Mercy Cancer Center is dedicated to providing state-of-the-art comprehensive cancer care in an environment that envelops patients and family in a warm embrace of compassion. As an American College of Surgeons’ Commission on Cancer Accredited Cancer Center, Mercy Cancer Center is committed to improving survival and quality of life for cancer patients through standard-setting, prevention, research, education and the monitoring of comprehensive quality of care. Each calendar year, Mercy’s cancer committee develops and disseminates a report of patient and program outcomes to the public. This report summarizes and highlights many of Mercy Cancer Center’s services and activities for calendar year 2018.

Each year, the cancer committee designates a physician member to complete an in-depth analysis to assess and verify cancer program patients are evaluated and treated according to evidence-based national treatment guidelines. This annual report includes an analysis of glioblastoma cases at Mercy prepared by Ali-Noor Shamsher Jassani and me. Because the treatment of glioblastomas requires a coordinated approach with neurosurgery, medical oncology, radiation oncology and palliative care, we became concerned that our patients, many who come from miles away, were not being provided with the coordinated care their diagnosis requires, including the services of palliative care. This study reports on Mercy Cancer Center’s experience with glioblastoma cases over a five-year period.

Each year, the cancer committee, under the guidance of the quality improvement coordinator, develops, analyzes, and documents studies that measure the quality of care and outcomes for cancer patients. This annual report includes an article describing the new Mercy Lung Cancer Clinic. It was opened in June 2018 in response to the increasing number of lung cancer cases that we are seeing at Mercy due, in part, to the expansion of lung cancer screening for patients at high risk of developing lung cancer. Dr. Neil Horning, the medical director of the Mercy Lung Cancer Clinic, describes the unique multidisciplinary approach that the center offers to lung cancer patients.

In 2018 Mercy Cancer Center received accreditation through the National Accreditation Program for Rectal Cancer (NAPRC) by the Commission on Cancer of the American College of Surgeons. The NAPRC was developed through a collaboration between The OSTRiCh Consortium (Optimizing the Surgical Treatment of Rectal Cancer) and the Commission on Cancer (CoC), a quality program of the American College of Surgeons. The NAPRC’s goal is to ensure patients with rectal cancer receive appropriate care using a multidisciplinary approach. Dr. Shankar Raman, the medical director of the Mercy Rectal Cancer Program, describes Mercy’s program and the value it brings to improving the quality of care for patients receiving rectal cancer treatment at Mercy.

Philanthropy plays an important role in maintaining and expanding services at a comprehensive community cancer such as ours. In this report, Joan Bindel from the Mercy Foundation describes the role of the Foundation and the role of philanthropy at Mercy. We are grateful for the philanthropic support that we receive from patients, families, staff and the community.

Mercy Cancer Center is proud to be a member of the National Cancer Institute’s Community Oncology Research Program through our affiliation with CHI’s NCORP grant. We believe that participation in clinical research is important for our patients and for our center. This annual report contains a bibliography and links to the peer reviewed journal articles that members of our cancer team have authored in 2018.

This annual report also summarizes the new analytic cancer cases for 2017. It highlights the large number and diverse variety of cancer cases seen at our center. Each year the statistics remind us of our responsibility to provide the highest quality of cancer possible. We are committed to quality and we are committed to the patient experience. In addition to our Commission on Cancer accreditation and the National Accreditation Program for Rectal Cancer, Mercy Cancer Center has also earned accreditation by the American College of Radiology in Radiation Oncology and by the National Accreditation Program for Breast Centers.

“None of us is as good as all of us.” Mercy Cancer Center is a team of dedicated professionals committed to quality care. We are proud to carry on the traditions of the Sisters of Mercy as we adhere to the values of reverence, integrity, compassion, excellence, justice, stewardship and commitment to the poor. I hope you find the information in this report educational and inspiring.

Sincerely,

Richard L. Deming, MD
Medical Director, Mercy Cancer Center
Chairman, Mercy Cancer Committee

Welcome

Autoimmune system
Endocrine system
Gastrointestinal system
Genital system
Gynecologic system
Hematopoietic system
Hepatic system
Hematopoietic system
Neurologic system
Pituitary system
Renal system
Skin except vulva
Spleen
Stomach
Thoracic system
Urinary system
Vulva

case

**ANNUAL REPORT 2018**

Lung Cancer Clinic opens
Glioblastomas at Mercy Cancer Center: Five-Year Statistical Analysis – Standard 4.6
Rectal Cancer Program earns accreditation
Donor Spotlight
Our Services / 2018 Cancer Committee
Peer Review Bibliography

**Analytic Case Distribution (2017)**

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Richard L. Deming, MD
Medical Director, Mercy Cancer Center
Chairman, Mercy Cancer Committee
Lung cancer is the most common cancer worldwide, with 1.69 million new diagnoses in 2015. In 2018 there were approximately 234,030 new cases of lung cancer diagnosed in the United States, accounting for 13% of all cancer diagnoses. Although breast cancer is the most common cancer in women and prostate the most common cancer in men, lung cancer is the leading cause of cancer-related death among both men and women. Nationwide, 75% of patients with lung cancer present with symptoms due to advanced local or metastatic disease. An estimated 154,050 Americans died from lung cancer in 2018, representing 25% of all cancer deaths.

The diagnosis and treatment of lung cancer requires the expertise of multiple medical specialties including pulmonology, radiation oncology, medical oncology, cardiothoracic surgery, radiology and pathology.

In June 2018, Mercy Cancer Center opened the Mercy Lung Cancer Clinic, offering a multidisciplinary approach to the treatment of lung cancer and providing patients an opportunity to receive treatment more efficiently than had been previously possible. Patients make a single appointment, organized by Mickie Bolander, intake coordinator, and see multiple specialists in one location during the same outpatient visit, eliminating extra travel time, expense and time away from their normal activities.

Patient care is provided by a team of physicians which includes pulmonologists, medical oncologists, radiation oncologists, thoracic surgeons, and others from the Mercy Cancer Center, Mercy CIC Associates, Iowa Heart Center, Medical Oncology & Hematology Associates, and Mercy Medical Center – Des Moines. In addition, patients and their families are able to benefit from discussions with Dona Van Berkum, the Mercy Cancer Center lung cancer navigator, and from specialists from the Mercy palliative care team.

One of the benefits of having a successful lung cancer screening program that screened over a thousand patients in 2018 is that more lung cancers are able to be found at an early stage. This is reflected in the large percentage of early stage lung cancers seen at the lung cancer clinic – 49 percent of the lung cancers were stage I and five percent were stage II. Twenty-three percent of the lung cancers were stage III and 23 percent were stage IV.

Having been open for less than a year, the lung cancer clinic has already been able to transform the way we approach the diagnosis and treatment of patients with lung cancer. At the lung cancer clinic, physicians, patients, and families work together to develop a treatment plan best suited for the patient. The Mercy lung cancer nurse navigator helps coordinate cancer testing and treatments and helps link patients to support networks and community services. Patients and their families also have easy access to the education and support services offered by Mercy Cancer Center.

With the multidisciplinary approach to the treatment of lung masses and lung cancer at the lung cancer clinic, physicians, nurses, the lung cancer navigator, and support staff are able to work together to offer an efficient, compassionate, comprehensive consultation, and an individualized treatment plan designed specifically for each patient.
Statement of the problem to be addressed by this study:

Dr. Richard Deming was designated to complete an in-depth review of our cases of glioblastoma. Ali-Noor Shamsher Jessani, medical student at DMU, performed the primary research in collaboration with Cindy Burgin of the Mercy Cancer Registry. We chose to complete an analysis of glioblastoma cases for several reasons. In the past five years, Mercy has expanded its neurosurgery department and it has expanded its outreach to surrounding areas of Iowa and surrounding states. Through its “Mercy Connect” program, more patients are being transferred to Mercy from surrounding hospitals that don’t have the ability to provide neurosurgical services. Because the treatment of glioblastomas requires a coordinated approach with neurosurgery, medical oncology, radiation oncology and palliative care, we became concerned that our patients, many who come from miles away, were not being provided with the coordinated care their diagnosis requires, including the services of palliative care.

INTRODUCTION

What is a glioblastoma?

One of the more aggressive types of cancer, glioblastomas form in the brain and spinal cord. They occur in cells that support nerve cells called astrocytes. They occur most commonly in older adults; however, they can occur at any age, but it is very rare. Symptoms include progressing headaches, nausea, vomiting, and seizures. Glioblastomas are egregious to treat, and a cure is often not possible. Often, treatment is focused on maintenance of symptoms and slowing the progression of disease.

How is glioblastoma treated?

There are three main treatments for glioblastoma: surgery, radiation therapy, and chemotherapy. Surgical removal is generally done first. The goal of the treatment is to excise as much of the tumor as possible. Unfortunately, the tumor grows in normal brain tissue, so removing all of the tumor is not always possible. Studies have shown that patients who have a gross total resection have a more favorable outcome compared to patients who have only a biopsy.

Radiation therapy along with temozolomide chemotherapy is the standard treatment post-surgery or when surgery is not possible. It involves the use of high-energy x-rays to kill the residual cancer cells.

Chemotherapy (temozolomide) is usually given with radiation therapy and is usually continued for six months after chemotherapy for those patients who are responding well to treatment.

One important aspect of treatment is palliative care. Many patients with glioblastomas have a poor prognosis and even those with a good performance status will likely face relapse and death within a few years. Therefore, attention to quality of life issues is paramount. Palliative care focuses on quality of life issues including the physical, psychological, social, philosophical, and spiritual dimensions of life with cancer.

Mercy statistics and analysis of glioblastomas

Mercy Cancer Center is a tertiary referral center in Iowa that treats patients from many parts of Iowa and surrounding states. Over the past five years Mercy has expanded its neurosurgery program and increased its outreach to surrounding geographic areas. As a result we have observed an increase in the number of glioblastomas cases at our center. We chose to review and analyze cases for a five-year period, 2013–2017.

Glioblastomas at Mercy Cancer Center: Five-Year Statistical Analysis

Standard 4.8

By Ali-Noor Shamsher Jessani, Medical Student, DMU and Richard L. Deming, MD

Each calendar year, the cancer committee designates a physician member to complete an in-depth analysis to assess and verify that cancer program patients are evaluated and treated according to evidence-based national treatment guidelines.

By Ali-Noor Shamsher Jessani, Medical Student, DMU and Richard L. Deming, MD
GLIOBLASTOMA CASES ANALYZED
2013 – 2016

<table>
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<tr>
<th>Year</th>
<th>Total cases</th>
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<td>2013</td>
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<td>2014</td>
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<td>2015</td>
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<td>2016</td>
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This chart represents the number of people treated by county. Polk County has significantly more people being diagnosed and treated compared to the other counties. This is probably due to the larger population in Polk County, since it includes the City of Des Moines. Also Mercy Cancer and Medical Center are located in Polk County, so the patients would report to the hospital for treatment.

NUMBER OF MALES VS. FEMALES IN DES MOINES WITH GLIOBLASTOMA

<table>
<thead>
<tr>
<th>Year</th>
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<tr>
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This chart shows the comparison of men and women who were diagnosed with glioblastomas broken up by year. It demonstrates an upward trend of the number of people treated at Mercy every year. It also demonstrates that men tend to present with a glioblastoma more than women.

NUMBER OF PEOPLE TREATED FOR GLIOBLASTOMA BY COUNTY

- Marshall: 2
- Polk: 41
- Wapello: 2
- Guthene: 1
- Dallas: 7
- Marion: 1
- Appanoose: 2
- Hamilton: 2
- Webster: 1
- Tama: 3
- Warren: 6
- Story: 7
- Carroll: 2
- Wayne: 1
- Poweshiek: 2
- Boone: 1
- Taylor: 1
- Madison: 1
- Grundy: 2
- Jasper: 3
- Decatur: 1
- Davis: 1
- Mahaska: 1
- Union: 2
- Palo Alto: 1
- Hardin: 1
- Pocahontas: 1
- Audubon: 1
- Ringgold: 1

This graph represents the age of onset for the patient when they were diagnosed with their glioblastoma. What can be noted is through a majority of the years, the age of onset is between the years of 60-79. There are not many patients diagnosed before their 50s, which is consistent with when glioblastomas could present throughout a person’s life.

GLIOBLASTOMA CASES ANALYZED
2013 – 2016

<table>
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This graph represents the amount of people who received palliative care as part of their treatment. The number can be seen going up in the past two years, but this could be due to the number of patients being diagnosed increasing, rather than more people choosing palliative care. The number of patients who do not choose palliative care remains constant throughout the years.

RACE DISTRIBUTION

- White: 97
- Spanish: 3
- Black: 1
- Other: 1

This graph represents the race distribution being predominantly white, seen in this graph, due to the population of Iowa being predominantly white. The one person who is other is Asian American.
This graph represents the first line of treatment for glioblastomas. A majority of the patients (58) received surgery, radiation and chemotherapy. The second highest group received surgery, and maybe a second form of treatment that was chemotherapy or radiation or hormone treatment, but not both. The next most common form of treatment tested (biopsy), radiation and chemotherapy. Other represents the people who received a singular treatment that does not include surgery. It is some combination of diagnostic testing, radiation, chemotherapy and hormone therapy. In the other category, there is also one patient whose treatment included palliative care.

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The survival rate of people with glioblastomas is low, especially after a few years. From the years 2013 to 2015 there is one person still alive from the time of this paper being written. It improves to four from those in 2016 and finally, there are more people alive than deceased in the group diagnosed in 2017.

There was a little more analysis done on this graph in order to see what if there were any trends found amongst those survived based on age, race, county, and location of the tumor.

In regards to age, the patients who survived tend to be scattered in the age ranges. For example, the person who survived from 2013 was 62 at the time of diagnosis, but there was patient who passed away at the age of 49. Therefore, survival rate does not seem to be correlated with survival rate.

When considering race, it seems as if the majority of people who survive are white. This is consistent with the statistics because a majority of people in Iowa by population are also white. However, in 2017 there were four patients who were not white (black, two Hispanics, and Asian) who also survived. This could be due to the prognosis being only about one year ago, and might need to be observed further to determine if there is any correlation.

In terms of county of residence, the patients who are still alive today are spread throughout the counties, with a majority of them being from Polk. This is most likely due to Polk being the largest county, so the number of survivors would be greater.

Finally, the location of the tumor also does not provide any trends that can be useful. They are scattered between the different lobes.

Although no trend can be seen from these numbers, palliative care should be noted as improving from 2013. They dropped slightly in 2014 and 2015, but since then they have increased significantly. This is very important to see especially in terms of those who are deceased or alive and are in later stages of the disease.

Palliative care discussion

Palliative care is an important part of treatment. One reason that we chose this diagnosis for review is to determine whether Mercy Cancer Center has met the palliative care standards for glioblastoma patients. A retrospective data analysis was done, based off articles from PubMed. Data was collected from about 696 articles that involved glioblastoma and end of life care. It was determined that only 12% of patients received end-of-life palliative care nationally in 2012. As the tables above notes the percentage of patients receiving palliative care varied the five years from which the numbers were taken. However, if the total percentage of patients who received palliative care throughout the five years was taken it averages to about 27.5% (28 out of 102 patients received palliative care). The Mercy five-year average is higher than the national average found in this retrospective study. As a hospital, Mercy is doing better than the national average, however there is still room for improvement.

A survey was done during this study in order to determine why patients were not receiving palliative care. According to the survey (239 responded), only 57% of practitioners referred their patients to palliative care. About 33% of the 239 felt uncomfortable discussing end of life symptoms. Another 33% felt that the treatment for the glioblastoma prevented their patients in getting to their palliative care referrals.

Palliative care has many more benefits than just being an end of life treatment option. Many of its benefits are missed when physicians do not refer their patients because they are not fully educated on the advantages, or feel uncomfortable discussing end of life scenarios with their patients. In order for Mercy to take a step forward in palliative care for patients, physicians have to be willing to at least discuss the options with their patients. At the end of the day, it is the patients’ and families’ choices whether or not they would like to pursue palliative care, but it is the obligation of the physician to present it as an option.

CONCLUSION

Glioblastoma multiforme is a malignant brain tumor. Diagnosis and treatment require a multidisciplinary approach. The best first course to treatment includes surgery, radiation therapy and chemotherapy. In light of the poor prognosis, having palliative care onboard at the beginning of treatment is an important component of care.

Mercy Cancer Center has seen an increase in the number of glioblastoma cases over the five years of analysis. We think that much of this increase is related to the increased number of neurosurgeons and the increased emphasis on outreach with the “Mercy Connect” program. In analyzing the first course of treatment, we found that Mercy Cancer Center patients are compliant with national standards. At Mercy Cancer Center we believe in a holistic approach to cancer care with an emphasis on compassionate care. As such, we have increased resources to expand our palliative care team. Our analysis shows that we are above the national average in regards to the percentage of patients who have palliative care on the multidisciplinary team from the outset of treatment. Although we compare favorably to national standards, we would like to continue to increase the percentage of patients who have palliative care on their team. This paper will serve as a baseline for comparison as we continue to expand our palliative care program.

References:

Mercy Cancer Center has earned a three-year accreditation from the National Accreditation Program for Rectal Cancer (NAPRC), a program launched in 2017 by the American College of Surgeons (ACS). Mercy is one of just five programs in the nation to date to earn this accreditation, and the first non-pilot hospital to be accredited. The NAPRC was developed to standardize how rectal cancer care is delivered across the country with the ultimate goal of improving patient outcomes.

Mercy’s accreditation is the result of many months of hard work by representatives from several departments. To earn the voluntary accreditation, Mercy Cancer Center met 19 standards, including the establishment of a rectal cancer multidisciplinary team (RC-MDT) which includes the following specialty representatives:

- Drs. Brian Freeman and Abdelaziz Elhaddad representing medical oncology
- Drs. Richard Deming and George Voynov representing radiation oncology
- Drs. Roman Mirsky and George Buss representing diagnostic radiology
- Drs. Matt Andres and Clinton Crowder representing diagnostic pathology
- Drs. Soren Kraemer and myself as surgeon representatives
- Jody Wilson, ARNP, as the rectal cancer program coordinator

Rectal cancer is an extremely complex disease. It takes collaboration between highly skilled physicians and allied professionals from various disciplines to deliver high quality care by following a streamlined approach and best practices, to keep patients. This accreditation emphasizes Mercy’s team approach to cancer care. It ensures our patients receive coordinated and comprehensive treatment options for the best possible outcome.

Our application for accreditation was submitted in early 2018 and our site visit was conducted in November of 2018. Surveyors were very complimentary of our program and processes. I congratulate and thank everyone at Mercy who has played a role in the process. This is a tremendous and exciting opportunity to improve rectal cancer care for our patients and to establish the Mercy Cancer Center as a leader in central Iowa and beyond.
A diagnosis of cancer can change everything. Overnight, priorities are shifted from routine activities to the sole focus of fighting cancer. Patients are often unable to continue working and the added expenses of cancer treatments, co-pays, travel, medication and nutritional supplements can create additional financial burdens.

The Semon Family Resource Endowment (SFRE) provides immediate assistance to cancer patients and their families when they need it most. Since its inception in 2012, the fund has helped over 500 cancer patients and awarded more than $110,000 in financial support to patients.

The SFRE was established in 2011 in memory of Dr. William J. Semon, a gastroenterologist at Iowa Digestive Disease Center. Dr. Semon served patients and families for over 25 years and passed away from pancreatic cancer.

If you would like to make a difference in the life of someone fighting cancer, please consider donating to the Semon Family Resource Fund. Your donation will go directly toward meeting tangible needs of a cancer patient and his or her family.

To make a donation, visit foundation.mercydesmoines.org and click on the “donate now” button. Contact Joan Bindel, Sr. Director of Development for Mercy Foundation, if you would like to learn how you can make a transformational impact on the fight against cancer.

Mercy Foundation serves the Mercy Cancer Center through a variety of funds and endowments designed to make an impact on patients and their care. Programs supported through philanthropy include a survivorship nurse navigator program, patient financial need programs, cancer education, and the Mercy Healing Garden, among others.

Donors to the Mercy Cancer Center have the opportunity to make a transformational impact on not only the patient, but also the care current and future patients receive. Charitable gifts provide physicians with needed resources and patients with free services that aid in the healing of their body, mind and spirit.
Mercy Cancer Center is proud to offer the following services to our patients and their families:

- Comprehensive team of oncology specialists
  - Radiation Oncology
  - Medical Oncology
  - Surgical Oncology
  - Katzmann Breast Center
  - Clinical trials and research
  - Nurse navigators
- Cancer resource center
- Nutritional counseling and support
- Lung screening program
- Lung cancer clinic
- Family and genetic risk assessment
- Survivorship services
- Wellness programs
- Support groups
- Individual counseling
- Wigs, head coverings and self-esteem boutique
- Home care
- Hospice
- Palliative care

2018 Cancer Committee

Brad Hiatt, DO
Medical Oncology

Sue Beck, DO
CLP/Breast Surgeon

Richard Deming, MD
Chair/Medical Director/ Radiation Oncology

Sarah McCow, MD
Radiation Oncology

Carolyn Pease, MD
Pathology

Carolyn Pease, MD
Pathology

Frank Kiener, LISW
Social Work

Sarah McCow, MD
Radiation Oncology

Karl Digman, MD
Radiology

John Martens, MD
Radiation Oncology

Monica Gordon, MSN, RN
Quality Management

Shankar Raman, MD
Surgery

Tami Singleton, RN
Palliative Care

Barb Wisnieski, RD
Oncology Dietitian

George Ugynov, MD
Radiation Oncology

Trey Wiegand, MHA
Clinic Administration

Dr. Jan Franko – Surgical Oncologist


Dr. Matthew Webbe – Medical Oncologist


Peer Reviewed Publications

The following peer reviewed articles were written, in part, by members of our oncology physician staff and published in 2018 in various oncology journals. We are proud of the contributions and research the oncologists at Mercy are making to improve cancer care for patient everywhere.

Dr. Jan Franko – Surgical Oncologist


Dr. May Tee – Surgical Oncologist


Dr. Tiffany Torstenson – Surgical Oncologist