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**T4N0 – From a Satellite Pulmonary
Nodules in the Same Lobe Should
NOT be Staged as IIIB NSCLC**

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Corresponding publication: Satellite pulmonary nodules in the same lobe (T4N0) should not be staged as IIIB NSCLC.

Ann Thorac Surg 2006; 82:1808-1814.



Introduction

- **The treatment of NSCLC depends on stage**
- **Patients with T4 lesions represent a heterogenous group of tumors that includes:**
 - **Invade trachea, carina, heart, great vessels, esophagus, or mediastinum**
 - **Consist of two or more nodules with same histology in the same lobe**
 - **Malignant pleural effusion**



Introduction

- **Previous reports suggest that patients with T4-satellite disease have better survival than those with other types of T4**
 - **Thus, we have been aggressive in offering surgery to patients with node negative, T4-satellite nodules**
 - **We routinely perform mediastinoscopy, EUS-FNA and if risk low, performed lobectomy in selected patients**



Goals

- **First goal**
 - To compare patients with T4-satellite nodules those with T4-invasive disease
 - Retrospective study of prospective database
- **Second goal**
 - To compare survival T4-satelliteN0M0 pts to pts with stage Ia, Ib and II disease
 - Case-Control analysis



Methods

- **2nd goal accomplished utilizing case-control study**
 - **Initially matched T4-Satellite patients (cases) 1:4 to patients with stage Ia, Ib (controls)**
- **However, since the abstract submission, there have been several deaths which lowered the T4-satellite group survival rate.**
 - **Thus, added stage II controls**
 - **Only able to find 1:3 match controls in our prospective database**



Methods

- **Controls**
 - matched on gender, procedure and histology from the prospective database
 - had similar pre-operative staging (dedicated PET and CT scan)
 - completely resected, by same surgeon in the same manner, over same time period
 - All underwent complete thoracic lymphadenectomy



Results

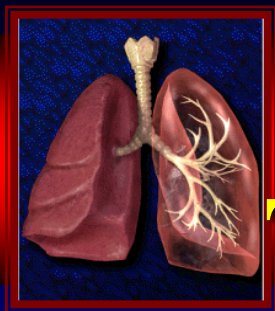
Demographics

1/99 → 1/05
337 patients

♂
71

32 → 81
↑
59 years

♀
33



Results

T4-satelliteN0M0 vs. T4-invasionN0M0

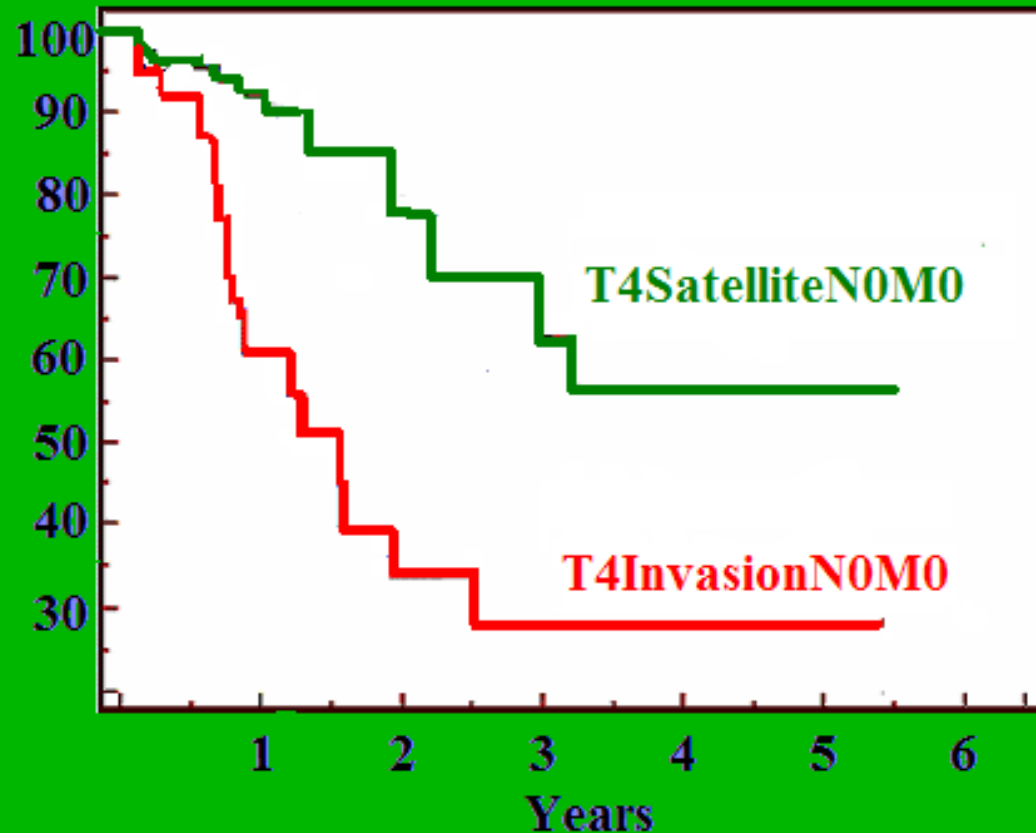
	T4-Satellite N = 26	T4-Invasion N = 25
GENDER		
Males	17	18
Females	9	7
HISTOLOGY		
Adenocarcinoma	13	7
Squamous Cell	6	15
NEO-ADJUVANT	4 (25%)	9 (36%)



Results

T4-satelliteN0M0 vs. T4-invasionN0M0

Kaplan-Meier Survival Analysis





Results

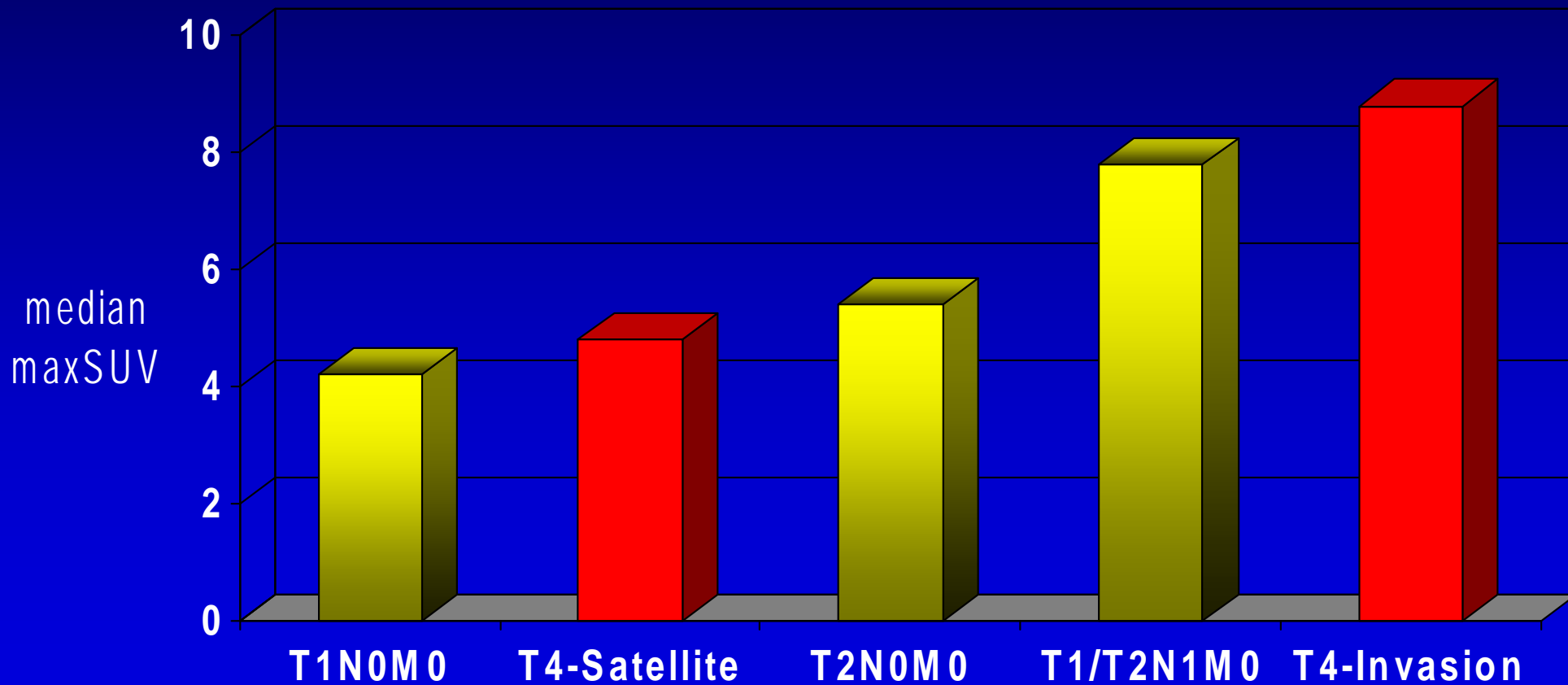
T4-satelliteN0M0 vs. Controls

	CASES	CONTROLS		
	T4-Satellite N = 26	T1N0M0 N = 104	T2N0M0 N = 104	T1N1M0 T2N1M0 N = 78
GENDER				
Males	17	68	68	51
Females	9	36	36	27
HISTOLOGY				
Adenocarcinoma	13	52	52	46
Squamous Cell	6	24	24	24
NEO-ADJUVANT	4 (25%)	6 (6%)	8 (8%)	20 (26%)



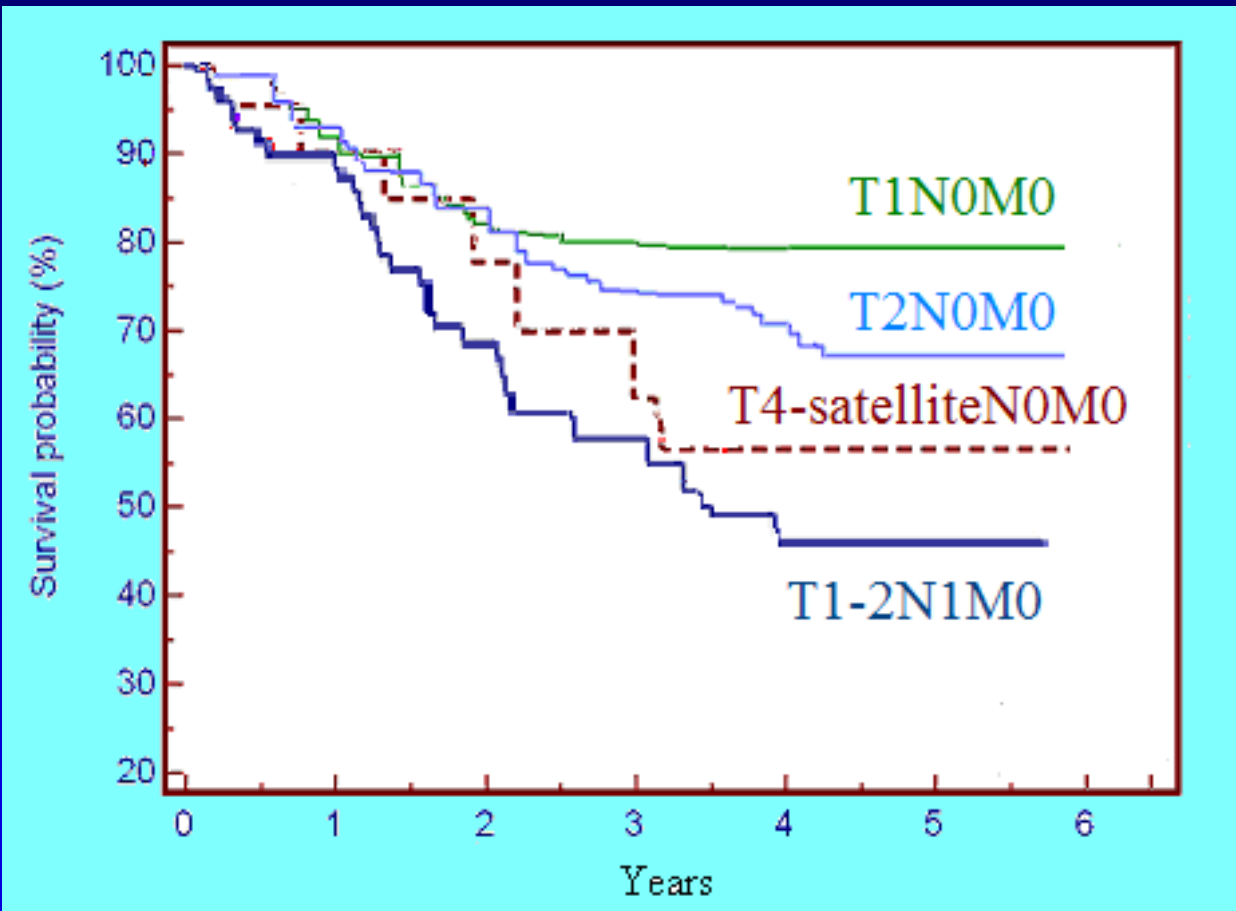
Results

MaxSUV



Results: Survival

T4-satelliteN0M0 vs Controls





Strengths and Limitations

- **STRENGTHS**

- Case-control study design
- Comparison amongst a homogeneous group of patients
 - minimizes confounders & interactions
- All patients were pathologically staged, underwent thoracotomy with complete thoracic lymphadenectomy

- **LIMITATIONS**

- Relatively Small N
- Different neoadjuvant and adjuvant therapies
- Selective use of immunohistochemical staining



Conclusions

- **Patients with T4-SatelliteN0M0 and T4-InvasionN0M0 NSCLC have significantly different outcomes, these include:**
 - **Greater prevalence of squamous cell carcinoma in patients with T4-Invasion cancer**
 - **Significantly different survival**
 - Survival of patients with T4-SatelliteN0M0 is similar to those with stage Ib and IIa lesions
 - **Significantly different maxSUV**
 - The maxSUV of patients with T4-satellite nodules similar to the maxSUV of patients with Stage Ia and Ib lesions



Conclusions

- **Based on this preliminary report with only 51 patients, we suggest that pts with T4-sateleittle node negative lesions should not be classified as stage IIIb - should not be in same stage with pts T4-invasive node negative NSCLC lesions**
- **This data requires further corroboration from other centers, with greater numbers prior to any changes in the current TNM classification system**