

INCONTRO
E ASSEMBLEA

VATS GROUP

UPDATE DI TECNICA
E TECNOLOGIA NELLE
RESEZIONI ANATOMICHE
TORACOSCOPICHE

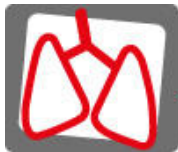
30 MARZO 2017

PADOVA

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Società Italiana Chirurgia Toracica



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Lobectomy in VATS nell'N2: PROS

Prof. G. Marulli

Chirurgia Toracica - Università di Padova

Direttore: Prof. F. Rea

Lobectomy in VATS nell'N2

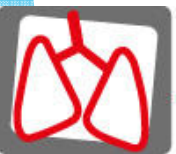


Table 1—Subsets of Stage IIIA(N₂)*

Subset	Description
IIIA ₁	Incidental nodal metastases found on final pathology examination of the resection specimen
IIIA ₂	Nodal (single station) metastases recognized intraoperatively
IIIA ₃	Nodal metastases (single or multiple station) recognized by prethoracotomy staging (mediastinoscopy, other nodal biopsy, or PET scan)
IIIA ₄	Bulky or fixed multistation N2 disease

*Adapted from Ruckdeschel.²

Diagnosis and Management of Lung Cancer: ACCP Guidelines

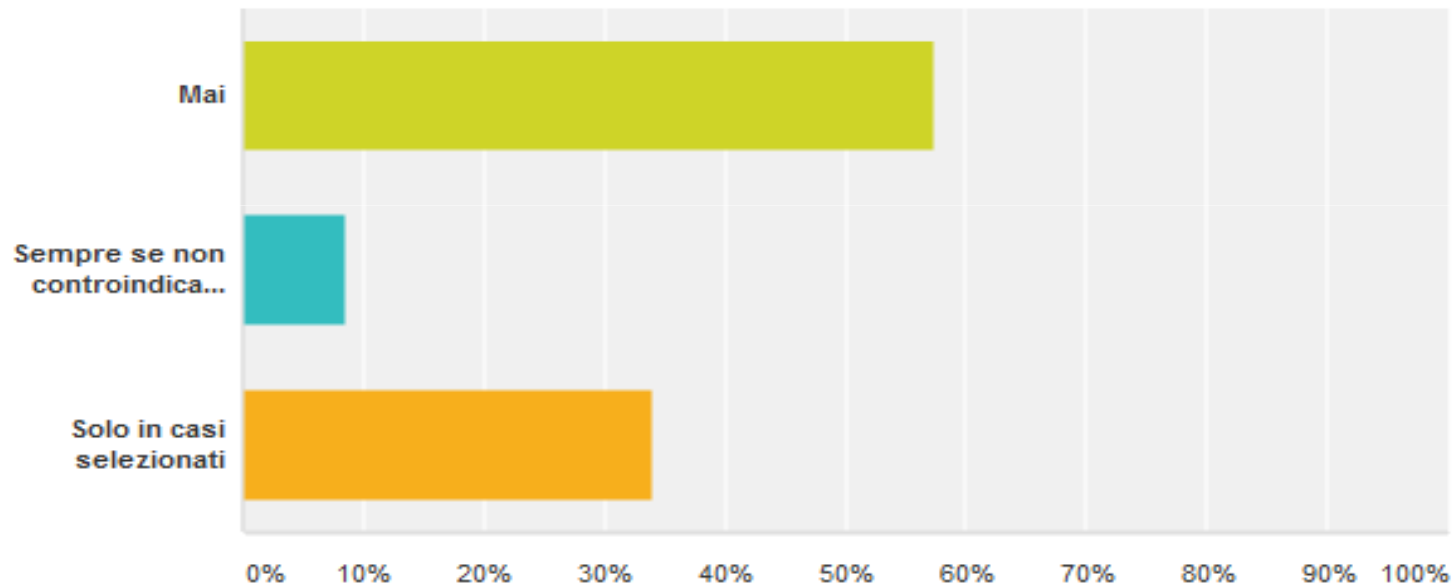


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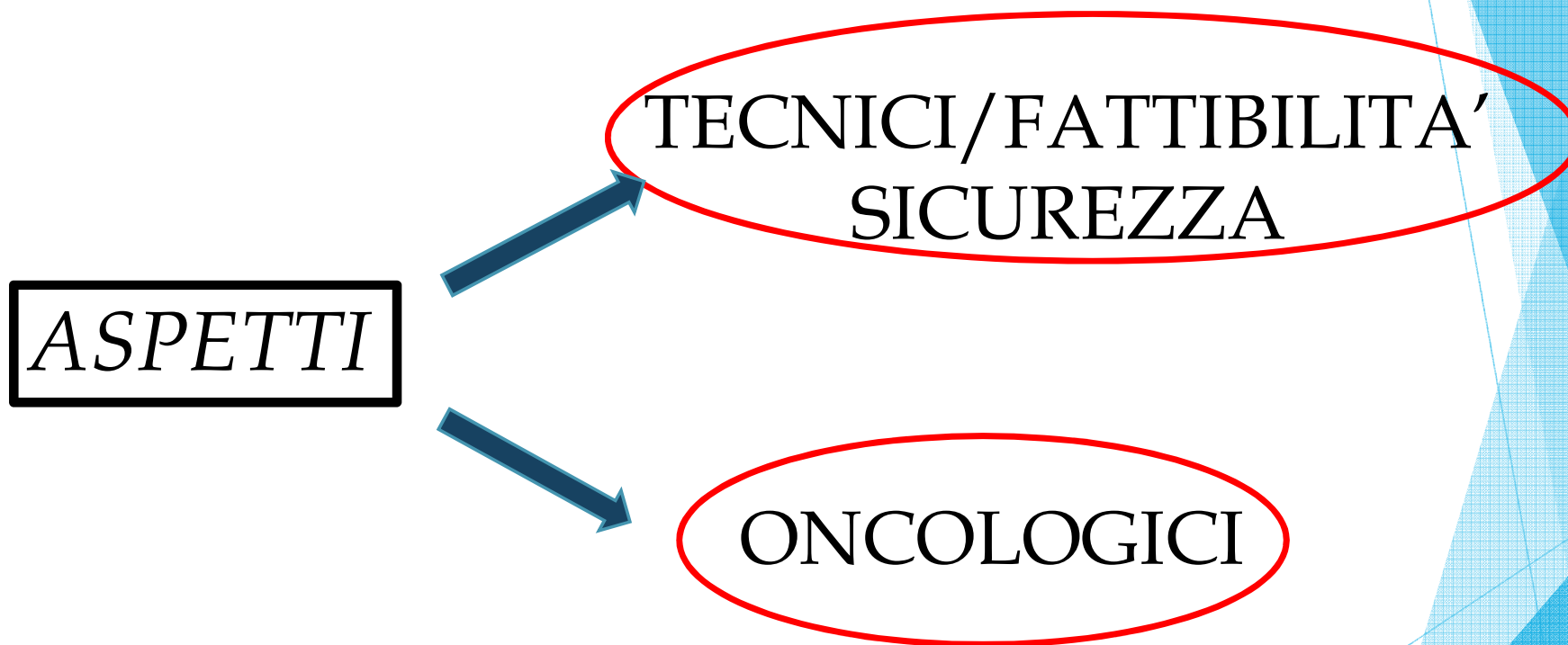
Lobectomia in VATS nell'N2



Usi l'approccio in VATS per la malattia N2?



Lobectomia in VATS nell'N2



Aspetti tecnici...



General Thoracic Surgery

Villamizar et al

Impact of T status and N status on perioperative outcomes after thoracoscopic lobectomy for lung cancer

Nestor R. Villamizar, MD, Marcus Darrabie, MD, Jennifer Hanna, MD, Mark W. Onaitis, MD, Betty C. Tong, MD, Thomas A. D'Amico, MD, and Mark F. Berry, MD

significantly overall morbidity in multivariate analysis. Clinical node status did not predict increased complications by univariate or multivariate analysis. Significant predictors of morbidity in multivariable analysis were increasing age, decreasing forced expiratory volume in 1 second, prior chemotherapy, and congestive heart failure.

Conclusions: Thoracoscopic lobectomy for lung cancers that are central, clinically node positive, or >3 cm does not confer increased morbidity compared with peripheral, clinical N0 cancers that are <3 cm. (J Thorac Cardiovasc Surg 2013;145:514-21)



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Aspetti tecnici...



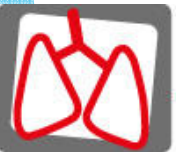
Beijing da Xue Xue Bao. 2011 Dec 18;43(6):861-5

Preliminary comparison research of thoracoscopy and thoracotomy lobectomy for clinical N0 and post-operatively pathological N2 non-small cell lung cancer

LI Feng-wei,JIANG Guan-chao,LI Yun,BU Liang,YANG Fan,LI Jian-feng, ZHAO Hui,LIU Yan-guo,ZHOU Zu-li,LIU Jun,WANG Jun[△]

(Department of Thoracic Surgery, Peking University People's Hospital, Beijing 100044, China)

of which were distant metastases. **Conclusion:** With respect to the safety, thoroughness and recent effect, VATS is not inferior to open thoracotomy in the treatment of cN0-pN2 non-small cell lung cancer.



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Aspetti tecnici...



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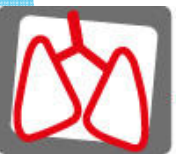
www.thecjcr.org

Chin J Cancer Res 2014;26(4):418-422

Safety and feasibility of video-assisted thoracoscopic surgery for stage IIIA lung cancer

Wenlong Shao^{1,2,3*}, Jun Liu^{1,2,3*}, Wehua Liang^{1,2,3}, Hanzhang Chen^{1,2,3}, Shuben Li^{1,2,3}, Weiqiang Yin^{1,2,3}, Xin Zhang^{1,2,3}, Jianxing He^{1,2,3}

Conclusions: VATS radical treatment is a safe and feasible treatment for stage IIIA lung cancer.



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Aspetti tecnici...

J Thorac Dis 2013;5(S3):S267-S273. doi: 10.3978/j.issn.2072-1439.2013.08.24

Feasibility of complete video-assisted thoracoscopic surgery following neoadjuvant therapy for locally advanced non-small cell lung cancer

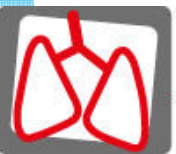
Jun Huang^{1,2}, Xin Xu^{1,2}, Hanzhang Chen^{1,2}, Weiqiang Yin^{1,2}, Wenlong Shao^{1,2}, Xinguo Xiong^{1,2}, Jianxing He^{1,2}

¹Department of Cardiothoracic Surgery, The First Affiliated Hospital of Guangzhou Medical University, Guangzhou 510120, China;

²Guangzhou Institute of Respiratory Disease & China State Key Laboratory of Respiratory Disease, Guangzhou 510120, China

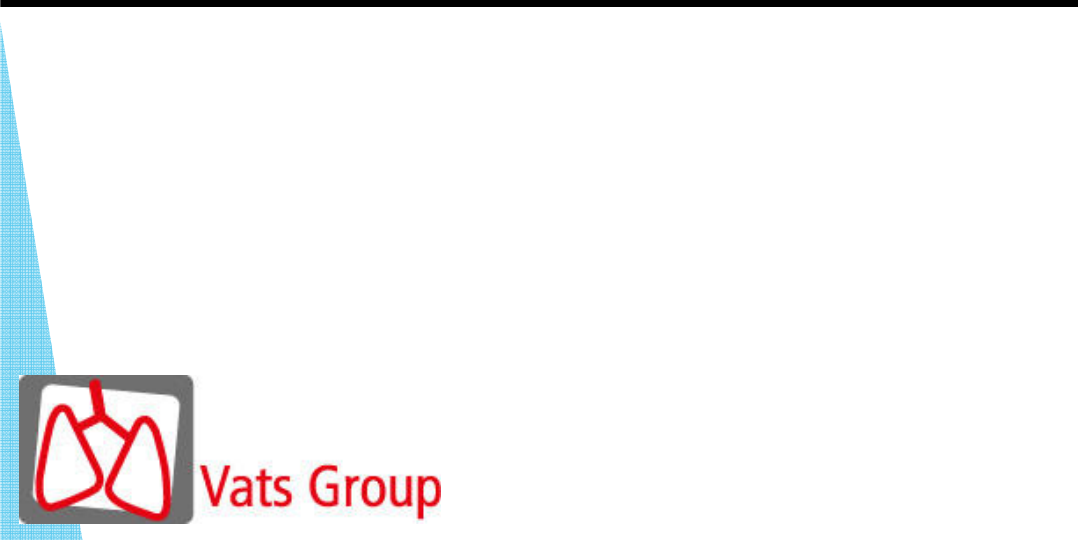
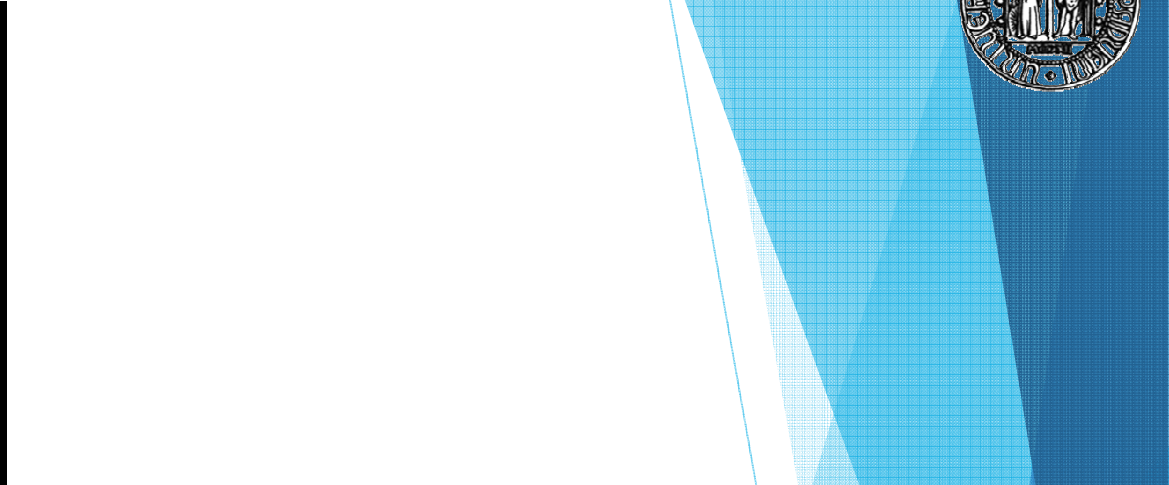
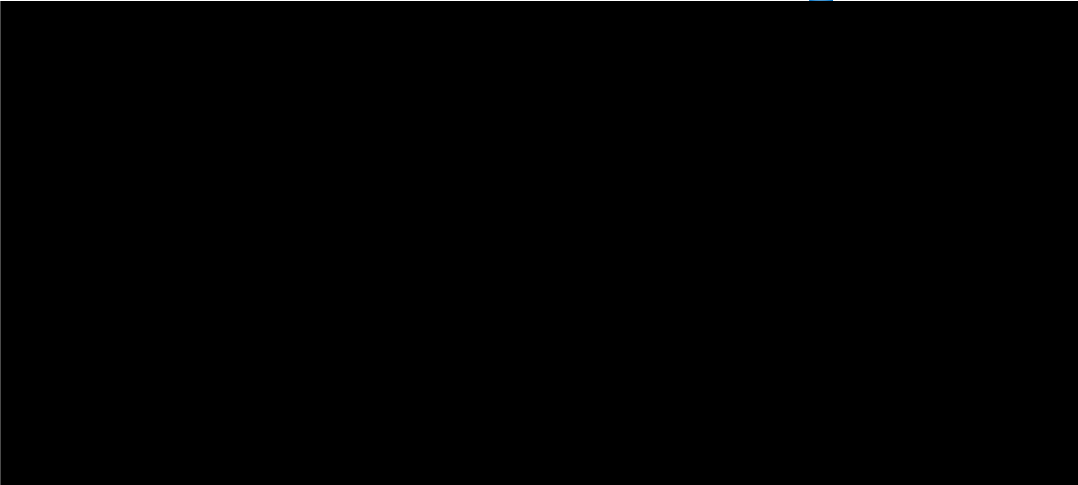
Conclusions: c-VATS following neoadjuvant therapy is safe and feasible for the treatment of locally advanced NSCLC.

Non-small-cell lung cancer (NSCLC); neoadjuvant chemotherapy; targeted therapy; complete video-assisted thoracoscopic surgery (c-VATS)



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Aspetti tecnici...



Aspetti tecnici...





Aspetti tecnici...

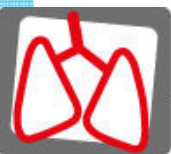
J Thorac Dis 2013;5(5):5192-5199. doi: 10.3978/j.issn.2072-1439.2013.07.02

Contraindications of video-assisted thoracoscopic surgical lobectomy and determinants of conversion to open

Jennifer M. Hanna, Mark F. Berry, Thomas A. D'Amico

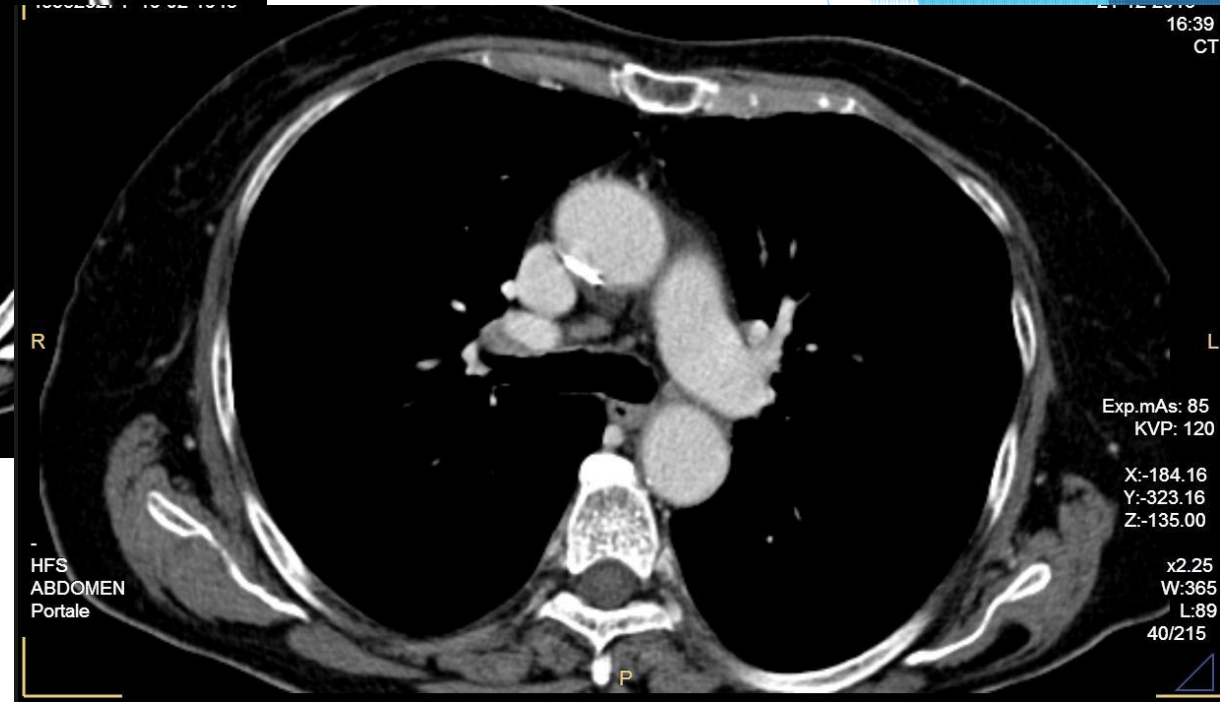
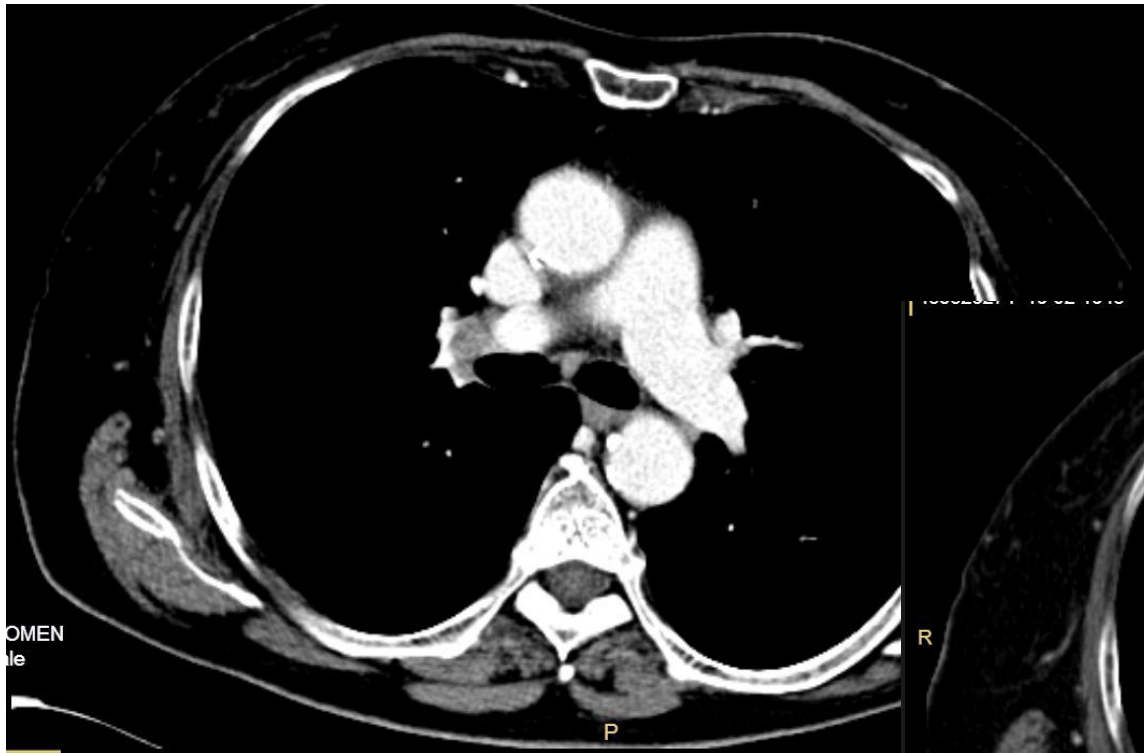
Relative contraindications include tumors that are visible at bronchoscopy and the presence of hilar lymphadenopathy that would complicate vascular dissection (benign or malignant).

cava. These authors concluded that abnormal hilar nodes with granulomatous or metastatic disease adherent to the superior pulmonary vein may be better evaluated and more safely resected with thoracotomy. However, about 30% of thoracotomy



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Aspetti tecnici...



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Aspetti tecnici...



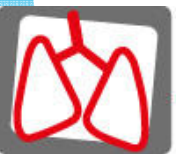
Aspetti tecnici...

J Thorac Dis 2013;5(5):5182-5189. doi: 10.3978/j.issn.2072-1439.2013.07.08

Contraindications of video-assisted thoracoscopic surgical lobectomy and determinants of conversion to open

Jennifer M. Hanna, Mark F. Berry, Thomas A. D'Amico

problems, and oncological conditions. Though it is difficult to anticipate which patients may require conversion, it appears that these patients do not suffer from increased morbidity or mortality as a result of conversion to open thoracotomy. Therefore, with a focus on a safe and complete resection, conversion should be regarded as a means of completing resections in a traditional manner rather than as a surgical failure.



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Aspetti tecnici: overview

- **Linfadenectomia nell'N2 non gravata da aumentata morbidity**
- **N2 paratracheale dx: utile sezione V. Azygos**
- **Stazione 7 più agevole a DX che a SX**
- **Fattibilità anche dopo trattamento d'induzione**
- **N2 senza N1: minor rischio di conversione**
- **Conversione non è un fallimento e non è associata a maggior morbidity o mortalità**



Aspetti oncologici...

(Ann Thorac Surg 2013;95:987-93)

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Clinical Outcomes of Thoracoscopic Lobectomy for Patients With Clinical N0 and Pathologic N2 Non-Small Cell Lung Cancer

Chenxi Zhong, MD,* Feng Yao, MD,* and Heng Zhao, MD

Department of Thoracic Surgery, Shanghai Chest Hospital affiliated to Shanghai Jiao Tong University, Shanghai, China

Conclusions. The clinical outcomes of thoracoscopic lobectomy were comparable to those of thoracotomy for patients with cN0-pN2 NSCLC. Single-station N2 is a good prognostic factor for disease-free survival in these patients.



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Aspetti oncologici...

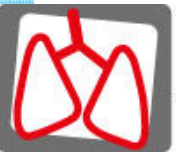


Ann Thorac Med. 2013 Jul-Sep; 8(3): 170–175.

Feasibility and long-term efficacy of video-assisted thoracic surgery for unexpected pathologic N2 disease in non-small cell lung cancer

[Shaohua Wang](#),^{1,2} [Wenyong Zhou](#),¹ [Hui Zhang](#),¹ [Mingchuan Zhao](#),¹ and [Xiaofeng Chen](#)¹

It is both feasible and safe to perform VATS lobectomy on patients with unexpected N2 NSCLC. VATS provides better survival rates for those patients with just one station of metastatic mediastinal lymph nodes.



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Aspetti oncologici...

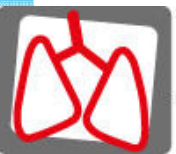
General Thoracic Surgery

Kim et al

Outcomes of unexpected pathologic N1 and N2 disease after video-assisted thoracic surgery lobectomy for clinical stage I non-small cell lung cancer

Hong Kwan Kim, MD, Yong Soo Choi, MD, PhD, Jhngook Kim, MD, PhD, Young Mog Shim, MD, PhD, and Kwhanmien Kim, MD, PhD

Conclusions: For patients with pathologic N1 or N2 disease after video-assisted thoracic surgery lobectomy, survival was comparable with that after lobectomy through a thoracotomy. Even if lymph node metastasis is unexpectedly detected during video-assisted thoracic surgery lobectomy for clinical stage I disease, there is no need to convert to conventional thoracotomy. (J Thorac Cardiovasc Surg 2010;140:1288-93)



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Aspetti oncologici...

Minimally invasive (robotic assisted thoracic surgery and video-assisted thoracic surgery) lobectomy for the treatment of locally advanced non-small cell lung cancer *J Thorac Dis* 2016;8(Suppl 4):S406-S413

Bernard J. Park^{1,2}, Hao-Xian Yang^{1,3}, Kaitlin M. Woo⁴, Camelia S. Sima⁴



Conclusions: In appropriately selected patients with NSCLC, MIS approaches to lobectomy following induction therapy are feasible and associated with similar disease-free and OS to those following thoracotomy.

Long-term survival following open versus thoracoscopic lobectomy after preoperative chemotherapy for non-small cell lung cancer[†]

Chi-Fu Jeffrey Yang^a, Robert Ryan Meyerhoff^a, Nicholas Ryan Mayne^a, Terry Singhapricha^b,
Christopher B. Toomey^a, Paul J. Speicher^a, Matthew G. Hartwig^a, Betty C. Tong^a, Mark W. Onaitis^a,
David H. Harpole Jr^a, Thomas A. D'Amico^a and Mark F. Berry^{c,*}

CONCLUSIONS: VATS lobectomy in patients treated with induction therapy for locally advanced NSCLC is feasible and effective and does not appear to compromise oncologic outcomes.

European Journal of Cardio-Thoracic Surgery 49 (2016) 1615-1623

Aspetti oncologici...

Interactive CardioVascular and Thoracic Surgery 19 (2014) 656–660

What is the extent of the advantage of video-assisted thoracoscopic surgical resection over thoracotomy in terms of delivery of adjuvant chemotherapy following non-small-cell lung cancer resection?

Elaine Teh^a, Udo Abah^a, David Church^b, Wasir Saka^b, Denis Talbot^b, Elizabeth Belcher^a and Edward Black^{a,c,*}

^a Department of Cardiothoracic Surgery, Oxford Radcliffe Hospitals Trust, Oxford, UK

^b University of Oxford Oncology Department, Oxford Radcliffe Hospitals Trust, Oxford, UK

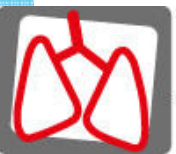
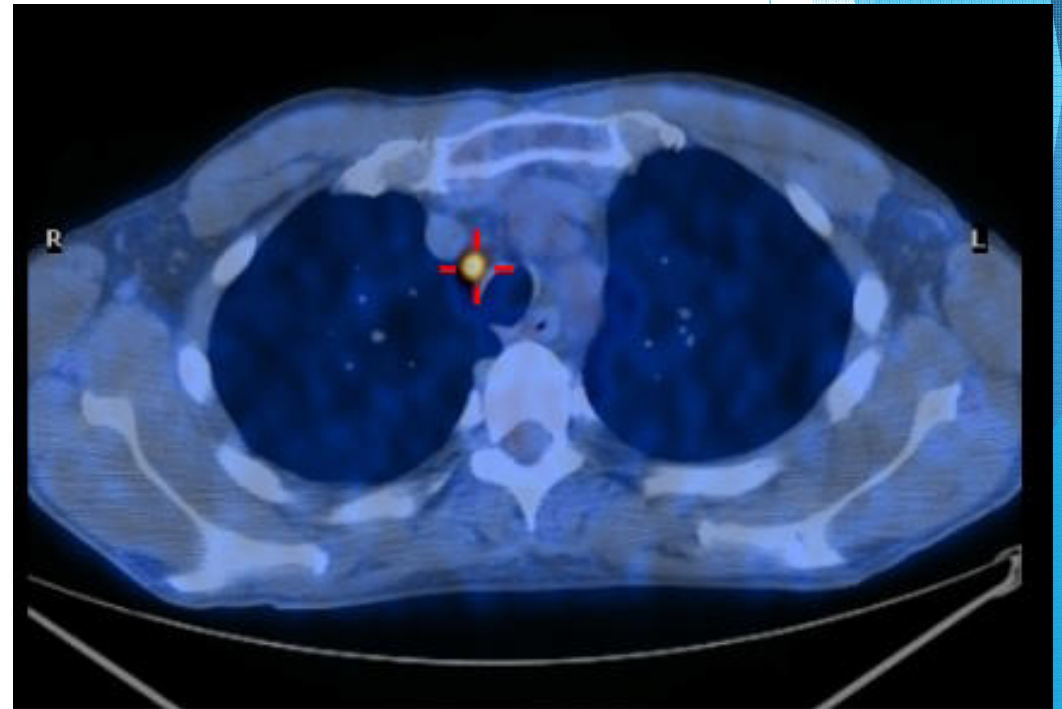
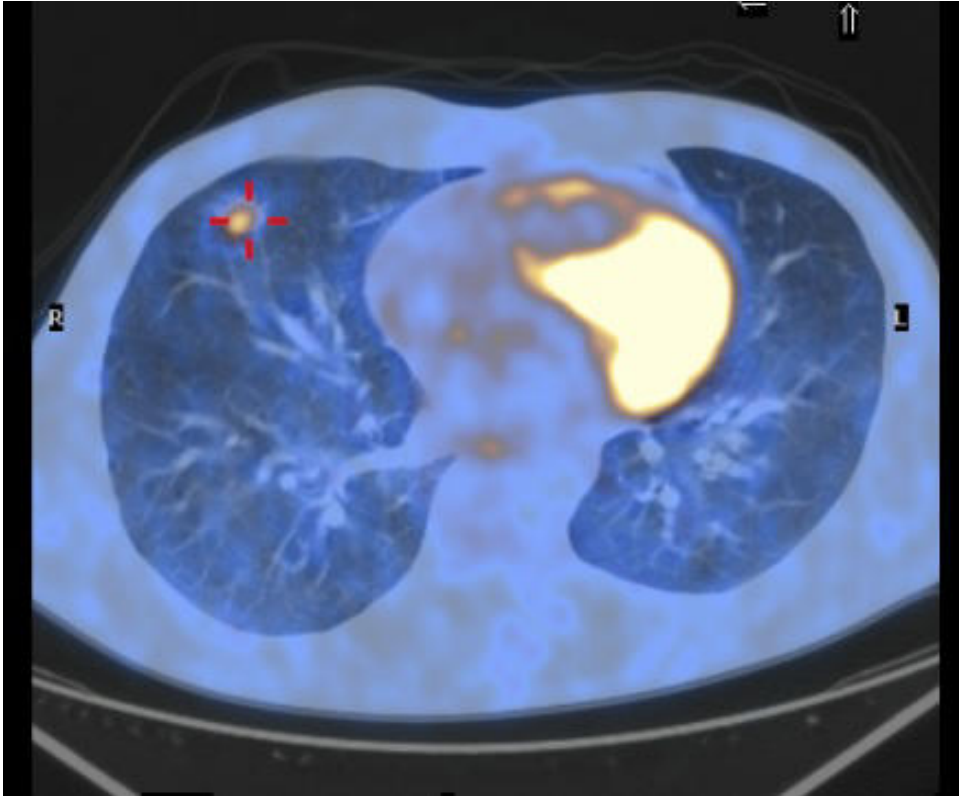
^c Thoracic Department, John Radcliffe Hospital, Oxford, UK

CONCLUSIONS: Adjuvant chemotherapy was started significantly earlier in patients following VATS lung resections for NSCLC compared with thoracotomy. There was also a trend towards improved tolerance with more complete courses and reduced haematological toxicity.



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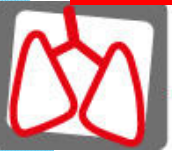
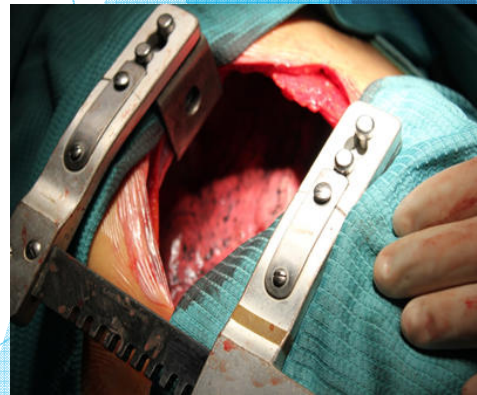
Aspetti oncologici...



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Aspetti oncologici: overview

- No differenza di sopravvivenza nel cN0/pN2 incidentale
- Single station/single node: riportata miglior prognosi (?)
- Risultati simili alla open dopo induzione
- Più precoce inizio, maggiore compliance e tasso di completamento della terapia adiuvante dopo VATS lobectomy rispetto a toracotomia
- **Mancanza di studi randomizzati**



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Padova

Grazie

