Introduction: Lung cancer (LC) is a malignancy that originates in tissues of the lung, typically cells lining air passages. It is the 2nd most common cancer in men and women, and leading cause of cancer deaths. In 2019, an estimated 228,150 new cases and 142,670 deaths are expected to occur in the U.S. Incidence and mortality have declined over the last few decades, mostly due to reductions in smoking, and screening in heavy smokers could also help reduce mortality.1

Fast Facts
Among patients receiving care in the VHA:
- There are ~7,700 new LC cases per year, accounting for 20% of all new cancer cases.3
- Overall age-adjusted LC incidence FY05-FY14 is 77/100,000. The age-adjusted LC incidence has decreased from 81 to 62 per 100,000 between FY05-FY14. In the US population, the LC incidence rate among males was 76/100,000 in 2005 and 59/100,000 in 2014.2
- 5-year overall survival is 13% and median survival is 9 months for patients diagnosed in 2002-2012.
- Median age at LC diagnosis is 68 in males and 62 in females.
- Smoking is the primary LC risk factor, with ~80% of LC deaths due to smoking.1 Among VA LC patients, 50% were former smokers while almost 40% were current smokers at the time of diagnosis.59/100,000 in 2014.2

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The 2 major LC histology groups are non-small cell (NSCLC), accounting for 86% of all LC cases, and small cell (SCLC). Adenocarcinoma and squamous cell are predominant subtypes of NSCLC. LC is typically diagnosed at an advanced stage. For NSCLC, ~30% are early-stage (I/II) disease, 25% stage III, and 40% stage IV. The majority (85%) of SCLC cases are advanced stage.

Five-Year Survival

5-year overall survival has increased from 10% to 15% between 2002-2012, whereas 5-year lung-cancer specific survival has increased from 16% to 35%.

Examples of VA Operational and Research Projects focused on LC

- VA Precision Oncology Program to be expanded nationally to help Veterans who have been newly diagnosed with non-small cell lung cancer
- VA Partnership to Increase Access to Lung Screening (VA-PALS)
- VA Lung Cancer Surgery or Stereotactic Radiotherapy (VALOR) phase III randomized trial (CSP#2005)
- Palliative Care Interventions for Outpatients Newly Diagnosed with Lung Cancer: Phase II (HSR&D)
- The role of RNA splicing in non-small cell lung cancer (BLR&D)

Summary of Data Sources and Analysis

Data were obtained from the VA Central Cancer Registry, which contains demographic, tumor and treatment characteristics for patients diagnosed and/or treated in the VHA. Lung cancer defined as ICD-O-3 C340-C349, SEER site recode 22030. Vital status was obtained from the VA Corporate Data Warehouse. Overall survival was estimated using the Kaplan-Meier method. The age-adjusted incidence rate was calculated based on US 2010 adult population estimates and VHA user population. The number of VHA users (i.e., receipt of inpatient, outpatient, purchased, or pharmacy care or long-term services/support) in FY05-15 was obtained from the VA National Center for Veterans Analysis and Statistics.

Notes: This work was conducted under the Epidemiology of Cancer among Veterans (EpiCAN) protocol (IRB: #2009). This material is the result of work supported with resources and the use of facilities at the VA Cooperative Studies Program Epidemiology Center in Durham, NC. The contents do not represent the views of VA or the US Government.

References