2015 CANCER CARE REPORT

Data collected in 2014 and reported in 2015

Lakeland Health

Marie Yeager Cancer Center

Table of Contents

Lakeland Health
Marie Yeager Cancer Center

Dear Colleague,

We are pleased to provide this update on recent accomplishments by Lakeland Health Oncology Services. When Lakeland initially launched with Epic, the Marie Yeager Cancer Center (MYCC) was utilizing a different electronic health record. However, in June, the Marie Yeager Cancer Center went live with Beacon, the Epic medical oncology application.

As the physician champion of Beacon, I continue to see the patient care benefits it provides. The capability to document in a single integrated patient chart is immensely helpful. The inpatient team can view past outpatient chemotherapy regimens or have an opportunity to review physician and navigator notes. In addition, Beacon has enhanced the efficiency of the clinic workflow and the safety of our chemotherapy administration through the use of bar code technology.

Now, instead of patients having separate records in both electronic systems, we are able to update a patient's chart within a single system. Patients now have access to *My*Chart with the ability to access their appointments and request medication refills.

This Epic integration helps to improve communication between multiple clinicians and at the same time enhance patient safety by providing the ability to scan medications and blood prior to administration.

Going forward, a patient's primary care provider or specialist will be able to access communication taking place among the medical oncology team. Medical providers who send outpatients to the infusion clinics for treatment will also be able to view the patients' infusion records after their visit.

We are excited to announce the addition of **Karen Powers, MD**, plastic surgery, to the medical staff of Lakeland Health. Dr. Powers, in partnership with Dr. Logan, is seeing patients at Stonegate Plastic Surgery, a Lakeland Health Affiliate, in St. Joseph. Prior to joining our team, Dr. Powers worked as an Assistant Professor, Division of Plastic Surgery, at the University of Texas Medical Branch located in Galveston, Texas. Prior to teaching, she earned her medical degree at the University of Michigan Medical School in Ann Arbor and completed her plastic surgery residency at the Medical College of Virginia in Richmond. She has also completed a Breast Reconstruction Fellowship at the University of Utah in Salt Lake City.

Karen Powers, MD

The addition of Stonegate Plastic Surgery to Lakeland will provide oncology patients greater access to local reconstructive services. Dr. Powers participates in Lakeland's weekly multidisciplinary breast cancer conferences and works with the team to develop individualized reconstructive plans of care. The practice includes a fully-accredited surgical facility on site, which enhances safety, efficiency, and privacy for patients.

We hope you find the information in this report helpful in understanding our community's cancer needs. We remain as dedicated as ever to provide a full spectrum of oncology services to achieve exemplary outcomes for our patients with cancer.

Sincerely,

E. Paloyan M.D.

Edmund Paloyan, MD
Medical Director of Oncology Services
Lakeland Health

American Cancer Society Road to Recovery Program

Cancer patients often miss or delay treatment because they do not have access to reliable transportation. Through the American Cancer Society's Road to Recovery Program, Berrien County residents can now help these cancer patients by giving them a life-saving ride.

The American Cancer Society, in partnership with Lakeland Health, has recruited volunteers for this program, which provides free transportation to those battling cancer.

The nationwide program ensures cancer patients get to and from their cancer treatment, but because of a lack of reliable transportation, a number of patients in Berrien County miss or delay cancer treatments each year.

Hazel is one of those patients that relies on Road to Recovery to receive her lifesaving treatment. "I have to go to the hospital up to three times each week and am not able to drive myself," she said.

"I'm so thankful for this amazing program and these volunteers that are willing to take time from their day to make sure I get to my cancer treatment. Without them, I don't know where I'd be today."

"This year, more than 1,000 Berrien County residents will be diagnosed with cancer. They will find themselves needing chemotherapy, radiation, and other medical care," said Ann Moenke, hospital systems account representative for the American Cancer Society. "We want to do everything we can to ensure these individuals, who are already going through so much, are able to get the treatment they desperately need. To do that, we continuously seek volunteers in and around Berrien County willing to drive patients to their appointments."

Brenda Clay, MSW

Brenda Clay, MSW, assists the Berrien County Road to Recovery Volunteer Coordinator in scheduling transportation for local residents.

To learn how you can become a Road to Recovery volunteer or how to utilize this transportation service during treatment, call (800) 227-2345

Cancer Liaison Program

General surgeon, **James Clancy, MD**, is dedicated to improving the quality of care delivered to cancer patients. Dr. Clancy has recently been reappointed as Lakeland's Cancer Liaison Physician (CLP).

James Clancy, MD

Dr. Clancy is part of a network of 1,500 CLPs across the county who voluntarily give their time and talent to manage clinically related cancer activities within their hospitals and surrounding communities.

Dr. Clancy serves as the liaison between Lakeland's cancer program, the Commission on Cancer, and the American Cancer Society. His responsibilities in this role include collaborating with the cancer registrars to ensure the accuracy of the cancer program's data and leading efforts to improve the quality of cancer care at Lakeland.

Psychosocial Oncology Services at Marie Yeager Cancer Center

The Psychosocial Oncology Program has an experienced clinical social worker and clinical psychologist who understand the stresses of a cancer diagnosis and have the skills necessary to help individuals cope and maintain the best possible quality of life during this time.

Emotional Support:

- Coping skills training and stress management
- Instruction in relaxation skills and meditation techniques
- Behavioral coaching in self-care strategies to manage illness and treatment side effects
- Non-pharmacological strategies for the management of pain
- Marital/family therapy
- Crisis intervention
- Bereavement counseling
- Support groups

Social Support:

- Financial, insurance and employment assistance
- Medicare, Medicaid and disability help
- Access to community resources
- Decision-making and care planning
- Support groups

This program helps with navigating the cancer experience from the time of diagnosis, through treatment and recovery, to the ultimate return to usual roles and life style.

For more information on Psychosocial Oncology Services available at Marie Yeager Cancer Center, visit **www.lakelandhealth.org** or call (269) 428-4411

Jamie Birris, PsyD
Clinical Psychologist

Shanin Thomas, LMSW
Licensed Master Social Worker

Navigating Financial Toxicity

The Marie Yeager Cancer Center screens for financial distress among patients and offers individualized financial planning services to reduce the negative impact of these changes.

Having cancer caused a particular patient to make the difficult decision to stop working. Stressed from the physical inability to work, he worried about paying his bills and keeping the insurance coverage needed for treatment. He scored high on his distress screening and was referred to the financial navigator for help.

During his initial consult meeting it was discovered that the patient was eligible for Social Security disability income and an application was submitted on his behalf. While these benefits were pending, the financial navigator was able to transition the patient over to Medicaid.

The patient was approved for Social Security disability payments and once again had a stable income. As a far too common consequence, the new income exceeded the amount allowed to remain eligible for Medicaid. For the second time since being diagnosed with cancer, the patient lost insurance coverage.

The patient now knew he could reach out to the financial navigator for help. The financial navigator, after assessing that the patient was eligible for an Affordable Care Act subsidy, helped the patient re-obtain health insurance. To help reduce the cost of care, the patient was enrolled into an oncology related assistance program that pays specific out of pocket costs for some cancer treatments.

After two years on Social Security disability, more change remains on the horizon for this patient who will lose his current insurance coverage by becoming eligible for Medicare. At this time decisions will need to be made to optimize his Medicare coverage and the financial navigator at the Marie Yeager Cancer Center will continue to be there for him to help keep his care plan on track.

Statistical Summary and Review of Registry Data 2014

In 2014, 954 cases were added to the Lakeland Health Cancer Registry. Of these cases, 856 were analytic cases, which means that they were diagnosed and received first course treatment at Lakeland. The number of male patients was 467 (49%), while the number of female patients was 487 (51%.)

Patients diagnosed at age at 60 years or older accounted for 66.4% of cases, 2.9% were younger than 29 years and the remainder ages 30 through 59 accounted for 30.7%. The mean age of cancer patients accessioned in 2014 was 64.

Non-Analytic Cases
Patients who received subsequent treatment at Lakeland Health after receiving first course treatment at another facility.

Figure 1a
2014 Ratio of Male to Female Patients

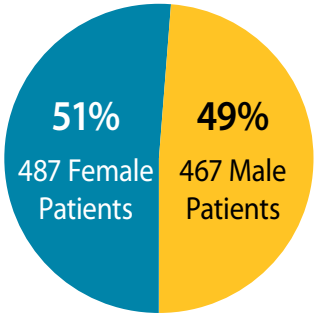


Figure 1b
2014 Age Distribution

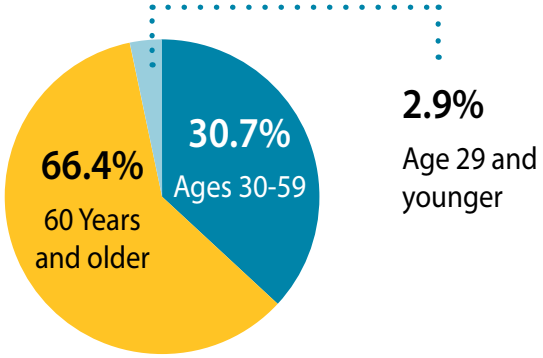


Figure 2
Percent Distribution of Lakeland Hospitals' 2014 Cancer Cases by Age Decade

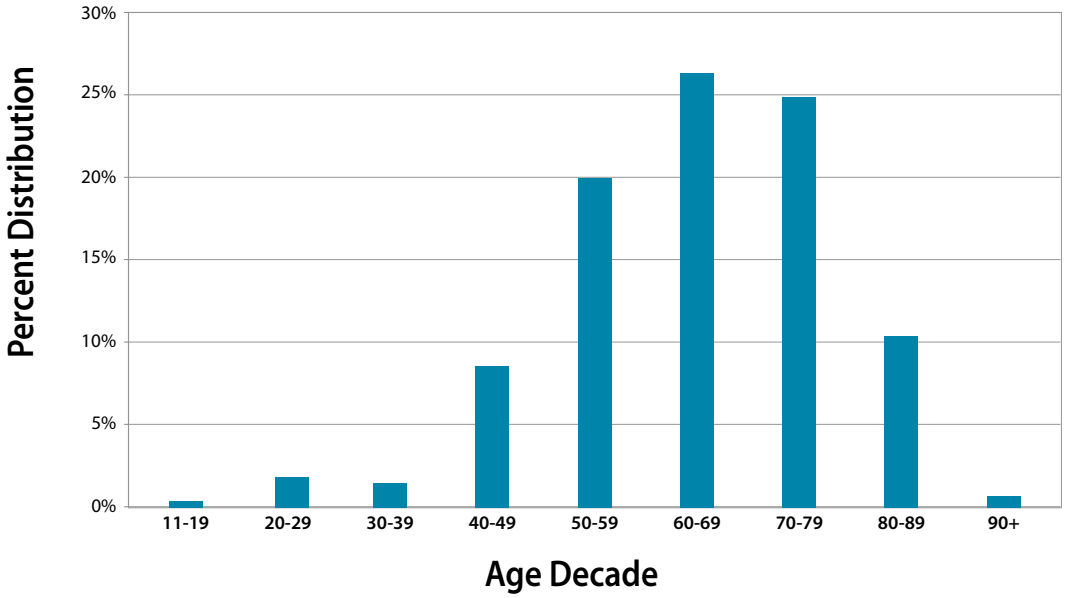


Table 1
Site Distribution by Stage for the Four Most Common Cancer Sites at Lakeland Hospitals*

	Cases	Stage 0	Stage I	Stage II	Stage III	Stage IV	Not Staged
Female Breast	155	32	59	40	17	5	2
Prostate	145	0	35	77	13	18	2
Lung	130	0	27	13	38	50	1
Colorectal	84	9	16	20	17	20	2

Excludes cases ineligible for staging.

Table 2
Comparison of Four Most Common Cancer Sites, Lakeland Hospitals, State of Michigan, and United States

Lakeland Hospitals				Michigan		United States	
Site	Rank	Cases	% of Total	Rank	% of Total	Rank	% of Total
Female Breast	1	155	16.24%	3	13.07%	2	13.96%
Prostate	2	145	15.20%	1	14.91%	1	13.98%
Lung	3	130	13.63%	2	13.80%	3	13.50%
Colorectal	4	84	8.81%	4	7.80%	4	8.20%

American Cancer Society. Cancer Facts & Figures 2014. Atlanta: American Cancer Society; 2014, pg 4-5.

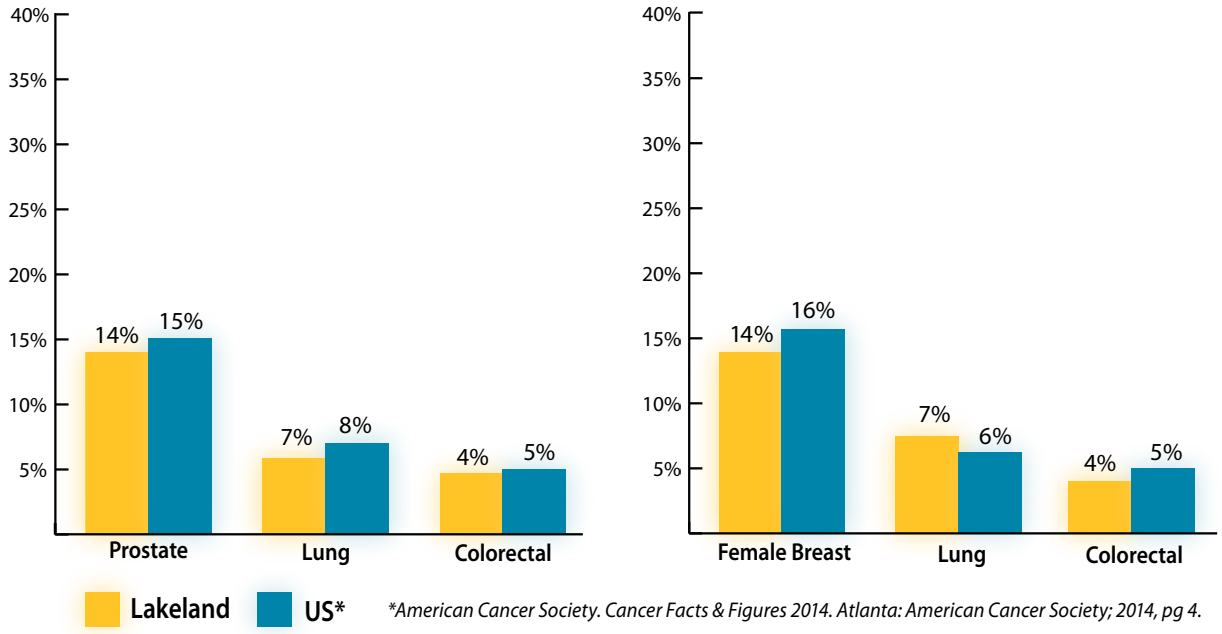
Table 3
Comparison of Percent Distribution of Lakeland Hospitals' 2014 Cancer Cases and United States Data by Gender and Lakeland's Four Most Common Cancer Sites

Male Cancer Cases: 467			Female Cancer Cases: 487	
Site	United States*	Lakeland	United States*	Lakeland
Female Breast	NA	NA	13.97%	15.83%
Prostate	13.99%	15.20%	NA	NA
Lung	6.96%	7.23%	6.50%	6.39%
Colorectal	4.31%	4.72%	3.90%	4.10%

**American Cancer Society. Cancer Facts & Figures 2014. Atlanta: American Cancer Society; 2014, pg 4.*

Figure 3

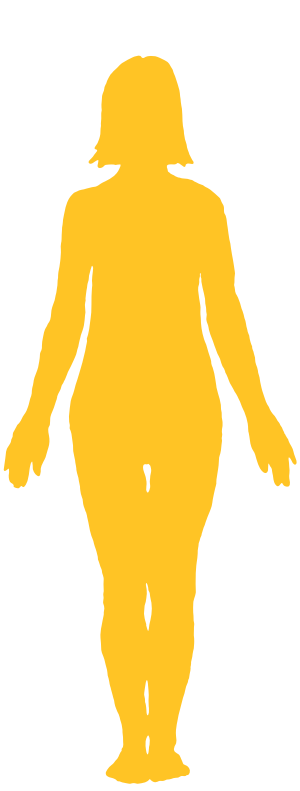
Comparison of Percent Distribution of Lakeland Hospitals' 2014 Cancer Cases and United States Data by Gender and Lakeland's Four Most Common Cancer Sites



*American Cancer Society. Cancer Facts & Figures 2014. Atlanta: American Cancer Society; 2014, pg 4.

Figure 4

Comparison of Percent Distribution of Lakeland Hospitals' 2014 Cancer Cases by Gender



Thyroid - 10 (2%)

Lung & Bronchus - 61 (13%)

Breast - 151 (31%)

Kidney & Renal Pelvis - 16 (3%)

Ovary - 8 (2%)

Uterine Corpus - 30 (6%)

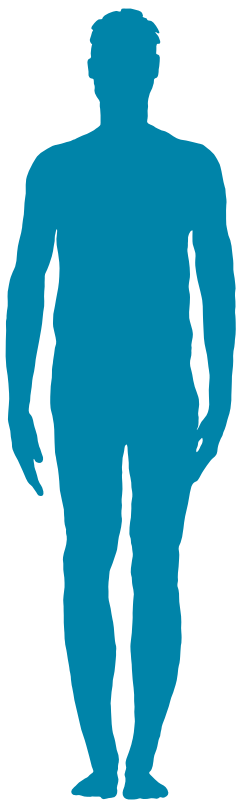
Colon & Rectum - 39 (8%)

Non-Hodgkin Lymphoma - 15 (3%)

Melanoma of the Skin - 14 (3%)

Leukemia - 7 (1%)

All Other Sites - 136 (28%)



Oral Cavity & Pharynx - 21 (4%)

Lung & Bronchus - 69 (15%)

Pancreas - 8 (2%)

Kidney & Renal Pelvis - 22 (5%)

Urinary Bladder - 26 (6%)

Colon & Rectum - 45 (10%)

Prostate - 145 (31%)

Non-Hodgkin Lymphoma - 18 (4%)

Melanoma of the Skin - 12 (3%)

Leukemia - 10 (2%)

All Other Sites - 91 (19%)

Figure 5a
Distribution of Lakeland Cancer Cases by County

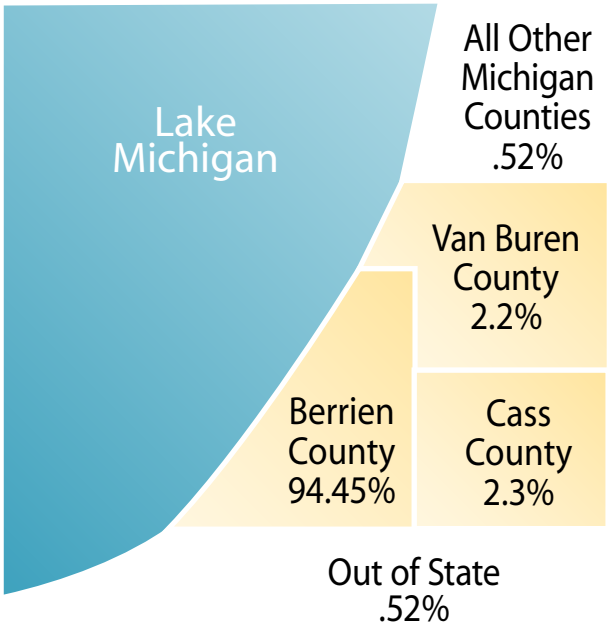


Figure 5b
Distribution of Lakeland Cancer Cases by Cities in Berrien County

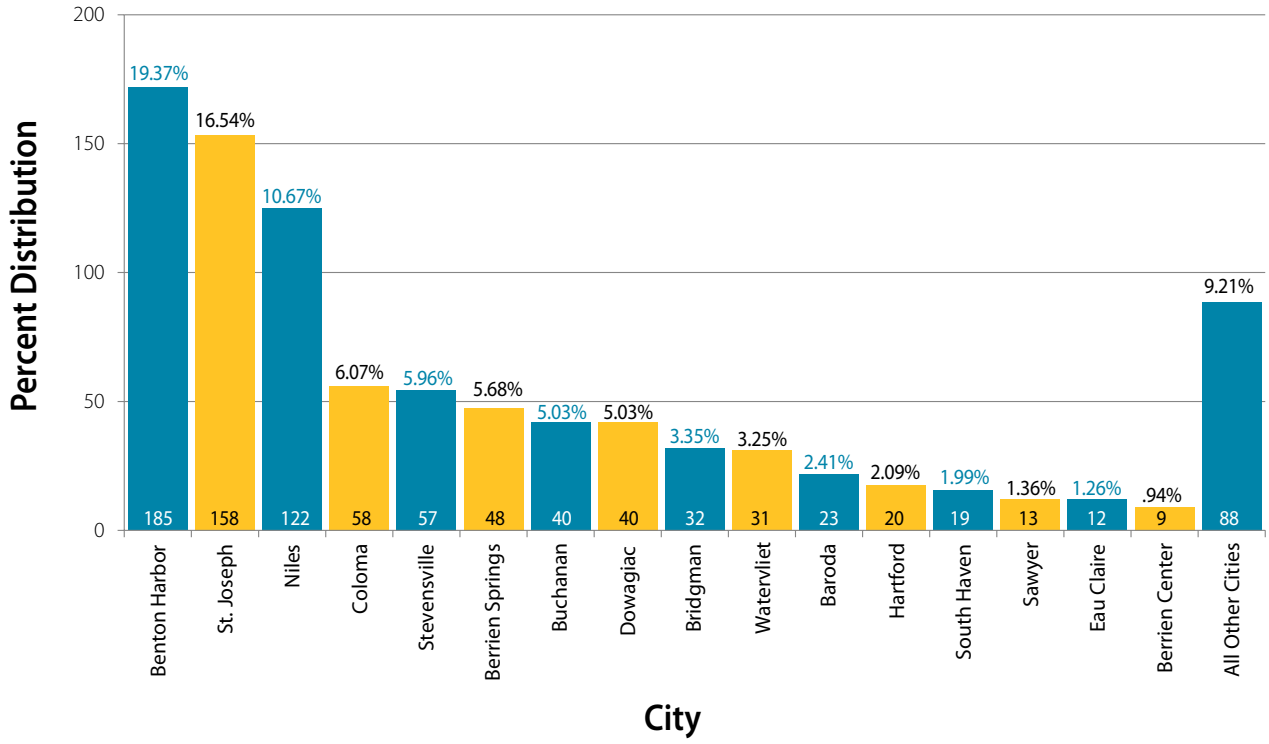
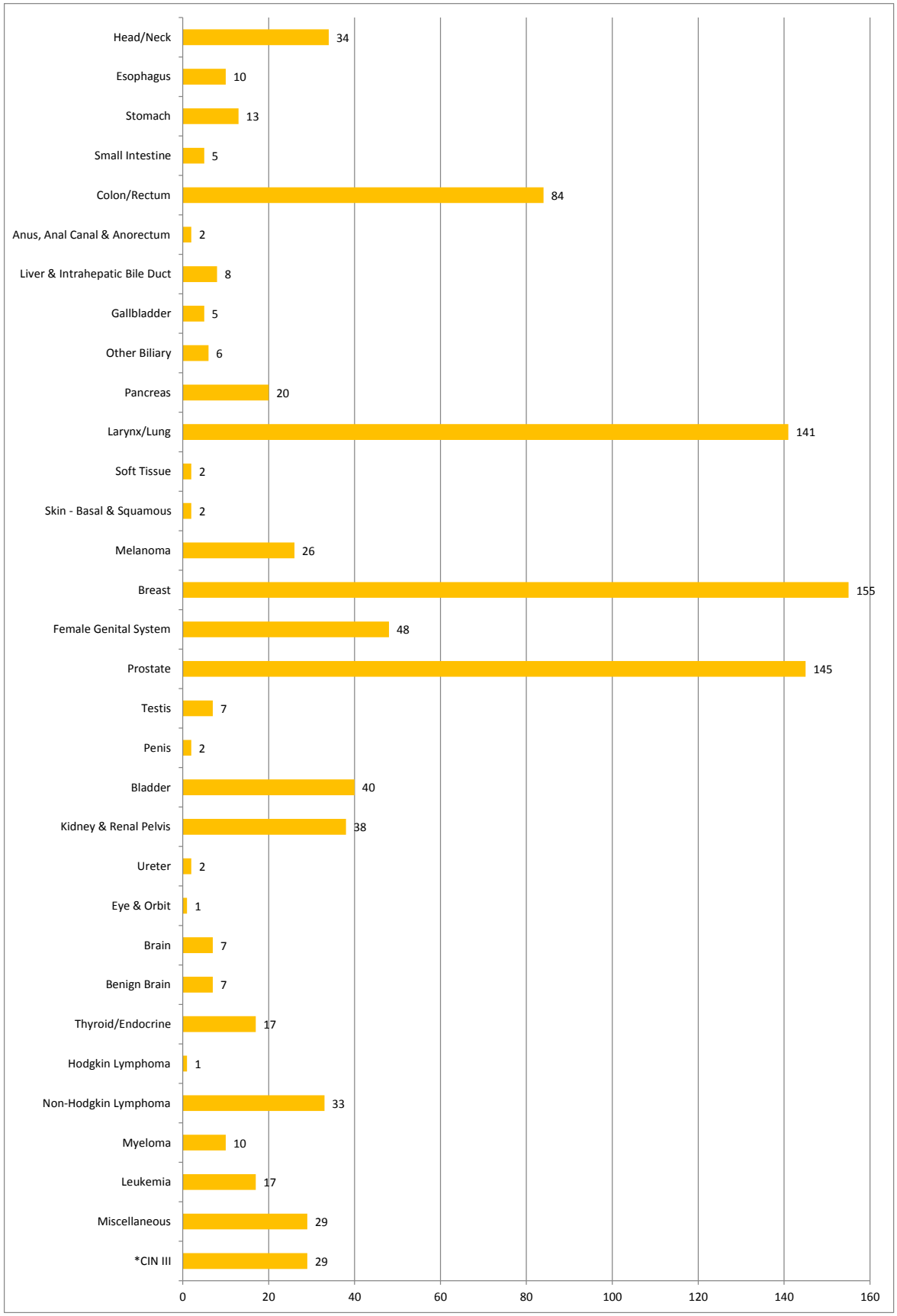


Figure 6

Distribution of Total Cancer Cases by Primary Site



**CIN III (non-invasive cervical severe dysplasia) is accessioned by agreement, but for the 2014 the collection of this data was mandated by the state of Michigan*

Table 4
Summary: By Body System and Gender

Primary Site	Total	Total %	Male	Male %	Female	Female %
Oral Cavity & Pharynx	**34**	**3.6%**	**21**	**4.5%**	**13**	**2.7%**
Lip	1	0.1%	1	0.2%	0	0.0%
Tongue	17	1.8%	9	1.9%	8	1.6%
Salivary Glands	3	0.3%	3	0.6%	0	0.0%
Floor of Mouth	2	0.2%	1	0.2%	1	0.2%
Gum & Other Mouth	5	0.5%	2	0.4%	3	0.6%
Nasopharynx	1	0.1%	0	0.0%	1	0.2%
Tonsil	2	0.2%	2	0.4%	0	0.0%
Oropharynx	2	0.2%	2	0.4%	0	0.0%
Hypopharynx	1	0.1%	1	0.2%	0	0.0%
Digestive System	**153**	**16.0%**	**83**	**17.8%**	**70**	**14.4%**
Esophagus	10	1.0%	8	1.7%	2	0.4%
Stomach	13	1.4%	8	1.7%	5	1.0%
Small Intestine	5	0.5%	2	0.4%	3	0.6%
Colon (Excluding Rectum)	63	6.6%	30	6.4%	33	6.8%
Cecum	18		6		12	
Appendix	1		0		1	
Ascending Colon	10		5		5	
Hepatic Flexure	4		3		1	
Transverse Colon	6		2		4	
Splenic Flexure	1		1		0	
Descending Colon	8		3		5	
Sigmoid Colon	9		7		2	
Large Intestine, NOS	6		3		3	
Rectum & Rectosigmoid	21	2.2%	15	3.2%	6	1.2%
Anus, Anal Canal & Anorectum	2	0.2%	0	0.0%	2	0.4%
Liver & Intrahepatic Bile Duct	8	0.8%	5	1.1%	3	0.6%
Liver	5		74		1	
Intrahepatic Bile Duct	3		1		2	
Gallbladder	5	0.5%	1	0.2%	4	0.8%
Other Biliary	6	0.6%	8	1.7%	0	0.0%
Pancreas	20	2.1%	6	1.3%	12	2.5%
Respiratory System	143	15.0%	80	17.1%	63	12.9%
Nose, Nasal Cavity & Middle Ear	2	0.2%	2	0.4%	0	0.0%
Larynx	11	1.2%	9	1.9%	2	0.4%
Lung & Bronchus	130	13.6%	69	14.8%	61	12.5%
Bones & Joints	**2**	**0.2%**	**2**	**0.4%**	**0**	**0.0%**
Soft Tissue	**2**	**0.2%**	**1**	**0.2%**	**1**	**0.2%**
Skin Excluding Basal & Squamous	**27**	**2.8%**	**12**	**2.6%**	**15**	**3.1%**
Melanoma -- Skin	26	2.7%	12	2.6%	14	2.9%
Other Non-Epithelial Skin	1	0.1%	0	0.0%	1	0.2%

(continued on page 10)

Table 4 (continued)
Summary: By Body System and Gender

Primary Site	Total	%	Male	Male %	Female	Female %
Basal & Squamous Skin	**2**	**0.2%**	**1**	**0.2%**	**1**	**0.2%**
Breast	**155**	**16.2%**	**4**	**0.9%**	**151**	**31.0%**
Female Genital System	**77**	**8.1%**	**0**	**0.0%**	**77**	**15.8%**
Cervix Uteri	32	3.4%	0	0.0%	32	6.6%
Corpus & Uterus, NOS	30	3.1%	0	0.0%	30	6.2%
Ovary	8	0.8%	0	0.0%	8	1.6%
Vagina	1	0.1%	0	0.0%	1	0.2%
Vulva	6	0.6%	0	0.0%	6	1.2%
Male Genital System	**154**	**16.1%**	**154**	**33.0%**	**0**	**0.0%**
Prostate	145	15.2%	145	31.0%	0	0.0%
Testis	7	0.7%	7	1.5%	0	0.0%
Penis	2	0.2%	2	0.4%	0	0.0%
Urinary System	**80**	**8.4%**	**50**	**10.7%**	**30**	**6.2%**
Urinary Bladder	40	4.2%	26	5.6%	14	2.9%
Kidney & Renal Pelvis	38	4.0%	22	4.7%	16	3.3%
Ureter	2	0.2%	2	0.4%	0	0.0%
Eye & Orbit	**1**	**0.1%**	**1**	**0.2%**	**0**	**0.0%**
Eye & Orbit	1	0.1%	1	0.2%	0	0.0%
Brain & Other Nervous System	**14**	**1.5%**	**5**	**1.1%**	**9**	**1.8%**
Brain	7	0.7%	4	0.9%	3	0.6%
Cranial Nerves Other Nervous System	7	0.7%	1	0.2%	6	1.2%
Endocrine System	**17**	**1.8%**	**6**	**1.3%**	**11**	**2.3%**
Thyroid	15	1.6%	5	1.1%	10	2.1%
Other Endocrime including Thymus	2	0.2%	1	0.2%	1	0.2%
Lymphoma	**34**	**3.6%**	**18**	**3.9%**	**16**	**3.3%**
Hodgkin Lymphoma	1	0.1%	0	0.0%	1	0.2%
Non Lymphoma	33	3.5%	18	3.9%	15	3.1%
Myeloma	**10**	**1.0%**	**1**	**0.2%**	**9**	**1.8%**
Myeloma	10	1.0%	1	0.2%	9	1.8%
Leukemia	**17**	**1.8%**	**10**	**2.1%**	**7**	**1.4%**
Lymphocytic Leukemia	10	1.0%	8	1.7%	2	0.4%
Acute Lymphocytic Leukemia	1		1		0	
Chronic Lymphocytic Leukemia	7		5		2	
Other Lymphocytic Leukemia	2		2		0	
Myeloid & Monocytic Leukemia	5	0.5%	2	0.4%	3	0.6%
Acute Myeloid Leukemia	2		1		1	
Chronic Myeloid Leukemia	3		1		2	
Other Leukemia	2	0.2%	0	0.0%	2	0.4%
Mesothelioma	**2**	**0.2%**	**2**	**0.4%**	**0**	**0.0%**
Kaposi Sarcoma	**1**	**0.1%**	**1**	**0.2%**	**0**	**0.0%**
Miscellaneous	**29**	**3.0%**	**15**	**3.2%**	**14**	**2.9%**
Total	**954**		**467**		**487**	

Study of Quality Esophageal Carcinoma

Esophageal Carcinoma Lakeland Medical Center, St. Joseph and Lakeland Hospital, Niles

IDENTIFIED PROBLEM

In 2014, Lakeland Health had a fair number of patients with esophageal carcinoma who were offered surgical therapy. A study of quality was conducted to look at pre-treatment staging to determine if Lakeland could enhance the ability to better identify esophageal cancer surgical candidate selection. In addition, a study of whether or not patients with esophageal squamous cell carcinoma tested positive for Human Papillomavirus (HPV) was also conducted at the request of Dr. Gerald Kozuh.

STUDY CRITERIA

Patients diagnosed with esophageal carcinoma from January 1, 2010 to July 15, 2015 were compared with national benchmarks provided by the National Cancer Database (NCDB).

EPIDEMIOLOGY

The National Cancer Database has reported that there will be an estimated 16, 980 patients diagnosed with esophageal carcinoma in 2015. An estimated 15, 590 patients are expected to die from this cancer.

Esophageal cancer has two main subtypes – esophageal adenocarcinoma and esophageal squamous cell carcinoma.[2] Esophageal adenocarcinoma is currently the predominant type of esophageal cancer in North American and Europe, with numbers increasing significantly over the past 30 years. This subtype of esophageal cancer is three to four times more common in males than females. The most common site for esophageal adenocarcinoma is the distal portion of the esophagus.

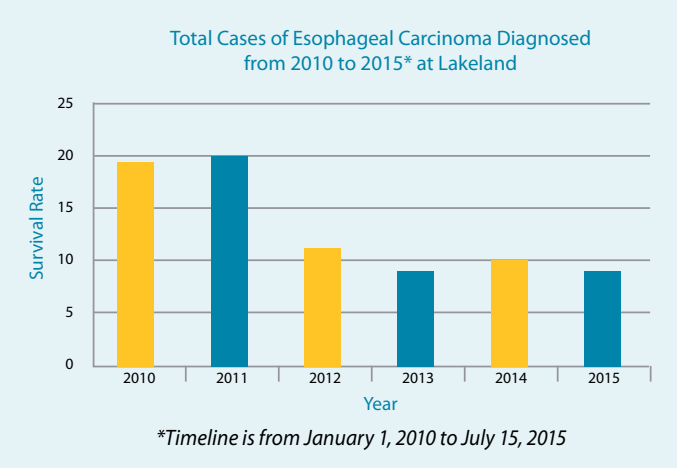
Esophageal squamous cell carcinoma is currently the predominant type of esophageal cancer in Asia, Africa, South America, and African Americans in North America, accounting for 90% of all esophageal cancer worldwide despite numbers decreasing over the past 30 years. The sex distribution is about equal between men and women, with the most common site being the proximal and middle esophagus. Both subtypes are rare in young people and tend to occur in patients in their 70s and 80s.

From January 1, 2010 to July 15, 2015, Lakeland has diagnosed esophageal carcinoma in 63 Caucasian patients, 14 African American patients, and one Asian Indian patient for a total of 78 cases. Fifty-five of these patients were male, while 23 were female. Of the 78 cases, 50 of them were adenocarcinoma, 27 were squamous cell carcinoma, and one case was small cell carcinoma.

RISK FACTORS

Barrett's esophagus is the recognized precursor lesion for esophageal adenocarcinoma, with gastroesophageal reflux disease (GERD) and obesity being the main two risk factors. Patients in which *H. pylori* infection is prevalent have a reduced risk.[1]

Esophageal squamous dysplasia is the precursor for esophageal squamous cell carcinoma, with alcohol and tobacco use being the main two risk factors. A person's risk for esophageal squamous cell carcinoma increases three-fold, 10-fold, and 30-fold with mild, moderate, and severe dysplasia, respectively. HPV may also increase the risk of esophageal squamous cell carcinoma, but much of the data available is inconclusive.[1]



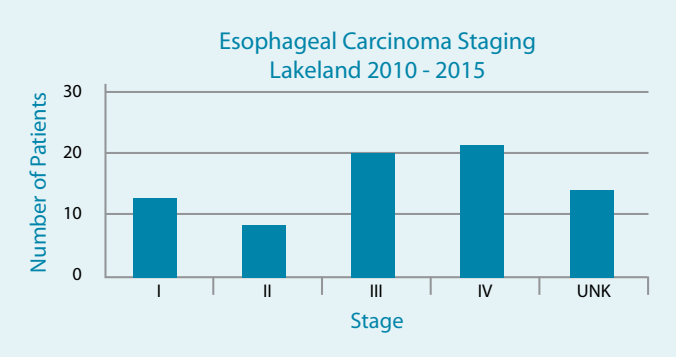
**Timeline is from January 1, 2010 to July 15, 2015*

Study of Quality - Continued

Esophageal Carcinoma

SCREENING/SURVEILLANCE

Although Barrett's esophagus is considered to be the precursor of esophageal adenocarcinoma, 80 to 90% of cases of esophageal adenocarcinoma are diagnosed in patients without know Barrett's.[2] Endoscopic screening with prolonged GERD symptoms results in the detection of Barrett's esophagus in 6 to 12% of patients. Dysplasia within Barrett's esophagus lesions results in a higher risk for esophageal carcinoma. Endoscopic screening is recommended every three years for patients with known non-dysplastic Barrett's. Patients with detected adenocarcinoma during endoscopic screening are commonly early stage, receive curative treatment, and survive longer versus symptomatic patients.[2]



STAGING AND MANAGEMENT

The prognosis and treatment for patients with esophageal carcinoma depends on accurate and reliable assessment of the depth of invasion and status with respect to lymph node involvement.[2] Endoscopic ultrasonography has increased the accuracy of staging these tumors by 70 to 80%. The addition of fine needle aspiration, has further improve the sensitivity of the lymph node status. Positron emission tomography (PET) scanning can identify occult distant metastases, which are most common in the supraclavicular and retroperitoneal lymph nodes, and thus leads to the establishment of a more advanced stage in 10 to 20% of cases.[2] Other staging methods includes endoscopy with or without mucosal resection and computer tomography (CT) scans of the chest and abdomen.

Over the past five years, 56% of patients diagnosed with esophageal carcinoma at Lakeland were already considered advanced tumors (stage III or IV) at diagnosis. An additional 19% of patients were listed as "unknown", which commonly resulted from no depth of invasion being reported with imaging or in the diagnostic biopsy report. The remaining 25% of patients were diagnosed with early stage carcinoma (stage I or II). The trend of this data is fairly comparable with that across the United States, with 36 % of all esophageal carcinomas being diagnosed at stage 0, I or II, 52% at stage III or IV, and 12% as "unknown."

Table 2. Comparison of the Esophageal Carcinoma Risk Factors between Patients Diagnosed at Lakeland by Histology Site.

	Adenocarcinoma	Squamous Cell Carcinoma	Small Cell Carcinoma
Barrett's Esophagus	10	0	0
Esophageal Squamous Dysplasia*	6	2	0
GERD	12	2	0
Obesity	16	4	0
Current Smoker	20	12	1
Previous Smoker	16	10	0
Non-smoker	17	2	0
Current Alcohol Use	24	18	0
Previous Alcohol Use	4	7	0
No History of Alcohol Use	25	4	1
HPV +**	-	-	-
Total Cases per Histology Site	**50**	**27**	**1**

** The six patients diagnosed with adenocarcinoma were diagnosed with esophageal squamous dysplasia at the same time as their cancer. Of the two patients with squamous cell carcinoma, only one patient was diagnosed with dysplasia on his diagnostic pathology report (the other was diagnosed prior to a cancer diagnosis).*

*** No indication of any HPV testing done on any of the esophageal carcinoma patients from 2010 to 2015.*

Of the 75 analytic esophageal carcinoma patients, 34 (45%) were treated with chemoradiation therapy. This trend seems to be due to the increased amount of patients who were diagnosed in more advanced stages of this disease. Four patients received surgical therapy, six received chemotherapy, and nine received radiation therapy. Seven patients received surgery, chemotherapy, and radiation therapy. The remaining 15 patients did not receive any first course treatment, other than a diagnostic tissue biopsy. Of the three non-analytic cases that were diagnosed at Lakeland, one patient went on to receive chemotherapy at another facility while the remaining two received surgery, chemotherapy, and radiation therapy. These trends tend to compare with those throughout the United States (as seen by the graph on the next page).

The average time it took for a patient to receive first course treatment after a diagnosis of esophageal carcinoma at Lakeland was 28-37 days.

Study of Quality - Continued

Esophageal Carcinoma

Tumor Type	Approach
Mucosal tumors (except stage 0 or I)*	
All tumors except T1b	Endoscopic mucosal resection (first choice) or esophagectomy with lymphadenectomy
T1b tumors	Esophagectomy with lymphadenectomy
Localized tumors (stage IIA or IIB)**	Esophagectomy preceded by neoadjuvant chemoradioation therapy (or neoadjuvant chemotherapy)
Advanced tumors (stage III or IV)	Endoscopic palliation with the use of self-expanding metal stents, with or without branchytherapy
Advanced or recurrent tumors	Two-drug or three-drug combination chemotherapy, commonly FOLFOX (infusional fluorouracil plus oxaliplatin) or XELOX (capecitabine plus oxaliplatin), or chemoradiation therapy

** Patients who are not healthy enough to undergo these procedures should be treated with definitive chemoradiotherapy.*

*** Patients who are not healthy enough or are unwilling to undergo these procedures should be treated with definitive chemoradiotherapy, especially if these have squamous cell carcinoma.*

PROGNOSIS

Currently, the overall five-year survival rate for patients with esophageal adenocarcinoma in the United States is approximately 17%, slightly higher than that of squamous cell carcinoma.[2] Surgical resection tends to result in progressive improvement in overall survival and marked improvement in progression-free survival. Last year, the NCDB reported that cases where regional metastases had already occurred, five-year survival decreased from 39% to 4%. It was also reported that 60-70% of patients with esophageal carcinoma have not been receiving guideline-concordant treatment, and that management of cases improved with discussion at a multidisciplinary tumor board.

CONCLUSION AND COMMENTS

A majority of the esophageal carcinoma cases diagnosed and treated at Lakeland were Stage III or Stage IV. Since five-year survival decreases from 39% to 4% after regional metastases have already occurred, it is important that we diagnose these cases during an earlier stage (i.e. Stage I and Stage II). A collaboration between the medical oncologists, generalists and gastrointestinal physicians will occur in order to implement a screening and awareness program for patients with Barrett's esophagus (the precursor of esophageal adenocarcinoma).

RESOURCES

1.) American Cancer Society. Cancer Facts and Figures 2015.

2.) Rusti A, El-Serag H. Esophageal Carcinoma. N Engl J Med 2014; 371: 2499-509.

3.) 2015 National Cancer Database. Commission on Cancer Benchmark Report. 3 Sept 2015.

4.) SEER State Fact Sheets: Esophageal Cancer. National Cancer Institute Surveillance, Epidemiology, and End Results Program. 10 July 2015. <http://seer.cancer.gov/statfacts/html/esoph.html>

Commission on Cancer

Treatment Guidelines Resource List:

1. American Cancer Society
   www.cancer.org
2. American Head and Neck Society
   www.headandneck.org
3. American Society of Clinical Oncology
   www.asco.org
4. Association of Community Cancer Centers
   www.assoc-cancer-ctrs.org
5. College of American Pathologist
   www.cap.org
6. The National Cancer Institute
   www.cancer.gov
7. The National Comprehensive Cancer Network
   www.nccn.org
8. Oncology Nursing Society
   www.ons.org
9. Society of Surgical Oncology
   www.surgonc.org

Reference: Medical Definitions

AJCC - TNM Staging System
T: Extent of the primary tumor.
N: Presence or absence of regional lymph node involvement.
M: Presence or absence of disease spread to distant sites (metastasis).

Analytic Case
Patients who are diagnosed and / or receive first course of treatment at Lakeland HealthCare during the current year.

Annual Report
Yearly publication describing the activities of an organization. A cancer program's annual report includes statistics on types of cancer diagnosed and treated at a healthcare facility.

Cancer Care Committee
An organized group of physicians and non-physicians that directs the long-range plans and general activities of the cancer program.

Cancer Program
All departments and services in a healthcare facility involved in diagnosis, treatment and rehabilitation of cancer patients.

Cancer Registry
Formerly called Tumor Registry, the department within the hospital designed to collect and analyze data on cancer patients, and to follow their medical progress for purposes of treatment evaluation.

Distant
Has spread to sites remote from site of origin, or is systemic in origin.

First Course Treatment
The initial cancer-directed treatment or series of treatments, usually initiated within four months of diagnosis.

Follow -Up
An organized system of long-term surveillance of patients.

Metastasis (plural metastases)
Any tumor spread to a part of the body away from the site of origin.

Non-Analytic Case
Patients who received subsequent treatment at Lakeland HealthCare for recurrent or persistent disease after receiving first course treatment at another facility.

Oncology
Medical term for the study of tumors and malignancies.

Protocol
A formalized treatment plan, detailing treatment dosage and schedule.

Regional
Has spread to adjacent tissue or lymph nodes.

SEER Summary Staging System
In situ: Non-invasive, confined to site of origin.
Local: Invasive and is confined to site of origin.

Service Area
The geographic region from which patients come to a healthcare facility.

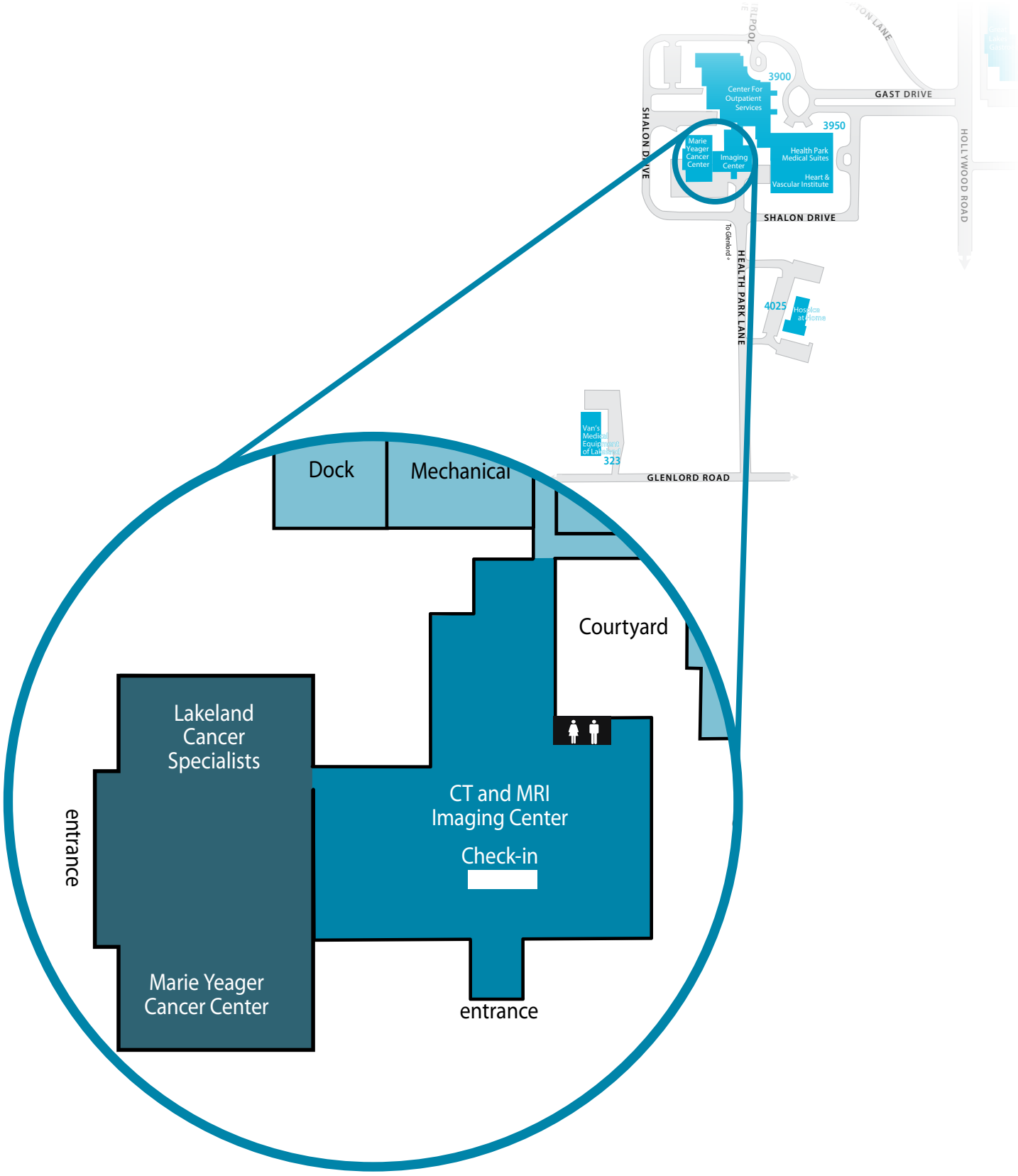
Stage
The extent to which the disease has spread.

How is Cancer Staged?

Staging is the process of describing the extent or spread of the disease from the site of origin.

The TNM staging system assesses tumors in three ways: extent of the primary tumor (T), absence or presence or regional lymph node involvement (N), and the absence or presence distant metastases (M). Once the T, N, and M are determined a stage of I, II, III, or IV is assigned with stage I being early stage and IV being advanced.

Lakeland Health
Marie Yeager Cancer Center and Health Park Map



Lakeland Health

Marie Yeager Cancer Center

wwww.lakelandhealth.org/cancer-care