**Lung cancer**

**## Clinical description (if available already):**

Incident primary malignant neoplasm of lung and descendants. Excluding types that do not originate from lung tissue melanoma’s, sarcoma’s, lymphoma, carcinoids, benign, and secondary malignancies.

**### Overview**

Lung cancer is the most common cause of cancer death globally and the second most common cancer, accounting for about one out of five malignancies in men and one out of nine in women. Lung cancer is uncommon below age 40, with rates increasing until age 80. The World Health Organization (WHO) defines lung cancer as tumours arising from the respiratory epithelium (bronchi, bronchioles, and alveoli). The WHO classification system divides epithelial lung cancers into four major cell types: small-cell lung cancer (SCLC), adenocarcinoma, squamous cell carcinoma, and large-cell carcinoma; the latter three types are collectively known as non-small-cell carcinomas (NSCLCs). Although cigarette smoking is the cause of many lung cancers, several other risk factors have been identified, including occupational exposure to asbestos and other chemicals, family history, radiation, genetics and prior history to prior lung diseases such as chronic bronchitis, emphysema, and tuberculosis. Treatment of lung cancer depends on type but can include surgery, radiation and/or chemotherapy.

**### Presentation**

In many cases, symptoms do not appear until the cancer is quite advanced. Symptoms can include difficulty breathing or shortness of breath, coughing, blood in sputum, recurring pneumonia or bronchitis; chest, shoulder, or arm pain; Loss of appetite; unexplained weight loss; Bone pain; Hoarseness; Headaches or seizures; Swelling of the face or neck; Fatigue.

**### Assessment**

Tissue sampling is required to confirm a diagnosis in all patients with suspected lung cancer.

**### Plan**

Non-small cell lung cancers (squamous, adenocarcinoma and large cell carcinoma) are treated with surgery, but largely unresponsive to chemotherapy. Those with involvement of lymph nodes can also be treated with chemoradiation followed by durvalumab. Patients with distant metastases from non-small cell lung cancer can be treated palliatively with radiation. Chemotherapy can be tailored depending on the genetic mutation of the tumour. Conversely small cell lung cancers do respond to chemotherapy and radiation but are usually too far advanced at diagnosis for a surgical cure.

**### Prognosis**

For non-small cell lung cancer survival is dependant on staging which in turn is dependant on size and location of tumour and involvement of lymph nodes and any metastasis. Two-year survival can vary from over 70% for stage 2 reducing to 23% and below for stage 4. Small cell lung cancer has a low two-year survival for stage 3-4 of around 2%.

**### MedDRA PTs**

NA

**### Disqualifiers**

Benign , secondary, unknown primary, melanoma’s, lymphoma, carcinoids, sarcoma’s

**### Strengtheners**

Biopsy, CT-PET scan, CT scan, sputum sample, PD-L1 for non-small lung cancer

**### Suggested Logic Description**

**Small cell lung cancer**

* With 1 year of history before index date
* => 18 years old
* Excluding terms for squamous, adenocarcinoma and large cell carcinoma (NSCLC)

**Non-small cell lung cancer**

* With 1 year of history before index date
* => 18 years old
* Excluding terms small cell lung cancer

**Phenotypes to develop:**

1. **Lung cancer BROAD**

Includes all codes for both small and non small cell lung cancer. Also include code for malignant neoplasm of respiratory tract.

1. **Non small cell lung cancer NARROW**

As lung cancer BROAD but removing codes related to small cell lung cancer and removal of code malignant neoplasm of respiratory tract.

1. **Small cell lung cancer**

Includes only codes related to small cell lung cancer

1. **Lung cancer BROAD stages 1-4**

Includes lung cancer BROAD codelist with measurements for each stage 1-4

1. **Lung cancer NARROW stages 1-4**

Includes lung cancer BROAD codelist with measurements for each stage 1-4

**### Sources**

Loscalzo, Fauci, Kasper, Hauser, Longo, Jameson: “Harrison’s Principles of Internal Medicine” 21st Edition McGrawHill

<https://training.seer.cancer.gov/lung/>