Who Should be Responsible for the Initial Diagnosis and Staging of Lung Cancer?
Surgeons vs. Non-Surgeons: Competition or Collaboration

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Disclosures

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Why Surgeons Should Control Lung Cancer Staging

- 43 year old female
- Biomedical engineer
- Pneumonia
- CT Scan
EBUS by IP (11R, 4R POSITIVE)
Sent for Definitive Chemo-Radiation

Comes to my office crying
Review of PET and CT

EBUS-EUS – THORACIC SURGERY
4R, 4L, #7, 8R, 9R = Negative
10R = Positive
SURGERY

- Right Pneumonectomy + MED LN Dissection

Path:
- Right Hilar Squamous Cell Carcinoma
- 4R: 6 LNs Negative
- #7: 5 LNs Negative
- 2R: 3 LNs Negative
- 8R: Negative
- 9R: Negative
Why Surgeons Should Control Lung Cancer Treatment and Palliation

- 46 year old male
- Return from Africa
- Stridor
- EBOLA Isolation

- Sent from OSH Pulmonologist for Airway Palliation and Y-Stent
BAL RUL = Adenocarcinoma
EBUS Station #7 = Normal Lymphocytes
No other LN Biopsies
Why Should Thoracic Surgeons Perform EBUS-EUS

- Traditionally mediastinum staged by TS
- Comprehension of the mediastinal anatomy
- Familiar with the TB and Esophagus
- Treatment planning
  - Neoadjuvant therapy
  - Surgical resection
  - Palliation
- Surgical decision making
  - Operative planning
Our Closest Colleagues

- **Vascular Surgery**
  - Endovascular Stenting
  - Endovascular Dilation

- **Cardiac Surgery**
  - Coronary Stenting
  - Percutaneous Valves
  - Percutaneous Valvuloplasty
  - Hybrid Surgery
Non-Radiologists Performing Ultrasound

- ER
- Gynecology
- Obstetrics
- Pulmonology
- Trauma Surgery
- Breast Surgeons
- H+N Surgeons
- Cardiology
- Hepatobiliary Surgeons
- Sports Medicine
Do You Want to Lose Control of?

**Diagnosis**
- NSCLC
- Small Cell Lung Cancer
- Lymphoma
- Sarcoidosis
- TB
- Thymoma / Thymic CA
  - Advanced Disease Only
- Germ Cell Tumors
- Thyroid Goiter
- Mediastinal LN Metastases

**Staging**
- NSCLC
- Esophageal Cancer
- Small Cell Lung Cancer
- Mesothelioma
- H+N Cancers
- Mediastinal Metastases
Do You Want to Lose Control of?

Treatment

- Barrett’s Esophagus
- High Grade Dysplasia – IMC
- T1a Esophageal Cancer
- Reflux Disease
- Achalasia
- Benign Esophageal Stenosis
- Malignant Esophageal Palliation
- Upper GI Bleeding
- Zenker’s Diverticulum

- Endoluminal resection of benign airway tumors
- Airway dilation / stenting in benign disease
- Endoluminal valves for air leaks and BPF
- Endoscopic LVRS
- Airway palliation
Minimally Invasive Mediastinal Staging

Lung Cancer

- Endobronchial Ultrasound
  **EBUS (L + R)**
- Endoscopic Ultrasound
  **EUS (L + R)**
Tailoring Your Diagnostic Technique To The Anatomy
Endosonography vs SMS

<table>
<thead>
<tr>
<th></th>
<th>Sens</th>
<th>NPV</th>
<th>Accuracy</th>
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</thead>
<tbody>
<tr>
<td>EBUS</td>
<td>72% (0.58-0.83)</td>
<td>88% (0.81-0.93)</td>
<td>91% (0.85-0.95)</td>
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<tr>
<td>EUS</td>
<td>62% (0.48-0.75)</td>
<td>85% (0.78-0.91)</td>
<td>88% (0.82-0.92)</td>
</tr>
<tr>
<td>EBUS-EUS</td>
<td>91% (0.79-0.97)</td>
<td>96% (0.90-0.99)</td>
<td>97% (0.93-0.99)</td>
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EBUS-EUS diagnosed N2/N3/M1 disease in 24 patients in whom SMS was negative

Preventing thoracotomy in an additional 14%

Liberman et al. Chest 2014;146:389-397
Endosonography - Effect on Volume

- Cervical Mediastinoscopy
- Anterior Mediastinotomy
- EBUS-EUS

Year | Cervical Mediastinoscopy | Anterior Mediastinotomy | EBUS-EUS
--- | --- | --- | ---
2007 | 44 | 11 | 44
2008 | 58 | 20 | 58
2009 | 49 | 16 | 49
2010 | 31 | 10 | 31
2011 | 15 | 4 | 15
2012 | 9 | 2 | 9
2013 | 8 | 2 | 8
2014 | 8 | 3 | 8

Total for 2014: 813
The Future of Interventional Thoracic Endoscopy

ENDOSCOPIC PARENCHYMAL LUNG CANCER THERAPY:

- RFA
- Microwave
- Cryotherapy
- Steam
Would You Rather Your Future Be:
Or This…
Don’t Get Left Behind

IF YOU COULD STOP DOING THINGS
THE OLD WAY

THAT'D BE GREAT
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