Lung Cancer Screening Program Outcomes

The Mercy Health Lung Cancer Screening Program began in May 2013. Lung cancer is the leading cause of cancer death among men and women, more than colon, breast and prostate cancers combined. Screenings can find lung cancers at an early stage when the chances of treatment success are much better. Through our program, eligible patients receive a low-dose CT of the chest. To learn more about our Lung Cancer Screening Program and how to enroll in the program, click here (http://www.mercyhealthlackscancercenter.com/lungct).

Patients Enrolled in Our Program

Only individuals who are at high risk of developing lung cancer can enroll in our program. We follow the National Comprehensive Cancer Network's (NCCN) definition of individuals who are at high-risk for lung cancer. High-risk includes the following: ages 55 to 80 years, a current smoker or former smoker who has quit in the past 15 years and having a smoking history of at least 30-pack years.

As of July 20141:

- 397 patients have enrolled in the program.
- 61% of patients are male and 39% are female.
- Average age of individuals enrolled is 64 years.
- 47% of patients are current smokers. Of the 53% who are not current smokers, 14% quit less than a year ago, 27% quit 1 to 5 years ago, 31% quit 6 to 10 years ago, 26% quit smoking 11 to 15 years ago and 2% it's unknown when they quit.
- 265 baseline low-dose CT scans were completed in 2013 and 132 baseline scans were completed thus far in 2014.

Number of Baseline Low-Dose CT Scans by Quarter – 2013 and 2014*

*The Lung Cancer Screening Program began in May 2013. Data were run at the beginning of July, 2014.
Diagnoses and Follow Up

It is common for low-dose CT scans to show nodules or abnormal areas when screening current or former smokers. Often these nodules require follow up. The National Comprehensive Cancer Network (NCCN) has Lung Cancer Screening Guidelines that provide guidance on screening findings and recommendations for follow-up. Follow up recommendations range from having immediate follow up including additional testing or procedures, such as a PET/CT, biopsy, or surgical excision, to having another low-dose CT scan in 3, 6, or 12 months. The Lacks Cancer Center follows these guidelines whenever possible; however, the follow up of screening findings may alter based on individual circumstances and physician discretion.

- **Nodules:**
  Seventy percent of patients screened had nodules present on their baseline CT screening ranging in size from 0.4 mm to 28 mm.

- **Follow Up:**
  Ten percent of patients required immediate follow up after their baseline CT screening, 5% required follow up in 3 months, 12% in 6 months, and 72% of patients required follow up in 12 months.

### Timeframe for Follow-Up after Baseline Low-Dose CT

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Percent</th>
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<tbody>
<tr>
<td>Immediate</td>
<td>10</td>
</tr>
<tr>
<td>3 months</td>
<td>5</td>
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<tr>
<td>6 months</td>
<td>12</td>
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<td>12 months</td>
<td>72</td>
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- **NCCN Compliance:**
  NCCN Lung Cancer Screening Guidelines were followed in determining follow up after the baseline low-dose CT screening in 91% of cases. In most of the cases where the guidelines were not followed, it was because the physician felt the patient needed follow up sooner than what the guidelines recommended.

- **Lung Cancer:**
  Nine early stage lung cancers have been diagnosed as a result of this program. Identifying cancers at an early stage is important as patients with early stage lung cancer may be eligible for treatments that are not appropriate for patients with advanced staged lung cancer.
Program Process Measures

Our Lung Cancer Screening Program tracks several process timeliness measures because we know a timely diagnosis and treatment are important to achieving the best possible outcomes for our patients. We are continuously looking for ways to improve our processes and the timeliness of care provided.

Baseline Low-Dose CT Scan to When Patient was seen by a Specialist

For patients that require further evaluation by a specialist, we evaluate the time it takes from their baseline low-dose CT scan to when they are seen by a specialist. A shorter time to when a patient is seen by a specialist can help reduce the worry associated with waiting and ensure a timely evaluation and diagnosis.

Our goal is for patients to see the specialist within 12 business days of their baseline low-dose CT scan. It took on average 12.4 business days in 2013 and 12.7 business days in 2014 from the date of a patient's baseline low-dose CT scan to the date they were seen by a specialist through our program.

Baseline Low-Dose CT Scan to the Date Treatment was Started

For patients diagnosed with lung cancer, we evaluate the time it took from the date of their baseline low-dose CT scan to the date their treatment started. Being diagnosed and starting treatment earlier often leads to better outcomes.

Our goal is to have patients begin treatment within 30 days of their low-dose CT scan. In 2013, it took an average of 27.3 business days from the date of a patient's baseline low-dose CT scan to the date treatment was initiated for patients diagnosed with lung cancer as a result of the Lung Cancer Screening Program. In 2014, this was reduced to 26.7 business days. By comparison, the Advisory Board reports the observed performance for image to treatment benchmarks as 34 days for the 25th percentile, 59 days for the 50th percentile and 93 days for the 75th percentile for Non-Small Cell Lung Cancer. This indicates that our program is getting patients in to begin treatment in a timely manner.

Lung Cancer Screening Program Timeliness Measures*

*MHSM=Mercy Health Saint Mary's
Diagnosis of Lung Cancer to Date Treatment was Started
For patients who are diagnosed with lung cancer, we evaluate how quickly they begin treatment after their diagnosis. Timely treatment often leads to better outcomes and may help ease the worry associated with waiting for treatment.

Our goal is for patients to begin treatment within 6 business days of their diagnosis. Often patients have surgery to determine their final diagnosis so therefore their treatment start date is the same as their diagnosis date. In 2013, it took an average of 6.5 business days from final diagnosis of lung cancer for patients diagnosed in our Lung Cancer Screening Program to begin their first treatment. Thus far in 2014, all of our patients diagnosed with cancer started treatment (surgery) the same day. By comparison, other studies have reported averages of 23.5 days to 66 days or approximately 2 months between a confirmed diagnosis of lung cancer and the start of first treatment.

Average Days from Diagnosis of Lung Cancer to Date Treatment was Started

Footnotes:
1Data are current as of July 7, 2014.
3Process timeliness measures are reported as business days. Business days exclude weekends and holidays observed by the hospital.
4Non-Small Cell Lung Cancer Dashboard. www.advisory.com
5Some patients had a treatment start date the same date as the final diagnosis date.

MHSM=Mercy Health Saint Mary's