



# Marie Yeager Cancer Center



# 2018 Cancer Care Report

Data collected in 2017 and reported in 2018



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## Message From The Medical Director of Oncology Services of Spectrum Health Lakeland

To better serve the community, Berrien County Cancer Service has relocated to 3900 Hollywood Road, St. Joseph. Their new office is on the second floor of the Marie Yeager Cancer Center; their loan closet is now located in the Lakeland Health Park.

Berrien County Cancer Service has helped those with cancer in southwest Michigan since 1948 and now offers the same compassionate care with the added convenience of being located in our local cancer center. We are enthusiastic about this move as it serves to bring a respected community partner closer to the Lakeland cancer healthcare team.

The medical staff at Spectrum Health Lakeland recently welcomed **Meredith Krugh, NP**. She is working with the medical oncologists, providing chemotherapy education, and seeing patients at the Marie Yeager Cancer Center. Meredith is no stranger to Lakeland; she has 12 years of invaluable experience caring for oncology patients working as a registered nurse.

**Barbara Schmidtman**, Manager of Radiation Oncology and Infusion, earned her PhD from Northcentral University in San Diego where she specialized in Industrial Organizational Psychology. She was also inducted into the International Honor Society Delta Mu Delta. Her work in this area utilizes science to study human behavior in order to improve work performance, which for Lakeland means better patient care and best medical practices.

More recently, we've launched a new website for the Marie Yeager Cancer Center. Check out **[www.marieyeagercancercenter.com](http://www.marieyeagercancercenter.com)** to find comprehensive information about cancer care and services available.

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 range of oncology services to achieve exemplary outcomes for our patients with cancer.

Sincerely,



**Edmund Paloyan, MD**

Medical Director of Oncology Services  
Spectrum Health Lakeland



**Edmund Paloyan, MD**



**Meredith Krugh, NP**



**Barbara Schmidtman, PhD**



# Prostate Cancer Symptoms Aren't Always Obvious

## 1 in Every 9 Men Affected

The earliest signs of prostate cancer are often urinary, including frequent urination, burning sensation when urinating, difficulty starting urine flow, a weak stream or dribbling, and even blood in the urine. The warning signs of the disease are often confused with other conditions.

Prostate cancer is the most common cancer in men other than skin cancer and the second-leading cause of cancer related death in men, after lung cancer. The good news is that prostate cancer is also one of the most treatable types of cancer, and the death rates are declining due to early detection and improved treatments.

## Non-Surgical Option for Treatment

Lakeland has started to use the SpaceOAR hydrogel rectal spacer to reduce the short- and long-term side effects of radiation therapy. The SpaceOAR System is a temporary injectable gel that protects the rectum in men undergoing radiation therapy for prostate cancer. It is the first and only prostate cancer spacing device to receive Food and Drug Administration (FDA) clearance.

Combined with our state-of-the-art treatment technology, including on-board cone-beam CT imaging and volumetric modulated arc therapy (VMAT), Lakeland is able to offer the most efficacious, safest and cost effective radiation treatment available for prostate cancer.

## Best Protection is Screening

Males over 55 years old that haven't had a prostate screening this year should talk to a primary care provider, or call Lakeland Urology at (269) 983-3455 and schedule one today.





Patients at Lakeland have been spared **100+ weeks** of radiation therapy and over **\$1,000,000** in costs have been saved

## A No Brainer

**Pat Howland** is no stranger to mammograms – for the past three years she's gotten one every six months as a precautionary measure for a spot in her breast that had been previously detected. However, it was between the regularly scheduled mammograms, when she noticed a new lump in her left breast. While a diagnostic mammogram revealed the lump was not cancerous, a second lump was detected which turned out to be invasive ductal carcinoma – a common form of breast cancer which occurs in the lining of the milk ducts.

After receiving the news, the Chicago, Illinois resident didn't waste any time scheduling an appointment with a surgeon near her hometown to learn more about the treatment options available.

"My surgeon discussed what I assumed was standard treatment for breast cancer – surgery and four to six weeks of radiation," said Pat. "It wasn't until I was talking to my neighbor and she recommended a new technology available at Lakeland that I realized I had other choices."

Interested in learning more, Pat reached out to oncology nurse navigator, **Shelley Wilkinson, RN, CBCN**, at the Marie Yeager Cancer Center in St. Joseph.

"Shelley was my angel," said Pat. "The only thing required of me from the time I met Shelley to the end of my treatment, was to show up when and where she told me. She followed my care and provided me with things I didn't even know I needed. I still can't believe how wonderfully I was treated."

During her initial meeting with radiation oncologist, **Benjamin Giolda, MD**, Pat learned about intraoperative radiation therapy (IORT) – a new treatment for breast cancer that delivers radiation at the time of surgery, following tumor removal. For many women this eliminates the need for four to six weeks of follow up radiation after surgery.

"No one in Chicago even mentioned IORT to me," said Pat. "After explaining how the procedure worked, Dr. Giolda suggested I go home and think about it. I told him I didn't need to – as far as I was concerned it was a no brainer for me."

On the day of surgery, Pat returned to Lakeland – an hour and 45-minute drive she says was worth every mile. While in the operating room, general surgeon, **Dennis Rasbach, MD**, performed lumpectomy surgery to remove the cancerous cells in Pat's breast. During the procedure he also discovered a second cancerous lump which was previously undetected and removed it at the same time. Once the tumors were removed, Dr. Rasbach, together with Dr. Giolda, delivered a dose of radiation directly to the tumor bed.

"When compared to having my rotator cuff repaired – breast cancer was a walk in the park," said Pat. "I felt very little discomfort and was strangely at peace throughout the entire experience."

Since her surgery, Pat continues to follow up regularly with an oncologist in Chicago. Although Pat said she hopes she'll never have to undergo breast cancer again – she wouldn't hesitate to return to Lakeland for care.

"Everyone I came into contact with at Lakeland treated me with the utmost care and concern," she said. "When faced with this kind of diagnosis, it is wonderful to know there is a place you can go for treatment, and know with certainty they are not going to drop the ball."



**42 people**  
BENEFITTED FROM IORT  
therapy at Lakeland since  
**December 2016**

## Nutrition Classes Offered for Cancer Patients

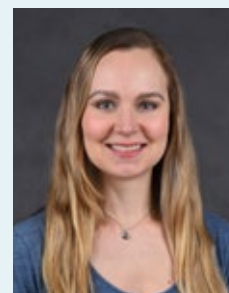
Cancer treatments and medications can cause many individuals to lose their appetite and energy, putting them at an increased risk for malnutrition. It is important to maintain proper nutrition before, during, and after cancer. Registered dietitian, **Alyson Davis** works with patients at the Marie Yeager Cancer Center to achieve this.

"It's rewarding to be able to help cancer patients heal and maintain quality of life by teaching them about the foods they can enjoy, not what they can't," said Alyson.

"Research shows that treatment tolerance and outcomes are better when nutritional status is maintained. I love that I can help with symptom control throughout treatment phases."

Free nutrition classes are held bi-monthly and teach participants about healthy eating habits, tips for maintaining adequate nutrition during cancer treatment, and ways to enhance overall well-being.

For information, visit [www.marieyeagercancercenter.com](http://www.marieyeagercancercenter.com), to register, call **(269) 556-2808**



**Alyson Davis**  
Oncology  
Registered  
Dietitian

## Restorative Yin Yoga

Restorative Yin Yoga takes place at Marie Yeager Cancer Center, weekly for one hour and is designed specifically for patients going through cancer treatment. This free class is intended to increase physical, mental, and spiritual well-being through the practice of gently restorative poses and relaxation techniques.

Research suggests that structured yoga during cancer treatment may:

- Boost mood, energy levels, and appetite
- Combat the side effects of treatment, especially fatigue and depression
- Enhance quality of life by relieving stress and anxiety, which in turn reduces heart rate
- Lower blood pressure, and eases respiration
- Provide a support system to assist you in coping with the emotional toll of cancer
- Reduce sensitivity to pain

Yoga is an ancient mind-body health system that began in India more than 5,000 years ago. It has been used in the U.S. since the 1800s. Yoga uses slow movement, precise posture, meditation, and breathing exercises to reach a state of relaxation.

As an additional therapy, yoga can create a sense of well-being, improve the quality of life, provide relaxation, and reduce stress for some patients with cancer. There is no specific amount of exercise suggested for a person with cancer. The type and amount of exercise that is right for you depends on your unique abilities and what you can handle.



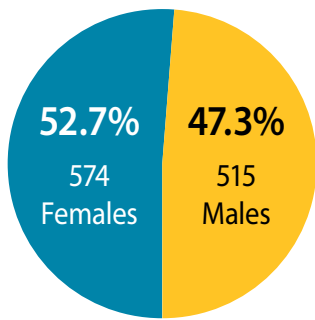
# Statistical Summary and Review of Registry Data 2017

In 2017, 1,089 cases were added to the Lakeland Health Cancer Registry. Of these cases, 965 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 **515 (47.3%)** and the number of female patients was **574 (52.7%)**.

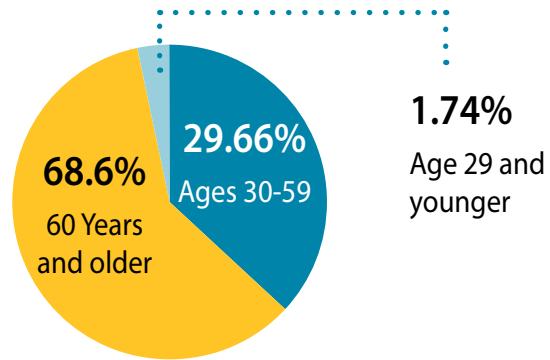
Patients diagnosed at age 60 years or older accounted for 68.6% of cases. Patients 30 through 59 years of age accounted for 29.66%, while 1.74% of cases were 29 years old or younger. The mean age of cancer patients in 2017 was 65.

**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.

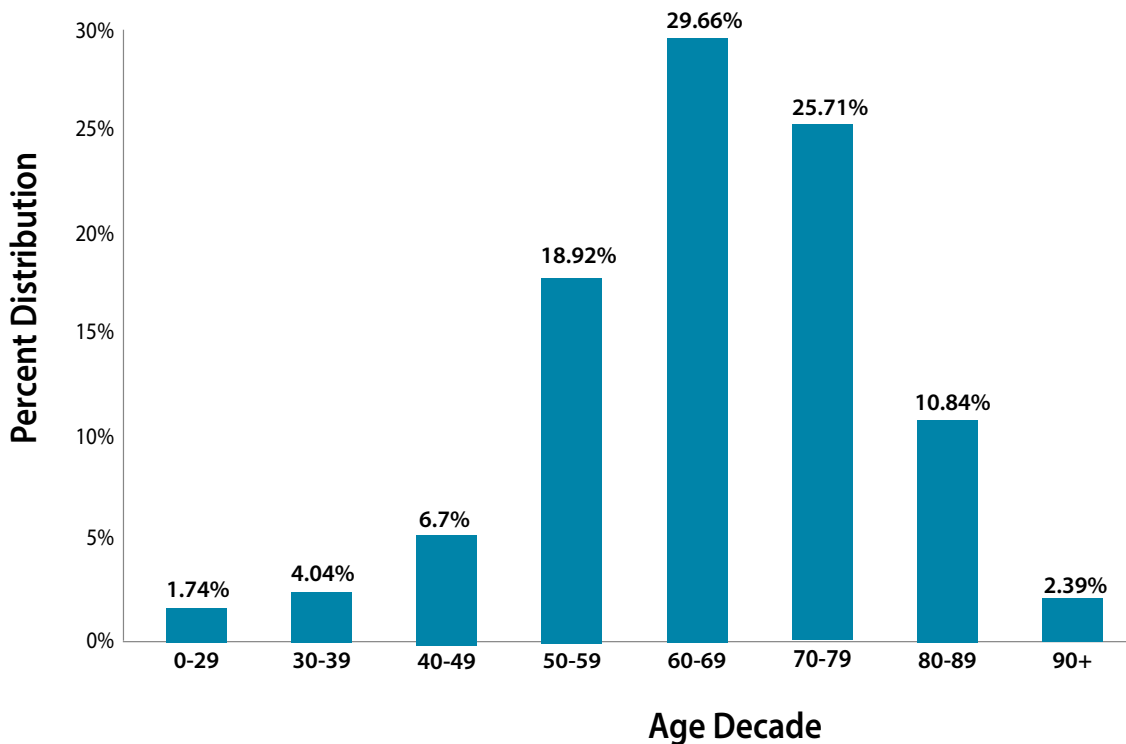
**Figure 1a**  
2017 Ratio of Male to Female Patients



**Figure 1b**  
2017 Age Distribution



**Figure 2**  
Percent Distribution of Lakeland Hospitals' 2017 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	164	1	35	18	40	70	0
Female Breast	166*	27	68	44	19	8	0
Prostate	102*	0	20	40	19	22	1**
Colorectal	80	10	18	21	11	15	5***

\*1 breast case, 3 prostate cases, 1 colon case not eligible for staging.

\*\* 1 case diagnosed clinically (no path) and started on HT, unable to stage.

\*\*\*3 cases declined staging workup, 1 case deceased before workup completed (advanced age), 1 case unable to stage due to path specimen

**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
Female Breast	1	167	15.3%	2	14.12%	1	15.10%
Lung	2	164	15.10%	1	14.22%	2	13.12%
Prostate	3	105	9.6%	3	9.29%	3	9.55%
Colon	4	81	7.4%	4	8.09%	4	5.66%

\*American Cancer Society. Cancer Facts & Figures 2017. Atlanta: American Cancer Society; 2017, pg 4-5.

**Table 3**

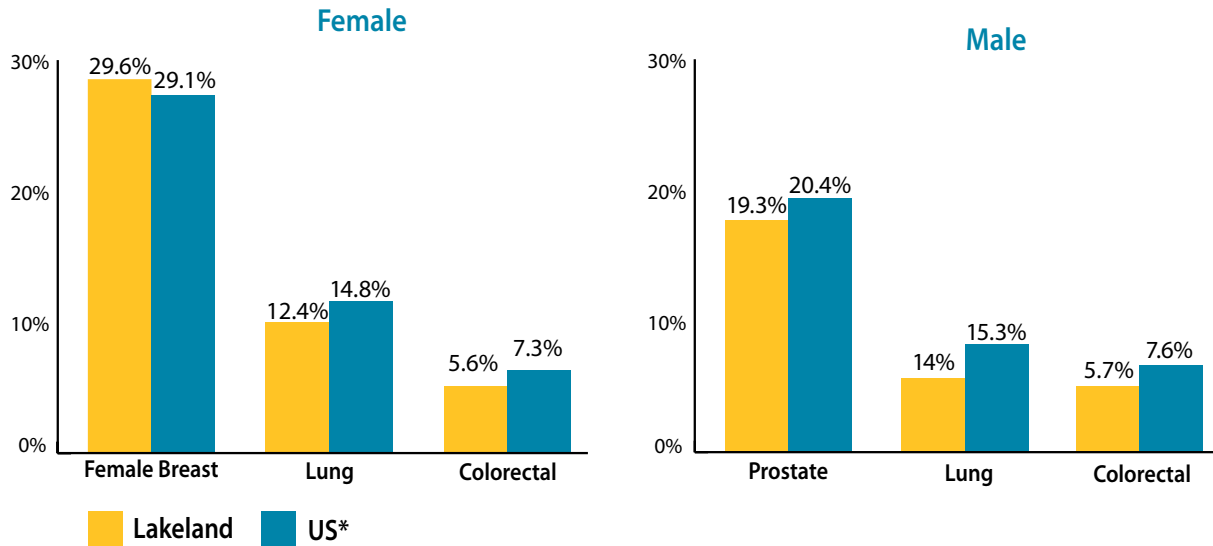
Comparison of Percent Distribution of Lakeland Hospitals' 2017 Cancer Cases and United States Data by Gender and Lakeland's Four Most Common Cancer Sites

Site	Male Cancer Cases: 515		Female Cancer Cases: 574	
	United States*	Lakeland	United States*	Lakeland
Female Breast	NA	NA	29.64%	29.10%
Prostate	19.30%	20.40%	NA	NA
Lung	14%	15.3%	12.37%	14.80%
Colorectal	5.7%	7.6%	5.61%	7.30%

\*American Cancer Society. Cancer Facts & Figures 2017. Atlanta: American Cancer Society; 2017, pg 4.

**Figure 3**

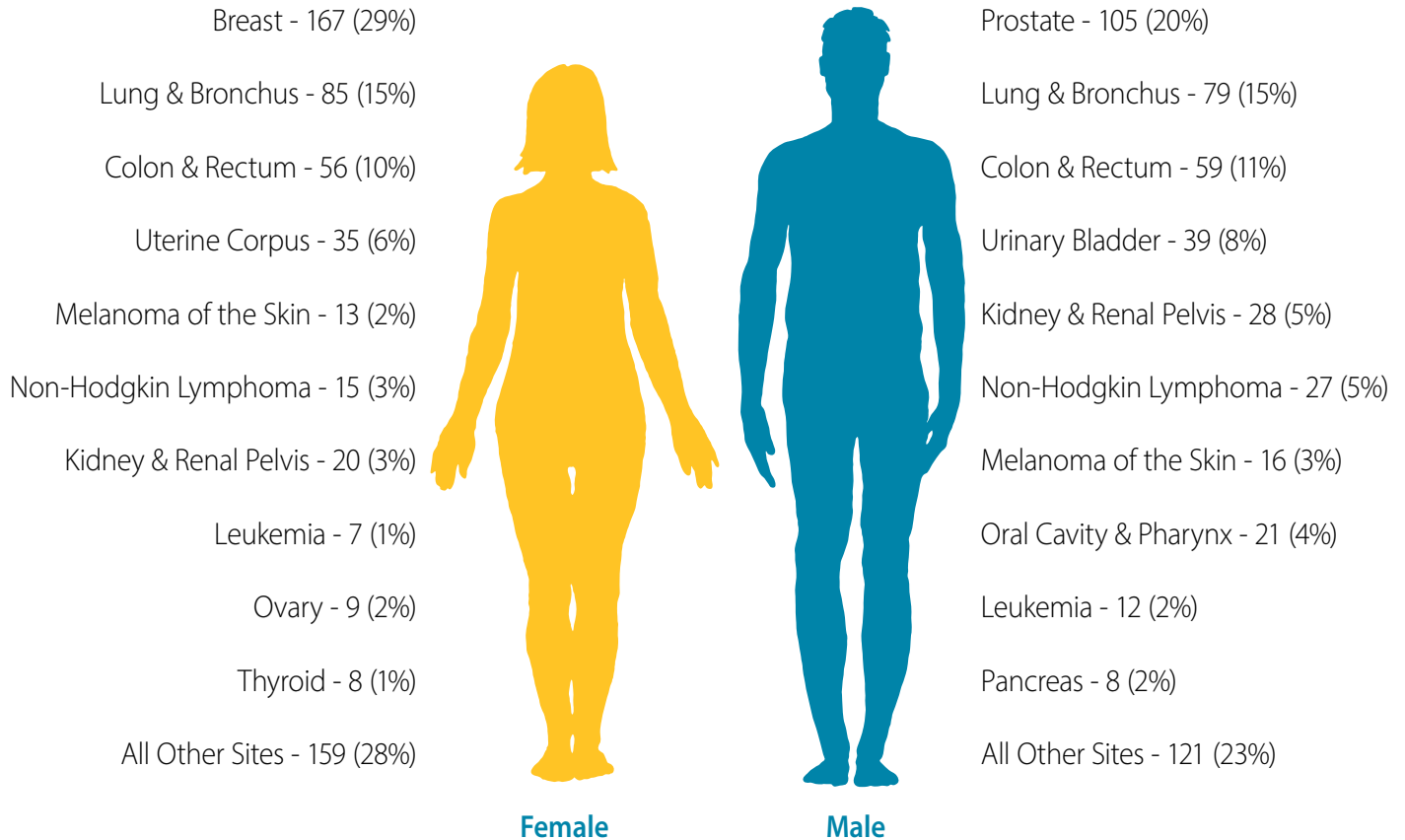
Comparison of Percent Distributions of Lakeland Health’s Four Most Common Female and Male Cancer Sites for 2017 and United States Data\*



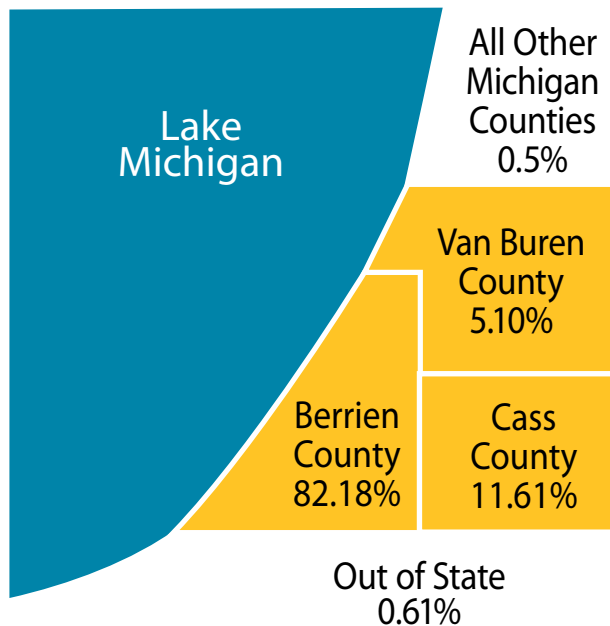
\*American Cancer Society. Cancer Facts & Figures 2015. Atlanta: American Cancer Society; 2015, pg 4.

**Figure 4**

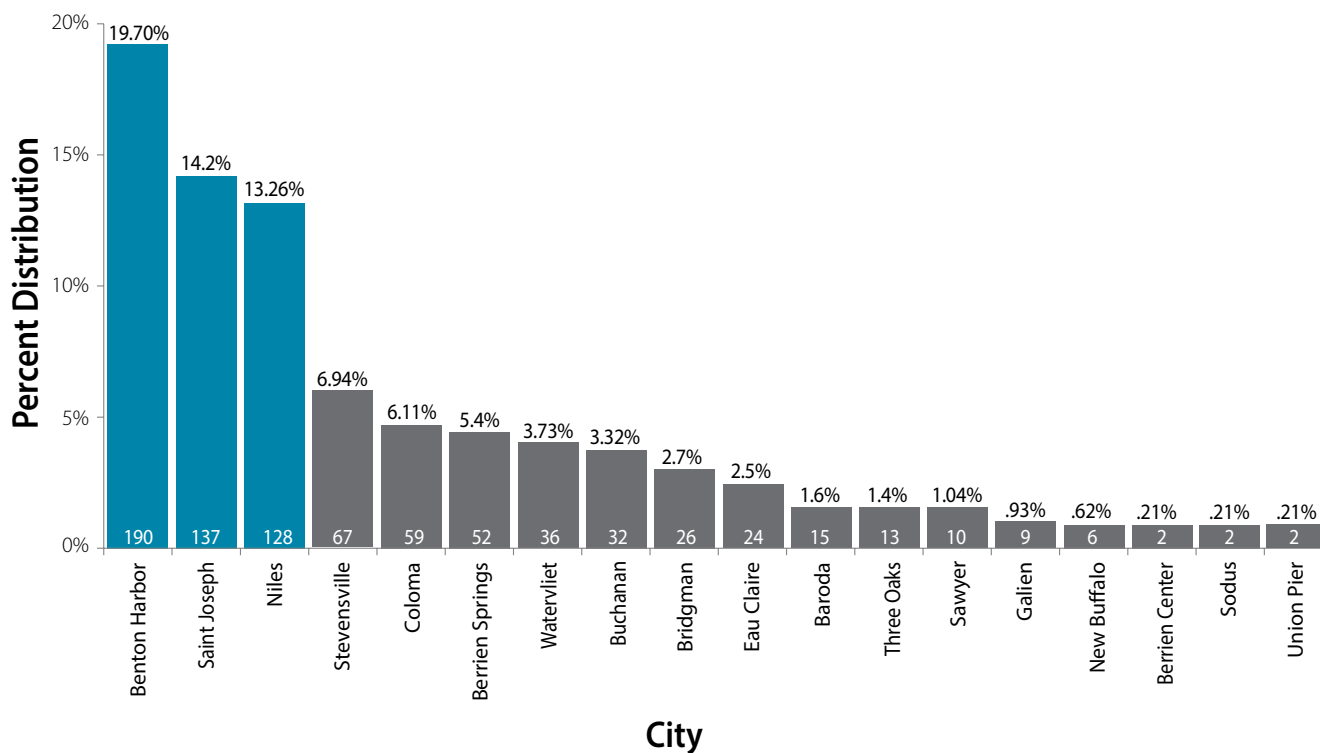
Comparison of Percent Distribution of Lakeland Hospitals’ 2017 Cancer Cases by Gender



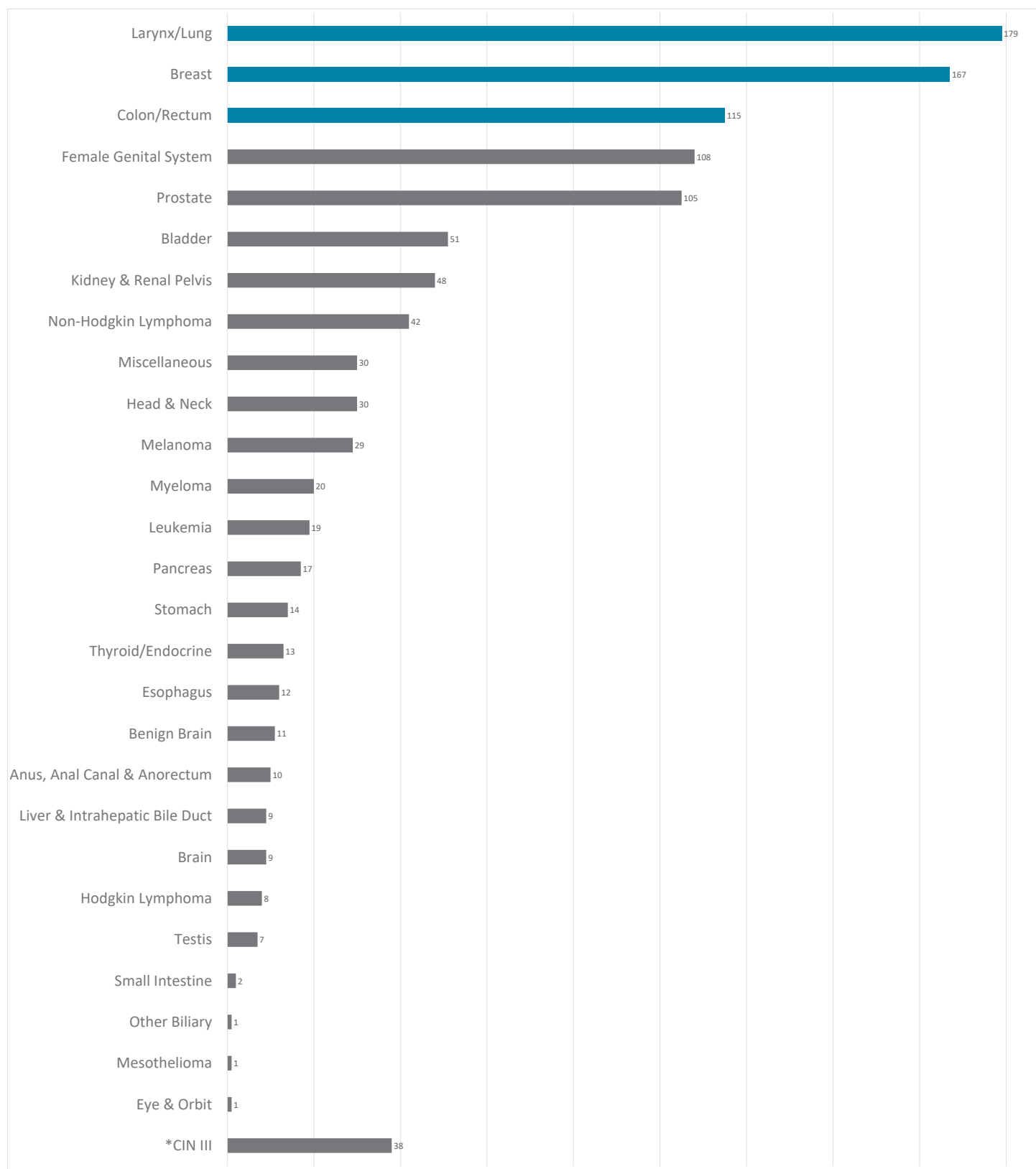
**Figure 5a**  
Distribution of Lakeland Cancer Cases by County



**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 2016 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 %
<b>Oral Cavity &amp; Pharynx</b>	<b>30</b>	<b>2.8%</b>	<b>21</b>	<b>4.1%</b>	<b>9</b>	<b>1.6%</b>
Lip	1	0.1%	1	0.2%	0	0.0%
Tongue	10	0.9%	5	1.0%	5	0.9%
Salivary Glands	2	0.2%	1	0.2%	1	0.2%
Floor of Mouth	2	0.2%	2	0.4%	0	0.0%
Gum & Other Mouth	4	0.4%	3	0.6%	1	0.2%
Tonsil	8	0.7%	7	1.4%	1	0.2%
Hypopharynx	3	0.3%	2	0.4%	1	0.2%
<b>Digestive System</b>	<b>185</b>	<b>17.0%</b>	<b>100</b>	<b>19.4%</b>	<b>85</b>	<b>14.8%</b>
Esophagus	12	1.1%	11	2.1%	1	0.2%
Stomach	14	1.3%	9	1.7%	5	0.9%
Small Intestine	2	0.2%	2	0.4%	0	0.0%
Colon Excluding Rectum	81	7.4%	39	7.6%	42	7.3%
<i>Cecum</i>	19		8		11	
<i>Appendix</i>	4		2		2	
<i>Ascending Colon</i>	13		2		11	
<i>Hepatic Flexure</i>	1		0		1	
<i>Transverse Colon</i>	12		5		7	
<i>Splenic Flexure</i>	3		3		0	
<i>Descending Colon</i>	4		2		2	
<i>Large Intestine, NOS</i>	22		16		6	
<i>Sigmoid Colon</i>	3		1		2	
Rectum & Rectosigmoid	34	3.1%	20	3.9%	14	2.4%
<i>Rectosigmoid Junction</i>	5		3		3	
<i>Rectum</i>	29		17		12	
Anus, Anal Canal & Anorectum	10	0.9%	4	0.8%	6	1.0%
Liver & Intrahepatic Bile Duct	9	0.8%	6	1.2%	3	0.5%
<i>Liver</i>	7		5		2	
<i>Intrahepatic Bile Duct</i>	2		1		1	
Gallbladder	3	0.3%	0	0.0%	3	0.5%
Other Biliary	1	0.1%	1	0.2%	0	0.0%
Pancreas	17	1.6%	8	1.6%	9	1.6%
Retroperitoneum	2	0.2%	0	0.0%	2	0.3%
<b>Respiratory System</b>	<b>181</b>	<b>16.6%</b>	<b>92</b>	<b>17.9%</b>	<b>89</b>	<b>15.5%</b>
Nose, Nasal Canal & Middle Ear	2	0.2%	2	0.4%	0	0.0%
Larynx	15	1.4%	11	2.1%	4	0.7%
Lung & Bronchus	164	15.1%	79	15.3%	85	14.8%
<b>Bones &amp; Joints</b>	<b>3</b>	<b>0.3%</b>	<b>2</b>	<b>0.4%</b>	<b>1</b>	<b>0.2%</b>
<b>Soft Tissue (including Heart)</b>	<b>12</b>	<b>1.1%</b>	<b>9</b>	<b>1.7%</b>	<b>3</b>	<b>0.5%</b>
<b>Skin Excluding Basal and Squamous</b>	<b>35</b>	<b>3.2%</b>	<b>20</b>	<b>3.9%</b>	<b>15</b>	<b>2.6%</b>
Melanoma - Skin	29	2.7%	16	3.1%	13	2.3%
Other Non-Epithelial Skin	6	0.6%	4	0.8%	2	0.3%

(continued on page 11)

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

<b>Breast</b>	<b>167</b>	<b>15.3%</b>	<b>0</b>	<b>0.0%</b>	<b>167</b>	<b>29.1%</b>
<b>Female Genital System</b>	<b>108</b>	<b>9.9%</b>	<b>0</b>	<b>0.0%</b>	<b>108</b>	<b>18.8%</b>
Cervix Uteri	53	4.9%	0	0.0%	53	9.2%
Corpus & Uterus, NOS	35	3.2%	0	0.0%	35	6.1%
<i>Corpus Uteri</i>	29		0		29	
<i>Uterus, NOS</i>	6		0		6	
Ovary	9	0.8%	0	0.0%	9	1.6%
Vagina	2	0.2%	0	0.0%	2	0.3%
Vulva	8	0.7%	0	0.0%	8	1.4%
Other Female Genital Organs	1	0.1%	0	0.0%	1	0.2%
<b>Male Genital System</b>	<b>114</b>	<b>10.5%</b>	<b>114</b>	<b>22.1%</b>	<b>0</b>	<b>0.0%</b>
Prostate	105	9.6%	105	20.4%	0	0.0%
Testis	7	0.6%	7	1.4%	0	0.0%
Penis	1	0.1%	1	0.2%	0	0.0%
Other Male Genital Organs	1	0.1%	1	0.2%	0	0.0%
<b>Urinary System</b>	<b>100</b>	<b>9.2%</b>	<b>68</b>	<b>13.2%</b>	<b>32</b>	<b>5.6%</b>
Urinary Bladder	51	4.7%	39	7.6%	12	2.1%
Kidney & Renal Pelvis	48	4.4%	28	5.4%	20	3.5%
Other Urinary Organs	1	0.1%	1	0.2%	0	0.0%
<b>Eye &amp; Orbit</b>	<b>1</b>	<b>0.1%</b>	<b>1</b>	<b>0.2%</b>	<b>0</b>	<b>0.0%</b>
<b>Brain and Other Nervous System</b>	<b>20</b>	<b>1.8%</b>	<b>5</b>	<b>1.0%</b>	<b>15</b>	<b>2.6%</b>
Brain	8	0.7%	3	0.6%	5	0.9%
Cranial Nerves Other Nervous System	12	1.1%	2	0.4%	10	1.7%
<b>Endocrine System</b>	<b>13</b>	<b>1.2%</b>	<b>3</b>	<b>0.6%</b>	<b>10</b>	<b>1.7%</b>
Thyroid	10	0.9%	2	0.4%	8	1.4%
Other Endocrine including Thymus	3	0.3%	1	0.2%	2	0.3%
<b>Lymphoma</b>	<b>50</b>	<b>4.6%</b>	<b>33</b>	<b>6.4%</b>	<b>17</b>	<b>3.0%</b>
Hodgkin Lymphoma	8	0.7%	6	1.2%	2	0.3%
Non-Hodgkin Lymphoma	42	3.9%	27	5.2%	15	2.6%
<i>NHL - Nodal</i>	29		20		9	
<i>NHL - Extranodal</i>	13		7		6	
<b>Myeloma</b>	<b>20</b>	<b>1.8%</b>	<b>14</b>	<b>2.7%</b>	<b>6</b>	<b>1.0%</b>
<b>Leukemia</b>	<b>19</b>	<b>1.7%</b>	<b>12</b>	<b>2.3%</b>	<b>7</b>	<b>1.2%</b>
Lymphocytic Leukemia	11	1.0%	7	1.4%	4	0.7%
Myeloid & Monocytic Leukemia	7	0.6%	5	1.0%	2	0.3%
<i>Acute Myeloid Leukemia</i>	4		4		0	
<i>Acute Monocytic Leukemia</i>	1		0		1	
<i>Chronic Myeloid Leukemia</i>	2		1		1	
Other Leukemia	1	0.1%	0	0.0%	1	0.2%
<b>Mesothelioma</b>	<b>1</b>	<b>0.1%</b>	<b>1</b>	<b>0.2%</b>	<b>0</b>	<b>0.0%</b>
<b>Miscellaneous</b>	<b>30</b>	<b>2.6%</b>	<b>20</b>	<b>3.9%</b>	<b>10</b>	<b>1.7%</b>
<b>TOTAL</b>	<b>1089</b>		<b>515</b>		<b>574</b>	

## A Dream Come True

**Linda Dolezan's** battle with breast cancer began in 2003 after discovering a lump in her right breast while taking a shower. A diagnostic mammogram later revealed the spot was cancerous, and when additional spots were found in her left breast, it was recommended she undergo a double mastectomy to remove both breasts.

In the years that followed Linda thought she was cancer free. However, in September 2016 she began to feel a nagging pain in her right side. Later, when a bulge developed in her neck, a biopsy revealed the cancer had spread beyond the breast to other organs in the body. Linda had metastatic breast cancer and was now stage IV.

"No one ever told me that one in three women with early stage breast cancer would go on to develop metastatic breast cancer," said Linda. "I didn't even really know what it was."

In January 2017 she began treatment and by March, Linda was considered stable, meaning the cancer was no longer spreading. Because her diagnosis was terminal, Linda would require treatment for the rest of her life in order to manage symptoms. Linda, who lives in Benton Harbor, had previously been traveling to South Bend, Indiana and wanted to receive care closer to home. That's when she met oncologist, **Sapna Patel, MD**, at the Marie Yeager Cancer Center in St. Joseph, Michigan.

After her initial consultation, Dr. Patel suggested Linda get a precautionary brain scan since the cancer had already spread to other areas of her body. The scan revealed a tumor located inside Linda's skull that was pressing on her brain.

"Dr. Patel really listened to me any time I had a concern, where other doctors I've had in the past would have just dismissed it," said Linda. "I truly do credit her for saving my life."

In order to remove the tumor Linda would need to undergo brain surgery with Lakeland, neurosurgeon, **Rafeek Woods, MD**.

"Dr. Woods has such a calm and caring personality and his physician assistant, Katie Trumbley, [PA], was also a great source of comfort," said Linda. "As you can imagine, I was very nervous about the surgery. If it weren't for Dr. Woods and Katie, I am not sure I would have even showed up that day. The surgery was very successful and my recovery was better than I expected."

Linda's care team is extensive; helping her keep it all straight is oncology nurse navigator, **Shelley Wilkinson, RN, CBCN**. One day Shelley asked Linda if she could have one wish what it would be?

"My very first thought was simply making memories – I wanted to go on a vacation with my family," said Linda.

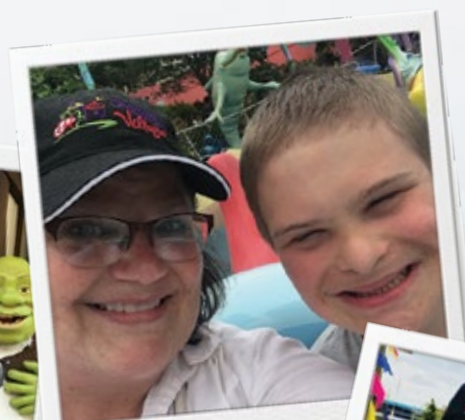
After hearing Linda's wish, Shelley, with the help of clinical research associate, Rose Lucker, began to put things into motion and filled out an application to the Dream Foundation – an organization serving terminally-ill adults and their families by providing end-of-life dreams that offer inspiration, comfort, and closure.

Much to her surprise Linda's wish came true she and her family were granted a week-long trip to Disney World, Universal Studios, and Sea World.

"We had never done anything like that before as a family – it really was a dream," said Linda.

Although Linda's battle with cancer continues, she maintains a positive outlook on her journey.

"There's been a lot of tears but everyone at Lakeland has been so compassionate and caring," said Linda. "I've seen a lot of doctors and had a lot of surgeries, and everyone has been amazing."



## Study of Quality:

# Quality Study: Average Radiation Dose to the Heart for Left-Sided Breast and Chest Wall Patients

### Identified Problem

Radiation treatment to the left breast and chest wall is associated with increased cardiac morbidity and mortality. In October 2016, Lakeland partnered with the Michigan Radiation Oncology Quality Consortium (MROQC) to begin monitoring the average dose of radiation given to the heart in patients with cancer in the left breast. With guidance of MROQC, an average radiation dose of less than two gray unit (< 2Gy) was established as the baseline tolerance.

During deep inspiration breath hold technique (DIBH) the patient inhales to a specified level and then holds that breath during each radiation therapy field delivered. Through DIBH, patients at Lakeland are achieving lower levels of cardiac radiation, resulting in less risk for coronary complications later in life.

### Study Criteria

All patients with left-sided breast cancer who receive radiation will be continually monitored for average heart dose metrics. The data will be extracted from the plan summed dose volume histograms. Each patient can easily be identified by the DIBH technique assigned to their treatment plan. Data collection will continue for a period of time that best represents a significant clinical outcome or metric parameter change.

### Epidemiology/Scope

In women, breast cancer is the leading cause of cancer in developed countries. Earlier detection through regular screenings is improving rates of survival. As a result, there will be more people living a normal life beyond cancer treatment. This means a greater percentage of the population will begin to see long term effects of cardiac radiation exposure from breast treatments.

At this stage, little is known about dose and threshold levels from treatment exposure. Some studies illustrate a linear relationship to dose and incidence of cardiovascular complications (i.e. approximately 7% increased risk per each Gy unit delivered). Therefore, it becomes crucial to continually decrease the average cardiac dose to as low as reasonably achievable.

### Process

Patients undergoing left-sided breast treatment will have their total average heart dose compared to the current goal of < 2Gy. Currently, cardiac metrics are reported monthly as a composite average.

This will remain the format until decided otherwise. Clinical follow-up visits will analyze any changes in cardiac performance and whether they relate to the actual treatment radiation verses lifestyle or congenital effects. Long term follow-up visits will show the most accurate results for cardiac changes.

### Current Data

From the month of October 2016, 39 patients have been monitored for average heart radiation doses. These patients received a combination of single and double phase treatment courses, including supraclavicular involvement and intraoperative radiation therapy (IORT) cavity boost.

Typical follow-up appointments occur at one month and then every three months on a regular basis, extending out at least five years. Prior to five years, it is too soon to determine if any cardiac complications have resulted from radiation exposure since the literature leans toward a minimum of five years follow-up for radiation-induced cardiovascular complications.

### Future Direction

Average heart dose metrics will continue to be collected on every patient undergoing left-sided breast and chest wall treatments at Lakeland. Several more years of data collection are needed to accurately determine cardiac outcomes.

For now, the goal is to continually reduce the average heart dose as much as reasonably achievable without compromising treatment of the primary disease or other areas at risk.



## PDCA Cycle

To properly analyze and evaluate outcomes of this quality study and bring them into best practice, Plan-Do-Check-Act (PDCA) is used. The PDCA cycle is designed to make rapid, incremental, and durable improvements to various processes. Typically, the cycle is repeated more than once to achieve the desired outcome.

### Step 4: Act

#### Standardize & Improve

- Standardize effective process improvements
- Communicate lessons and successes
- Plan on-going monitoring
- Repeat PDCA if indicated

### Step 3: Check

#### Evaluate Results

- Monitor progress of pilot implementation plan
- Gather/analyze data (e.g. run charts)
- Modify implementation plan if necessary
- Monitor results of process improvements

### Step 2: Do

#### Test & Implement

- Assign tasks and communicate
- Implement pilot, evaluate and communicate impact
- Return to step 1-B if necessary
- Revise / implement process improvements

### Step 1-A: Plan

#### Identify Opportunity

- Identify a standard / benchmark
- Define current situation / discrepancy
- Define a measurable goal / outcome
- Ensure collaboration with stakeholders

### Step 1-B: Plan

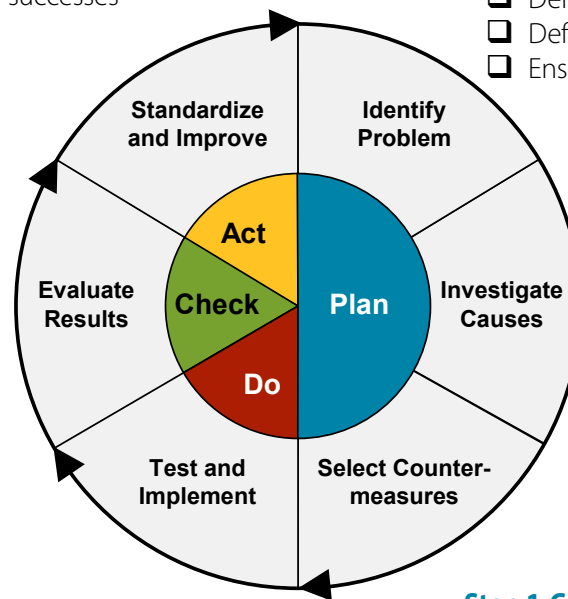
#### Evaluate Process

- Define current process / practice
- Collect / review data
- Identify causes of variation / waste / constraints
- Select targets for process improvements

### Step 1-C: Plan

#### Improve Process

- Evaluate evidence-based solutions
- Choose most effective / efficient process improvements
- Determine need for pilot
- Gain support to test / implement process improvement



For more information on the PDCA cycle, please contact the Performance Support Department at Spectrum Health Lakeland at [performancesupport@lakelandhealth.org](mailto:performancesupport@lakelandhealth.org)



## Early Diagnosis of Breast Cancer Opens More Options

Traditional lumpectomy procedures involve inserting a wire into the breast on the day of surgery for tumor localization. For many women, this leads to discomfort and increased anxiety. Lakeland has begun to use SAVI SCOUT® technology to make the day of breast cancer surgery easier for women, and more efficient and precise for clinicians.

Cianna Medical is the first to adapt this new technology for use in human tissue. Instead of wires, a small reflector the size of a grain of rice is placed into the breast prior to the day of surgery. The SCOUT system detects the reflector using its unique radar signal.

Using SCOUT, surgeons can precisely target the affected tissue to pinpoint its location within 1mm, which can mean more successful surgeries, optimized breast conservation strategies, and enhanced outcomes for women.

Benefits include:

- Minimized wait time on the morning of surgery.
- Possible elimination for additional procedure on the day of surgery, which can be a source of additional worry.
- Precisely locating the tumor helps surgeons to increase the likelihood of complete cancer removal and reduces the likelihood of needing a second surgery.
- The ability of the surgeon to plan the incision can result in less tissue being removed during surgery, increasing the potential for better cosmetic results.
- The reflector is not externally visible after placement and does not restrict your daily activities.

## Screenings Available to Help Catch Cancer Early

Regular screening can help prevent some types of cancer, such as cervical and colorectal cancer. Regular screening for these types of cancer can find and remove abnormal areas before they become cancer. For some other types of cancer, screening may help find cancer early, when it's small. This is when treatment is most likely to work better.

Here are some of the cancer screenings Lakeland offers:

- Breast cancer – clinical self-exam and mammograms
- Skin cancer – professional exam and biopsy of any changes that might be cancer
- Cervical cancer – pap test and human papilloma virus (HPV) tests
- Colorectal cancer – screening for blood or DNA in stool and colonoscopy
- Prostate cancer – prostate-specific antigen (PSA) blood test with or without a digital rectal exam
- Testicular cancer – professional exam
- Lung cancer – annual low-dose CT scan (for current or past smokers) based on guidelines by the National Comprehensive Cancer Network

The most important step to take to manage your health is establishing a good relationship with a primary care provider. Talk about family history and your cancer risk - together you can decide on the cancer screening plan that's best for you.

# Contact Us

## Telephone Directory

### Marie Yeager Cancer Center (MYCC)

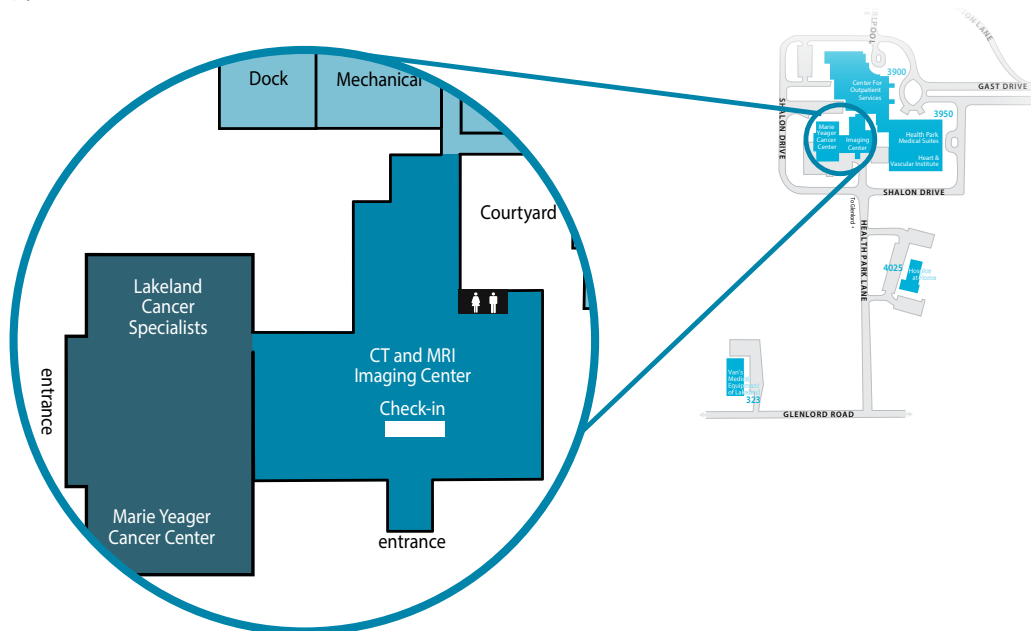
Berrien County Cancer Service .....	(269) 269-3281
Cancer Registry .....	(269) 428-7293 or (269) 428-7290
Clinical Research .....	(269) 556-2881
Executive Director of Oncology Services.....	(269) 556-2880
Infusion Manager .....	(269) 556-2879
Lakeland Cancer Specialists.....	(269) 428-4411
Social Work and Financial Counseling.....	(269) 556-7161
MYCC Front Desk.....	(269) 556-7180
Nurse Navigator.....	(269) 556-2885
Psychology Services.....	(269) 428-4411

### 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) 983-8698
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





Lakeland  
Health

# Marie Yeager Cancer Center

[www.lakelandhealth.org/cancer-care](http://www.lakelandhealth.org/cancer-care)