Küçük Hücre-Dışı Akciğer Kanserinde Cerrahi Tedavi

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Doç.Dr. Akif Turna

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Göğüs Cerrahisi Anabilim Dalı

HANGİ

TANI VE EVRELEME

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- Balgam Sitolojisi (Santral ise %52 - 87)

TANI VE EVRELEME

- Balgam Sitolojisi (Santral ise %52 - 87)
- Fiberoptik Bronkoskopi
  - Periferik ise %15 - 24
  - Santral ise %70 - 90
  - Fluoroskopik **Bronkoskopi (Tümünde %40-80)**

TANI VE EVRELEME

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- Transtorasik İğne Aspirasyonu (Tümünde %35 – 65)

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- Transtorasik İğne Aspirasyonu (Tümünde %35 – 65)
- PET (**Hassasiyet** : %90 -94,**Özgüllük** : %71-82)

TANI VE EVRELEME

**Ann Thorac Surg 1993; 56:825*

TANI VE EVRELEME

- **VATS (*Video-assisted Thoracoscopic Surgery*)**
  - **Mack ve ark.*: 242 hasta (Tanısız soliter pulmoner nodül, dış 1/3'te lokalize, kalsifikasyonsuz)→ Sadece 3 hastada torakotomi gerekti. 239'da kesin tanı.**

**Ann Thorac Surg 1993; 56:825*

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  - **Mack ve ark.*: 242 hasta (Tanısız soliter pulmoner nodül, dış 1/3'te lokalize, kalsifikasyonsuz)→ Sadece 3 hastada torakotomi gerekti. 239'da kesin tanı.**
- **Evre I'de tüm cerrahi işlemler VATS ile yapılabilir (İşaretleme teknikleri yardımcıdır).**

**Ann Thorac Surg 1993; 56:825*

TANI VE EVRELEME

TANI VE EVRELEME

- ERS VE ATS' nin Konsensus Raporları (1997, 2000):

TANI VE EVRELEME

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TANI VE EVRELEME

- ERS VE ATS' nin Konsensus Raporları (1997, 2000):

- **TANI KOYULAMAMIŞ SOLİTER PULMONER NODÜL BULUNAN RİSK GRUBU OLGULARDA DİREKT CERRAHİ GİRİŞİM UYGULANABİLİR.**

SOLİTER PULMONER NODÜLDE MALİGNİTE

SOLİTER PULMONER NODÜLDE MALİGNİTE

- Radiolojik Özellikler
  - Çap > 2 cm
  - Spikülasyon
  - Üst lob lokalizasyon

SOLİTER PULMONER NODÜLDE MALİGNİTE

- Radiolojik Özellikler
  - Çap > 2 cm
  - Spikülasyon
  - Üst lob lokalizasyon
- Klinik Özellikler
  - Yaş> 40
  - Pozitif sigara hikayesi

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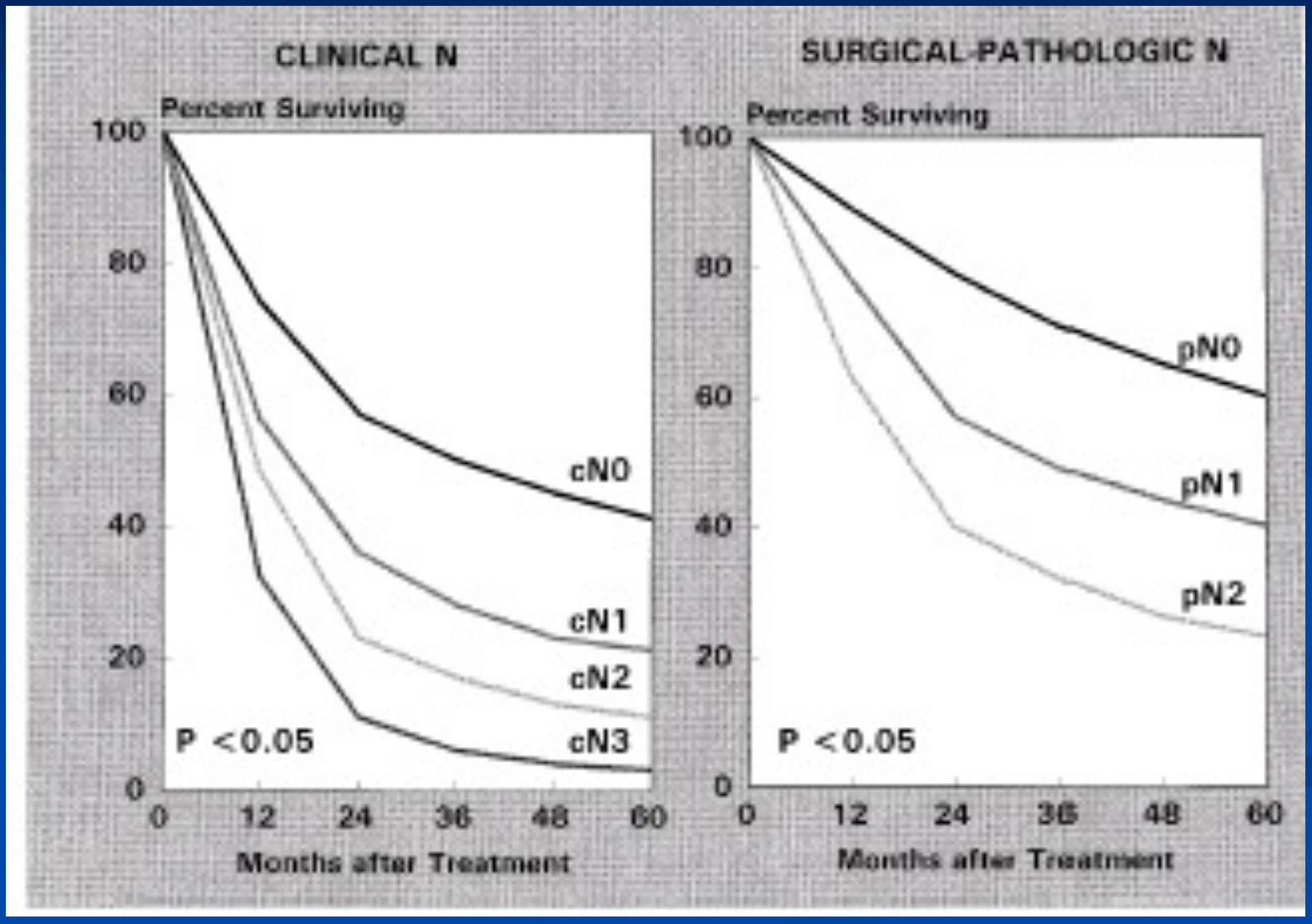
  - Spikülasyon
  - Üst lob lokalizasyon
- Klinik Özellikler
  - Yaş> 40
  - Pozitif sigara hikayesi
- Diğer bir malignite varlığı

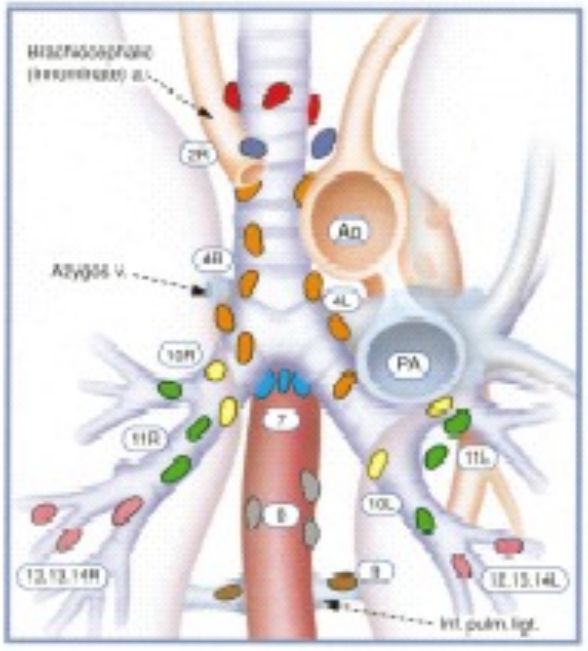
EVRELEMEDE T FAKTÖRÜ

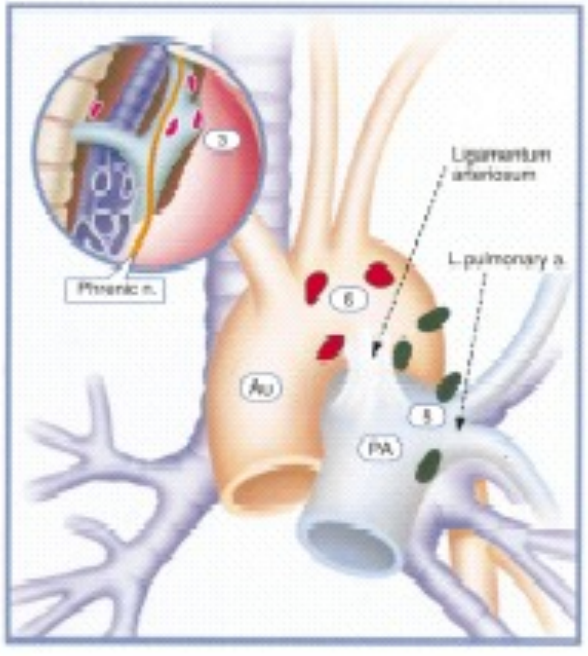
EVRELEMEDE T FAKTÖRÜ

	Months After Treatment (Cumulative Percent Surviving)				
	12 (%)	24 (%)	36 (%)	48 (%)	60 (%)
cTNM*					
cT1N0M0 (n=687)	91	79	71	67	61
cT2N0M0 (n=1,189)	72	54	46	41	38
pTNM†					
pT1N0M0 (n=511)	94	86	80	73	67
pT2N0M0 (n=549)	87	76	67	62	57

EVRELEMEDE N FAKTÖRÜ







Superior Mediastinal Nodes

- 1 Highest Mediastinal
- 2 Upper Paratracheal
- 3 Pre-vascular and Retrotracheal
- 4 Lower Paratracheal (including Azygos Nodes)

N_1 = single digit, ipsilateral
N_2 = single digit, contralateral or supraclavicular

Aortic Nodes

- 5 Subaortic (A-P window)
- 6 Para-aortic (ascending aorta or phrenic)

Inferior Mediastinal Nodes

- 7 Subcarinal
- 8 Paraesophageal (below carina)
- 9 Pulmonary Ligament

N_1 Nodes

- 10 Hilar
- 11 Interlobar
- 12 Lobar
- 13 Segmental
- 14 Subsegmental

N FAKTÖRÜNÜN PREOPERATİF DEĞERLENDİRİLMESİ

N FAKTÖRÜNÜN PREOPERATİF DEĞERLENDİRİLMESİ

- Non-İnvazif
  - BT
  - MRI
  - PET
  - Endoskopik Ultrasonografi

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- Torakotomi (Peroperatif)

HASSASİYET?
ÖZGÜLLÜK?

HASSASİYET? ÖZGÜLLÜK?

Studies Comparing PET and CT in Mediastinal Staging of Lung Cancer

Author	No. of Patients	Nodal Status: Malignant/Benign (Type of Evaluation)	PET Sensitivity (%)	PET Specificity (%)	CT Sensitivity, % (Size Criteria)	CT Specificity (%)
Chin et al. (1995)	30	9/21 (patients)	78	81	56 (1.5 cm)	86
Wahl et al. (1994)	23	11/16 (sides)	82	81	64 (1.0 cm)	44
Patz et al. (1995)	42	23/39 (stations)	83	82	43 (1.0 cm)	85
Scott et al. (1996)	62	10/65 (stations)	100	98	60 (1.0 cm)	93
Sasaki et al. (1996)	29	17/54 (stations)	76	98	65 (1.0 cm)	87
Steinert et al. (1997)	47	58/133 (stations)	93	99	72 (0.7–1.1 cm)	94
Sazon et al. (1996)	37	16/16 (patients)	100	100	81 (1.0 cm)	56
Valk et al. (1995)	74	24/52 (sides)	83	94	63 (1.0 cm)	73
Vansteenkiste et al. (1997)	50	14/36 (patients)	67 93[a]	97 97[a]	67 (1.5 cm)	63
Guhlman et al. (1997)	32	20/12 (patients)	80	100	50 (1.0 cm)	75
Bury et al. (1996b)	50	21/19 (patients)	90	86	72 (1.0 cm)	81

CT, computed tomography; PET, positron emission tomography.

N FAKTÖRÜNÜN PREOPERATİF DEĞERLENDİRİLMESİ

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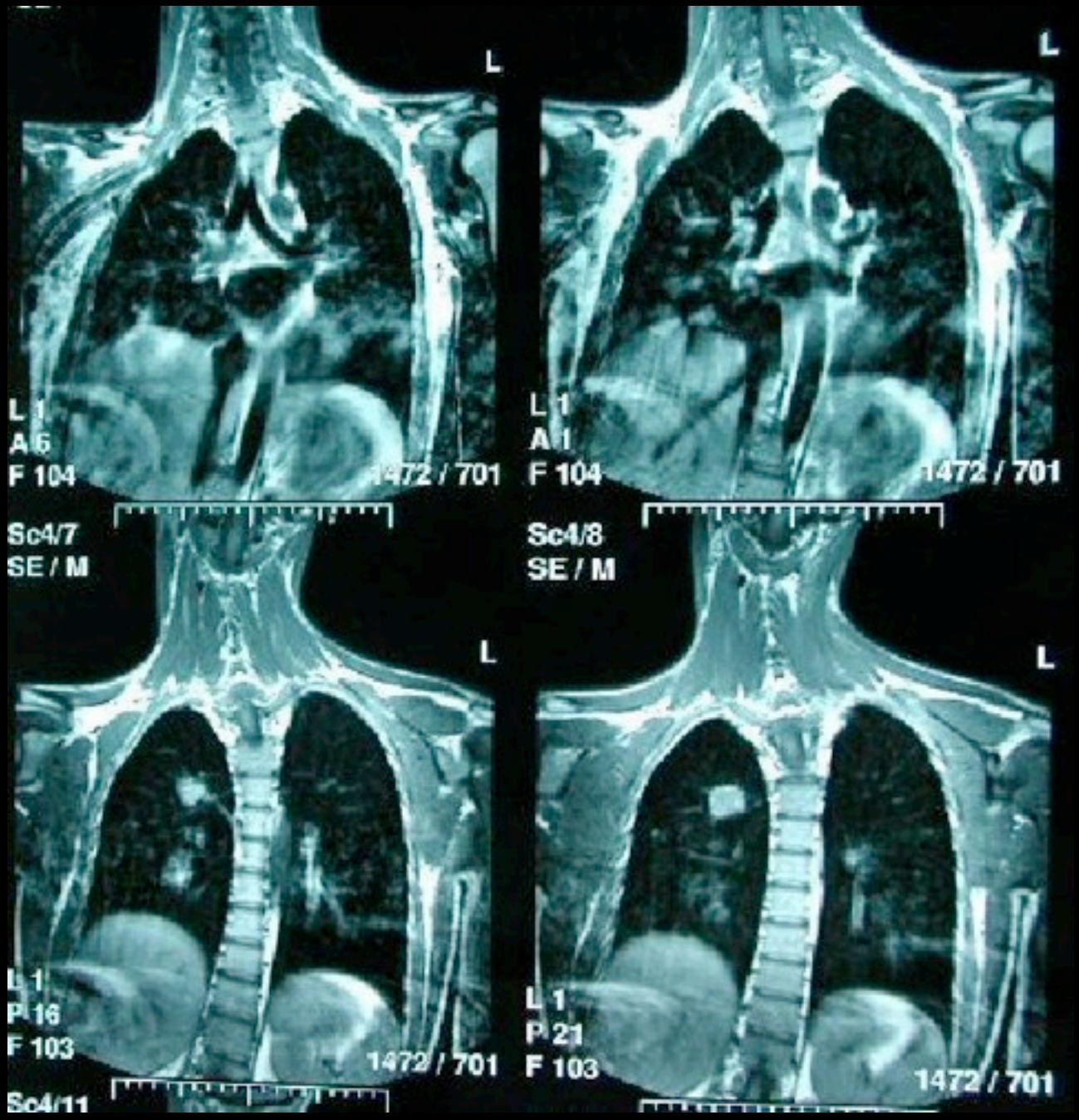
L
L 1
A 6
F 104
1472 / 701
Sc4/7
SE / M
L
L 1
A 1
F 104
1472 / 701
Sc4/8
SE / M
L
L 1
P 16
F 103
1472 / 701
Sc4/11
L
L 1
P 21
F 103
1472 / 701

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Table 6-8. Number of Nodes Identified in the Inferior Compartment of the Mediastinum[a] by Transesophageal Ultrasound (TEUS) versus Computed Tomography (CT)

	Stations 7, 8, and 10	R9	L9
TEUS	274	8	22
CT	96	1	2

[a]Naruke map.

Adapted from Kondo D, et al: Endoscopic ultrasound examination for mediastinal lymph node metastases of lung cancer. Chest 98:587, 1990.

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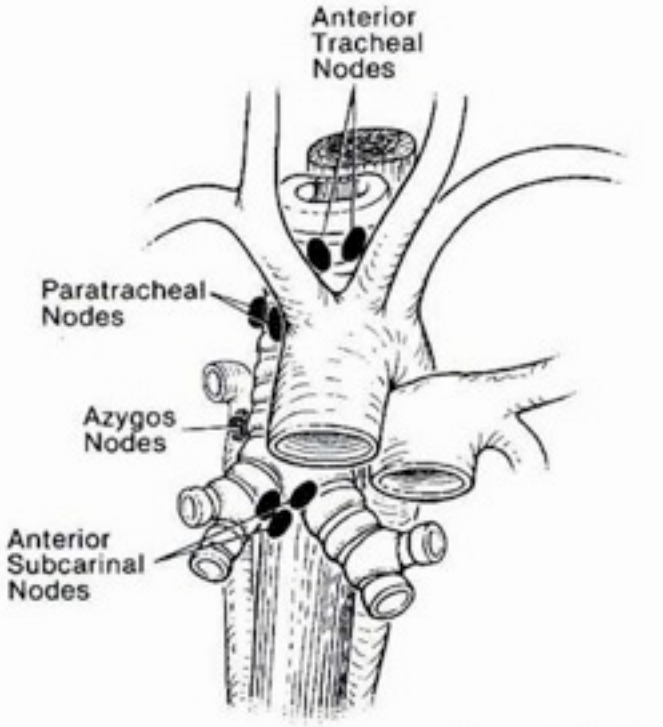
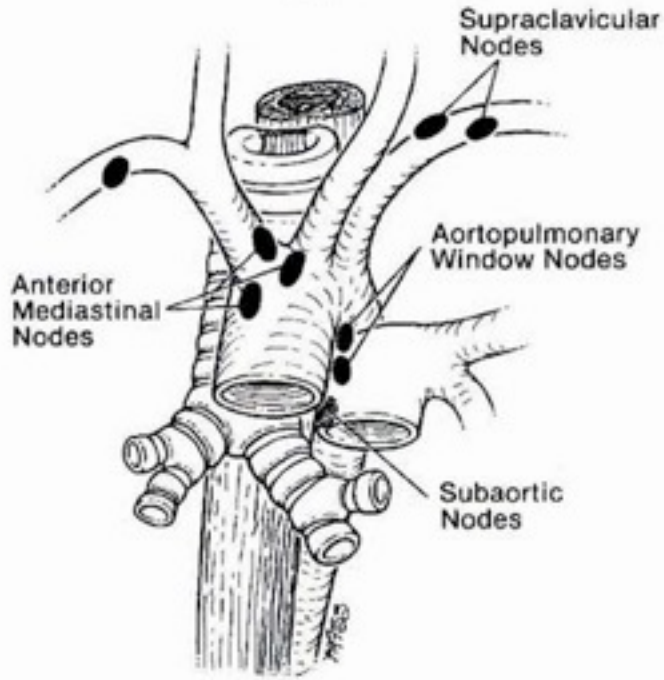
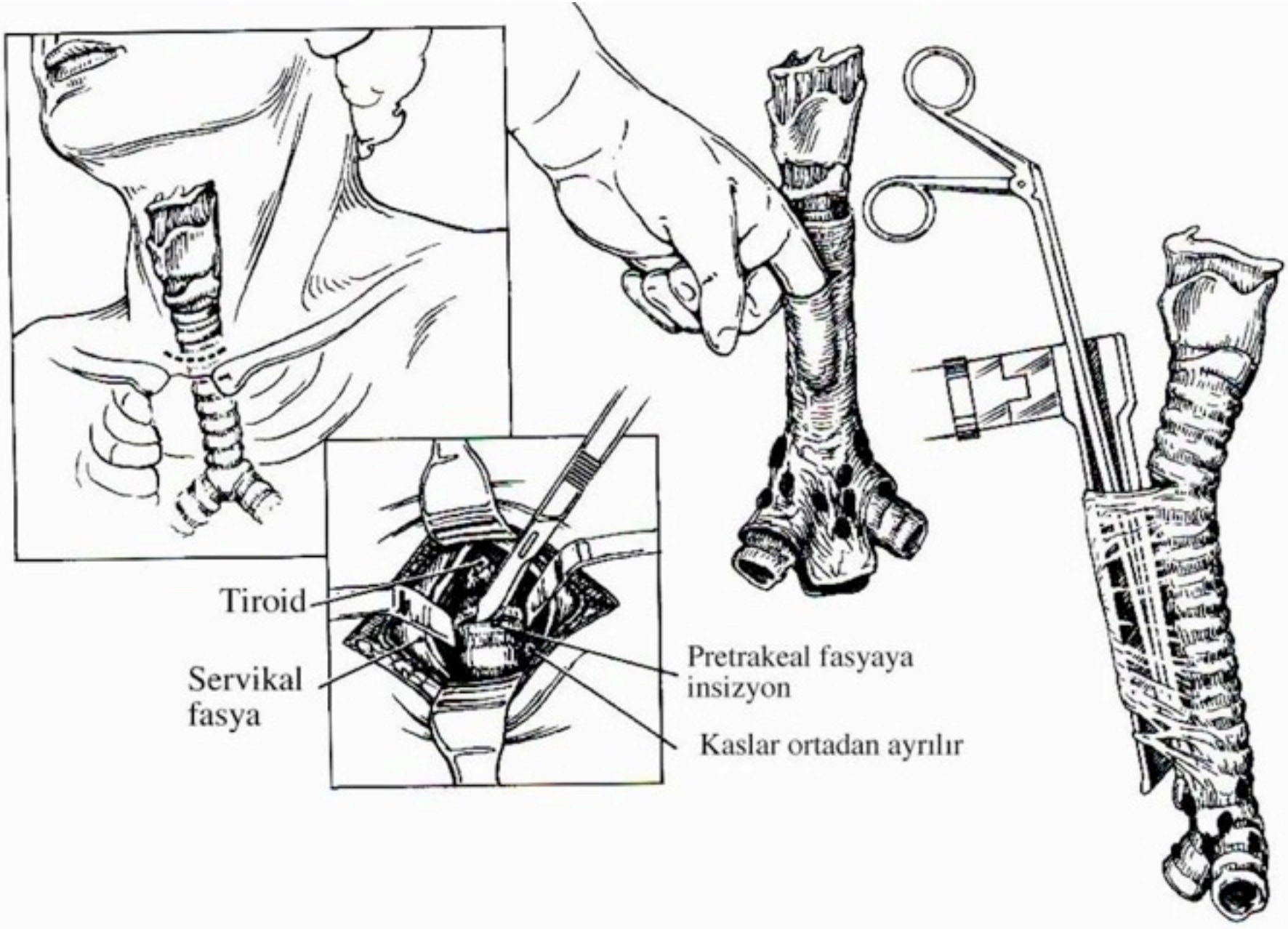

Anterior
Tracheal
Nodes
Paratracheal
Nodes
Azygos
Nodes
Anterior
Subcarinal
Nodes


Supraclavicular
Nodes
Aortopulmonary
Window Nodes
Anterior
Mediastinal
Nodes
Subaortic
Nodes


Tiroid
Servikal fasya
Pretrakeal fasyaya insizyon
Kaslar ortadan ayrılır

NODAL TUTULUMDA MEDİASTİNOSKOPİ

- Hassasiyet en çok %83.3*
  en az %64.0+(Subkarinal)

Özgüllük en çok %100*

'Yanlış Negatif' lik en az %6.1+

Hayatı tehdit edici komplikasyon %0.3§

L. Lopez et al. Ann Thorac Surg 1994;57:555
T. Funatsu et al. J Thorac Cardiovasc Surg 1992;104:1688
R.J. Ginsberg Surg Clin North Am. 1987;67:1025

SAYI	452 (*Temmuz 2000*)
MORBİDİTE	20 (%4.4)
MORTALİTE	1(%0.35)
SPESİFİSİTE	%96.2

MEDİASTİNOSKOPİDE YEDİKULE DENEYİMİ

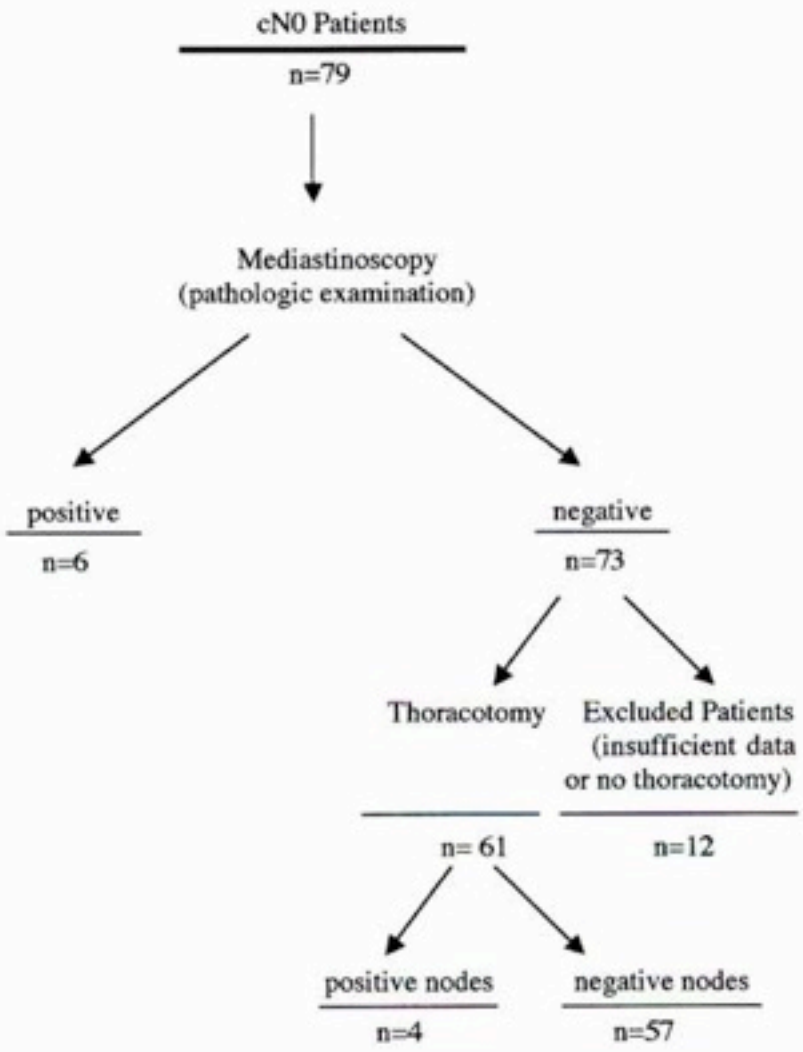
SAYI	452 (*Temmuz 2000*)
MORBİDİTE	20 (%4.4)
MORTALİTE	1(%0.35)
SPESİFİSİTE	%96.2

Must mediastinoscopy be routinely performed in the patients with resectable non-small cell lung cancer and no enlarged mediastinal lymph node (cN0) on CT?

Akif Turna, Atilla Gürses, Mehmet Ali Bedirhan, Tevrat Özalp, Celalettin Kocatürk, Adalet Demir, Mustafa Özcan, Nur Ürer

*Thorac Cardiovasc Surg, 2002, baskıda.

Figure 1. Schematic depiction of patients undergoing mediastinoscopy and resection through thoracotomy.



**Thorac Cardiovasc Surg, 2002, baskıda.*

N FAKTÖRÜNÜN PREOPERATİF DEĞERLENDİRİLMESİ

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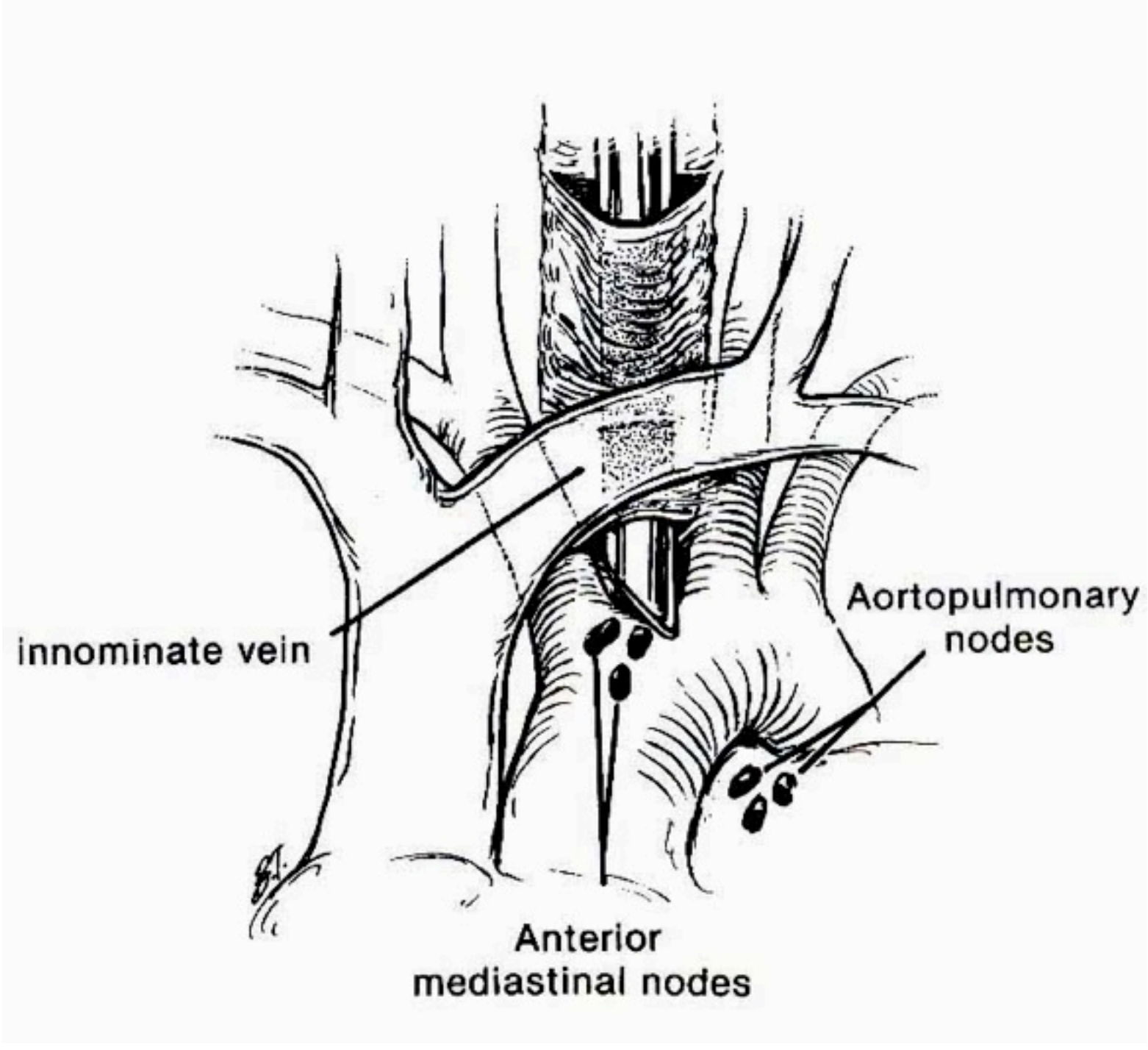
innominate vein
Aortopulmonary
nodes
Anterior
mediastinal nodes

Extended Cervical Mediastinoscopy in the Diagnosis of Anterior Mediastinal Masses

Muzaffer Metin, MD, Adnan Sayar, MD, Akif Turna, MD, and Atilla Gürses, MD

Yedikule Hospital for Chest Disease and Thoracic Surgery, Zeytinburnu, Istanbul, Turkey

Background. Although transthoracic needle biopsy (TNB) has been the preferred method for the diagnosis of anterior mediastinal masses, it has inherent limitations in accuracy. In particular, lymphoma and thymoma are diagnosed less reliably using needle biopsy. Videothoracoscopy has been advocated as an alternative method for diagnosis. Our goal was to assess the usefulness of extended cervical mediastinoscopy (ECM) in the diagnosis of anterior mediastinal masses.

Methods. The ECM technique was performed in 9 patients in whom TNB and Tru-cut biopsies had been inefficient for histologic diagnosis. All lesions were in the anterior mediastinum. Extended cervical mediastinoscopy was carried out using the same incision as in a standard cervical mediastinoscopy and dissection was performed behind the sternum as previously published. Mean operative time was 50 minutes (range 40 to 70 minutes) and mean hospital stay was 8 hours (range 5 to 36 hours).

Results. Diagnosis of lymphoma in 4 cases, thymoma in 3 cases, and thymic hyperplasia in 2 cases were obtained by ECM. In 1 of 2 patients with suspected thymoma who underwent resectional surgical procedures, final histologic diagnosis was non–small cell lung carcinoma. There was no surgical mortality or intraoperative complication. One patient had minimal pneumothorax requiring no intervention.

Conclusions. We conclude that ECM in the diagnosis of anterior mediastinal masses is technically feasible and provides an alternative to the conventional approaches in patients with paraaortic or aortopulmonary masses.

(Ann Thorac Surg 2002;73:250–2)

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- Tek N2 hastalığı olan olgularda ortalama sağkalım (median) 40 ay, 3yıllık ve 5 yıllık sağkalım %54,%34,

- Tek N2 hastalığı olan olgularda ortalama sağkalım (median) 40 ay, 3yıllık ve 5 yıllık sağkalım %54,%34,
- Multipl N2 de ise ortalama sağkalım 18 ay, 2 yıllık sağkalım %11 (log rank; p=0.04).

- Tek N2 hastalığı olan olgularda ortalama sağkalım (median) 40 ay, 3yıllık ve 5 yıllık sağkalım %54,%34,
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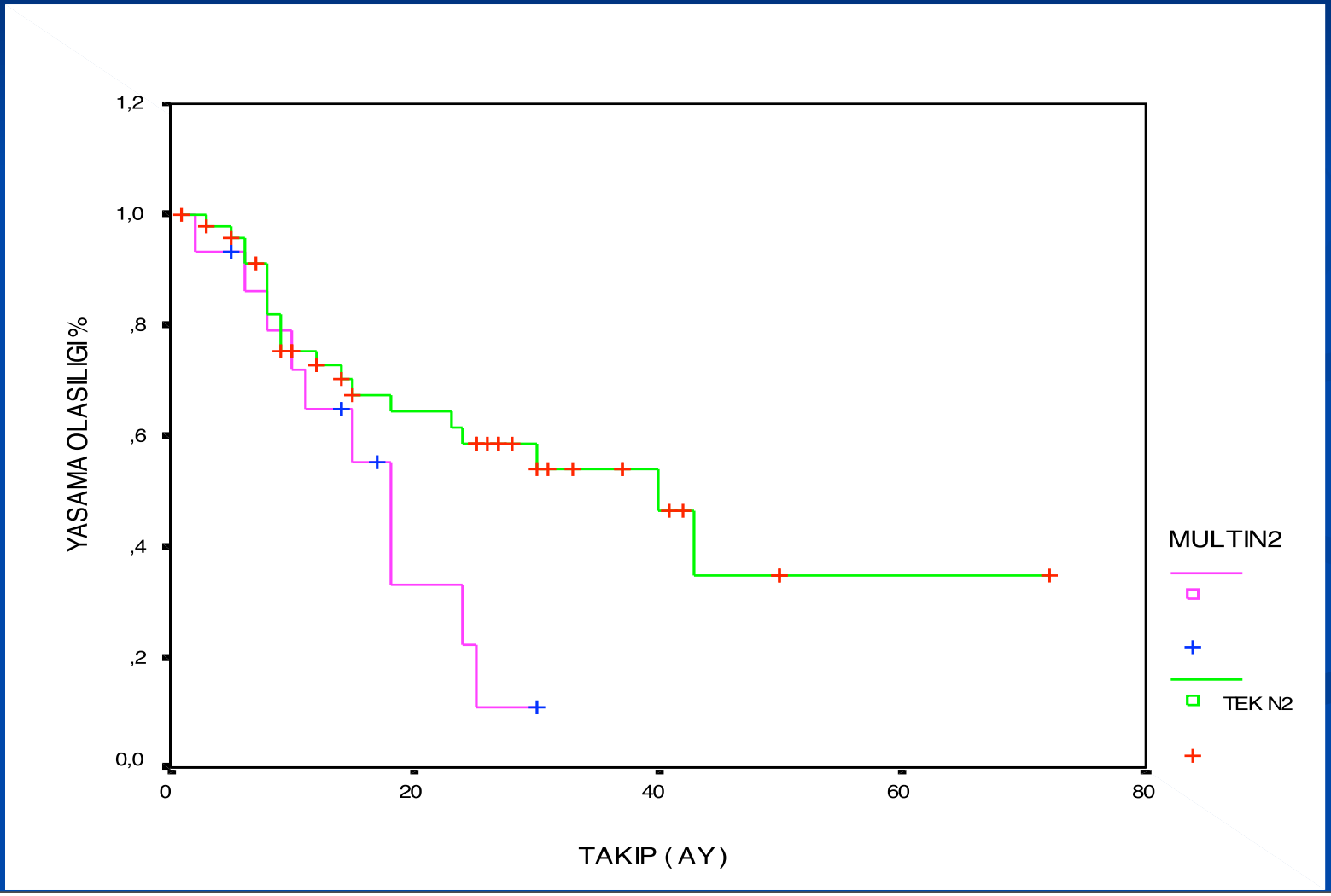

Lenf nodu istasyon	'Risk Oranı'	Sig.	%95 GA	p
NO2	1,160	,892	,135 - 9,939	>0.05
NO4	1,750	,236	,699 - 4,430	>0.05
NO5	1,556	,364	,601 – 4,058	>0.05
NO6	3,789	,096	,791 - 18,254	>0.05
NO7	*2,746*	*,033*	*1,093 – 6,992*	*<0.05*
NO8	1,582	,375	,576 - 4,368	>0.05
NO9	,449	,454	,055 - 3,645	>0.05

YEDİKULE'DE OPERE EDİLEN 81

Lenf nodu istasyon	'Risk Oranı'	Sig.	%95 GA	p
NO2	1,160	,892	,135 - 9,939	>0.05
NO4	1,750	,236	,699 - 4,430	>0.05
NO5	1,556	,364	,601 – 4,058	>0.05
NO6	3,789	,096	,791 - 18,254	>0.05
NO7	*2,746*	*,033*	*1,093 – 6,992*	*<0.05*
NO8	1,582	,375	,576 - 4,368	>0.05
NO9	,449	,454	,055 - 3,645	>0.05

YEDİKULE'DE OPERE EDİLEN 81 (TOPLAM 573 OPERE HASTA)

Lenf nodu istasyon	'Risk Oranı'	Sig.	%95 GA	p
NO2	1,160	,892	,135 - 9,939	>0.05
NO4	1,750	,236	,699 - 4,430	>0.05
NO5	1,556	,364	,601 – 4,058	>0.05
NO6	3,789	,096	,791 - 18,254	>0.05
NO7	*2,746*	*,033*	*1,093 – 6,992*	*<0.05*
NO8	1,582	,375	,576 - 4,368	>0.05
NO9	,449	,454	,055 - 3,645	>0.05

YEDİKULE'DE OPERE EDİLEN 81 (TOPLAM 573 OPERE HASTA)

Lenf nodu istasyon	'Risk Oranı'	Sig.	%95 GA	p
NO2	1,160	,892	,135 - 9,939	>0.05
NO4	1,750	,236	,699 - 4,430	>0.05
NO5	1,556	,364	,601 – 4,058	>0.05
NO6	3,789	,096	,791 - 18,254	>0.05
NO7	*2,746*	*,033*	*1,093 – 6,992*	*<0.05*
NO8	1,582	,375	,576 - 4,368	>0.05
NO9	,449	,454	,055 - 3,645	>0.05

N FAKTÖRÜNÜN PREOPERATİF DEĞERLENDİRİLMESİ

N FAKTÖRÜNÜN PREOPERATİF DEĞERLENDİRİLMESİ

- Non-İnvazif
  - BT
  - MRI
  - PET
  - Endoskopik Ultrasonografi

N FAKTÖRÜNÜN PREOPERATİF DEĞERLENDİRİLMESİ

- Non-İnvazif
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- Mediastinotomi
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- VATS

N FAKTÖRÜNÜN PREOPERATİF DEĞERLENDİRİLMESİ

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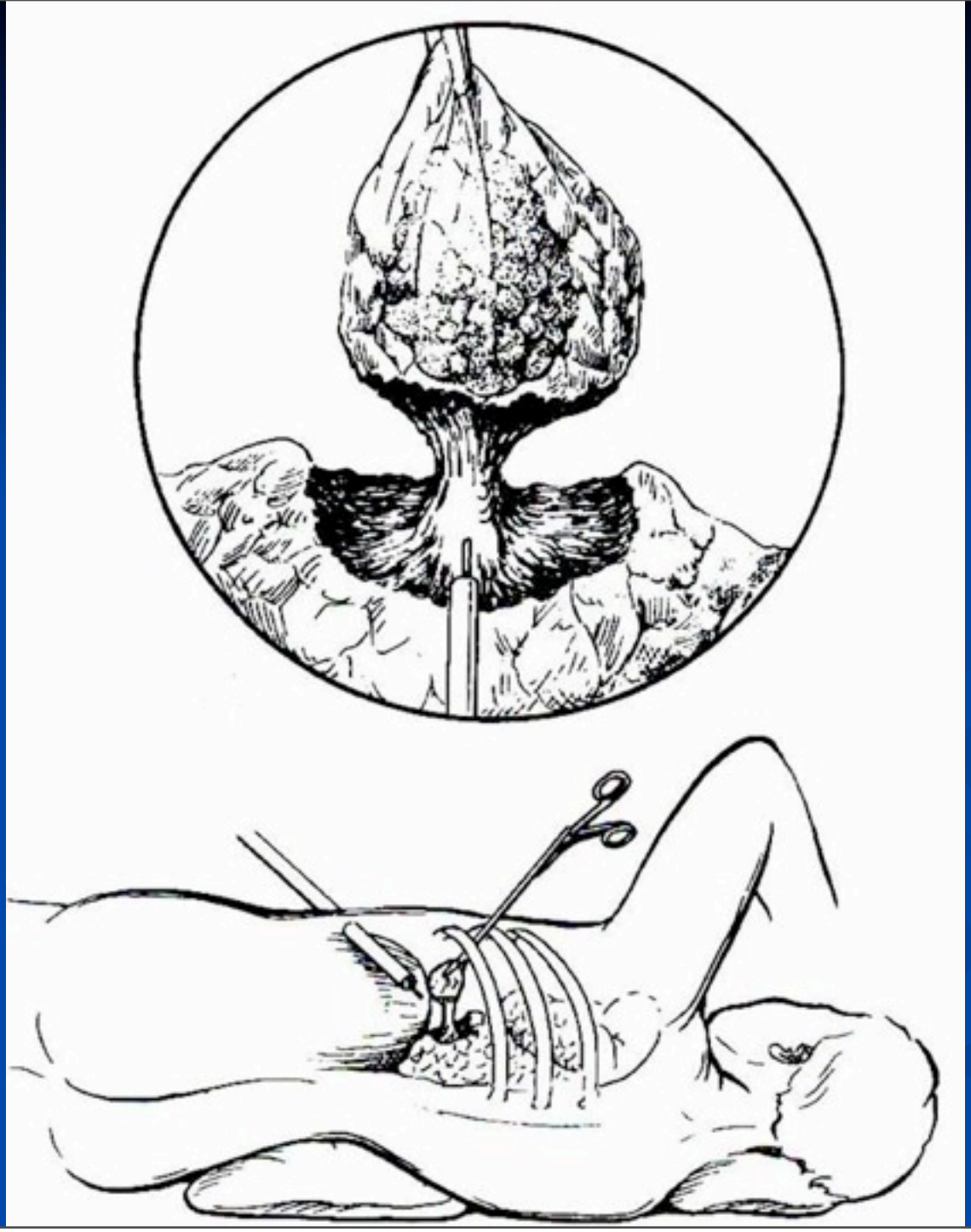

A Prospective Trial of Systematic Nodal Dissection for Lung Cancer by Video-Assisted Thoracic Surgery: Can It Be Perfect?

Motoyasu Sagawa, MD, Masami Sato, MD, Akira Sakurada, MD, Yuji Matsumura, MD, Chiaki Endo, MD, Masashi Handa, MD, and Takashi Kondo, MD

Department of Thoracic Surgery, Institute of Development, Aging and Cancer, Tohoku University, Sendai, Department of Thoracic Surgery, Kanazawa Medical University, Uchinada, Ishikawa, and Department of Surgery, Sendai Kosei Hospital, Sendai, Japan

Background. There have been no reports evaluating the completeness of systematic nodal dissection with video-assisted thoracic surgery (VATS). In order to elucidate the completeness of the dissection, we have conducted a prospective trial with patients having primary lung cancer.

Methods. Patients with clinical stage I lung cancer were the candidates for this study. Thoracotomy was performed with a small skin incision of 7 cm to 8 cm in length. Through these small wounds and two trocars, pulmonary resection was performed and then hilar and mediastinal lymph nodes were dissected. After that, a standard thoracotomy was carried out by another surgeon to complete systematic nodal dissection.

Results. Video-assisted thoracic surgery lobectomy with lymph node dissection was accomplished in 17 right lung cancer patients and 12 left lung cancer patients. On the right side, the average numbers of resected lymph nodes by VATS and remnant lymph nodes were 40.3 and 1.2, respectively. The average weights of dissected tissues by VATS and remnant tissues were 10.0 g and 0.2 g, respectively. On the left side, there were 37.1 and 1.2 lymph nodes and 8.3 g and 0.2 g of weight of dissected tissues. No nodal involvement was observed in the remnant lymph nodes.

Conclusions. The lymph node dissection with VATS was technically feasible and the remnant ("missed" by VATS) lymph nodes and tissues were 2% to 3%, which seems acceptable for clinical stage I lung cancer.

(Ann Thorac Surg 2002;73:900–4)

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N FAKTÖRÜNÜN PREOPERATİF DEĞERLENDİRİLMESİ

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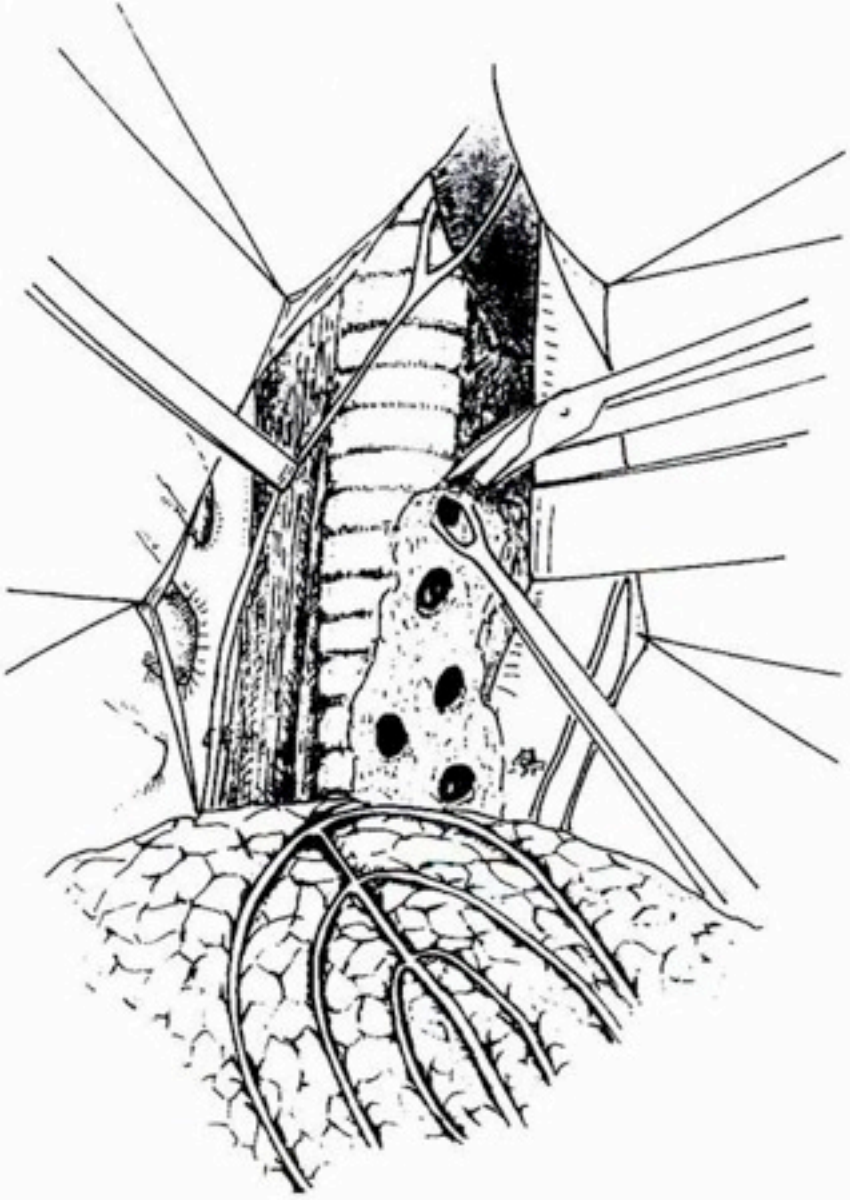

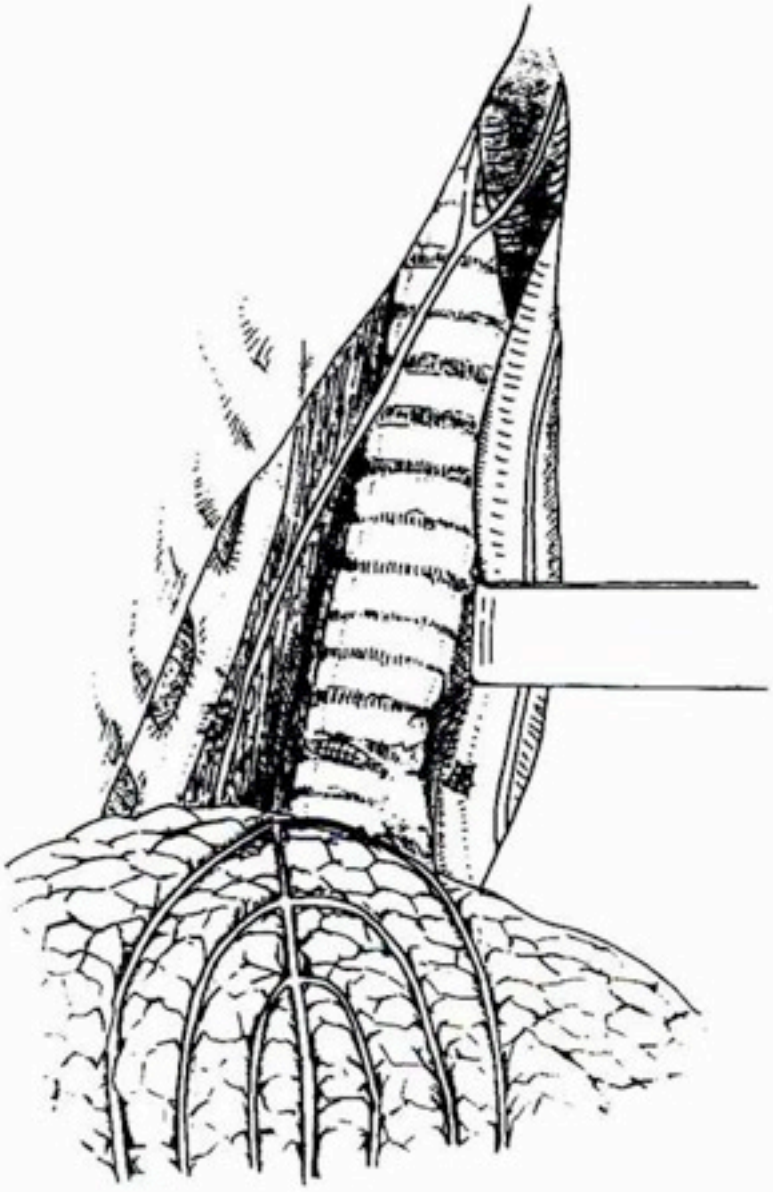

T FAKTÖRÜNÜN PREOPERATİF DEĞERLENDİRİLMESİ

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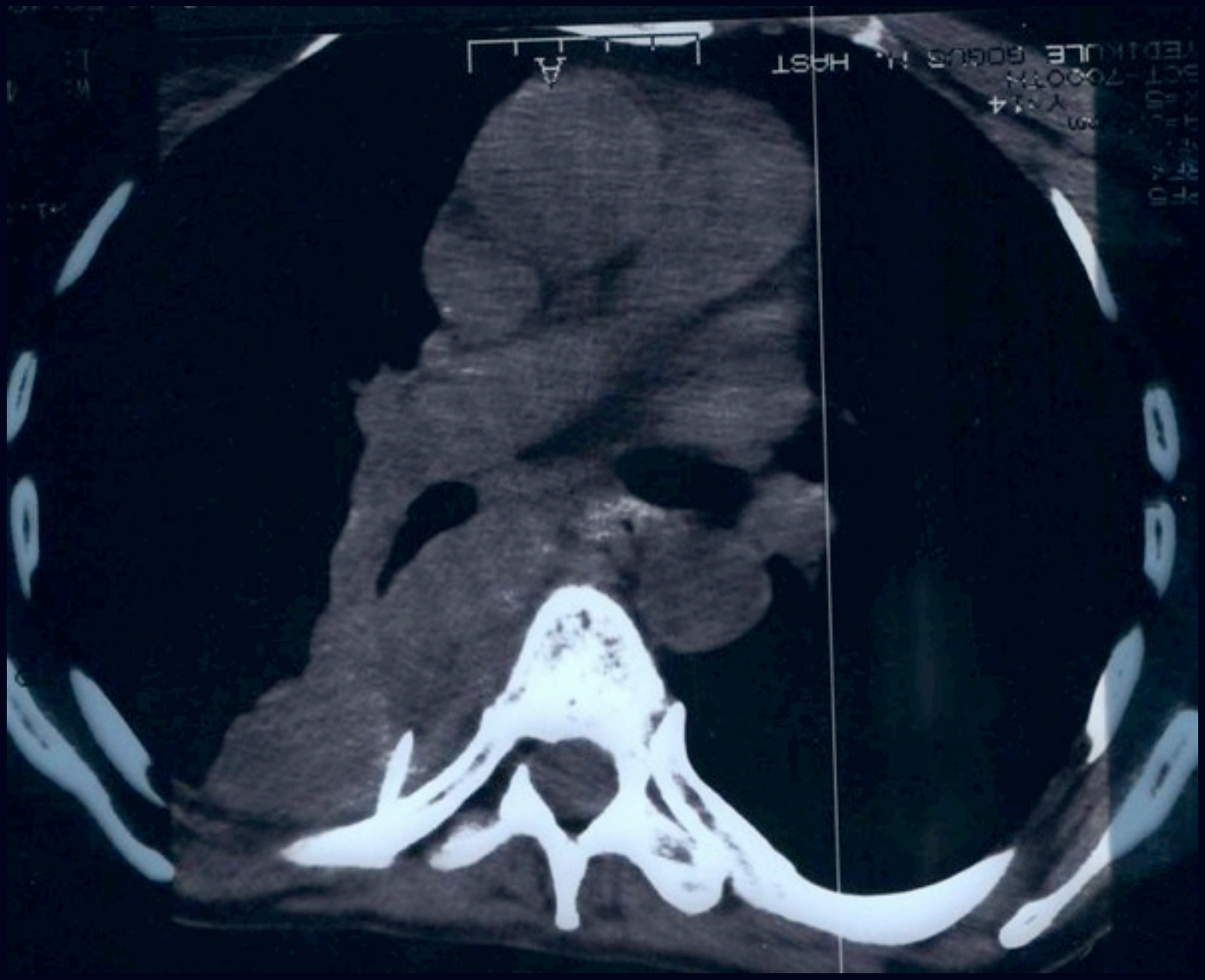
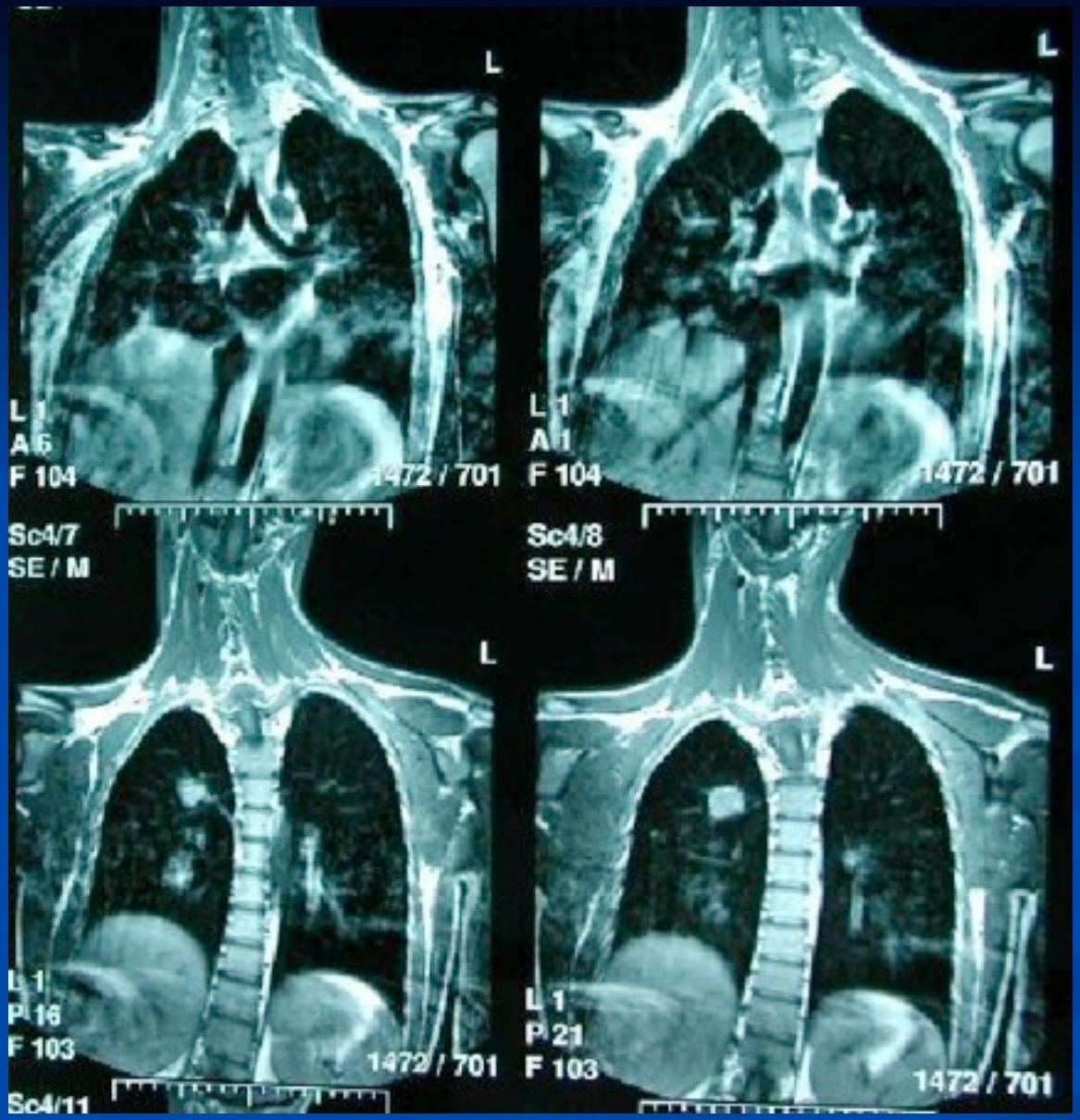
- VATS



CERRAHİ EKSPLORASYONDA MULTİPL N2, T4 (MULTİPL PLEVRA, DİAFRAGMA PERİKARD), GÖĞÜS DUVARI METASTAZI BULUNDU



CERRAHİ EKSPLORASYONDA MULTİPL N2, T4 (MULTİPL PLEVRA, DİAFRAGMA PERİKARD), GÖĞÜS DUVARI METASTAZI BULUNDU

VİDEOTORAKOSKOPİK EVRELEME

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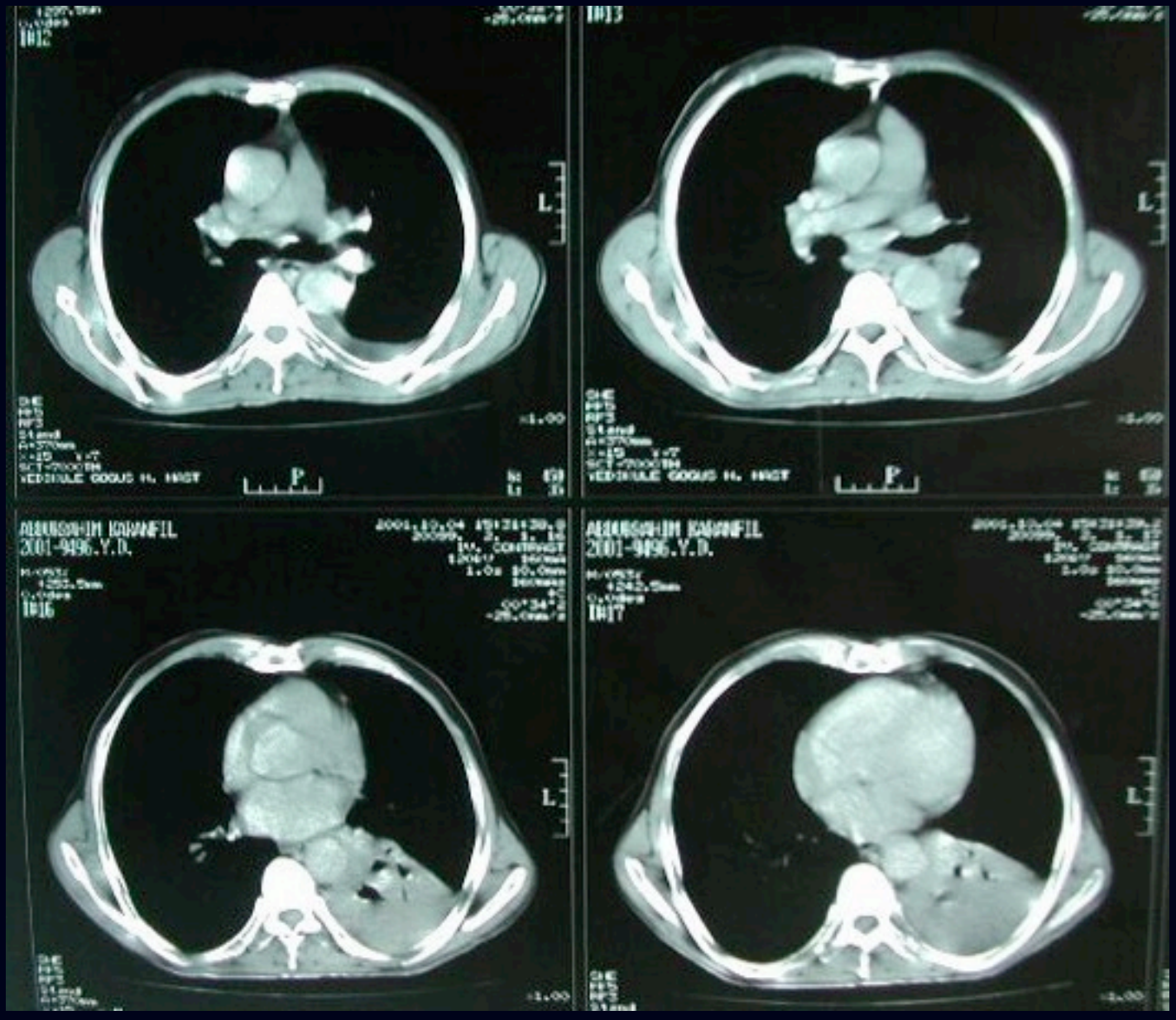
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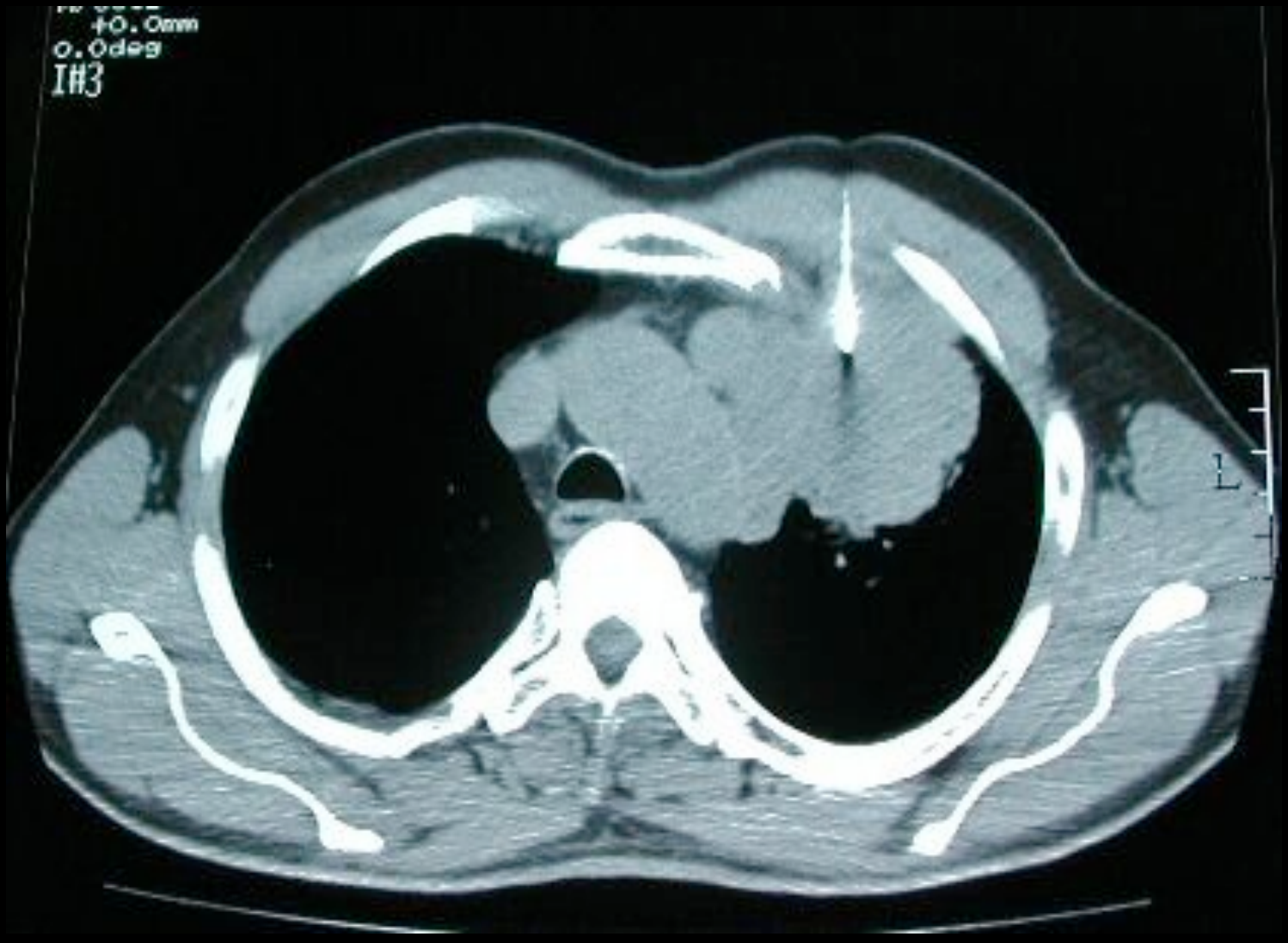
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T EVRELEMELERİNDE YEDİKULE DÖKÜMENTASYONU

	cT1	cT2	cT3	cT4	Total	% of total
PTNM pT1	**12**	1	0	0	13	7.2
pT2	3	**82**	10	3	98	54.4
pT3	1	13	**26**	5	45	25.0
pT4	0	6	5	**13**	24	13.3
Total	16	102	41	21	180	
% of total	89	56.7	22.8	11.7	100	100
Probability that cT=pT	75.0	80.4	63.4	61.9	73.9 (133/180) x100	

PREOPERATİF DEĞERLENDİRME

PREOPERATİF DEĞERLENDİRME

TAM KLİNİK DEĞERLENDİRME

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TAM KLİNİK DEĞERLENDİRME

PREOPERATİF DEĞERLENDİRME

TAM KLİNİK DEĞERLENDİRME

Metastaz (-)

Metastaz(+)

PREOPERATİF DEĞERLENDİRME

TAM KLİNİK DEĞERLENDİRME

Metastaz (-)

Metastaz(+)

PREOPERATİF DEĞERLENDİRME

TAM KLİNİK DEĞERLENDİRME

Metastaz (-)

Metastaz(+)

PREOPERATİF DEĞERLENDİRME

TAM KLİNİK DEĞERLENDİRME

Metastaz (-)

Metastaz(+)

PREOPERATİF DEĞERLENDİRME

TAM KLİNİK DEĞERLENDİRME

Metastaz (-)

Metastaz(+)

T1-4(Sınırlı)N0-3

PREOPERATİF DEĞERLENDİRME

TAM KLİNİK DEĞERLENDİRME

Metastaz (-)

Metastaz(+)

T1-4(Sınırlı)N0-3

Masif T4

PREOPERATİF DEĞERLENDİRME

TAM KLİNİK DEĞERLENDİRME

Metastaz (-)

Metastaz(+)

T1-4(Sınırlı)N0-3

Masif T4

PREOPERATİF DEĞERLENDİRME

TAM KLİNİK DEĞERLENDİRME

Metastaz (-)

T1-4(Sınırlı)N0-3

Mediastinoskopi

Masif T4

Metastaz(+)

PREOPERATİF DEĞERLENDİRME

TAM KLİNİK DEĞERLENDİRME

Metastaz (-)

T1-4(Sınırlı)N0-3

Mediastinoskopi

Masif T4

Metastaz(+)

PREOPERATİF DEĞERLENDİRME

TAM KLİNİK DEĞERLENDİRME

Metastaz (-)

Metastaz(+)

T1-4(Sınırlı)N0-3

Mediastinoskopi

Masif T4

İnoperabl

PREOPERATİF DEĞERLENDİRME

TAM KLİNİK DEĞERLENDİRME

Metastaz (-)

Metastaz(+)

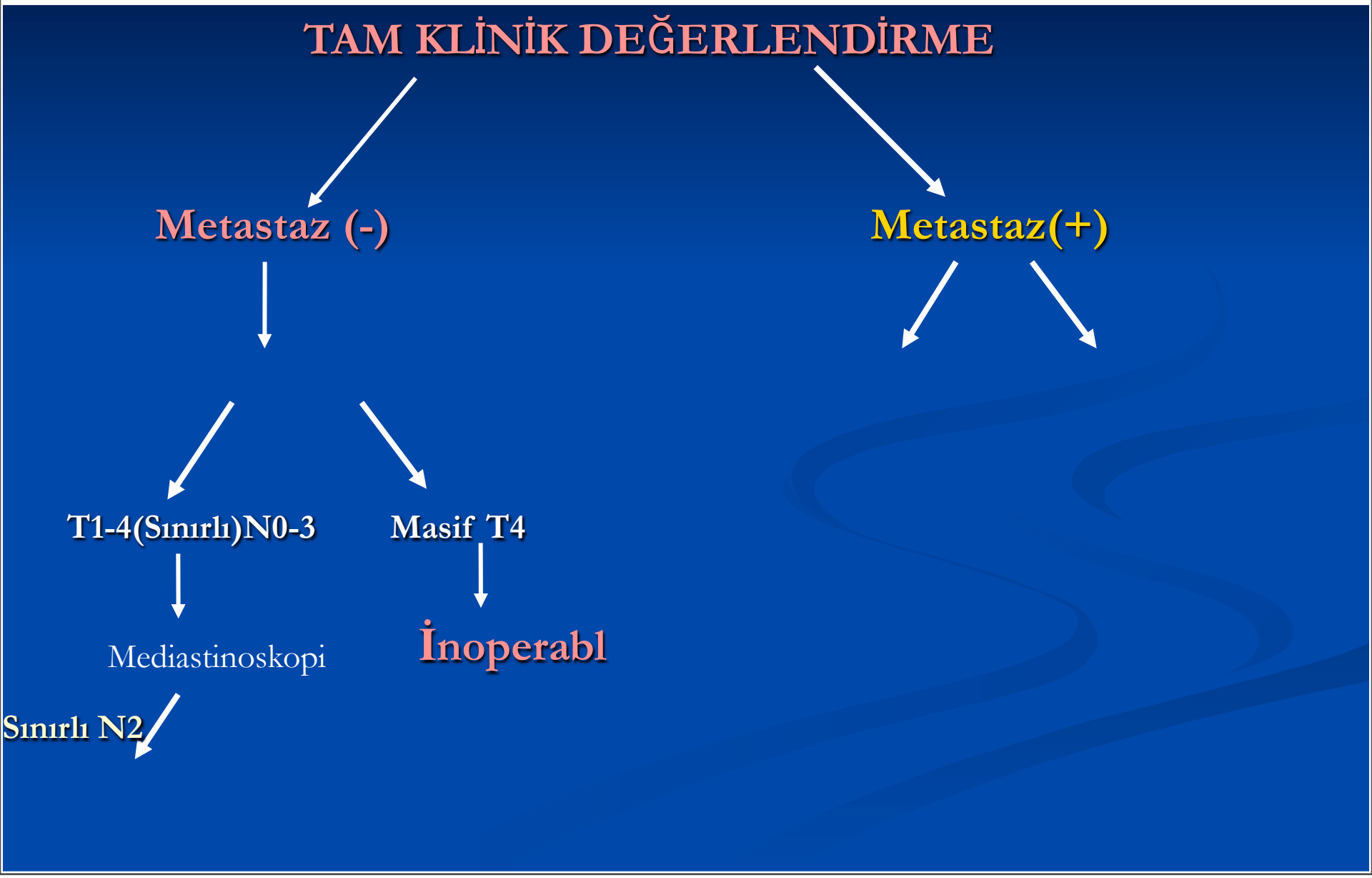
T1-4(Sınırlı)N0-3

Masif T4

Mediastinoskopi

İnoperabl

PREOPERATİF DEĞERLENDİRME



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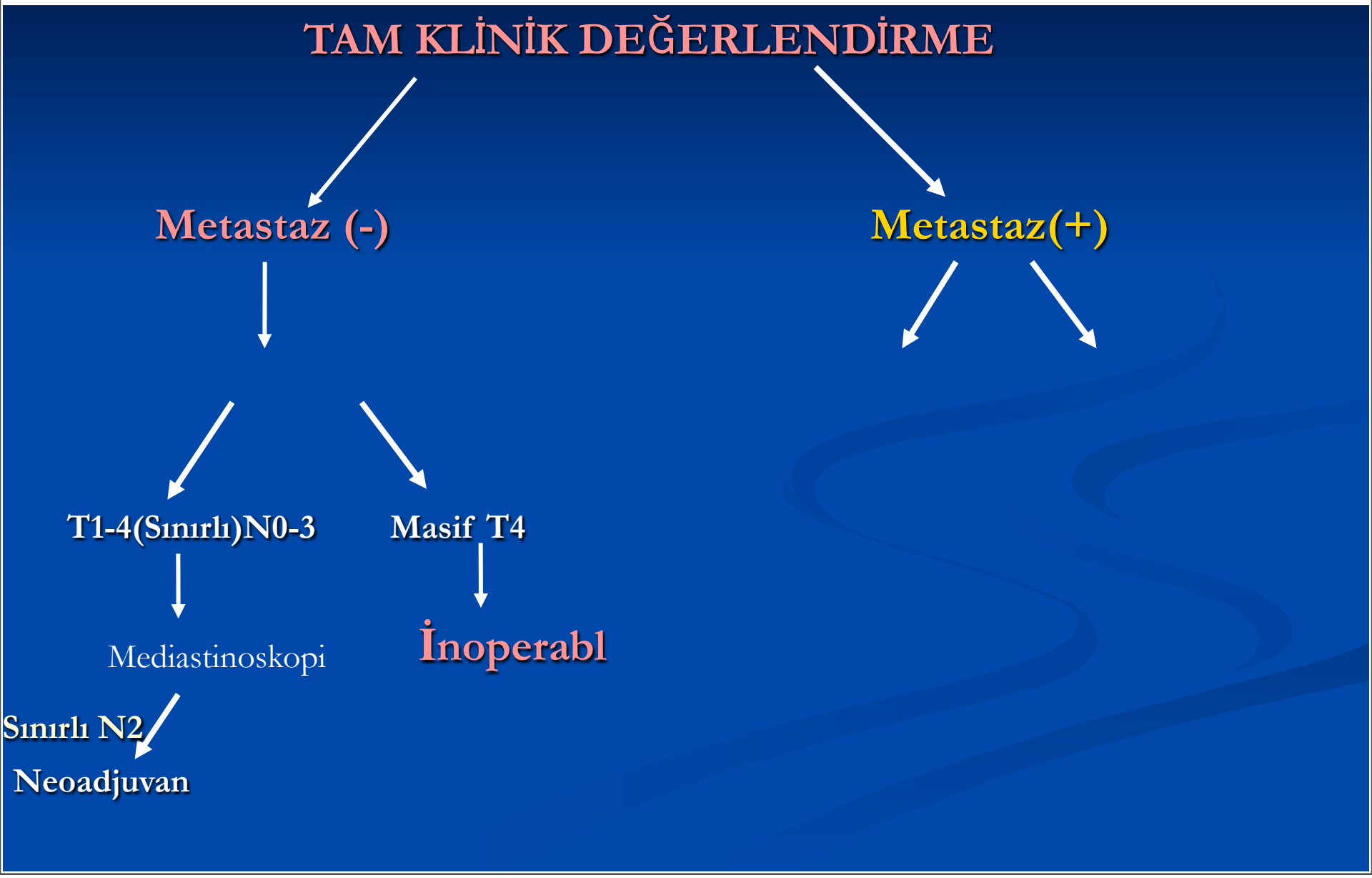

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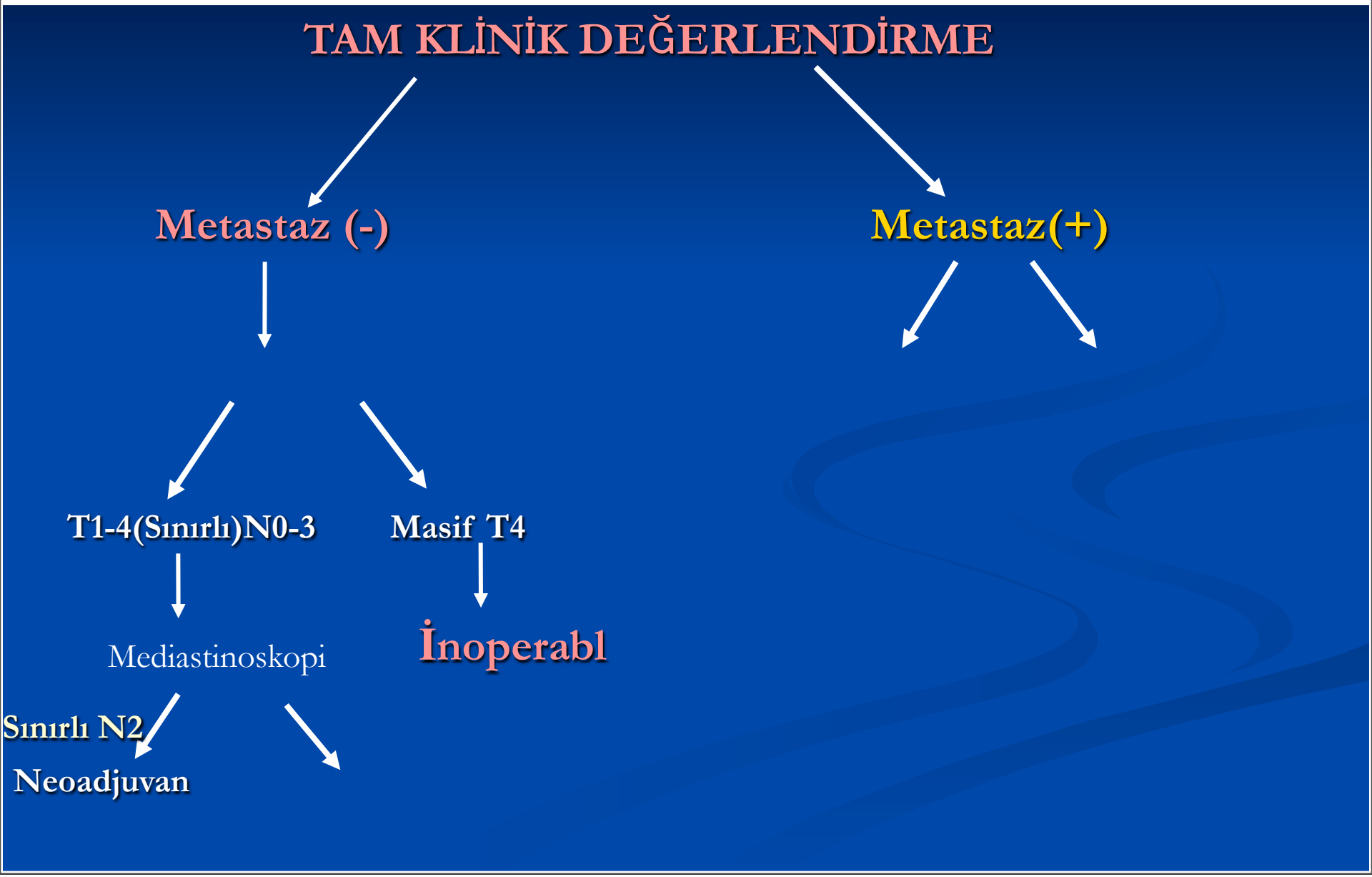

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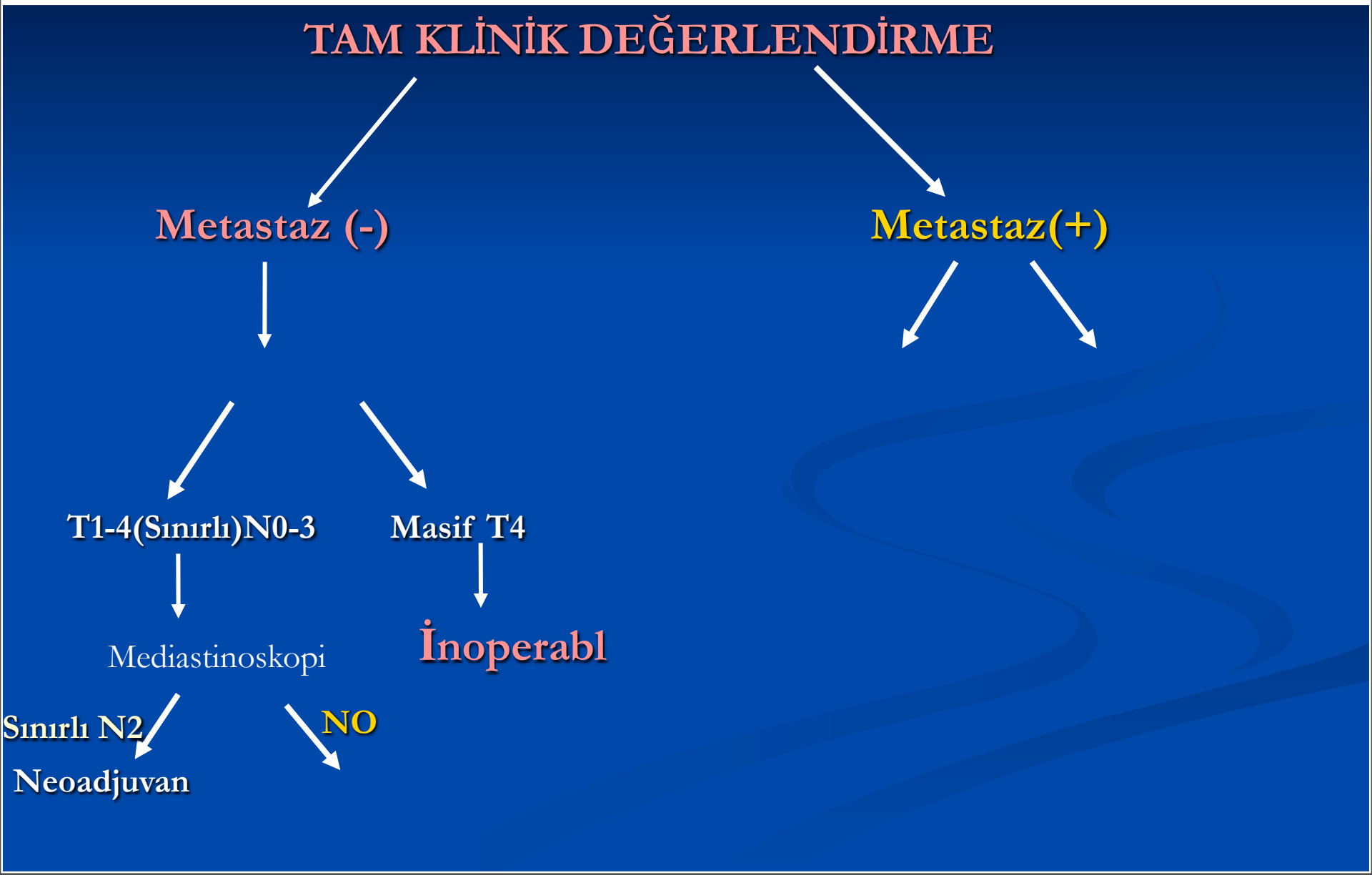

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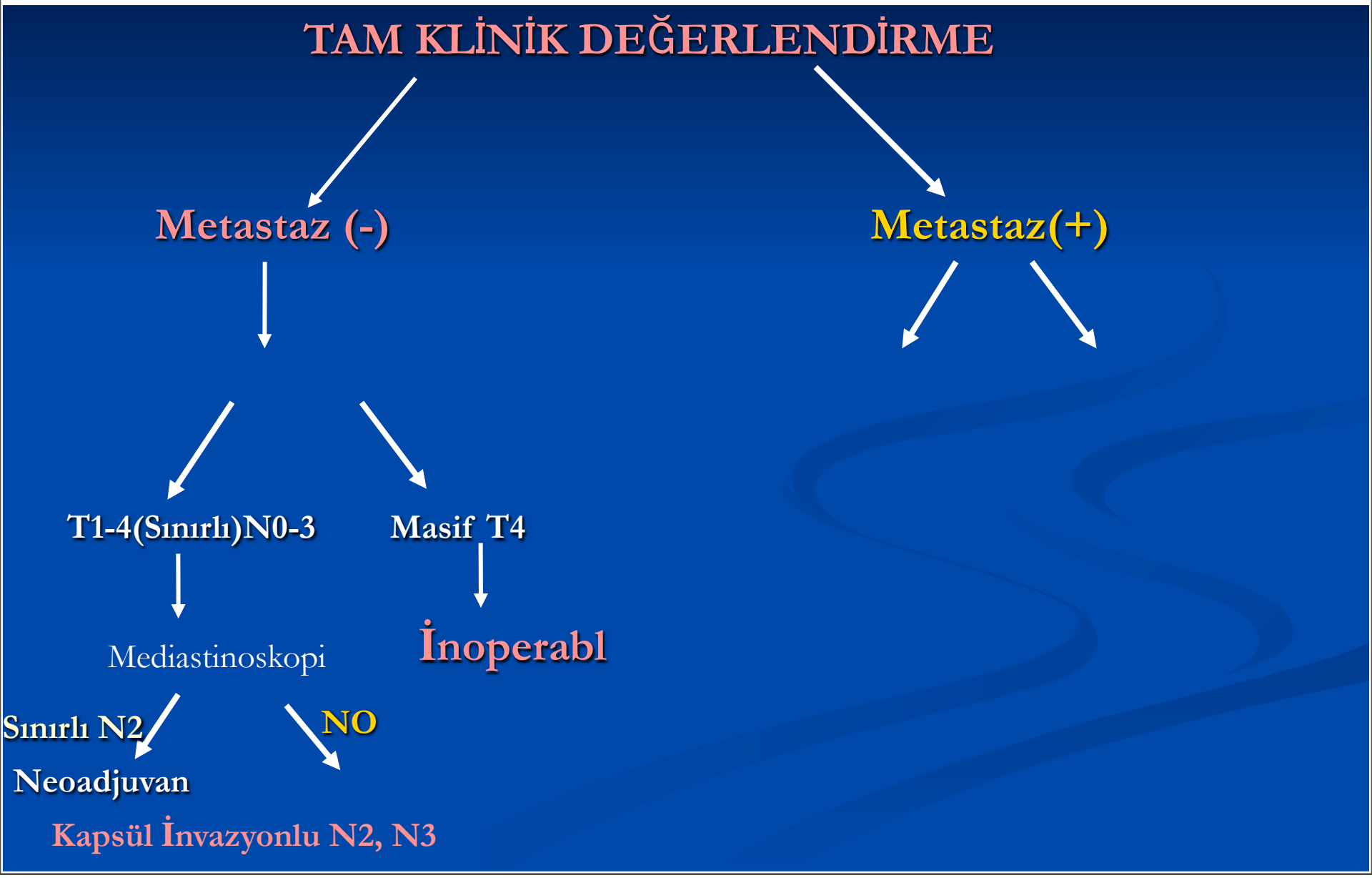

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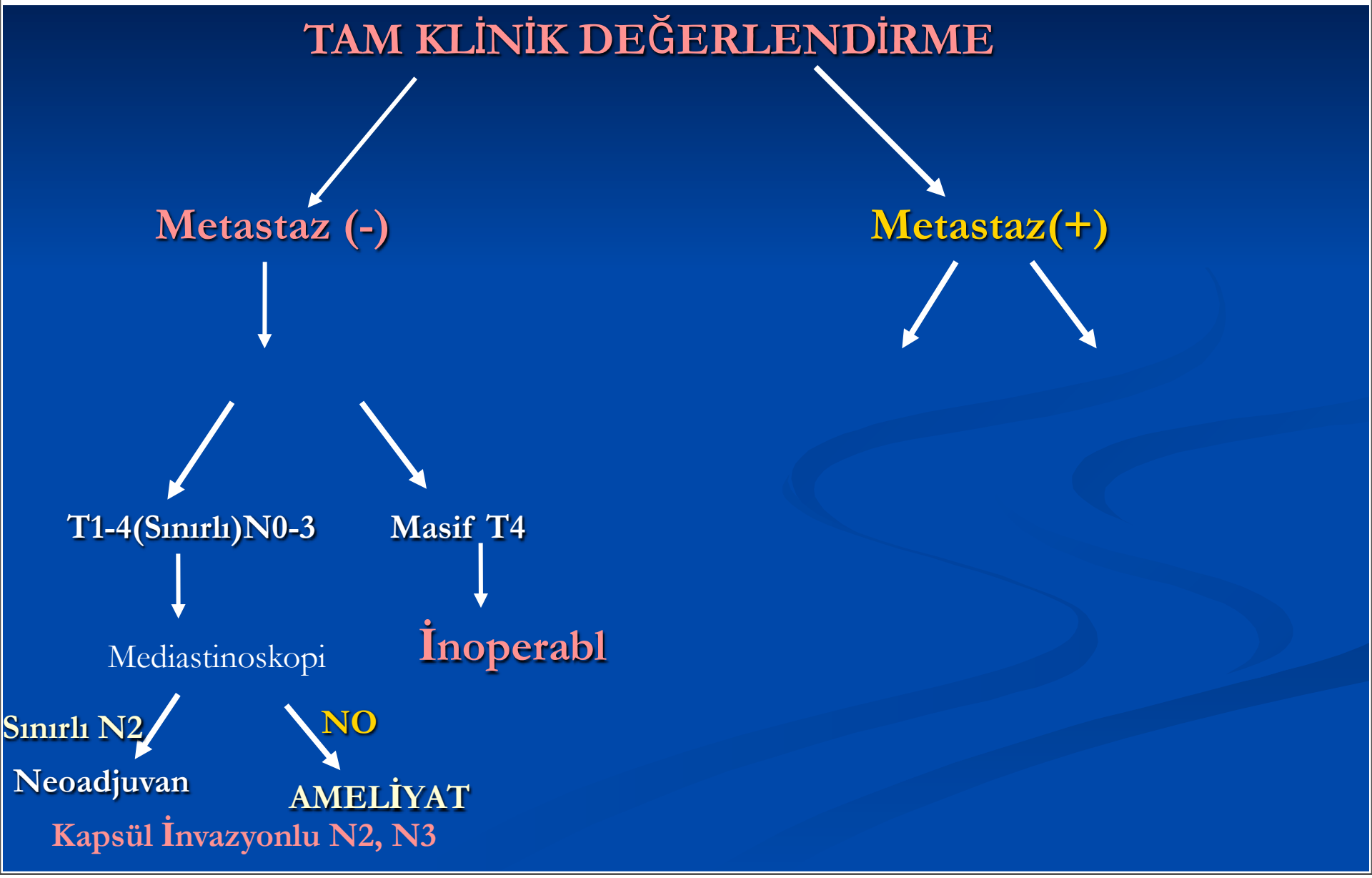

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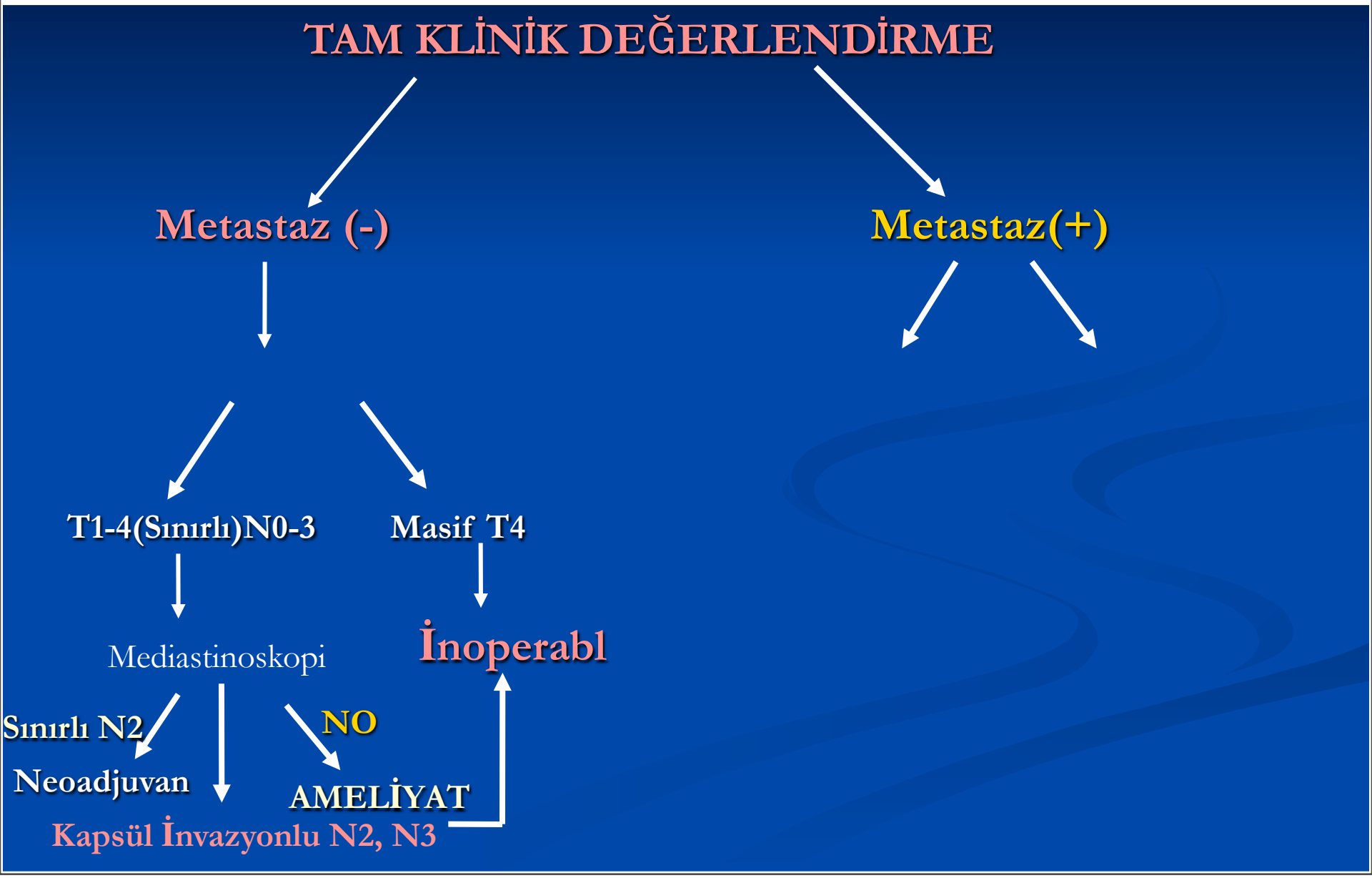

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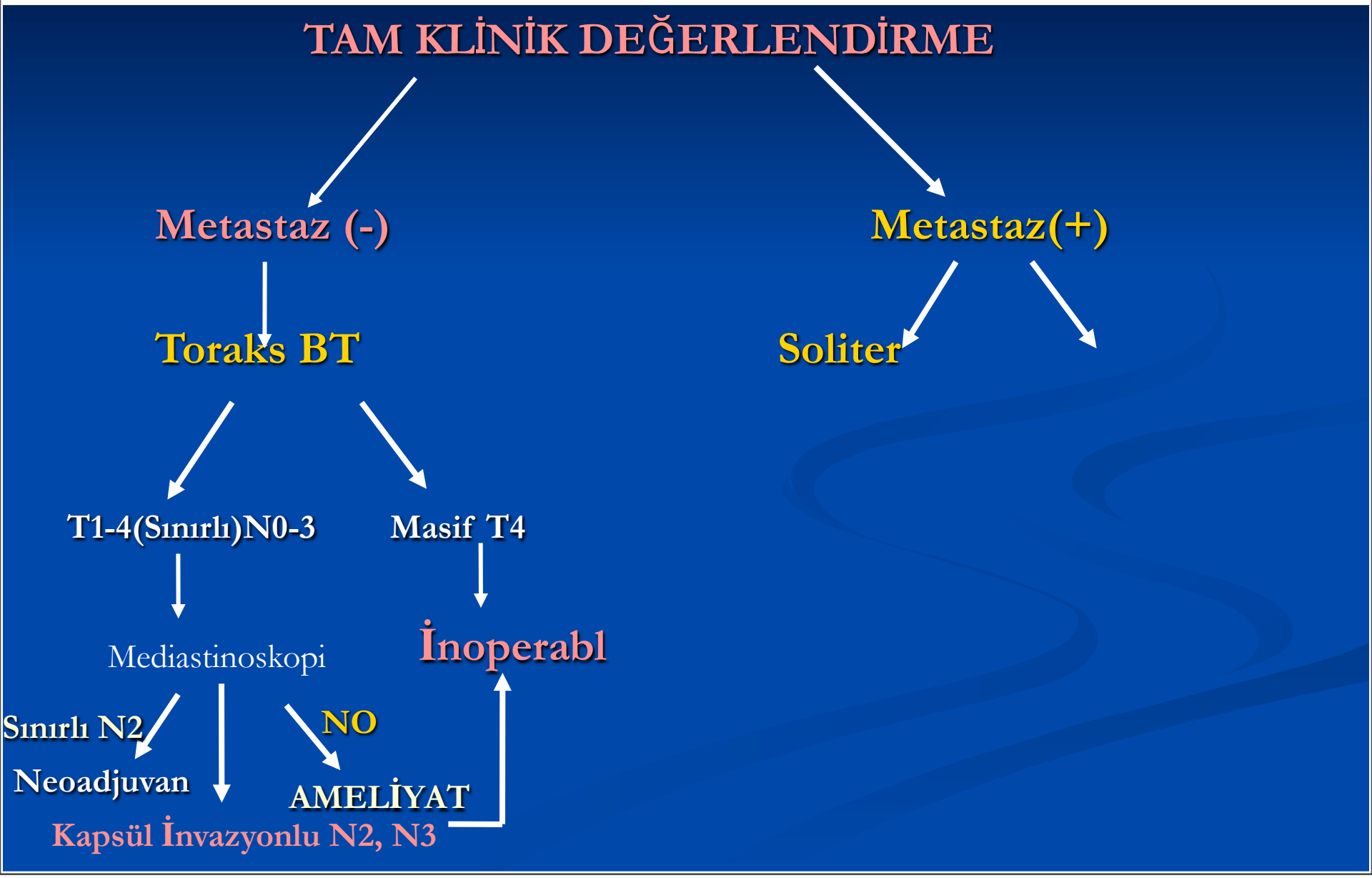

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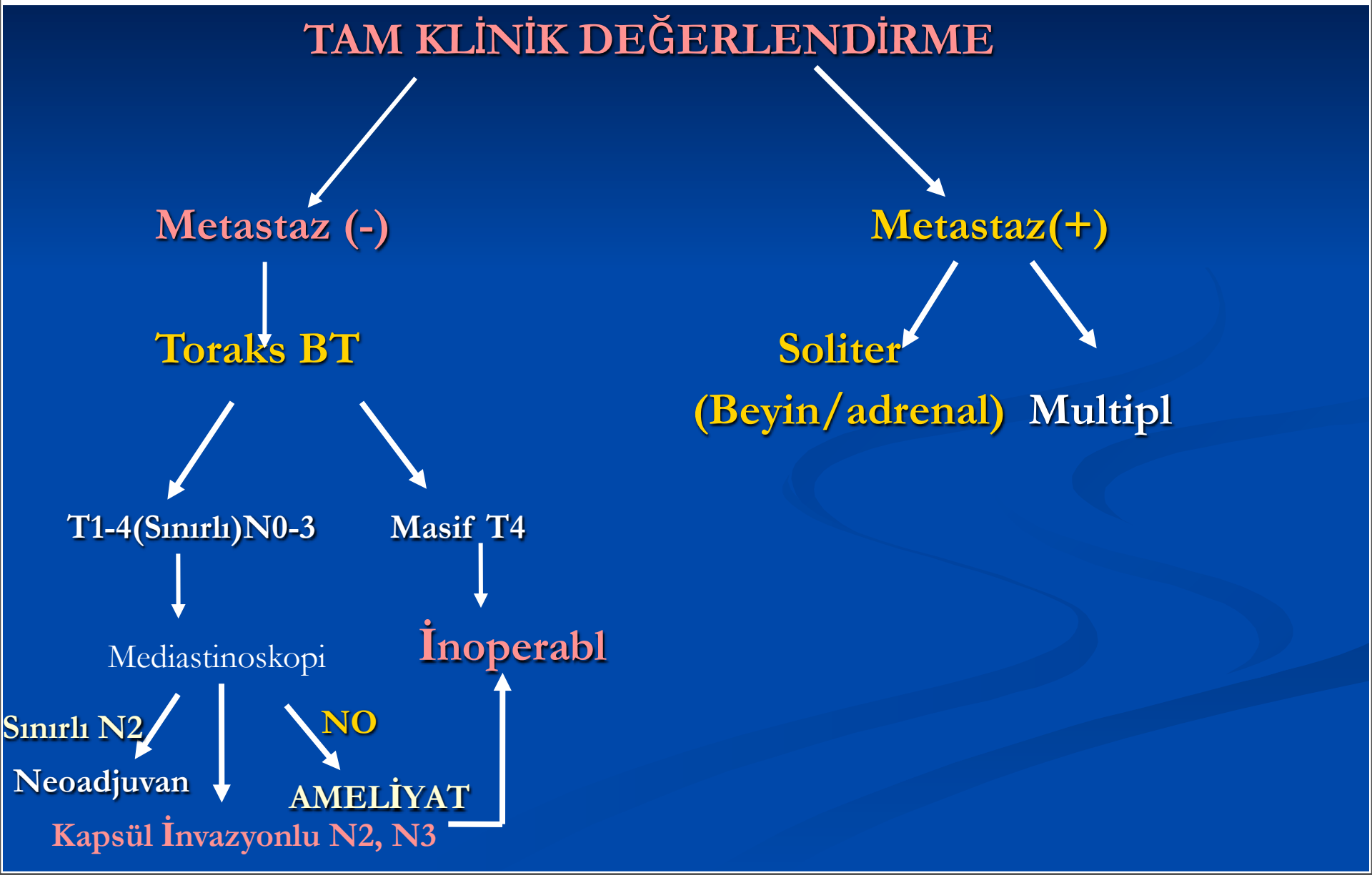

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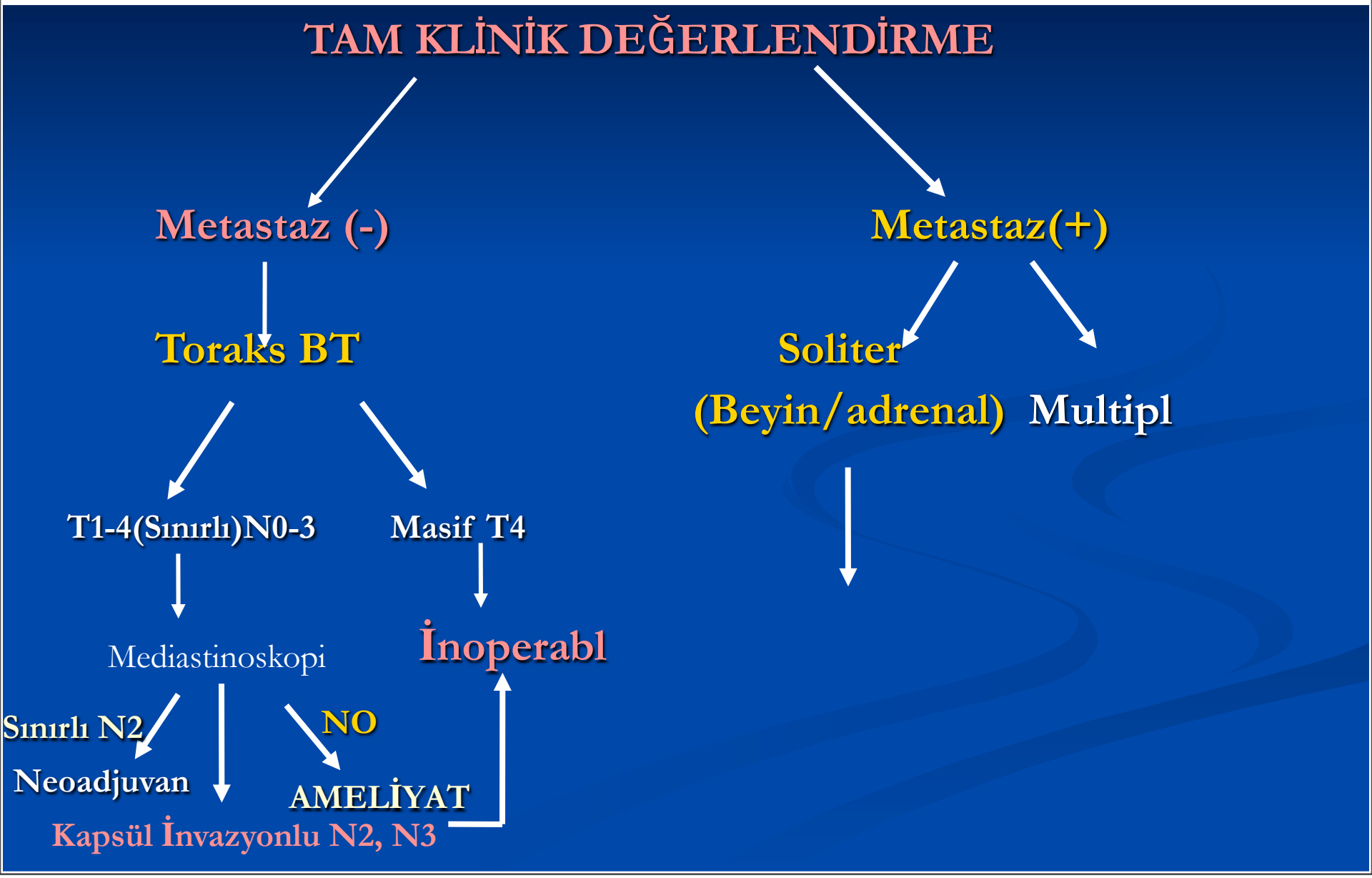

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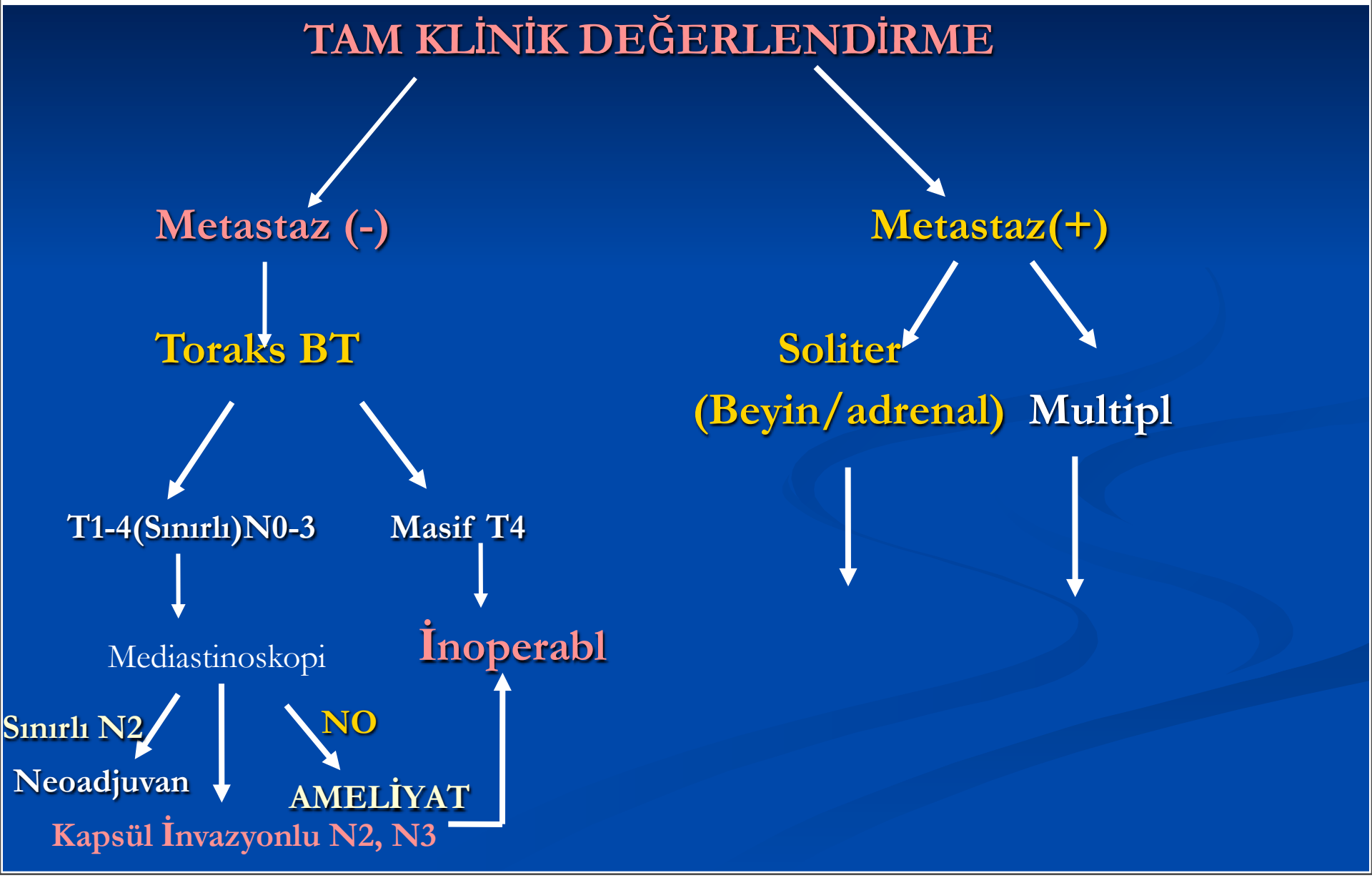

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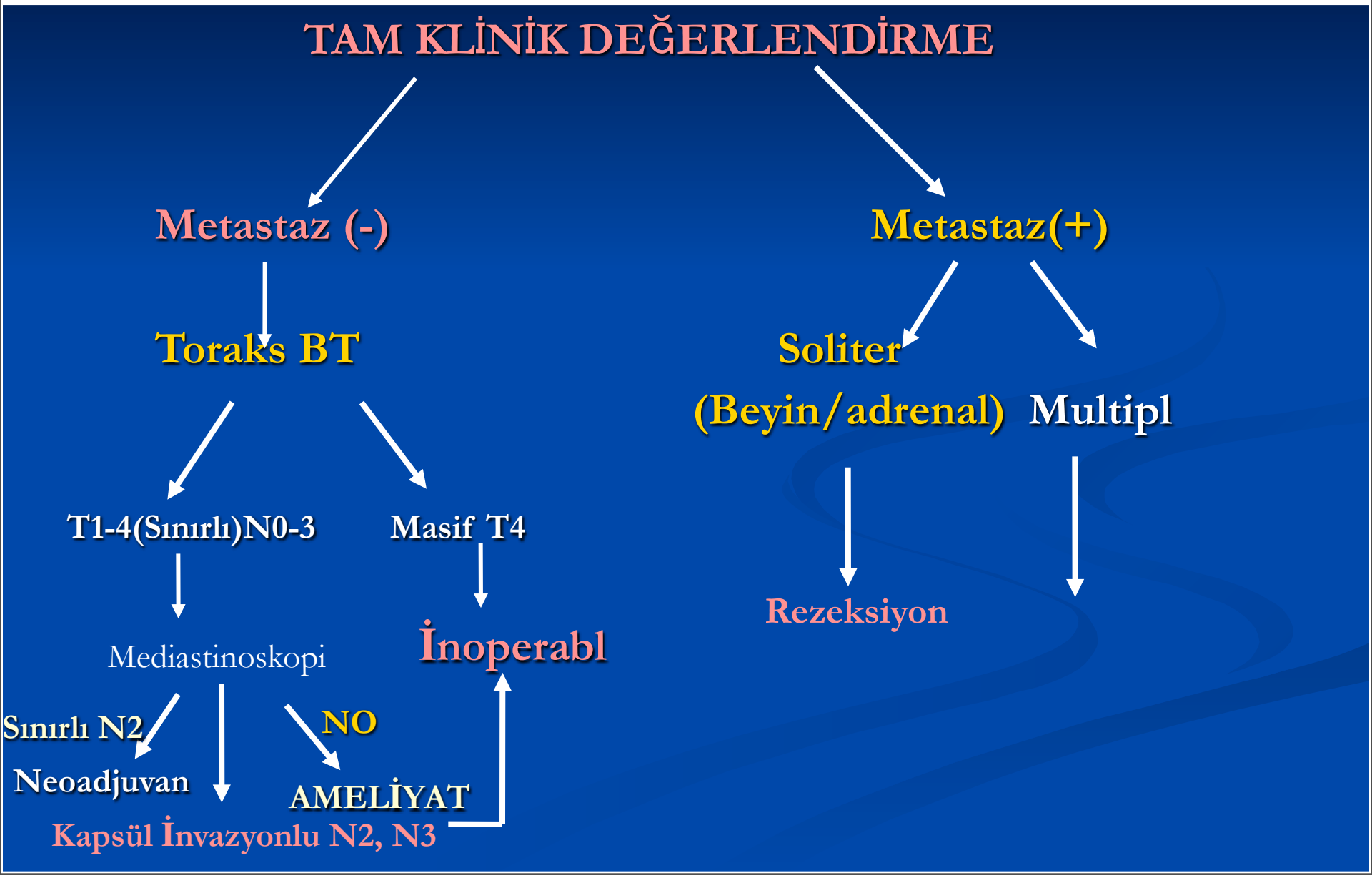

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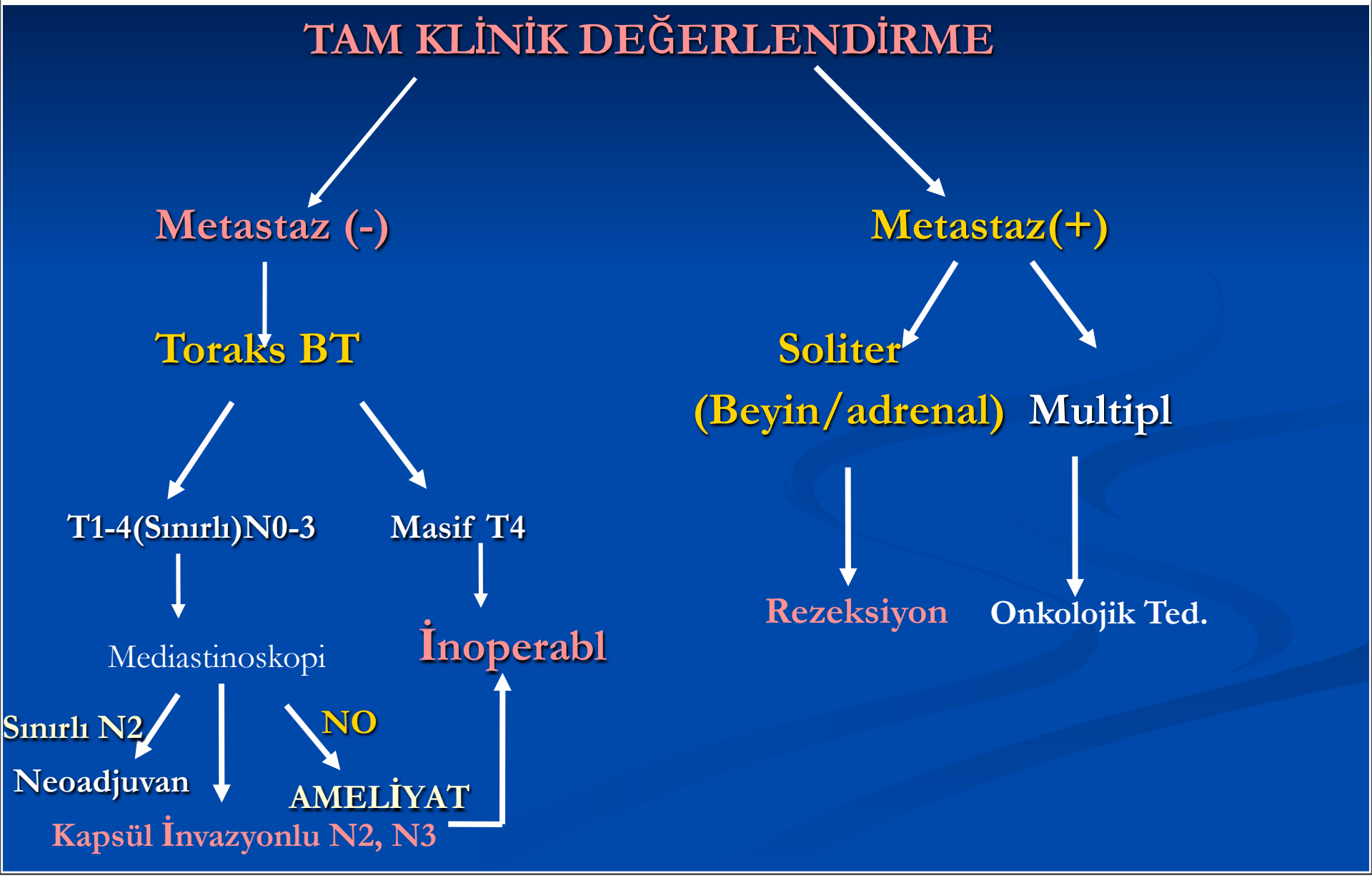

EVRELERE GÖRE SAĞKALIM

TNM	Stage (1997 System)	Naruke (1988)		Mountain (1997)	
		No.	5-Year Survival (%)	No.	5-Year Survival (%)
$T_1N_0M_0$	IA	245	75	511	67
$T_2N_0M_0$	IB	291	57	549	57
$T_1N_1M_0$	IIA	66	52	76	55
$T_2N_1M_0$	IIB	153	38	288	39
$T_3N_0M_0$	IIB	106	33	87	38
$T_3N_1M_0$	IIIA	85	39	55	25
$T_{1-3}N_2M_0$	IIIA	368	15	344	23
$T_{1-3}N_3M_0$	IIIB	55	0	572	3
T_4 any N M_0	IIIB	104	8	458	6
Any T any N M_1	IV	293	7	1427	1

EVRE IIIB (T4) OLGULARDA CERRAHİ?

Kaynak	5-yıllık Sağkalım
Dartevelle ve ark. Ann Thorac Surg 1988; 46: 68-72. (n=55)	% 23
Rendina EA ve ark. J Thorac Cardiovasc Surg 1993; 106: 73-79. (n=12)	% 12
Tsuchiya R, ve ark. Ann Thorac Surg 1994; 57: 960-5 (n=101)	% 13
Spaggiari L, ve ark. Ann Thorac Surg 2000; 69: 233-6. (n=25)	% 29

EVRE IIIB (T4) OLGULARDA CERRAHİ?

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Tsuchiya R, ve ark. Ann Thorac Surg 1994; 57: 960-5 (n=101)	% 13
Spaggiari L, ve ark. Ann Thorac Surg 2000; 69: 233-6. (n=25)	% 29

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Is lung cancer surgery justified in patients with direct mediastinal invasion?☆

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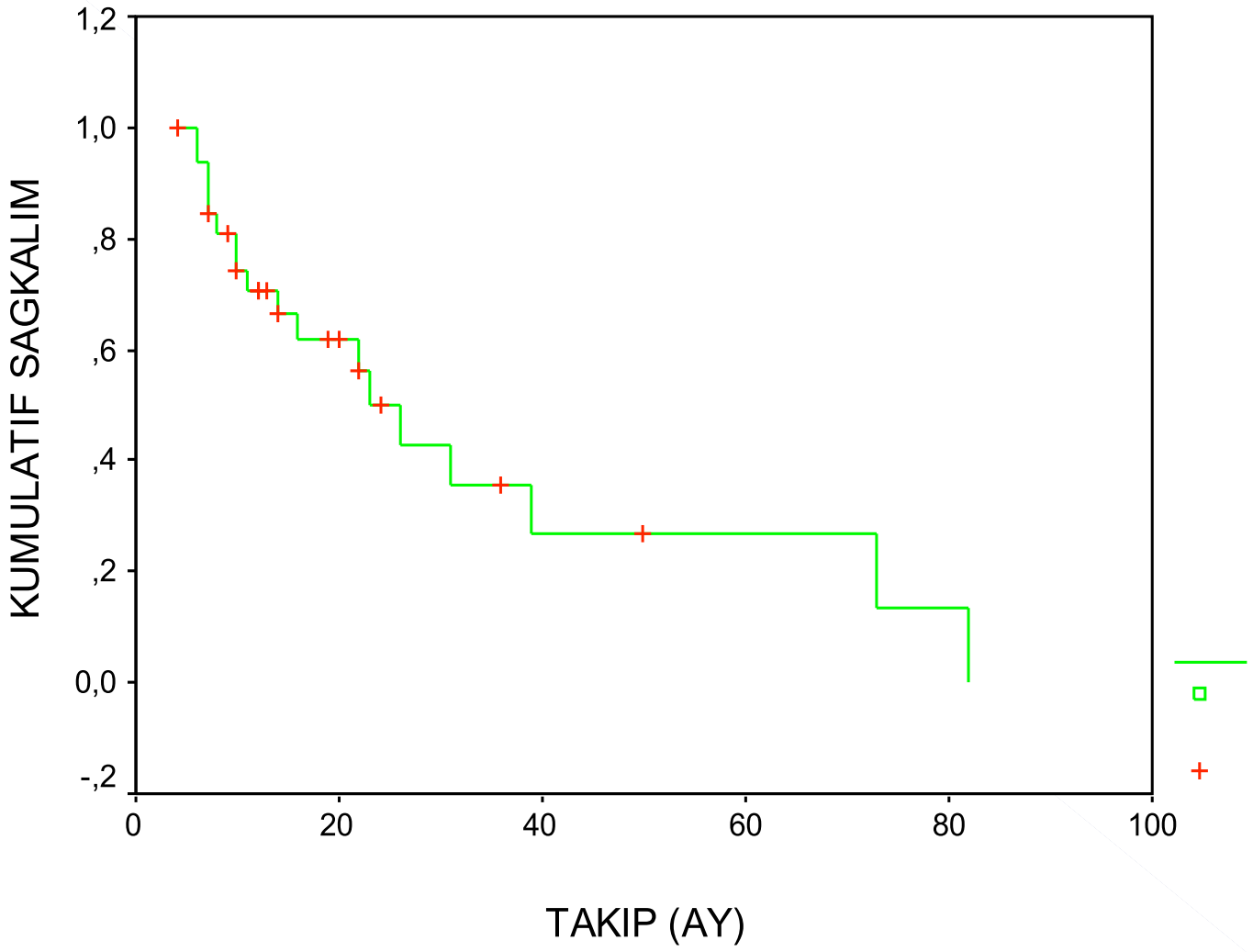
Abstract

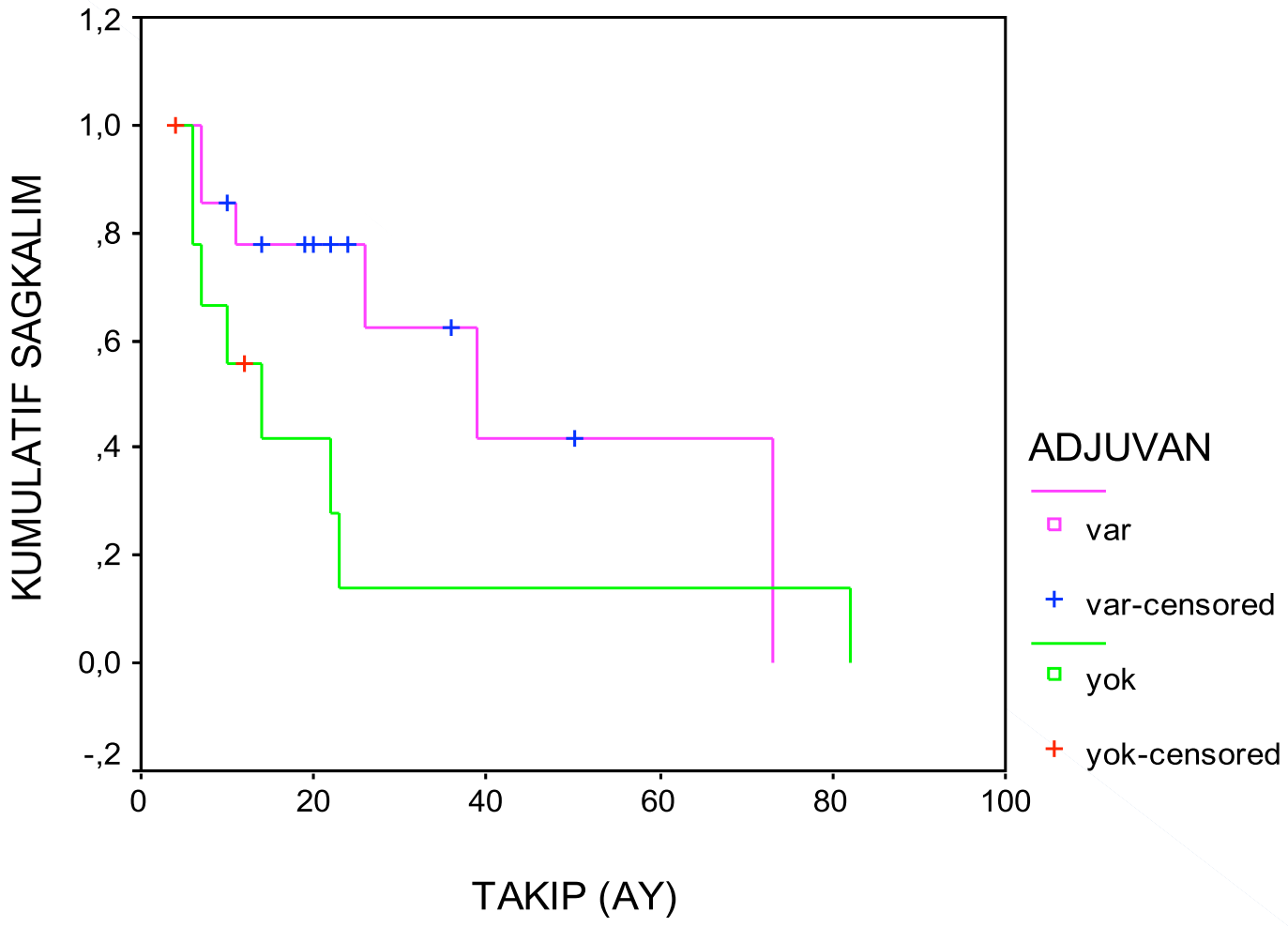
Objective: To assess the results of the surgical treatment of patients with stage IIIB non-small cell lung carcinoma (NSCLC) invading the mediastinum (T4). **Methods**: Twenty-nine patients were operated on from 1986 to 1999. Histology was squamous cell carcinoma in 17 patients, adenocarcinoma in eight, large cell carcinoma in two and neuroendocrinal carcinoma in two. Three patients received a preoperative chemotherapy ($n = 2$) or radiochemotherapy ($n = 1$). The lung resection consisted of a pneumonectomy in 25 patients and a lobectomy in four. The procedure was extended to one of the following structures: superior vena cava (SVC) ($n = 17$), aorta ($n = 1$), left atrium ($n = 5$) and carina ($n = 6$). Seventeen patients had a postoperative regimen including radiochemotherapy ($n = 12$), radiotherapy ($n = 4$), or chemotherapy ($n = 1$). **Results**: Complete R0 resection was achieved in 25 patients, whereas four patients had a microscopically ($n = 1$) or macroscopically ($n = 3$) residual disease. The operative mortality rate was 7% ($n = 2$). Non-fatal major complications occurred in eight patients (28%). Overall 5-year survival rate was 28% (median 11 months), including the operative mortality. The median survival of the 18 patients with an N0 or N1 disease was 16 months whereas the median survival of the 11 patients with an N2 disease was 9 months. At completion of the study, 22 patients have died, two postoperatively and 10 from pulmonary causes without evidence of cancer. **Conclusions**: Surgical management of T4 NSC lung cancer invading the mediastinum should be considered, in the absence of N2 disease, when a complete resection is achievable. © 2001 Elsevier Science B.V. All rights reserved.

Keywords: Lung cancer; Extended resection; Postoperative mortality; Survival

YEDİKULE DENEYİMİ: 39 OLGUDA GENEL SAĞKALIM
(MEDİAN TAKİP SÜRESİ: 35 AY)

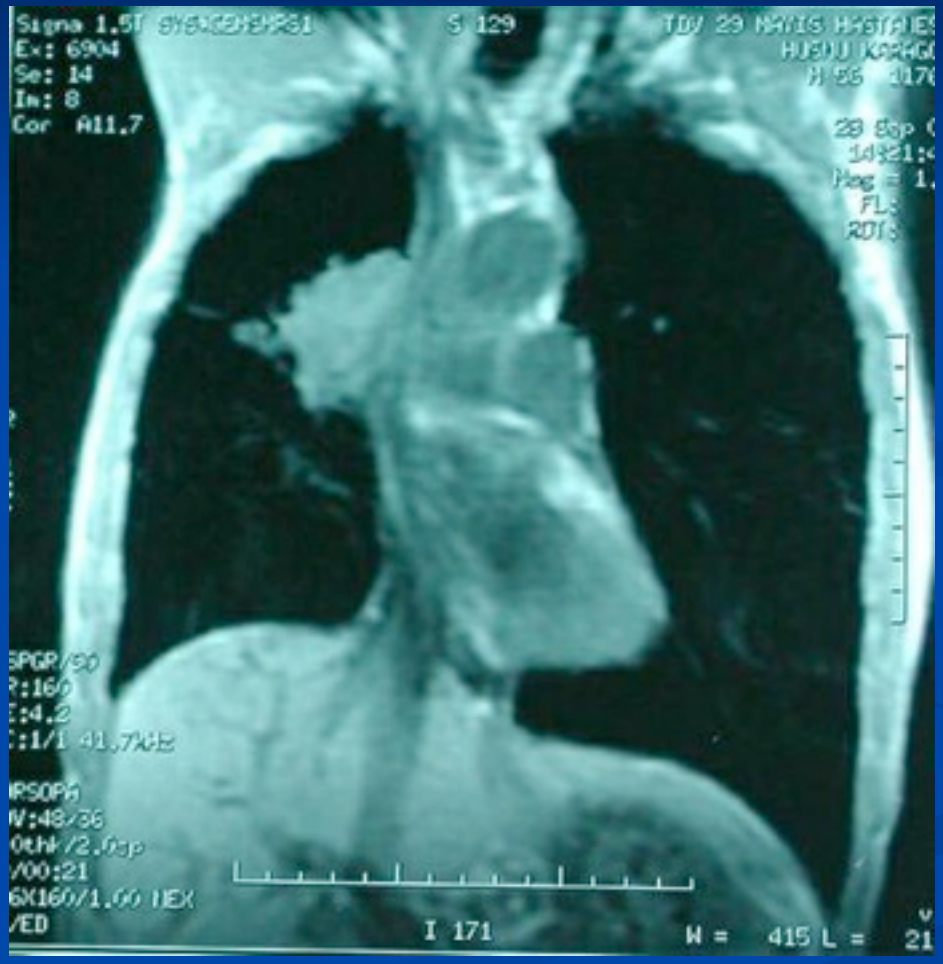


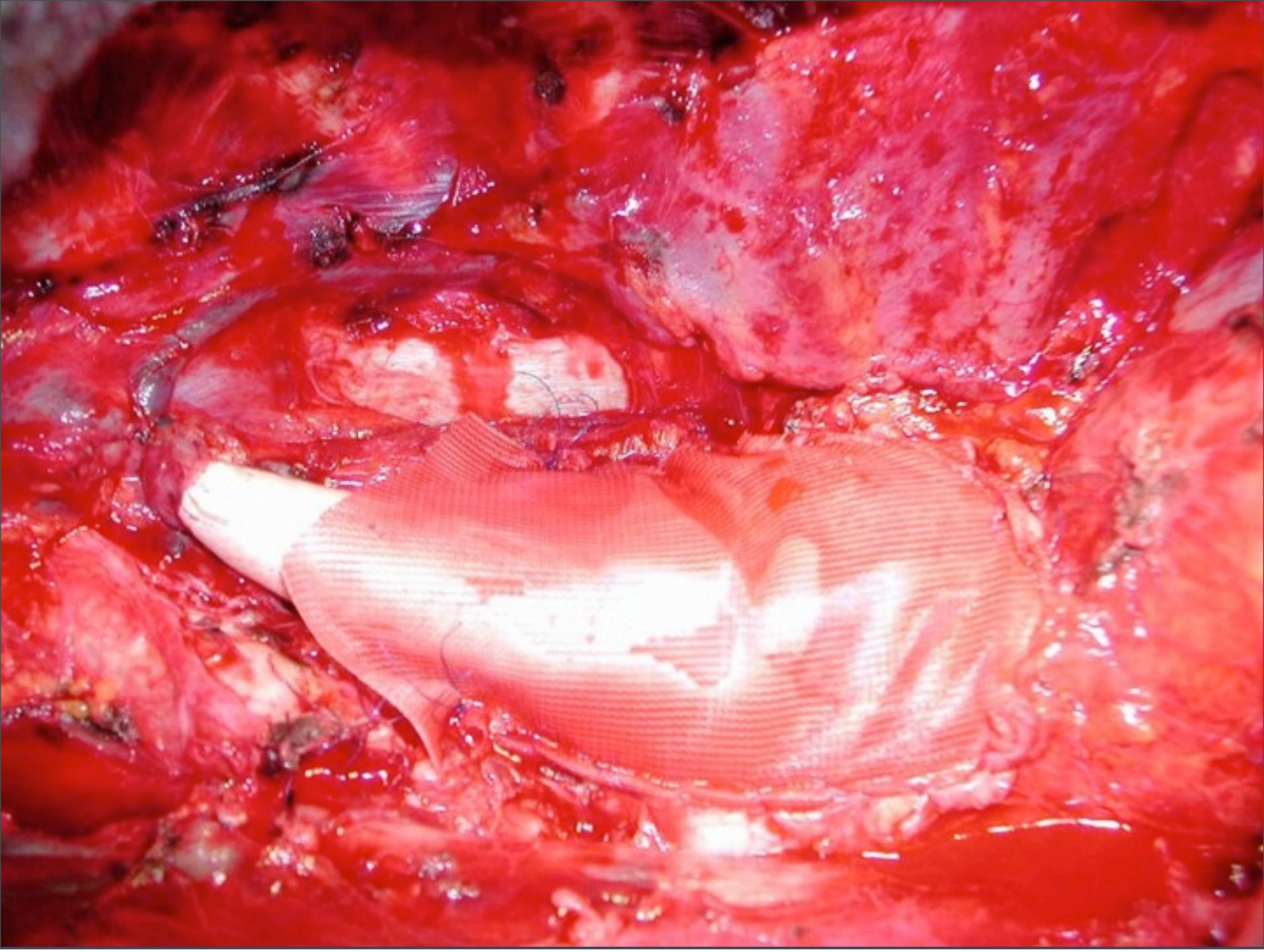
YEDİKULE DENEYİMİ: ADJUVAN TEDAVİNİN ETKİSİ



Vena Cava Superior Tutulumu

Vena Cava Superior Tutulumu



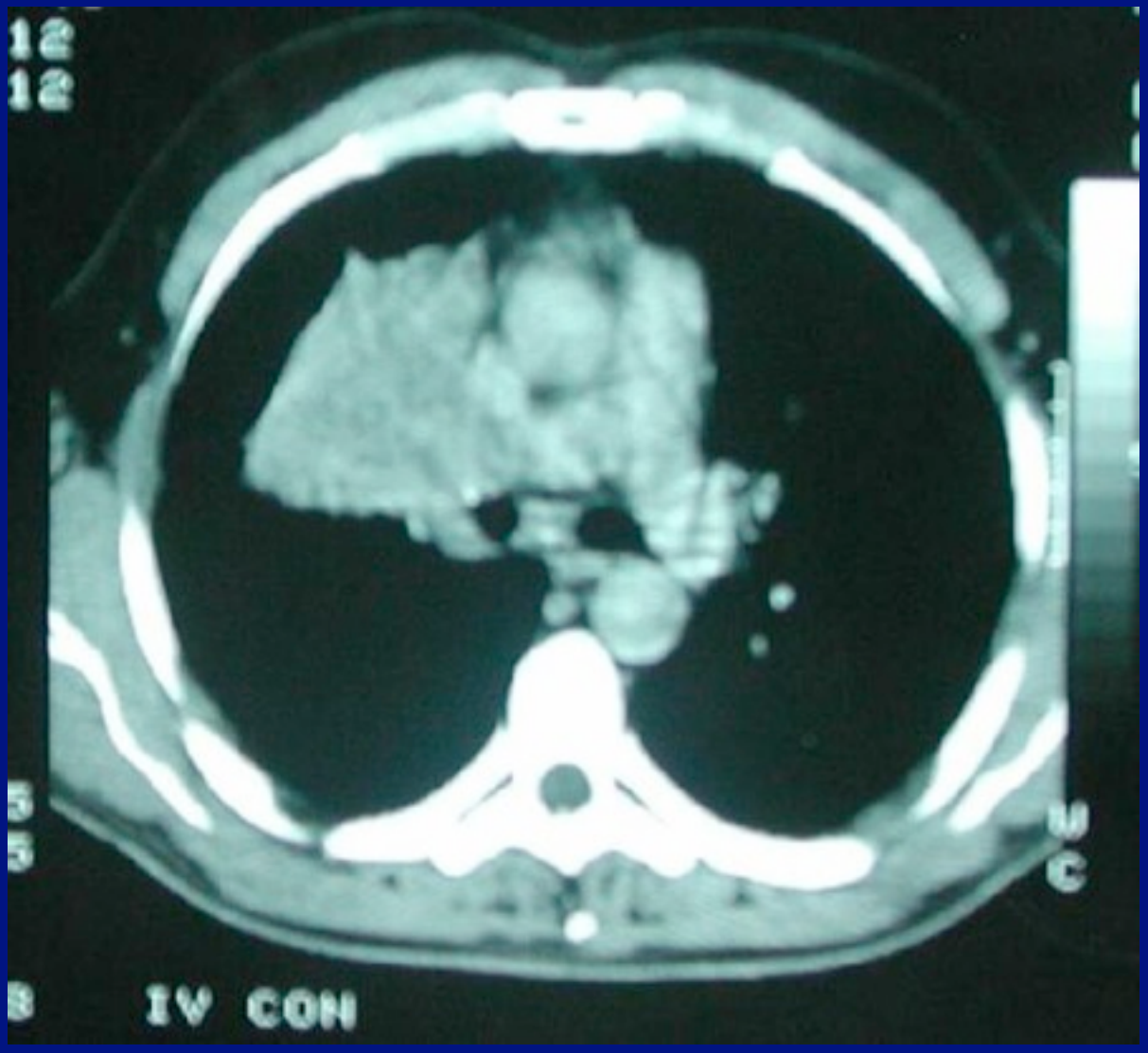


NEOADJUVAN TEDAVİ

NEOADJUVAN TEDAVİ

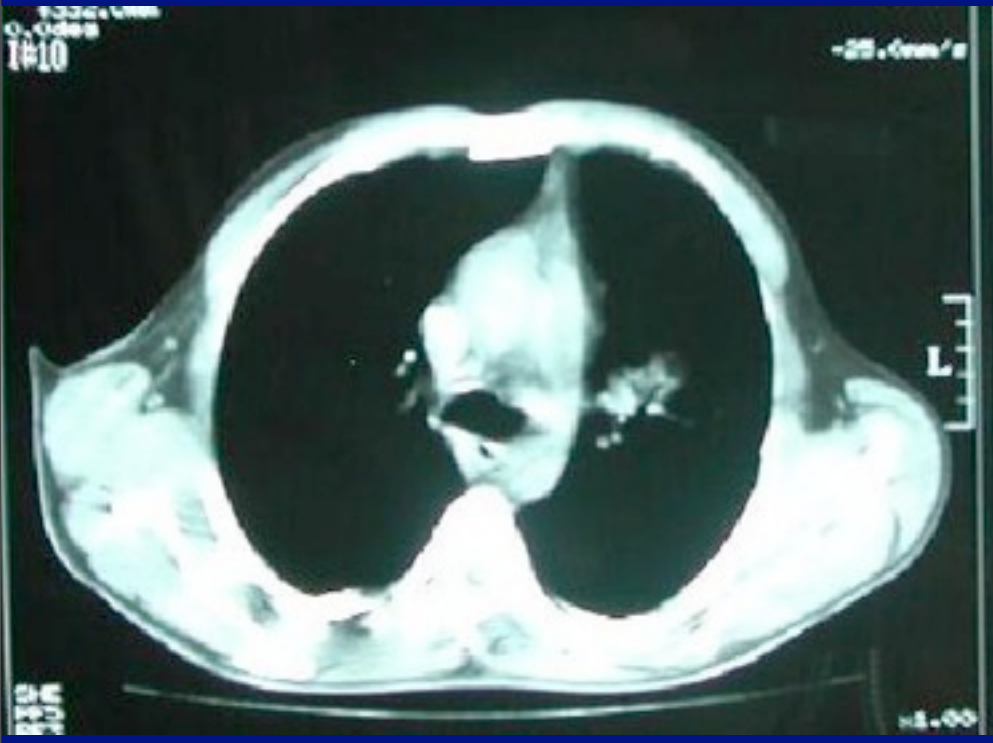
Locoregional Non–Small Cell Lung Cancer: Neoadjuvant Trials

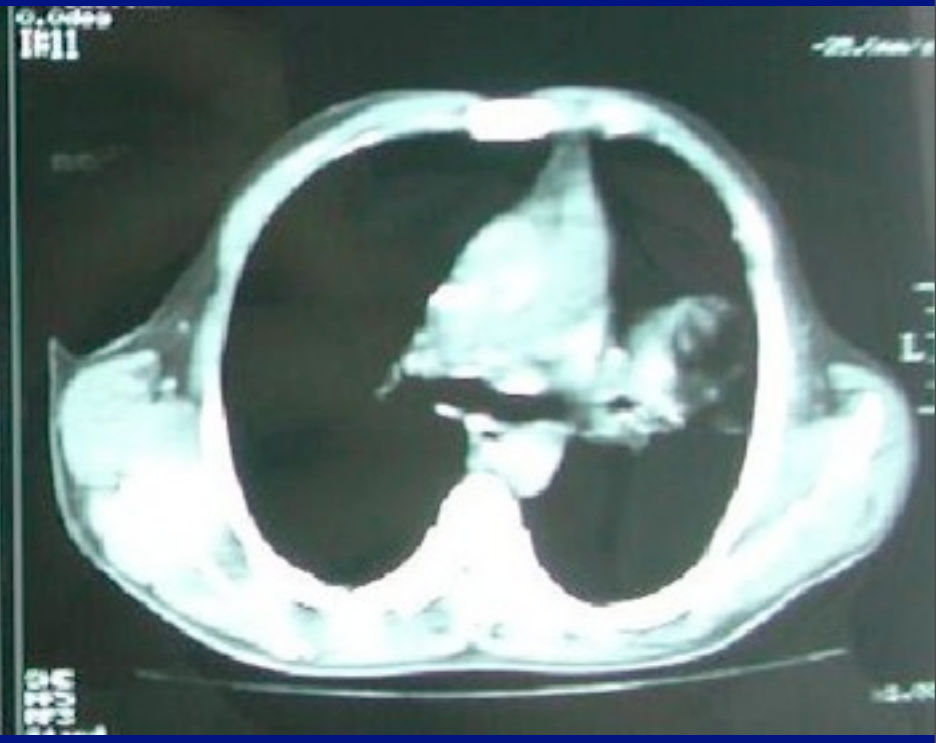
No. of Patients	Stage T	Stage N	Preoperative Therapy	Complete Response Clinical No.	Complete Response Clinical %	Complete Response Pathologic No.	Complete Response Pathologic %	Reference
136	1–3	2	C	13	10	19/98	21	Martini (1983)
58	1–3	2	C	7	12	9/28	32	Gralla (1988)
32	1–3	0–2	C	4	13	3/29	10	Raut et al. (1984)
11	2	2	C	0	0	1/11	9	Pass et al. (1992)
20	3	2–3	C	0	0	1/2	50	Bitran et al. (1986)
13	1–3	0–2	C	1/11	9	0/9	0	Dautzenberg et al. (1990)
39	1–4	2	C	3	8	3/39	8	Burkes et al. (1992)
126	1–4	0–3	C+RT	2	2	19/89	21	Albain et al. (1995)
64	1–3	0–2	C+RT	5	8	9/39	23	Taylor et al. (1987)
24	1–3	0–3	C+RT	0	0	4/8	50	Bonomi et al. (1986)
36	2–3	2	C+RT	—	—	10/31	32	Yashar et al. (1992)
39	1–3	1–2	C+RT	2	5	—	—	Eagan et al. (1987)
85	1–4	2	C+RT	2	2	8/35	23	Weiden and Piantadosi (1991)
41	1–3	0–2	C+RT	0	0	7/31	23	Strauss et al. (1992)


IV CON

- Mediastinoskopi
- Neoadjuvan Kemoterapi -
(Karinal N2 için)
- Torakotomi
- pT2N0

- Mediastinoskopi
- Neoadjuvan Kemoterapi -
(Karinal N2 için)
- Torakotomi
- pT2N0

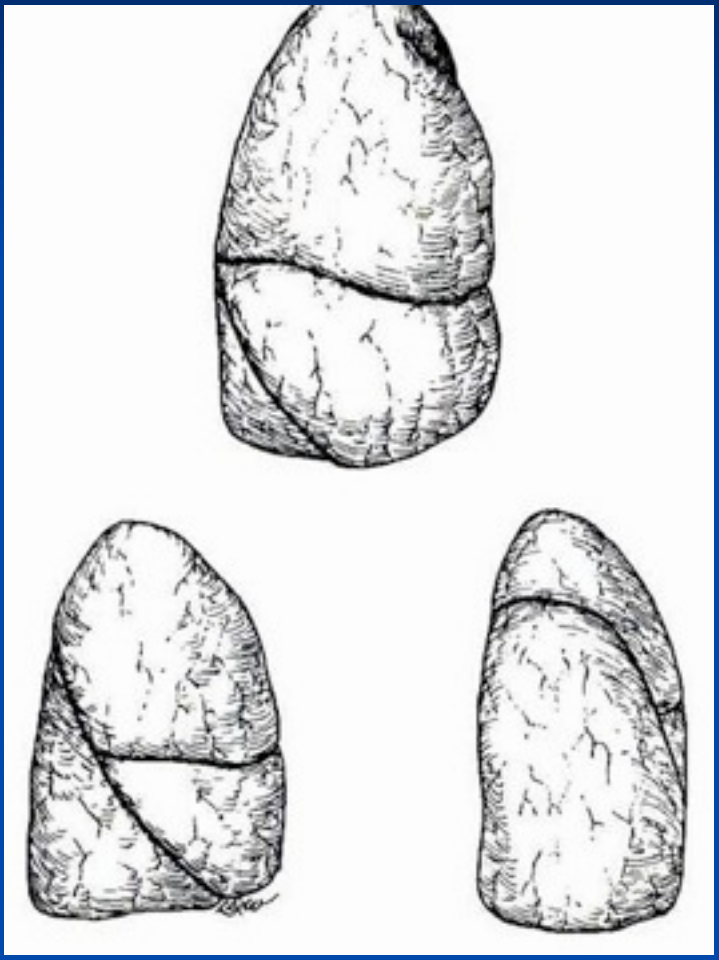




KÜÇÜK HÜCRE DIŞI AKCİĞER TÜMÖRLERİNDE İLERİ CERRAHİ GİRİŞİMLER

STANDART REZEKSİYONLARDA ANATOMİ

STANDART REZEKSİYONLARDA ANATOMİ



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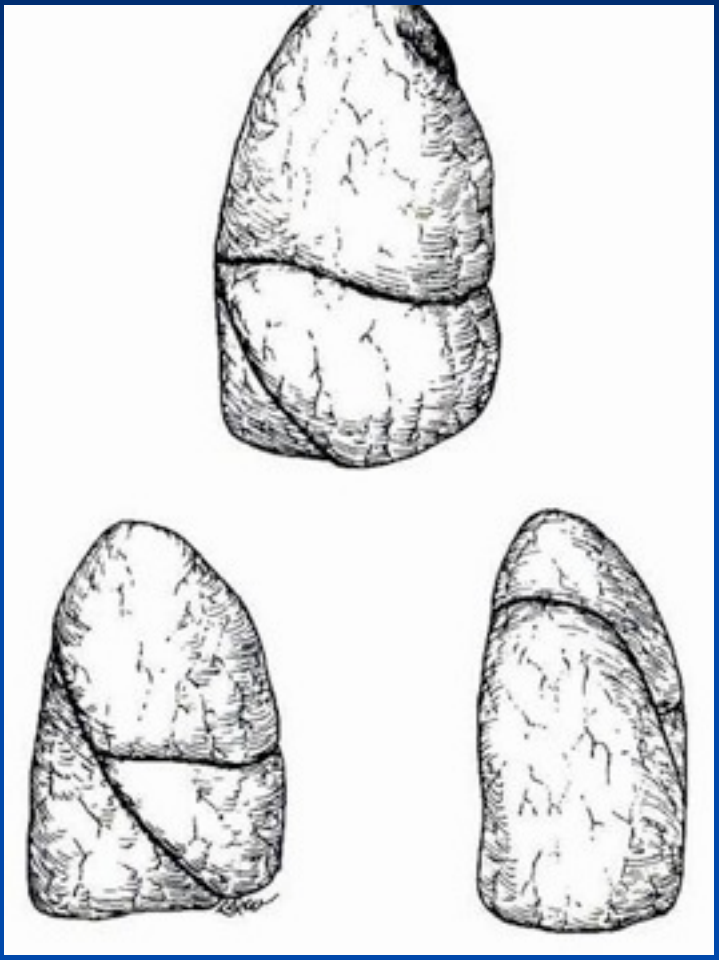
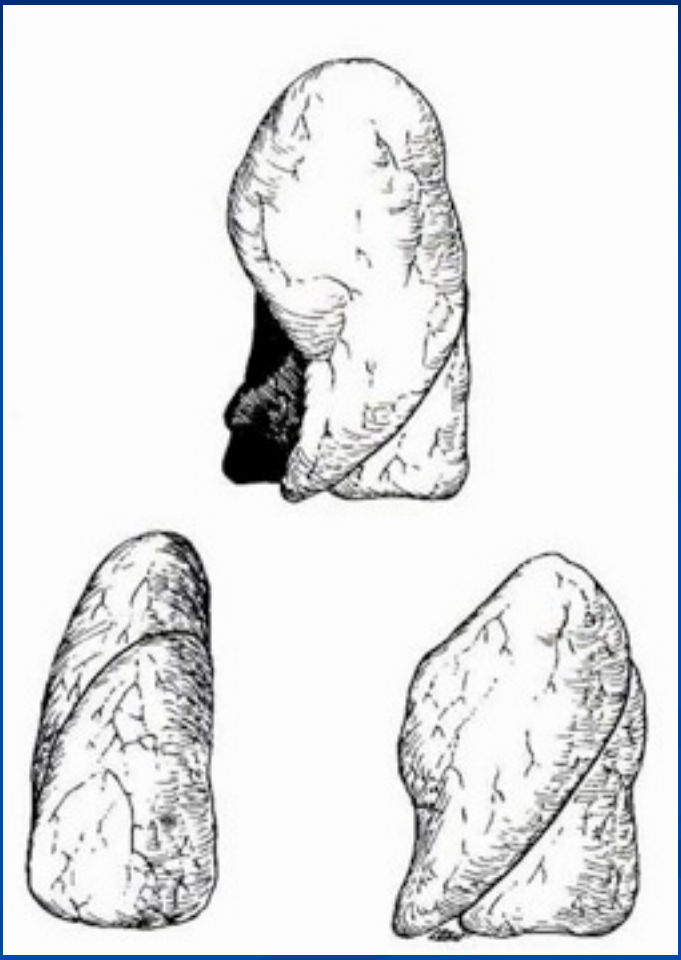
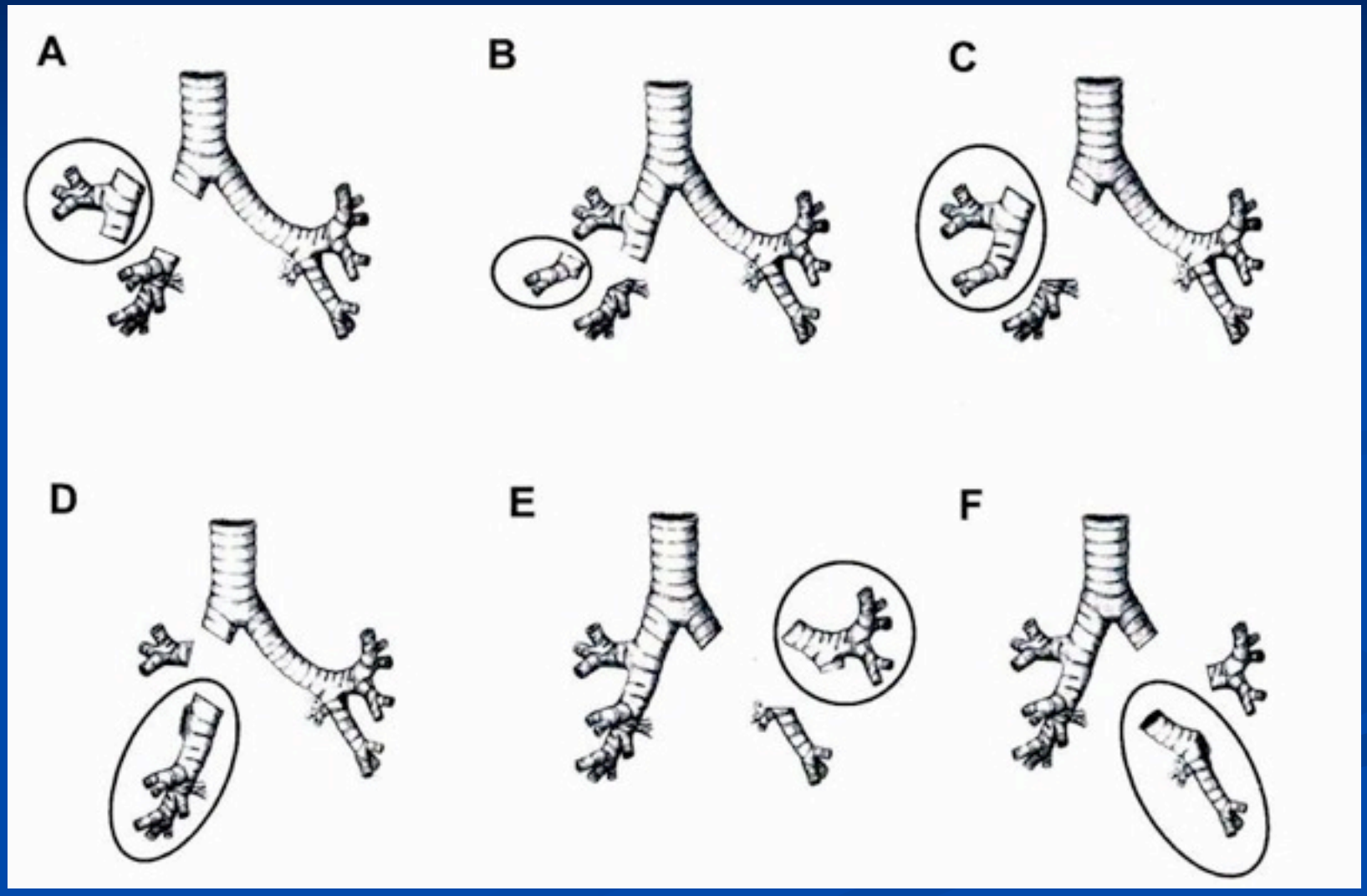
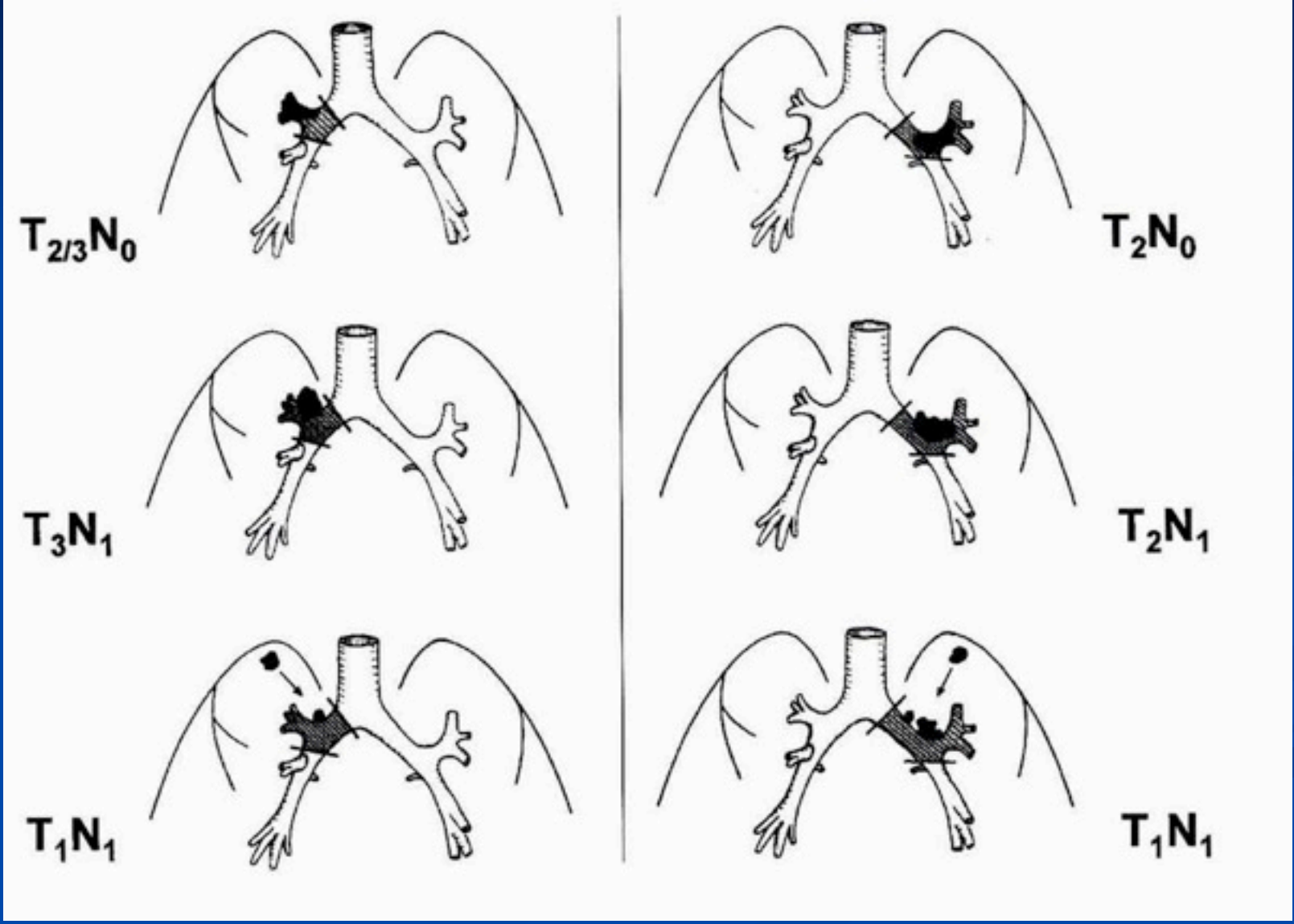




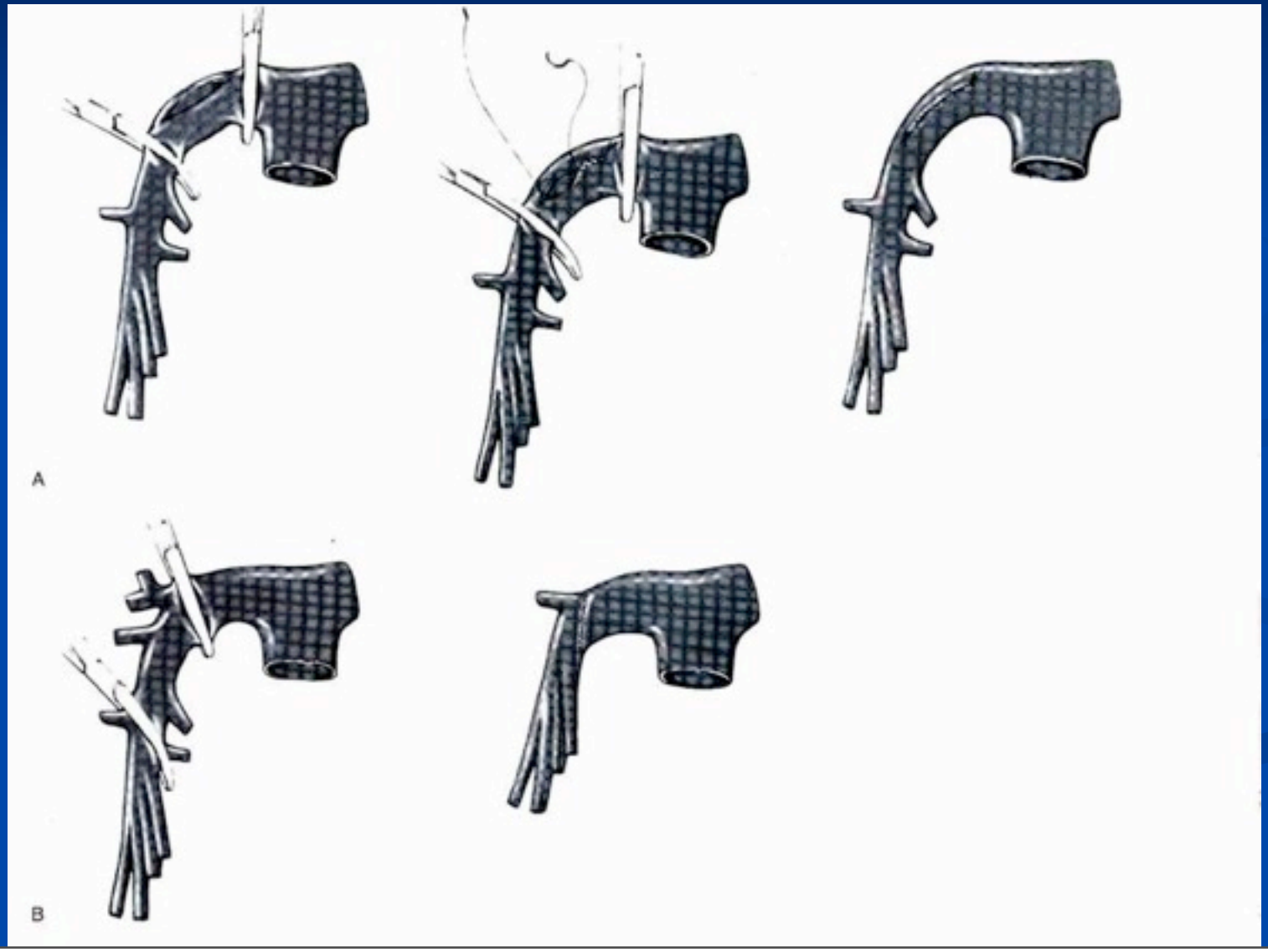
SLEEVE LOBEKTOMİ -1



SLEEVE LOBEKTOMİ -2

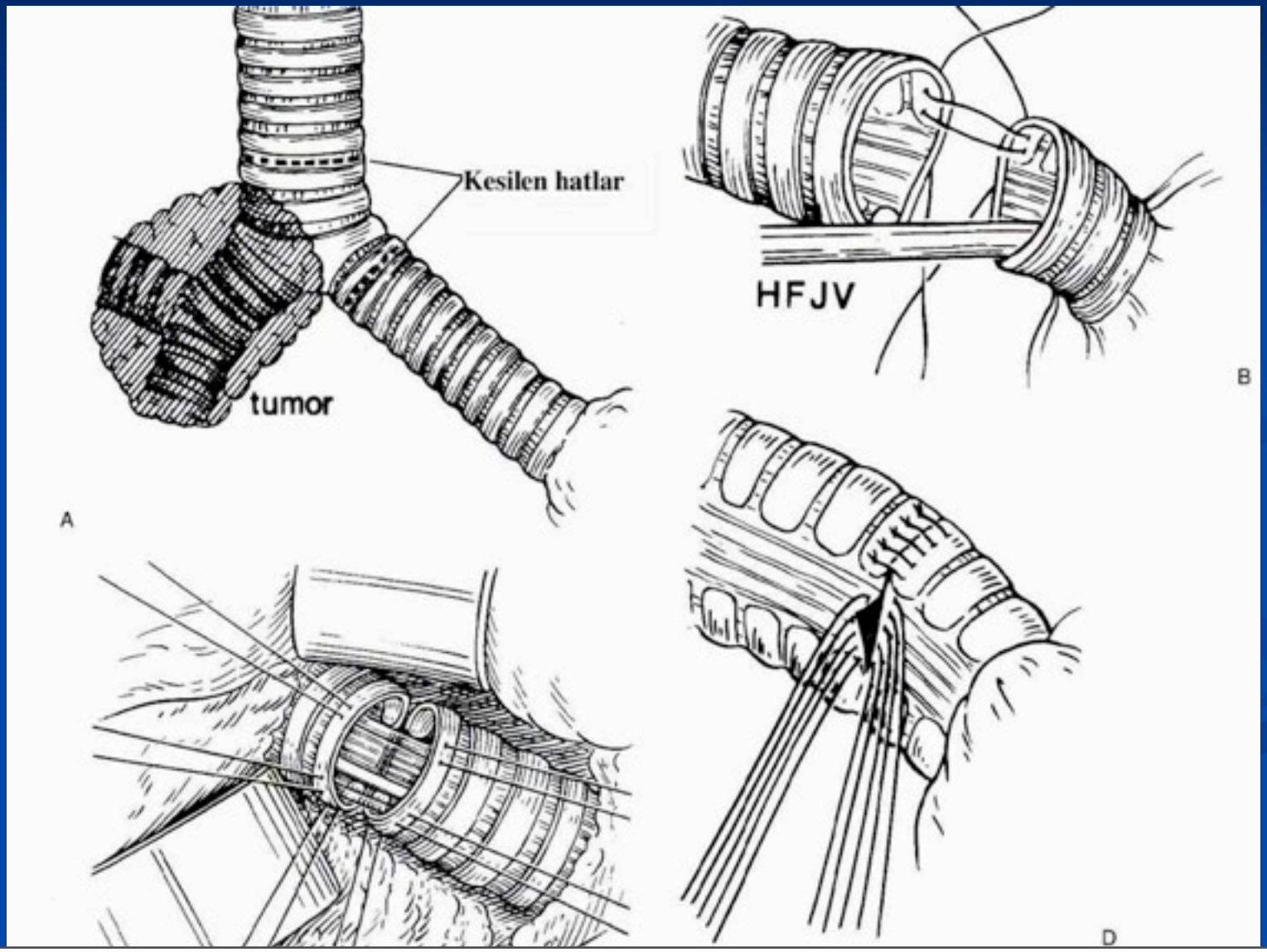


SLEEVE LOBEKTOMİ -3 (VASKÜLER SLEEVE)



TRAKEAL SLEEVE PNÖMONEKTOMİ

TRAKEAL SLEEVE PNÖMONEKTOMİ



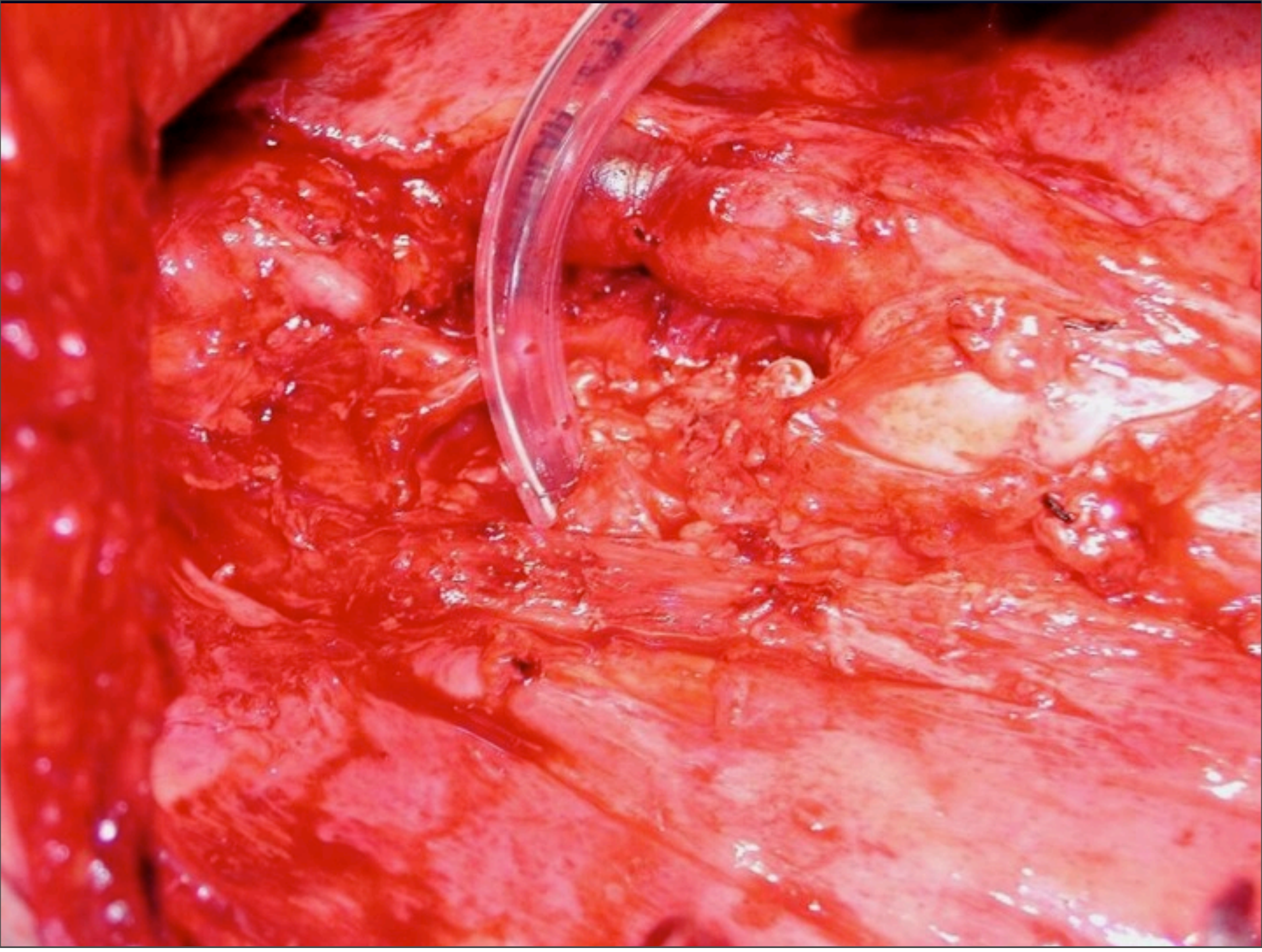


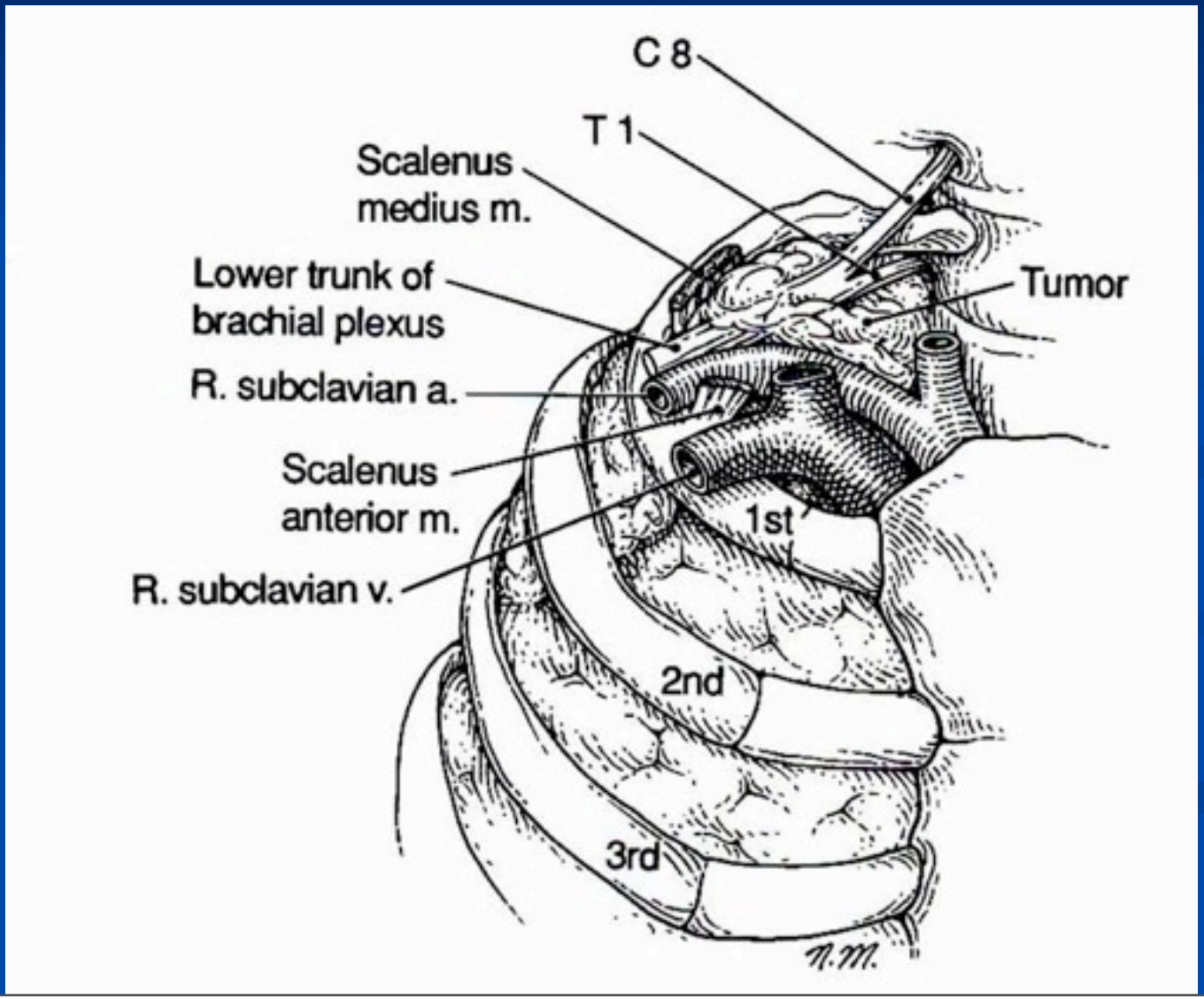
Table 30-1. Results of Tracheal Sleeve Pneumonectomy

Authors	No. of Patients	Operative Mortality (%)	Long-Term Survivors	5-Year Survival Rate (%)
Mathey et al (1966)	2	0	1 (>4 yrs)	—
Jensik et al (1972)	17	12	2 (>2 yrs)	—
Jensik et al (1982)	34	29	2 (>5 yrs)	15
Faber (1987)	37	27	6 (>5 yrs)	16
Faber (1991)	40	28	8 (>5 yrs)	20
Deslauriers et al (1979)	16	31	1 (>7 yrs)	—
Deslauriers et al (1985)	27	27	3 (>5 yrs)	23
Deslauriers et al (1989)	38	29	4 (>5 yrs)	13
Dartevelle et al (1988)	55	11	7 (>5 yrs)	23[a]
Dartevelle et al (1995)	55	7	9 (>5 yrs)	40
Dartevelle et al (1996)	60	3	12 (>2 yrs)	43
Fujimura et al (1985)	6	0	1 (>2 yrs)	—
Watanabe et al (1990)	12	17	1 (>4 yrs)	—
Tsuchiya et al (1990)	15	20	1 (>2 yrs)	—
Matheisen and Grillo (1991)	17	8[b]	—	—
Muscolino et al (1992)	7	0	2 (>4 yrs)	—
Roviaro et al (1994)	28	4	7 (>4 yrs)	20
Sharpe and Moghissi (1996)	17	0	—	—

[a]Excluding six operative deaths.
[b]Including other procedures of carinal resection.

SUPERİOR SULCUS TÜMÖRÜ (PANCOAST?)

SUPERİOR SULCUS TÜMÖRÜ (PANCOAST?)



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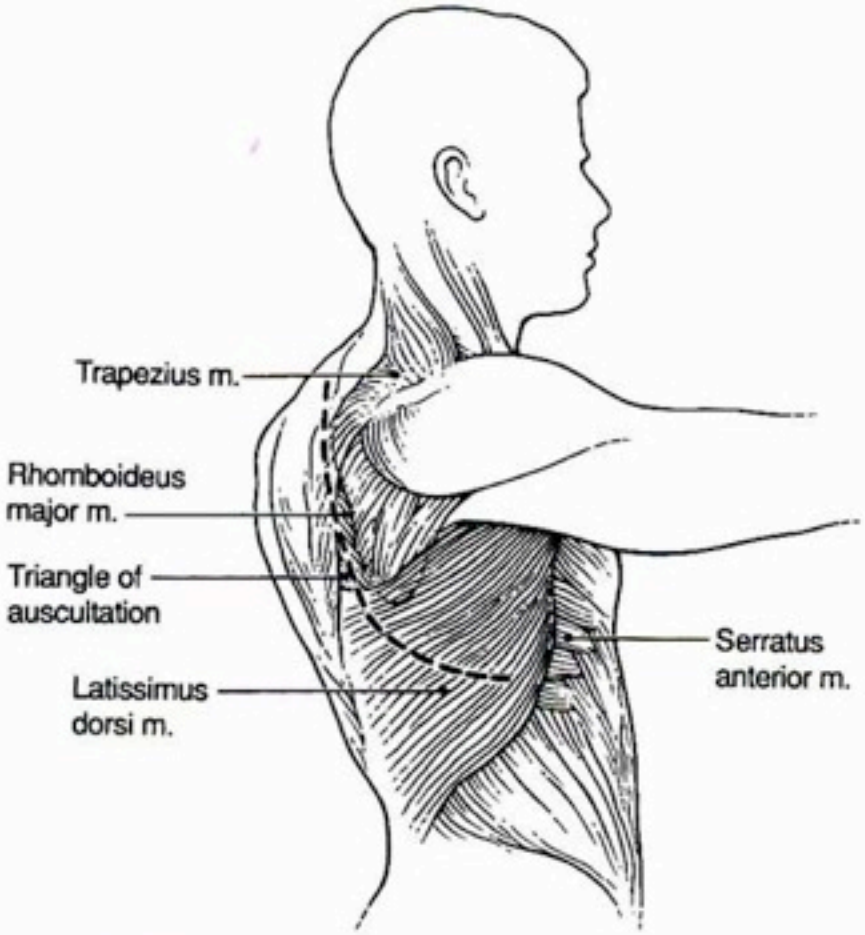


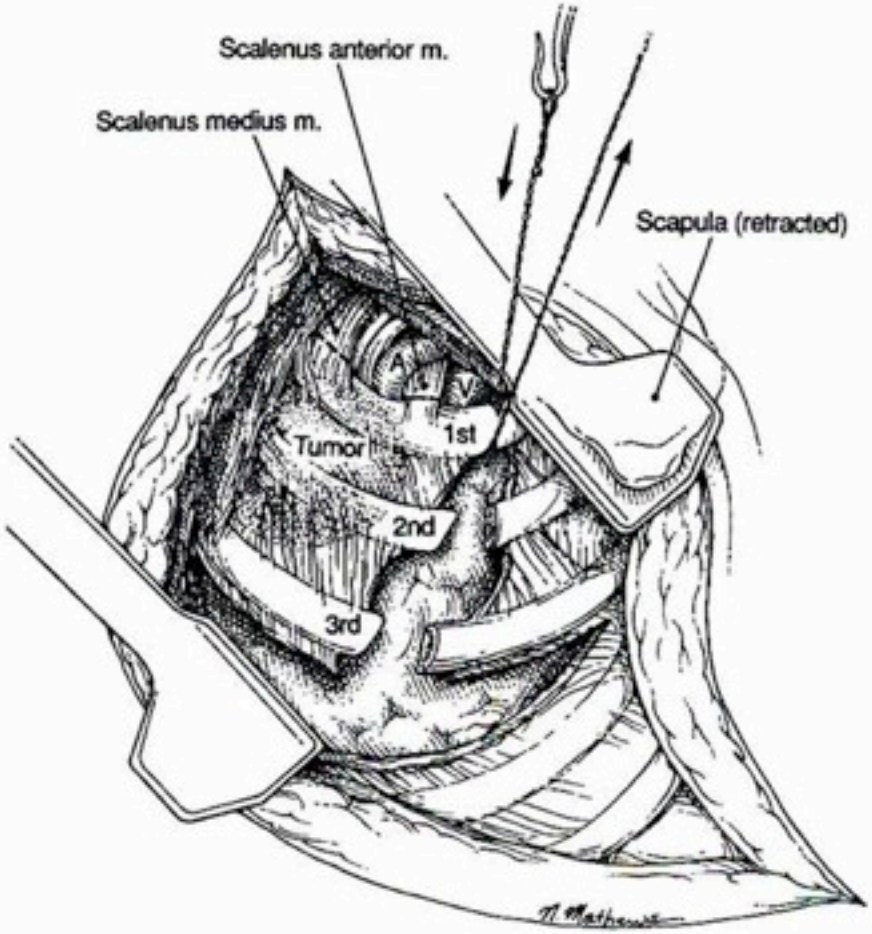
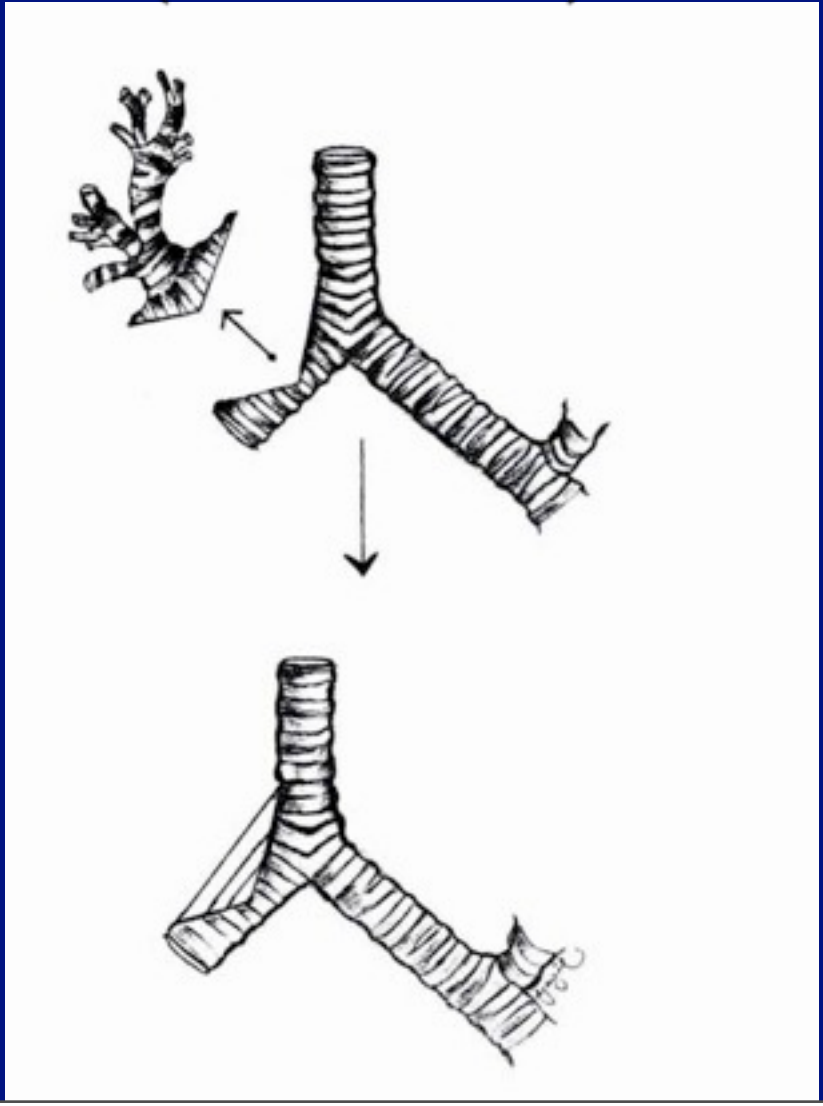
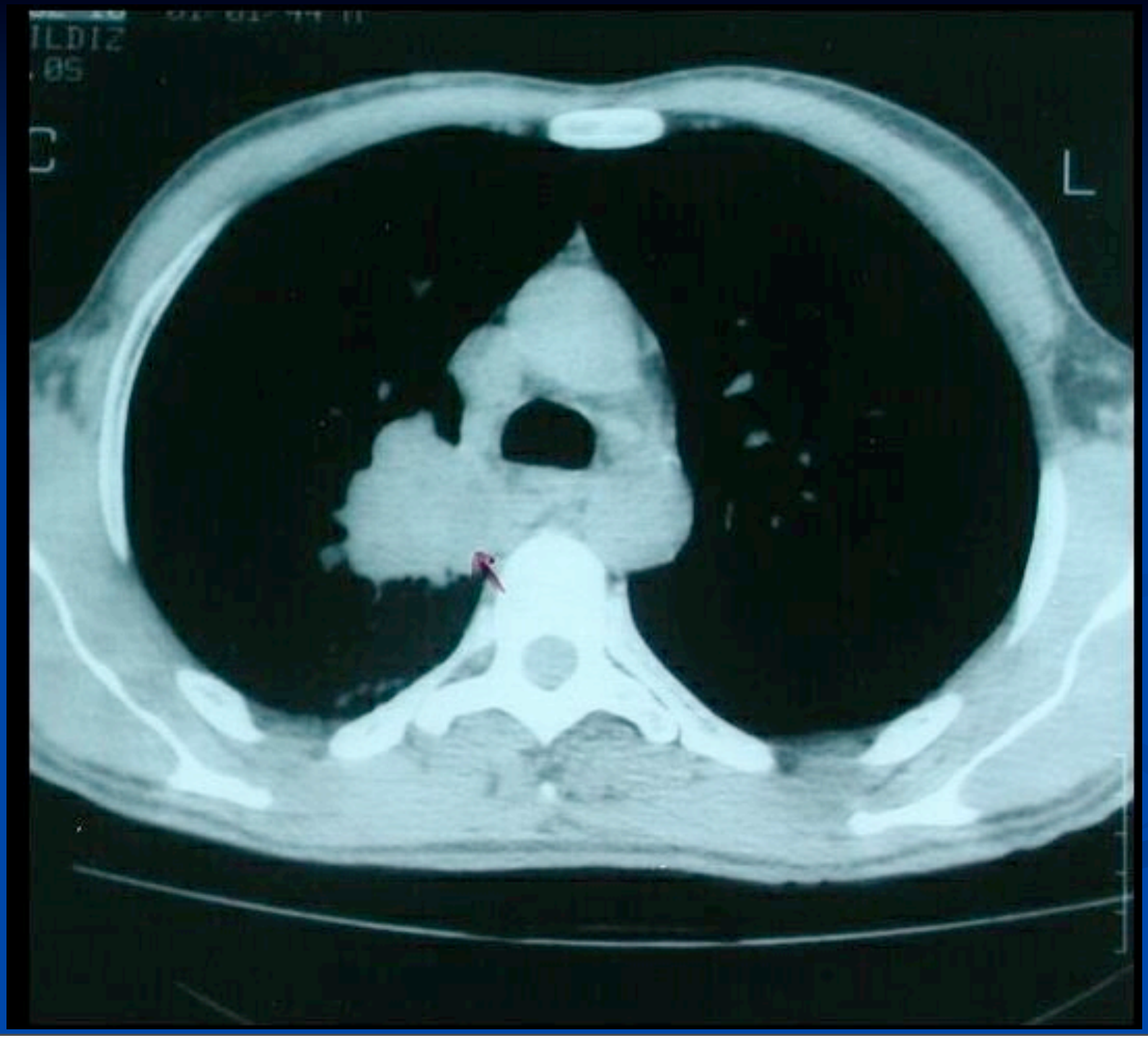


Fig. 35-2. The classic posterolateral thoracotomy incisi

WEDGE TRAKEOBRONKOPLASTİK LOBEKTOMİ
(YEDİKULE)

WEDGE TRAKEOBRONKOPLASTİK LOBEKTOMİ (YEDİKULE)

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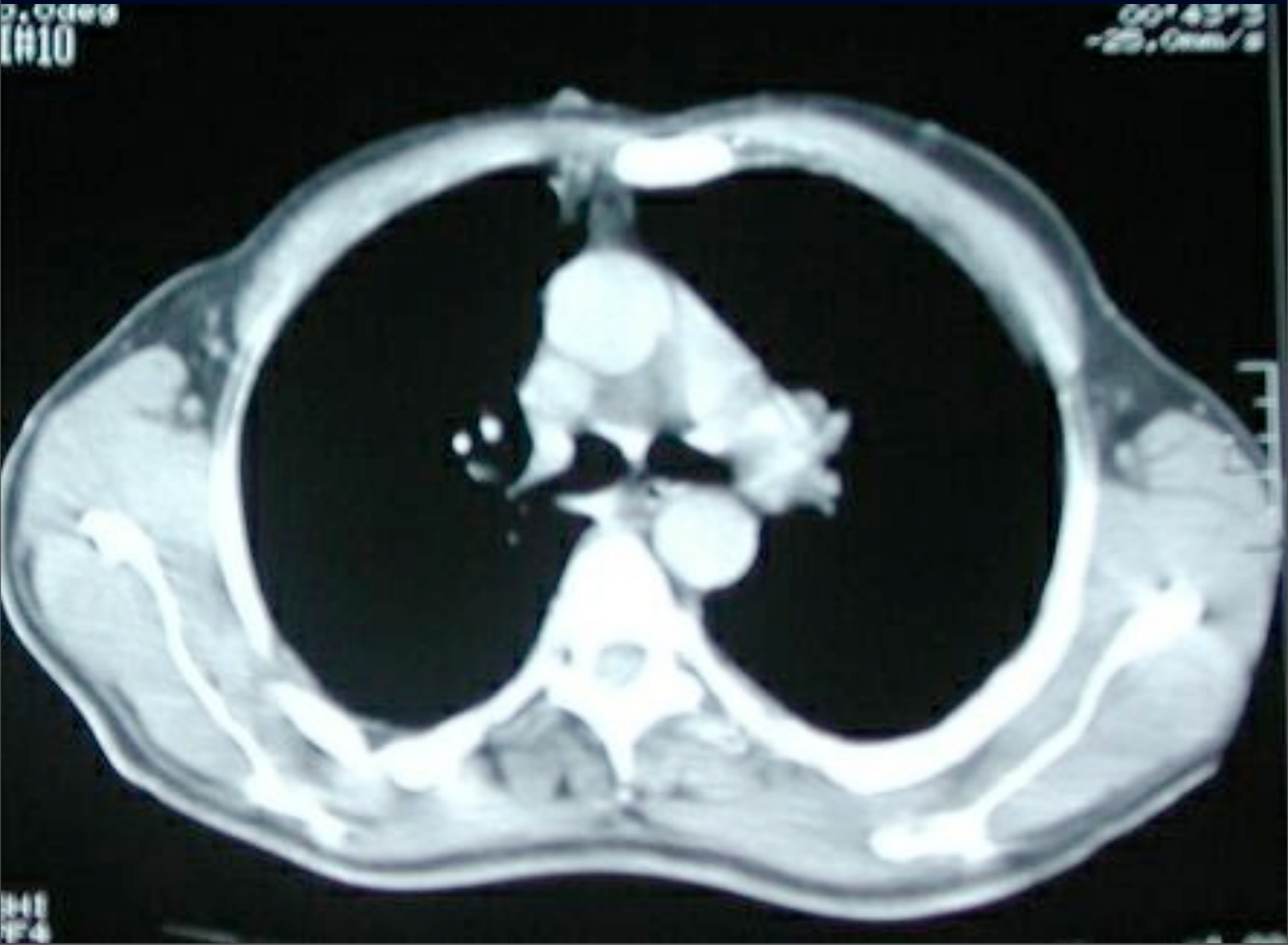

PREOPERATİF HAZIRLIK

TABLE 36.1. PUBLISHED CRITERIA OF PULMONARY FUNCTION FOR PREDICTING HIGH RISK FOR LUNG RESECTION

Parameter	General Cutoff for Resection	Pneumonectomy	Lobectomy	Segmentectomy
FVC	under 2 L[19]			
	under 1.7 L[23]			
FEV_1	under 1.2 L[23]	under 2 L[25,257]	under 1 L[25,257]	under 0.6 L[25,257]
	under 2 L[21]			
FEV_1/FVC	under 35%[23]			
	under 50%[21]			
MVV	under 50% pred[19]	under 55% pred[25,257]	under 40% pred[25,257]	under 35% to 45% pred[25,257]
	under 28 L per min[23]			
	under 45 L per min[20]			
RV	Increased[20]			
	over 47% pred[23]			
DLCO	under 40% pred[34]			
	under 50% pred[258]			
	under 60% pred[32]			

SORUNLU KONULAR

Prospective Study of Extended Segmentectomy for Small Lung Tumors: The Final Report

Koichi Yoshikawa, MD, Noriaki Tsubota, MD, Ken Kodama, MD, Hiroyoshi Ayabe, MD, Toshihiko Taki, MD, and Takashi Mori, MD, for the Study Group of Extended Segmentectomy for Small Lung Tumors

Department of General Thoracic Surgery, Sumitomo Hospital, Osaka, Japan

Background. Minimal resection of small lung tumors is still controversial. This study was conducted to clarify whether this type of operation is acceptable.

Methods. From January 1992 to December 1994, 73 patients were registered in a multiinstitutional trial of limited resection for peripheral lung tumors less than 2 cm in diameter. The operative procedure consisted of extended segmentectomy in which the cut line of the lung was beyond the burdened segment, confirming N0 disease by intraoperative lymph node examination of frozen sections. The operation was changed to other procedures if the report was positive.

Results. All the patients were observed more than 5 years. There were no perioperative deaths and no major complications. A total of 55 patients were finally enrolled in this study. Ten patients died postoperatively, 4 of lung cancer and the remaining 6 died of other diseases, with no signs of recurrence. The 5-year survival rate, excluding these 6 patients, was 91.8%; for all patients including those who died it was 81.8%. A total of 18 patients were not included in this study for various reasons. The decrease in forced vital capacity was 11.3% ± 9.8% compared with the preoperative value.

Conclusions. Extended segmentectomy is an alternative method as a standard operation for patients with small peripheral lung tumors, and the loss of lung function is minimal. However, patient selection must be strict, with intraoperative pathologic examination, and a wide margin to the lesion beyond the burdened segment is mandatory.

(Ann Thorac Surg 2002;73:1055–9)

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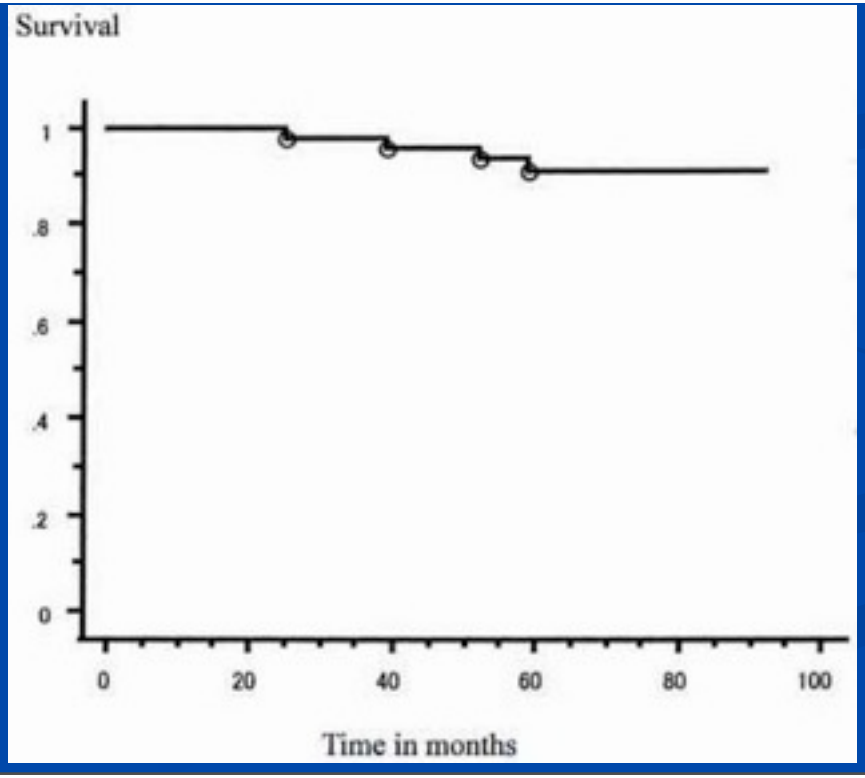
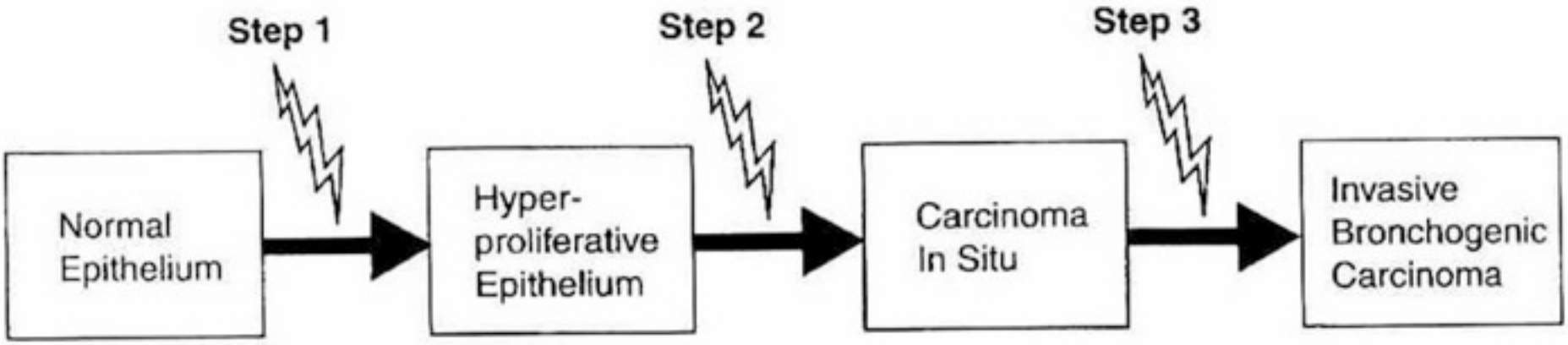


RUTİN TARAMA?



WHY SHOULD THORACIC SURGEONS UNDERSTAND BASIC BIOLOGY?

Robert B. Wagner, MD, and Michael R. Johnston, MD

THE "NEW" BIOLOGY

Thoracic surgeons are a small and rather cohesive group of highly specialized and uniquely focused individuals. Conversations among ourselves all too often focus on the financial and political issues that shape our practices. But occasionally we talk of the many changes taking place in the medical and surgical aspects of our specialty. Lately, these changes have not been just refinements of basic principles we learned in medical school or in residency, but a virtual explosion of "new" biology that is completely foreign to many of us. Cell biology, immunology, molecular biology, and molecular genetics are just a few of the disciplines that are slowly creeping into our literature.

What are these new languages? What do they have to do with thoracic surgery? And why should we try to understand them? Despite this explosion in obscure and often inane theoretical molecular mishmash, thoracic surgery has progressed through the twentieth century very nicely. We take good care of our patients. We have low morbidity and mortality rates. We may even cure a few cancer patients along the way. Most of us have published a few clinical papers and feel that we have made some contribution to our field. Although some may think of