

Tumor Board - Stage IIIA NSCLC

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Director of Endoscopy, University Health Network

Director, Interventional Thoracic Surgery Program

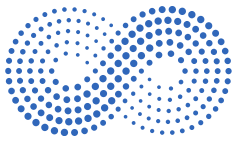
Professor and Chair, Division of Thoracic Surgery, University of Toronto

48th Annual Toronto Thoracic Surgery Refresher Conference

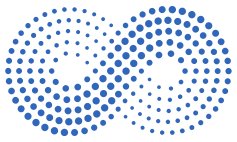
Toronto, June 7th 2024

Disclosure

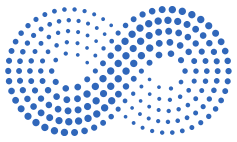
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Management of Stage IIIA (N2) Lung Cancer

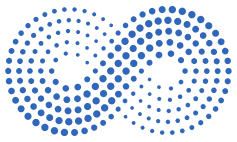


Case Presentation

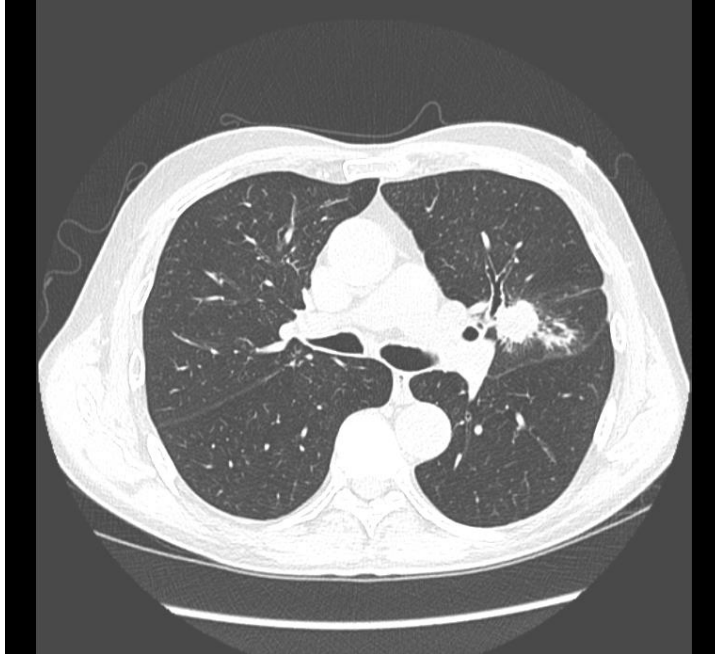


66M, 60 pk yr smoker, LUL lung nodule

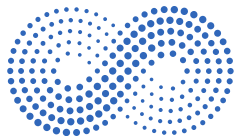




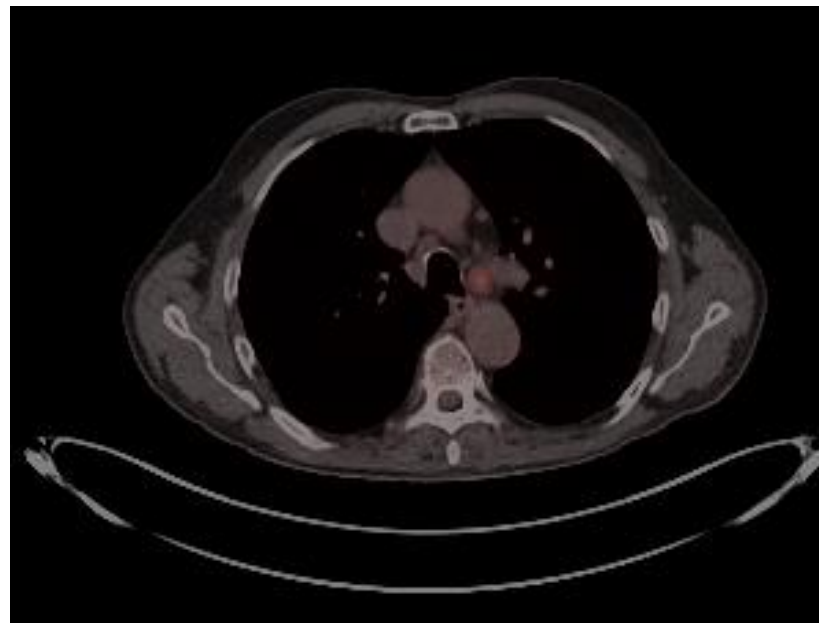
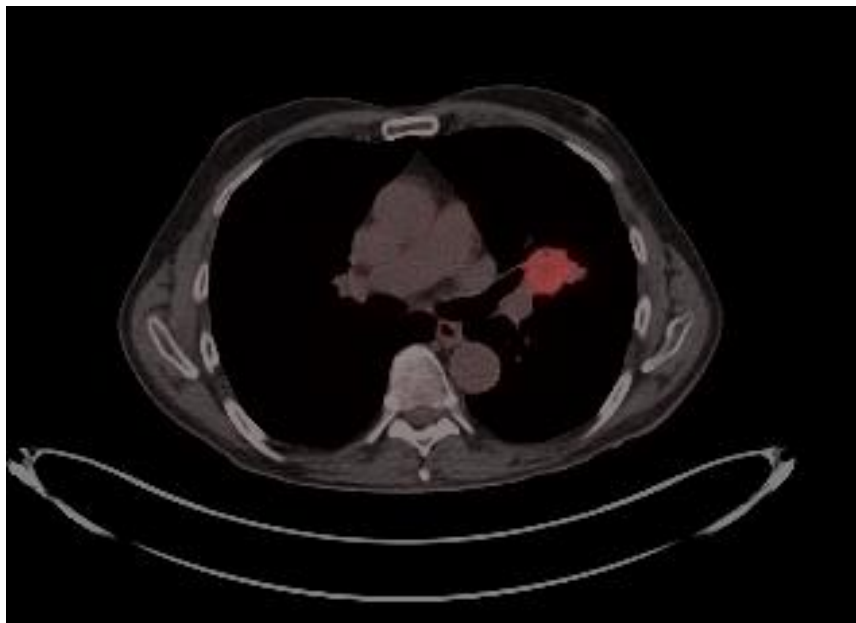
CT Chest



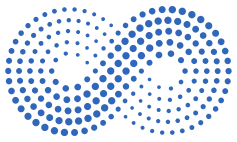
LUL 3.4x3.1cm lung mass
Slightly enlarged 4L



PET-CT

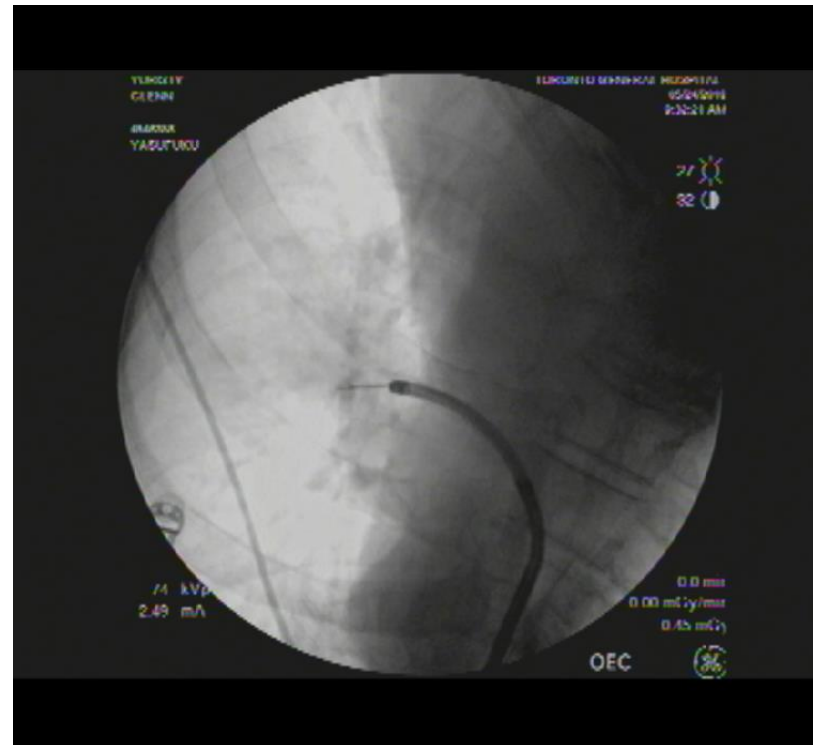


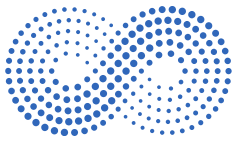
Significant FDG uptake in LUL tumor SUV 12.6
FDG avid 4L (SUV 9.4) measuring 1.3cm



Transbronchial Biopsy

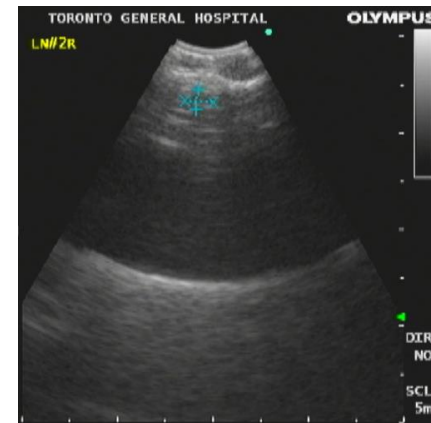
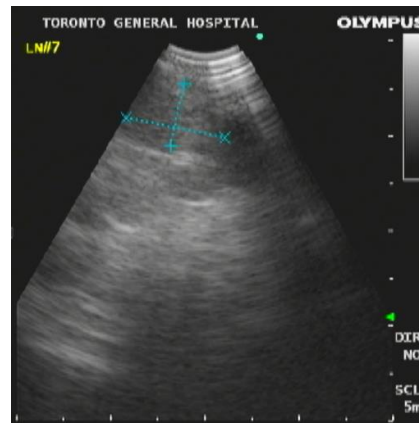
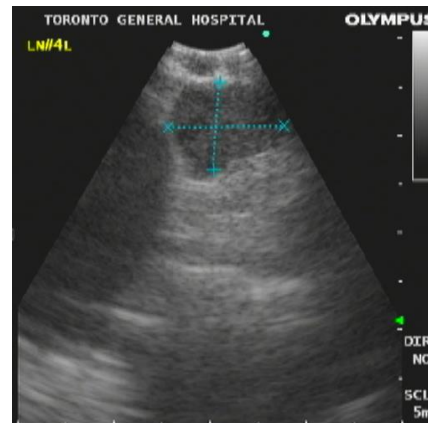
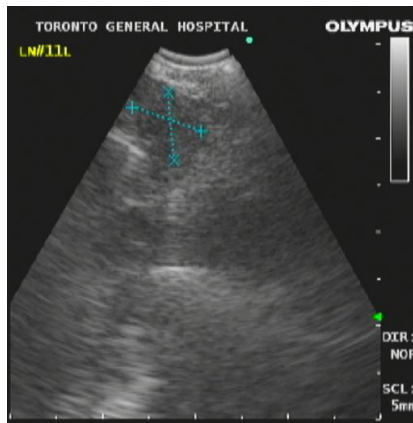
- RP-EBUS guided TBNA LUL: adenoca





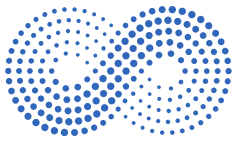
Mediastinal Staging

- EBUS-TBNA (4R, 4L, 7, 11L)
 - 4L +ve
 - 4R, 7, 11L -ve

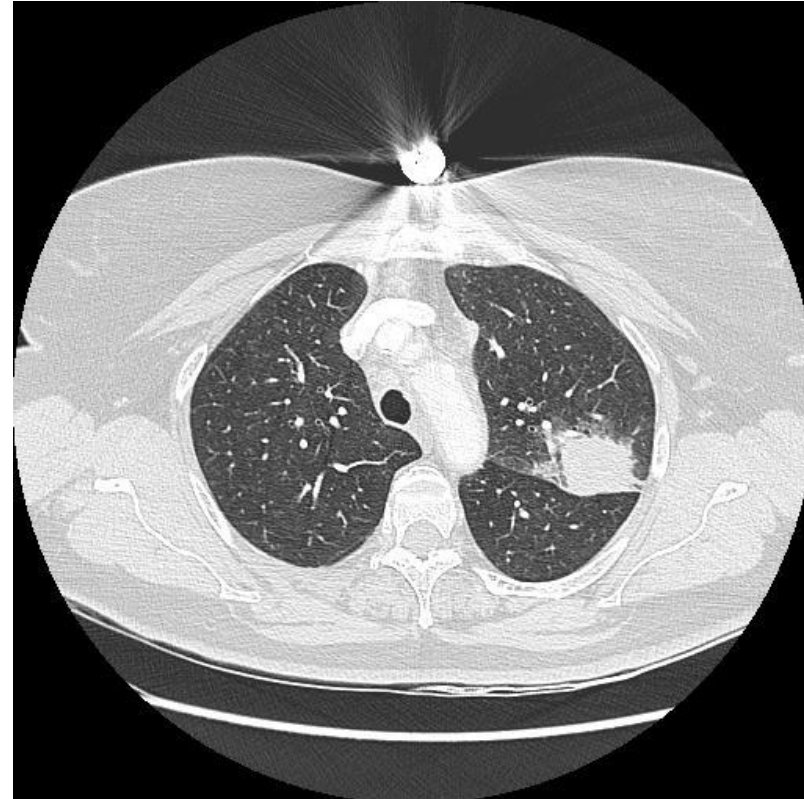
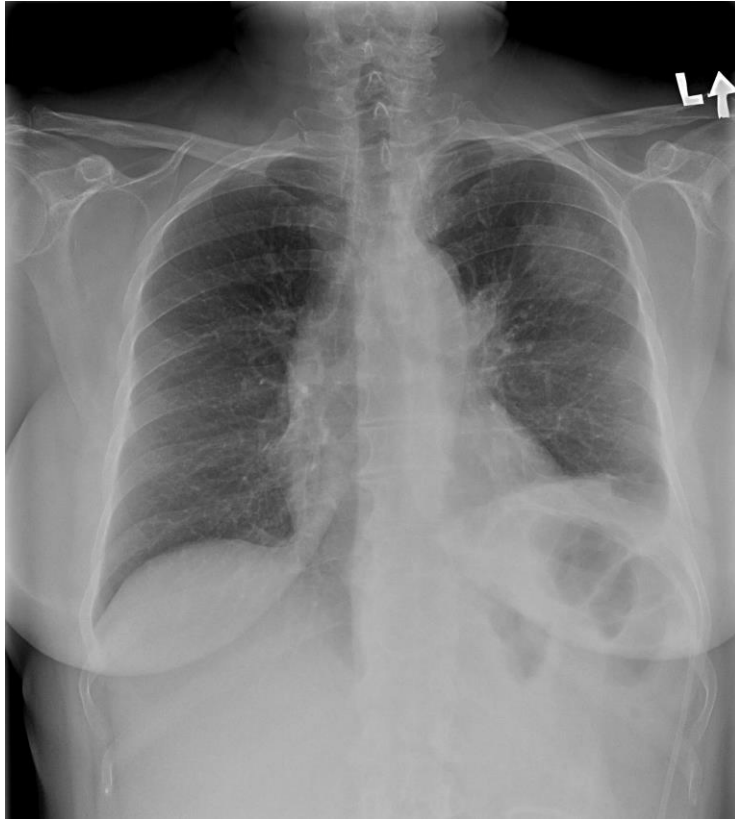


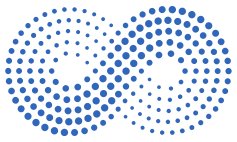
Mediastinal Staging

- RP-EBUS guided TBNA LUL: adenoca
- EBUS-TBNA (4R, 4L, 7, 11L)
 - 4L +ve
 - 4R, 7, 11L -ve
- cT2aN2M0 stage IIIA adenoca, EGFR -ve, PD-L1 -ve
- Treatment options?

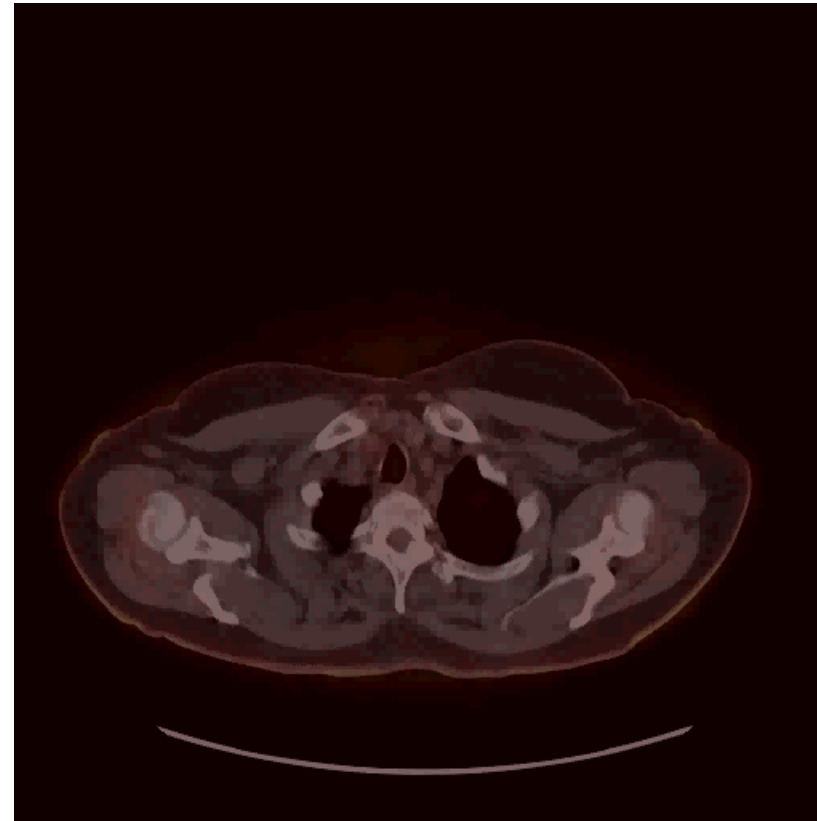


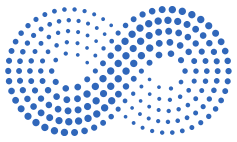
58F, LUL mass





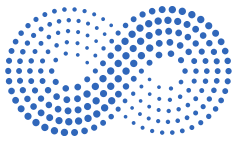
58F, LUL mass





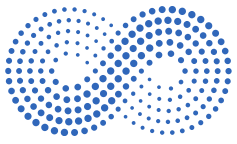
Mediastinal Staging

- FNA
 - Adenocarcinoma
- EBUS-TBNA (2R, 4R, 2L, 4L, 7, 12L)
 - all negative for metastasis

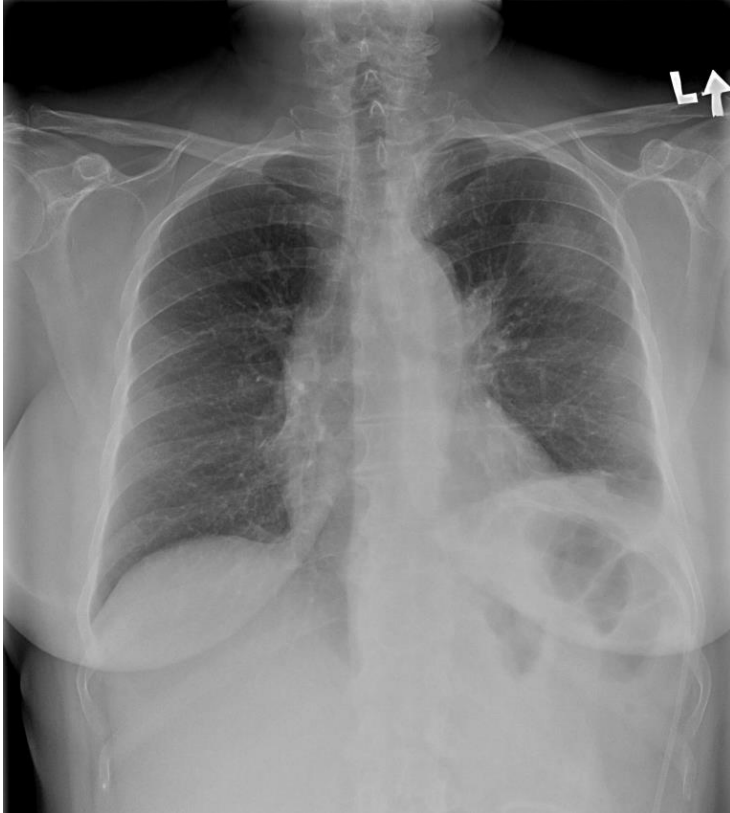


Neoadjuvant Chemo/Rads

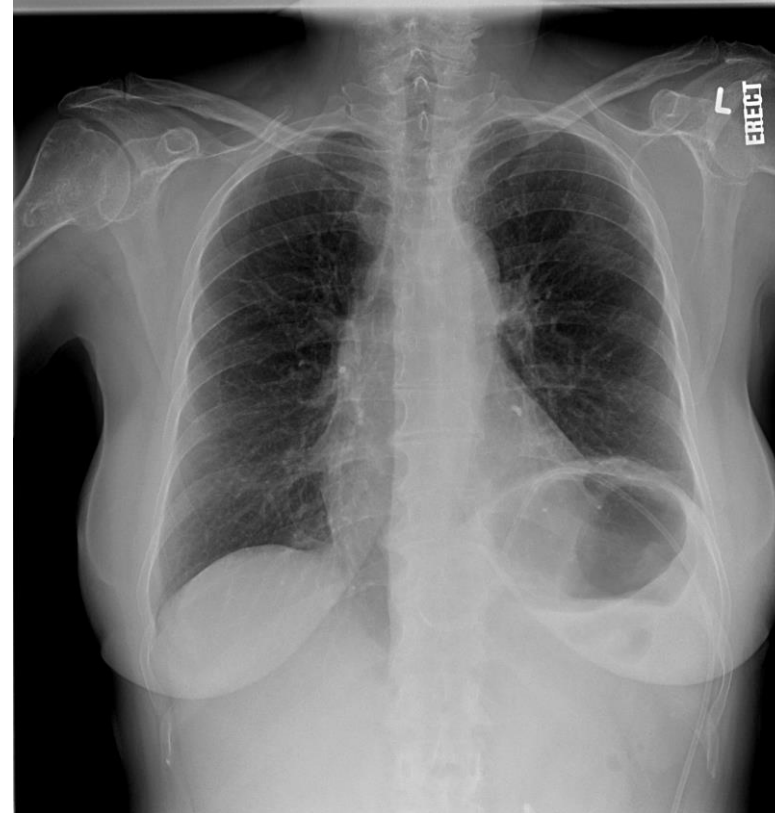




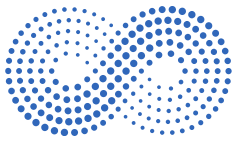
Neoadjuvant Chemo/Rads



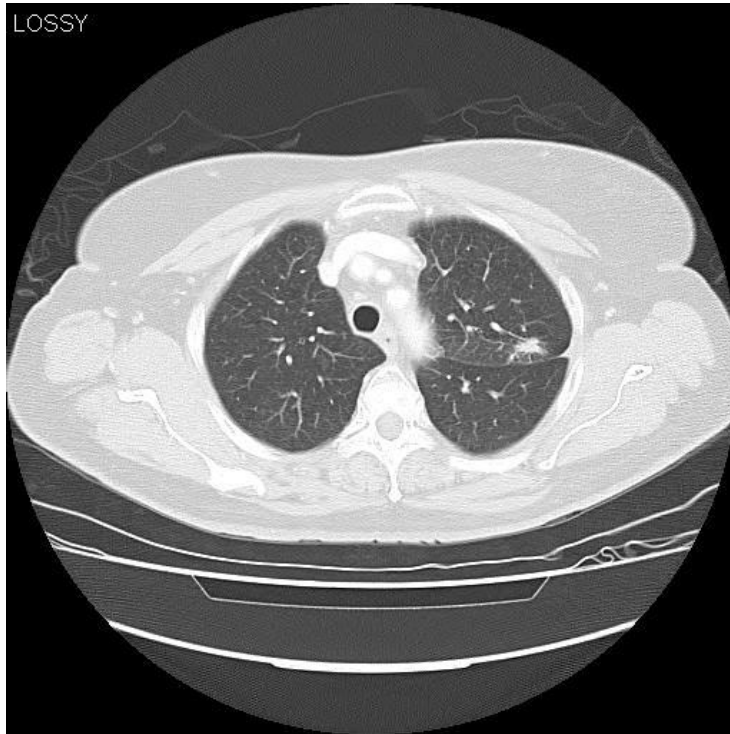
pre



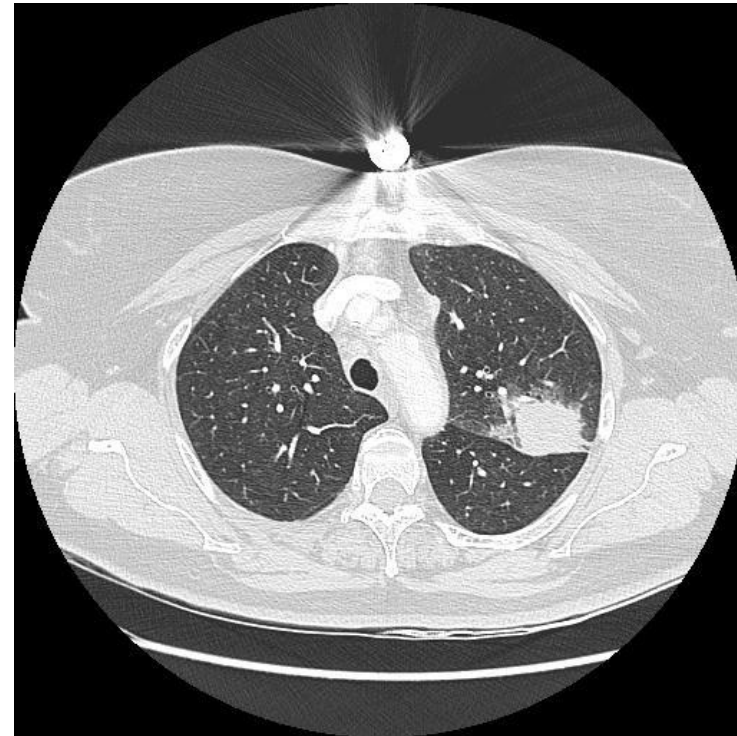
post



Neoadjuvant Chemo/Rads



pre



post

Mediastinal restaging

- Mediastinoscopy
 - 2R, 4R, 2L, 4L, 7 –ve
- Surgery
 - L thoracotomy
 - L upper lobectomy + LN dissection
 - Resection of pericardium, phrenic nerve
 - pT1aN1M0 stage IIIA (single station N2)

Lung ca mediastinal staging

- Invasive Mediastinal Staging of Lung Cancer
 - ACCP Evidence-Based Clinical Practical Guideline (3rd Edition)

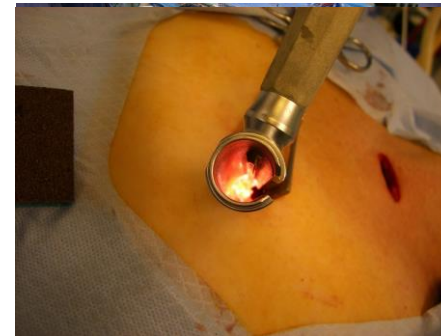
First Author	Year	N	Setting	Stage	Prev	Sens	Spec ^a	PPV ^a	NPV
Anterior mediastinotomy									
Nechala ²⁵⁴	2006	117	Med -	cN0,1	8	56	(100) ^a	(100) ^a	96
Barendregt ²⁵³	1995	37	-	cN0-2	14	20	(100) ^a	(100) ^a	89
Page ²⁴¹	1987	45	CXR/TG	cN1,2	47	86	(100) ^a	(100) ^a	89
Deneffe ²⁴⁵	1983	39	CXR/TG	cN0,1	38	87	(100) ^a	(100) ^a	92
Summary: median		238			26	71	(100)^a	(100)^a	91
Extended cervical mediastinoscopy									
Freixinet Gilart ²⁵⁵	2000	93	Med -	cN2	34	81	(100) ^a	(100) ^a	91
Obiols ²⁵⁸	2012	132	Med -	cN1,2 ^b	19	76	(100) ^a	(100) ^a	95
Metin ²⁵⁷	2011	42	Med -	cN1,2 ^b	19	50	(100) ^a	(100) ^a	89
Obiols ²⁵⁸	2012	89	Med -	cN0-2	10	44	(100) ^a	(100) ^a	94
Ginsberg ²⁵⁶	1987	100	CXR/TG	cN0-2	29	71	(100) ^a	(100) ^a	89
Summary: median		456			19	71	(100)^a	(100)^a	91
Summary ALL: median		694			19	71	(100)^a	(100)^a	91

For the patients with a LUL cancer in whom invasive mediastinal staging is indicated as defined by the previous recommendations, it is suggested that invasive assessment of the APW nodes be performed (via Chamberlain, VATS, or extended cervical mediastinoscopy) if other mediastinal node stations are found to be uninvolved (Grade 2B).

Silvestri et al. Chest. 2013; 143: e211s-250s

Surgical Staging (Anterior Mediastinotomy)

- Originally introduced by Chamberlain in 1966
 - Chamberlain Procedure (*Chest. Surg. Clin. North Am.* 1996; 6: 31-40)
- Skin incision: 2nd or 3rd ics left of the sternum
- Sensitivity
 - 63-86% (87% when combined with cervical med)
- Downside
 - Visualization may be difficult
 - Lack of usage in clinical practice
 - Reliability not been fully investigated



Eur. J. Cardiothorac. Surg. 1997; 11: 450-4
Eur. J. Cardiothorac. Surg. 2005; 27: 920-2
Eur. J. Resp. Dis. 1983; 64: 613-9
Ann. Thorac. Surg. 1987; 43: 78-81
Can. J. Surg. 1990; 99: 416-25

Surgical Staging (Extended Mediastinoscopy)

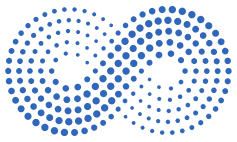
- Originally described by Kirschner and popularized by Ginsberg
 - After a standard med, the mediastinoscope is inserted through the suprasternal notch and directed lateral to the aortic arch
 - Lymph node #5, #6
 - Reported complications: stroke, aortic injury
- Sensitivity: 69-81%
- Drawback
 - Has only been used in a few centers and not a routine procedure for all thoracic surgeons

J. Thorac. Cardiovasc. Surg. 1987; 94: 673-8
Ann. Thorac. Surg. 2000; 70: 1641-3.
Ann. Thorac. Surg. 1994; 57: 740-1
Ann. Thorac. Surg. 1994; 57: 555-7

Surgical Staging (VATS)

- Requires one lung ventilation
- Advantage over Med
 - LN #5, #6, #8, #9 (high yield)
- Disadvantage
 - only exploration of ipsilateral side
 - #2L, #4L technically difficult to biopsy

*J. Thorac. Cardiovasc. Surg. 1994; 35: 347-9
Ann. Thorac. Surg. 2002; 73: 900-4.*



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