

## **Lung Cancer Screening Program Guidelines for Providers**

Salem Health is an accredited provider of low-dose CT (LDCT) scans for lung cancer screening in high-risk patients. Salem Cancer Institute at Salem Health has assembled a multispecialty team to provide this service. The purpose of this handout is to review the rationale for screening, its pros and cons and, because the role of primary care is vital to management, a guide for physicians and medical professionals.

### **LUNG CANCER**

Lung cancer is the leading cause of cancer death in the United States, expected to kill 160,340 people this year. That is more than breast, prostate and colon cancer combined. The overall 5 year survival rate is only 16%. This is because by the time most patients are symptomatic, they present at a late stage. For this reason, the Salem Cancer Institute and the Thoracic Oncology Committee recommends screening for this high-risk group.

### **LUNG CANCER SCREENING BACKGROUND**

Published in 2011, the National Lung Screening Trial (NLST) demonstrated a 20% reduction in lung cancer specific mortality when compared to chest x-ray (CXR) alone. After lung cancer screening was officially endorsed by several national organizations, Salem Cancer Institute officially began lung cancer screening in January 2013. Since that time, hundreds of patients have been screened, and multiple lives have been saved.

The NLST is considered Category 1 evidence. Major national organizations officially recommend lung cancer screening, including American Cancer Society (ACA), American Lung Association, (ALA) National Comprehensive Cancer Network (NCCN), as well as United States Preventative Task Force (USPTF). In early 2015, CMS officially approved reimbursement for lung cancer screening.

### **WHO SHOULD BE SCREENED?**

At this point, only patients that meet the USPTF and Medicare criteria are eligible for screening.

- Age 55 to 80 (Medicare/Medicare Managed Care patients age 78-80 are eligible as self-pay)
- Patient is asymptomatic
- Number of pack/years – must be 30 or greater
- Still smoking or has quit within the last 15 years

### **EXPECTED RESULTS**

Lung cancer screening has been shown to have a high sensitivity for detecting early lung cancer. Some patients (approximately 13% on baseline scan) will have initial positive scans with the presence of nodule(s). However, most of these nodules are benign and will show no change on follow-up scans. Approximately 1% of screened patients will be found to have lung cancer.

### **LUNG CANCER SCREENING – BENEFITS**

- 20% reduction overall mortality
- Detection of earlier stage
- Quality of life for cancer patients - studies demonstrate improved quality of life since early stage cancer can be treated more readily with minimally invasive techniques, fewer pneumonectomies, less adjuvant chemo/radiation and, potentially, less disease-related morbidity.

## **LUNG CANCER SCREENING – HARMS AND RISKS**

- False alarms related to false positive scans
- Overtreatment
- Additional testing
- Invasive procedures - Invasive procedures have their inherent risks. However, most positive scans are false positive and only require follow-up scans to show stability. Very few patients go on to biopsy. Fortunately, the rate of major complications is quite low (0.06%).

## **RADIATION EXPOSURE**

The mean effective radiation dose of LDCT is 1.5 mSv for a single scan, which represents about 20% of a conventional chest CT scan. LDCT radiation exposure is comparable to a lumbar spine x-ray.

## **SMOKING CESSATION / SMOKING ABSTINENCE**

The most beneficial tool in reducing lung cancer is to encourage stopping smoking. A side benefit of Lung Cancer Screening has emerged, which is the concept of a “teaching moment” for smoking cessation. Stopping smoking in the screened population decreases cancer rates and increases quality of life. The Salem Cancer Institute along with Salem Health Community Education Center (CHEC) strongly recommends smoking cessation and offers resources to physicians and patients. Finally, smoking cessation has been strongly advocated by all of the Societies as part of a screening program.

## **COST BENEFIT**

Since the cost of treating late stage lung cancer is higher than stage I and II (treated with surgery alone), the ultimate question, and the one that needs to be discussed with the patient, is what is the benefit to the individual patient. There is clearly a population benefit in terms of mortality. To prevent one lung cancer death, 320 high-risk patients need to be screened. But what is the benefit to the individual patient? A full discussion with the patient about risks and benefits and expectations is required.

## **EVALUATION OF NODULES**

Appropriate evaluation and follow-up recommendations are based on using guidelines from American College of Radiology (ACR) Lung-Rads Version 1.0 Assessment Categories release date: April 28, 2014. Assessment and recommendation format is based on national breast cancer screening. Every report will have a specific recommendation. Follow-up intervals are derived from three criteria: Initial size of the lesion, growth, and morphology. To assist with follow-up and evaluation, this resource can be found in our handout (request from the SCI) or online at our website. The link is also listed at the bottom of all LDCT imaging reports.

## **THE ROLE OF PRIMARY CARE**

Primary care physicians play an integral role in the overall lung cancer screening process. Patients can be appropriately chosen based on approved selection criteria (ages 55-80, asymptomatic,  $\geq 30$  pack-year smoking history, and still smoking or have quit no more than 15 years ago). Patients should initially be counseled on the risks and benefits of screening as described above. This “Shared Decision Making” should also include counseling patients to stop smoking. Primary care physicians will also be able to encourage patients to continue with screening every year.

**For more information, please contact the Salem Cancer Institute Lung Cancer Screening Program at 503-814-1459.**