



Marie Yeager  
Cancer Center

**2020**

**Cancer Care Report**

Data collected in 2019 and reported in 2020



# Table of Contents

Message from the oncology team.....	1
Biosimilars: Same treatment, smaller cost .....	2
New genetic oncology counselor .....	3
High risk cancer program .....	4
Statistical summary and review of registry data 2019.....	5
Figure 1a: 2019 ratio of male to female patients .....	5
Figure 1b: 2019 age distribution.....	5
Figure 2: Percent distribution of Lakeland hospitals' 2019 cancer cases by age decade .....	5
Table 1: Site distribution by stage for the four most common cancer sites at Lakeland hospitals.....	6
Table 2: Comparison of four most common cancer sites Lakeland hospitals, Michigan, and United States .....	6
Table 3: Comparison of percent distribution of Lakeland hospitals' 2019 cancer cases and United States data by gender and Lakeland's four most common cancer sites.....	6
Figure 3: Comparison of percent distributions of Spectrum Health Lakeland's three most common female and male cancer sites for 2019 and United States data* .....	7
Figure 4: Comparison of percent distribution of Lakeland hospitals' 2019 cancer cases by gender .....	7
Figure 5a: Distribution of Lakeland cancer cases by county .....	8
Figure 5b: Distribution of Lakeland cancer cases by city (Berrien, Cassopolis, Van Buren counties).....	8
Figure 6: Distribution of total cancer cases by primary site .....	9
Table 4: Summary: By body system and gender .....	10-11
Advancements in oncology .....	12
Study of quality: False positive rate for low dose lung CT.....	13-14
It takes a team.....	15
Oncology services contact and map .....	16

## Message from the oncology team

Spectrum Health Lakeland has always been committed to staying at the forefront of cancer care, and this year has been an exciting time for advancement. Oncology Services has continued to grow and enhance patient care with recent additions including a new high risk cancer program, expansion of services in Niles, the adoption of the latest options in prevention and treatment, and more.

Like the services we offer, our team has also undergone changes. We welcomed oncology genetic counselor **Samantha Witt Crosby** to the team as well as **Kathryn Vera, NP**. We said tearful goodbyes to **Janell Jones, NP**, retiring after many dedicated years with the team.

Something that remains unchanged at Lakeland is our continuation of pursuing accreditations and certifications. We are accredited with commendation by the Commission on Cancer (CoC) of the American College of Surgeons (ACoS) as a Community Hospital Comprehensive Cancer Program. The Radiation Oncology Department is accredited by the American College of Radiology (ACR). We are fully accredited by the National Accreditation Program for Breast Centers (NAPBC), a program administered by the American College of Surgeons.

In the field of oncology, things are always changing, but we look forward to what that means for our patients as we work to improve care and save lives. Read on to learn more about where we've been and where we're headed next, as we look forward to everything still to come.



## Biosimilars: Same treatment, smaller cost

At the Marie Yeager Cancer Center, patients receive infusion for cancer treatments such as chemotherapy while others receive general infusion for conditions like rheumatoid arthritis. Regardless of illness, one thing is true for many infusions: the medications are very expensive, sometimes costing thousands of dollars per treatment.

Since 2019, the implementation of biosimilars at Spectrum Health Lakeland is easing the financial burden, resulting in lower out-of-pocket charges for patients.

### What is a biosimilar?

A biosimilar is an infusion drug like the drug a patient would normally receive. It has similar molecular structure to the original “reference” drug. Although a biosimilar is not considered a generic, it is similar on a molecular level to the reference drug and has no clinical differences. Biosimilars are significantly lower in cost.

### Are biosimilars new?

Use of biosimilars began in Europe in the early 2000s. Several years later, health systems in the United States began to adopt them, after rigorous testing and approval by the FDA. Still, the work is considered innovative and not yet widely available at health systems in the U.S. Lakeland is one of a few health systems looking to approve more and more biosimilars.

The program began at Lakeland in the fall of 2019. Since that time, it is estimated that biosimilars have resulted in \$800,000 in cost savings for patients.



## Genetic oncology counselor joins Lakeland

Inspired by her many family members who work in health care, **Samantha Witt Crosby** always dreamed of working in medicine too. When she learned about genetic counseling as a teenager, she knew she had found her calling.

Samantha's dream is now a reality, after she joined Spectrum Health Lakeland in 2020 as a genetic oncology counselor. Her role includes meeting with individuals affected by cancer or who have a family history of cancer that may indicate higher risk of developing the disease. She discusses a patient's personal health, family health, and any clues about an inherited risk for cancer.



“I’m passionate about oncology genetics. Working with someone with increased risk and implementing screenings are our best tools for catching cancer very early.”

## High risk cancer program provides help and hope

A high risk cancer program has been established to care for community members with increased risk of developing certain types of cancer. Located within the Center for Outpatient Services in St. Joseph, the program works closely with patients to help them understand genetic risks, learn strategies for cancer prevention, and diagnose cancer at an earlier stage. Services support patients at high risk for breast cancer with a plan to expand to other types of cancer in the future.

In order to qualify for the program, patients must fit at least one of the following criteria:

- A family history of breast cancer diagnosed at or before 50 years of age and be aged 20 or older
- Multiple close relatives with a history of breast cancer
- A known gene mutation with associated increased breast cancer risks
- A history of breast biopsy proven atypical hyperplasia or lobular carcinoma in situ (LCIS)
- Chest wall radiation
- A family history of male breast cancer
- Ashkenazi Jewish ancestry

For more information, visit [spectrumhealthlakeland.org/highrisk](https://spectrumhealthlakeland.org/highrisk) or call **269.932.9337**

**More than 5,200 patients within our community are considered high risk for breast cancer. On average, 150 patients are diagnosed per year with the disease at Lakeland.**



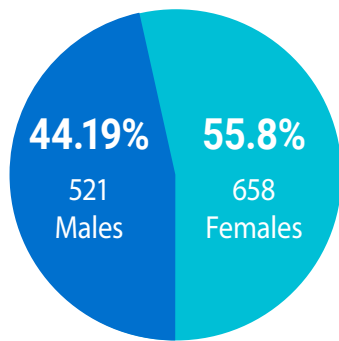
# Statistical summary and review of registry data 2019

In 2019, 1,179 cases were added to the Spectrum Health Lakeland Cancer Registry. Of these cases, 1,057 cases were considered analytic, which means that they received all or part of their first course treatment at Lakeland, or were diagnosed at Lakeland and received all first course treatment elsewhere. The number of male patients was **521 (44.19%)** and the number of female patients was **658 (55.81%)**.

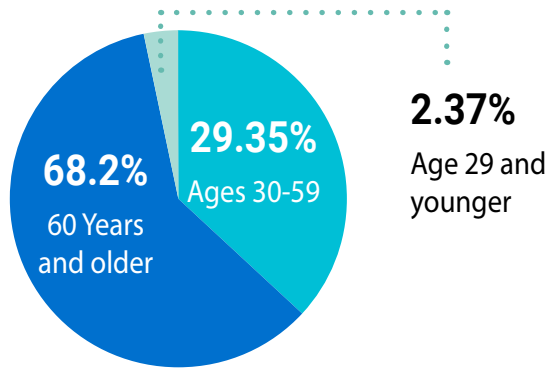
Patients diagnosed at age 60 years or older accounted for 68.28% of cases. Patients 30 through 59 years of age accounted for 29.35%, while 2.37% of cases were 29 years old or younger. The mean age of cancer patients in 2018 was 65.

**Non-analytic** cases are those that were diagnosed and received all first course treatment elsewhere, and came to Lakeland for subsequent treatment for either recurrence or persistence of their disease.

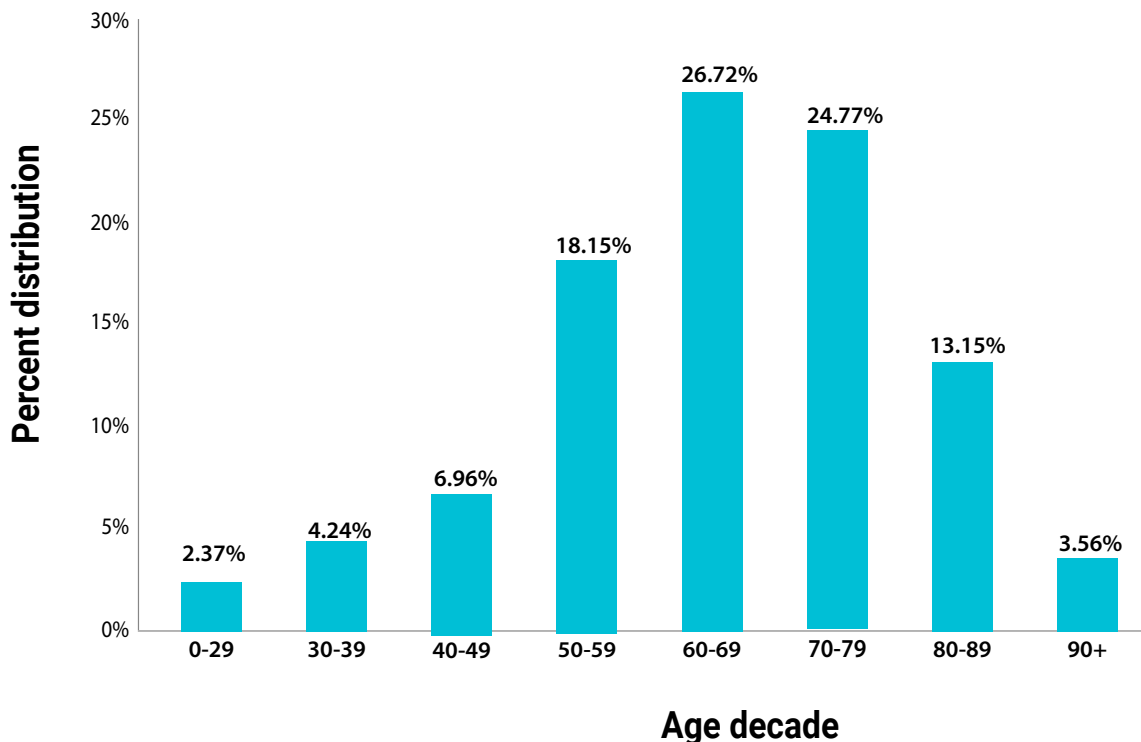
**Figure 1a**  
2019 ratio of male to female patients



**Figure 1b**  
2019 age distribution



**Figure 2**  
Percent distribution of Lakeland hospitals' 2019 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
Lung	160	0	39	12	24	75	10
Breast	150	19	80	29	9	7	6
Prostate	132	0	41	48	20	22	1
Colorectal	98	3	17	30	17	27	4
Melanoma	48	9	25	8	2	1	3

**Table 2**

Comparison of four most common cancer sites, Lakeland hospitals, state of Michigan, and United States

Site	Lakeland Hospitals			Michigan		United States	
	Rank	Cases	% of Total	Rank	% of Total	Rank	% of Total
Breast	2	150	12.7%	1	15.9%	1	15.2%
Lung	1	160	13.5%	2	13.8%	2	12.9%
Prostate	3	132	11.1%	4	7.8%	3	9.9%
Colon/Rectum	4	98	8.3%	3	8.6%	4	8.2%
Melanoma	5	48	4.0%	5	5.6%	5	5.4%

\*American Cancer Society. Cancer Facts &amp; Figures 2019. Atlanta: American Cancer Society; 2019, pg 4-5.

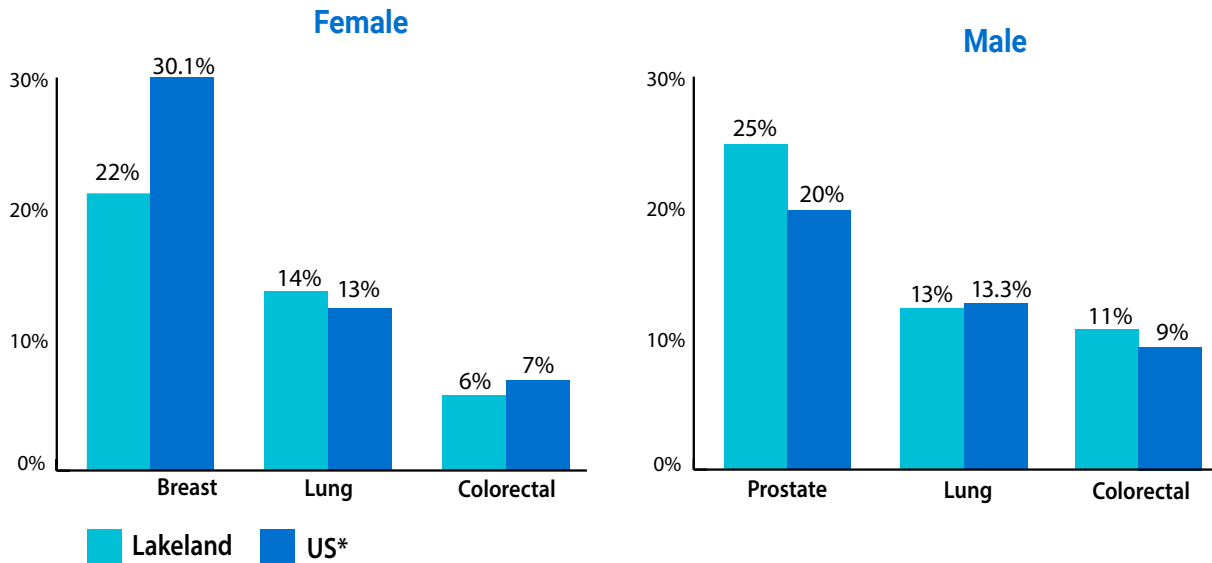
**Table 3**

Comparison of percent distribution of Lakeland hospitals' 2019 cancer cases and United States data by gender and Lakeland's five most common cancer sites

Site	Male Cancer Cases: 521		Female Cancer Cases: 658	
	United States*	Lakeland	United States*	Lakeland
Breast	NA	NA	30%	22%
Prostate	20%	25%	NA	NA
Lung	13.3%	13%	13%	14%
Colorectal	9%	11%	7%	6%
Melanoma	6.5%	4%	4.4%	3%

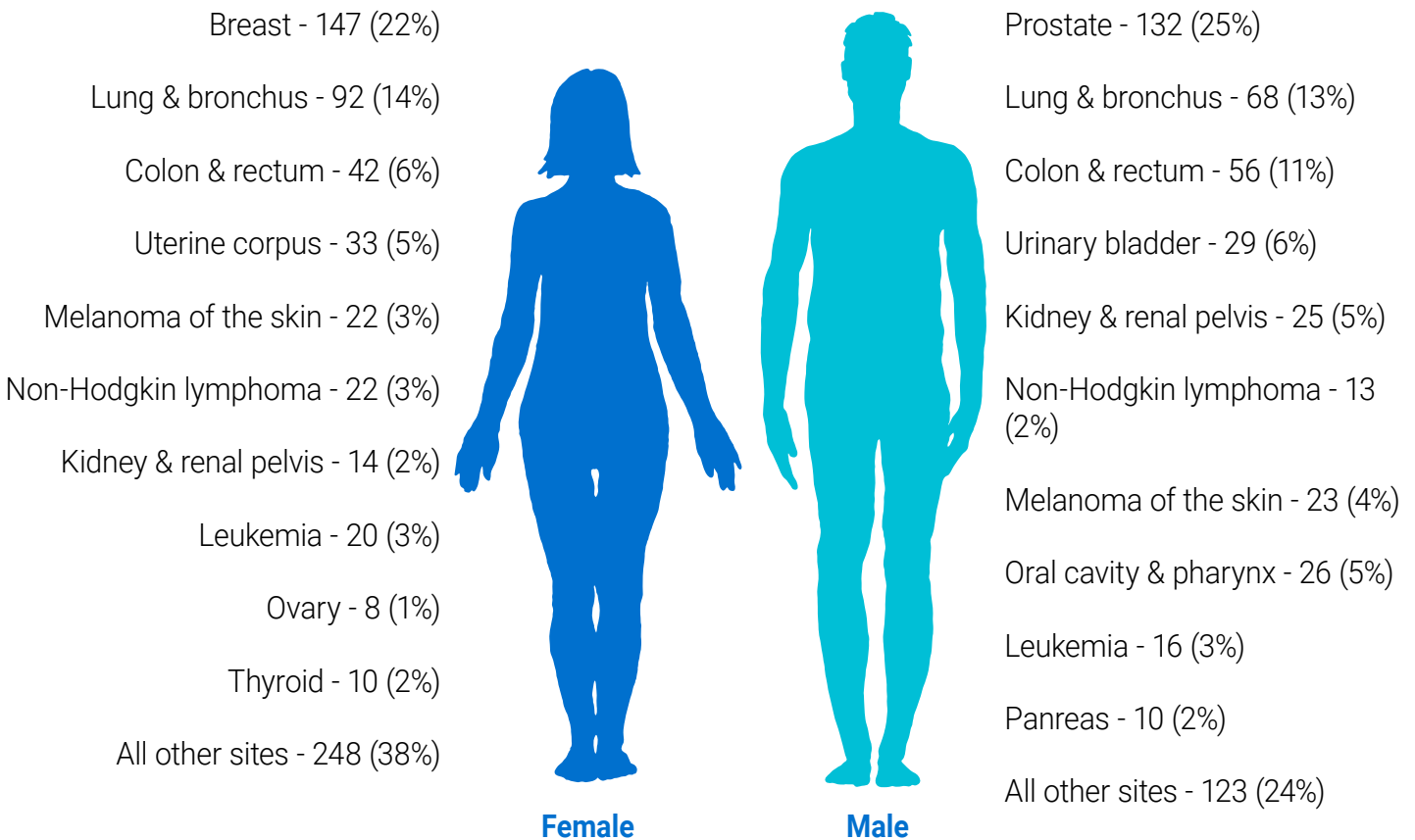
\*American Cancer Society. Cancer Facts &amp; Figures 2019. Atlanta: American Cancer Society; 2019 pg 4.

**Figure 3**  
Comparison of percent distributions of Spectrum Health Lakeland’s three most common female and male cancer sites for 2019 and United States data\*

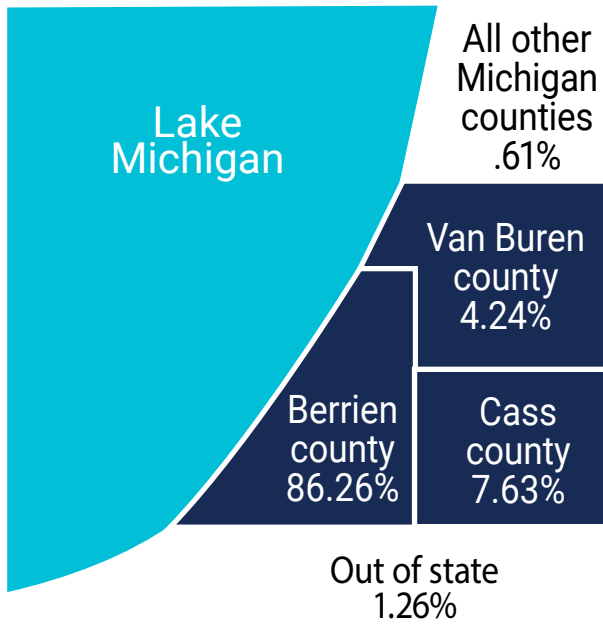


\*American Cancer Society. Cancer Facts & Figures 2019. Atlanta: American Cancer Society; 2019, pg 4.

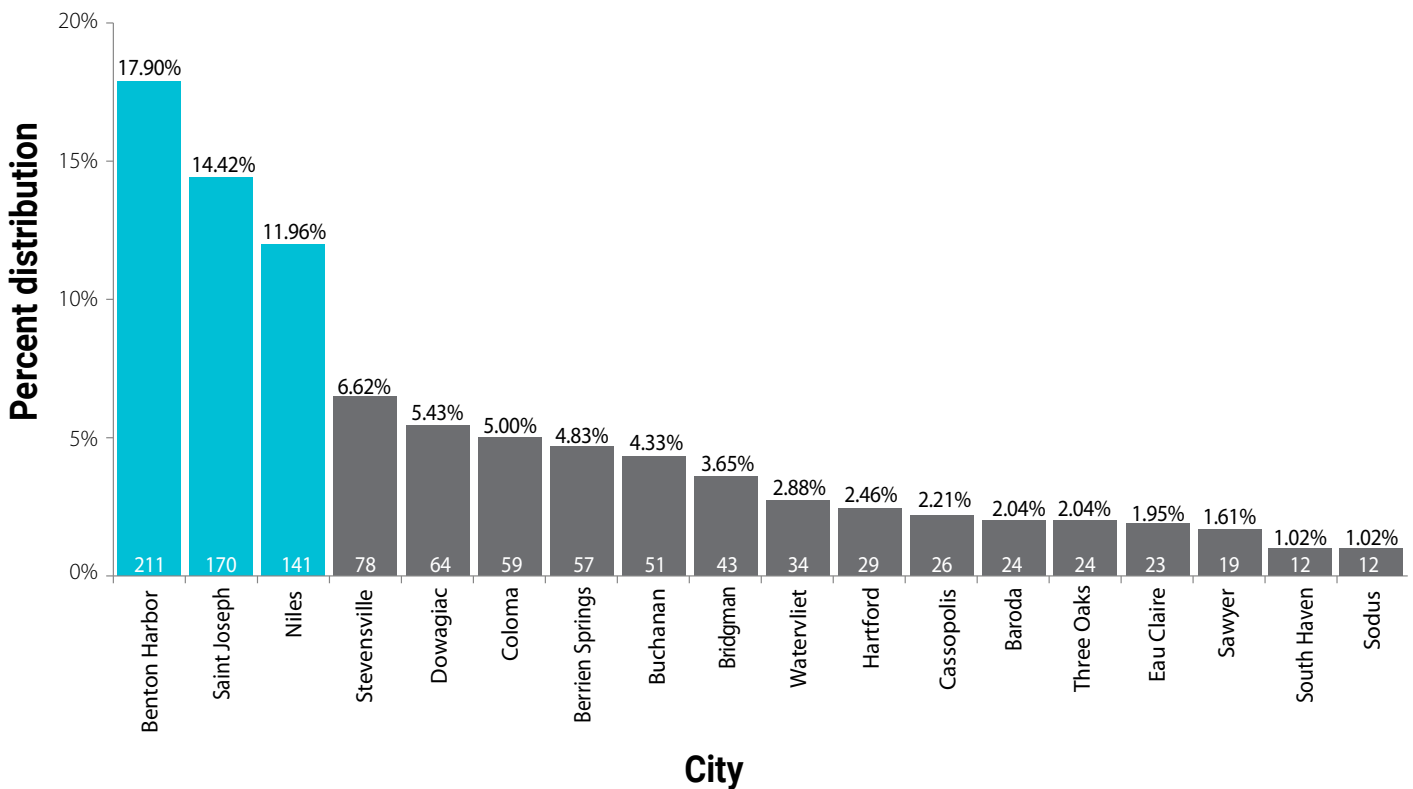
**Figure 4**  
Comparison of percent distribution of Lakeland hospitals’ 2019 cancer cases by gender



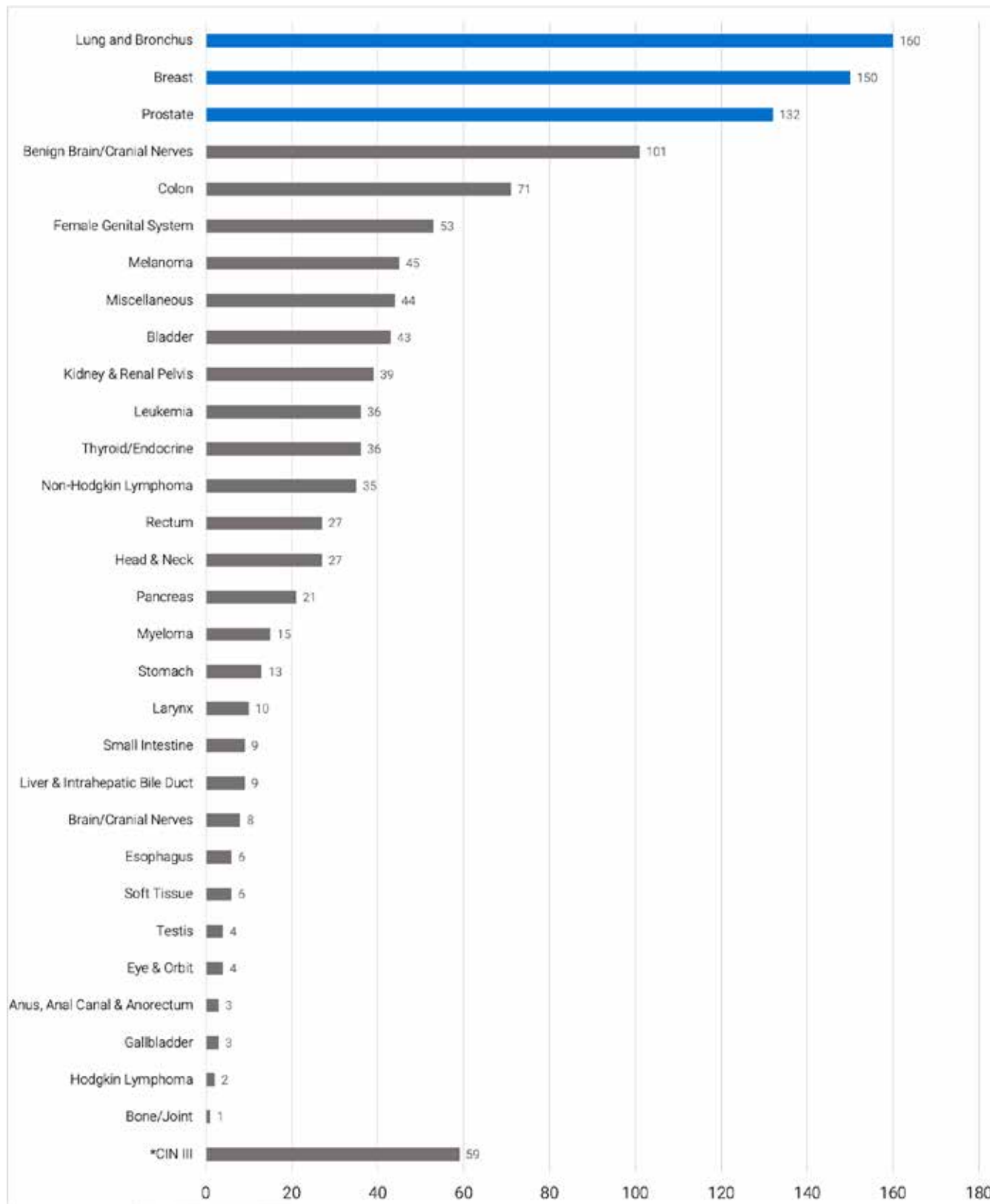
**Figure 5a**  
Distribution of Lakeland cancer cases by county



**Figure 5b**  
Distribution of Lakeland cancer cases by city  
(Berrien, Cassopolis, Van Buren counties)



**Figure 6**  
Distribution of total cancer cases by primary site



\*CIN III (non-invasive cervical severe dysplasia) is accessioned by agreement, but for 2019 the collection of this data was mandated by the State of Michigan

**Table 4**  
**Summary: By body, system, and gender**

Primary Site	Total	Percent	Male	Percent	Female	Percent
<b>ORAL CAVITY &amp; PHARYNX</b>	<b>27</b>	<b>2.3%</b>	<b>26</b>	<b>5.0%</b>	<b>1</b>	<b>0.2%</b>
Lip	2	0.2%	2	0.4%	0	0.0%
Tongue	13	1.1%	12	2.3%	1	0.2%
Floor of mouth	1	0.1%	1	0.2%	0	0.0%
Gum & other mouth	1	0.1%	1	0.2%	0	0.0%
Tonsil	6	0.5%	6	1.2%	0	0.0%
Oropharynx	3	0.3%	3	0.6%	0	0.0%
Hypopharynx	1	0.1%	1	0.2%	0	0.0%
<b>DIGESTIVE SYSTEM</b>	<b>164</b>	<b>13.9%</b>	<b>84</b>	<b>16.1%</b>	<b>80</b>	<b>12.2%</b>
Esophagus	6	0.5%	3	0.6%	3	0.5%
Stomach	13	1.1%	6	1.2%	7	1.1%
Small intestine	9	0.8%	2	0.4%	7	1.1%
Colon excluding rectum	71	6.0%	40	7.7%	31	4.7%
Cecum	9		3		6	
Appendix	3		0		3	
Ascending colon	23		12		11	
Transverse colon	7		5		2	
Descending colon	4		3		1	
Sigmoid colon	18		14		4	
Large intestine, NOS	7		3		4	
Rectum & rectosigmoid	27	2.3%	16	3.1%	11	1.7%
Rectosigmoid junction	5		4		1	
Rectum	22		12		10	
Anus, anal canal & anorectum	3	0.3%	0	0.0%	3	0.5%
Liver & intrahepatic bile duct	9	0.8%	5	1.0%	4	0.6%
Liver	8		4		4	
Intrahepatic bile duct	1		1		0	
Gallbladder	3	0.3%	1	0.2%	2	0.3%
Other biliary	1	0.1%	0	0.0%	1	0.2%
Pancreas	21	1.8%	10	1.9%	11	1.7%
Other digestive organs	1	0.1%	1	0.2%	0	0.0%
<b>RESPIRATORY SYSTEM</b>	<b>171</b>	<b>14.5%</b>	<b>75</b>	<b>14.4%</b>	<b>96</b>	<b>14.6%</b>
Nose, nasal cavity & middle ear	1	0.1%	1	0.2%	0	0.0%
Larynx	10	0.8%	6	1.2%	4	0.6%
Lung & bronchus	160	13.6%	68	13.1%	92	14.0%
<b>BONES &amp; JOINTS</b>	<b>1</b>	<b>0.1%</b>	<b>1</b>	<b>0.2%</b>	<b>0</b>	<b>0.0%</b>
<b>SOFT TISSUE (INCLUDING HEART)</b>	<b>6</b>	<b>0.5%</b>	<b>1</b>	<b>0.2%</b>	<b>5</b>	<b>0.8%</b>
<b>SKIN EXCLUDING BASAL &amp; SQUAMOUS</b>	<b>46</b>	<b>3.9%</b>	<b>24</b>	<b>4.6%</b>	<b>22</b>	<b>3.3%</b>
Melanoma -- skin	45	3.8%	23	4.4%	22	3.3%
Other non-epithelial skin	1	0.1%	1	0.2%	0	0.0%
<b>BREAST</b>	<b>150</b>	<b>12.7%</b>	<b>3</b>	<b>0.6%</b>	<b>147</b>	<b>22.3%</b>

(continued on page 11)

**Table 4** (continued)  
**Summary: By body, system, and gender**

Primary Site	Total	Percent	Male	Percent	Female	Percent
<b>FEMALE GENITAL SYSTEM</b>	<b>112</b>	<b>9.5%</b>	<b>0</b>	<b>0.0%</b>	<b>112</b>	<b>17.0%</b>
Cervix uteri	63	5.3%	0	0.0%	63	9.6%
Corpus & uterus, NOS	33	2.8%	0	0.0%	33	5.0%
Corpus uteri	28		0		28	
Uterus, NOS	5		0		5	
Ovary	8	0.7%	0	0.0%	8	1.2%
Vagina	2	0.2%	0	0.0%	2	0.3%
Vulva	5	0.4%	0	0.0%	5	0.8%
Other female genital organs	1	0.1%	0	0.0%	1	0.2%
<b>MALE GENITAL SYSTEM</b>	<b>138</b>	<b>11.7%</b>	<b>138</b>	<b>26.5%</b>	<b>0</b>	<b>0.0%</b>
Prostate	132	11.2%	132	25.3%	0	0.0%
Testis	4	0.3%	4	0.8%	0	0.0%
Penis	2	0.2%	2	0.4%	0	0.0%
<b>URINARY SYSTEM</b>	<b>82</b>	<b>7.0%</b>	<b>54</b>	<b>10.4%</b>	<b>28</b>	<b>4.3%</b>
Urinary bladder	43	3.6%	29	5.6%	14	2.1%
Kidney & renal pelvis	39	3.3%	25	4.8%	14	2.1%
<b>EYE &amp; ORBIT</b>	<b>5</b>	<b>0.4%</b>	<b>4</b>	<b>0.8%</b>	<b>1</b>	<b>0.2%</b>
Eye & orbit	5	0.4%	4	0.8%	1	0.2%
<b>BRAIN &amp; OTHER NERVOUS SYSTEM</b>	<b>109</b>	<b>9.2%</b>	<b>34</b>	<b>6.5%</b>	<b>75</b>	<b>11.4%</b>
Brain	10	0.8%	4	0.8%	6	0.9%
Cranial nerves other nervous system	99	8.4%	30	5.8%	69	10.5%
<b>ENDOCRINE SYSTEM</b>	<b>36</b>	<b>3.1%</b>	<b>16</b>	<b>3.1%</b>	<b>20</b>	<b>3.0%</b>
Thyroid	13	1.1%	3	0.6%	10	1.5%
Other endocrine including thymus	23	2.0%	13	2.5%	10	1.5%
<b>LYMPHOMA</b>	<b>37</b>	<b>3.1%</b>	<b>14</b>	<b>2.7%</b>	<b>23</b>	<b>3.5%</b>
Hodgkin lymphoma	2	0.2%	1	0.2%	1	0.2%
Non-Hodgkin lymphoma	35	3.0%	13	2.5%	22	3.3%
NHL - nodal	27		8		19	
NHL - extranodal	8		5		3	
<b>MYELOMA</b>	<b>15</b>	<b>1.3%</b>	<b>9</b>	<b>1.7%</b>	<b>6</b>	<b>0.9%</b>
<b>LEUKEMIA</b>	<b>36</b>	<b>3.1%</b>	<b>16</b>	<b>3.1%</b>	<b>20</b>	<b>3.0%</b>
Lymphocytic leukemia	21	1.8%	9	1.7%	12	1.8%
Acute lymphocytic leukemia	1		0		1	
Chronic lymphocytic leukemia	18		8		10	
Other lymphocytic leukemia	2		1		1	
<b>MYELOID &amp; MONOCYTIC LEUKEMIA</b>	<b>14</b>	<b>1.2%</b>	<b>7</b>	<b>1.3%</b>	<b>7</b>	<b>1.1%</b>
Acute myeloid leukemia	10		6		4	
Chronic myeloid leukemia	4		1		3	
Other leukemia	1	0.1%	0	0.0%	1	.2%
<b>MISCELLANEOUS</b>	<b>44</b>	<b>3.7%</b>	<b>22</b>	<b>4.2%</b>	<b>22</b>	<b>3.3%</b>
<b>Total</b>	<b>1,179</b>		<b>521</b>		<b>658</b>	

## Advancements in oncology

Significant advancements in the detection and treatment of cancer mean the field of oncology is constantly changing. At Spectrum Health Lakeland, we're committed to staying up to date and providing the latest services to our patients, which include screenings, immunotherapy, and more.

### Breast Cancer Center of Excellence

As a certified Breast Cancer Center of Excellence, we've been able to improve pathology, radiology, radiation oncology, and surgical oncology for breast cancer patients. Meeting the rigorous standards required for this certification means our data is compared to others on a state and national level, so we know where we excel and where we can strive to provide better care.

### Genetics of cancer

For certain cancers that have progressed, patients can be screened for specific genetic mutations. If found, these mutations can be treated with small molecule inhibitors and pills. This form of treatment continues to be tested as research provides more insight into this method.

### Immunotherapy

Immunotherapy is extending lives and improving quality of life for patients with melanoma, lung, kidney, head and neck, or breast cancer. As an alternative to chemotherapy, immunotherapy helps the body identify and kill tumorous cells using the immune system. As a more natural treatment that doesn't affect bone marrow or cause nausea, most patients can tolerate it and are living longer than they would have if relying on other treatment such as chemotherapy.

### Lung cancer screenings

We know there are certain risk factors for lung cancer: anyone who smokes aged 55 to 75, who has smoked for 30 years or more, and who has quit less than 15 years ago. Lung cancer screenings for people with these risk factors have enabled us to catch lung cancer at a very early stage, sometimes even before chemotherapy is a necessity. An estimated 1,800 screenings are conducted per year.

### Treatment of chronic lymphocyte leukemia

A new therapy for recently diagnosed or relapsed chronic lymphocyte leukemia patients – the most common type of leukemia – is available at Lakeland. A combination of immunotherapy and molecule pills are resulting in better survival rates and less impact on the body.

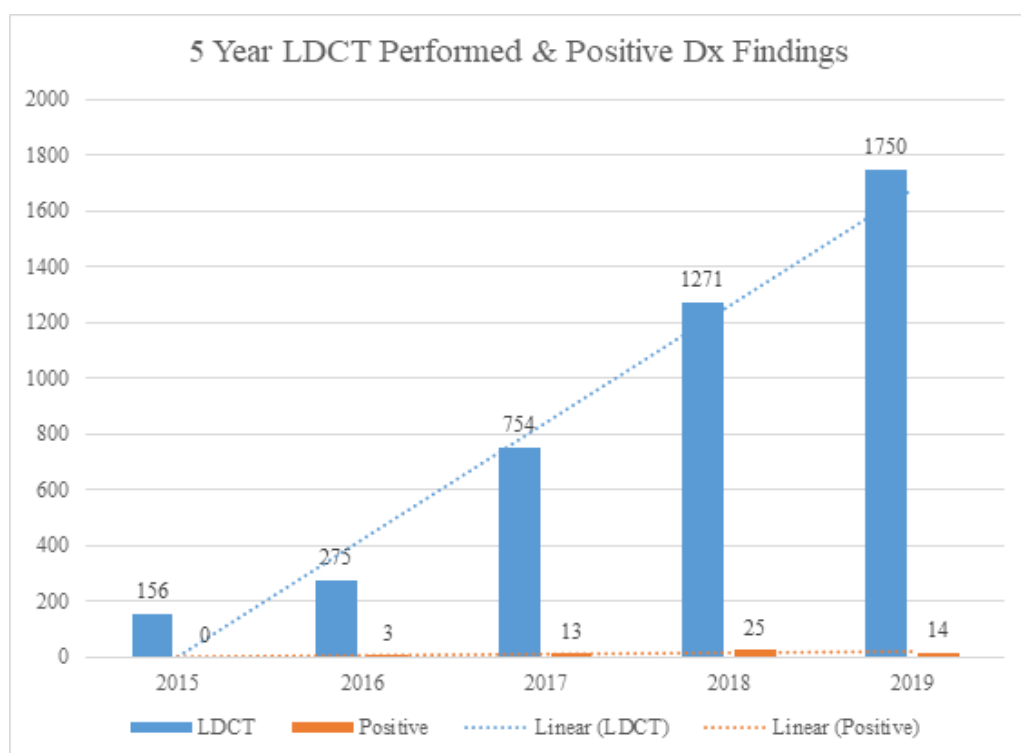


## Study of quality: False positive rate for low dose lung CT

When local primary care providers expressed concern over the perceived amount of low dose lung CT (LDCT) false positives at Spectrum Health Lakeland, a study of quality was conducted to better understand how our false positive rates compared to national benchmarks.

Each year in the United States approximately 218,000 people are diagnosed with lung cancer and nearly 149,000 will die from the disease [3]. At Lakeland, the number of LDCTs performed to screen for lung cancer increases significantly each year. Figure 1 shows the increase of LDCTs that have been performed in comparison to the amount of positive lung cancer findings. Each year, approximately 2% of patients who underwent a LDCT had a positive cancer diagnosis.

**Figure 1.**  
Low dose lung CTs performed & positive diagnosis



In 2019, approximately 1,750 LDCTs were performed, with 14 positive lung cancer findings.

The National Lung Screening Trial (NLST) study comparing LDCT with single view radiography demonstrated a 20% reduction in lung cancer death in patients undergoing LDCT surveillance and established LDCT as the standard of care for patients at high risk for lung cancer [1]. In that study, it was noted that 1.1% of patients in the LDCT arm were ultimately diagnosed with lung cancer [2].

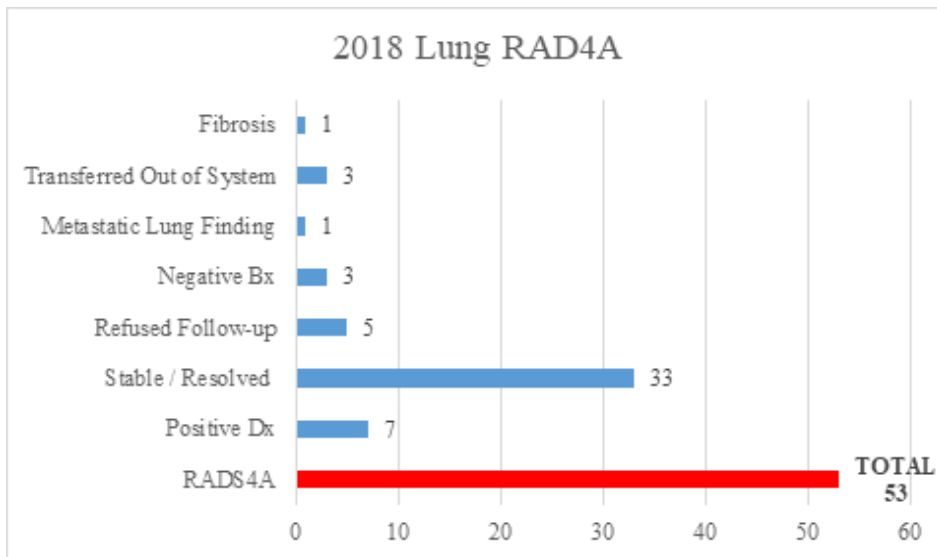
At Lakeland, we have been recommending LDCT to our high-risk patients since 2015, as indicated in Figure 1. We analyzed our outcomes data for 2015 through 2018 to determine if our detection rates were on par with the national data as described in the NLST trial. We documented that 1,271 LDCTs were performed in 2018, with 25 resulting in a diagnosis of lung cancer (2%), consistent with the findings of the NLST trial.

Despite being consistent with the diagnosis rate, the Centers for Disease Control indicate one of the risks of low dose lung screening are false positive rates, leading to patient anxiety and potentially unnecessary follow-up procedures [3]. Given the continued increase in LDCTs and approximately 2% of patients within our health system who receive a positive lung cancer finding on LDCT, false positive data from all LDCTs performed in 2018 was reviewed.



Figure 2 shows the total number of RADS 4A in 2018, with 53 total RAD4A interpretations on LDCT in comparison with positive lung cancer findings. Of the 53 RAD4A, 7 out of 53 had a positive diagnosis, or approximately 13%, and 3 out of 53 had a negative biopsy or approximately 5%.

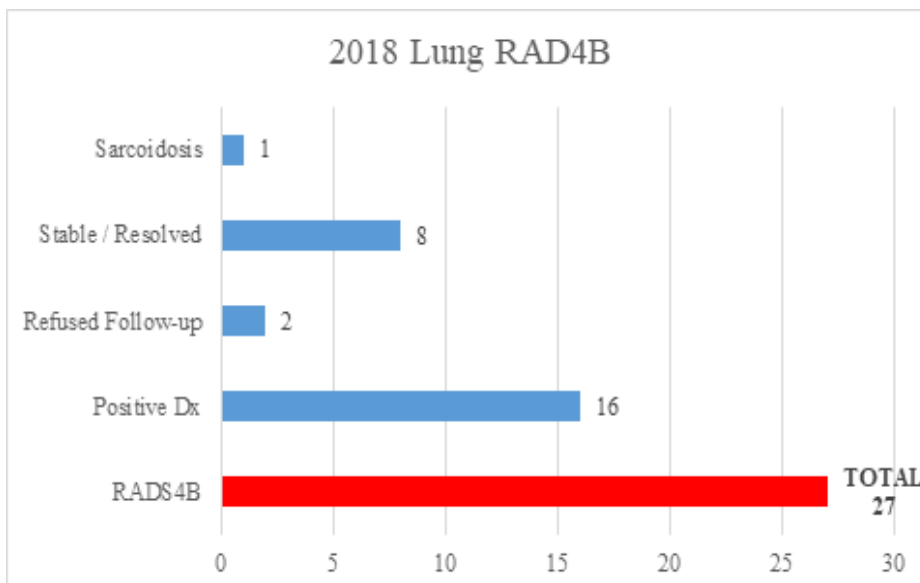
**Figure 2.**  
RADS 4A in 2018



Our rate of detection at Lakeland remains very high at approximately 2% of patients being diagnosed with a positive finding in comparison to the documented 1.1% in the NLST. Despite the risk of false positives for the use of LDCT for detection of lung cancer, the risk associated with the false positive rate far exceeds the risk of not undergoing any screening or diagnostic work-up for positive findings. As previously noted, of those diagnosed with lung cancer each year nationally, survival outcomes are less than ideal.

Reviewing the quality of false positive rates, in response to the significant uptick and volume of LDCTs performed, no action is necessary for quality enhancements for the LDCT program.

**Figure 3.**  
RADS 4B in 2018



#### REFERENCES

1. The National Lung Screening Trial Research Team. Reduced Lung-Cancer Mortality with Low-Dose Computed Tomographic Screening. *NEJM* 365(5):395-409, 2011.
2. The National Lung Screening Trial Research Team. Results of Initial Low-Dose Computed Tomographic Screening for Lung Cancer. *NEJM* 368(21):1980-1991; 2013.
3. Center for Disease Control. Lung Cancer Screening Programs, Policies & Practices for Cancer Prevention. Retrieved from [www.cdc.org](http://www.cdc.org)

## It takes a team

Did you know there are 24 different roles on the oncology services team? All of them are highly unique, some may be unexpected or surprising, but all are necessary in the delivery of complex oncology care.

- Administrative assistant
- Clinical psychologist
- Clinical research associate
- Dietician
- Dosimetrist
- Financial navigator / analyst
- Genetic counselor
- Infusion nurse
- Leaders
- Medical assistant
- Medical oncologist
- Medical oncology nurse
- Nurse navigator
- Nurse practitioner
- Nursing assistant
- Oncology support specialist
- Physicist
- Radiation oncologist
- Radiation oncology nurse
- Radiation therapist
- Receptionist
- Research RN
- Social worker
- Tumor registrar

It takes a team to care for oncology patients, and we're grateful for all of those who serve in these roles and deliver their best every day.



# Contact Us

## Spectrum Health Lakeland oncology services

Telephone directory

### Marie Yeager Cancer Center (MYCC)

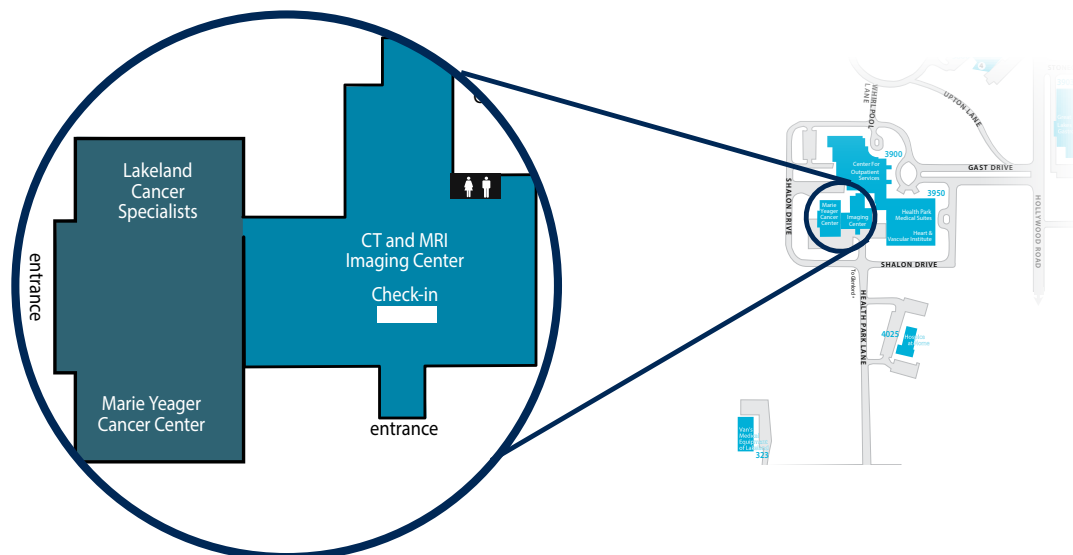
Berrien County Cancer Service .....	269.269.3281
Cancer registry .....	269.428.7293 or 269.428.7290
Clinical research .....	269.556.2881
Director of oncology services .....	269.556.2879
Infusion manager .....	269.556.7104
Lakeland Cancer Specialists, St. Joseph .....	269.428.4411
Lakeland Cancer Specialists, Niles .....	269.687.1168
MYCC front desk.....	269.556.7180
Nurse navigator .....	269.556.2885
Psychology services .....	269.428.4411
Social work and financial counseling .....	269.556.7161

### Infusion Clinics

Niles .....	269.684.6140
St. Joseph .....	269.556.7180
Watervliet .....	269.932.8406

### Radiation Oncology

Dosimetry.....	269.983.4212
Front desk.....	269.983.8888
Manager .....	269.983.8607
Nursing .....	269.983.8916 or 269.983.4960
Physics .....	269.983.4593
Social work and financial counseling .....	269.983.8690
Therapy.....	269.983.8841 or 269.983.8839



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