La nouvelle classification TNM en pratique

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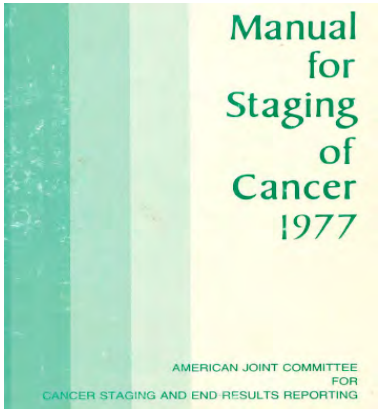
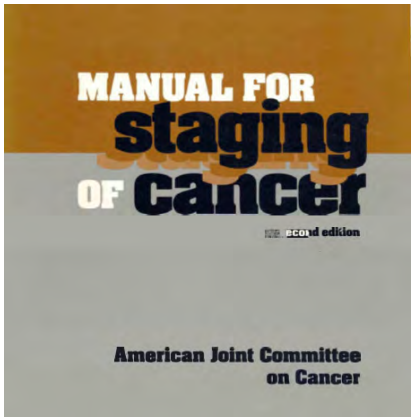
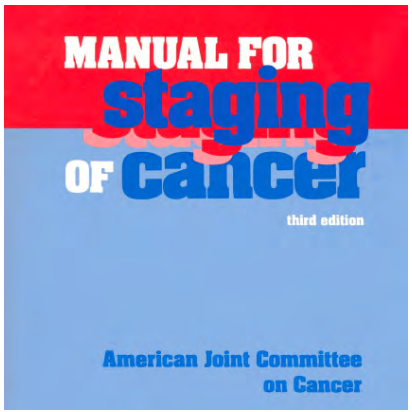
Pas de conflit d’intérêt en lien avec cette présentation

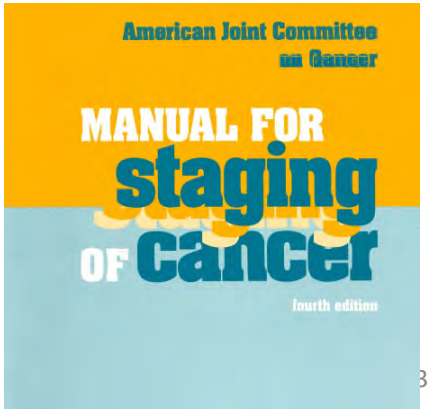
Bases historiques

- 1946 : Denoix invente le TNM
- 1968 : 1ère édition du manuel de l'UICC (classification TNM des tumeurs malignes)
- 1973 : AJCC : classification TNM basée sur la banque de données de **Mountain**
- 1974 : 2ème édition du manuel intégrant la classification de **Mountain**

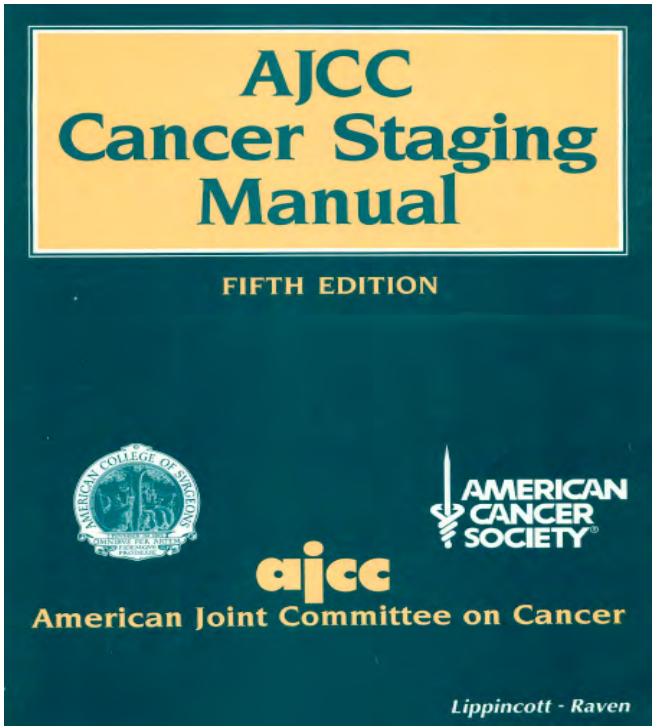








Bases historiques



- 1997 : 5ème édition toujours basée sur les données de **Mountain**
- 2002 : 6ème édition inchangée pour le cancer du poumon
- 2009 : 7ème édition (**IASLC Staging Project**) – accepté par l'UICC
- 2016 : 8ème édition (**IASLC Staging and Prognostic factors committee**) – accepté par l'UICC

Qu'apporte la 7ème édition?

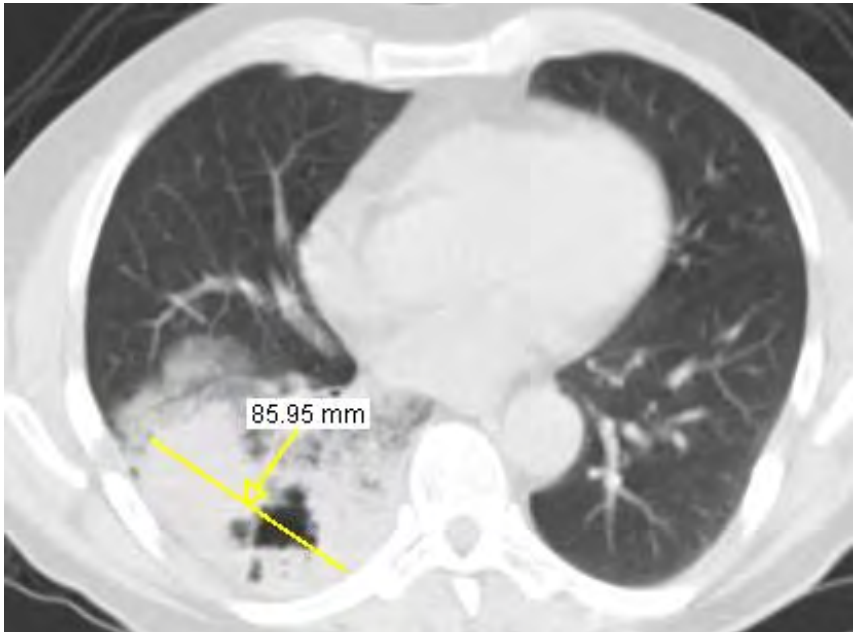
- Etude rétrospective multicentrique sur base de 67725 CBNPC
  - Par rapport à une série chirurgicale ancienne (1975-1988), unicentrique de taille limitée
- Validation interne et externe (registre SEER)
  - Par rapport à des résultats non validés dans des séries indépendantes
- Analyse statistique définissant les seuils de séparation des groupes
  - Par rapport à des seuils souvent définis sur base d'avis d'experts

La 8ème classification TNM

Votre avis sur la nouvelle classification TNM?

1. Elle est basée sur une étude prospective
2. La répartition géographique est homogène (USA = Europe = Asie)
3. Il s'agit essentiellement de cas chirurgicaux
4. Elle offre une nouvelle définition du N
5. Elle intègre les données des bilans thérapeutiques

Comment stadifier cette tumeur?



1. cT3N0M0
2. cT4N0M0
3. pT4N0M0
4. cIIIB
5. cIVA

Adénocarcinome. IRM cerveau normale
TEP-CT: pas d'autre captation que la tumeur
Médiastinoscopie (2-4 R/L et 7): négative

IASLC Staging Committee Article

The IASLC Lung Cancer Staging Project: The New Database to Inform the Eighth Edition of the TNM Classification of Lung Cancer

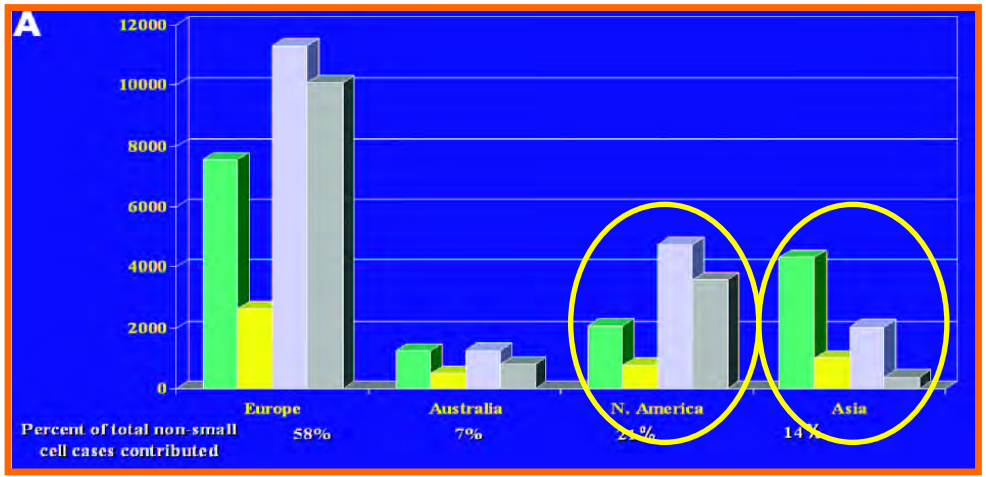
Ramón Rami-Porta, MD, FETCS,† Vanessa Bolejack, MPH,‡ Dorothy J. Giroux, MS,‡ Kari Chansky, MS,‡ John Crowley, PhD,‡ Hisao Asamura, MD,§ Peter Goldstraw, MBChB, FRCS,‖ on behalf of the International Association for the Study of Lung Cancer Staging and Prognostic Factors Committee, Advisory Board Members and Participating Institutions¶*

- Rétrospectif 90.041 patients
- Prospectif 4.667 patients → **4,9%**

(*J Thorac Oncol.* 2014;9: 1618–1624)

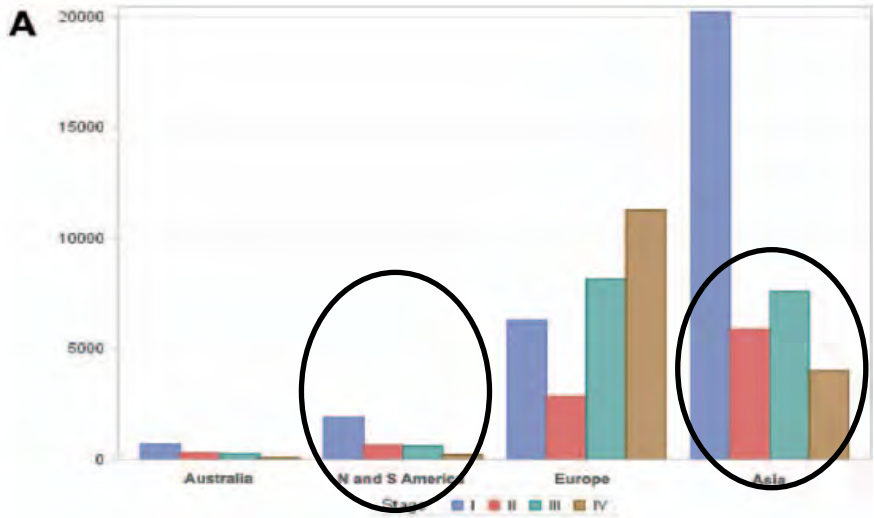
Quelques comparaisons entre les deux banques de données

7ème édition



J Thorac Oncol 1; 2006

8ème édition



(*J Thorac Oncol.* 2014;9: 1618–1624)

TABLE 5. Comparison of Basic Elements of the Two IASLC Databases Used for Informing the seventh Edition and the eighth Edition of the TNM Classification of Lung Cancer

Element	Database for the seventh Edition	Database for the eighth Edition
Period of diagnosis	1990 to 2000	1999 to 2010
Total patients submitted	100,869	94,708
Geographical origin		
Europe	58,701 (58%)	46,560 (49%)
North America	21,130 (21%)	4,660 (5%)
Asia	11,622 (11.5%)	41,705 (44%)
Australia	9,416 (9.3%)	1,593 (1.7%)
South America	0	190 (0.3%)
Patients excluded	19,374 (19%)	17,552 (18%)
Patients included for analyses	81,495	77,154
NSCLC	68,463 (84%)	70,967 (92%)
SCLC	13,032 (16%)	6,189 (8%)
Treatment modalities		
Surgery alone	41%	57.7%
Radiotherapy + surgery	5%	1.5%
Chemotherapy + surgery	4%	21.1%
Chemotherapy alone	23%	9.3%
Radiotherapy alone	11%	1.5%
Chemotherapy + radiotherapy	12%	4.7%
Trimodality	3%	4.4%

Propositions pour le T

IASLC STAGING COMMITTEE ARTICLE

The IASLC Lung Cancer Staging Project

Proposals for the Revisions of the T Descriptors in the Forthcoming Eighth Edition of the TNM Classification for Lung Cancer

Ramón Rami-Porta, MD, FETCS, Vanessa Bolejack, MPH,† John Crowley, PhD,† David Ball, MD, FRANZCR,‡ Jhingook Kim, MD,§ Gustavo Lyons, MD,‖ Thomas Rice, MD,¶ Kenji Suzuki, MD,# Charles F. Thomas Jr, MD,** William D. Travis, MD,†† and Yi-Long Wu, MD,‡‡ on behalf of the IASLC Staging and Prognostic Factors Committee, Advisory Boards and Participating Institutions§§*

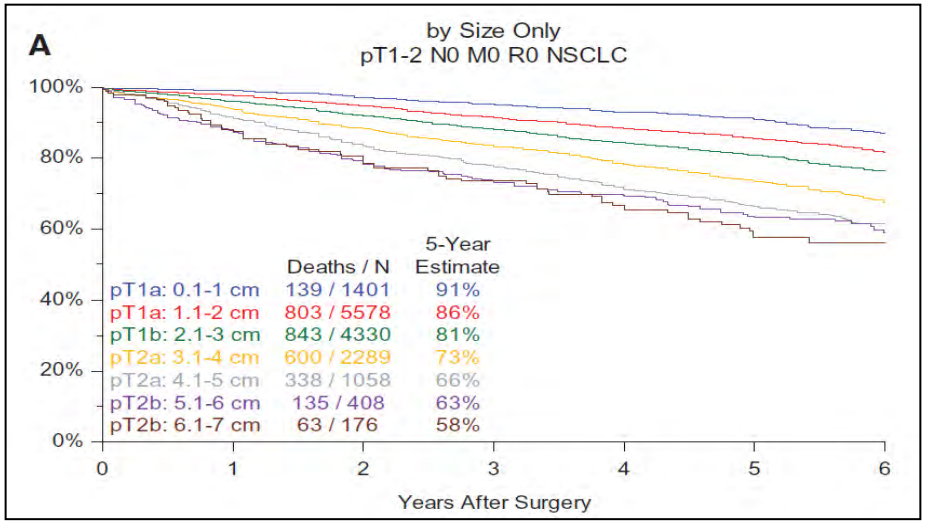
(*J Thorac Oncol.* 2015;10: 990–1003)

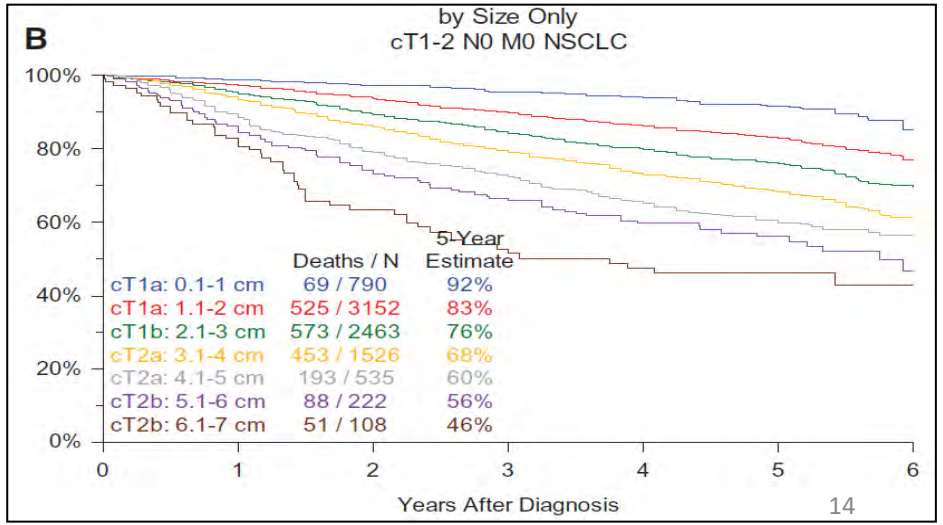
TABLE 2. Results of Univariate Analyses of Survival of Pathologically Staged T1–T3 N0M0R0 Cases According to Tumor Size and T2 and T3 Descriptors

		Survival from Surgery	
Variable	**n/N (%)**	**HR (95% CI)**	***P* value**
Other histology vs. adeno	7064/21,122 (33)	2.19 (2.07, 2.32)	<0.001
Squamous vs. other	5237/21,122 (25)	1.96 (1.85, 2.07)	<0.001
Age ≥ 60 vs. <60	16,070/21,014 (76)	2.29 (2.11, 2.49)	<0.001
Male vs. female	12,457/20,995 (59)	1.86 (1.75, 1.98)	<0.001
Americas vs. Asia	1873/21,123 (9)	1.79 (1.64,1.97)	<0.001
Europe/Australia vs. Asia	2361/21,123 (11)	2.61 (2.43,2.80)	<0.001
Size >2 vs. ≤2 cm	12,970/21,123 (61)	1.50 (1.39,1.62)	<0.001
Size >3 vs. >2–3 cm	7163/21,123 (34)	1.59 (1.47,1.70)	<0.001
Size >5 vs. >3–5 cm	1925/21,123 (9)	1.45 (1.31,1.59)	<0.001
Size >7 vs. >5–7 cm	606/21,123 (3)	1.45 (1.26,1.67)	<0.001
Size >1 vs. ≤1 cm	19,623/21,122 (93)	2.68 (2.28, 3.14)	<0.001
Size >4 vs. ≤4 cm	3669/21,122 (17)	2.43 (2.28, 2.58)	<0.001
Size >6 vs. ≤6 cm	1041/21,122 (5)	2.79 (2.55, 3.06)	<0.001
Multiple pT2 descriptors vs. other pT2, pT3	1817/9952 (18)	1.17 (1.07, 1.27)	<0.001
pT3 vs. pT1-2	1882/21,122 (9)	2.63 (2.44, 2.83)	<0.001
pT2 main bronchus >2 cm vs. all others	67/19,013 (0)	1.53 (0.98, 2.37)	0.059
pT3 main bronchus <2 cm vs. all others	24/19,013 (0)	1.82 (0.91, 3.64)	0.091
pT2 atelectasis vs. all others	161/11,869 (1)	1.98 (1.51, 2.61)	<0.001
pT3 atelectasis vs. all others	8/11,869 (0)	3.06 (0.76, 12.24)	0.114
pT2 visceral pleura PL1 vs. PL0	2690/15,685 (17)	1.74 (1.60,1.89)	<0.001
pT2 visceral pleura PL2 vs. PL0	813/15,685 (5)	2.23 (1.97,2.54)	<0.001
pT2 3–5 cm size only vs. pT1, pT2 ≤ 3 cm	3320/21,123 (16)	1.79 (1.66,1.93)	<0.001
pT2 3–5 cm plus other descriptor vs. pT1, pT2 ≤ 3 cm	1362/21,123 (6)	2.22 (2.01,2.46)	<0.001
pT2 5–7 cm size only vs. pT1, pT2 ≤ 3 cm	586/21,123 (3)	2.59 (2.25,2.99)	<0.001
pT2 5–7 cm plus other descriptor vs. pT1, pT2 ≤3 cm	450/21,123 (2)	2.85 (2.46,3.31)	<0.001
pT3 Single descriptor vs. pT1, pT2 ≤ 3 cm	1556/21,123 (7)	3.20 (2.94,3.49)	<0.001
pT3 Multiple pT3 descriptors vs. pT1, pT2 ≤ 3 cm	326/21,123 (2)	4.27 (3.66,4.99)	<0.001

TABLE 3. Multivariate Survival Analyses of Proposed 1-cm Cutpoints in Pathologically Staged T1 Tumors

		Survival from Surgery	
Variable	**n/N (%)**	**HR (95% CI)**	***P* Value**
Age ≥60 vs. <60	12,554/16,644 (75)	2.06 (1.87,2.28)	<0.001
Americas vs. Asia	1559/16,644 (9)	2.24 (2.01,2.50)	<0.001
Europe/Australia vs. Asia	1647/16,644 (10)	2.58 (2.36,2.83)	<0.001
Male vs. female	9371/16,644 (56)	1.70 (1.57,1.83)	<0.001
Other histology vs. adeno	4759/16,644 (29)	1.47 (1.31,1.65)	<0.001
Squamous vs. other	3473/16,644 (21)	0.98 (0.87,1.10)	0.685
T1a >1–2 vs.<1 cm	5462/16,644 (33)	1.45 (1.21,1.74)	<0.001
T1b >2–3 vs.<1 cm	4230/16,644 (25)	1.82 (1.52,2.18)	<0.001
T2a <3 vs. <1 cm	5611/16,644 (34)	2.43 (2.04,2.90)	<0.001





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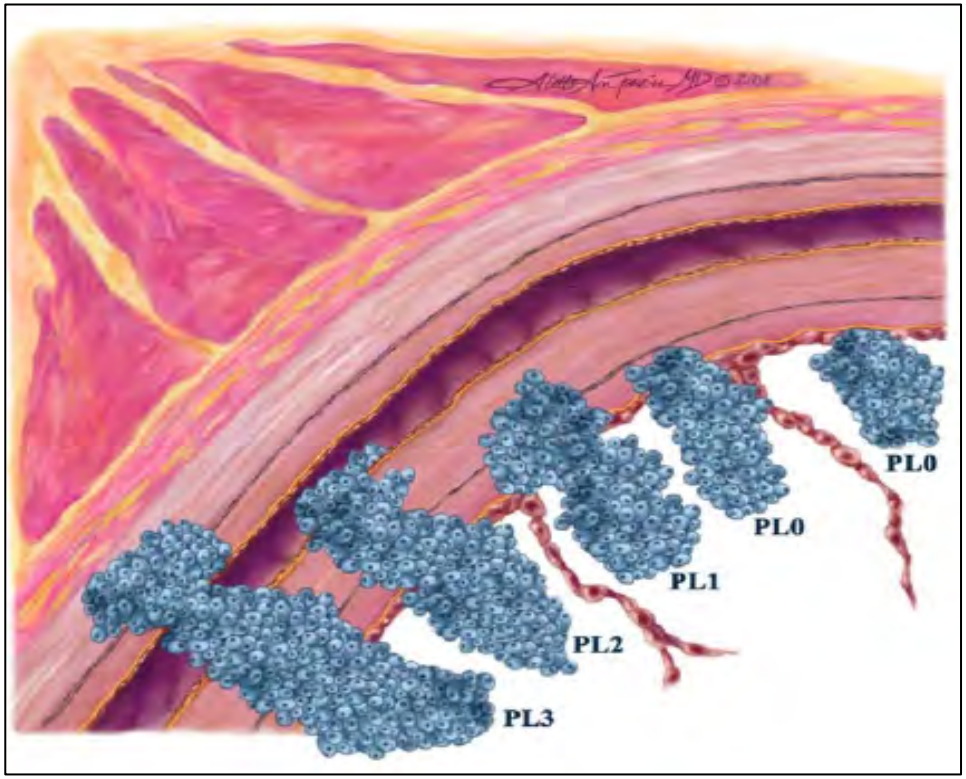
Propositions pour la définition de l'invasion pleurale

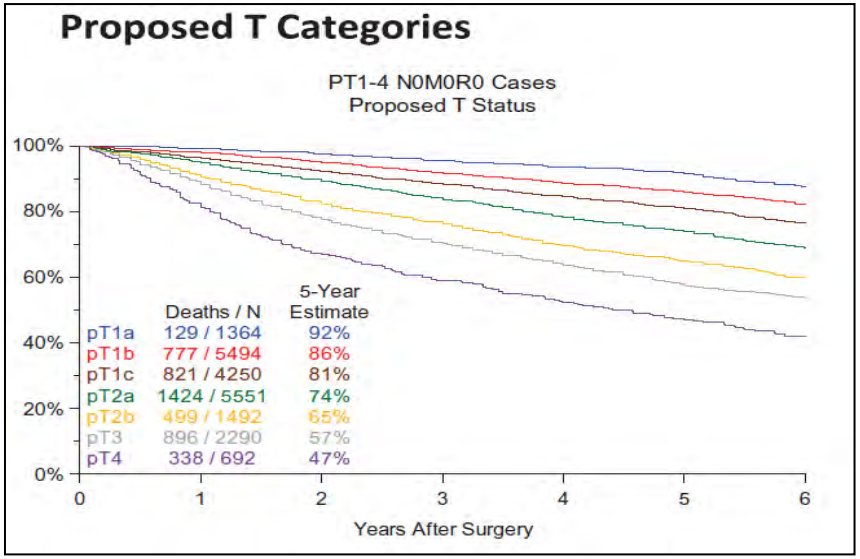


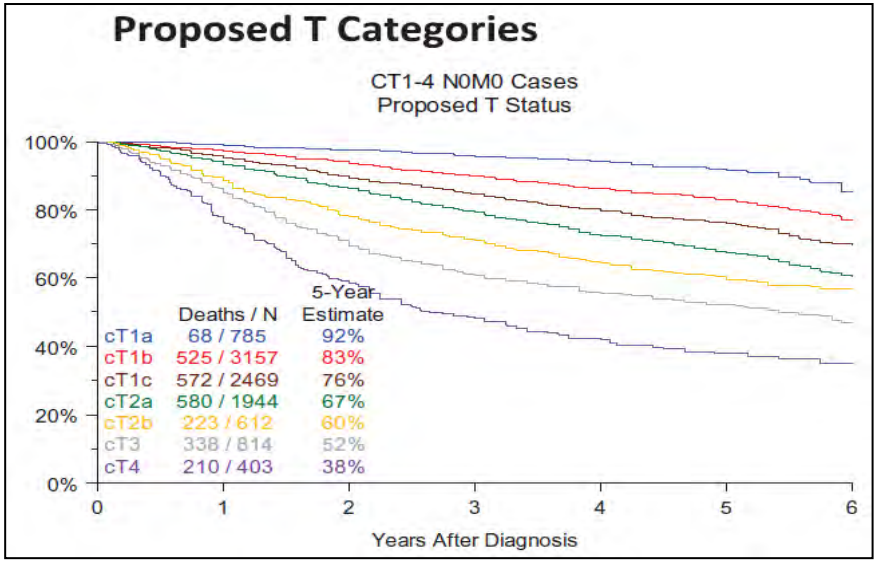
PL0 tumor within the subpleural lung parenchyma or invading superficially into the pleural connective tissue
PL1 tumor invades beyond the elastic layer
PL2 tumor invades the pleural surface
PL3, tumor invades any component of the parietal pleura.

CA CANCER J CLIN 2017;67:138–155

TABLE 5. Multivariate Survival Analyses of Pathologically Staged pT2-3 Tumors Based on Their Endobronchial Location

Multivariate Results Variable	n/N (%)	Survival from Surgery HR (95% CI)	*P* Value
Other histology vs. adenocarcinoma	3725/8807 (42)	1.42 (1.26, 1.60)	<0.001
Squamous vs. other	2868/8807 (33)	0.88 (0.78, 1.00)	0.045
Age ≥ 60 vs. <60	7031/8807 (80)	1.96 (1.76, 2.20)	<0.001
Male vs. female	5807/8807 (66)	1.45 (1.33, 1.58)	<0.001
Americas vs. Asia	234/8807 (3)	1.74 (1.39, 2.18)	<0.001
Europe vs. Asia	1031/8807 (12)	1.98 (1.78, 2.21)	<0.001
Size >2 vs. ≤ 2 cm	7640/8807 (87)	1.28 (1.09, 1.50)	0.002
Size >3 vs. 2 to ≤3 cm	6230/8807 (71)	1.09 (0.97, 1.22)	0.133
Size >5 vs. 3 to ≤5 cm	1571/8807 (18)	1.33 (1.20, 1.48)	<0.001
Size >7 vs. 5 to ≤7 cm	467/8807 (5)	0.99 (0.83, 1.19)	0.953
pT2 main bronchus >2 cm from carina vs. pT2 without invasion	67/8807 (1)	1.08 (0.69, 1.69)	0.725
pT3 main bronchus <2 cm from carina vs. pT2 without invasion	24/8807 (0)	1.03 (0.51, 2.06)	0.937
pT3 other than main bronchus vs. pT2, pT3 with invasion of main bronchus	1304/8807 (15)	1.56 (1.39, 1.76)	<0.001





Proposed Categories				
Contrast	**Estimate**	**Lower Limit**	**Upper Limit**	***P* Value**
T1a vs. T1b	1.4899	1.2340	1.7988	<0.0001
T1b vs. T1c	1.2767	1.1568	1.4090	<0.0001
T1c vs. T2a	1.3647	1.2519	1.4878	<0.0001
T2a vs. T2b	1.2218	1.1022	1.3543	0.0001
T2b vs. T3	1.2895	1.1553	1.4392	<0.0001
T3 vs. T4	1.2997	1.1458	1.4742	<0.0001

Proposed Categories				
Contrast	**Estimate**	**Lower Limit**	**Upper Limit**	***P* value**
T1a vs. T1b	1.8380	1.4274	2.3668	<0.0001
T1b vs. T1c	1.4165	1.2580	1.5949	<0.0001
T1c vs. T2a	1.2967	1.1543	1.4567	<0.0001
T2a vs. T2b	1.2038	1.0309	1.4056	0.0190
T2b vs. T3	1.3031	1.0996	1.5443	0.0022
T3 vs. T4	1.4542	1.2221	1.7305	<0.0001

Résumé des changements pour le T

Taille

- Classification de T1
  - T1a: ≤ 1 cm
  - T1b: > 1 cm - ≤ 2 cm
  - T1c: > 2 cm - ≤ 3 cm
- Classification de T2
  - T2a: >3 cm - ≤ 4 cm
  - T2b: > 4 cm - ≤ 5 cm
- T3: > 5 cm - ≤ 7 cm
- T4: > 7 cm

Autres descripteurs

- T2: envahissement bronche principale, peu importe distance à la caréna mais sans invasion de celle-ci
- T2: atélectasie partielle ou totale d'un lobe ou du poumon
- T4: envahissement du diaphragme
- Suppression de l'invasion pleurale médiastinale comme descripteur T

Propositions pour le N

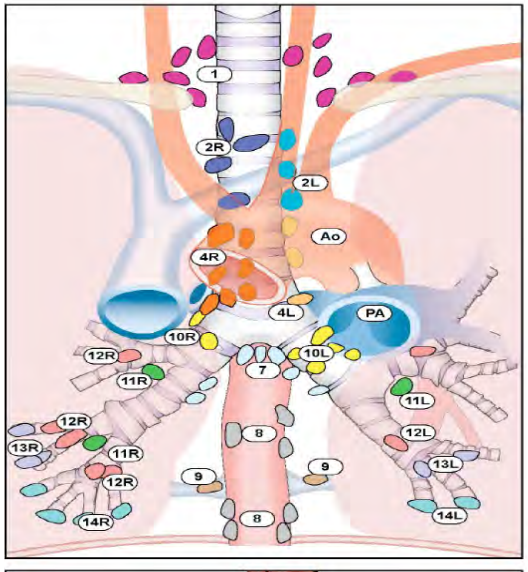
STATE OF THE ART: CONCISE REVIEW

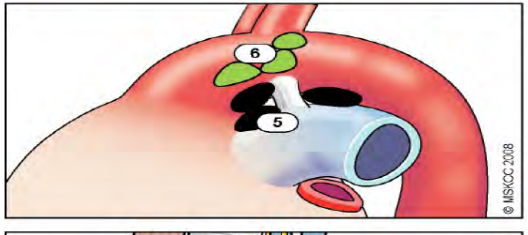
The International Association for the Study of Lung Cancer Lung Cancer Staging Project

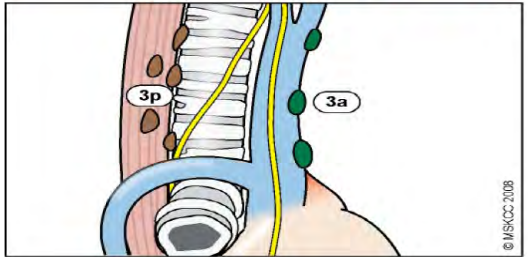
Proposals for the Revision of the N Descriptors in the Forthcoming 8th Edition of the TNM Classification for Lung Cancer

Hisao Asamura, MD, Kari Chansky, MS,† John Crowley, PhD,† Peter Goldstraw, MBChB, FRCS,‡ Valerie W. Rusch, MD,§ Johan F. Vansteenkiste, MD,‖ Hirokazu Watanabe, MD,¶ Yi-Long Wu, MD,# Marcin Zielinski, MD,** David Ball, MD,†† and Ramon Rami-Porta, MD,‡‡§§ On behalf of the International Association for the Study of Lung Cancer Staging and Prognostic Factors Committee, Advisory Board Members, and Participating Institutions‖‖*

(*J Thorac Oncol.* 2015;10: 1675–1684)







Supraclavicular zone

1 Low cervical, supraclavicular, and sternal notch nodes

Superior Mediastinal Nodes

Upper zone

2R Upper Paratracheal (right)
2L Upper Paratracheal (left)
3a Pre-vascular
3p Retrotracheal
4R Lower Paratracheal (right)
4L Lower Paratracheal (left)

Aortic Nodes

AP zone

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

Inferior Mediastinal Nodes

Subcarinal zone

7 Subcarinal

Lower zone

8 Paraesophageal (below carina)
9 Pulmonary ligament

N_1 Nodes

Hilar/Interlobar zone

10 Hilar
11 Interlobar

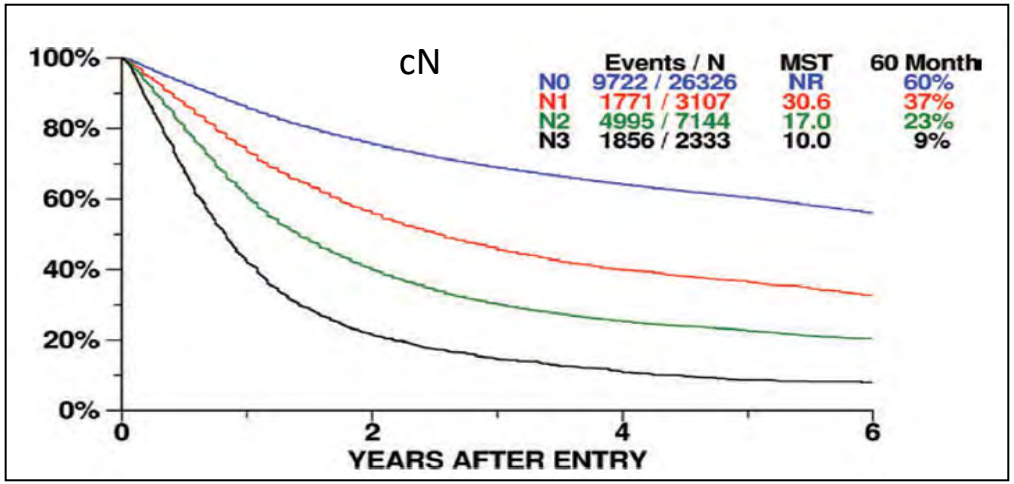
Peripheral zone

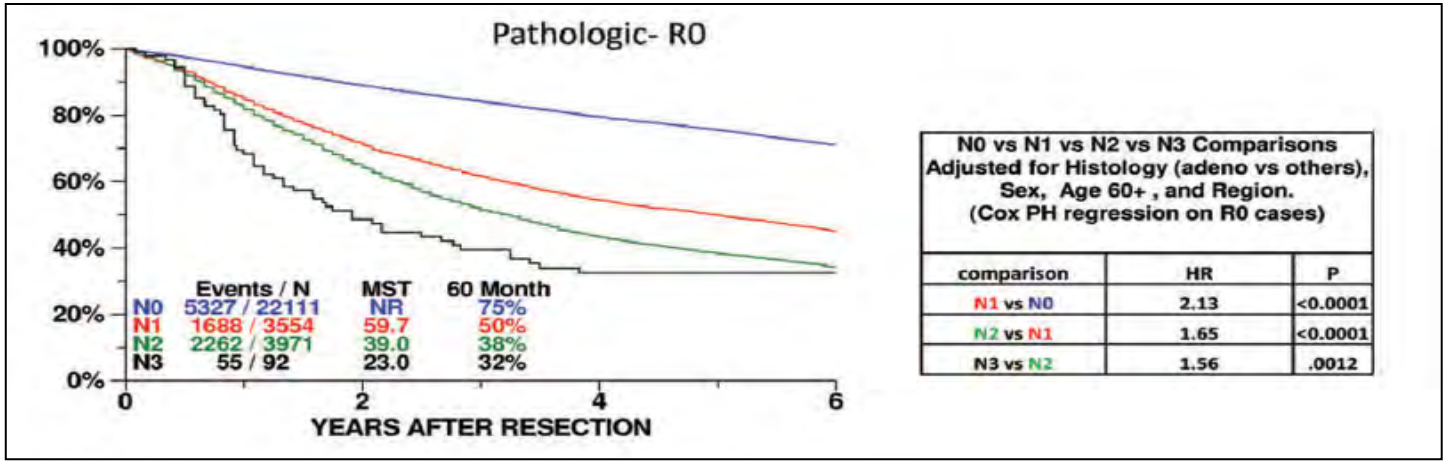
12 Lobar
13 Segmental
14 Subsegmental

Cartographie ganglionnaire

N0: pas de ggl envahi
N1: atteinte ipsilatérale péribronchique, interlobaire, hilaire
N2: atteinte ipsilatérale médiastinale
N3: atteinte médiastinale ou hilaire contralatérale, supraclaviculaire

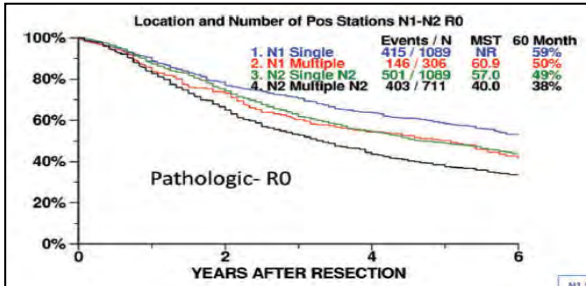
J Thorac Oncol 2009;4:568–577.





N0 vs N1 vs N2 vs N3 Comparisons Adjusted for Histology (adeno vs others), Sex, Age 60+ , and Region. (Cox PH regression on R0 cases)

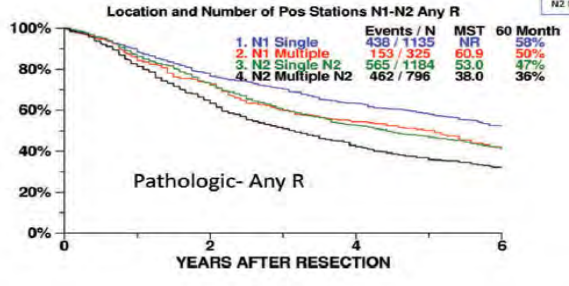
comparison	HR	P
N1 vs N0	2.13	<0.0001
N2 vs N1	1.65	<0.0001
N3 vs N2	1.56	.0012



N1a vs N1b vs N2a vs N2b Comparisons
Adjusted for Histology (adeno vs others), Sex, Age 60+ , and Region.
(Cox PH regression on R0 cases)

comparison	HR	P
N1b vs N1a	1.40	0.0005
N2a vs N1b	1.04	0.6798
N2b vs N2a	1.47	<.0001

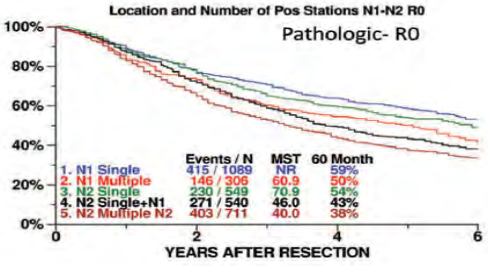
N1 Single = N1a
N1 Multiple = N1b
N2 Single N2 = N2a
N2 Multiple N2 = N2b



N1a vs N1b vs N2a vs N2b Comparisons
Adjusted for Histology (adeno vs others), Sex, Age 60+ , R0 resection, and Region.
(Cox PH regression on All cases)

comparison	HR	P
N1b vs N1a	1.38	0.0005
N2a vs N1b	1.08	0.4133
N2b vs N2a	1.41	<.0001

N1 Single = N1a
N1 Multiple = N1b
N2 Single N2 ("skip mets") = N2a1
N2 Single N2 + N1 = N2a2
N2 Multiple N2 = N2b

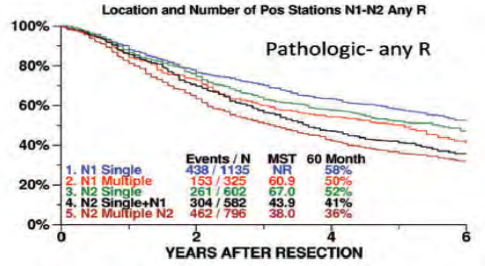


N1a vs N1b vs N2a1 vs N2a2 vs N2b Comparisons
Adjusted for Histology (adeno vs others), Sex, Age 60+ , and Region.
(Cox PH regression on R0 cases)

comparison	HR	P
N1b vs N1a	1.39	0.0005
N2a1 (skip) vs N1b	0.89	0.2863
N2a2 vs N2a1 (skip)	1.35	0.0007
N2b vs N2a2	1.26	0.0028
N2a2 vs N1b	1.21	0.064

N1 Single = N1a
N1 Multiple = N1b
N2 Single N2 ("skip mets") = N2a1
N2 Single N2 + N1 = N2a2
N2 Multiple N2 = N2b

N1 Single = N1a
N1 Multiple = N1b
N2 Single N2 ["skip mets"] = N2a1
N2 Single N2 + N1 = N2a2
N2 Multiple N2 = N2b



N1a vs N1b vs N2a1 vs N2a2 vs N2b Comparisons
Adjusted for Histology (adeno vs others), Sex, Age 60+ , R0 Resection, and Region.
(Cox PH regression on All cases)

comparison	HR	P
N1b vs N1a	1.38	0.0005
N2a1 (skip) vs N1b	0.92	0.4331
N2a2 vs N2a1 (skip)	1.37	0.0002
N2b vs N2a2	1.21	0.0117
N2a2 vs N1b	1.26	0.0197

Résumé des changements pour le N

Aucun!

- Garder le descripteur N de la 7ème classification
- Pronostic potentiellement influencé par la localisation de l'atteinte ganglionnaire → à valider prospectivement
- Conserver carte ganglionnaire proposée par l'IASLC

Propositions pour le M

STATE OF THE ART: CONCISE REVIEW

The IASLC Lung Cancer Staging Project

Proposals for the Revision of the M Descriptors in the Forthcoming Eighth Edition of the TNM Classification of Lung Cancer

Wilfried E.E. Eberhardt, MD, Alan Mitchell, MSc,† John Crowley, PhD,† Haruhiko Kondo, MD,‡ Young Tae Kim, MD,§ Andrew Turrisi III, MD,‖ Peter Goldstraw, MBChB,¶ and Ramon Rami-Porta, MD,#** On behalf of the International Association for the Study of Lung Cancer Staging and Prognostic Factors Committee, Advisory Board Members, and Participating Institutions††*

(*J Thorac Oncol.* 2015;10: 1515–1522)

TABLE 1. Subject Counts by Data Source and 7th edition M Category

Database Type	Country	Institution	7th Edition M Category M1a	M1b
EDC	Argentina	Hospital Británico de Buenos Aires	2	4
		Hospital Universitario Austral	2	2
		Hospital Universitario-Fundación Favalor		7
		Hospital de Rehabilitación Respiratoria	3	1
	Australia	Peter MacCallum Cancer Institute		2
	Belgium	University Hospital Antwerp	15	51
		University Hospital Ghent	6	
	Brazil	University of Sao Paulo Medical School		
	China	Guangdong General Hospital	83	188
	France	L'Institut Mutualiste Montsouris		
	Greece	Athens School of Medicine		
	Spain	Complejo Hospitalario de Ourense		
		Complejo Hospitalario La Mancha Centro		
		Fundación Jiménez Díaz		
		Htal. de la Plana Vila-Real		
		Htal. General Universitario de Valencia		
		Htal. General Universitario Gregorio Mar		
		Htal. General Universitario de Albacete	14	42
		Htal. Meixoeiro	3	26
		Htal. Nuestra Señora de Sonsoles	2	8
		Htal. San Pedro Alcántara	12	24
		Htal. Severo Ochoa	10	13
		Htal. Sierrallana, Sección de Neumología	9	23
		Htal. Universitari Joan XXIII	13	10
		Htal. Universitario Central de Asturias	6	5
		Htal. Universitario La Fe	12	28
		Htal. Universitario de Canarias	10	15
		Htal. de Sagunto		4
	United States	Mayo Clinic Rochester		13
		NYU Langone Medical Center and Cancer Center	29	37
		Penrose Cancer Center	2	5
Subtotal—EDC cases by 7th edition M category			324	735
Subtotal—EDC cases			1059	
Consortium	Turkey	Turkish Thoracic Society	81	1215
Institutional registry	Australia	Prince Charles Hospital	2	54
Subtotal—All institutions by 7th edition M category			407	2004
Total			2411	

M1a

M1b

407

2004

2411

TABLE 2. Prognostic Impact of M1a Descriptors

Variable	n/N (%)	Overall Survival HR (95% CI)	*P* Value
Multiple M1a descriptors	95/324 (29)	Reference level	
Contra/bilateral tumor nodules	94/324 (29)	0.87 (0.62, 1.24)	0.446
Pleural/pericardial nodules	52/324 (16)	0.81 (0.53, 1.22)	0.314
Pleural/pericardial effusion	83/324 (26)	1.00 (0.70, 1.43)	0.997

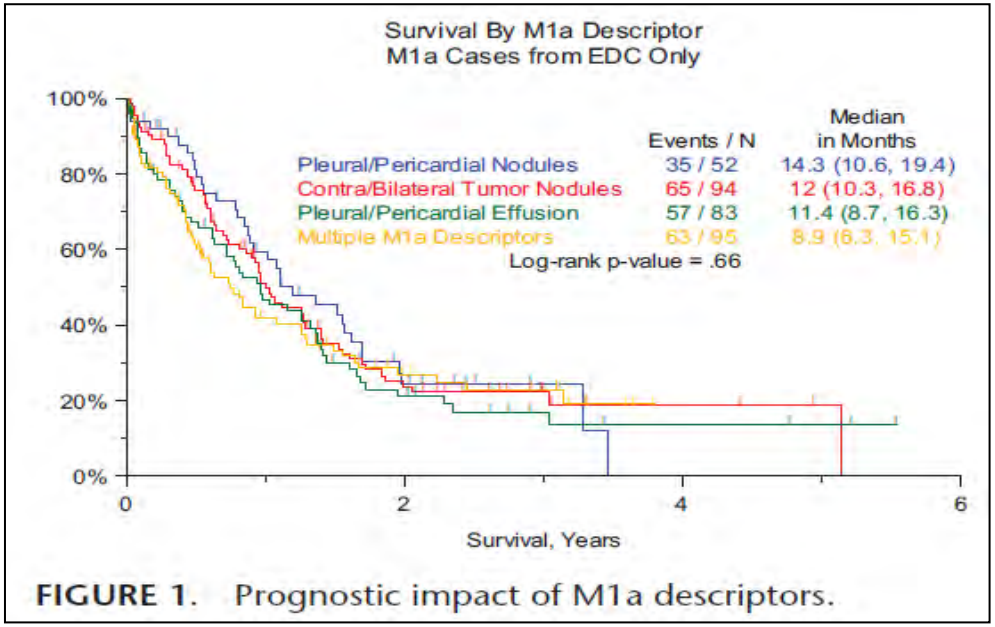
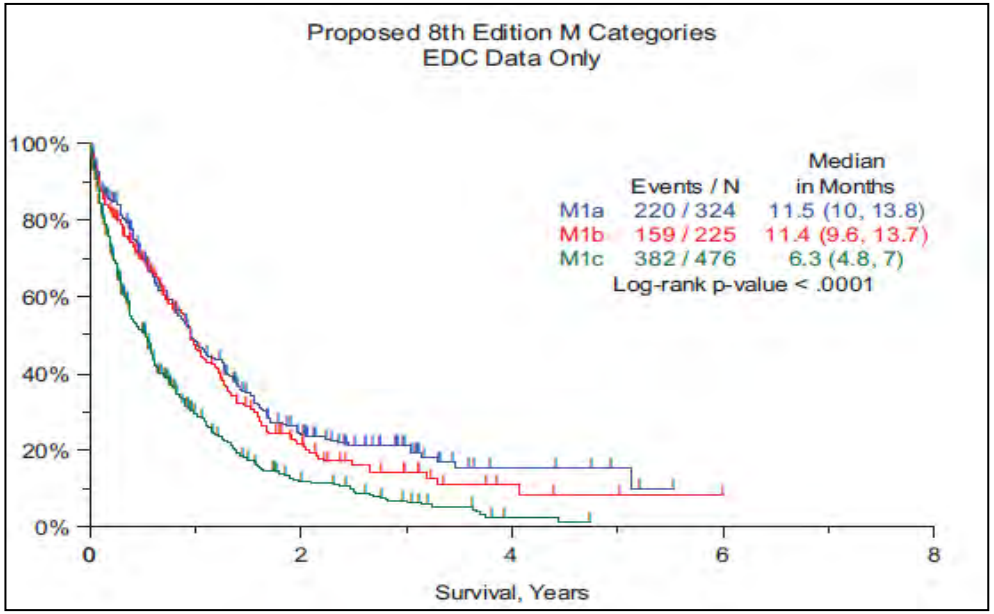


FIGURE 1. Prognostic impact of M1a descriptors.

TABLE 3. Prognostic Impact of Single and Multiple Metastatic Lesions in a Single Organ versus Multiple Metastatic Sites

Proposed Category	Variable	Overall Survival		
		n/N (%)	HR (95% CI)	*P* Value
M1a	M1a	324/1025 (32)	Reference level	
M1b	M1b, single organ/lesion	225/1025 (22)	1.11 (0.91, 1.36)	0.308
M1c	M1b, single organ/multiple lesions	229/1025 (22)	1.63 (1.34, 1.99)	<0.001
	M1b, multiple organs	247/1025 (24)	1.85 (1.52, 2.24)	<0.001



Résumé des changements pour le M

- M1a inchangé: atteinte plèvre/péricarde (épanchement, nodules), nodules contralatéraux, multiples descripteurs M1a
- M1b: métastase unique dans un seul organe
- M1c: multiples métastases dans un seul organe, multiples lésions dans plusieurs organes

TABLE 1. Innovations in the Descriptors Introduced in the Eighth Edition of the TNM Classification of Lung Cancer Compared With the Seventh Edition

DESCRIPTOR	SEVENTH EDITION	EIGHTH EDITION
T component		
0 cm (pure lepidic adenocarcinoma ≤3 cm total size)	T1a if ≤2 cm; T1b if >2-3 cm	Tis (AIS)
≤0.5 cm invasive size (lepidic predominant adenocarcinoma ≤3 cm total size)	T1a if ≤2 cm; T1b if >2-3 cm	T1mi
≤1 cm	T1a	T1a
>1-2 cm	T1a	T1b
>2-3 cm	T1b	T1c
>3-4 cm	T2a	T2a
>4-5 cm	T2a	T2b
>5-7 cm	T2b	T3
>7 cm	T3	T4
Bronchus <2 cm from carina	T3	T2
Total atelectasis/pneumonitis	T3	T2
Invasion of diaphragm	T3	T4
Invasion of mediastinal pleura	T3	-
N component		
No assessment, no involvement, or involvement of regional lymph nodes	NX, N0, N1, N2, N3	No change
M component		
Metastases within the thoracic cavity	M1a	M1a
Single extrathoracic metastasis	M1b	M1b
Multiple extrathoracic metastases	M1b	M1c

Les groupements par stade

The IASLC Lung Cancer Staging Project: Proposals for Revision of the TNM Stage Groupings in the Forthcoming (Eighth) Edition of the TNM Classification for Lung Cancer

Peter Goldstraw, FRCS,[a,*] Kari Chansky, MS,[b] John Crowley, PhD,[b] Ramon Rami-Porta, MD,[c] Hisao Asamura, MD,[d] Wilfried E. E. Eberhardt, MD,[e] Andrew G. Nicholson, FRCP,[f] Patti Groome, PhD,[g] Alan Mitchell, MS,[b] Vanessa Bolejack, MPH,[b] on behalf of the International Association for the Study of Lung Cancer Staging and Prognostic Factors Committee, Advisory Boards, and Participating Institutions

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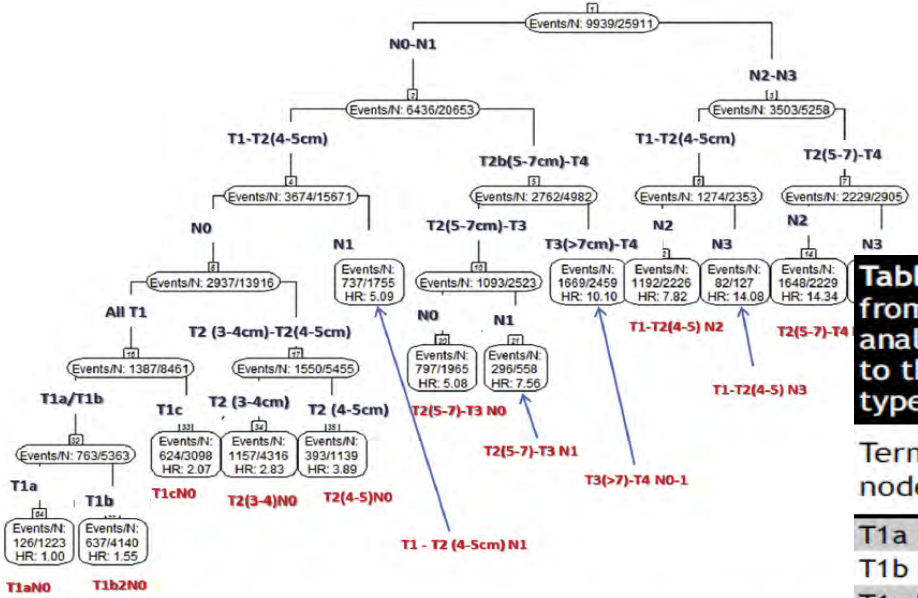
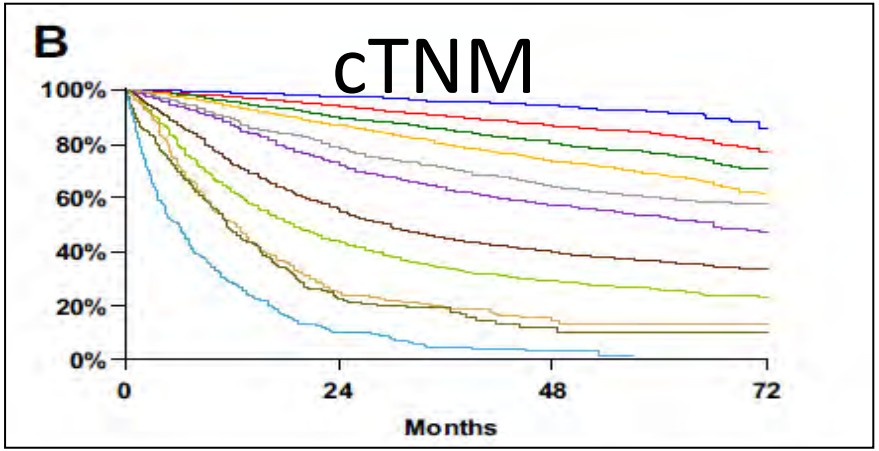


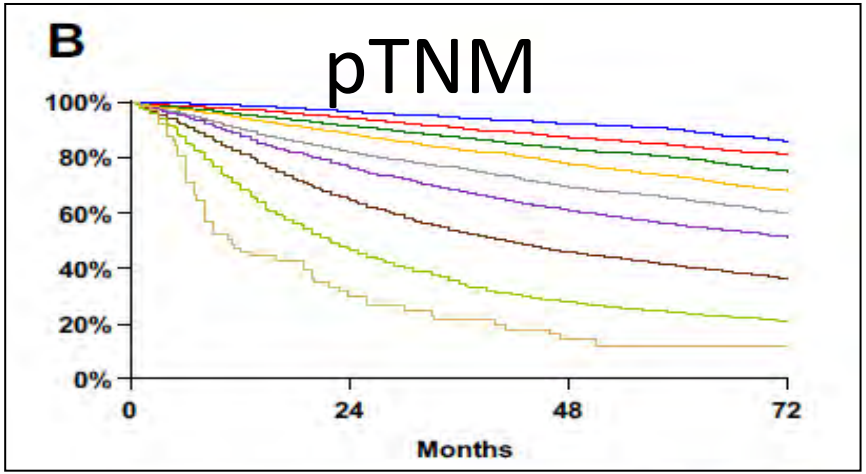
Figure 1. Recursive partitioning and amalgamation-generated survival tree based on best stage f
cases. T and N categories are modeled as ordered variables. Stratified hazard ratios are given rela
minal node, T1aN0.

Table 4. Terminal nodes defined on the basis of best stage from a stratified tree-based analysis (recursive partitioning analysis) of the training data set. Hazard ratios are relative to the best prognosis group (T1aN0) and are stratified on type of database submission: registry versus others

Terminal node	Sample size (training set)	Hazard ratio
T1a N0	1223	1.00
T1b N0	4140	1.55
T1c N0	3098	2.07
T2a N0	4316	2.83
T2b N0	1139	3.89
T3 N0	1965	5.08
T1a-T2b N1	1755	5.09
T3 N1	558	7.56
T1a-T2b N2	2226	7.82
T4 N0-N1	2459	10.10
T1a-T2b N3	127	14.08
T3-T4 N2	2229	14.34
T3-T4 N3	676	21.73

Table 9. Proposed stage groupings for the eighth edition of the TNM classification for lung cancer			
Occult carcinoma	TX	N0	M0
Stage 0	Tis	N0	M0
Stage IA1	T1a(mi)	N0	M0
	T1a	N0	M0
Stage IA2	T1b	N0	M0
Stage IA3	T1c	N0	M0
Stage IB	T2a	N0	M0
Stage IIA	T2b	N0	M0
Stage IIB	T1a-c	N1	M0
	T2a	N1	M0
	T2b	N1	M0
	T3	N0	M0
Stage IIIA	T1a-c	N2	M0
	T2a-b	N2	M0
	T3	N1	M0
	T4	N0	M0
	T4	N1	M0
Stage IIIB	T1a-c	N3	M0
	T2a-b	N3	M0
	T3	N2	M0
	T4	N2	M0
Stage IIIC	T3	N3	M0
	T4	N3	M0
Stage IVA	Any T	Any N	M1a
	Any T	Any N	M1b
Stage IVB	Any T	Any N	M1c





Etudes de validation

Table 2. Distribution of T, N, and M categories in the training set (clinical classification)

Proposed T/M categories	N category				
	N0	N1	N2	N3	Total
T1a	781	7	19	6	813
T1b	3105	68	124	30	3327
T1c	2417	142	208	32	2799
T2a	1928	268	372	50	2618
T2b	585	131	183	36	935
T3	837	191	344	77	1449
T4	1711	392	1642	909	4654
M1a	64	9	77	127	277
M1b	39	16	67	85	207
M1c	67	15	120	196	398
Total	11,534	1239	3156	1548	17,477

Table 3. Distribution of T, N, and M categories in the training set (pathologic classification)

Proposed T/M categories	N categories				
	N0	N1	N2	N3	Total
T1a	1390	45	49	2	1486
T1b	5638	311	392	7	6348
T1c	4403	484	515	13	5415
T2a	6102	1223	1526	55	8906
T2b	1640	485	490	16	2631
T3	2683	795	1025	39	4542
T4	1447	546	613	30	2636
Total	23,303	3889	4610	162	31,964

Validation interne

- 12.931 cas
  - 5785 stade clinique
  - 10.558 stade pathologique

The IASLC Lung Cancer Staging Project: External Validation of the Revision of the TNM Stage Groupings in the Eighth Edition of the TNM Classification of Lung Cancer

Kari Chansky, MS,[a,*] Frank C. Detterbeck, MD,[b] Andrew G. Nicholson, DM,[c] Valerie W. Rusch, MD,[d] Eric Vallières, MD, FRCSC,[e] Patti Groome, PhD,[f] Catherine Kennedy,[g] Mark Krasnik, MD,[h] Michael Peake, MD,[i] Lynn Shemanski, PhD, Vanessa Bolejack, MPH,[a] John J. Crowley, PhD,[a] Hisao Asamura, MD,[j] Ramón Rami-Porta, MD,[k,l] on behalf of the IASLC Staging and Prognostic Factors

Table 2. Overall Survival Comparisons by Eighth Edition Clinical and Pathologic Stage Groups in the NCDB and IASLC Data Sets for NSCLC, Adjusted for Age (>70 y), Sex, and Adenocarcinoma Histologic Type

	Clinical Stage				Pathologic Stage			
	NCDB 2000-2012 Data Set		IASLC 1999-2010 Data Set		NCDB 2000-2012 Data Set		IASLC 1999-2010 Data Set	
NSCLC Comparison	HR	*p* Value	HR	*p* Value	HR	*p* Value	HR	*p* Value
IA2 vs. IA1	1.04	0.3208	1.83	<0.0001	1.13	<0.0001	1.43	<0.0001
IA3 vs. IA2	1.18	<0.0001	1.41	<0.0001	1.15	<0.0001	1.32	<0.0001
IB vs. IA3	1.21	<0.0001	1.29	<0.0001	1.16	<0.0001	1.31	<0.0001
IIA vs. IB	1.13	<0.0001	1.29	0.0017	1.11	<0.0001	1.27	<0.0001
IIB vs. IIA	1.03	0.0703	1.32	0.0005	1.33	<0.0001	1.39	<0.0001
IIIA vs. IIB	1.21	<0.0001	1.52	<0.0001	1.32	<0.0001	1.65	<0.0001
IIIB vs. IIIA	1.23	<0.0001	1.36	<0.0001	1.55	<0.0001	1.68	<0.0001
IIIC vs. IIIB	1.15	<0.0001	1.34	<0.0001	1.47	<0.0001	1.83	<0.0001
IV vs. IIIC[a]	1.54	<0.0001	2.41	<0.0001	1.01	0.8837	—[b]	—[b]
R^2	15.9%		68.0%		31.2%		46.1%	

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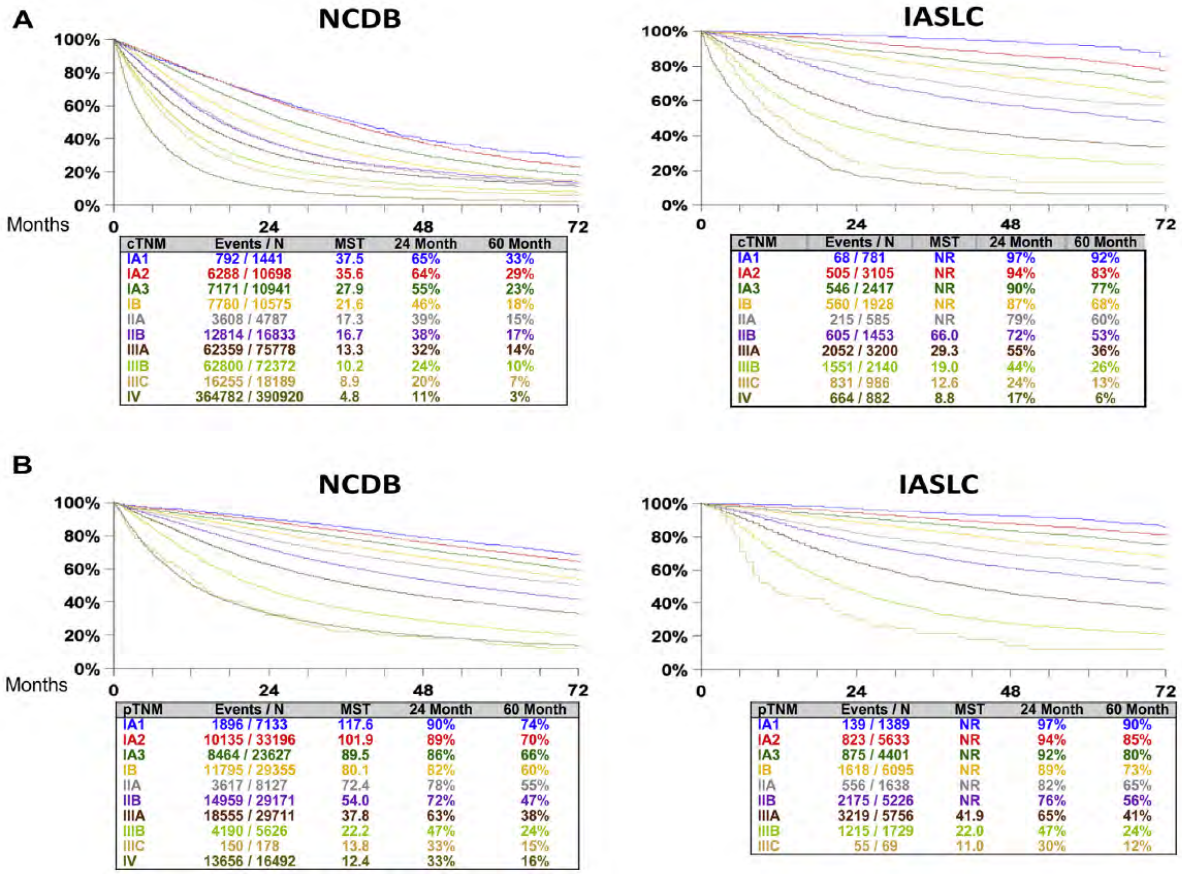
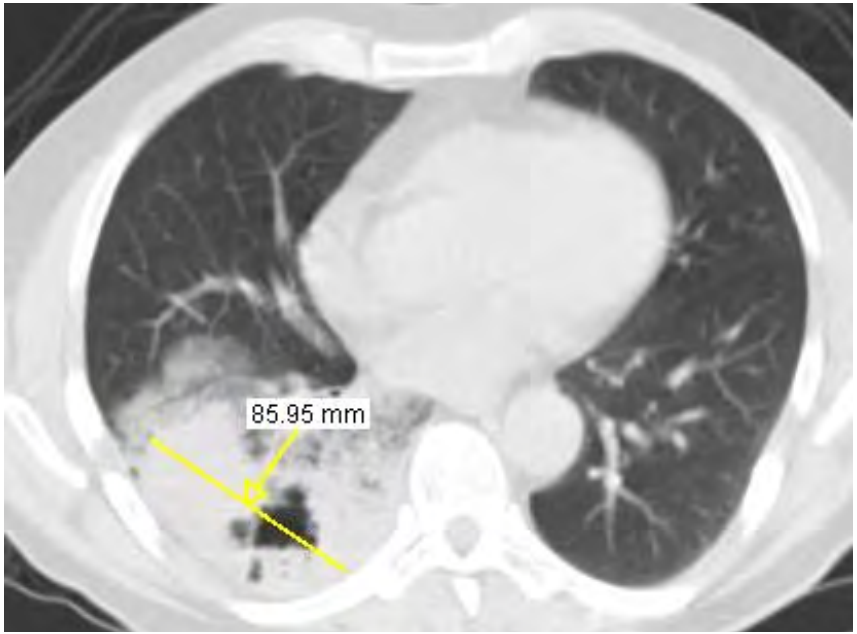


Figure 2. Stage groups for NSCLC. Overall survival in patients with NSCLC according to the eighth edition stage groups in the National Cancer Data Base (NCDB) and International Association for the Study of Lung Cancer (IASLC) data sets (IASLC survival curves are weighted by type of submitting database). (*A*) Clinically staged (cTNM) tumors. (*B*) Pathologically staged (pTNM) tumors. MST, median survival time (months).

Comment stadifier cette tumeur?



1. cT3N0M0
2. cT4N0M0
3. pT4N0M0
4. cIIIB
5. cIVA

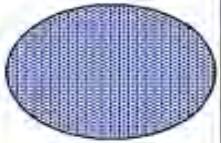
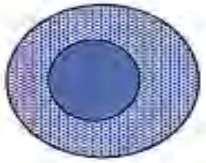
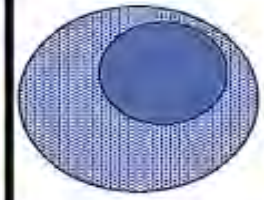
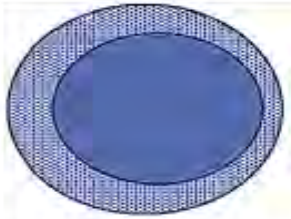
Adénocarcinome. IRM cerveau normale
TEP-CT: pas d'autre captation que la tumeur
Médiastinoscopie (2-4 R/L et 7): négative

Les tumeurs avec composante en verre dépoli

The IASLC Lung Cancer Staging Project: Proposals for Coding T Categories for Subsolid Nodules and Assessment of Tumor Size in Part-Solid Tumors in the Forthcoming Eighth Edition of the TNM Classification of Lung Cancer

William D. Travis, MD,[a,*] Hisao Asamura, MD,[b] Alexander A. Bankier, MD, PhD,[c] Mary Beth Beasley, MD,[d] Frank Detterbeck, MD,[e] Douglas B. Flieder, MD,[f] Jin Mo Goo, MD,[g] Heber MacMahon, MB, BCh,[h] David Naidich, MD,[i] Andrew G. Nicholson, DM, FRCPath,[j] Charles A. Powell, MD,[k] Mathias Prokop, MD,[l] Ramón Rami-Porta, MD,[m,n] Valerie Rusch, MD,[o] Paul van Schil, MD,[p] Yasushi Yatabe, MD,[q] on behalf of the International Association for the Study of Lung Cancer Staging and Prognostic Factors Committee and Advisory Board Members**

Journal of Thoracic Oncology Vol. 11 No. 8: 1204-1223

cT*	CT image on HRCT						
	Solid part	0 cm	0 cm	≤0.5 cm†	0.6-1.0 cm†	1.1-2.0 cm†	2.1-3.0 cm†
	Total tumor size including GG	≤0.5 cm	0.6-3.0 cm‡‡	≤3.0 cm‡‡	0..6-3.0 cm††	1.1-3.0 cm††	2.1-3.0 cm††
	Pathologic Differential Diagnosis	AAH‡, AIS, MIA	AIS, MIA, LPA	MIA, LPA, AIS	LPA, Invasive AD, MIA	LPA, Invasive AD	Invasive AD
	Clinical Stage*		cTis‡‡	cT1mi‡‡	cT1a	cT1b	cT1c
pT	Invasive part	0 cm	0 cm	≤0.5 cm‡‡	0.6-1.0 cm†	1.1-2.0 cm†	2.1-3.0 cm†
	Total tumor size including lepidic growth part	Usually ≤0.5 cm‡	≤3.0 cm‡‡	≤3.0 cm‡‡	0.6-3.0 cm††	1.1-3.0 cm††	2.1-3.0 cm††
	Pathology	AAH	AIS	MIA	Lepidic predominant AD or Invasive AD with lepidic compnent	Invasive AD with a lepidic component or lepidic predominant AD	Invasive AD with lepidic component
	Pathologic Stage		pTis‡‡	pT1mi‡‡	pT1a	pT1b	pT1c

Les tumeurs multiples dans le poumon

The IASLC Lung Cancer Staging Project: Summary of Proposals for Revisions of the Classification of Lung Cancers with Multiple Pulmonary Sites of Involvement in the Forthcoming Eighth Edition of the TNM Classification

Frank C. Detterbeck, MD,[a,*] Andrew G. Nicholson, MD,[b] Wilbur A. Franklin, MD,[c] Edith M. Marom, MD,[d] William D. Travis, MD,[e] Nicolas Girard, MD,[f] Douglas A. Arenberg, MD,[g] Vanessa Bolejack, MPH,[h] Jessica S. Donington, MD,[i] Peter J. Mazzone, MD,[j] Lynn T. Tanoue, MD,[k] Valerie W. Rusch, MD,[l] John Crowley, PhD,[h] Hisao Asamura, MD,[m] Ramón Rami-Porta, MD,[n,o] on behalf of the IASLC Staging and Prognostic Factors Committee, Advisory Boards, Multiple Pulmonary Sites Workgroup, and Participating Institutions**

Journal of Thoracic Oncology Vol. 11 No. 5: 639-650

Table 1. Criteria to Distinguish Second Primary versus Related Tumors

Clinical criteria[a]

Tumors may be considered second primary tumors if

They ar… squa…

Tumors m… sourc…

Exactly matching breakpoints are identified by comparative genomic hybridization.

Relative arguments that favor separate tumors

Different radiographic appearance or metabolic uptake

Different biomarker pattern (driver gene mutations)

Relative arguments that favor a single tumor source

Same radiographic appearance

Similar growth patterns (if previous imaging is available)

Significant nodal or systemic metastases

Tumors may be considered second primary tumors if

They are clearly of a different histologic type (e.g., squamous carcinoma and adenocarcinoma).

They are clearly different by a comprehensive histologic assessment.

They are squamous carcinomas that have arisen from …

… source if

Exactly matching breakpoints are identified by comparative genomic hybridization.

Relative arguments that favor separate tumors (to be considered together with clinical factors)

Different biomarker pattern

Absence of nodal or systemic metastases

Relative arguments that favor a single tumor source (to be considered together with clinical factors)

Matching appearance on comprehensive histologic assessment

Same biomarker pattern

Significant nodal or systemic metastases

Table 2. Criteria to Categorize a Lesion as a Separate Tumor Nodule (Intrapulmonary Metastasis)

Clinical criteria

Tumors should be considered to have a separate tumor nodule(s) if

… with (presumed) matching histologic …

… is strong suspicion that the lesions are …

AND provided that

The lesions are NOT judged to be synchronous primary lung cancers.

Table 3. Criteria to Categorize a Tumor as Multifocal GG/L Adenocarcinoma

Clinical criteria

Tumors should be considered multifocal GG/L lung adenocarcinoma if

- This applies if the other nodules(s) are suspected to be AIS, MIA, or LPA.
- This applies if a nodule has become >50% solid but is judged to have arisen from a GGN, provided that there are other subsolid nodules.
- GGN lesions <5mm or lesions suspected to be AAH are not counted.

- This applies whether a detailed histologic assessment (i.e., proportion of subtypes, etc.) shows a matching or different appearance.
- This applies if one lesion(s) is LPA, MIA, or AIS and there are other subsolid nodules of which a biopsy has not been performed.
- This applies whether the nodule(s) are identified preoperatively or only on pathologic examination.
- Foci of AAH are not counted.

Table 4. Criteria to Categorize a Tumor as a Pneumonic-Type Adenocarcinoma

Clinical criteria

- This applies whether there is one confluent area or multiple regions of disease. The region(s) may be confined to one lobe, in multiple lobes, or bilateral, but it should involve a regional pattern of distribution.
- The appearance of involved areas may be ground glass, solid consolidation, or a combination thereof.
- This can be applied when there is compelling suspicion of malignancy whether or not a biopsy has been performed of the area(s).
- This should not be applied to discrete nodules (i.e., GG/L nodules).
- This should not be applied to tumors causing bronchial obstruction with resultant obstructive pneumonia or atelectasis.

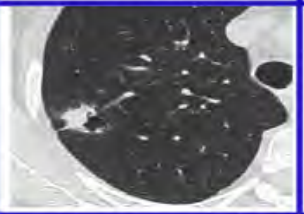
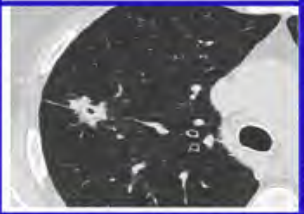
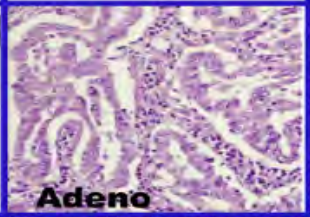
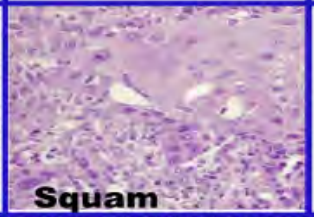
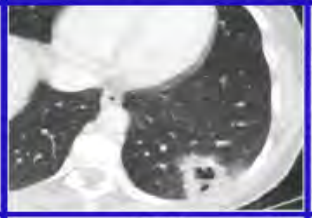
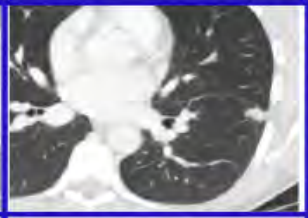
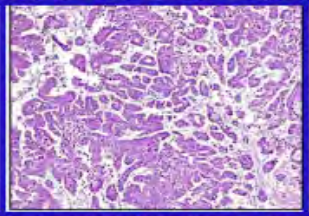
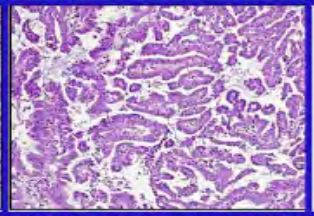
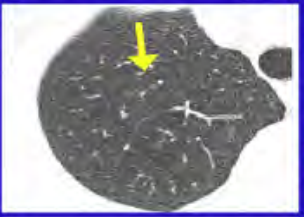
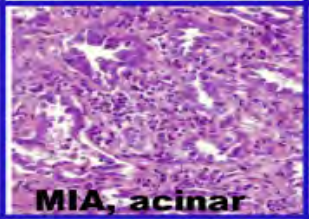
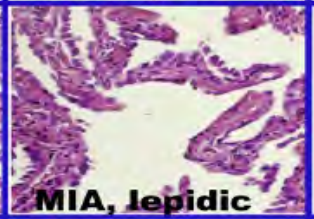
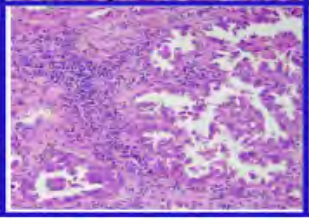
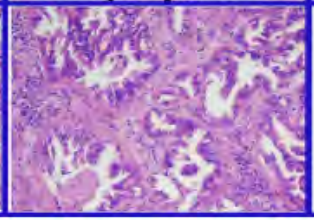
Pathologic criteria

Tumors should be considered pneumonic-type adenocarcinoma if

There is diffuse distribution of adenocarcinoma throughout a region(s) of the lung, as opposed to a single well-demarcated mass or multiple discrete well-demarcated nodules.

- This typically involves an invasive mucinous adenocarcinoma, although a mixed mucinous and nonmucinous pattern may occur.
- The tumor may show a heterogeneous mixture of acinar, papillary, and micropapillary growth patterns, although it is usually lepidic predominant.

Note: A radiographically solid appearance and the specific histologic subtype of solid adenocarcinoma denote different things.
GG/L, ground glass/lepidic.

		Tumor Site 1	Tumor Site 2	Tumor Site 1	Tumor Site 2	TNM Classification
A	Second Primary Cancer					Separate T, N and M for each tumor
B	Separate Tumor Nodules					T3 if in same lobe T4 if same side (other lobe) M1a if different lobe, Single N and M for all
C	Multifocal GG/L Nodules					T according to highest T lesion, single N and M for all lesions collectively, (#/m) indicates multiplicity
D	Diffuse Pneumonic-Type					T3 if in same lobe T4 if same side (other lobe) M1a if different lobe, Single N and M for all

Les autres tumeurs

The International Association for the Study of Lung Cancer Lung Cancer Staging Project: Proposals for the Revision of the Clinical and Pathologic Staging of Small Cell Lung Cancer in the Forthcoming Eighth Edition of the TNM Classification for Lung Cancer

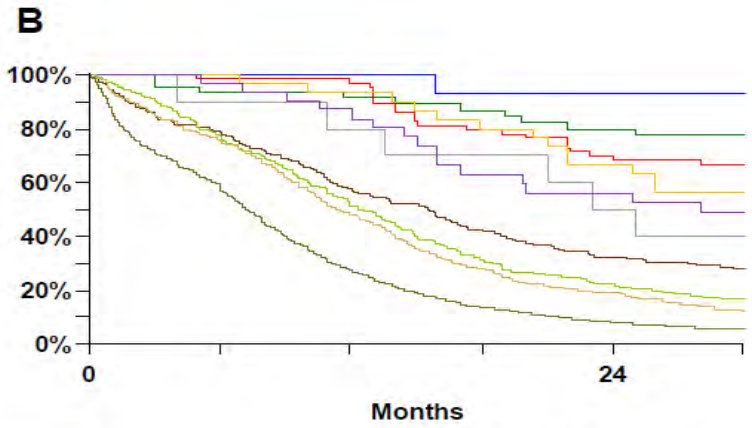
Andrew G. Nicholson, DM,[a,*] Kari Chansky, MS,[b] John Crowley, PhD,[b]
Ricardo Beyruti, MD,[c] Kaoru Kubota, MD,[d] Andrew Turrisi, MD,[e]
Wilfried E. E. Eberhardt, MD,[f] Jan van Meerbeeck, MD,[g]
Ramón Rami-Porta, MD, FETCS,[h] on behalf of the Staging and Prognostic Factors Committee, Advisory Boards, and Participating Institutions[i]

Journal of Thoracic Oncology Vol. 11 No. 3: 300-311

Table 4. Formal Comparisons between Clinical TNM Stages (Seventh Edition and Proposed Eighth Edition)

Comparison	Unadjusted HR	p Value	Adjusted HR[a]	Adjusted p Value
Clinical TNM stages (7th ed)				
IB vs. IA			.49	0.13
IIA vs. IB			.87	0.70
IIB vs. IIA			.17	0.08
IIIA vs. IIB			.75	0.40
IIIB vs. IIIA			.23	0.01
IV vs. IIIB			.68	<0.0001
Clinical TNM stages (proposed 8t				
IA2 vs. IA1			.33	0.16
IA3 vs. IA2			.75	0.36
IB vs. IA3			.55	0.22
IIA vs. IB			.30	0.59
IIB vs. IIA			.93	0.88
IIIA vs. IIB			.24	0.42
IIIB vs. IIIA			.17	0.09
IIIC vs. IIIB			.08	0.30
IV vs. IIIC			.62	<0.0001

[a]Adjusted for surgery.
HR, hazard ratio; TNM, tumor, nc



cTNM Proposed	Events / N	MST	12 Month	24 Month
IA1	3 / 14	NR	100%	93%
IA2	27 / 67	NR	97%	68%
IA3	15 / 48	NR	91%	80%
IB	16 / 32	33.0	93%	67%
IIA	6 / 10	24.1	80%	50%
IIB	17 / 38	28.0	87%	56%
IIIA	191 / 254	15.6	58%	32%
IIIB	326 / 402	12.6	52%	22%
IIIC	330 / 400	11.4	48%	19%
IV	2620 / 2926	7.3	27%	8%

The IASLC Mesothelioma Staging Project: Proposals for Revisions of the T Descriptors in the Forthcoming Eighth Edition of the TNM Classification for Pleural Mesothelioma

Anna K. Nowak, M.B.B.S., PhD,[a,b,*] Kari Chansky, MS,[c] David C. Rice, MBBCh,[d] Harvey I. Pass, MD,[e] Hedy L. Kindler, MD,[f] Lynn Shemanski, PhD,[c] Andrea Billé, MD, PhD,[g] Robert C. Rintoul, MBChB, PhD,[h] Hasan F. Batirel, MD, PhD,[i] Charles F. Thomas, MD,[j] Joseph Friedberg, MD,[k] Susana Cedres, MD, PhD,[l] Marc de Perrot, MD, MSc,[m] Valerie W. Rusch, MD,[n] on behalf of the Staging and Prognostic Factors Committee, Advisory Boards and Participating Institutions**

Journal of Thoracic Oncology Vol. 11 No. 12: 2089-2099

elioma Staging Project: Proposals
e N Descriptors in the Forthcoming
he TNM Classification for Pleural

David Rice, MBBCh,[a,*] Kari Chansky, MS,[b] Anna Nowak, M.B.B.S., PhD,[c] Harvey Pass, MD,[d] Hedy Kindler, MD,[e] Lynn Shemanski, MS,[b] Isabelle Opitz, MD,[f] Sergi Call, MD,[g] Seiki Hasegawa, MD,[h] Kemp Kernstine, MD, PhD,[i] Cansel Atinkaya, MD,[j] Federico Rea, MD,[k] Philippe Nafteux, MD,[l] Valerie W. Rusch, MD,[m] on behalf of the Mesothelioma Domain of the IASLC Staging and Prognostic Factors Committee, advisory boards and participating institutions**

Journal of Thoracic Oncology Vol. 11 No. 12: 2100-2111

The IASLC Mesothelioma Staging Project: Proposals for the M Descriptors and for Revision of the TNM Stage Groupings in the Forthcoming (Eighth) Edition of the TNM Classification for Mesothelioma

Valerie W. Rusch, MD,[a,*] Kari Chansky, MS,[b] Hedy L. Kindler, MD,[c] Anna K. Nowak, M.B.B.S., PhD,[d,e] Harvey I. Pass, MD, PhD,[f] David C. Rice, MBBCh,[g] Lynn Shemanski, PhD,[b] Françoise Galateau-Sallé, MD,[h] Brian C. McCaughan, AM, M.B.B.S.,[i] Takashi Nakano, MD, PhD,[j] Enrico Ruffini, MD,[k] Jan P. van Meerbeeck, MD,[l] Masahiro Yoshimura, MD,[m] on behalf of the IASLC Staging and Prognostic Factors Committee, advisory boards, and participating institutions**

Journal of Thoracic Oncology Vol. 11 No. 12: 2112-2119

Stage	Definition
Primary tumor (T)	
TX	Primary tumor cannot be assessed
T0	No evidence of primary tumor
T1	Tumor limited to the ipsilateral parietal ± visceral ± mediastinal ± diaphragmatic pleura
T2	Tumor involving each of the ipsilateral pleural surfaces (parietal, mediastinal, diaphragmatic, and visceral pleura) with at least one of the following features: • involvement of diaphragmatic muscle • extension of tumor from visceral pleura into the underlying pulmonary parenchyma
T3	Describes locally advanced but *potentially resectable* tumor. Tumor involving all of the ipsilateral pleural surfaces (parietal, mediastinal, diaphragmatic, and visceral pleura) with at least one of the following features: • involvement of the endothoracic fascia • extension into the mediastinal fat • solitary, completely resectable focus of tumor extending into the soft tissues of the chest wall • nontransmural involvement of the pericardium
T4	Describes locally advanced *technically unresectable* tumor. Tumor involving all of the ipsilateral pleural surfaces (parietal, mediastinal, diaphragmatic, and visceral pleura) with at least one of the following features: • diffuse extension or multifocal masses of tumor in the chest wall, with or without associated rib destruction • direct transdiaphragmatic extension of tumor to the peritoneum • direct extension of tumor to the contralateral pleura • direct extension of tumor to mediastinal organs • direct extension of tumor into the spine • tumor extending through to the internal surface of the pericardium with or without a pericardial effusion, or tumor involving the myocardium
Regional lymph nodes (N)	
NX	Regional lymph nodes cannot be assessed
N0	No regional lymph node metastases
N1	Metastases in the ipsilateral bronchopulmonary, hilar, or mediastinal (including the internal mammary, peridiaphragmatic, pericardial fat pad, or intercostal lymph nodes) lymph nodes
N2	Metastases in the contralateral mediastinal, ipsilateral, or contralateral supraclavicular lymph nodes
Distant metastasis (M)	
M0	No distant metastasis
M1	Distant metastasis present

Regroupement par stades

Stade	T	N	M
IA	T1	N0	M0
IB	T2, T3	N0	M0
II	T1, T2	N1	M0
IIIA	T3	N1	M0
IIIB	T1, T2, T3	N2	M0
	T4	N0, N1, N2	M0
IV	anyT	Any N	M1

Votre avis sur la nouvelle classification TNM?

1. Elle est basée sur une étude prospective
2. La répartition géographique est homogène (USA = Europe = Asie)
3. Il s'agit essentiellement de cas chirurgicaux
4. Elle offre une nouvelle définition du N
5. Elle intègre les données des bilans thérapeutiques

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4. Elle offre une nouvelle définition du N
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Les limites à considérer

Récolte des données

- Très peu de données prospectives
- Répartition géographique inhomogène
- Excès de stades chirurgicaux
- Peu de stades IV
- Manque de descripteurs

Les analyses

- Aucune notion des bilans effectués (modification de stade par introduction de la TEP …)
- Biologie moléculaire non prise en compte
- …

Capacité opérationnelle de la stadification

- La stadification a clairement une valeur pronostique
- Sa capacité opérationnelle (décision/guide thérapeutique) est mise en doute du fait de sa complexité

Table 2 Criticism of the 8th TNM edition for lung cancer

Only 5.1% prospective data
Retrospective data not specifically designed for TNM classification
Study population mainly from Europe and Asia
Mainly based on anatomical information only
Size measurement for T factor: not yet generally accepted and implemented
Not enough data to refine nodal staging
Ongoing discussion on borders of mediastinal and hilar nodal stations
More prospective data required on distant metastatic involvement
Multiple tumors: criteria to be implemented in daily practice
R descriptor: further analysis necessary, especially of uncertain resection

Futur

- Nouveau comité en vue d'une 9ème édition
- Nouvelle base de données devant intégrer
  - Classification OMS 2015 pathologique
  - Recommandations IASLC pour les tumeurs en verre dépoli
  - Recommandations IASLC sur tumeurs multiples
  - Biologie moléculaire

FORMATION CONTINUE

Certificat européen interuniversitaire en oncologie thoracique

Examen donnant droit à une attestation de réussite délivrée par l'Université Libre de Bruxelles et l'Université d'Aix-Marseille

- L'examen aura lieu durant le CPLF à Paris, le vendredi 24 janvier 2020 de 14 à 16h, hôtel Mercure Vaugirard, salle Behra (proche du Parc des expositions)
- Condition : être inscrit et avoir assisté au cours du GOLF qui précède le CPLF
- L'inscription à l'examen se fait auprès de Madame Caroline Gustin : secret.sculier@bordet.be avec la preuve de participation au cours du GOLF 2019
- Frais d'inscription : 50 € à payer avant le 15/12/2019
  - Soit par Virement bancaire à l'ELCWP : compte IBAN : BE62 3100 7281 5461 - Swift/Bic : BBRUBEBB - Banque ING, rue d'Arlon 26 à 1050 Bruxelles avec votre nom en communication + examen
  - soit par Visa card/Eurocard (Carte bleue) n°
    - _ _ _ _/_ _ _ _/_ _ _ _/_ _ _ _
    - *Date d'expiration……/……*
    - *Nom du titulaire :……*
    - *Signature :*

Aix*Marseille université

cri écembre 2019 - **Aucun chèque ne sera accepté**

ULB