 26 patient records reviewed by Girum Lemma, MD and Mary Weis, MSN, APRN-CNS.

The selection criteria to include patients in the study was straight forward — patients who received all of their treatment at St. Cloud Hospital or Coborn Cancer Center.

Graph 2 displays the total number of brain tumors diagnosed during the study period (January 1, 2013 to June 30, 2015), broken down by histology. The chart demonstrates consistency with the literature in that the most common malignant primary brain tumor is glioblastoma, followed by anaplastic astrocytoma. This data was provided by the St. Cloud Hospital Cancer Registry.

Graph 2



Treatment: It is recommended that all high-grade gliomas have either a resection

when determined to be feasible or a stereotactic/open biopsy. The decision is made while carefully considering patient safety and outcome. This is followed by radiation therapy and/or chemotherapy depending on the patient's performance status. If the patient's performance status is poor, the patient will be referred to palliative care or hospice. The 26 patients reviewed demonstrated 100 percent (15/15) compliance for those who were treated. All the remaining patients, 100 percent (11/11) were referred to palliative care or hospice.

Follow-up Imaging: Twenty-five of the patients (96 percent) underwent a surgical resection. It is recommended that a brain MRI be completed within 24-72 hours after surgery. The 25 patients reviewed demonstrated a 28 percent (7/25) compliance rate to this guideline. An additional recommendation is to

have an MRI completed two to six weeks after radiation therapy, and then every two to four months for up to three years. Of the 15 cases who had radiation therapy, 100 percent (15/15) compliance was demonstrated.

Methylguanine DNA methyl-transferase (MGMT) Promoter Status: If the patient has a Karnofsky Performance Status (KPS) greater than 60, it is recommended this testing be completed. When the test is positive, recommendations reflect use of Temozolomide. This test is not routinely completed at St. Cloud Hospital, thus resulting in a 0 percent compliance with this guideline.

All data was reviewed by the Cancer Care Center Board. It was decided to continue the current practice regarding not testing for the MGMT and to focus on the patient performance status and ability to tolerate Temozolomide. An area of concern identified was obtaining a post-operative MRI within 72 hours of resection per NCCN guidelines. The cancer liaison physician met with the Neurosurgery department to share the study results.

The Cancer Care Center Board requested a follow-up review of cases in 2016 to assess impact of recommendations as part of their quality improvement efforts. There were four cases reviewed who were diagnosed and treated between April-June 2016. The results of this follow-up demonstrated 100 percent compliance with obtaining a post-operative MRI within 72 hours of resection, per NCCN guidelines.

(left to right)

Janet Sather, RHIA, CTR, Cancer Registry

Jodi Kreutz-Gratke, Cancer Registry

Heidi Leach, RHIT, CTR, Cancer Registry

Girum Lemma, MD, Hematology/Oncology

Melissa Shankey, RHIT, CTR, Cancer Registry

Jessica Klaphake, RHIT, CTR, Cancer Registry

Candace Schoolmeesters, RHIT, CTR, Cancer Registry



Clinical Achievements

Coborn Cancer Center is nationally recognized for its dedication to quality. Our professionals are committed to providing patients with exceptional outcomes based on adherence to best practice standards, multidisciplinary coordination of care, shared decision-making, access to leading cancer providers, research and clinical trials and continued adoption of new technologies, services and programming.

Some examples of our recognized quality include:

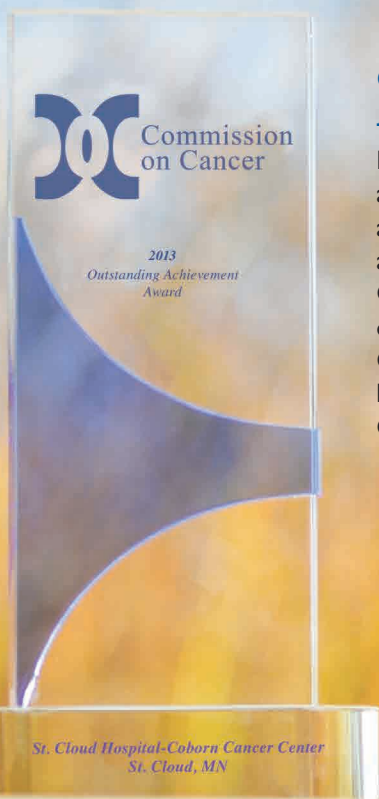
St. Cloud Hospital Magnet Designation

Magnet designation is the highest international recognition for excellence in the provision of nursing services, quality patient care and innovation in professional nursing practice. St. Cloud Hospital has been Magnet-designated since 2004.



Commission on Cancer Certificate of Accreditation with Commendation

In 2013, Coborn Cancer Center received a three-year approval with Commendation and an Outstanding Achievement Award as a Community Hospital Comprehensive Cancer Program from the American College of Surgeons Commission on Cancer. Coborn Cancer Center, a service of St. Cloud Hospital, has been accredited by the Commission on Cancer since 1989.



CENTRA CARE Coborn Cancer Center

a service of St. Cloud Hospital

1900 CentraCare Circle • St. Cloud, MN 56303
centracare.com • 320-229-4907

Non-profit
organization
U.S. POSTAGE
PAID
St. Cloud, MN
Permit No. 389

Member of the Mayo Clinic Cancer Care Network

As part of the cancer care network, Coborn Cancer Center physicians have access to Mayo Clinic's evidence-based protocols, clinical care guidelines and reference materials, as well as eConsults. Our selection as a Mayo Clinic Cancer Care Network member was based on a rigorous set of quality and service criteria.



Patients and their families can be assured that Coborn Cancer Center shares with Mayo Clinic a commitment to continually improve all aspects of health care. The primary goal of the network is to help people gain the benefits of Mayo Clinic expertise while receiving care closer to home.

The fight against cancer is stronger.

Coborn Cancer Center already is a regional cancer center of the highest quality with program certification of commendation and outstanding achievement by the American College of Surgeons Commission on Cancer. Mayo Clinic is a National Cancer Institute-designated cancer center, committed to serving patients and collaborating across the full spectrum of cancer research, from basic biology to treatment.

We have enjoyed a longstanding working and referral relationship with Mayo Clinic, including research programs for patients interested in cancer-based clinical trials.