

# Exérèses élargies en pathologie bénigne et maligne pulmonaire, pariétale et médiastinale

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# I. LES ENVAHISSEMENTS PAR CONTIGUITE DU CBPNPC

- Parfois (parfois dans le cas de la métastase hémate) bloc
- A différencier d'une atteinte métastatique
- Chirurgie plus « lourde » mais exérèse radicale possible
- Pronostic en fonction :
  - du caractère complet de l'exérèse
  - de l'envahissement associé ou non des ganglions

# RESULTATS (3)

## *Survies à 5 ans*

|                      |   |  |
|----------------------|---|--|
| T <sub>3</sub> paroi | Plèvre pariétale<br>Paroi<br>N <sub>2</sub>                                       | 40 % si N <sub>0</sub> -N <sub>1</sub><br>20 %<br>15 % |
| T4 carène            | N <sub>0</sub> -N <sub>1</sub><br>N <sub>2</sub>                                  | 40 %<br>10 %   |
| T4 VCS               |  | 28 %   |
| Pancoast             | Exérèse complète  | 45 %   |

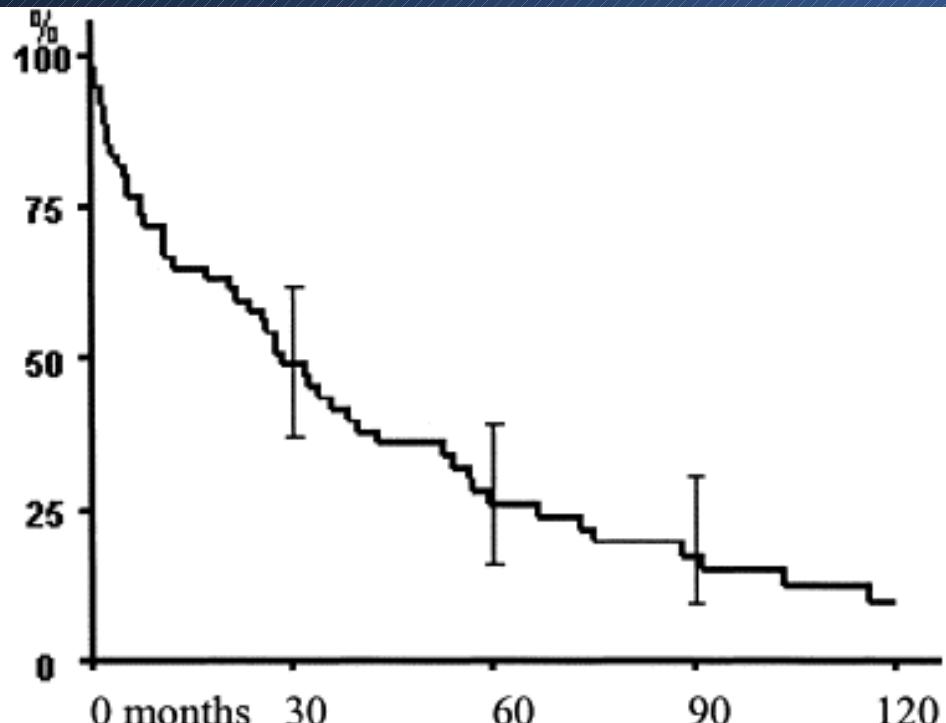
# *Resection for Tumors With Carinal Involvement: Technical Aspects, Results, and Prognostic Factors*

Jean-François Regnard, MD, Cédric Perrotin, MD, Riccardo Giovannetti, MD, Olivier Schussler, MD, Antonio Petino, MD, Lorenzo Spaggiari, MD, Marco Alifano, MD, Pierre Magdeleinat, MD

*The Annals of Thoracic Surgery*

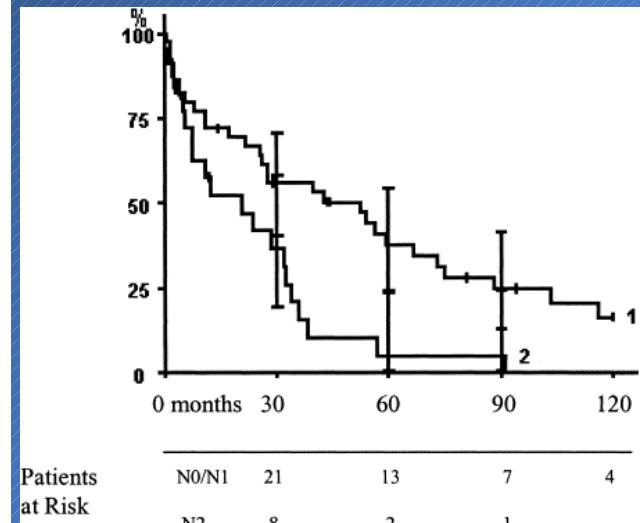
Volume 80, Issue 5, Pages 1841-1846 (November 2005)

DOI: 10.1016/j.athoracsur.2005.04.032

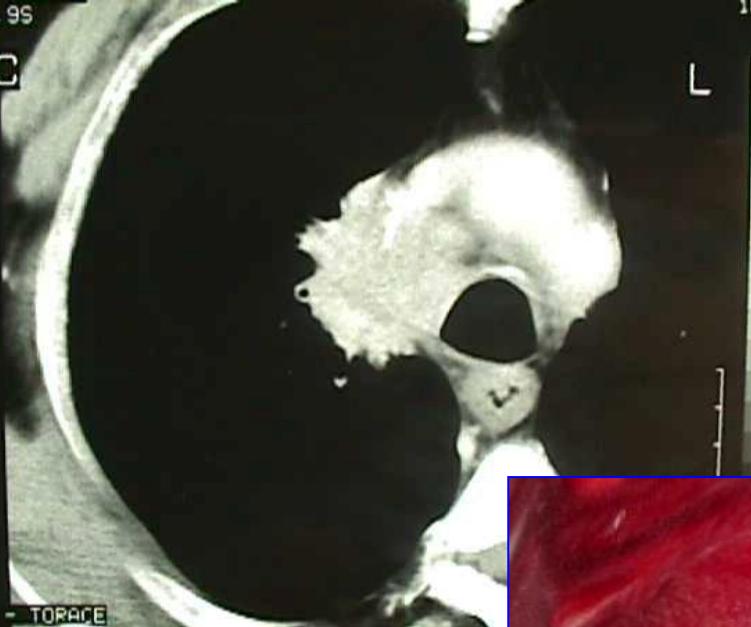


Patients  
at Risk

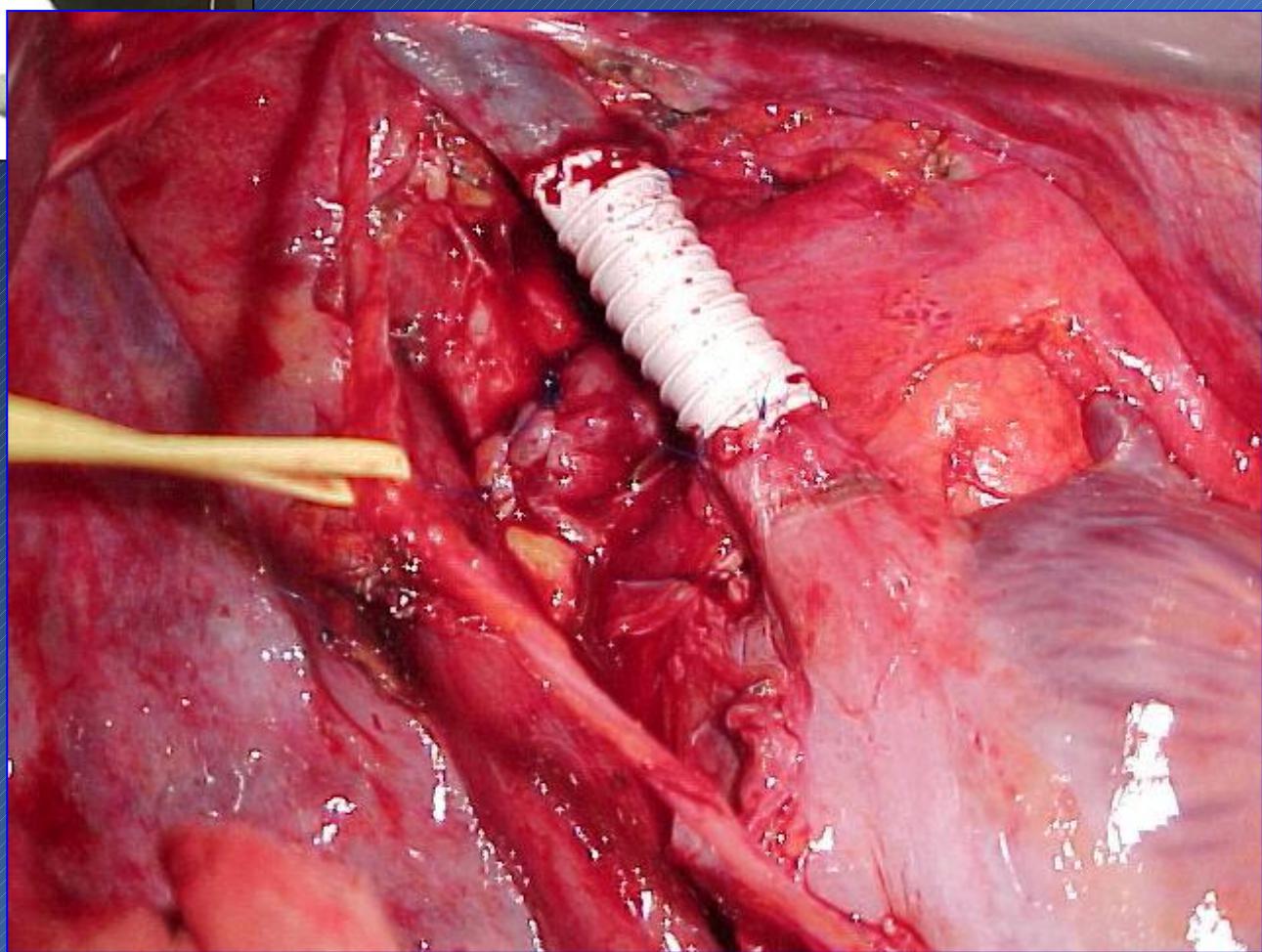
28                  14                  8                  4

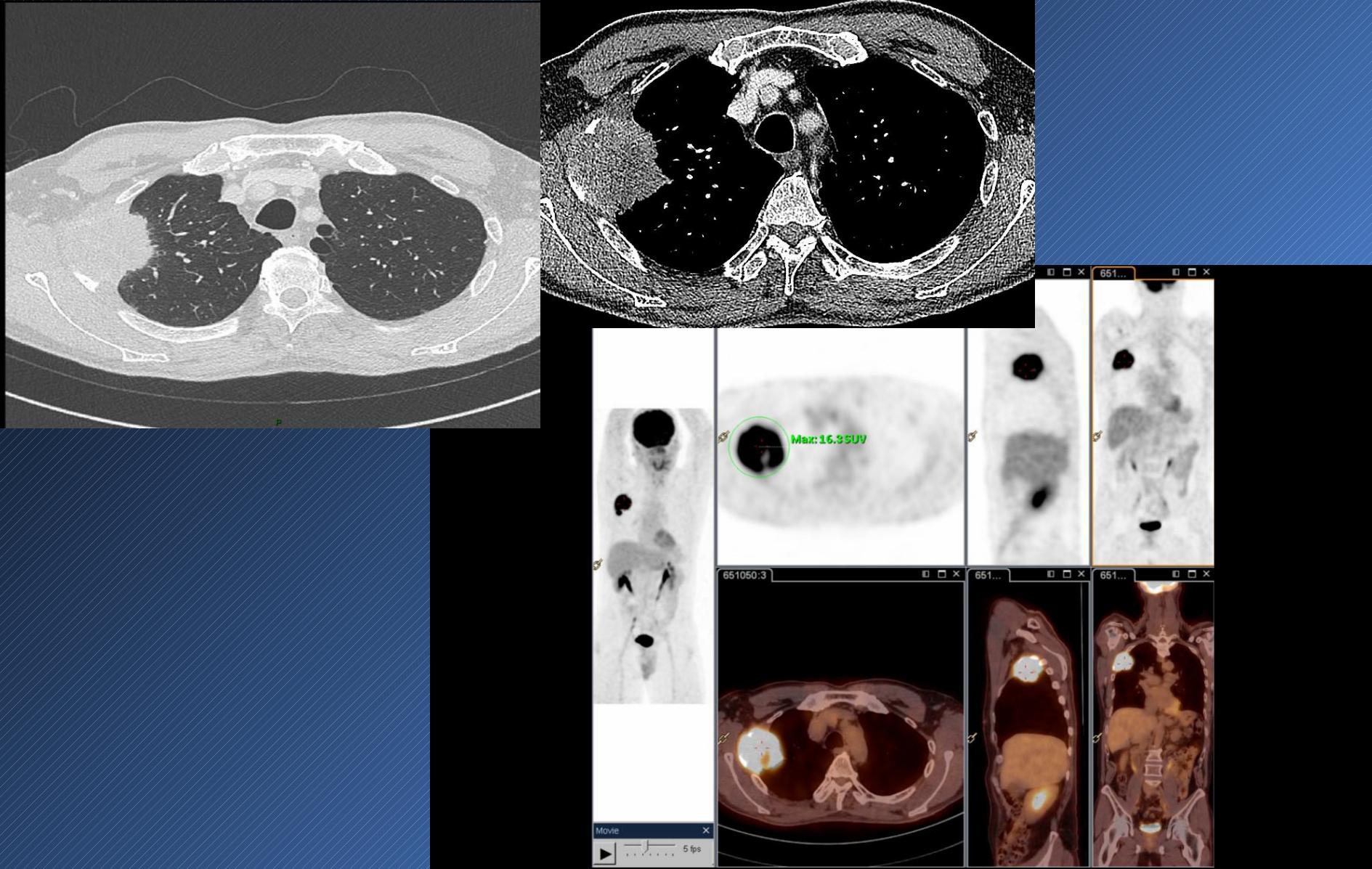


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P -50.0  
A 0.0  
B 175 C  
F 4  
HF/S  
120KU  
225MA

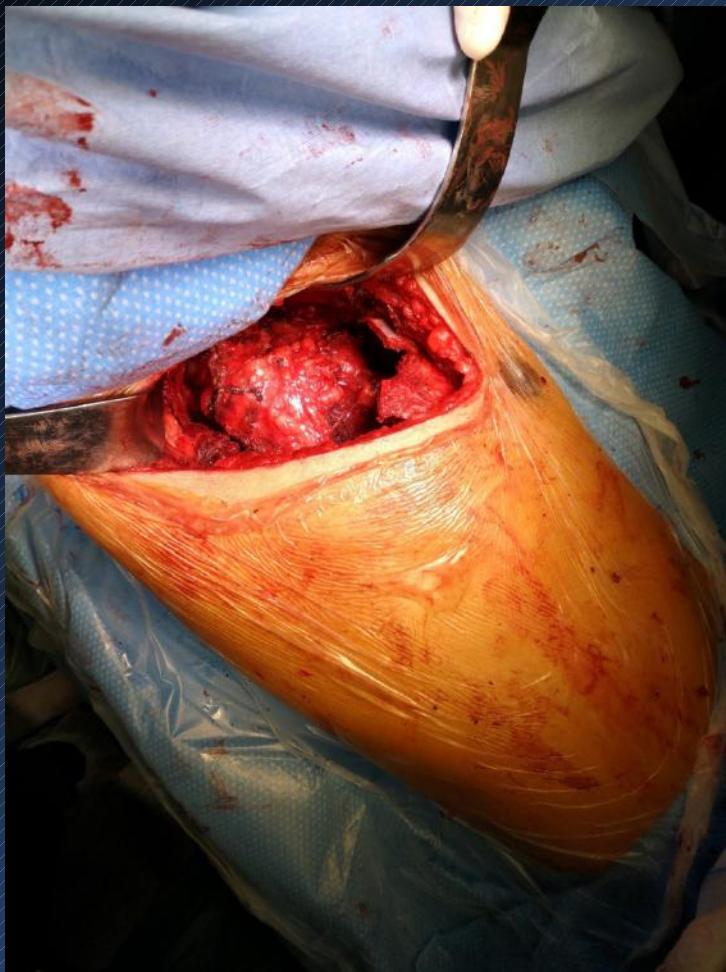


T4 VCS

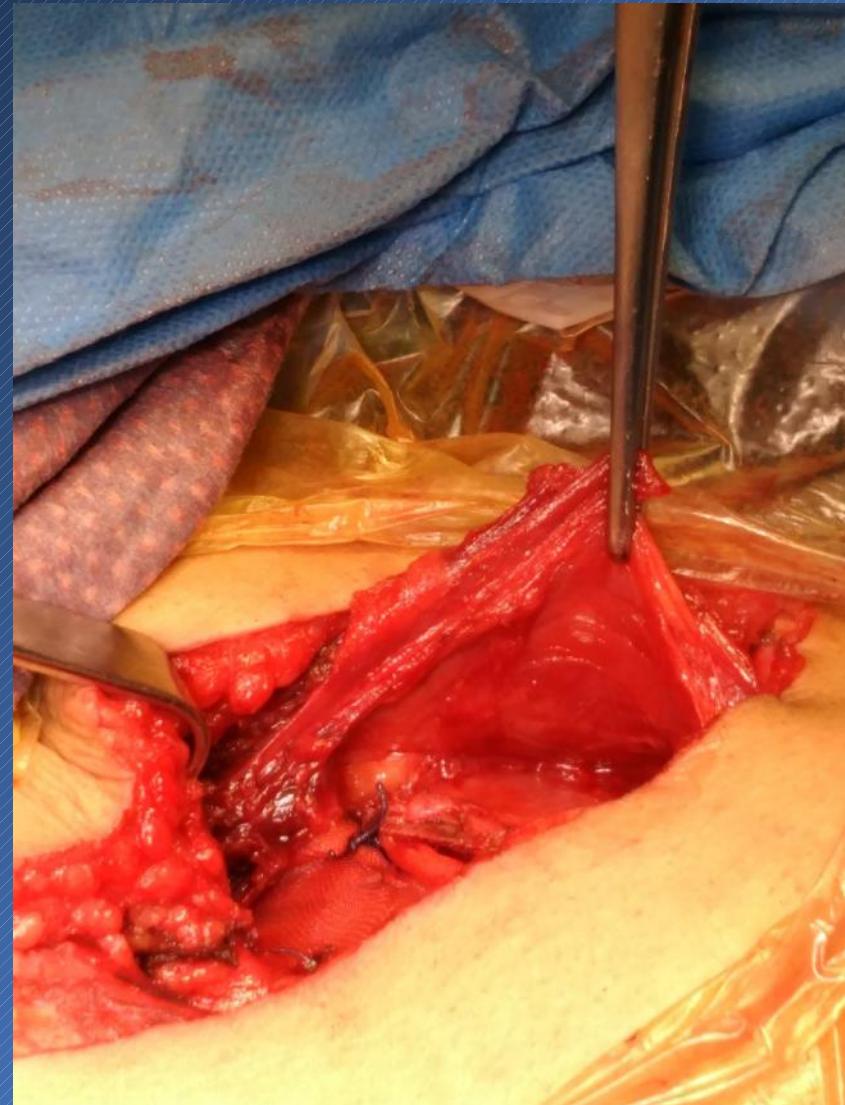
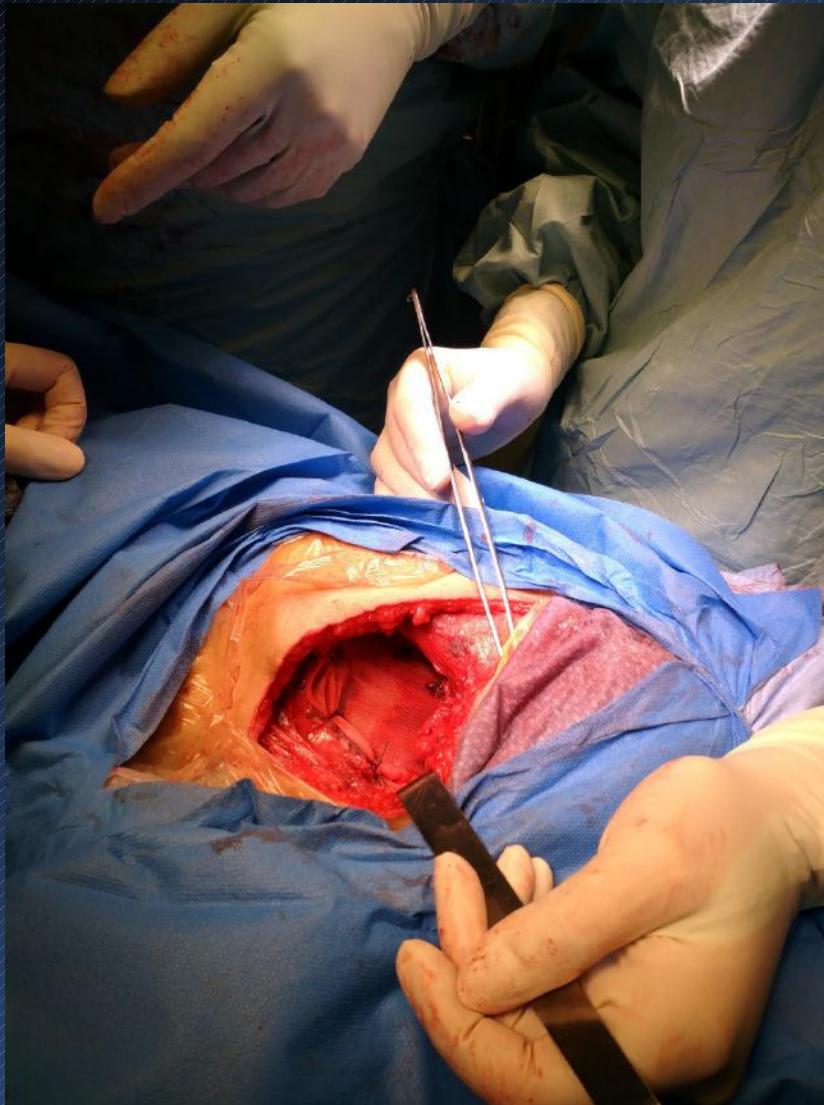




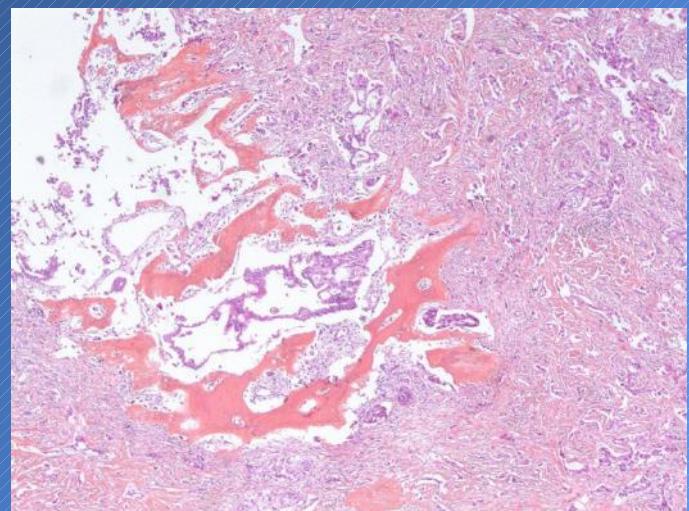
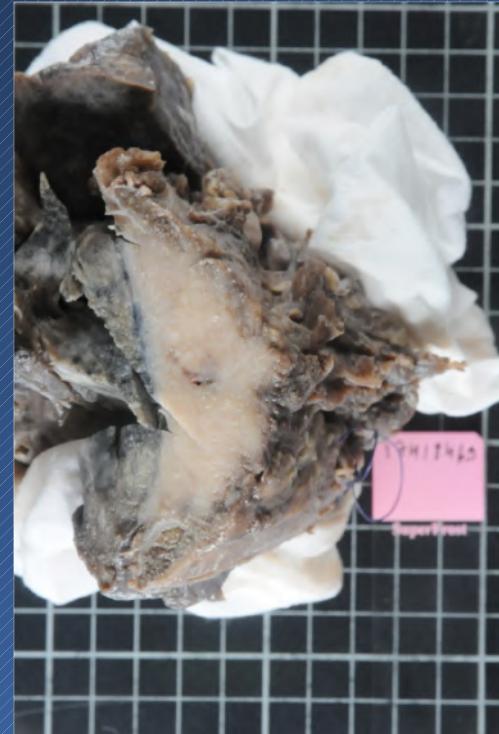
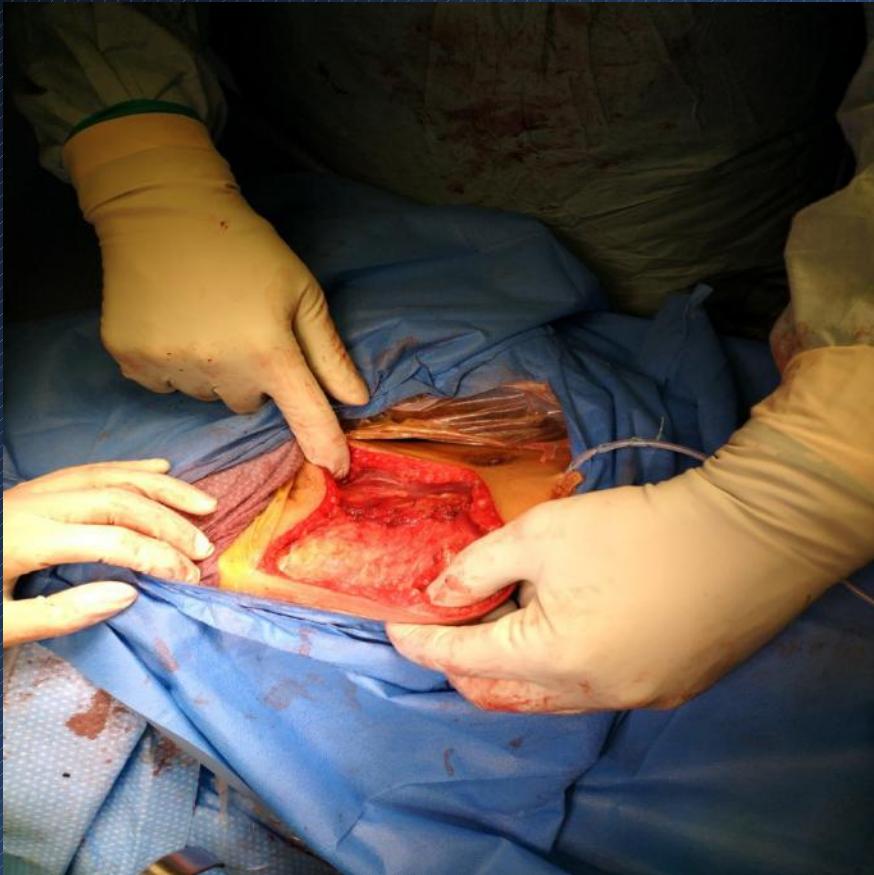
## RESECTION EN BLOC



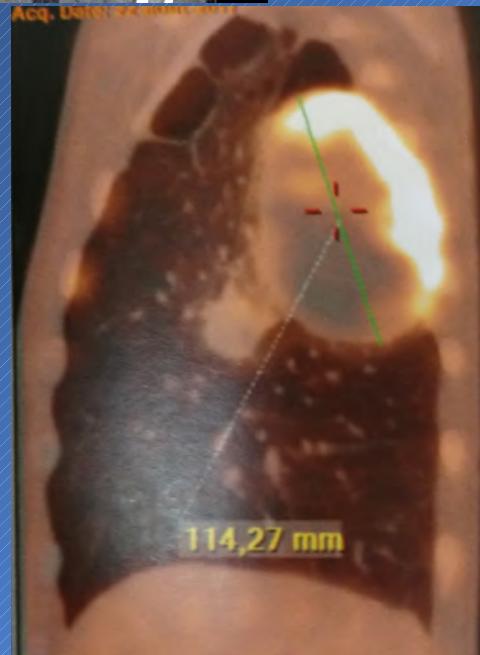
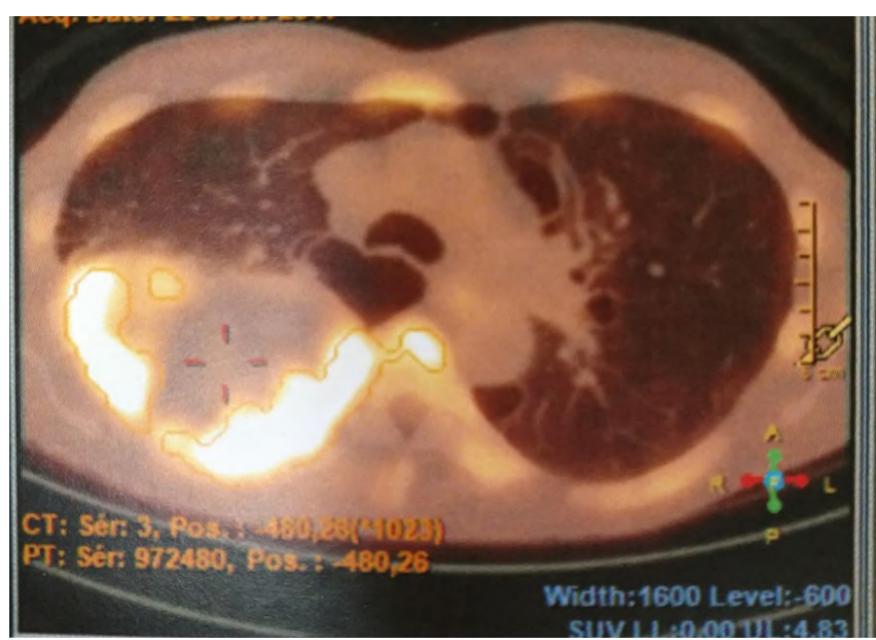
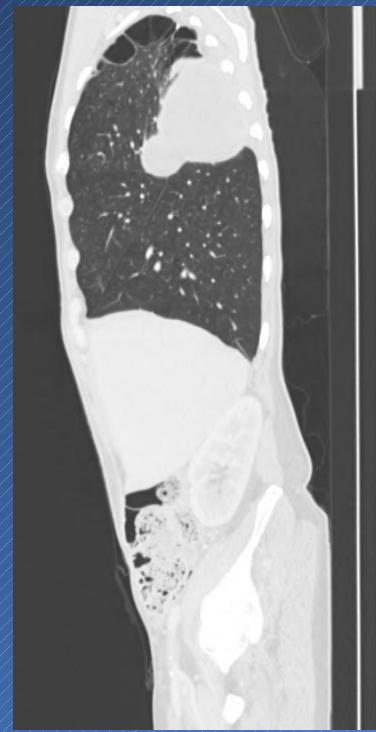
## Reconstruction: lambeaux de glissement de grand pectoral et grand dorsal



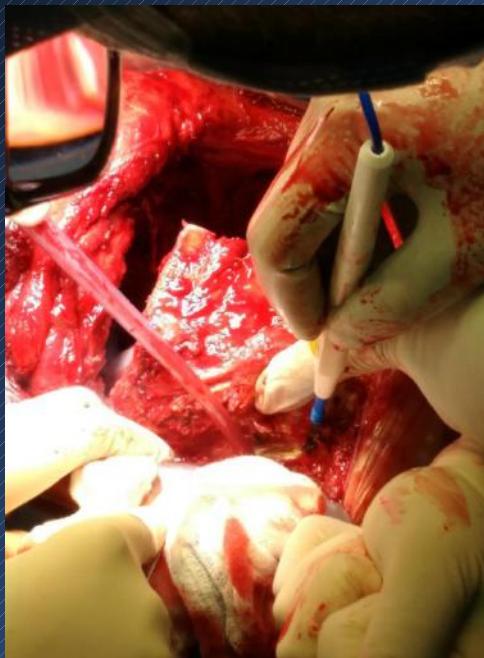
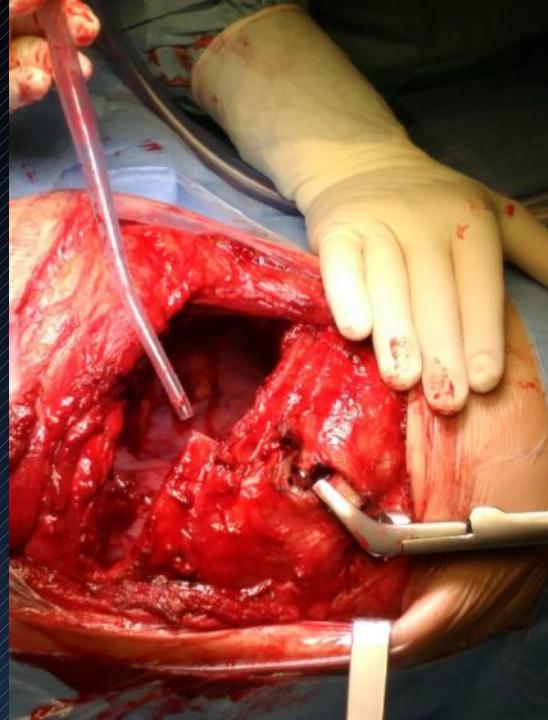
## Reconstruction: lambeaux de glissement de grand pectoral et grand dorsal



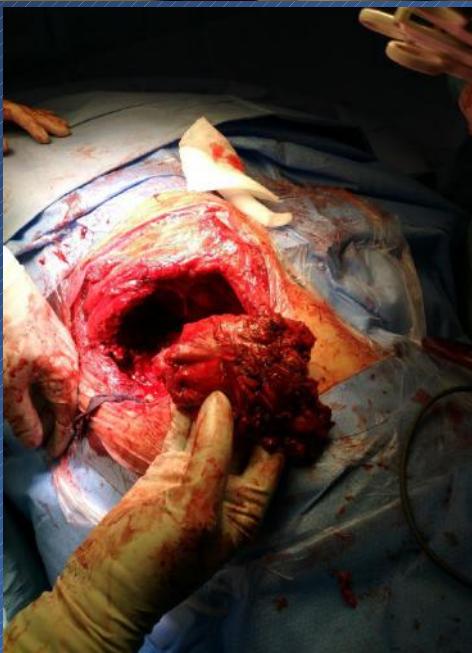
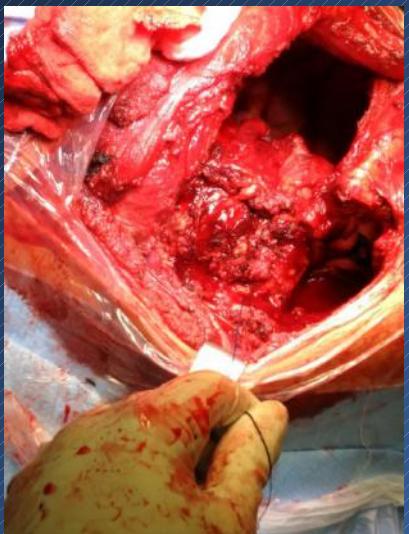
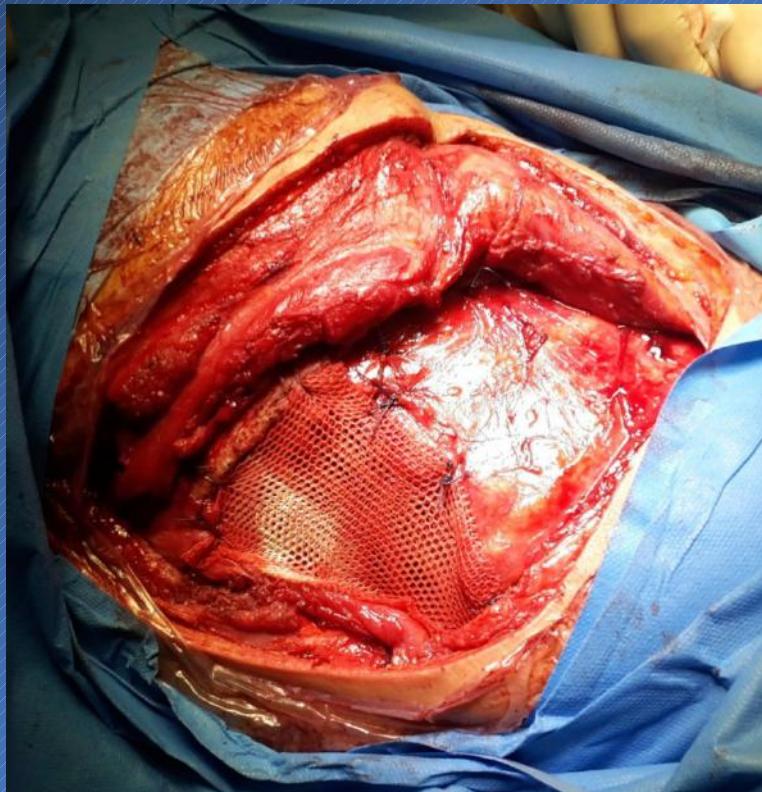
T3 PAROI



## Résection discontinue



Résection de V, VI et VII côte  
avec désarticulation  
postérieure





# Surgical Treatment of Lung Cancer Invading the Chest Wall: Results and Prognostic Factors

Pierre Magdeleinat, MD, Marco Alifano, MD, Cedrik Benbrahem, MD,  
Lorenzo Spaggiari, MD, Calogero Porrello, MD, Philippe Puyo, MD,  
Philippe Levasseur, MD, and Jean François Regnard, MD

Department of Thoracic and Vascular Surgery, Marie Lannelongue Hospital, Le Plessis Robinson, and Unit of Thoracic Surgery,  
Hôtel-Dieu Hospital, Paris, France

*Old experience of our team on 201 consecutive patients in a 14-year period  
In hospital and 30-day mortality: 7%*

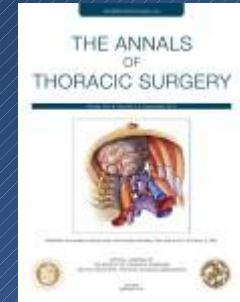
*“Multivariate analysis showed the independent prognostic value of  
nodal involvement ( $p = 0.006$ ),  
depth of invasion ( $p = 0.01$ ),  
and age ( $p = 0.04$ ).*

*Actuarial survival for completely resected patients with N0 disease, invasion  
limited to parietal pleura, and age less than 65 years was 40%.”*

# Does Thoracoscopic Surgery Decrease the Morbidity of Combined Lung and Chest Wall Resection?

Mark W. Hennon, MD, Elisabeth U. Dexter, MD, Miriam Huang, MD, John Kane, MD, Chukwumere Nwogu, MD, PhD, Anthony Picone, MD, Sai Yendamuri, MBBS, and Todd L. Demmy, MD

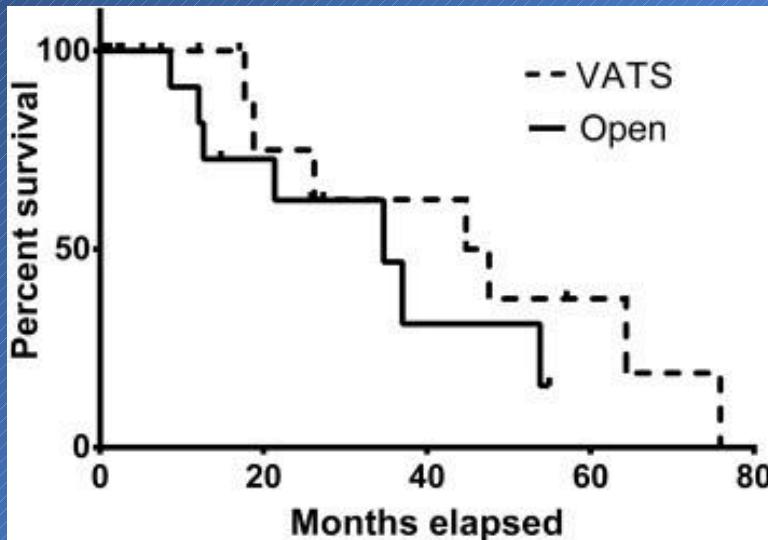
Departments of Thoracic Surgery and Surgical Oncology, Roswell Park Cancer Institute, and Department of Surgery, State University of New York at Buffalo, Buffalo, New York



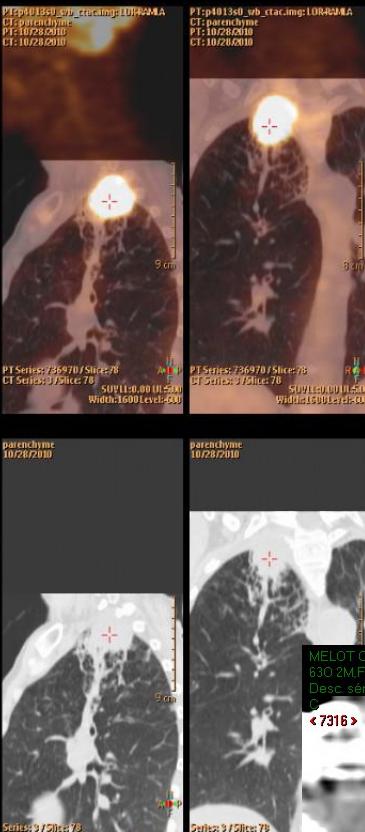
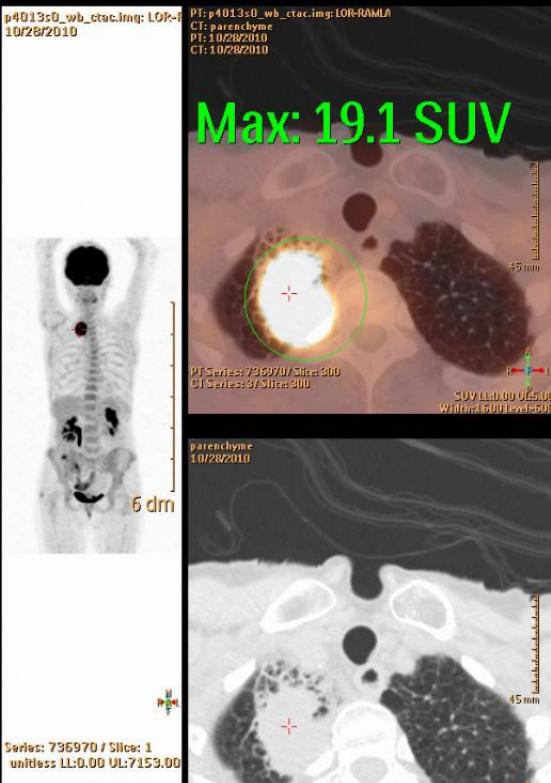
Ann Thorac Surg 2015; 99 (6):1929–1935

| Patient | Age (y) | Neoadjuvant | In Hospital | Complications                             | Primary Cause        | Day |
|---------|---------|-------------|-------------|---|----------------------|-----|
| VATS 8  | 73      | ChemoRT     | Yes         | SIRS/sepsis/shock                         | Respiratory          | 4   |
| VATS 10 | 77      | None        | Yes         | Aspiration/Afib/ respiratory failure      | Respiratory          | 75  |
| VATS 14 | 90      | ChemoRT     | Yes         | Delirium/pneumonia/PE                     | Neuro/cardio         | 15  |
| VATS 16 | 83      | ChemoRT     | Yes         | Colon ischemia, stroke, sepsis            | Cardiovascular event | 3   |
| Open 1  | 67      | Chemo       | Yes         | Respiratory failure, delirium, VC paresis | Respiratory          | 81  |
| Open 5  | 74      | Chemo       | Yes         | Pneumonia, trach/PEG                      | Respiratory          | 35  |
| Open 8  | 54      | None        | No          | SIRS, delirium, VC paresis                | Respiratory          | 74  |
| Open 18 | 62      | None        | No          | Deconditioning/ pleural effusion          | Disease progression  | 68  |

Groups had a 90-day mortality of 26.7% and 25% respectively.

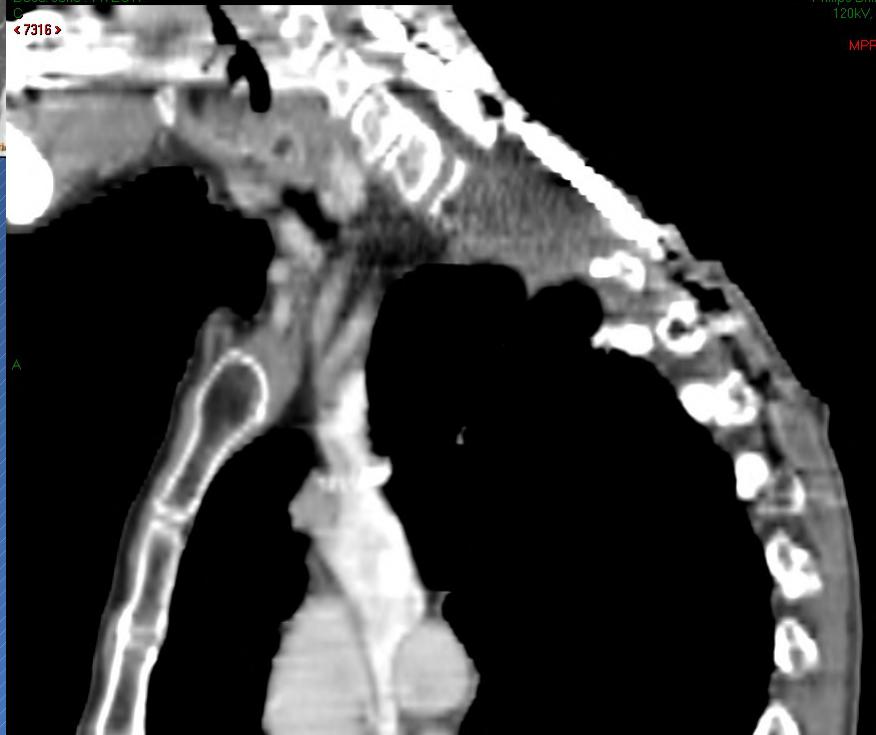


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## ENVAHISSEMENT DE PAROI ET VERTEBRES (T4):

LOBECTOMIE SUPERIEURE DROITE?  
PARIETECTOMIE ET HEMI-VERTEBRECTOMIE



HOTEL DIEU  
[ 17/05/2013.1  
Philips Brilliance  
120kV, MPR

# Surgical Treatment of Superior Sulcus Tumors\*

## Results and Prognostic Factors

Marco Alifano, MD; Massimiliano D'Aiuto, MD; Pierre Magdeleinat, MD;  
Eric Poupartdin, MD; Aziz Chafik, MD; Salvatore Strano, MD; and  
Jean François Regnard, MD

67 patients

All resection were en bloc

Surgical approaches:

posteriorolateral thoracotomy according to Paulson (n = 33),  
combined transcervical and transthoracic approach (n = 33),  
isolated transcervical approach (n = 1).

Pulmonary resection:

lobectomies (n = 59),  
pneumonectomies (n = 2),  
wedge resections (n = 6).

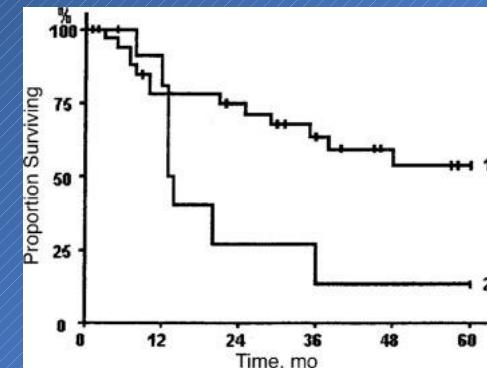
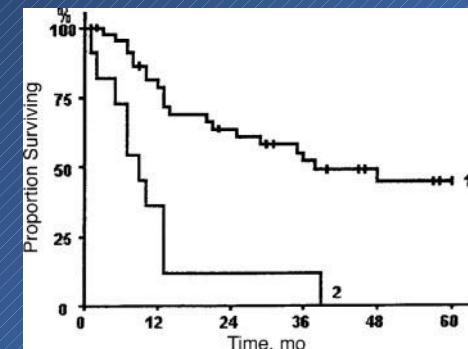
R0: 55 patients (82%).

Operative and in hospital mortality 8.9%

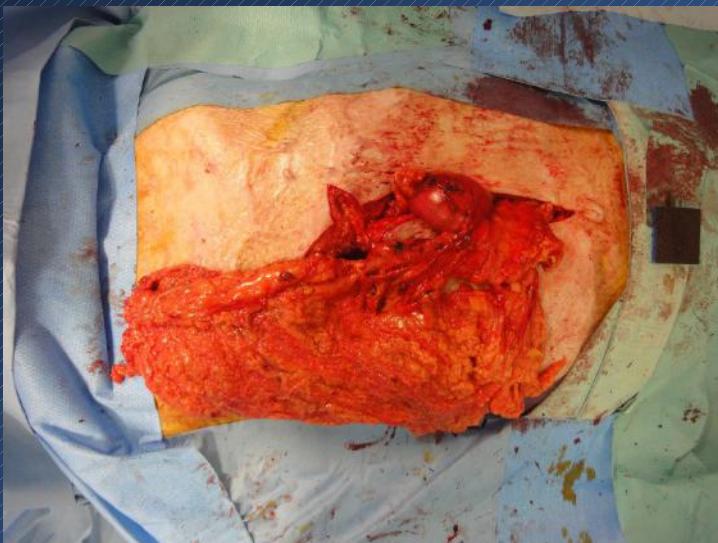
Overall 5-year survival rate: 36.2%

complete resection versus incomplete resection (44.9% vs 0%, p = 0.000065)  
absence of associated major versus presence (52% vs 16.9%, p = 0.043)

Multivariate analysis: completeness of resection and the absence of major comorbidities = independent positive prognostic value



## II. EXERESES COMPLEXES EN PATHOLOGIE BENIGNE: INFECTION CHRONIQUE



## Late costal osteomyelitis with a cutaneous fistula after flame burns: a case report

S. Gaucher

MD, PhD, Plastic Surgeon<sup>1,2</sup>

A. Bobbio

MD, PhD, Thoracic Surgeon<sup>3</sup>

A. Mansuet-Lupo

MD, PhD, Pathologist Doctor<sup>4</sup>

E. Hamelin-Canny

MD, Thoracic Surgeon<sup>3</sup>

A. Hautier

MD, Plastic Surgeon<sup>5</sup>

C. Nicolas

MD, Physiotherapist Doctor<sup>6</sup>

M. Alifano

MD PhD, Professor, Thoracic Surgeon<sup>1,3</sup>



### III. Tumeurs malignes de la paroi thoracique

#### Aspects épidémiologiques fondamentaux

Primary chest wall tumors: <2% of all tumors

25-45% of chest wall resections

Infiltration of chest wall by neighboring cancer: more common

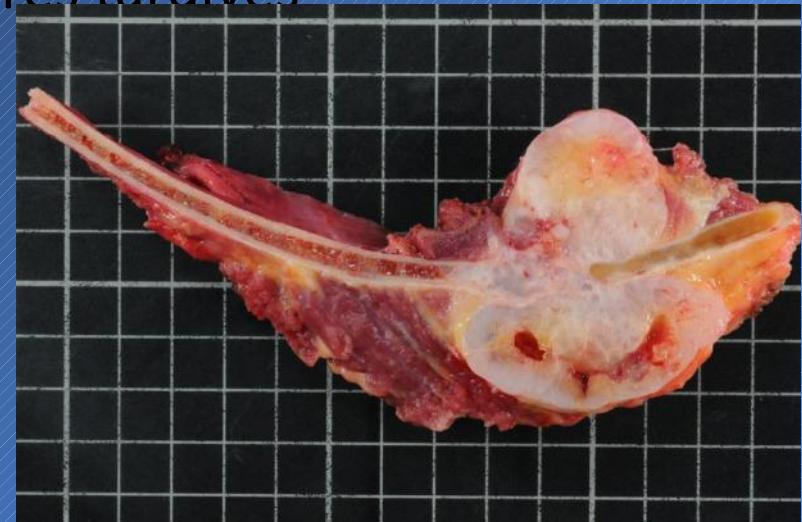
Primary chest wall tumors:

55% Bone or cartilage: 6-8% of all bony tumors<sup>18</sup>

# Tumeurs malignes primitives

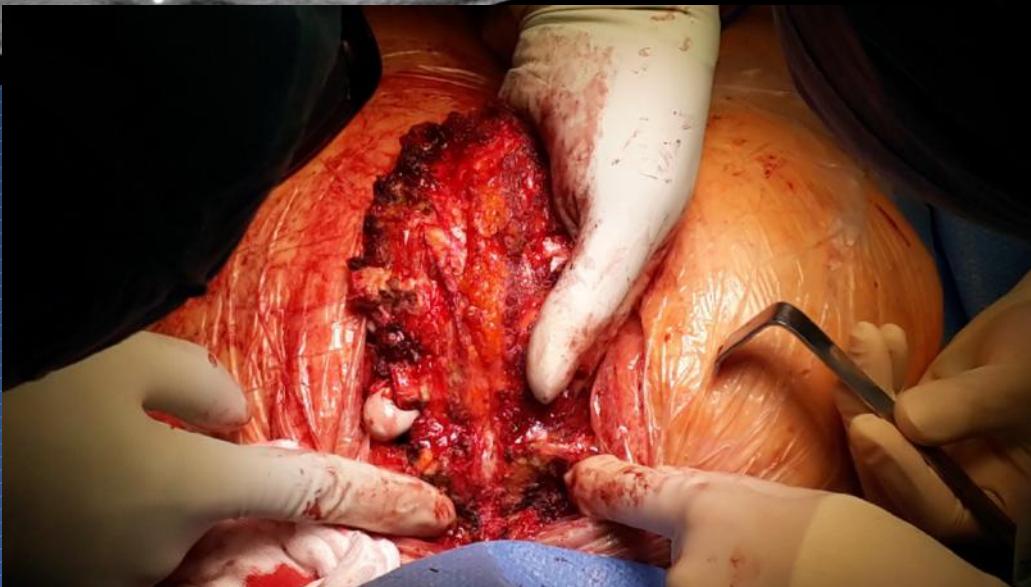
## Chondrosarcome

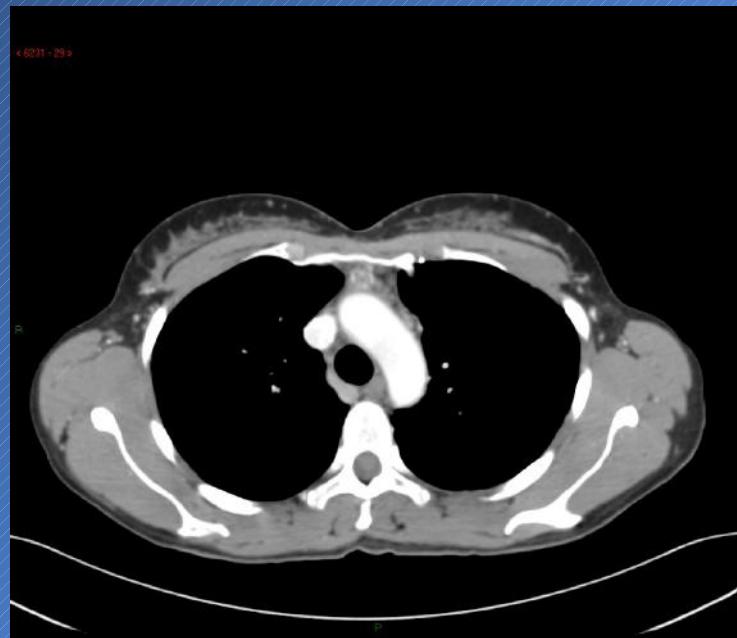
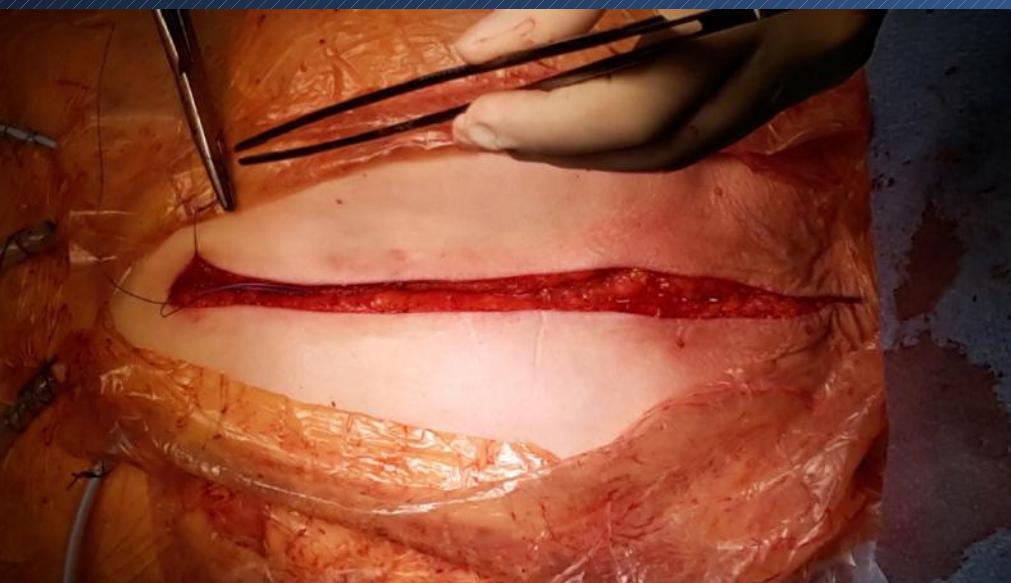
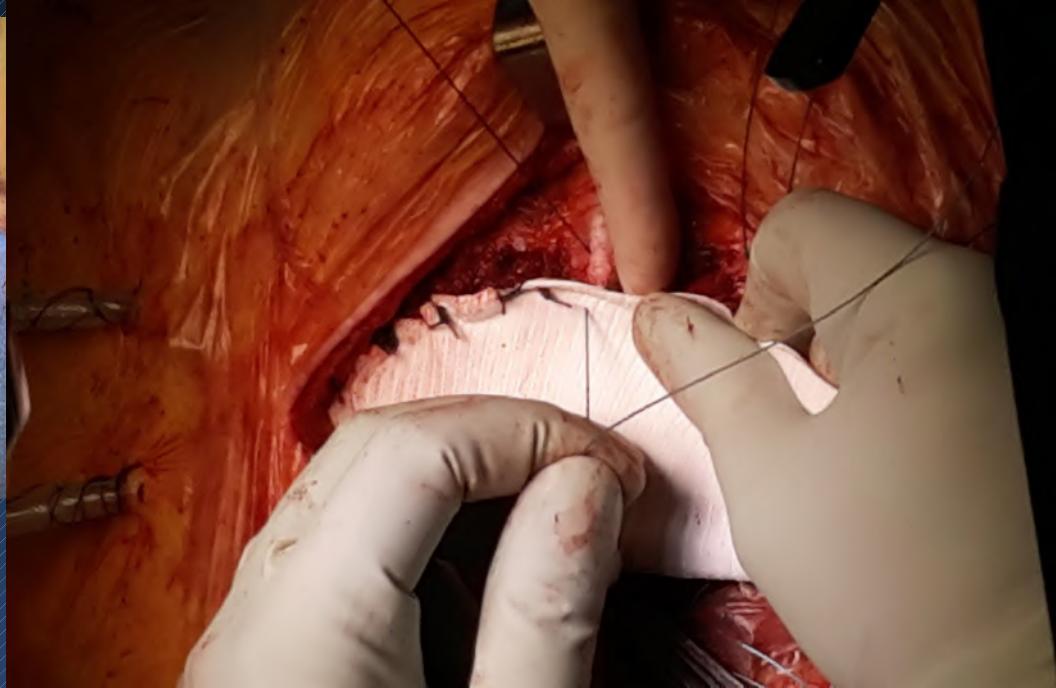
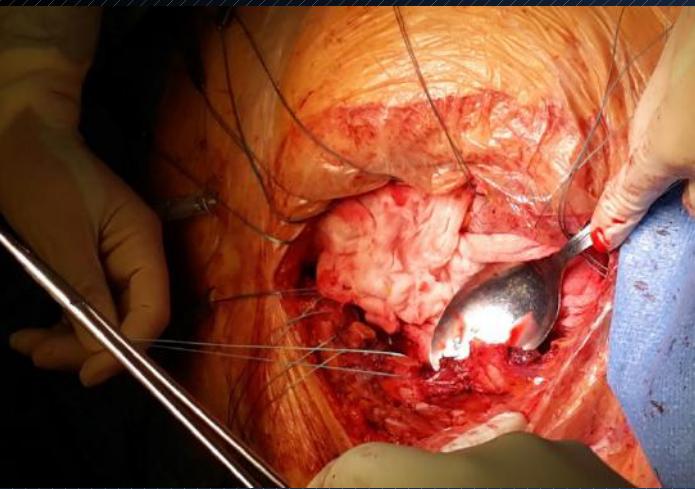
- Paroi antérieure
- Plus fréquente chez le jeune homme (20-30 ans) males
- La fracture pathologique est rare
- Croissance lente et métastases très tardives



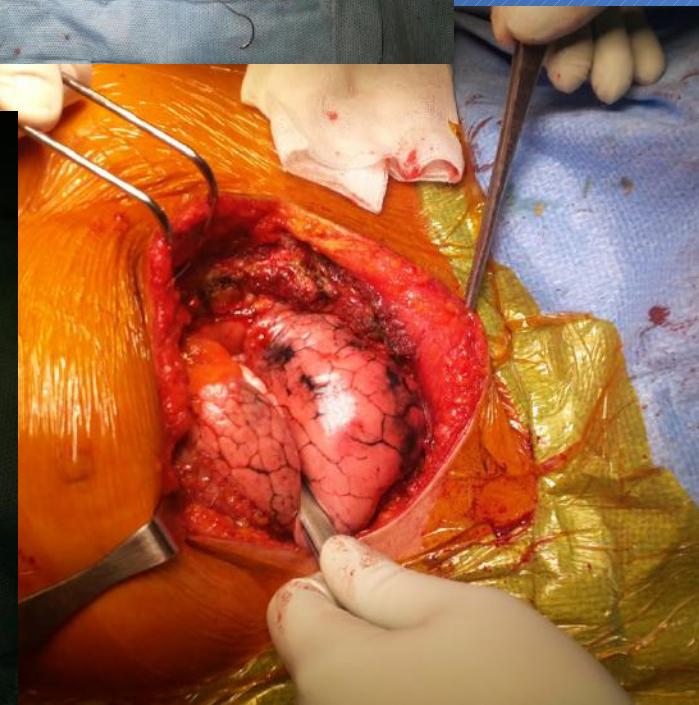
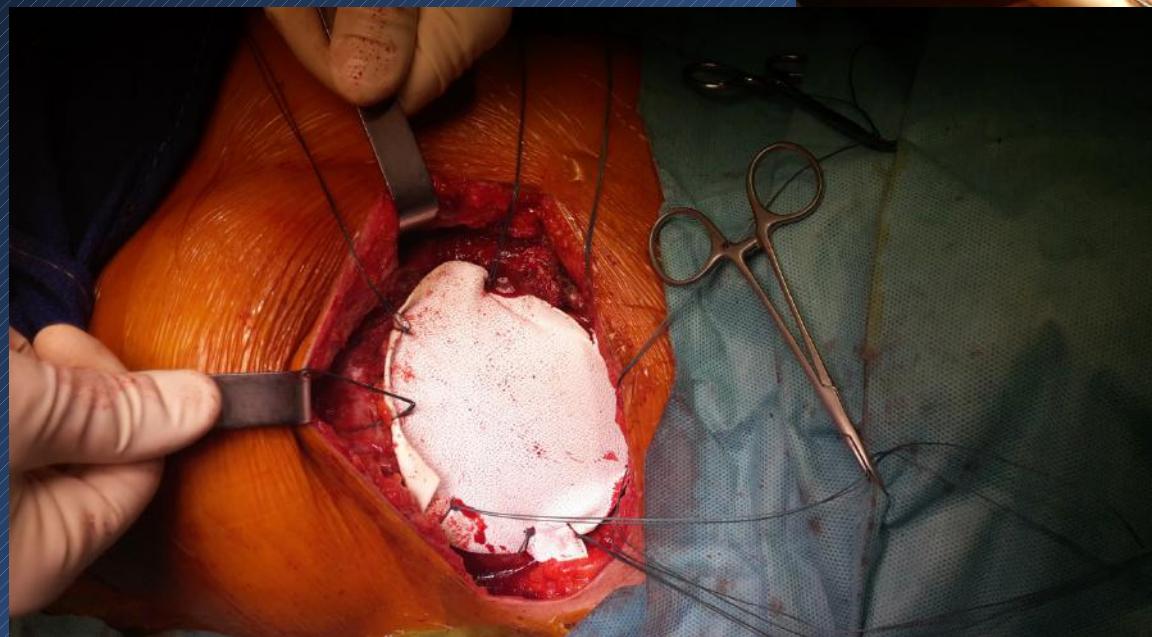
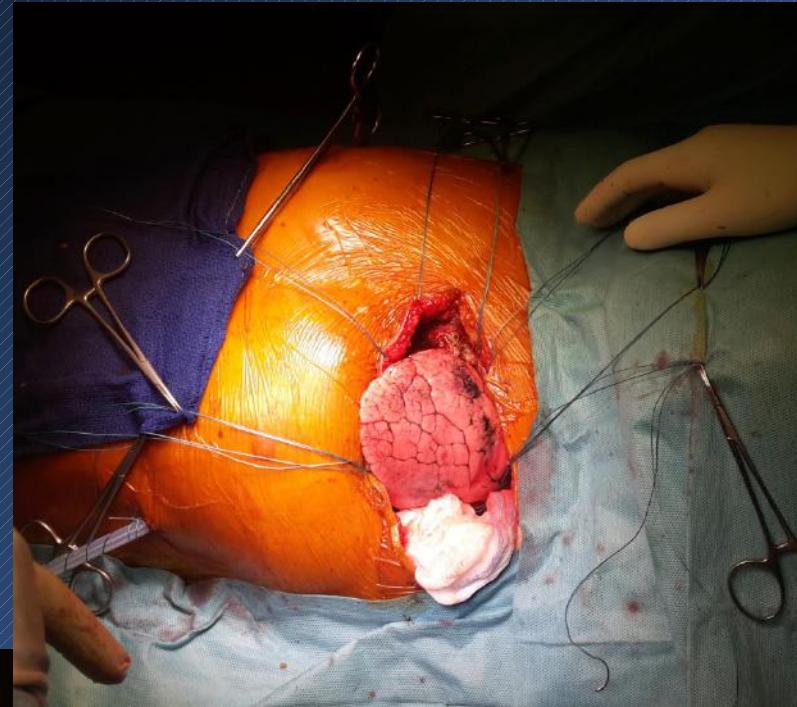
# Chondrosarcome du sternum

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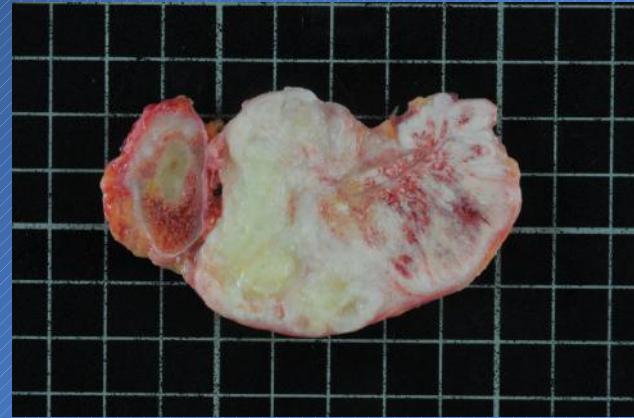
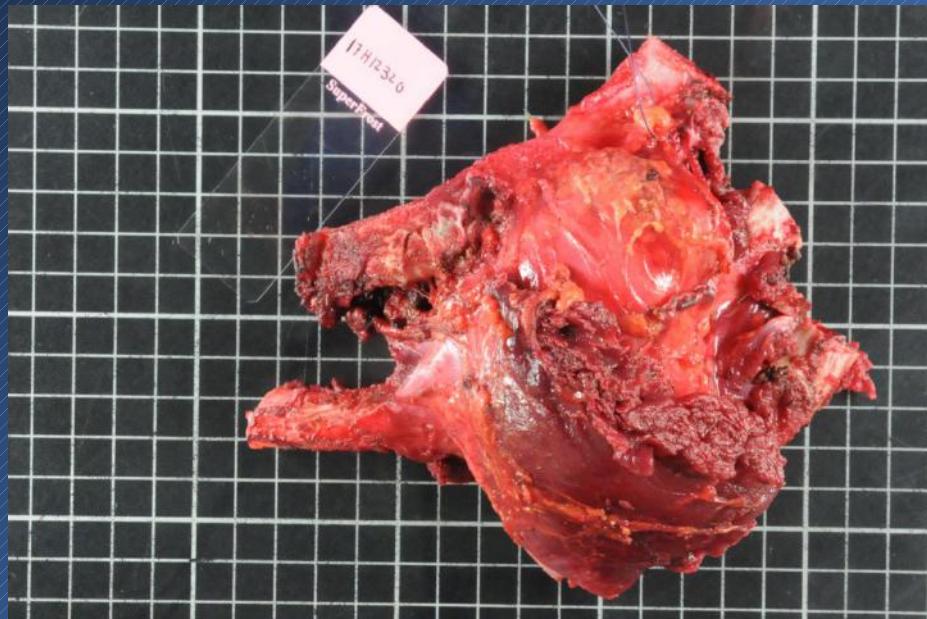
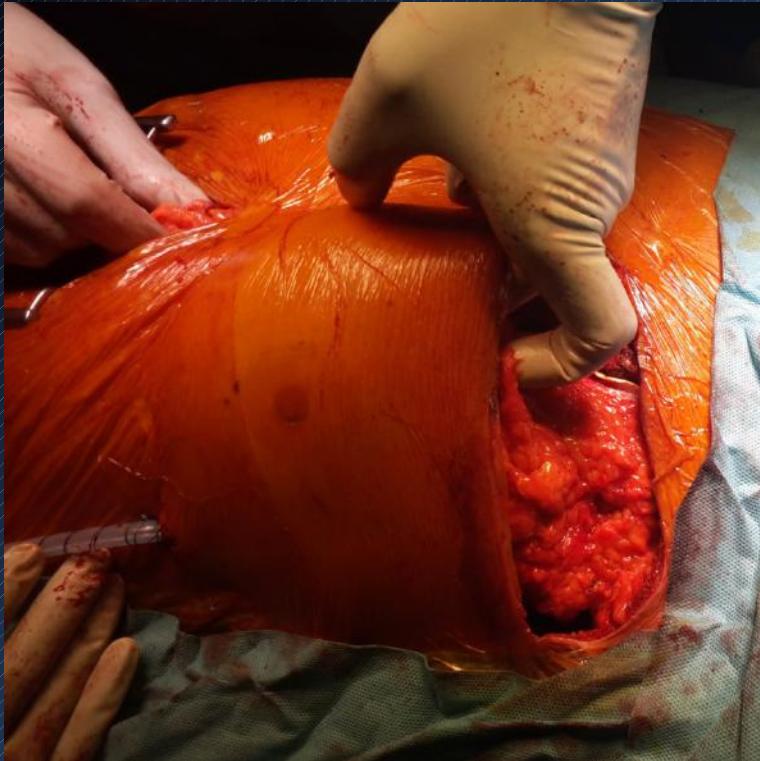




# Osteosarcome



## Transposition d' épiploon



# THE ANNALS OF THORACIC SURGERY

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**March 2017** Volume 103, Issue 3, Pages 898–905

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## Safety and Effectiveness of Cadaveric Allograft Sternochondral Replacement After Sternectomy: A New Tool for the Reconstruction of Anterior Chest Wall

Presented at the Fifty-second Annual Meeting of The Society of Thoracic Surgeons, Phoenix, AZ, Jan 23–27, 2016.

Giuseppe Marulli, MD, PhD Andrea Dell'amore, MD, Francesca Calabrese, MD, Marco Schiavon, MD, PhD, Niccolò Daddi, MD, PhD, Giampiero Dolci, MD, Franco Stella, MD, Federico Rea, MD

4 total sternectomy

8 partial lower sternectomy

6 a partial upper sternectomy

14 muscle flaps coverage.

Complications: 1 pulmonary embolism (death), 1 systemic *Candida* infection, 1 bleeding, 1 removal of screw on the clavicle

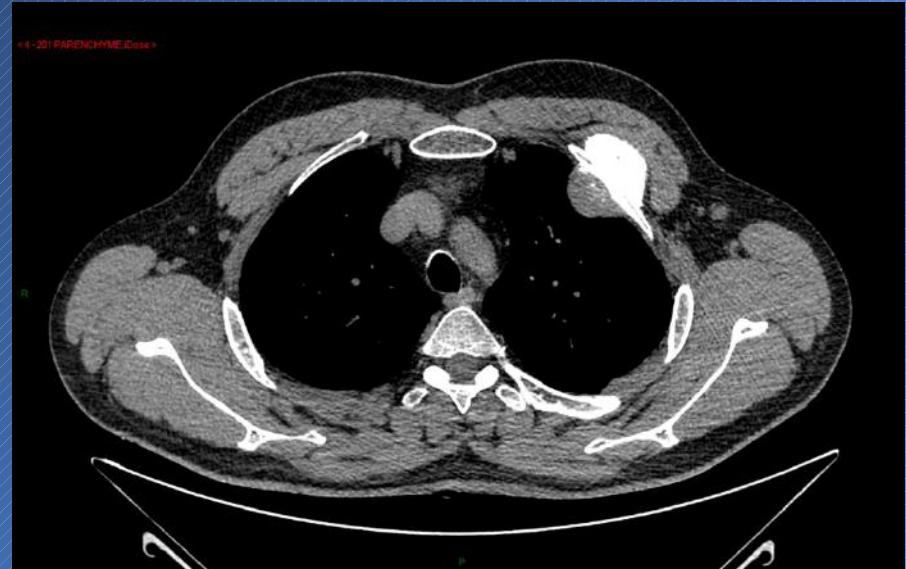
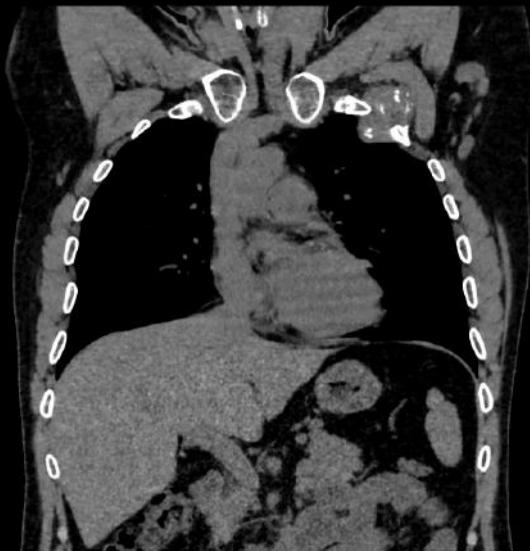
No infection nor rejection of the graft occurred;

Median follow-up 36 months: 13 patients alive without disease, 4 patients died.

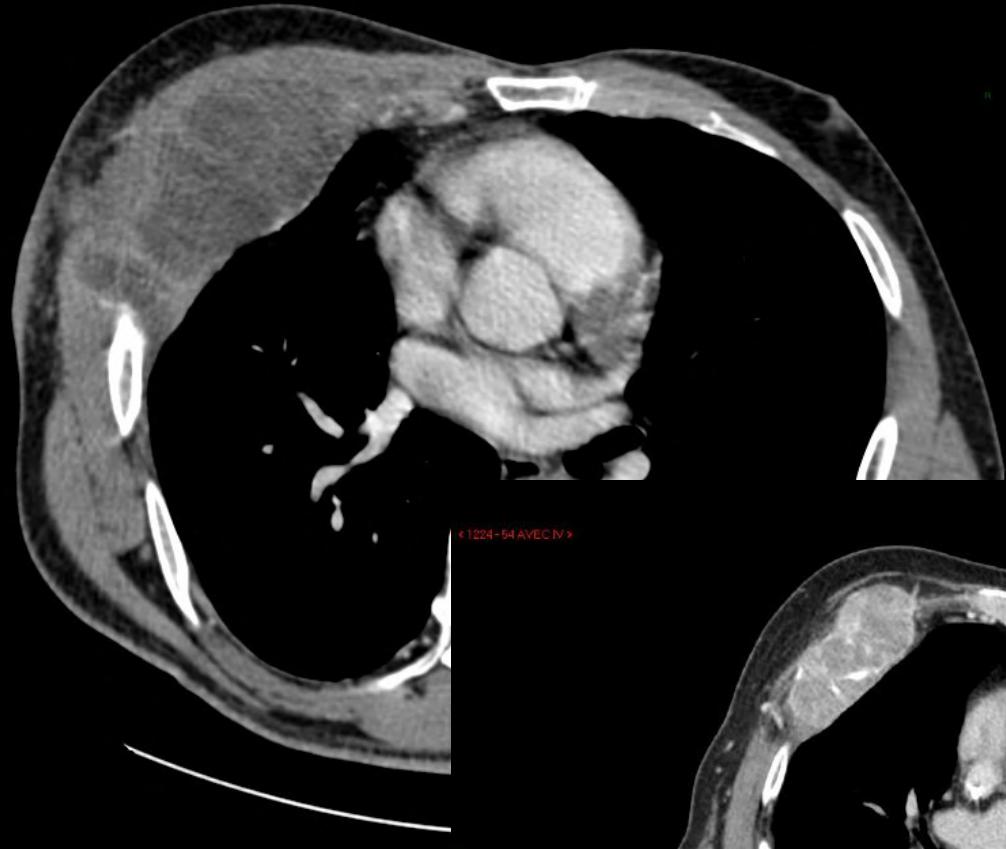
# TUMEURS COSTALES MALIGNES

## Ostéosarcome

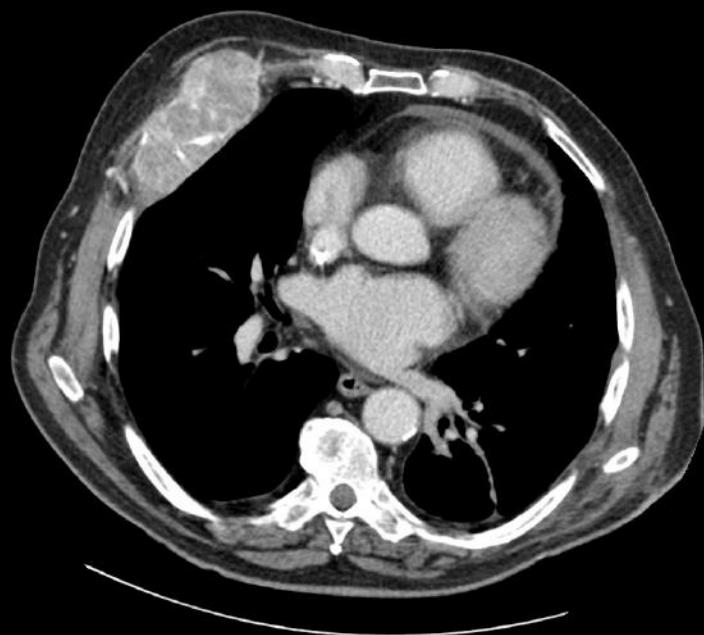
- Plus malin et moins fréquent que le chondrosarcome
- Plus fréquent chez les adolescents
- H>F



< 5805 - 71 AVEC IV >



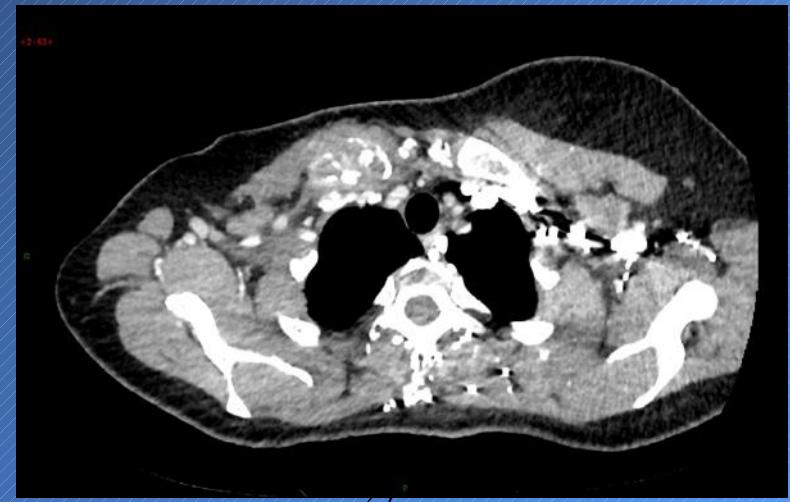
< 1224 - 54 AVEC IV >



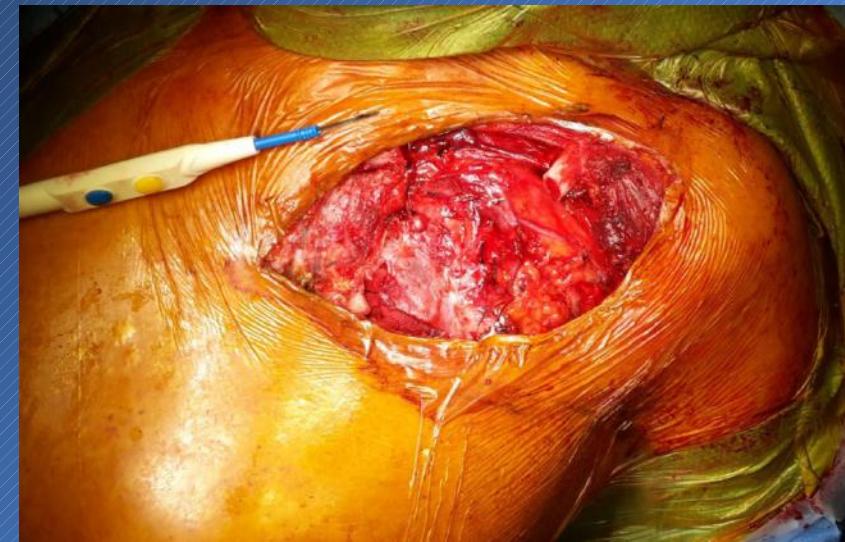
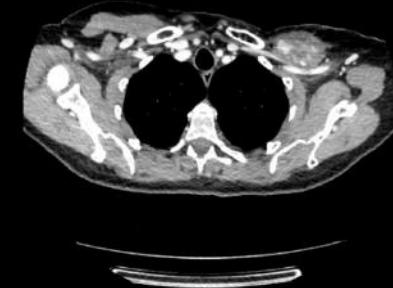
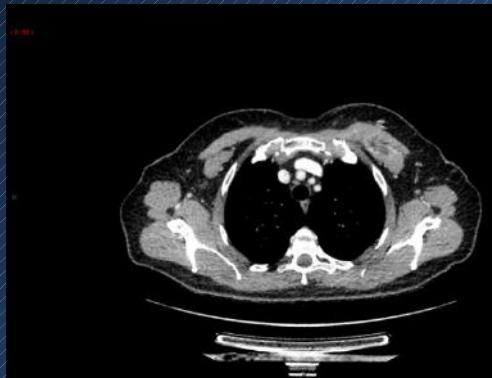
Ostéosarcome: chimiothérapie d'induction

# Sarcomes radio-induits

- Rares.
- Radiothérapie contraindiquée
- Chémothérapie peu utile



# Fibromyxosarcome



*Lambeau myo-cutané  
de grand dorsal*



# Récidive de cancer mammaire: parietectomie et lambeau myo-cutané de grand dorsal

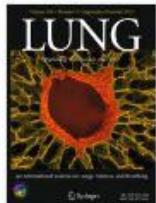


# Tumeurs de faible malignité

## Tumeur desmoïde

- 40 % de toutes les tumeurs desmoides se développent dans la paroi thoracique ou l' épaule.
- Extension médiastinale et pleuropulmonaire possible





Lung

October 2016, Volume 194, Issue 5, pp 855–863

## Indications and Results of Reconstructive Techniques with Flaps Transposition in Patients Requiring Complex Thoracic Surgery: A 12-Year Experience

Authors

Authors and affiliations

Sonia Gaucher , Filippo Lococo, Claude Guinet, Antonio Bobbio, Pierre Magdeleinat, Samir Bouam

Jean-François Regnard, Marco Alifano



Indication to flap transposition:

chest wall reconstruction after resection for malignancy (33%)

repair of intrathoracic viscera perforation (18.5%)

filling of residual cavities secondary to pulmonary/pleural infection (48.5%)

Pedicle muscle flap : 79 %

Omental flap: 21%

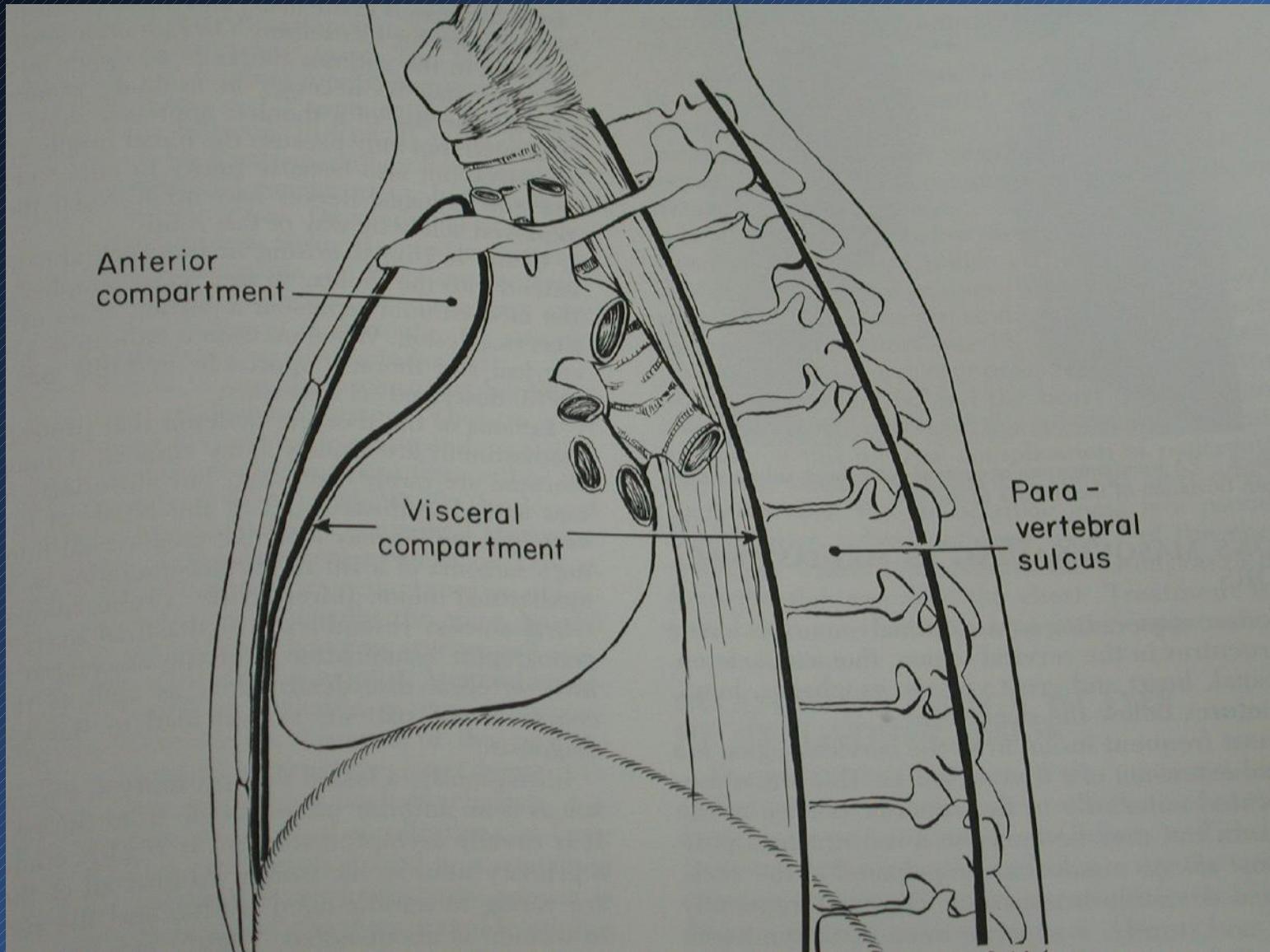
No immediate postoperative complications

No flap necrosis,

Late Mortality: 3.7% (respiratory or multiorgan failure)



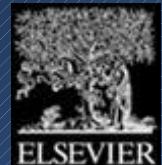
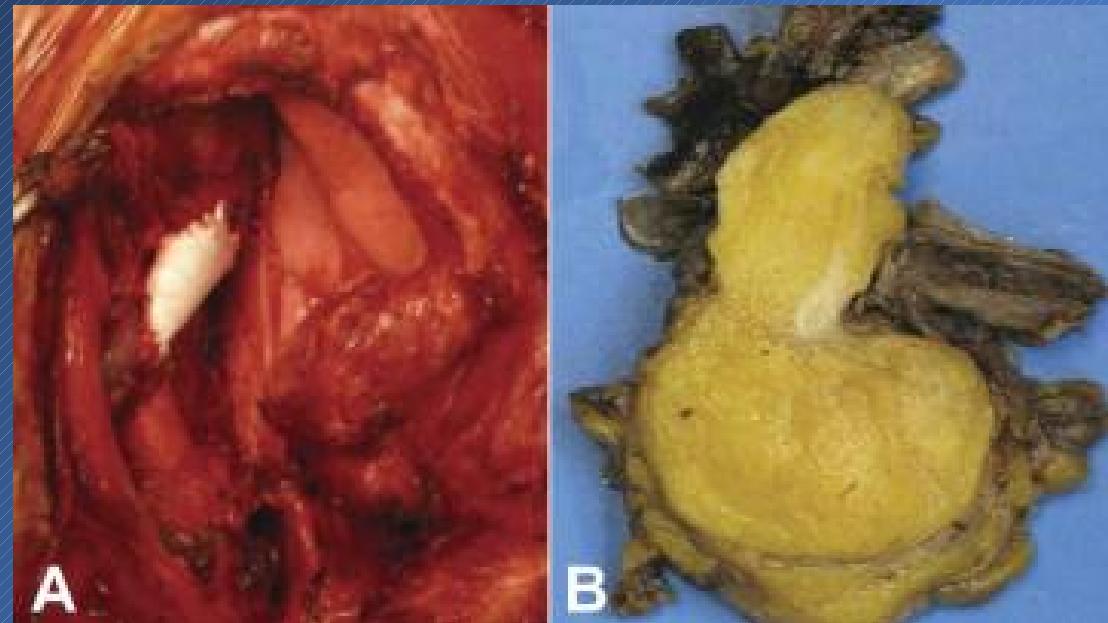
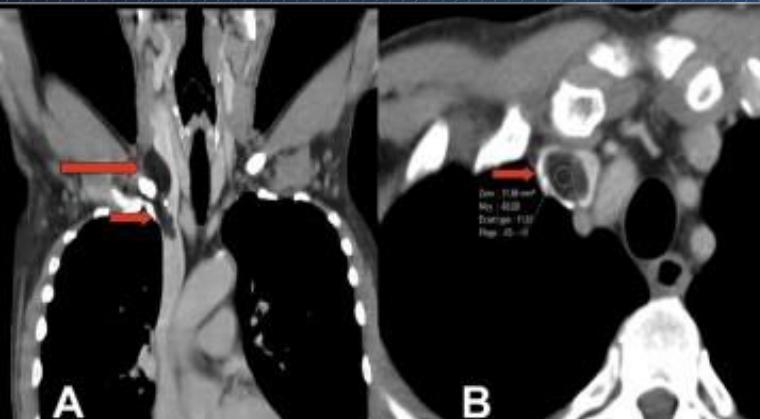
#### IV EXERESE ELARGIE EN PATHOLOGIE MEDIASTINALE



# Lipoma of the Right Thoracic Inlet With Intravascular Extension and Fatty Thrombus Into the Right Brachiocephalic Vein

Filippo Lococo, MD, Jury Brandolini, MD, Emelyne Hamelin-Canny, MD, Marie-Christine Charpentier, MD, Marco Alifano, MD, PhD

The Annals of Thoracic Surgery  
Volume 95, Issue 5, (May 2013)  
DOI: 10.1016/j.athoracsur.2012.10.053

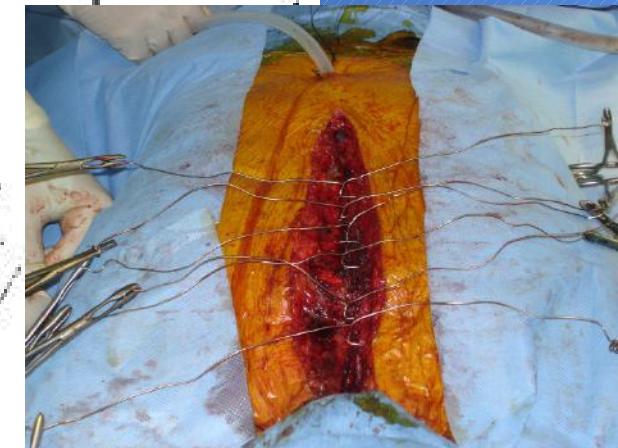
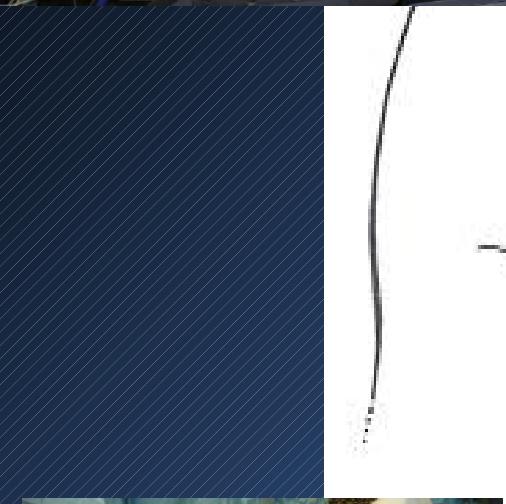
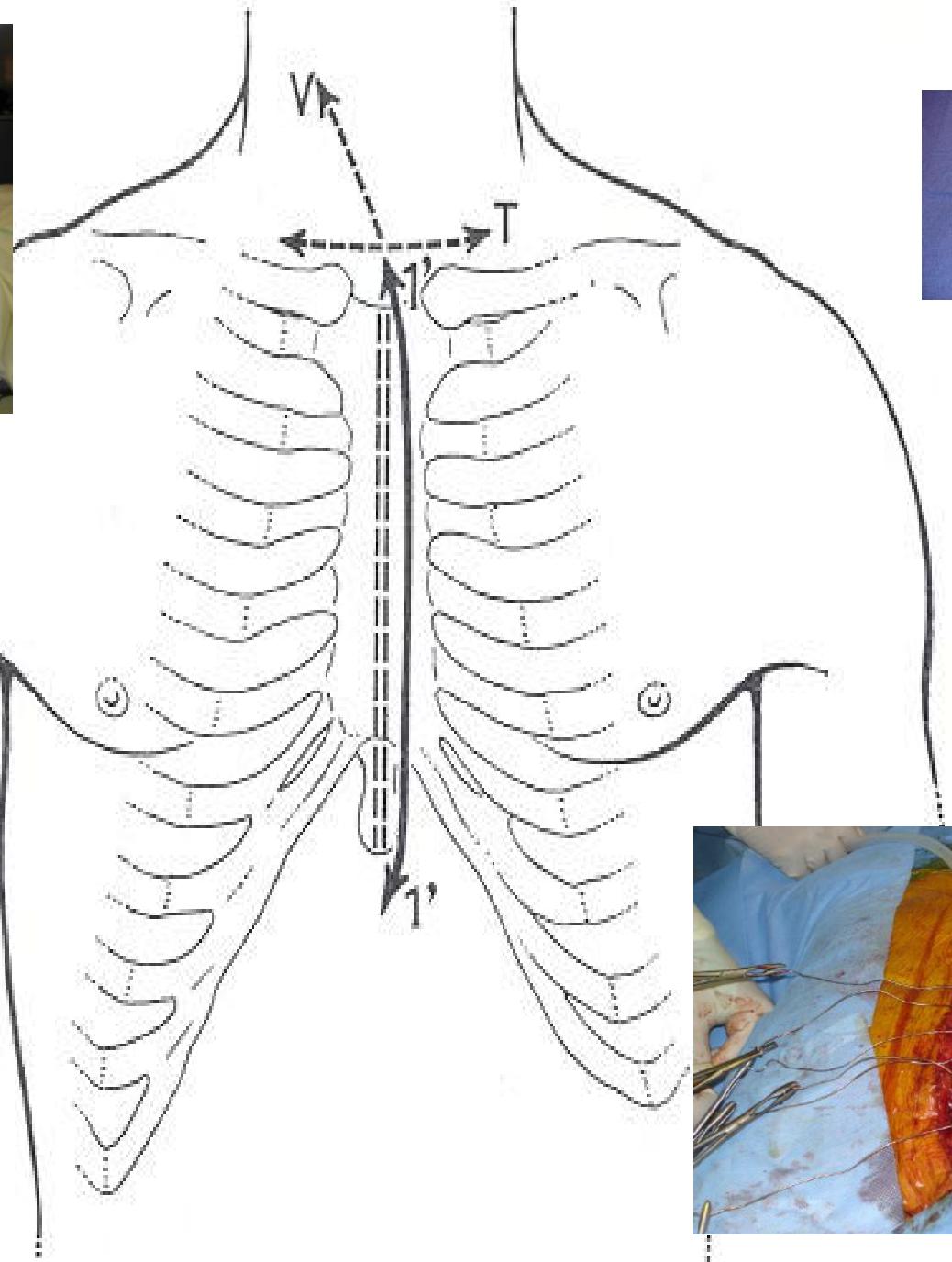


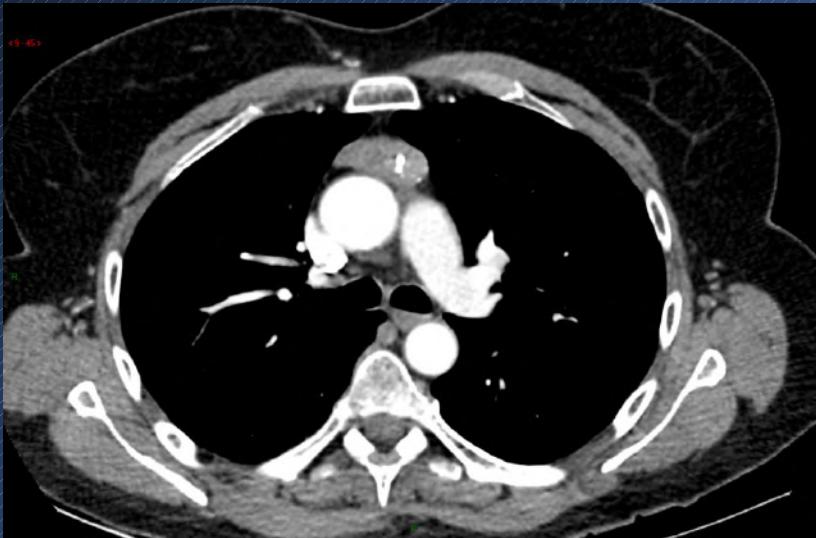
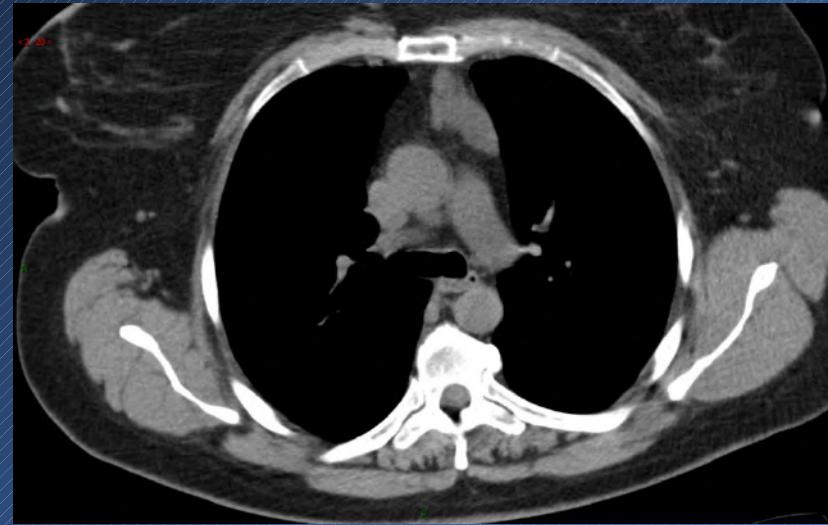
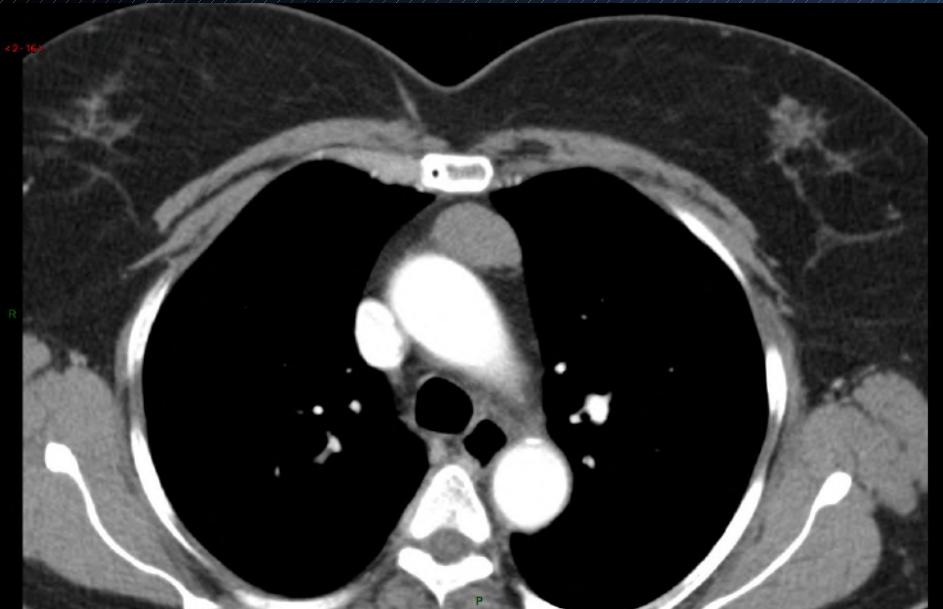
## PATHOLOGIE THYMIQUE

- ✓ Myasthénie sans thymome
  - vs cervicotomie +/- suspension ou cervico-manubriotomie
  - pas d'avantage démontré de la vidéothoracoscopie (cicatrice, douleurs)
- ✓ Myasthénie avec thymome
  - Petites lésions : **cervico-manubriotomie ou vidéothoracoscopie**
  - Lésions plus volumineuses : **chirurgie conventionnelle (sternotomie)**

**Mack et al, J Thorac Cardiovasc Surg 1996; 112:1352-1359.**  
**Cooper et al, Ann Thorac Surg 1988; 45:242-247.**  
**Port et al, Chest Surg Clin North Am 2001; 11:421-437.**

# STERNOTOMIE





**Exérèse « standard »**

# Thymomes

**Thoracic Oncology**



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**Article in Press**

## Determinants of Complete Resection of Thymoma by Minimally Invasive and Open Thymectomy: Analysis of an International Registry

Bryan M. Burt, MD  , Xiaopan Yao, MD, Joseph Shrager, MD, Alberto Antonicelli, Sukhmani Padda, MD, Jonathan Reiss, MD, Heather Wakelee, MD, Stacey Su, MD, James Huang, MD, Walter Scott, MD

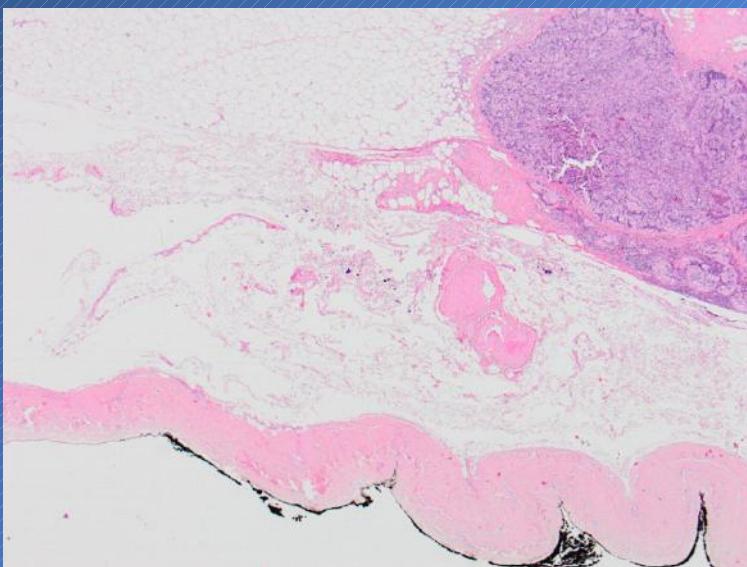
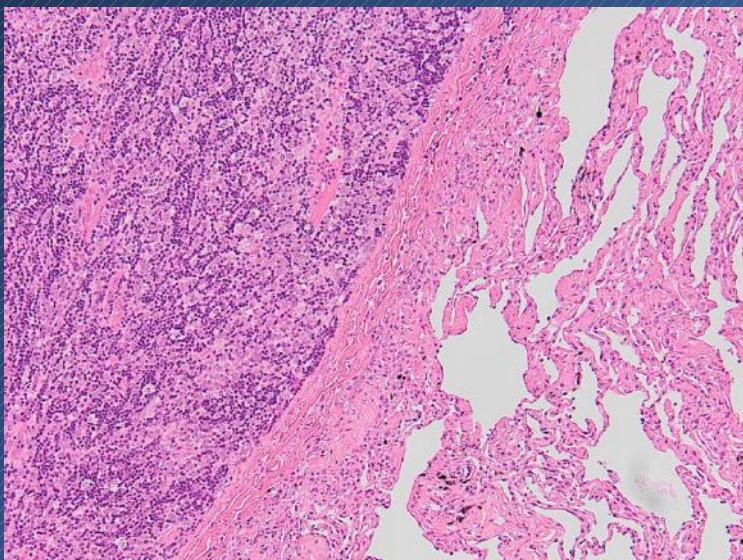
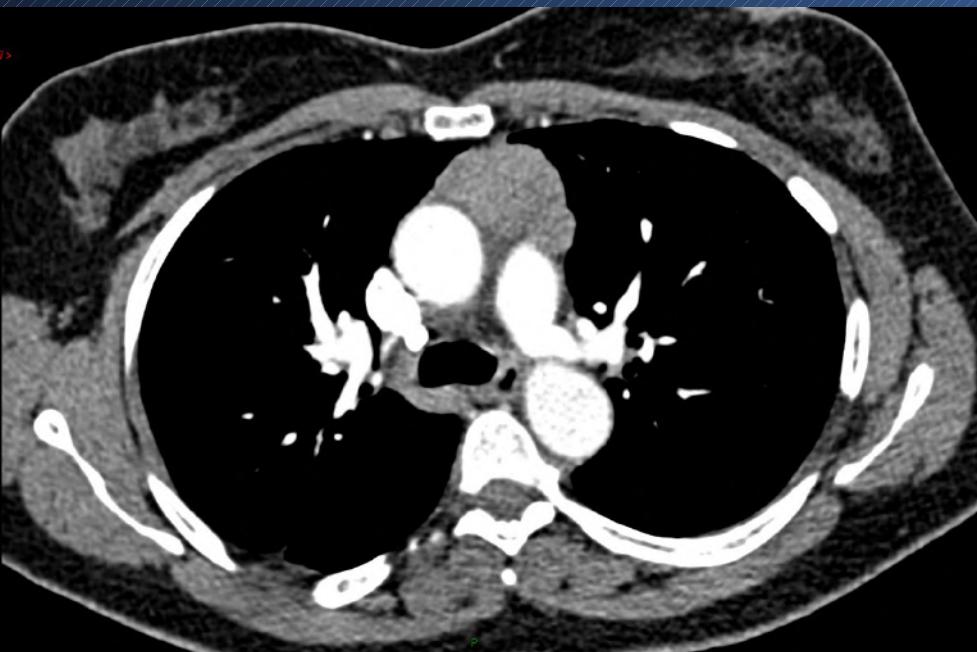
Altmetric 0

- Data-base ITMIG  
1997-2012
- 2514 patients
- 2053 Open
- 461 Minimal
  
- R0 OT 86 %
- R0 MT 94 %
- Propensity-matched: 96% OT e MT

<5-83>



<5-97>



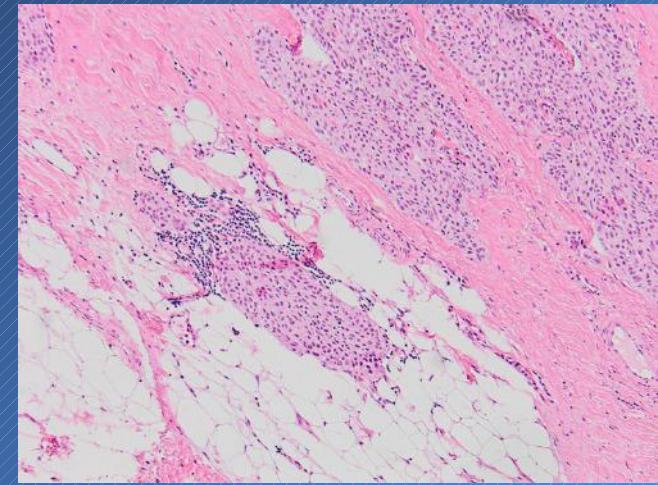
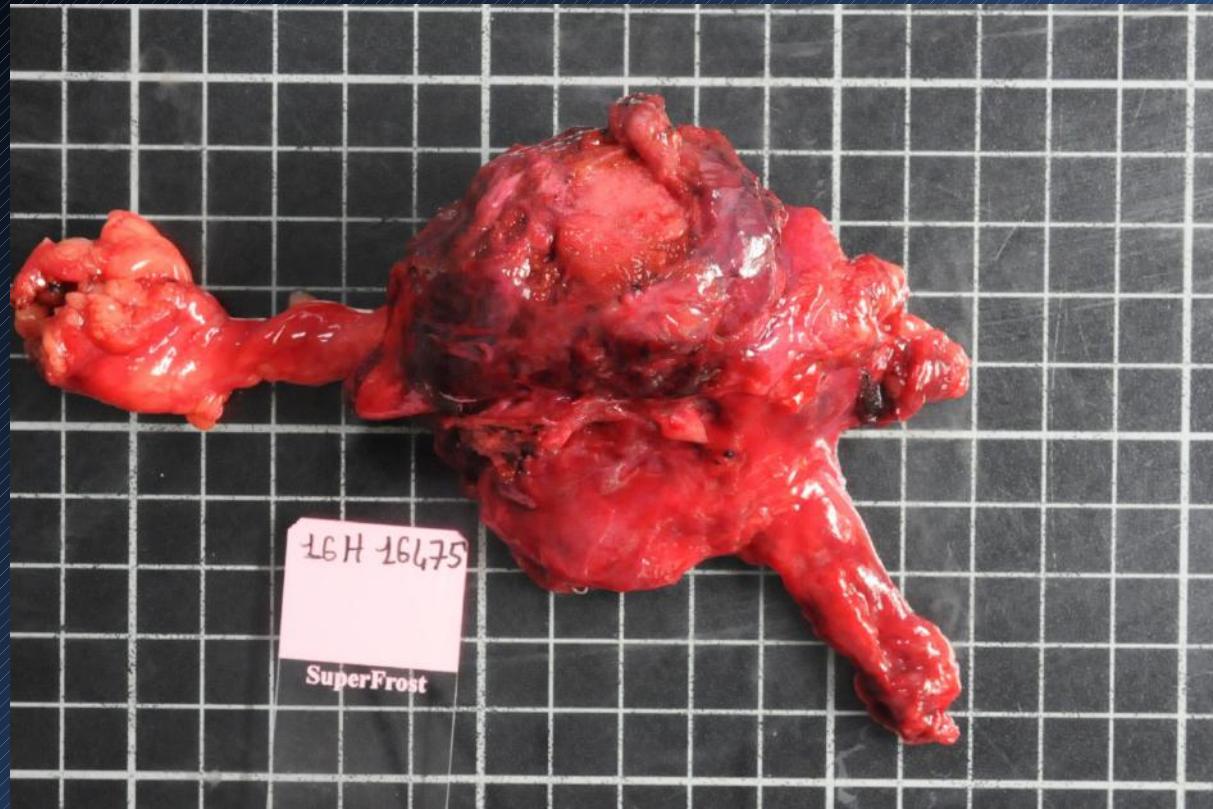
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H, 32 ans



# Exérèse élargie: Thymus, thymome, péricarde, plèvre, origine VCS + LSD en sternotomie



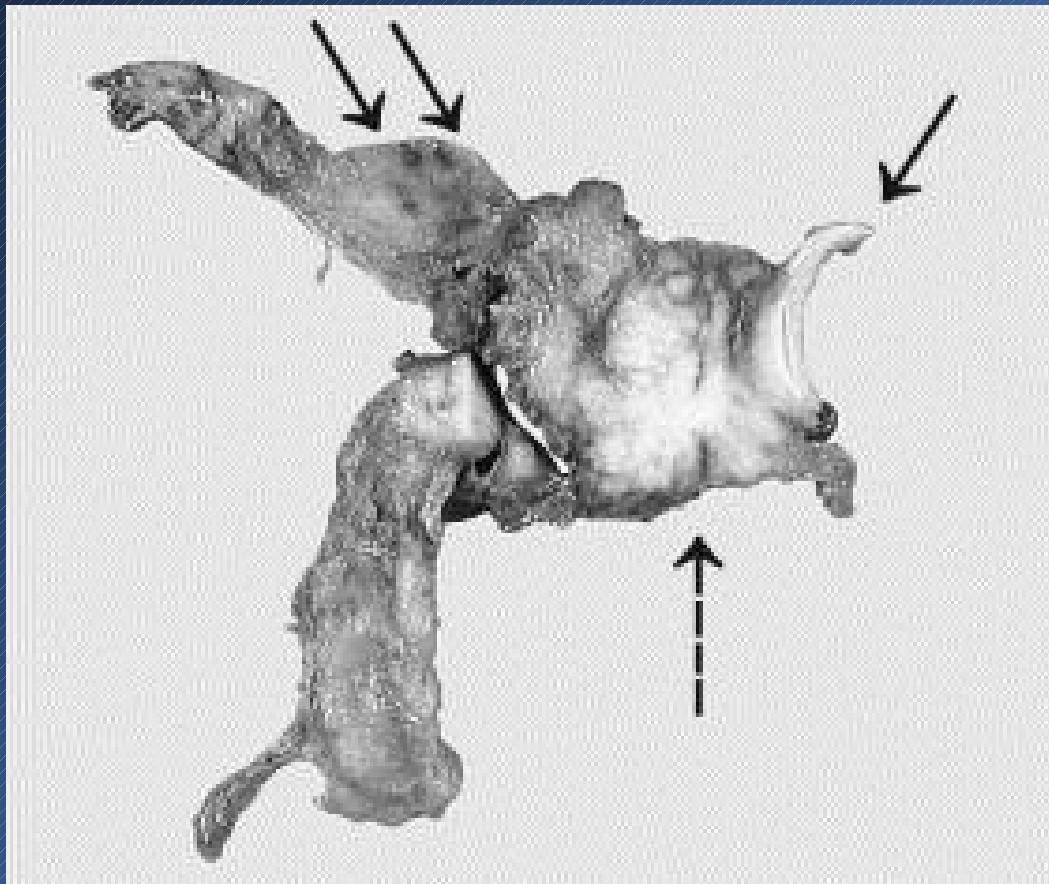
## Carcinoma showing thymus-like elements invading the trachea

Marco Alifano, MD, Mohamed Sadok Boudaya, MD, Carmen Dinu, MD, Habiba Kadiri, MD, Jean-François Regnard, MD

*The Journal of Thoracic and Cardiovascular Surgery*

Volume 132, Issue 1, Pages 191-192 (July 2006)

DOI: 10.1016/j.jtcvs.2006.03.020



# Pour finir



- 88 Ans
- Exérèse standard

