

# IMPACT OF ROUTINE VIDEO THORACOSCOPY AS THE FIRST STEP OF THE PLANNED RESECTION FOR LUNG CANCER

## Experience of 1306 cases

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### 1. Background & Objectives

Notwithstanding refinement of preoperative staging, a number of procedures still end in an exploratory thoracotomy (E.T), due to unexpected findings.

The aim of this work is to evaluate the validity of routine videothoracoscopy – performed as the first step of the planned resection for NSCLC – to assess tumor resectability and feasibility of the resection through thoracoscopy.

### 2. Patients & Methods

From November 1991 to December 2007, 1306 patients with NSCLC, candidates for curative surgery after conventional staging, underwent routine VATS exploration immediately before the planned operation.

Preoperative staging included Chest X-rays, CT scan of the thorax, upper abdomen, brain, and bronchoscopy. Mediastinoscopy was carried out in cases of suspected N3 disease or extracapsular N2 invasion.

When thoracoscopy demonstrated clear unresectability the procedure was concluded. In any case of doubt, it was converted to thoracotomy. When feasible and indicated, thoracoscopic resection was performed.

The clinical charts have been retrospectively reviewed, and data analyzed by SPSS 16.0 software.

### 4. Comments

In our previous series from 1980 to 1991 the E.T. rate had been 11.6%. In the present series, after the introduction of routine thoracoscopy, as the unique major variation of the staging protocol, the E.T. rate is 2.4%.

Considering the 58 pts in whom thoracoscopy revealed an unexpected cause of inoperability and the 449 pts in whom it confirmed the feasibility of a VATS resection, thoracoscopy spared an unnecessary thoracotomy in 507 (38.8%) patients.

Technical and anatomical problems can limit the accuracy of preliminary VATS

### 5. Conclusions

Routine videothoracoscopy immediately before the planned operation for lung cancer:

- provides precise assessment of tumor extension and resectability;
- allows the surgeon to decide for a thoracoscopic or an open resection, and
- minimizes the number of unnecessary thoracotomies.

### 3. Results

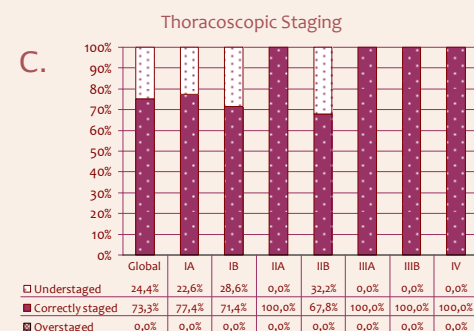
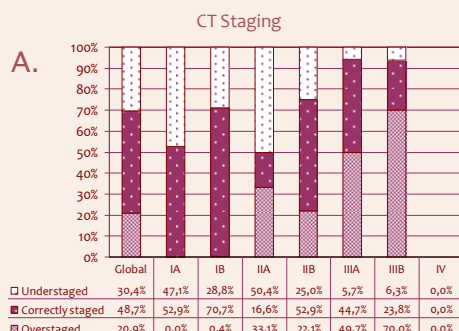
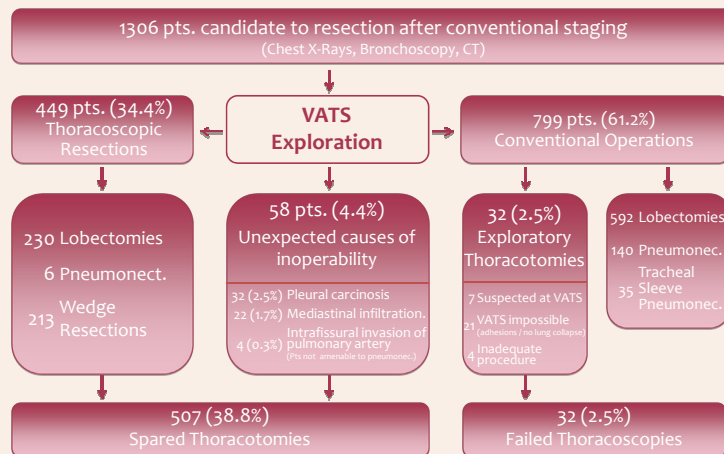
Morbidity and mortality specifically related to thoracoscopy has been absent.

Thoracoscopy, resulted highly reliable in excluding causes of unresectability, (NPV 0.97).

The global accuracy was 73.3%. (graph C)

The difference in the rate of correctly staged patients by CT and by thoracoscopy was significant. (p<0.001).

E.T. rate after the adoption of preliminary VATS decreased to 2.4%.



**B. Pathologic staging**

	IA	IB	IIA	IIB	IIIA	IIIB	IV
IA (278 pts)	147	82	22	3	8	4	2
IB (229 pts)	1	162	0	54	7	12	5
IIA (139 pts)	36	10	23	29	18	15	8
IIB (208 pts)	19	21	6	110	31	11	10
IIIA (159 pts)	23	19	5	32	71	7	2
IIIB (80 pts)	0	15	0	20	21	19	5
IV (0 pts)	0	0	0	0	0	0	0

**LEGEND:** Using as the benchmark the final pTNM staging of pts submitted to VATS, the rates of cases (Figs. A and C) and the number of cases (Figs. B and D) understaged, correctly staged, or overstaged by CT or VATS are reported.

**D. Pathologic staging**

	IA	IB	IIA	IIB	IIIA	IIIB	IV
IA (292 pts)	226	0	25	0	43	0	0
IB (433 pts)	0	309	0	65	56	3	0
IIA (33 pts)	0	0	33	0	0	0	0
IIB (329 pts)	0	0	0	162	56	21	0
IIIA (12 pts)	0	0	0	0	12	0	0
IIIB (27 pts)	0	0	0	0	0	27	0
IV (32 pts)	0	0	0	0	0	0	32
Unfeasible (25 pts)	0	0	0	1	7	17	0

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