Surgical Treatment of Lung Cancer

Initial Evaluation
Staging
Resection

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Cardiovascular/Thoracic Surgery Services
Disease Stages for Potential Surgical Resection

Non small Cell Cancer: Squamous Cell Carcinoma, Adenocarcinoma

Small Cell Cancer is not Surgically Treatable Disease with rare exception

Disease Stages for Potential Surgical Resection
- Stage I A/B
- Stage II A/B
- Stage III A
Anatomic Considerations for Resection

CENTRAL ENDOBRONCHIAL TUMOR MASS
PERIPHERAL PARENCHYMAL NODULE

STRUCTURAL/ CHEST WALL INVOLVEMENT
Surgical Workup essentials for consideration for Resection

- Chest X-ray
- CT Scan of Chest with Contrast
- CT guided needle Bx: Establish Tissue Dx
- PETCT
- Pulmonary Function Tests FEV1 FVC DLCO
- Bronchoscopy for endobronchial assessment
- EBUS noninvasive lymph node staging
EBUS: Endobronchial Ultrasound
Surgical Procedures for Staging and Treatment

MEDIASTINOSCOPY - ALL PATIENTS FOR RESECTION

SURGICAL LYMPHADENECTOMY LEVELS 4R, 5, 6, 7, 8, 9
Surgical Procedures for Resection of Tumor

Open Posterior-Lateral thoracotomy
Surgical Procedures for resection of Tumor

Video-assisted Thoracic Surgery VATS

Hybrid
VATS: View through the scope
Surgical Procedures for resection of Tumor

Robotic Surgery
Evolution of Surgical Staplers
Surgical Resection of Tumor

- **Wedge Resection** – Compromise for Functional Limitation
- **Lobectomy** – Optimal Resection for Cure Anatomic section of lung with immediate lymphatic bed
- **Anatomic Segmentectomy** – Lesions less than 2 cm equivalent to lobe while preserving lung function
- **Pneumonectomy** - Only if absolutely required Significant function/physiologic impairment
Resections of Special Consideration

Bronchial and/or Vascular Sleeve Lobectomy
Resections of Special Consideration

Resectable Chest Wall and Structural Invasive Tumor Masses
Superior Sulcus Tumor (Pancoast Tumor)
Vertebral Body Invasion
Other Structures
Resections of Special Consideration

Induction Chemo Radiation for Resectable advanced Disease

Induction Chemotherapy for Stage IIIA NSCLC

<table>
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<th>Trial, Arm</th>
<th>N</th>
<th>Med Surv</th>
<th>3-Year Surv</th>
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<td>Rosell, 1994</td>
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<td>Surgery</td>
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CT = chemotherapy

Rosell, NEJM 330: 153, 1994
Roth, JNCI 86: 673: 1994

From Rosell, 1994