



ST. LUKE'S CANCER CENTER

2018 Annual Report and Outcomes



St Luke's
Cancer Center





ST. LUKE'S SCREENING, PREVENTION AND COMMUNITY OUTREACH

Colorectal Cancer Screening

An ongoing multifaceted Colorectal Cancer Screening research project across four separate St. Luke's University Health Network (SLUHN) clinics began in CY17 to ensure that screening and treatment rates increase among our vulnerable populations, where rates are typically lower and later-stage cancers are more frequently diagnosed. This project is a result of collaboration among clinic staff, providers, service lines, medical students, residents, researchers and Community Health and Preventive Medicine (CHPM). The first phase of this project was the completion of surveys by providers, staff and patients to assess and inform of needs. The team has also been working on scholarship research and publications related to this project. As a result, the group continues to work on a multidisciplinary approach to improving quality metrics among some of our highest-need populations.

Breast Cancer Screening – Lehigh Coalition for Cancer Control (LCCC) clients seen at SLUHN

Dates	Women Screened	Total Mammos	Total CBEs	Total Ultrasounds	Returning for Add'l Testing	Recommended Biopsies	Breast Cancers Detected
CY 2018	196	196 (124 screening, 72 diagnostic)	0	71	16	11	1

Cervical Cancer Screening – LCCC clients seen at SLUHN

	January to March 18	April to June 2018	July to September 2018	October to December 2018	CY 2018 Total
Women Receiving Pap Tests	10	17	45	43	128

Cancer Prevention Initiatives

As a non-profit health institution, SLUHN must conduct a Community Health Needs Assessment (CHNA) every three years, as mandated by the 2010 Affordable Care Act. This CHNA is used to identify priority health areas and to formulate strategic implementation plans for addressing identified health needs. In 2016, SLUHN conducted both the Network CHNA and a Cancer Center Community Needs Assessment (CNA) concurrently, using analogous processes. Both needs assessments were conducted by our Department of Community Health and Preventive Medicine, which has expertise in population health, evaluation and assessment. Our 2016 Network CHNA process included a Network-wide CHNA as well as CHNAs for each of our seven campuses, allowing us to identify the specific needs of our unique campus service areas' populations.

Through the Network CHNA process, SLUHN identified these five priority areas:

1. Improving access to care and reducing health disparities;
2. Promoting healthy lifestyles and reducing chronic disease;
3. Improving mental and behavioral health;
4. Improving child and adolescent health; and
5. Improving elder health.



Cancer is considered to be a chronic disease; therefore, it is included under the health priority area of promoting healthy lifestyles and reducing chronic disease. Network-wide efforts have been underway to address the health priority area of promoting healthy lifestyles and reducing chronic disease. Some of the efforts that SLUHN and its partners have undertaken to prevent chronic diseases and to promote healthy lifestyles include:

Nutrition initiatives

- Plant-based cooking classes and Community Supported Agriculture (CSA) shares for employees;
- School gardens; and
- The Kellyn Foundation Mobile Market, which continues to provide produce for sale across locations in Northampton County, all of which are in areas with little or no access to fruits and vegetables.

Physical Activity initiatives

- The Get Your Tail on the Trail and Walk With a Doc programs; and
- Bike Bethlehem.

The full CHNA report, as well updates on the priority areas, may be found at <http://www.slhn.org/Conditions-Services/Community-Health/Community-Health-Needs-Assessment>.



CANCER DATA MANAGEMENT & STATISTICS

The Cancer Registry is the data collection component of our Cancer Program. It is a repository of confidential patient information that provides the whole picture of the patients' disease. The Network Cancer Registry is staffed by a team of data specialists trained as Certified Tumor Registrars and Cancer Data Associates. They collect information about the occurrence (incidence) of cancer, types of cancer, locations within the body, extent of cancer at the time of diagnosis (disease stage) and types of treatment patients receive. Cancer Registry data provide hospital administrators with statistics for research, education and strategic planning.

Data for all cancer cases diagnosed or treated within the Network are reported to a central statewide cancer registry. Data collected by state cancer registries enable public health professionals to better understand and address the cancer burden.

Reliable registry data are fundamental to a variety of research efforts, including those aimed at evaluating effectiveness of cancer prevention, control or treatment programs. In recent years, higher education and certification standards for Cancer Registrars were mandated to ensure the accuracy of the collected data. Cancer Registry data go through electronic edits as well as quality review processes.

Each patient in the database is followed annually in order to acquire necessary information on disease recurrence, subsequent treatment and survival data that is vital for continued patient care. Following are some cancer statistics for our Network:

Summary by Body System, Sex, Class, Status and Best CS/AJCC Stage Report

Primary Site	Total (%)	Sex		Class of Case		Status		Stage Distribution*						
		M	F	Analy	NA	Alive	Exp	0	I	II	III	IV	88	Unk
Oral Cavity & Pharynx	81 (2.8%)	54	27	81	0	58	23	1	12	8	16	34	1	9
Lip	1 (0.0%)	1	0	1	0	1	0	0	1	0	0	0	0	0
Tongue	30 (1.0%)	18	12	30	0	23	7	1	7	3	3	14	0	2
Salivary Glands	14 (0.5%)	10	4	14	0	8	6	0	1	3	4	5	0	1
Floor of Mouth	2 (0.1%)	1	1	2	0	1	1	0	0	0	1	0	0	1
Gum & Other Mouth	7 (0.2%)	4	3	7	0	5	2	0	1	1	2	1	0	2
Nasopharynx	3 (0.1%)	2	1	3	0	3	0	0	0	0	2	1	0	0
Tonsil	12 (0.4%)	8	4	12	0	11	1	0	1	0	1	9	0	1
Oropharynx	4 (0.1%)	4	0	4	0	3	1	0	0	0	1	2	0	1
Hypopharynx	7 (0.2%)	5	2	7	0	2	5	0	1	1	2	2	0	1
Other Oral Cavity & Pharynx	1 (0.0%)	1	0	1	0	1	0	0	0	0	0	0	1	0
Digestive System	557 (18.9%)	310	247	557	0	313	244	78	75	92	73	140	43	56
Esophagus	49 (1.7%)	42	7	49	0	22	27	9	3	6	9	14	0	8
Stomach	32 (1.1%)	27	5	32	0	18	14	2	9	2	5	7	3	4

*Analytic Cases Only



Primary Site	Total (%)	Sex		Class of Case		Status		Stage Distribution*						
		M	F	Analy	NA	Alive	Exp	0	I	II	III	IV	88	Unk
Small Intestine	16 (0.5%)	5	11	16	0	13	3	1	1	2	0	1	10	1
Colon Excluding Rectum	196 (6.7%)	86	110	196	0	141	56	50	27	34	25	34	6	20
Cecum	47	20	27	47	0	31	16	11	11	5	2	13	1	4
Appendix	8	2	6	8	0	8	0	0	0	1	0	2	5	0
Ascending Colon	30	13	17	30	0	19	11	10	2	7	5	3	0	3
Hepatic Flexure	12	2	10	12	0	9	3	2	2	4	3	0	0	1
Transverse Colon	30	14	16	30	0	21	9	7	2	8	5	4	0	4
Splenic Flexure	3	2	1	3	0	3	0	0	2	0	1	0	0	0
Descending Colon	11	4	7	11	0	8	3	4	1	1	1	3	0	1
Sigmoid Colon	47	27	20	47	0	37	10	14	7	8	4	8	0	6
Large Intestine, NOS	8	2	6	8	0	5	3	2	0	0	4	1	0	1
Rectum & Rectosigmoid	67 (2.3%)	39	28	67	0	54	13	13	7	9	16	10	3	9
Rectosigmoid Junction	12	7	5	12	0	8	4	1	0	3	3	4	1	0
Rectum	55	32	23	55	0	46	9	12	7	6	13	6	2	9
Anus, Anal Canal & Anorectum	7 (0.2%)	1	6	7	0	4	3	0	1	4	2	0	0	0
Liver & Intrahepatic Bile Duct	54 (1.8%)	35	19	54	0	20	34	0	10	11	8	15	3	7
Liver	40	31	9	40	0	16	24	0	7	10	8	9	1	5
Intrahepatic Bile Duct	14	4	10	14	0	4	10	0	3	1	0	6	2	2
Gallbladder	8 (0.3%)	5	3	8	0	2	6	0	1	0	1	6	0	0
Other Biliary	16 (0.5%)	10	6	16	0	5	11	0	2	4	1	3	4	2
Pancreas	103 (3.5%)	58	45	103	0	32	71	3	14	20	5	50	6	5
Retroperitoneum	1 (0.0%)	0	1	1	0	0	1	0	0	0	1	0	0	0
Peritoneum, Omentum & Mesentery	4 (0.1%)	0	4	4	0	1	3	0	0	0	0	0	4	0
Other Digestive Organs	4 (0.1%)	2	2	4	0	1	3	0	0	0	0	0	4	0
Respiratory System	367 (12.5%)	194	173	367	0	194	173	3	111	30	58	131	9	25
Nose, Nasal Cavity & Middle Ear	8 (0.3%)	6	2	8	0	3	5	0	0	0	4	3	0	1
Larynx	24 (0.8%)	22	2	24	0	19	5	2	5	1	5	9	0	2
Lung & Bronchus	334 (11.4%)	166	168	334	0	171	163	1	106	29	49	119	8	22
Trachea, Mediastinum & Other Respiratory Organs	1 (0.0%)	0	1	1	0	1	0	0	0	0	0	0	1	0
Bones & Joints	1 (0.0%)	0	1	1	0	0	1	0	1	0	0	0	0	0
Bones & Joints	1 (0.0%)	0	1	1	0	0	1	0	1	0	0	0	0	0

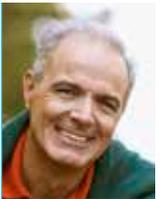
*Analytic Cases Only



CANCER DATA MANAGEMENT & STATISTICS *cont.*

Primary Site	Total (%)	Sex		Class of Case		Status		Stage Distribution*						
		M	F	Analy	NA	Alive	Exp	0	I	II	III	IV	88	Unk
Soft Tissue	14 (0.5%)	10	4	14	0	9	5	0	5	3	2	2	0	2
Soft Tissue (including Heart)	14 (0.5%)	10	4	14	0	9	5	0	5	3	2	2	0	2
Skin excluding Basal & Squamous	142 (4.8%)	82	60	142	0	128	14	25	60	22	24	5	1	5
Melanoma – Skin	134 (4.6%)	77	57	134	0	121	13	25	57	21	23	5	0	3
Other Non-Epithelial Skin	8 (0.3%)	5	3	8	0	7	1	0	3	1	1	0	1	2
Breast	470 (16.0%)	3	467	470	0	443	27	82	197	116	38	23	0	14
Breast	470 (16.0%)	3	467	470	0	443	27	82	197	116	38	23	0	14
Female Genital System	249 (8.5%)	0	249	249	0	195	54	2	144	10	45	21	18	9
Cervix Uteri	11 (0.4%)	0	11	11	0	9	2	0	5	1	3	2	0	0
Corpus & Uterus, NOS	162 (5.5%)	0	162	162	0	139	23	1	110	8	14	11	12	6
Corpus Uteri	161	0	161	161	0	139	22	1	110	8	14	11	11	6
Uterus, NOS	1	0	1	1	0	0	1	0	0	0	0	0	1	0
Ovary	43 (1.5%)	0	43	43	0	33	10	0	17	1	19	5	0	1
Vagina	3 (0.1%)	0	3	3	0	2	1	1	1	0	1	0	0	0
Vulva	16 (0.5%)	0	16	16	0	6	10	0	8	0	5	3	0	0
Other Female Genital Organs	14 (0.5%)	0	14	14	0	6	8	0	3	0	3	0	6	2
Male Genital System	219 (7.4%)	219	0	219	0	202	17	2	33	126	23	23	0	12
Prostate	200 (6.8%)	200	0	200	0	184	16	0	26	123	21	23	0	7
Testis	15 (0.5%)	15	0	15	0	15	0	0	6	3	2	0	0	4
Penis	3 (0.1%)	3	0	3	0	2	1	2	0	0	0	0	0	1
Other Male Genital Organs	1 (0.0%)	1	0	1	0	1	0	0	1	0	0	0	0	0
Urinary System	300 (10.2%)	218	82	300	0	250	50	86	128	25	17	27	2	15
Urinary Bladder	163 (5.5%)	129	34	163	0	125	38	79	35	21	5	14	0	9
Kidney & Renal Pelvis	128 (4.4%)	85	43	128	0	119	9	2	93	4	12	12	0	5
Ureter	6 (0.2%)	3	3	6	0	4	2	4	0	0	0	1	0	1
Other Urinary Organs	3 (0.1%)	1	2	3	0	2	1	1	0	0	0	0	2	0
Brain & Other Nervous System	107 (3.6%)	41	66	107	0	86	21	0	0	0	0	0	107	0
Brain	44 (1.5%)	20	24	44	0	27	17	0	0	0	0	0	44	0
Cranial Nerves Other Nervous System	63 (2.1%)	21	42	63	0	59	4	0	0	0	0	0	63	0

*Analytic Cases Only



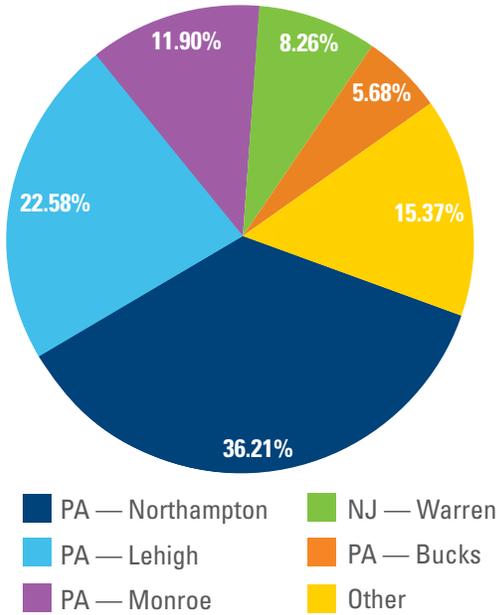
Primary Site	Total (%)	Sex		Class of Case		Status		Stage Distribution*						
		M	F	Analy	NA	Alive	Exp	0	I	II	III	IV	88	Unk
Endocrine System	144 (4.9%)	35	109	144	0	140	4	0	86	12	15	5	24	2
Thyroid	123(4.2%)	30	93	123	0	121	2	0	86	12	15	5	3	2
Other Endocrine including Thymus	21 (0.7%)	5	16	21	0	19	2	0	0	0	0	0	21	0
Lymphoma	117 (4.0%)	65	52	117	0	91	26	0	24	26	22	27	0	18
Hodgkin Lymphoma	14 (0.5%)	7	7	14	0	12	2	0	1	10	2	1	0	0
Non-Hodgkin Lymphoma	103 (3.5%)	58	45	103	0	79	24	0	23	16	20	26	0	18
NHL - Nodal	74	44	30	74	0	57	17	0	11	11	19	19	0	14
NHL - Extranodal	29	14	15	29	0	22	7	0	12	5	1	7	0	4
Myeloma	49 (1.7%)	22	27	49	0	40	9	0	0	0	0	0	49	0
Myeloma	49 (1.7%)	22	27	49	0	40	9	0	0	0	0	0	49	0
Leukemia	38 (1.3%)	24	14	38	0	19	19	0	0	0	0	0	38	0
Lymphocytic Leukemia	13 (0.4%)	10	3	13	0	9	4	0	0	0	0	0	13	0
Acute Lymphocytic Leukemia	3	1	2	3	0	1	2	0	0	0	0	0	3	0
Chronic Lymphocytic Leukemia	8	7	1	8	0	6	2	0	0	0	0	0	8	0
Other Lymphocytic Leukemia	2	2	0	2	0	2	0	0	0	0	0	0	2	0
Myeloid & Monocytic Leukemia	25 (0.9%)	14	11	25	0	10	15	0	0	0	0	0	25	0
Acute Myeloid Leukemia	17	9	8	17	0	3	14	0	0	0	0	0	17	0
Chronic Myeloid Leukemia	7	4	3	7	0	6	1	0	0	0	0	0	7	0
Other Myeloid/ Monocytic Leukemia	1	1	0	1	0	1	0	0	0	0	0	0	1	0
Mesothelioma	7 (0.2%)	4	3	7	0	2	5	0	1	0	0	3	0	3
Mesothelioma	7 (0.2%)	4	3	7	0	2	5	0	1	0	0	3	0	3
Kaposi Sarcoma	1 (0.0%)	1	0	1	0	1	0	0	0	0	0	0	1	0
Kaposi Sarcoma	1 (0.0%)	1	0	1	0	1	0	0	0	0	0	0	1	0
Miscellaneous	78 (2.7%)	46	32	78	0	32	46	0	0	0	0	0	78	0
Miscellaneous	78 (2.7%)	46	32	78	0	32	46	0	0	0	0	0	78	0
Total	2,941	1,328	1,613	2,941	0	2,203	738	279	877	470	333	441	371	170

*Analytic Cases Only

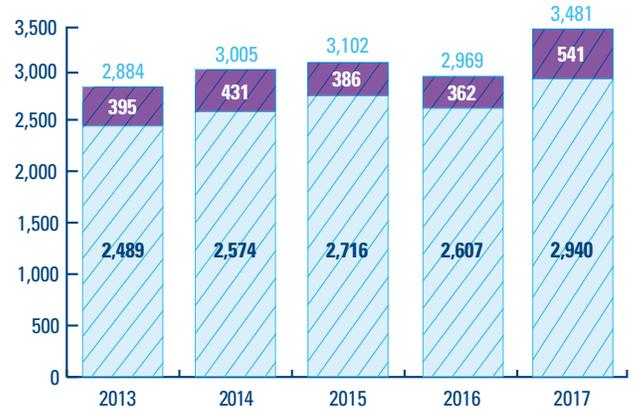


CANCER CASES

County of Residence at Diagnosis CY2017



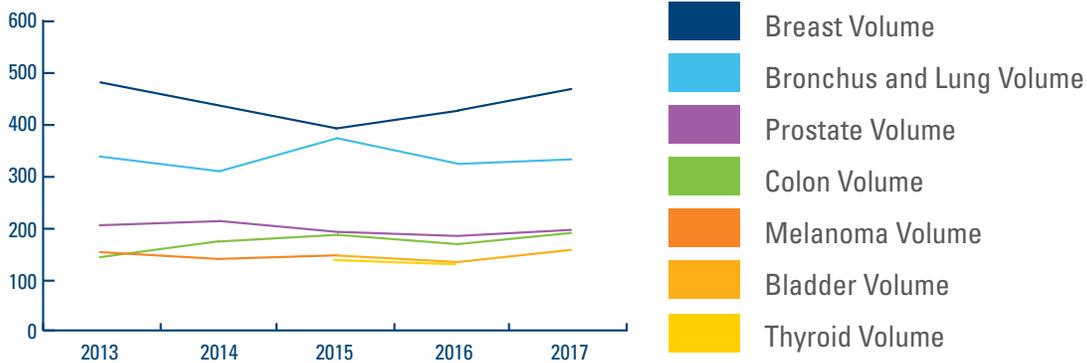
Cancer Cases by Calendar Year



Analytic Cases: SLUHN was involved in the diagnosis and/or treatment of the patient during their initial diagnosis of cancer.

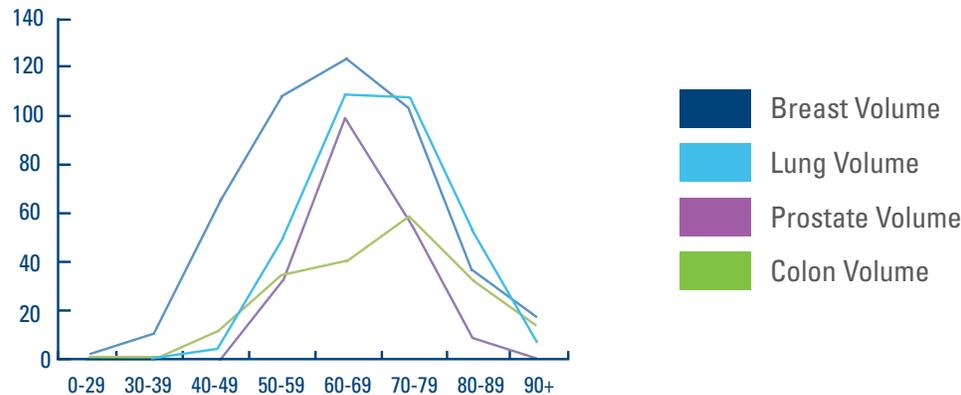
Non-Analytic Cases: Patients who were initially diagnosed and treated elsewhere and came to SLUHN for management of recurrent or persistent disease.

Top 7 Most Prevalent Sites of Cancers Treated (2017)



Only includes analytic cases

Age at Diagnosis of Cancer Cases by Site (2017)





2018 EVIDENCE-BASED STUDY

The Commission on Cancer Standard 4.6 Evidence-Based Study was conducted on the treatment of patients with all stages of pancreatic cancer diagnosed at SLUHN from January 1, 2016, through December 31, 2016.

Study Objective	Methods Used	Results	Conclusions
Compare Network standards of treatment for pancreatic cancer patients to National Comprehensive Cancer Network (NCCN) guidelines to ensure compliance with evidence-based guidelines.	<ul style="list-style-type: none"> • Network Pancreatic Adenocarcinoma cases for 2016 were selected using the Cancer Registry database. • Patients who went elsewhere for treatment or had carcinoids, neuroendocrine cancer, islet cell cancer and infiltrating duct cancer were excluded from this study. 	<p>A total of 32 cases were reviewed</p> <ul style="list-style-type: none"> • 22 cases received chemotherapy. • 6 patients declined chemotherapy treatment. • 2 patients were not indicated for chemotherapy due to patient age, comorbidities or performance status. • 2 patients died shortly after diagnosis. <p>Overall results: 32/32 patients or 100 percent were offered appropriate treatment.</p>	All patients were offered appropriate treatment according to NCCN guidelines. No further actions were required.

We are committed to providing our patients with exceptional care tailored to their individual needs.





CLINICAL PERFORMANCE DATA

The American College of Surgeons (ACoS) Commission on Cancer (CoC) provides tools to accredited facilities to help them improve the quality of their patient care. Two of those tools are the Rapid Quality Reporting System (RQRS) and the National Cancer Database (NCDB) Cancer Program Practice Profile Reports (CP³R).

RQRS provides real-time tracking of treatments recommended by evidence-based standards. RQRS helps facilities evaluate the timeliness of cancer treatment given at their facilities. Participation in RQRS is voluntary and SLUHN chooses to participate because of our commitment to quality patient care.

CP³R accountability and quality measures, endorsed by the National Quality Forum (NQF) are used by facilities to monitor the use of evidence-based guidelines.

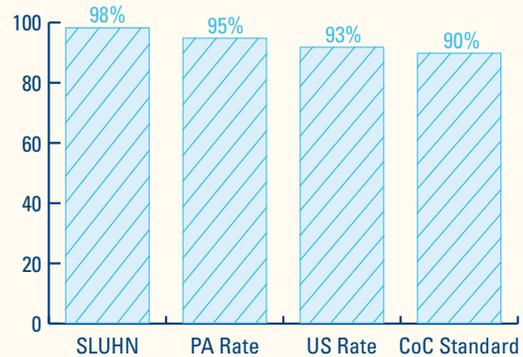
The tables below contain the most recent data obtained from the SLUHN multi-facility Cancer Registry Database along with RQRS and NCDB CP³R. Pennsylvania and U.S. comparative rates were obtained from the Pennsylvania Health Care Quality Alliance for February 2018. CoC Standards were obtained from CP³R.

Breast Cancer

Radiation therapy following breast-conserving surgery

Radiation therapy is administered within one year of diagnosis for women under age 70 receiving breast-conserving surgery (a lumpectomy instead of a mastectomy).

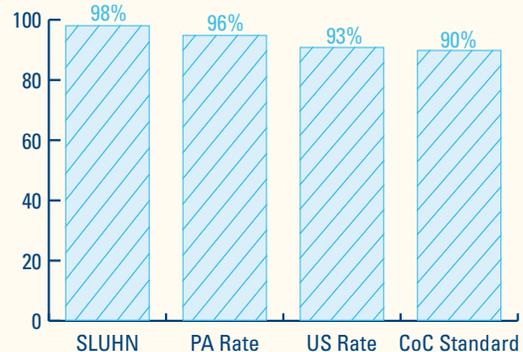
SLUHN's compliance with this standard is at 98.4 percent, which is above the CoC benchmark of 90 percent for this measure and above the Pennsylvania state rate of 95.1 percent and the U.S. rate of 93 percent.



Hormone modification therapy for breast cancer

Hormone modification therapy is considered or administered within one year of diagnosis for women with AJCC T1c, or stage IB - III hormone receptor positive breast cancer.

SLUHN's compliance with this standard is at 97.9 percent, which is above the CoC benchmark of 90 percent and above the Pennsylvania state rate of 95.6 percent and the U.S. rate of 92.6 percent.

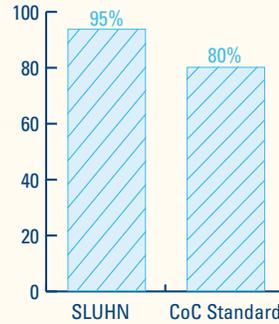




Needle biopsy to establish diagnosis for breast cancer

Image- or palpation-guided needle biopsy to the primary site is performed to establish the diagnosis of breast cancer.

SLUHN's compliance with this standard is 94.5 percent which is above the CoC benchmark of 80 percent. No Pennsylvania state rate or U.S. rate is available for this measure.



Radiation after mastectomy for positive lymph nodes

Radiation therapy is recommended or administered following any mastectomy within one year of diagnosis of breast cancer for women with ≥ 4 positive regional lymph nodes.

SLUHN's compliance with this standard is at 100 percent, which is above the CoC benchmark of 90 percent. No Pennsylvania state rate or U.S. rate is available for this measure.

