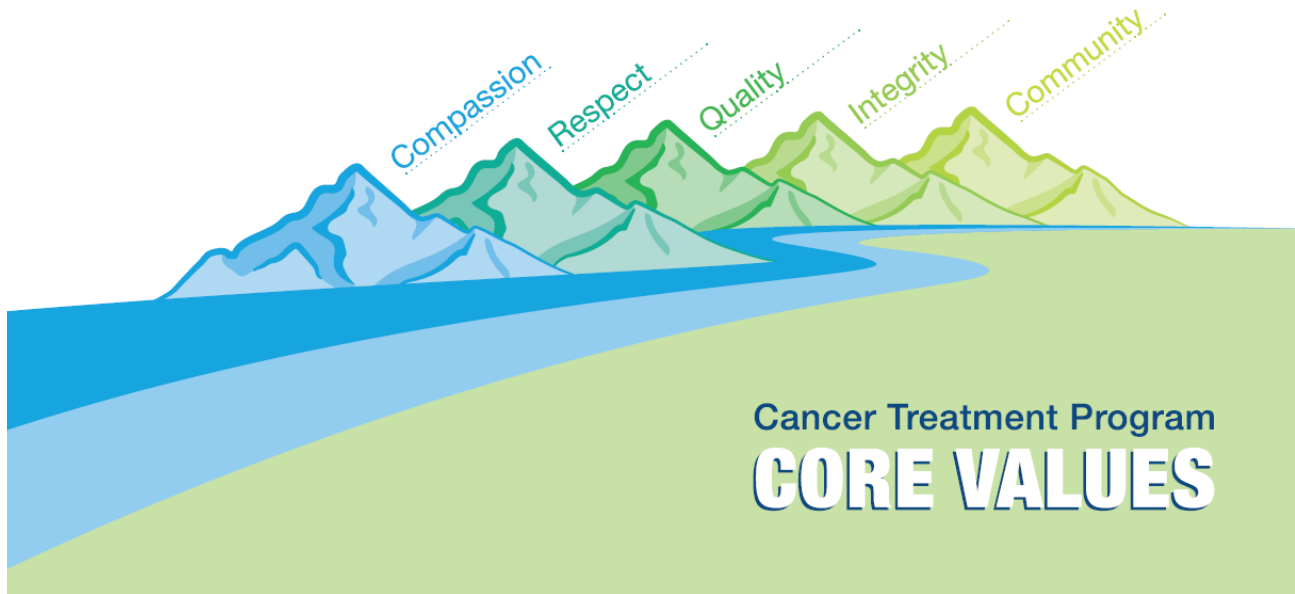




2016 Cancer Service Line | *Annual Report*



Core Values



Cancer Committee Members

Julie C. Smith, MD
Chair Cancer Committee,
Medical Director Oncology Service Line

Mary Gunkel, RN
Co-Chair Cancer Committee,
Director Oncology Service Line,
Cancer Program Administrator,
Tumor Registry Quality Coordinator

Jeanine Allen, SR
VP Specialty Care

Cici Asplund, MD
Primary Care

Susie Ball, MS, GC
Genetic Counselor

Rachelle Boyd
Tumor Registry

Megan Brown, RN
Practice Manager
Medical Oncology and Infusion

Jane Budden
Quality Improvement Coordinator

Thomas Carlson, MD
Radiation Oncology

Diane Davis
Oncology Research,
Clinical Research Coordinator

Ed DePersio, MD
Radiation Oncology

Carl Kjobech, MD
Wellness Place

Sharmen Dye, CTR
Tumor Registry,
Cancer Conference Coordinator

Keta Evans
Practice Manager Radiation Oncology,
Community Outreach Coordinator

Susan Fletcher, RD
Nutrition/Dietician

Anna Hansen, MD
Radiology, Women's Imaging

Ginny Heintz, RN
Palliative Care

Darren Hess, MD, PhD
General Surgery,
Cancer Liaison Physician

Louise Jackson, MD
General Surgery,
Cancer Liaison Physician

Jody Conner
American Cancer Society

Jennifer Jorgensen, MD
Gastroenterology

Barbara Kane, RN
Hospice

Katie Kemble, DNP
Medical Oncology,
Survivorship Program

Daniel Kerr, MD
Pathology

Jennifer Mason, RN
Inpatient Oncology

Thomas Tucker, MD
Medical Oncology

Mary Vargas, MSW
Oncology Social Work,
Psychosocial Services Coordinator

Devin Wall, RN
Oncology Nurse Navigation

Celeste Van Houten, MA-C
Breast Care Coordinator

Accreditation

The Confluence Health Cancer Program was awarded full accreditation by the American College of Surgeons Commission on Cancer with several areas of commendations in 2014, our next accreditation will be in 2017. The areas of commendation were in:

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> • Clinical Trial Accrual • Nursing Care • Public Reporting of our outcomes | <ul style="list-style-type: none"> • Adherence to the College of American Pathologist Protocols • Accuracy of our data | <ul style="list-style-type: none"> • Education of Cancer Registry Staff • Participation in Rapid Quality Reporting System |
|---|--|---|

Our Approach

The Cancer Program at Confluence Health offers a full range of medical services along with a multidisciplinary team approach to patient care. Our program and treatment center is affiliated with the Seattle Cancer Care Alliance, and accredited by the Commission on Cancer, which sets stringent guidelines to improve patient outcomes and promotes consultation among surgeons, medical and radiation oncologists, pathologist, and other cancer specialists.

We provide state of the art pretreatment evaluation, staging, treatment and clinical follow-up for many hundreds of patients each year.

We recognize that cancer is a complex group of disease and that each diagnosis is a life-changing event for every patient. This is why we firmly believe in setting quality goals, monitoring activity, and evaluating our services are critical components to improve patient care.

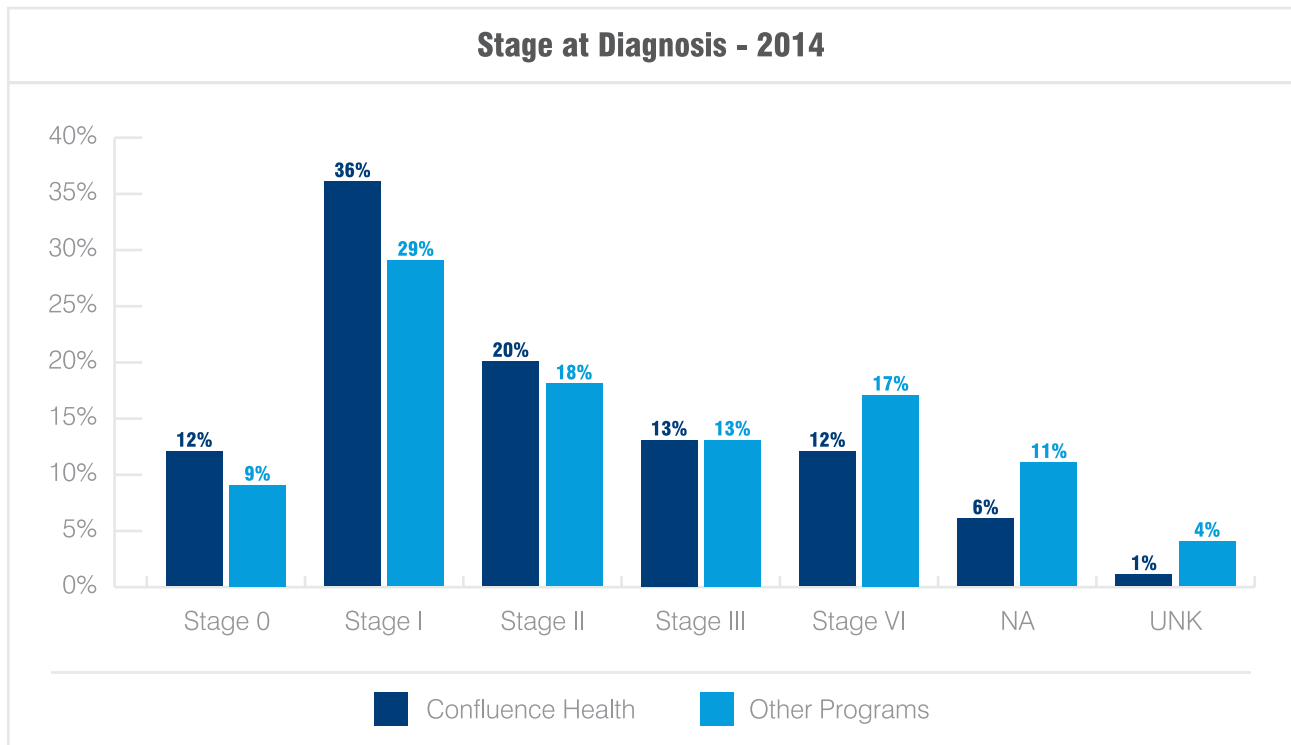
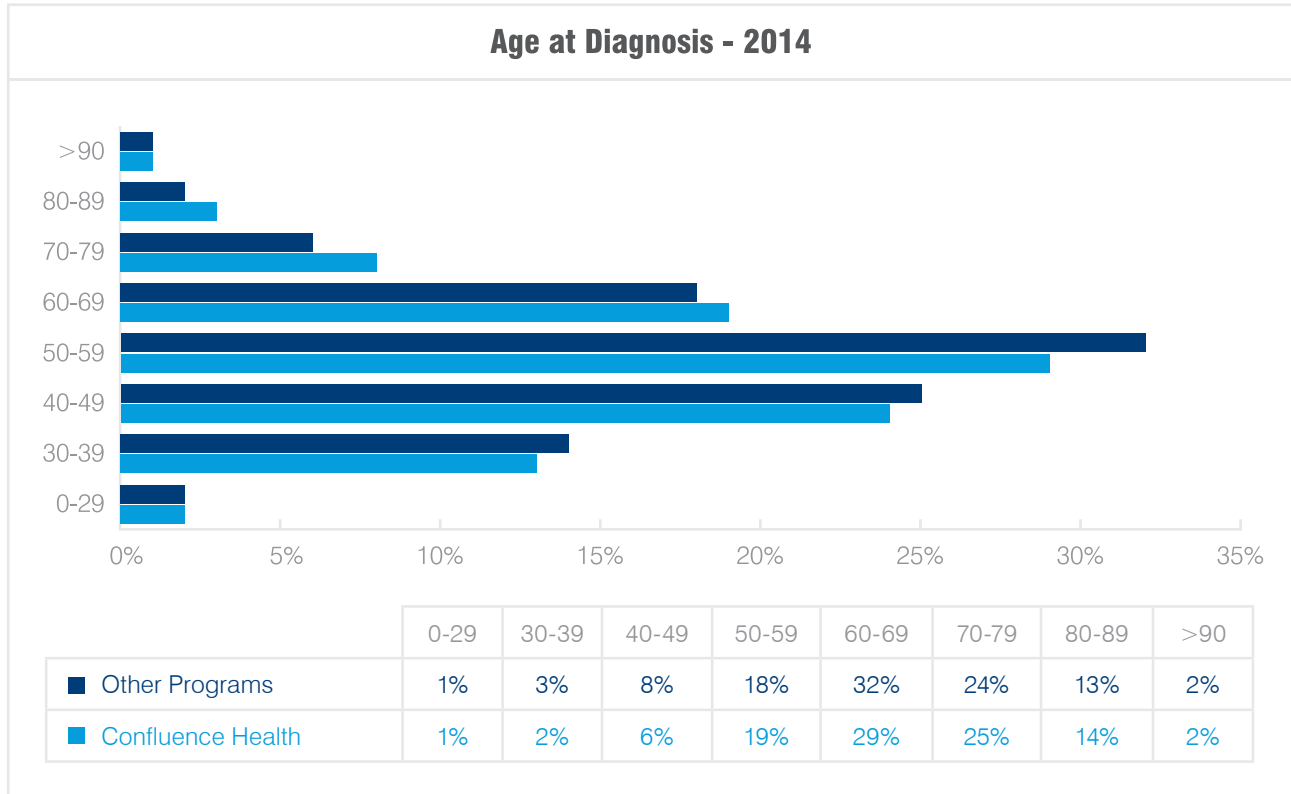
Cancer Committee 2016 Quality Dashboard

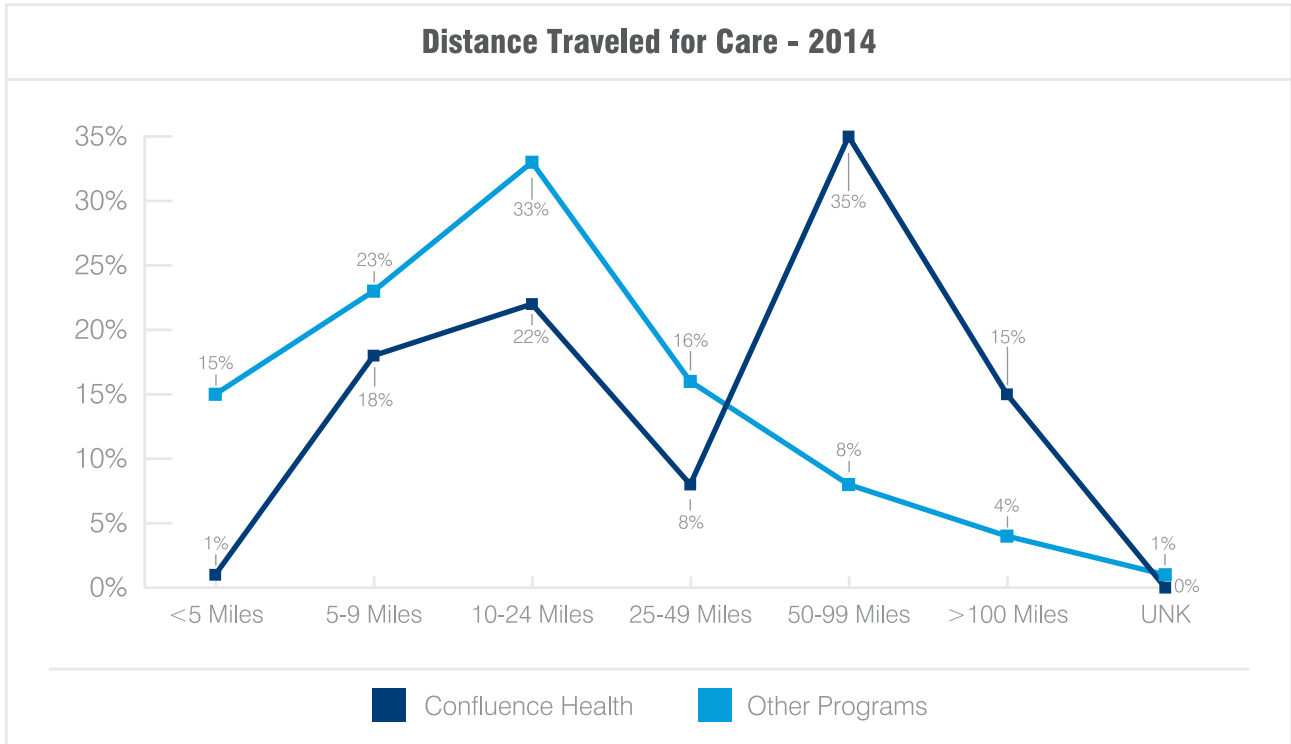
WVH&C Cancer Care Quality Measures Dashboard 2008 - 2016 Data

Surgery	ROTC	ROTC (New)	Oncology	Oncology	Oncology	
>12 Regional Ln's removed and pathologically examined for resected Colon Cancer - CWH surgery analytical for WVMC	XRT administered within 1 year of diagnosis for women <70 receiving breast conserving surgery for Breast Cancer	XRT considered or administered following mastectomy w/ 1 year of diagnosis for women w/ >4 positive regional LNs.	Percentage of time combination is considered or administered with 4 months of diagnosis for women <70, stage 1C - stage III Hormone Receptor Negative Breast Cancer	Percentage of time Tamoxifen or third generation AI considered or administered within 1 year of diagnosis for women with Stage 1C - Stage III hormone receptor Positive Breast Cancer	Percentage of time adjunctive chemotherapy is considered or administered within 4 months of diagnosis for patients age <80 with Stage III node positive Colon Cancer	
96%	95%	NA	100%	98%	100%	1/24/16
95%	94%	NA	100%	98%	100%	4/24/16
94%	95%	80%	100%	100%	100%	7/22/16
90%		94%	100%	100%	100%	12/31/16

National Comparison Data

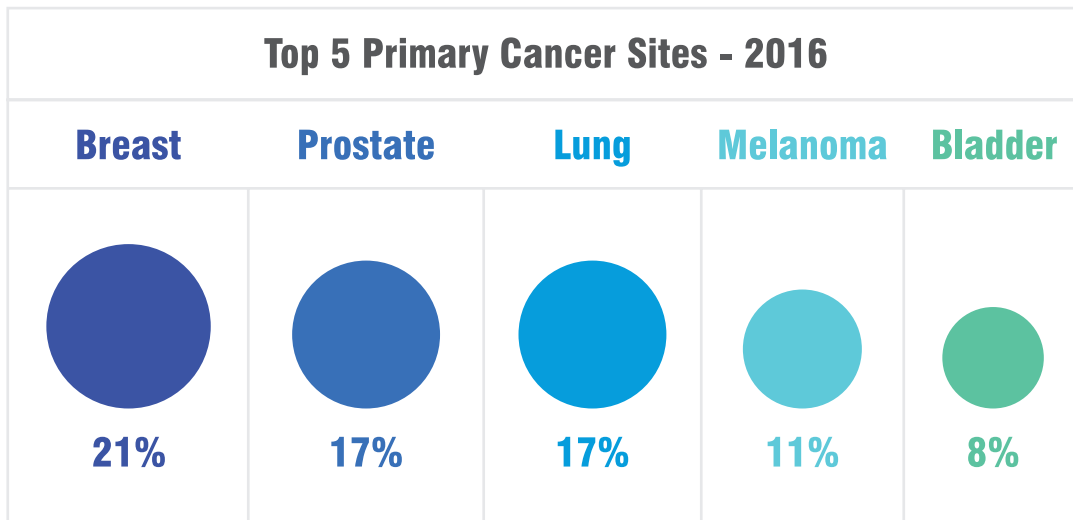
Our cancer statistics, in comparison to national data, as published by American College of Surgeons Commission on Cancer are shown here. Our Cancer program has an active tumor registry, with local data, case by case abstracting, staging, treatments, and outcomes reported to the Commission on Cancer. Shown below are comparison tables of age of cancer, stage of cancer, and distance traveled by patients to receive care in North Central Washington.





Top sites of cancer diagnosed at Confluence Health

Similar to other Comprehensive Community Cancer programs within the United States, our top five sites of cancer diagnosis include: Breast Cancer (20% of cases), Prostate Cancer (19% of cases), Lung Cancer (15% of cases), Melanoma (12 % of cases), and Bladder Cancer (8% of cases). In 2015, 181 patients were diagnosed with Breast Cancer, 168 patients diagnosed with Prostate Cancer, 133 patients diagnosed with Lung Cancer, 105 patients diagnosed with Melanoma, and 68 patients diagnosed with Bladder Cancer.



Site Specific Study **Lung Cancer**

A Focus on Lung Cancer,
Staging, Work Up, and Treatment



Balaji Laxmanan, MD
Pulmonary
Wenatchee



Julie Smith, MD
Oncology
Wenatchee

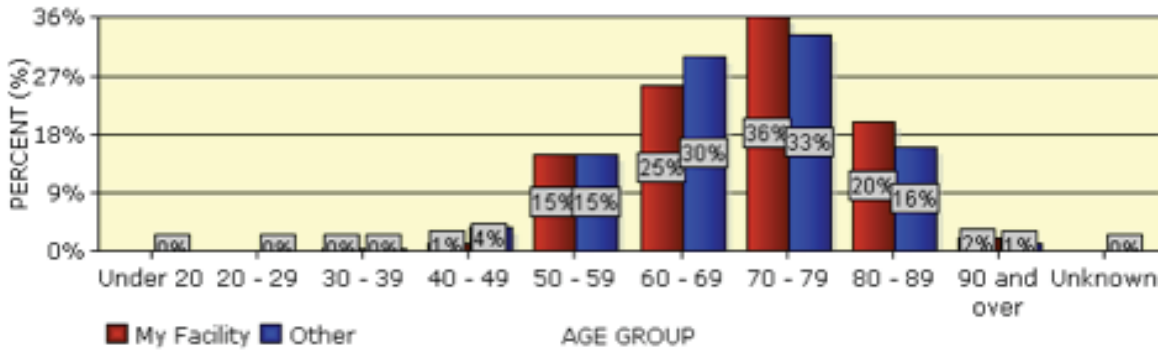
Lung Cancer is the cancer with the second highest incidence in both men and women, with the highest mortality rate among both genders. The screening, diagnosis, work up, and treatment of Lung Cancer continues to improve and evolve over time. Included is a review of the low dose CT screening program at Confluence Health, the diagnostic and staging evaluations performed, and treatment options through the continuum of care. Lung Cancer includes two large subtypes, including Non-Small Cell Lung Cancer, and Small Cell Lung Cancer. The far majority of Lung Cancer Cases are those considered as Non-Small Cell Lung Cancer. The National Cancer Institute Surveillance, Epidemiology, and End Results Program estimates that for 2016 there will be 224,390 new cases of lung cancer diagnosed, accounting for 13.3% of all new cancer cases for 2016. It is estimated that over 158,000 deaths in 2016 will be attributable to Lung Cancer, accounting for 26.5% of all cancer death, with an overall 5 year survival of 17.7%. During 2015, at Confluence Health a total of 130 patients were diagnosed with Lung Cancer, including 114 with Non-Small Cell Lung Cancer, 15 with Small Cell Lung Cancer, and 1 other histology/subtype.

The symptoms of lung cancer are variable from no symptoms, to symptoms such as cough, shortness of breath, weight loss, fatigue, loss of appetite, change in sputum, blood tinged sputum, or even symptoms such as unexplained bone pain, headaches, or neurologic findings.

Lung cancer is usually initially suspected with the finding of an abnormal CXR or CT scan, leading to additional work up and diagnostic testing. Risk factors for the development of lung cancer include tobacco use, and other environmental factors. Lung Cancer is not felt to be inherited. Individuals who are asymptomatic with a tobacco use history of 30 or greater pack years (1 pack year=1 pack per day for 1 year time period) are felt to be at increased risk and may qualify for Low-Dose CT scans of the chest in screening.

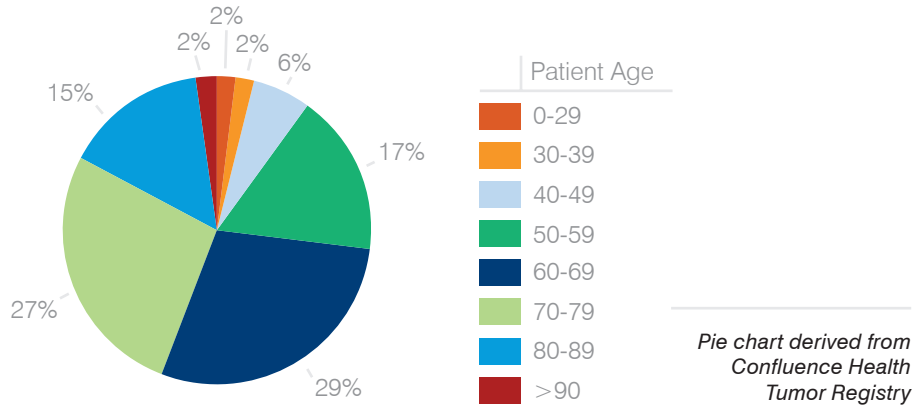
Compared to national data, over a 10 year period, the distribution by age of patients with Non-Small Cell Lung Cancer, is similar at Confluence Health compared to all other comprehensive community cancer centers, with the average age of diagnosis approximately 70.

Age Group of Lung, Bronchus – Non-Small Cell Carcinoma Cancer Diagnosed in 2004 to 2014
 Central Washington Hospital, Wenatchee, WA vs.
 Comprehensive Community Cancer Program Hospitals in All States
 All Diagnosis Types – Data from 637 Hospitals



Above: Table derived from National Cancer Data Base, Commission on Cancer

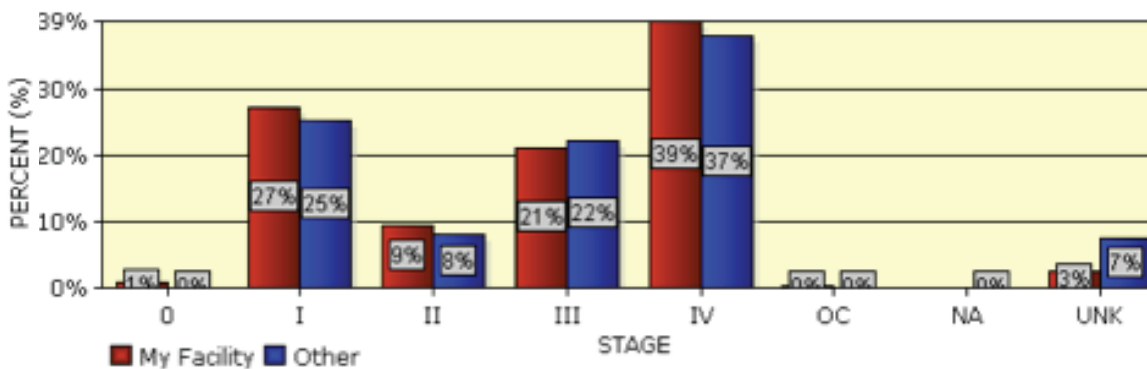
For the year ending 2016, the age of patients diagnosed with Lung Cancer is shown here:



Pie chart derived from Confluence Health Tumor Registry

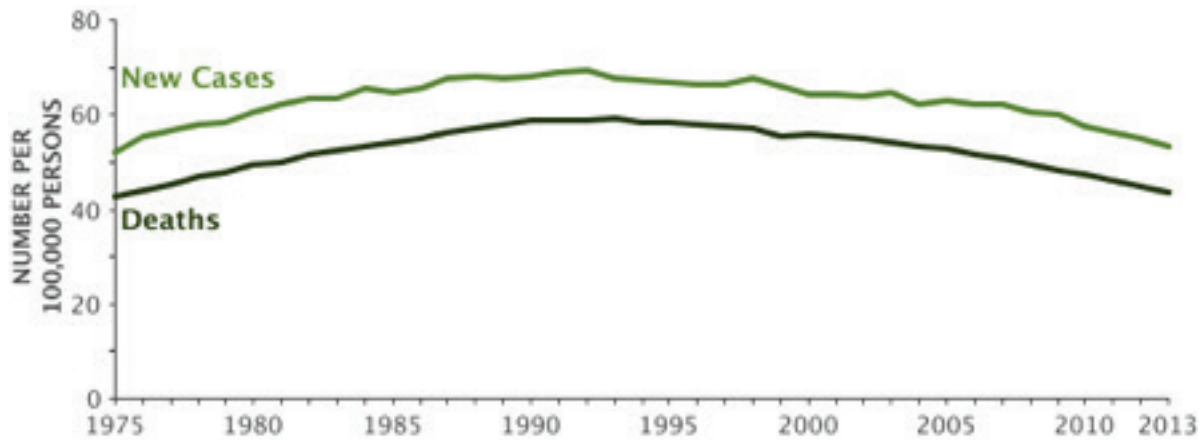
As seen below, the stage at time of diagnosis of patients treated at Confluence Health with Non-Small Lung Cancer is similar to patients diagnosed and treated elsewhere within the United States.

Stage of Lung, Bronchus – Non-Small Cell Carcinoma Cancer Diagnosed in 2004 to 2014
 Central Washington Hospital, Wenatchee, WA vs.
 Comprehensive Community Cancer Program Hospitals in All States
 All Diagnosis Types – Data from 637 Hospitals



Above: Table derived from National Cancer Data Base, Commission on Cancer

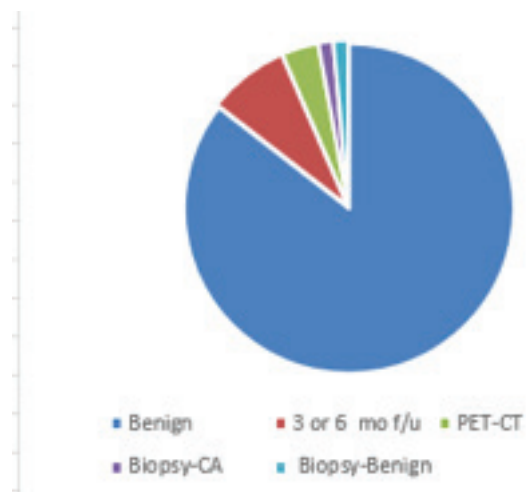
The incidence (number of new cases per 100,000 persons) and death rates (mortality) over the past 30-40 years can be seen here. Reference: SEER 9 Incidence and US Mortality.



The decrease in incidence is felt to be due to large public education programs regarding the hazards of tobacco use. The survival of patients diagnosed with Lung Cancer is felt to be in relation to the stage, and/or extent of spread of the cancer. Other factors important in the survival of patients with Lung Cancer include age, underlying health issues, performance status, and factors associated with specific gene mutations seen within those cancers. Patients diagnosed with localized, or early stage disease have over a 50% 5 year survival, those with regional disease have a 28% 5 year survival, and those with distant disease have a 4-5% 5 year survival.

It is felt that education and early detection are key factors in improvements in decreasing incidence, and also morbidity and mortality due to lung cancer. Low Dose screening chest CT (LDCT) scans are now available at many centers, including Confluence Health for patients that are without symptoms, and have at least a 30 pack year tobacco history, and are continuing to smoke, or within 15

years of smoking cessation. In 2016, our LDCT screening program enrolled 138 total patients, of which 118 patients were benign (normal), 11 patients required 3-6 month follow up scans, 5 patients required Pet CT scans, and 2 patients were diagnosed with Lung Cancer by performing a biopsy. This is shown in visual format here:

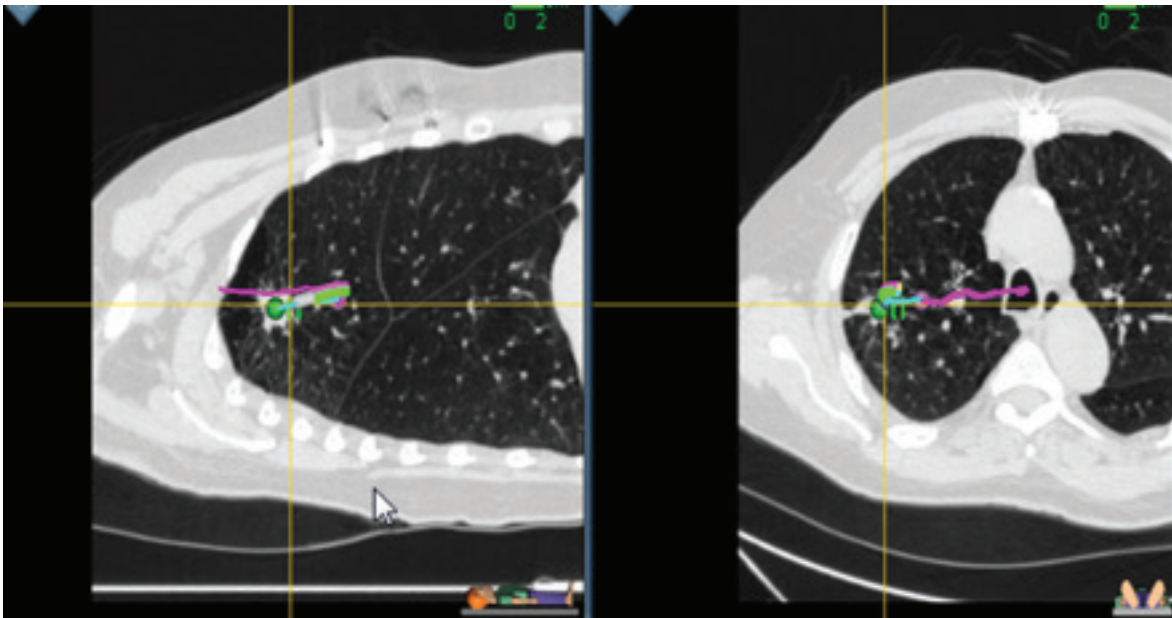


Above: Patients and outcome of LDCT program, Confluence Health, 2016.

When Lung Cancer is suspected, the diagnosis is then confirmed with a pathologic evaluation of tissue. In addition, in the past decade, there have been numerous advances in bronchoscopy to improve the diagnosis and staging of patients with suspected lung cancer. Historically, standard flexible bronchoscopy has had a low yield in the diagnosis of lung nodules and masses, and therefore had fallen out of favor as a diagnostic intervention. To improve on this shortcoming, electromagnetic navigational bronchoscopy (ENB) has been developed as a new advanced diagnostic modality that enables the biopsy of nearly all pulmonary lesions. In addition, endobronchial ultrasound (EBUS)

guided lymph node sampling has become the recommended first staging modality in patients with lung cancer. The combination of EBUS and ENB now allows patients with concerning pulmonary lesions to be diagnosed and staged in a single procedure.

Shown below are a CT scan showing localization of a lung mass with navigational bronchoscopy, allowing a tissue biopsy and diagnosis to be easily made. Also pictured and illustrated are Dr. Laxmanan performing Bronchoscopy with endobronchial ultrasound, and an illustration and visualization of the mediastinal lymph nodes station 7.



Treatment options for patients with lung cancer is determined by many factors, including sub-type of lung cancer, genetic mutations (abnormalities within the DNA of the lung cancer itself), underlying health and co-morbidities, age, and life expectancy. Local treatments such as surgery or Stereotactic Body Radiation Therapy are considered for patients with stage 1 and 2 Non-Small Cell Lung Cancer. Following surgical resection, chemotherapy is then discussed in appropriate patients to help decrease the risk of recurrent and/or relapse of cancer. For patients with Stage IIIA, treatment options and discussed within a multi-disciplinary forum include chemotherapy and radiation as definitive treatment, vs prior to surgery. For patients with stage IIIB Lung Cancer, surgery has not been shown to be of benefit, however chemotherapy in combination with radiation is of benefit. Patients with stage IV (metastatic) lung cancer may benefit from chemotherapy, targeted therapies, immunotherapies, targeted radiation to symptomatic metastatic lesions, and consideration of clinical trials.

Multi-disciplinary input and discussion at Clinical Cancer Conference (“Tumor Board”) occurs on a weekly basis, with input from physicians specializing in Radiology, Pathology, Pulmonary Medicine, Surgery and Thoracic Surgery, Medical Oncology, Radiation Oncology, and Palliative Care).

It is standard of care to test Lung Cancer tissue for genetic mutations in patients with advanced/metastatic lung cancer to determine if targeted and/or immunotherapy treatment options are appropriate. This DNA testing included evaluation of EGFR mutations, KRAS mutations, ROS-1 mutations, PDL-1 mutations for which approved targeted therapies are available.

Clinical Research trials are important in Lung Cancer, and have led to the development of novel therapies, and improved patient outcomes for many patients over many years. When a new diagnosis of Lung Cancer occurs, these patients are screened at diagnosis regarding eligibility for enrollment in clinical trials. At Confluence Health, we have a dedicated Oncology Research department and team, and offer clinical trails through our affiliation with the Seattle Cancer Care Alliance, national consortiums (SWOG, RTOG, etc.), and also through pharmaceuticals under development.

The discussion of goals of care, outcomes of care, and palliative care are also recommended for patients with advanced Lung Cancer. Our Palliative Care program includes providers in both the inpatient and outpatient settings, also with resources in our cancer program of MSW and Behavioral Health for patient and family support. ■

Improvements and Accomplishments OSL in 2016

- In 2016 Confluence Health committed to the National Colorectal Roundtable initiative to eliminate colorectal cancer as a major public health problem and are working toward the shared goal of reaching 80% of adults aged 50 and older are screened for colorectal cancer by 2018.
- Oncology nutrition increased access to service by adding another registered dietician which increased the availability of this service by 50%. The referral and scheduling process were also improved to ensure more patients receive this support.

- Confluence Health improved mammography screening rates from 44% in 2014 to 63% in 2016.
- Oncology Nurse Navigation services expanded and increased number of patients they are able to support. In 2014 47% of patients had contact with a navigator and in 2016 that increase to 86%.
- A Intake Coordinator role was implemented in oncology to improve our patients ability to reach us by the phone.
- In 2016 a second shuttle was added to the People for People service which assists in transporting cancer patients from Moses Lake area to Wenatchee for services at Confluence Health. The American Cancer Society supported this effort with a significant donation.
- Tomosynthesis, or 3D mammography services, were added to Confluence Health Women Imaging Center which adds the latest technology in screening for breast cancer.

Screening and Prevention

- Our Breast, Cervical, and Colon Health Program at Confluence health has a mission to prevent breast, cervical and colon cancer by providing free cancer screening services to men and women who are non-insured or underinsured who are age and income eligible. This year they focused on educating providers and the community about their services at many events throughout the year. They enrolled 852 women who were screened for breast and cervical cancer. They enrolled 34 men and women for initial colon cancer screening. Their services include not only initial screenings but they also assist with follow up tests to find out if treatment is needed and assistance with finding resources for treatment.
- We had several community educational outreach for Breast Cancer Awareness. There was education materials on prevention and screening. We had MD's and oncology staff present to answer questions and talk with community members.
- We also had a several community outreach events for Colon Cancer Awareness. These included the Strollin Colon which is a blow up colon that you can walk through and you can visualize what changes happen as the colon develops cancer. There was education materials on screening and our BCCHP program.
- We had an educational event on the prevention of skin cancer.
- Confluence Health added Tomosynthesis, or 3D mammography services, which provides the latest technology in screening for breast cancer.
- We committed to the National Colorectal Roundtable and American Cancer Society initiative of "80% by 2018". We will join other healthcare organizations in working towards a shared goal of having 80% of adults aged 50 and older screened for colorectal cancer by 2018.

