OLYMPIC
MEDICAL
CANCER CENTER

2017 ANNUAL REPORT

Olympic Medical Cancer Center
844 N. 5th Avenue, Sequim, WA 98382

Olympic Medical Center
939 Caroline Street, Port Angeles, WA 98362

A Comprehensive Community Cancer Program (CCCP)
American College of Surgeons Commission on Cancer

In This Report

Cover photo: Olympic Medical Cancer Center, Medical Oncology staff from left: Shawn Gould, nurse coordinator, Amy Gammill, medical assistant - registered, Ruth Page, nurse coordinator, Kay C. Hobbs, nurse coordinator, Angela Mendoza, medical assistant - registered, Dawn Savage, medical assistant - registered, Dawn Prendergast, nurse coordinator.

Cancer Conference and Tumor Board

A tumor board conference is a multidisciplinary team of medical specialists that discuss patient cases to decide on the best course of treatment. This is designed to share each team member's expertise in their area and recommend the optimal treatment for each specific patient. Brief history, diagnostic imaging, and pathology slide reviews are accomplished twice monthly throughout the year.

In 2017, **114 cases** were presented, representing **21.5%** of OMC analytical cases. **22 of 24** scheduled tumor boards occurred.

The Olympic Medical Cancer tumor board team consists of:

- Medical Oncology
- Radiation Oncology
- Oncology Nursing
- Radiation Oncology Nursing
- Administration
- Patient Navigation
- Nutrition
- Rehabilitation
- Surgery
- Diagnostic Imaging/Radiology
- Pathology

Items discussed during case review include:

- Stage
- Use of NCCN Guidelines in Treatment Planning
- Clinical Trials
- Palliative Care
- Genetic Testing
- Psychosocial Care
- Rehabilitation Services
- Nutrition

OLYMPIC MEDICAL CANCER CENTER

INTRODUCTION

Dear Colleagues, Staff, and Community Members

On behalf of the Cancer Committee, I am proud to introduce the Olympic Medical Cancer Center Annual Report. This document is a compilation of data accumulated throughout the year, as we care for cancer patients on the Olympic Peninsula. It is intended to provide some concrete facts about the quality of cancer care at Olympic Medical Center (OMC) and the commitment of the entire team to our patients.

The oncology program is dedicated to providing **local**, comprehensive, multi-faceted treatment to the people who live on the Olympic Peninsula. This dedication has many motivations including reducing the need for patients to travel to Seattle for their care.

I would like to call out the most relevant resource developments in our ability to deliver such high-caliber care at OMC, the most important of which is our incredible **human resource**. The hiring of many new team members has enabled us to compile a highly trained and professional group.

Additional resources allocated to the cancer center include:

- HumediQ system
- Preparation for expansion of pharmacy/infusion/medical oncology clinic

In 2017, 530 new cases were submitted to the State of Washington from the OMC Cancer Registry. These cases were diagnosed and/or treated with curative intent at our facility. From a statistical standpoint, OMC found 1.5% of all cases in the State of Washington.

The Cancer Committee met on a quarterly basis in order to meet and/or exceed all American College of Surgeons (ACoS) Commission on Cancer Program Standards to assure full compliance for 2017 and beyond. We will submit our program to the ACoS in 2019 for another three-year accreditation. This helps ensure our program is meeting national standards set for cancer care.

On behalf of the Cancer Committee, our sincere thanks go out to the skilled and compassionate staff and support teams who have provided such comprehensive and empathetic care to our patients. I am proud to be a member of this team.

Sandra Tatro MD FACS
Cancer Committee Liason

CANCER COMMITTEE

The Olympic Medical Center Cancer Committee is a multidisciplinary collection of healthcare professionals and administrators that are responsible for the development and coordination of the cancer program at OMC.

OMC is voluntarily accredited and monitored through the American College of Surgeons Commission on Cancer (ACoS CoC), a medical organization that establishes national standards to ensure cancer patients are afforded full access to state-of-the-art diagnosis, treatment, rehabilitation, and support during their journey with cancer.

OMC must adhere to the standards set forth in the CoC Program Standards, currently the 2016 edition. The mission of the CoC is to improve the survival and the quality of life for cancer patients through those standards.

Meetings are held quarterly in Port Angeles, Washington and 75% attendance is expected from each member. OMC last had an accreditation survey in July of 2016 in which OMC received a three-year accreditation approval with contingency.

Items Addressed by CoC Standards

- Monitoring program activity
- Evaluating patient outcomes/comparison to state and national statistics
- Improving cancer patient care
- Programmatic and clinical goals
- Screening and prevention programs
- Professional staff education
- Quality improvements
- Standards for healthcare professionals
- Strategic planning

2017 OMC Cancer Committee Members

Name, Title and Department	Position on Cancer Committee
Matthew Levy, MD, General Surgery	Cancer Committee Chair
Sandra Tatro, MD, General Surgery	Cancer Liaison Physician
Sue Kinney, CTR, Cancer Registry	Cancer Registry Quality Coordinator
Michael Fishman, MD, Diagnostic Imaging	Diagnostic Radiology
Alfonso Masangkay, MD, Pathology	Pathology
Patrick Jewell, MD, Radiation Oncology	Radiation Oncology
Deborah Turner, PA-C, Medical Oncology	Medical Oncology
Stacie Neff, MPH, Quality Management	Quality Management
Byron Russell, MD, Urology/Surgery	Designated Alternate Chair
Kurt Norman, MD, Medical Oncology	Medical Oncology
Ken Berkes, MSPT, Director Cancer Center	Cancer Program Administrator, Community Outreach Coord.
Betsi Thompson, Director, Quality Management	Quality Improvement Coordinator
Vicki Everett, RD CDE, Supervisor, Nutritional Counseling	Nutrition Services
Kay C. Hobbs, RN, AOCN, Supervisor, Medical Oncology Nursing	Medical Oncology Nursing, Clinical Research Coordinator
Mikel Townsley, Patient Navigator	Patient Navigation, Psychosocial Services Coordinator
Sheryl Greer, CTR, Cancer Registry	Cancer Conference Coordinator
Karen Rushby, PT, MScHA, CLT-LANA, Physical Therapy/Rehabilitation	Physical & Rehabilitation Services
Tatyana Buzdnitskaya, RN, Radiation Oncology	Radiation Oncology Nursing

DIFFUSE LARGE B CELL LYMPHOMA STUDY

An OMCC workgroup conducted a study to determine how closely we are following the National Comprehensive Cancer Network (NCCN) guidelines for work up, treatment and follow up of patients diagnosed with diffuse large B cell lymphoma (DLBCL).

Twenty patients were diagnosed with DLBCL during 2014-2016. Two patients were diagnosed with primary CNS DLBCL, and they were not included in the study. The 18 patients included in the study were treated at OMCC with several patients receiving at least some of their therapy in Seattle.

Work up, therapy and post-treatment imaging of the above 18 patients were reviewed. Please see the NCCN guidelines for details of recommended work up.[1] We followed the recommendations in the majority of cases.

- One of the 18 patients did not undergo pre-treatment heart imaging which is recommended because anthracycline is a component of R-CHOP therapy.
- One patient did not have the recommended hepatitis B testing which is recommended because of possible reactivation of hepatitis B with Rituxan use.
- Only one of the 18 patients had an international prognostic index score, which is done to assess the risk of CNS disease. See guidelines for details.[1]

Pre- and post-treatment PET/CT scans are recommended to help with staging and evaluate response.

- One patient did not have pre- and post-treatment PET/CT.
- Two patients had a pretreatment PET/CT, but for unclear reasons those same two patients did not undergo post treatment PET/CT imaging.

NCCN guidelines recommend radiology interpretation of PET/CTs in patients with DLBCL using the Deauville scoring. This scoring was performed in one patient who had repeat PET/CT in June 2017.

Discussion

We are doing an excellent job following the NCCN guidelines in management of our patients with DLBCL, but there are a couple of points for discussion.

IPI Scoring

We are not using IPI scoring as recommended. A low score can determine a patient's chance for cure. The score to assess risk of CNS disease may be of more value, as patients with a high score should be considered for LP to evaluate for CNS involvement.

Medical Oncology providers were surveyed at OMCC (three current providers) and indicated that the IPI scoring system for DLBCL suggested by NCCN is really not helpful, and does not change how they manage their patients. We can continue to discuss with our providers if this scoring system is of value to them in assessing prognosis.

Deauville Scoring System

PET/CT is advised pre- and post-initial treatment for all patients with diagnosis of DLBCL (and several other lymphomas) using Deauville scoring.

In regards to Deauville scoring system for DLBCL, three newly diagnosed DLBCL patients from 2017 were surveyed. One patient had three PET/CTs, with the first one performed in 2016, and not scored by the Deauville scoring system. The same patient's subsequent PET/CTs in 4/2017 and 8/2017 were scored by Deauville. Another patient had a PET/CT 8/2017 which was scored by Deauville. The third patient had a first PET/CT 10/2017, and this was not scored. All of these studies were interpreted by Radia. Therefore, the use of the Deauville scoring system is accepted by our radiology colleagues, though not consistently done perhaps because it is a new guideline. We will discuss with our radiology team their perception of the value of this scoring system.

[1]National Comprehensive Cancer Network www.nccn.org/

RADIATION THERAPY

A Radiation Therapist (RT) is an Allied Health Professional who uses ionizing radiation to treat disease, usually cancer. They are also responsible for collecting relevant patient information and using this information to plan a patient's treatment.

An RT works under the guidance of a Radiation Oncologist, in a team of health professionals who care for and treat cancer patients. RTs are usually assigned to work on a rotating basis in one of three main areas: simulation, planning and treatment. At Olympic Medical Cancer Center (OMCC), therapists usually only do simulation and treatment while another staff member called a dosimetrist focuses on planning.

Simulation

Simulation involves the gathering of all relevant data to plan and treat the patient. RTs read through the patient's notes and analyze tests and radiographic scans such as x-rays, CTs, and MRIs the patient may have already completed in order to determine the exact location of the tumor. A CT scanner is then used to gather data that will be used for planning the patient's treatment.

The patient is then placed into the treatment position. The simulation helps to prepare the patient for the potential use of equipment such as a special thermo-plastic mask, neck or knee rests, and other pieces of equipment used to keep the patient as immobile as possible in order to accurately target the tumor.

Target marks are put onto the patient's skin as an external indicator of where the treatment will be directed. After the CT scan or simulation, these marks will be tattooed onto the patient in the form of small permanent dots, the size of a freckle. The radiation therapist will document information such as the patient's position, equipment used, the location of the tattoo dots, and any relevant measurements or data.

Planning

Planning is also known as dosimetry. The radiation therapist uses the data gathered during simulation to plan the patient's treatment. This is usually done with the aid of a computer. The oncologist indicates where the treatment needs to be delivered and the dose of radiation the patient will receive. The radiation therapist is responsible for deciding the best way to aim the radiation at the cancer, minimizing the effect on normal, or surrounding tissues. The radiation therapist also works to ensure that sensitive tissues such as the eyes, heart or rectum receive the smallest dose possible in order to limit long-term side effects of the treatment. The oncologist approves the final radiation plan before treatment begins.

Treatment

When the patient arrives for treatment, the RT is responsible for ensuring treatment is administered accurately as well as providing emotional support for the patient. Before a patient's first treatment, the RT checks through all of the planning information and makes sure all relevant equipment is in the treatment room. The RT explains the procedure to the patient and answers any questions.

They align the tattoo dots that were placed during the simulation process with laser lights in the treatment room to ensure the patient is in the same correct position each day. The tattoos help to ensure the highest level of treatment accuracy.

Support

RTs are responsible for supporting the patient throughout their treatment. They must have compassion and strong interpersonal skills. Part of their role is to listen to the emotional concerns and anxieties of the patient and refer them appropriately if needed. The RT also assesses the patient's reaction to treatment, provides advice on the side effects of treatment and methods of alleviating these. RTs often develop close relationships with their patients, as they usually see them five days per week for between three and seven weeks.

RTs may have extra responsibilities such as Quality Assurance testing of the simulation and treatment machines or checking weekly patient x-rays for treatment accuracy. Radiation

therapists may be involved in coordinating clinical trials, or specialist groups to develop radiation techniques within their departments. They may attend national and international conferences and study days, and are involved in ongoing education.

Education

To obtain employment as an RT, individuals must first complete a two-year associate's degree or four-year bachelor's degree program in radiation therapy. It is important to remember that an associate's degree is the minimum level of education needed to qualify for employment as an RT — many employers prefer and seek candidates with a bachelor's degree.

RTs must also be licensed or certified by the state in which they live and work. Requirements to obtain licensure or certification vary from state to state. In nearly every state, however, the individual must sit for and pass a national certification examination before seeking employment in the radiation therapy field.

Olympic Medical Cancer Center, Radiation Oncology staff from left: Neil McIlmoil, radiation oncology manager, Dean Putt, cancer center director, Lynn Elmenhurst, RN, Mark Jackson, dosimetrist, Lindsay Jensen, MD, Teresa Fuentes, certified medical assistant, Patrick Jewell, MD, Daniel McFadden, physicist, Sara Mendenhall, radiation therapist, and Rob Lewis, radiation therapist.

ONCOLOGY NURSING

Oncology nursing is a demanding and complex job that plays a critical role in the outcomes and delivery of care for cancer patients – a diverse, high-risk and complex patient population. Oncology nurses must have comprehensive knowledge of cancer pathophysiology, treatment options and symptom management. Additionally, they help identify and treat the numerous psychosocial challenges faced by their patients. They work to identify and eliminate existing and potential barriers to treatment, such as financial barriers, communication barriers, lack of insurance coverage, and lack of understanding and/or fear. They must function seamlessly within an interdisciplinary team that includes physicians, pharmacists, patient navigation, social workers, rehabilitation services, nutrition services, hospice agencies, complementary and integrative medicine specialists and a variety of exceptional support staff. Oncology nurses exhibit "genuine passion and commitment for supporting patients with cancer and their caregivers as they traverse the daunting maze of cancer care." *(Oncology Nurse Navigation: Delivering Patient-Centered Care Across the Continuum edited by Blaseg, Daugherty and Gamblin.)*

Their skills and abilities include, but are not limited to:

- A strong comprehension of the basic principles of cancer and its treatments
- The ability to calculate medication dosing/basic pharmacology
- The ability to engage in therapeutic relationships
- The ability to problem solve
- The ability to set priorities and reprioritize
- The ability to work autonomously
- The ability to work collaboratively
- Effective adherence to infection control practices
- Interpersonal skills
- Solid critical-thinking skills
- Strong nurse assessment skills
- A strong application of the nursing process
- Strong verbal and written communication skills
- Strong self-assessment skills coupled with the desire to continuously increase one's knowledge and understanding of cancer and its treatments

(Adapted from ONS Oncology Nurse Generalist Competencies)

These skills and abilities are epitomized by all oncology nurses, however there are three distinct teams of nurses and medical assistants at Olympic Medical Cancer Center. Each team has a unique role within the cancer center that requires highly specialized skills.

- Radiation Oncology Nurse Coordinators & Medical Assistants
- Medical Oncology Nurse Coordinators & Medical Assistants
- Medical Oncology Infusion Nurses

Radiation Oncology Nurse Coordinators & Medical Assistants

The radiation oncology nurse coordinator and medical assistant are typically the first health care professionals the patient meets when they arrive for their initial meeting with the radiation oncologist. This multifaceted radiation nurse role includes a thorough review of the patient's history, symptoms and medications, education of the patient regarding what to expect during treatment, weekly and as needed assessments of patient, management of side effects from radiation therapy, and survivorship education. The radiation oncology nurse coordinators and medical assistants work closely with the entirety of the radiation and medical oncology teams to ensure that each patient's cancer care is coordinated in the most efficient and effective way possible. Upon completion of treatment, the radiation oncology nurse coordinator remains available to assist the patient in managing both short- and long-term symptoms and side effects caused by the radiation treatment.

Medical Oncology Nurse Coordinators & Medical Assistants

The medical oncology nurse coordinator and medical assistant role is similar in scope to their radiation colleagues, however with the focus on treatment of cancers by the use of oral and infusional chemotherapy, immunotherapy, biotherapy and biosimilar medications. This is typically a long-term relationship with patients and their caregivers, encompassing months to years. In addition to having solid knowledge of the ever-increasing number of oncology

medications and their side effects, the medical oncology nurse coordinator must have superior assessment skills – no small task when the patient assessment frequently occurs over the phone. Along with their radiation oncology colleagues, the medical oncology nurse team works collaboratively with all departments within the cancer center as well as with the Seattle Cancer Care Alliance, the University of Washington, Swedish Medical Center, Virginia Mason Medical Center and other organizations who also provide care for the same patients. The medical oncology nurse coordinator works with patients and their caregivers across the entire continuum of care: from prevention and screening to diagnosis, treatment and survivorship, as well as supportive, palliative and end of life care.

Medical Oncology Infusion Nurses

Along with the skills and abilities initially discussed, the medical oncology infusion nurse directly administers chemotherapy, immunotherapy, biotherapy and biosimilar medications to cancer patients. They work jointly with physicians, pharmacists and nurse coordinators to ensure the correct medications are given to the correct patient at the correct time. They deliver safe care of hazardous medications, making sure patients and staff alike are properly protected. They utilize evidence-based practices to provide care that is safe, appropriate, timely, cost-effective and individualized. They continue the education process with patients. They assess both physical and mental health and work collaboratively with their colleagues to address each patient's specific and ever-changing needs.

Oncology Certification

Sixty-two percent of Olympic Medical Cancer Center's infusion nurses have attained their Oncology Certified Nurse (OCN) certification. Certification validates specialty knowledge, enhances patient experience, confidence and safety and gives oncology nurses professional credibility. Attaining certification is challenging and validates that a nurse has met rigorous requirements for both experience and knowledge in oncology nursing including a minimum of 1,000 hours of direct oncology experience and passing an extensive test. This process typically takes 18-24 months to complete.

All the nurses and medical assistants at Olympic Medical Cancer Center work together tirelessly to care for and support their patients. Oncology Nurses are the epitome of thoughtful, committed people who strive to provide the best possible patient-centered cancer care to the North Olympic Peninsula community.

"Never doubt that a small group of thoughtful, committed people can change the world. Indeed, it is the only thing that ever has."
— Margaret Mead

Olympic Medical Cancer Center Infusion Staff from left: Janlyn Robinson, RN, Julie Larson, RN, nursing supervisor infusion, Leann Johnson, RN, Sue Spence, pharmacy technician, Diane Titterness, RN, Maia Cosio, pharmacy technician, Amber Frehner, RN and Melinda Straub, RN.

Improved Linear Accelerator (LINAC) small-field beam data to enhance radiation treatment planning accuracy

Background

A large percentage of radiation treatment plans are "inverse planned" via commercially developed software packages that utilize iterative algorithms to help compute optimal radiation plans. These plans deliver complex "shapes" of radiation dose to target tissues, while sparing adjacent normal tissues from potentially toxic radiation levels. Radiation plans developed in this manner are referred to as Intensity Modulated Radiation Therapy (IMRT) and Volumetric Modulated Arc Therapy (VMAT). Software-computed dose profiles require physical dose measurement on the treatment machine with a radiation measurement device, prior to actual use on a patient, to verify the computed doses match (with high concordance) the measured dose.

Although there is not a consensus guideline for an "actionable" threshold of pass rates of radiation plans within a clinic, studies in peer-reviewed professional trade publications[2] suggest a first "pass" rate of computed plans in a modern radiation oncology clinic with similar software and LINAC technology exceeding 99.0% when scrutinized by measurement with a typical radiation quality assurance (QA) measurement device such as Mapcheck, MatriXX, EPID, ArcCheck, etc. The OMCC Radiation Oncology Clinic utilizes a Mapcheck device for verifying inverse-planned radiation treatments prior to all treatment starts. We also employ a relatively standard "3% and 3 mm" criteria in the "pass" specification, as similar to the cited publication and as used in the community of treatment centers at large.

Measurement

It was recognized in mid-2016 that QA measurement failures ("no pass") rates were higher than expected. (This would result in a re-computation of a new modified radiation plan that continued to satisfy clinical safety criteria specified by the physician but was performed sequentially until a measurement-verified "pass" was achieved, allowing therapy to start). Out of approximately 110 patients treated in the second half of 2016 in the Radiation Oncology Clinic (July 1 through December 31), 44 total IMRT/VMAT treated patients were identified. Out of those, four patient plans for which QA measurements did not "pass" the first time, requiring re-planning and repeat QA measurement were identified, or a 90.9% pass rate. (The first-pass rate was actually a bit lower than this as some of these cases required more than one re-planning iteration to achieve a pass, but unused plans/all iterations were not maintained for later discovery.)

Improvement initiative

In order to improve first-pass rates and increase confidence in inverse-planned radiation treatments at OMCC, the LINAC beam model used in the software computations was enhanced with small-field measurement data to better characterize the emitted beam, at small apertures, from the treatment machine. With this new information within its database, the commercial software was expected to be better able to compute similar high-quality radiation dose plans but with even higher concordance with subsequent first-measurement on the actual treatment machine.

Small field measurements were performed in January 2017 and implemented into the planning software database.

Outcome

Subsequent to this implementation, we elected to review the first-pass rate experience from July 1 through November 30, 2017. A total of 53 IMRT/VMAT-plans were developed. An observed 100% first-pass rate, indicating an improvement in the accuracy of treatment modeling of the software, was achieved. This has reduced the planning and QA process time while maintaining high standards of care. This

[2]Son J et al, "A comparison of the quality assurance of four dosimetric tools for intensity modulated radiation therapy." Radiol Oncol 2015 Aug 21;49(3):307-13

has removed unexpected added planning-time burdens before previously-affected patients were able to begin their treatments. This has also reduced the duplication of staff work, and further increased the expectation of concordance in planned-to-measured radiation dose profiles in patient treatment plans.

Endoscopy capability for patients with malignant tumors of the head and neck

Background

In mid-2016, it was recognized that the Radiation Oncology Clinic at OMCC lacked in-clinic capability to perform fiberoptic nasopharyngolaryngoscopy exams for patients referred for definitive or postoperative/adjuvant radiation with curative intent. National Comprehensive Cancer Network (NCCN) guidelines indicate, among other initial evaluation maneuvers, that with the history and physical, a "complete head and neck exam with mirror and fiberoptic exam as clinically indicated" be performed. Without the in-office capability, the treating radiation oncologist was not able to perform the in-office fiberoptic exam if desired, and the exam results from referring physicians (as well as standard and supplemental imaging, etc) were used to design the appropriate radiation treatment targets/fields.

Measurement

To understand the number of patients affected, a retrospective review of the curative-intent head- and neck-treated patient census was performed, spanning from June 2016 through June 2017. In total, 17 patients in the second half of 2016 and 12 in the first six months of 2017 with malignancies arising from the head and neck were identified (29 total). This consisted of 13 definitive and 16 postoperative/adjuvant-treated patients. All had fiberoptic endoscopic examinations from referring physicians as well as 3D anatomic imaging of one or more modalities (CT, PET, MRI). None (0%) had fiberoptic/endoscopic exams from their radiation treatment physician due to the above lack of equipment availability at OMCC. This was recognized as an area of opportunity for improvement in the evaluation, care, and follow-up of head- and neck-treated patients at OMCC.

Improvement initiative

OMCC purchased and implemented in the clinic a video fiberoptic endoscopy capability in mid-2017 with an Olympus endoscope system, and this was routinely available for all appropriate head and neck malignancy site clinic evaluations.

Outcome

Subsequent to that implementation, from July 2017 through the end of November 2017, a total of 10 patients with malignancies arising in a head and neck site were consulted for definitive (8) or postoperative/adjuvant (2) radiation therapy with curative intent. All of these patients (100%) received a comprehensive fiberoptic endoscopic exam in the OMCC radiation oncology clinic by the treating physician. Furthermore, reference/baseline image capture and storage of their pre-treatment head and neck anatomy was used for treatment decision-making/target design and subsequent treatment response evaluation. Follow-up evaluation of previously treated patients has also been enabled as routine, affecting a larger number of patients, but this was not tracked within the scope of this study.

Studies presented as part of fulfillment of ACoS Standard 4.7

2017 SITE TABLE

	Total	Stage 0	Stage I	Stage II	Stage III	Stage IV	88	Unk
Lip	1	0	0	0	0	1	0	0
Tongue	6	0	0	0	1	2	0	3
Salivary Glands	2	0	0	2	0	0	0	0
Gum & Other Mouth	3	0	0	0	1	2	0	0
Tonsil	5	0	1	0	1	1	0	2
Oropharynx	1	0	0	1	0	0	0	0
Esophagus	6	0	1	1	2	2	0	0
Stomach	6	0	1	0	1	1	0	3
Small Intestine	3	0	0	0	2	0	1	0
Cecum	4	0	0	3	0	1	0	0
Ascending Colon	7	0	1	2	2	1	0	1
Hepatic Flexure	1	0	0	0	0	1	0	0
Transverse Colon	1	0	0	1	0	0	0	0
Splenic Flexure	1	0	0	1	0	0	0	0
Descending Colon	3	0	0	0	0	2	0	1
Sigmoid Colon	5	0	0	2	1	2	0	0
Large Intestine, NOS	4	0	0	0	1	0	0	3
Rectosigmoid Junction	1	0	1	0	0	0	0	0
Rectum	7	0	1	2	2	0	0	2
Anus, Anal Canal & Anorectum	8	1	1	1	3	2	0	0
Liver & Intrahepatic Bile Duct	6	0	1	0	0	0	4	1
Gallbladder	1	0	0	0	1	0	0	0
Other Biliary	4	0	0	0	1	3	0	0
Pancreas	12	0	0	4	0	4	1	3
Peritoneum, Omentum & Mesentery	1	0	0	0	0	0	1	0
Larynx	8	0	2	2	1	1	2	0
Lung & Bronchus	63	1	14	5	11	21	0	11
Soft Tissue (including Heart)	3	0	1	0	1	1	0	0
Melanoma – Skin	5	2	2	0	1	0	0	0

	Total	Stage 0	Stage I	Stage II	Stage III	Stage IV	88	Unk
Other Non-Epithelial Skin	2	0	0	2	0	0	0	0
Breast	98	13	34	25	3	4	0	19
Cervix Uteri	7	1	1	0	0	3	0	2
Corpus Uteri	13	0	7	0	2	0	0	4
Uterus, NOS	1	0	0	0	0	1	0	0
Ovary	8	0	0	0	5	1	0	2
Vulva	1	1	0	0	0	0	0	0
Prostate	86	0	14	32	2	11	0	27
Testis	2	0	1	0	0	0	0	1
Urinary Bladder	32	20	7	3	0	1	0	1
Kidney & Renal Pelvis	10	3	0	1	1	3	0	2
Ureter	1	0	1	0	0	0	0	0
Brain	12	0	0	0	0	0	12	0
Cranial Nerves Other Nervous System	8	0	0	0	0	0	8	0
Thyroid	7	0	1	1	0	1	0	4
Other Endocrine including Thymus	5	0	0	0	0	0	5	0
Hodgkin Lymphoma	1	0	0	0	1	0	0	0
NHL - Nodal	12	0	4	3	2	0	0	3
NHL - Extranodal	3	0	0	1	1	1	0	0
Myeloma	8	0	0	0	0	0	8	0
Chronic Lymphocytic Leukemia	4	0	0	0	0	0	4	0
Other Lymphocytic Leukemia	1	0	0	0	0	0	1	0
Acute Myeloid Leukemia	2	0	0	0	0	0	2	0
Chronic Myeloid Leukemia	1	0	0	0	0	0	1	0
Other Leukemia	1	0	0	0	0	0	1	0
Mesothelioma	4	0	0	0	1	2	1	0
Miscellaneous	22	0	0	0	0	0	22	0
Total	**530**	**42**	**97**	**95**	**51**	**76**	**74**	**95**

INCIDENCE RATES

OMC Comparison to Washington State & The US – 2017

	Olympic Medical Center		Washington State 35,560 estimated total		United States 1,688,780 estimated total	
Site	Total Case	Percent of Total	Total Cases	Percent of Total	Total Cases	Percent of Total
Breast	98	18.50%	5,950	17.00%	252,710	15.00%
Prostate	86	16.30%	3,580	10.00%	161,360	10.00%
Lung	63	11.90%	4,390	12.35%	222,500	13.18%
Bladder	32	6.10%	1,830	5.15%	79,030	5.00%
Colon	26	4.90%	2,720	8.00%	135,430	8.02%

Rounded to the nearest 1/10. Washington State and US estimated numbers based on American Cancer Society Cancer Facts & Figures 2017. OMC data based on OMC cancer registry data 2017.

OMC Top 5 Cancer Sites – 2017

Type	# of Cases
Breast	98
Prostate	86
Lung	63
Bladder	32
Colon	26

CANCER SCREENINGS

OMCC promotes American Cancer Society recommendations for common cancer screenings and steps to reduce cancer risk.

Common Cancer Screenings

Test	Type of Cancer	Gender	Age	Frequency
Yearly fecal immunochemical test (FIT) Yearly guaiac-based fecal occult blood test (gFOBT) Stool DNA test (sDNA) every 3 years Colonoscopy CT Colonography Sigmoidoscopy	Colon	M & F	45-85	Average risk individuals should discuss options with their physician. Any positive or suspicious findings should be followed-up with colonoscopy
			85+	Colorectal Cancer Screening no longer recommended
PSA	Prostate	M	50+	Average risk individuals should discuss options with their physician.
Pap/Pelvic Pap/HPV	Cervical	F	21-29	Pap test every 3 years
			30-65	Pap test and HPV test every 5 years
			65+	Women who have had regular testing in preceding 10 years with normal results do not need to be screened
Mammogram	Breast	F	45-54	Annually
			55+	Every 2 years
Low-dose CT (LDCT)	Lung	M-F	55-74	Individuals with current smoking history or have quit in past 15 years and have at least a 30 pack-year smoking history.

Steps to Reduce Cancer Risk

- Avoid all forms of tobacco.
- Get to and stay at a healthy weight.
- Get moving with regular physical activity.
- Eat healthy with plenty of fruits and vegetables.
- Limit alcohol use.
- Protect skin.
- Know yourself, family history, and risks.
- Get regular check-ups and cancer screening tests.

Olympic Medical Cancer Center Team

Commission on Cancer®

Olympic Medical Cancer Center is voluntarily accredited by the American College of Surgeons Commission on Cancer Standards as a Community Cancer Program.

DNV·GL ACCREDITED Hospital

By demonstrating compliance with national standards for health care quality and safety, Olympic Medical Center has earned DNV Healthcare accreditation.

Seattle Cancer Care Alliance
Fred Hutch · Seattle Children's · UW Medicine
NETWORK MEMBER

Our affiliation with the Seattle Cancer Care Alliance provides local patients access to leading edge therapies.

OLYMPIC MEDICAL CANCER CENTER

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