What Every Family Physician Should Know About Lung Cancer

William McNulty, MD
John Lynch

On behalf of the Improving Access to Treatment for Lung Cancer Patients (AccessTLC) project
Disclosures

William McNulty, MD:
• Nothing to Disclose

John Lynch:
• Nothing to Disclose
Objectives

As a result of participation in this session, you will improve your competencies as related to:

- Recognizing symptoms indicative of lung cancer
- Clinically evaluating patients when lung cancer is suspected
- Effectively communicating with lung cancer patients
- Applying rapid referral to appropriate specialists
Part 1
ARS Question #1

Approximately what percentage of lung cancer diagnoses are among people who have already quit smoking?

a. 15%
b. 30%
c. 45%
d. 75%
ARS Question #1:
c. 45%
Case

- 69 year old male, who quit smoking cigarettes 25 years ago (50 pack year history)
- Pipe and chewing tobacco use continued until age 64
- Family history of lung cancer, including brother’s death 3 months prior
- Patient complains of persistent dry cough
ARS Question #2

• Which of the following would you be more likely to order?

a. Chest x-ray
b. Chest CT scan
c. Spirometry
d. Antibiotics
e. None of the above
If a suspicion of lung cancer exists, the best answer is:

b. Chest CT scan
Case Continued

• The primary physician ordered an x-ray of the chest
• Results of x-ray led primary physician to order a CT scan of the chest
• CT revealed a mass on the right side near the esophagus
• Patient referred to pulmonology for biopsy
Case Continued

- Pathological review indicated non-small cell lung cancer (NSCLC), and he was referred to oncology
- Subsequent staging indicated IIIA disease
ARS Question #3

- How likely are you to discuss clinical trials as a treatment option for this patient?
  a. Unlikely
  b. Uncertain
  c. Likely
ARS Question #3

c. Likely
ARS Question #4

• Is Stage IIIA NSCLC curable?
  a. Yes
  b. No
  c. Uncertain
ARS Question #4

a. Yes
Case Continued

- The patient receives combined chemotherapy and radiation therapy, followed by maintenance experimental immunological therapy on a second clinical trial.
Case Continued

I am that case.
Leading Causes of Death in the US

- Heart Disease: 33%
- Cancer: 30%
- Stroke: 7%
- Resp. Disease: 7%
- Accidents: 7%
- Alzheimer’s: 4%
- Diabetes: 4%
- Flu & Pneumonia: 3%
- Kidney Disease: 3%
- Septicemia: 2%
Leading Causes of Cancer Death in the US

- Lung & Bronchus: 28%
- All Others: 21%
- Colorectal: 9%
- Breast: 7%
- Prostate: 6%
- Pancreatic: 6%
- Leukemia: 4%
- Lymphoma: 4%
- Liver: 3%
- Bladder: 3%
- Esophageal: 3%
- Ovarian: 2%
- Brain: 2%
- Kidney: 2%
Leading Causes of Death in the US

- Cancer is the leading cause of death in people under the age of 75.

- Lung cancer kills approximately 160,000 people in the United States each year – more people than breast, colon, and prostate cancers combined.
Lung Cancer: Risk

- 1 in 13 men and 1 in 16 women will be diagnosed with lung cancer
- Lung Cancer can affect ANYONE
Lung Cancer: Risk

Lung cancer can affect anyone

- **People who currently smoke**: 44%
- **People who used to smoke**: 43%
- **People who have never smoked**: 10-15%

*As the population of people who have quit smoking expands, this % is growing*
Other Causes of Lung Cancer

- Second hand smoke
- Radon
- Genetic susceptibility
- Cooking fumes (developing countries)
- Asbestos, cadmium, arsenic
Lung Cancer Screening: Where Are We?

- National Lung Screening Trial: Largest lung cancer screening trial ever (over 50,000 enrolled)
- Compares annual CXR to low dose CT scan
- Results released November 2010; published June, 2011¹
- 20% risk reduction in lung cancer deaths !!!

¹ The National Lung Screening Trial Research Team, NEJM, 2011
Lung Cancer Screening: Where Are We?

Who was screened?
- Over age 55
- 30 pack year smoking history

Risks from screening
- Biopsy / surgery for non-malignant disease
- Radiation exposure (low risk)
Lung Cancer Screening: Where Are We?

- Data has just been released, so no guidelines yet
- No insurance coverage yet
- Difficult position for you – use clinical judgment
Symptoms of Lung Cancer: Local/Regional Disease

- Bronchial obstruction:
  - Cough, shortness of breath, hemoptysis

- Chest wall involvement:
  - Pain

- Laryngeal nerve involvement:
  - Hoarseness

- Vena cava involvement:
  - Facial swelling, flush
Symptoms of Lung Cancer: Metastatic Disease

- **Bone**: pain

- **Brain**:
  - Nausea
  - Headache
  - Other central nervous system symptoms

- **Liver**:
  - Anorexia
  - Painful right upper quadrant

- **Adrenal**: often asymptomatic
Paraneoplastic Symptoms of Lung Cancer: Metastatic Disease

- Anorexia, weight loss
  - Most common presenting symptoms of ANY cancer

- Hormonal
  - SIADH (low sodium - nausea, vomiting, headache, confusion)
  - Hypercalcemia (high calcium – confusion, abdominal pain, polyuria)

- Deep venous thrombosis
Histological Types of Lung Cancer

- Non-Small Cell Lung Cancer
  - Adenocarcinoma
    - Adenocarcinoma in situ (previously Bronchioloalveolar)
  - Squamous cell carcinoma
  - Large cell

- Small Cell Lung Cancer
Histological Types of Lung Cancer

- **Non-Small Cell Lung Cancer**
  - Can occur in people with or without smoking history

- **Small Cell Lung Cancer**
  - Rare, but not impossible, in people without smoking history
Staging: NSCLC

**Stage I:**
- ≤ 5cm; no lymph nodes involved

**Stage II:**
- ≤ 7cm, if ipsilateral lymph nodes involved
- >7cm, or local invasion, or multiple nodules in same lobe if no lymph nodes involved
Staging: NSCLC

Stage III:
- Has not spread beyond lymph nodes in chest
- May have metastases within ipsilateral lung
- May have local invasion of major structures

Stage IV:
- Metastatic disease or disease with pleural effusion
Small Cell Lung Cancer: Staging

**Limited stage:**
- Treated with chemotherapy & radiation from a single field.
- Potentially curable!

**Extensive stage:**
- Has spread to a larger region of the chest and/or other parts the body.
- Treated with chemotherapy only.
Lung Cancer Treatments

- Local disease = local treatment
  - Surgery
  - Radiation therapy

- Systemic disease = systemic treatment
  - Chemotherapy
  - Targeted therapy
  - Radiation therapy (for palliative purposes)
Response to Gefitinib
Clinical Trials: The Road to New Therapeutic Advances

- With the advances being made in lung cancer treatment, clinical trials are an attractive therapy option.

- The family physician is often the most trusted – your advice carries a lot of weight!!

- You don’t need to know that there is a trial available, just plant the seed!
Referral: Fast and Appropriate

- Medical oncologists – appropriate for every lung cancer patient

- Thoracic surgeons – role in treatment for all stage patients

  - Best results from centers that do higher number of thoracic surgeries
  - Most early-stage lung cancer patients will still need to see a medical oncologist
Palliative Care: Offer Early

Temel et al., NEJM, 2010
Smoking Cessation: Always Beneficial

- Quitting smoking benefits (even with lung cancer)
  - Less stress on heart & lungs
  - Helps treatments work better
  - Helps patients live longer
  - Comprehensive quit plan often needed
Lung Cancer: The Facts

Lung Cancer is one of the most deadly cancers

5-yr. Cancer Survival Rates, 2009

Prostate: 99%
Breast: 89%
Colorectal: 64%
Lung: 15%
Lung Cancer: The Hope

Despite the relatively low funding for lung cancer research, significant progress has been made in treating lung cancer.

1970: Best supportive care
1980: Single-agent platinum
1990: Doublets
2000: Targeted therapies
2010:

There is more hope for lung cancer patients than ever before!
A Promising Hypothesis

With early referral, more personalized therapy, and more research dollars, the statistics will change!
Thank You!

Access TLC
Improving Access to Treatment for Lung Cancer Patients
The goals of AccessTLC are to:

- Reduce the delay in diagnosis and treatment of lung cancer in the US thereby limiting disease progression prior to treatment,
- Increase access to stage-appropriate care based on scientific evidence, and
- Increase the number of lung cancer patients who are enrolled in clinical trials thus shortening the time required to make new and more effective treatments available to patients.

This multifaceted, multi-partner initiative is sponsored by the University of Wisconsin School of Medicine and Public Health in partnership with the National Lung Cancer Partnership and its chapter, the North Carolina Lung Cancer Partnership, and Healthcare Performance Consulting.
Online LSA CME Activity
(Learning from Self-Assessment)

Utilizing national experts, AccessTLC has developed a FREE Online LSA Activity for your participation!

The LSA has been designed as an interactive, case-based activity that will help participants assess their competencies and identify specific gaps in their practice related to recognizing symptoms indicative of lung cancer, evaluating patients when lung cancer is suspected, communicating with lung cancer patients, and referring them to appropriate specialists.

Please visit the link below to participate in this FREE online educational activity and earn CME credit:

http://cme.wisc.edu/LSA/AccessTLC/index.php

Accreditation Statement: The University of Wisconsin School of Medicine and Public Health is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Credit Designation Statement: The University of Wisconsin School of Medicine and Public Health designates this enduring material for a maximum of 0.5 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

This activity is supported by an educational grant from Pfizer.