



EUROPEAN LUNG CANCER
CONFERENCE 2016

ELCC 2016

13-16 April 2016

THE IASLC NEW STAGING SYSTEM

- THE M-COMPONENT -

Dr. Wilfried Ernst Erich Eberhardt, Germany

IASLC Scientific Committee Chair



elcc2016.org

WELCOME TO THE 2016 ELCC CONFERENCE!



A collaborative effort of the most important multidisciplinary societies representing thoracic oncology specialists

ORGANISERS



GOOD SCIENCE
BETTER MEDICINE
BEST PRACTICE



PARTNERS



ESTRO
European Society for
RADIO THERAPY
& ONCOLOGY



A shared goal: to advance
science, disseminate
education and improve the
practice of lung cancer
specialists worldwide

Conflict of interest statement - WEE Eberhardt

1. CEO function or other direct job relationships

none

2. Advisor function

advisory board function Astra Zeneca, Roche, Eli Lilly, Novartis, Pfizer, BayerSchering, Sanofiaventis,
Boehringer Ingelheim, BMS, GSK, Amgen, Teva, Astellas

3. stocks

none

4. honoraria

for lectures Pierre Fabre, Merck, Astra Zeneca, Roche, Eli Lilly, Novartis, Pfizer,
BayerSchering, SanofiAventis, OSI, BMS, GSK, Boehringer Ingelheim, Synthon

5. research funding

for IIT Eli Lilly

6. scientific evidence

none

7. other financial relations

none

ELCC 2016



The NEW IASLC Staging Database

- The number of patients with a palliative chemotherapy approach (mainly stage IV) is only about 10%
- Several factors for metastasis (number of mets, location, intra/extrathoracic) were available in the staging database
- Geographical location was rather balanced (America, Europe Asia & ROW)

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	1990 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%

IASLC Staging Database - patient population -

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	18
	Brazil	University of Sao Paulo Medical School		2
	China	Guangdong General Hospital	83	188
	France	L'Institut Mutualiste Montsouris	3	5
	Greece	Athens School of Medicine	6	15
	Spain	Complejo Hospitalario de Ourense	41	83
		Complejo Hospitalario La Mancha Centro	9	31
		Fundación Jiménez Díaz	18	45
		Htal. de la Plana Vila-Real	12	28
		Htal. General Universitario de Valencia	1	
		Htal. General Universitario Gregorio Mar	1	
		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

EDC, electronic data capture.

M-descriptors

- data from the 7th edition -

7th edition definitions for the M-descriptors

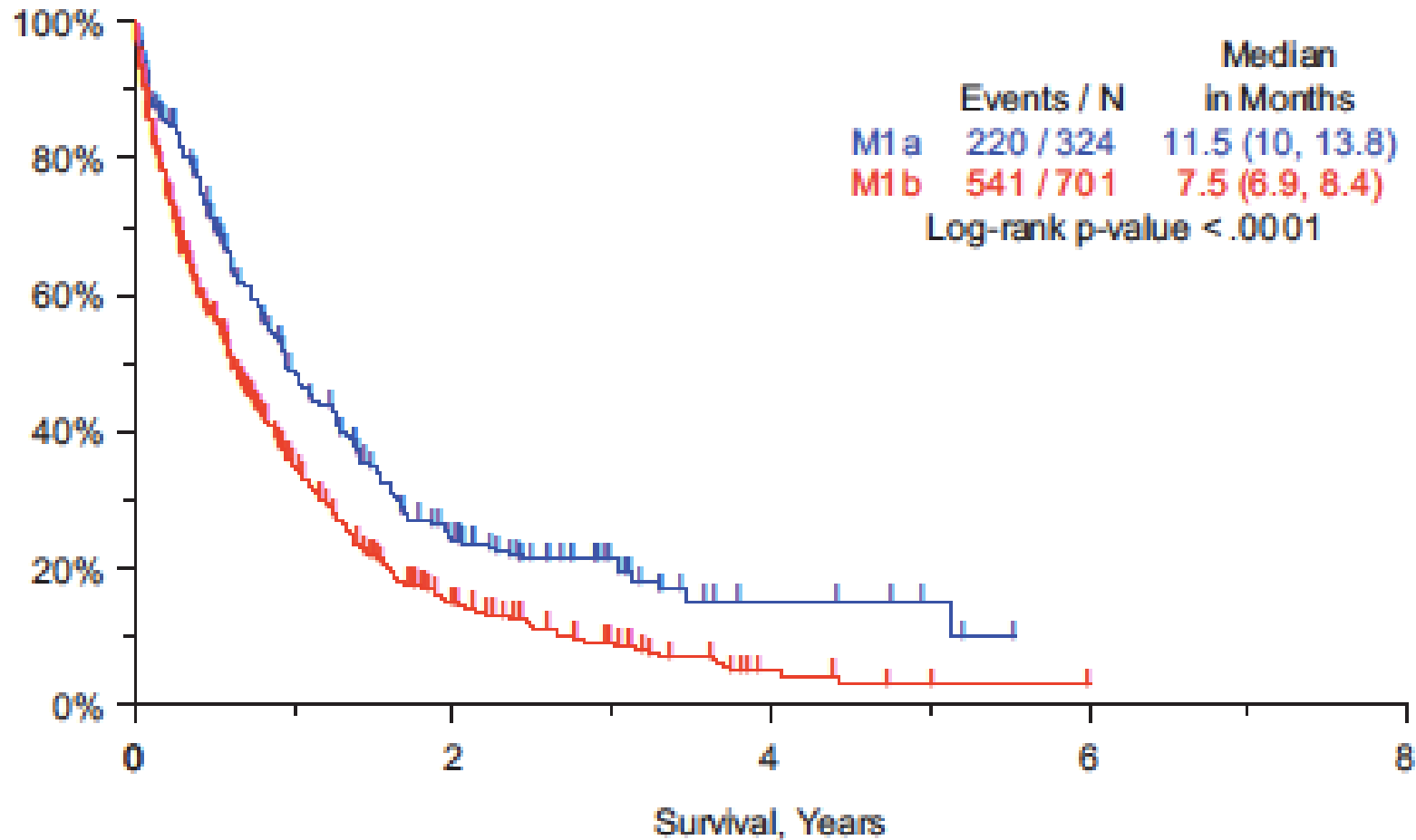
Grouped as *M1a category*

**pleural/pericardial effusions
contralateral/bilateral lung nodules
contralateral/bilateral pleural nodules
or a combination of multiple of these parameters**

Grouped as *M1b category*

**any extrathoracic metastatic lesion
either in one or several organs**

7th Edition M Categories
EDC Data Only



Recommended changes for the M-descriptors

In this revision of the staging system

Continued to be grouped as *M1a category*

pleural/pericardial effusions

contralateral/bilateral lung nodules

contralateral/bilateral pleural nodules

or a combination of multiple of these parameters

Newly designated to the *M1b category*

Single metastatic lesions in a single distant organ

Reclassified as *M1c category*

Multiple lesions in a single organ

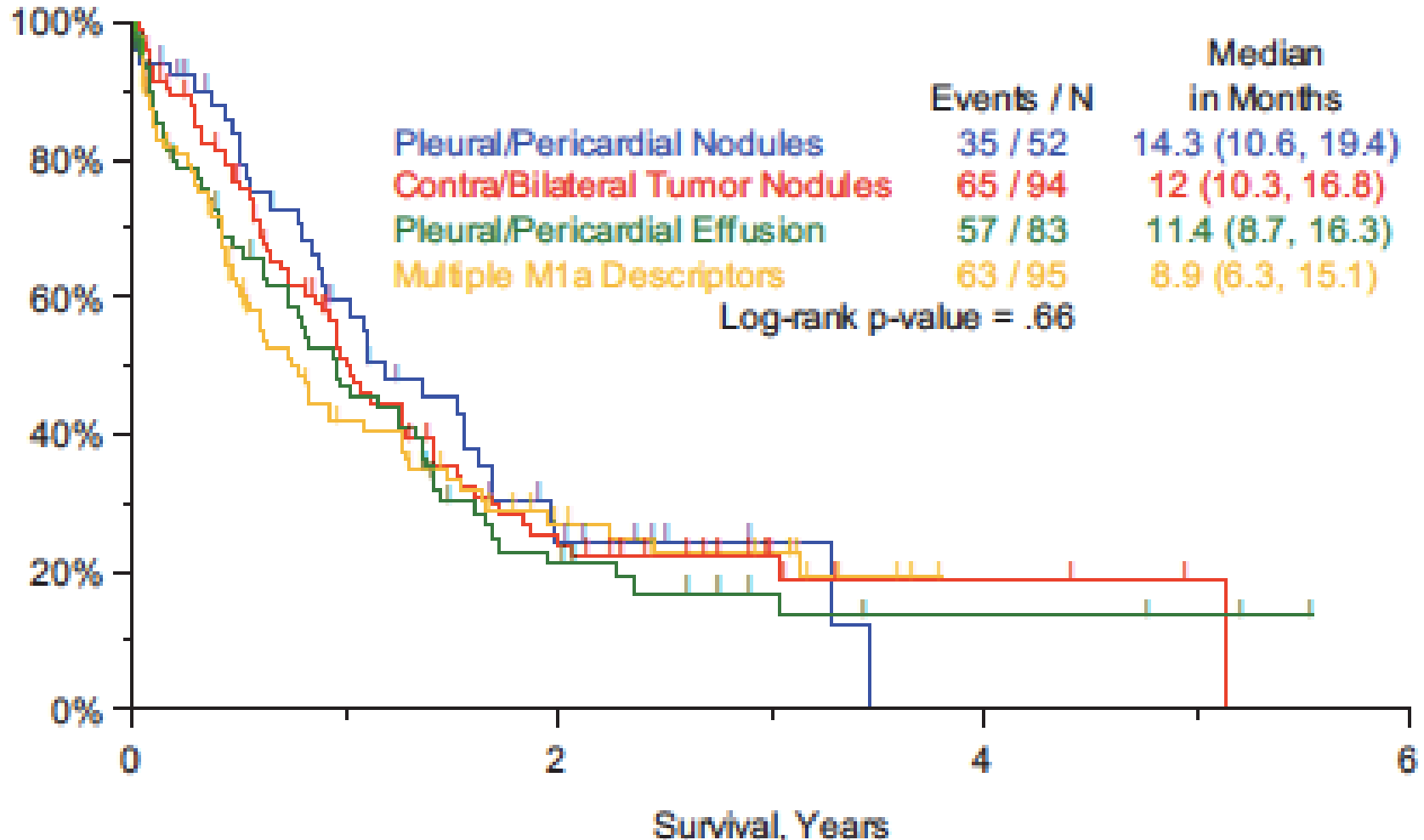
Multiple lesions in multiple organs

This new division can serve as a first step into providing rational definitions for an oligometastatic disease stage in non-small cell lung cancer in the future

M-descriptors

- M 1 a -

Survival By M1a Descriptor M1a Cases from EDC Only



8th edition definitions for the M-descriptors

Grouped as *M1a* category

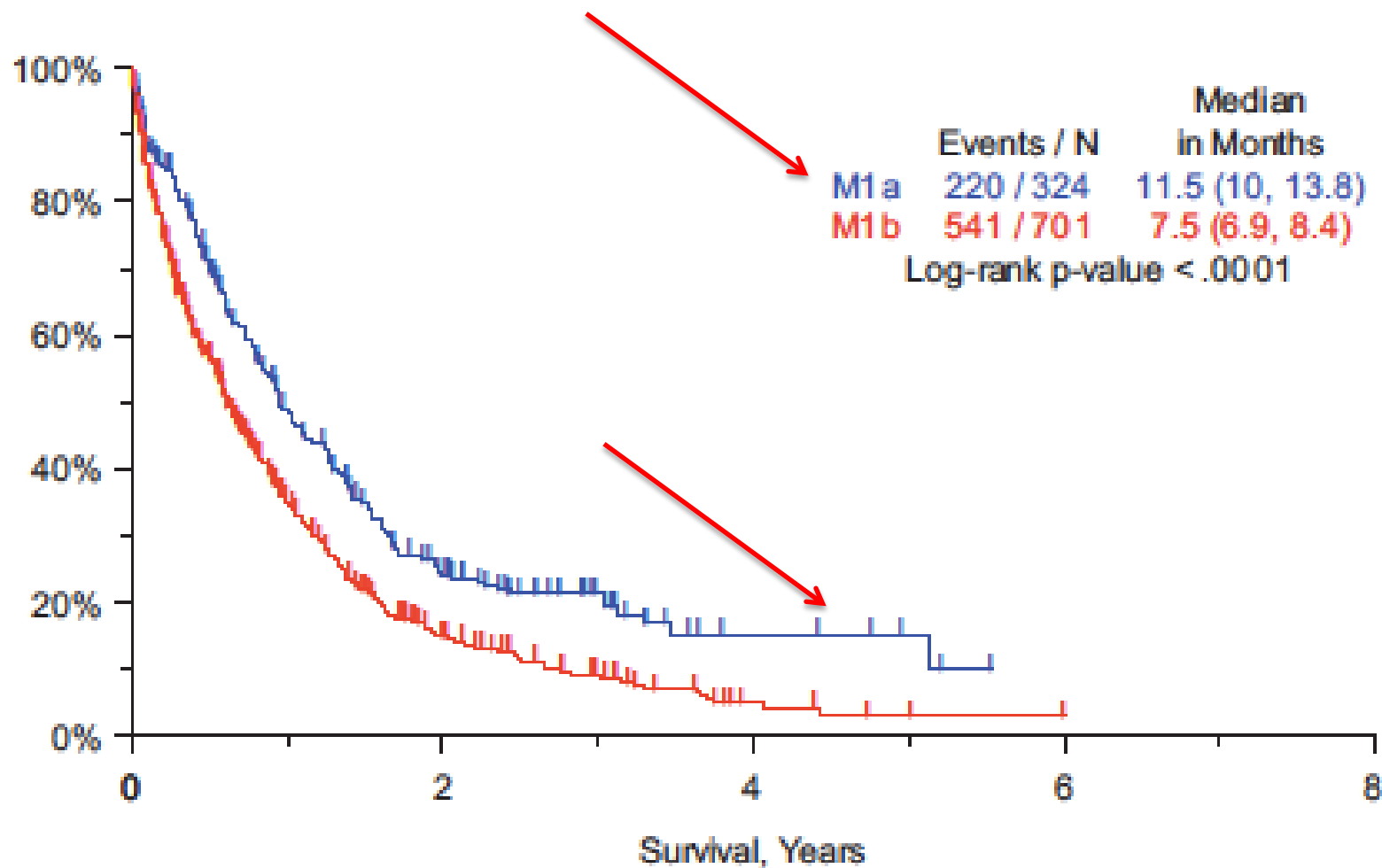
pleural/pericardial effusions

contralateral/bilateral lung nodules

contralateral/bilateral pleural nodules

or a combination of multiple of these parameters

7th Edition M Categories
EDC Data Only



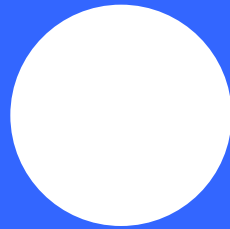
M-descriptors

- M 1 b & c -

IASLC/UICC 8 Database:

Documentation of the prognostic impact of
number and anatomical localization of
metastases

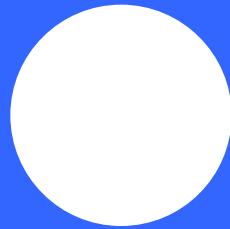
- **M-factor** M1b



single metastatic lesion
single organ site

M1b

- **M-Faktor M1b**



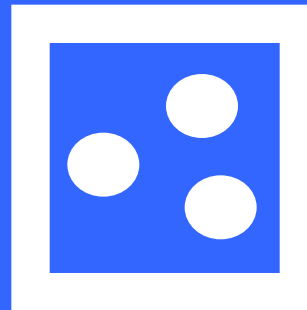
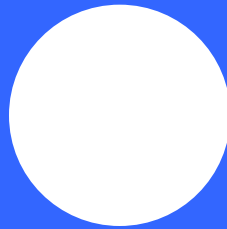
single metastatic lesion
in single organ site

organs

Brain, Bone, Liver, Pulmo,
Adrenals, LN, Dermis,

M1b

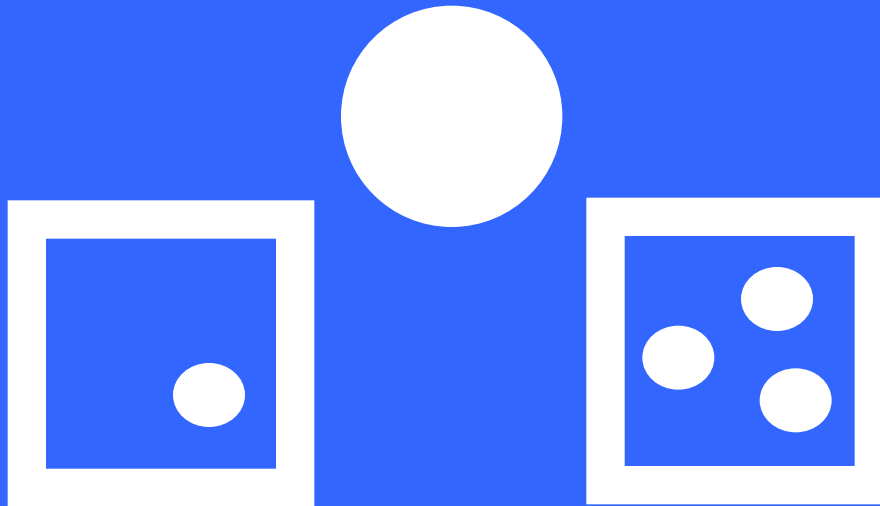
- **M-factor** M1c



multiple metastatic lesions
in single organ site

M1c

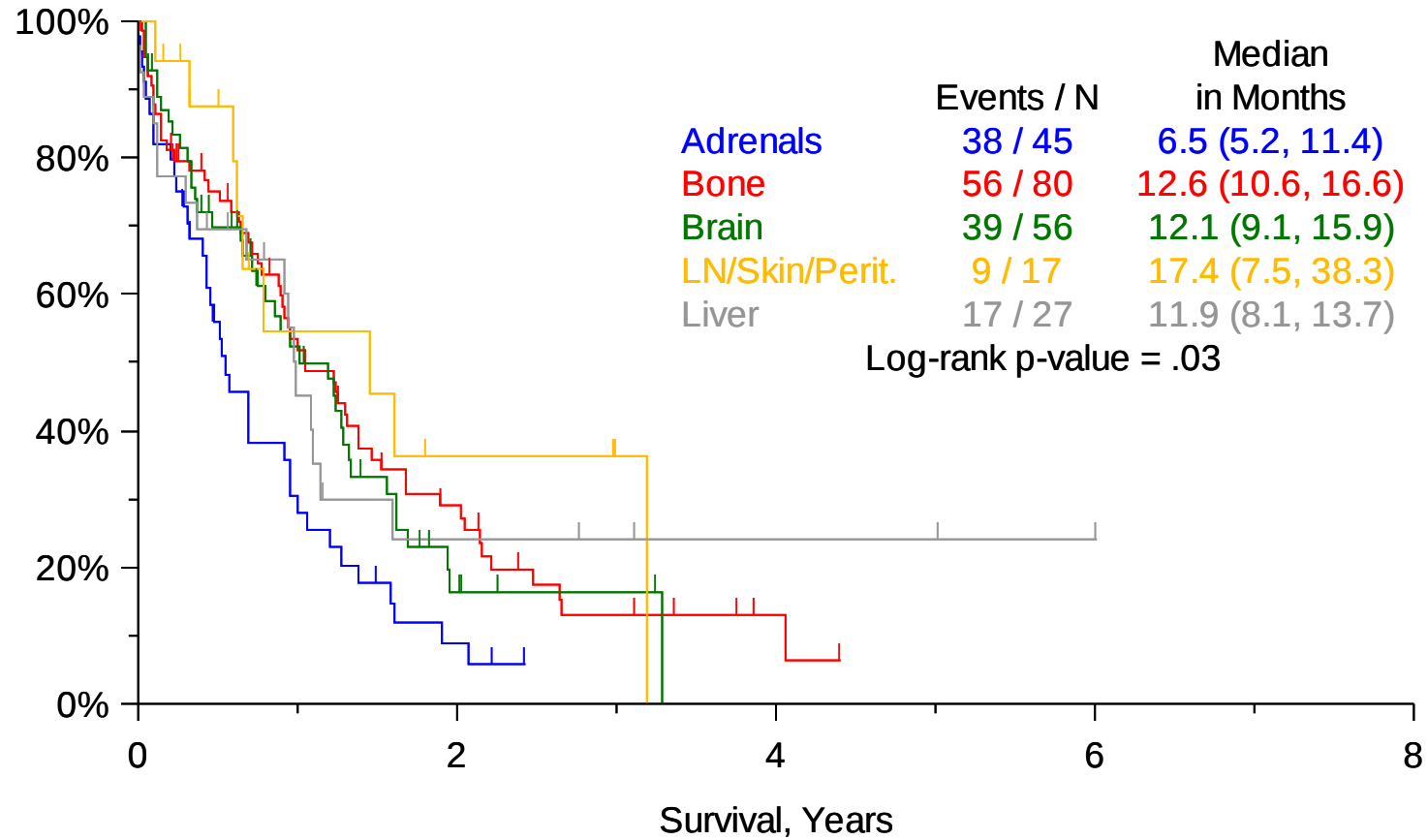
- **M-factor** M1c



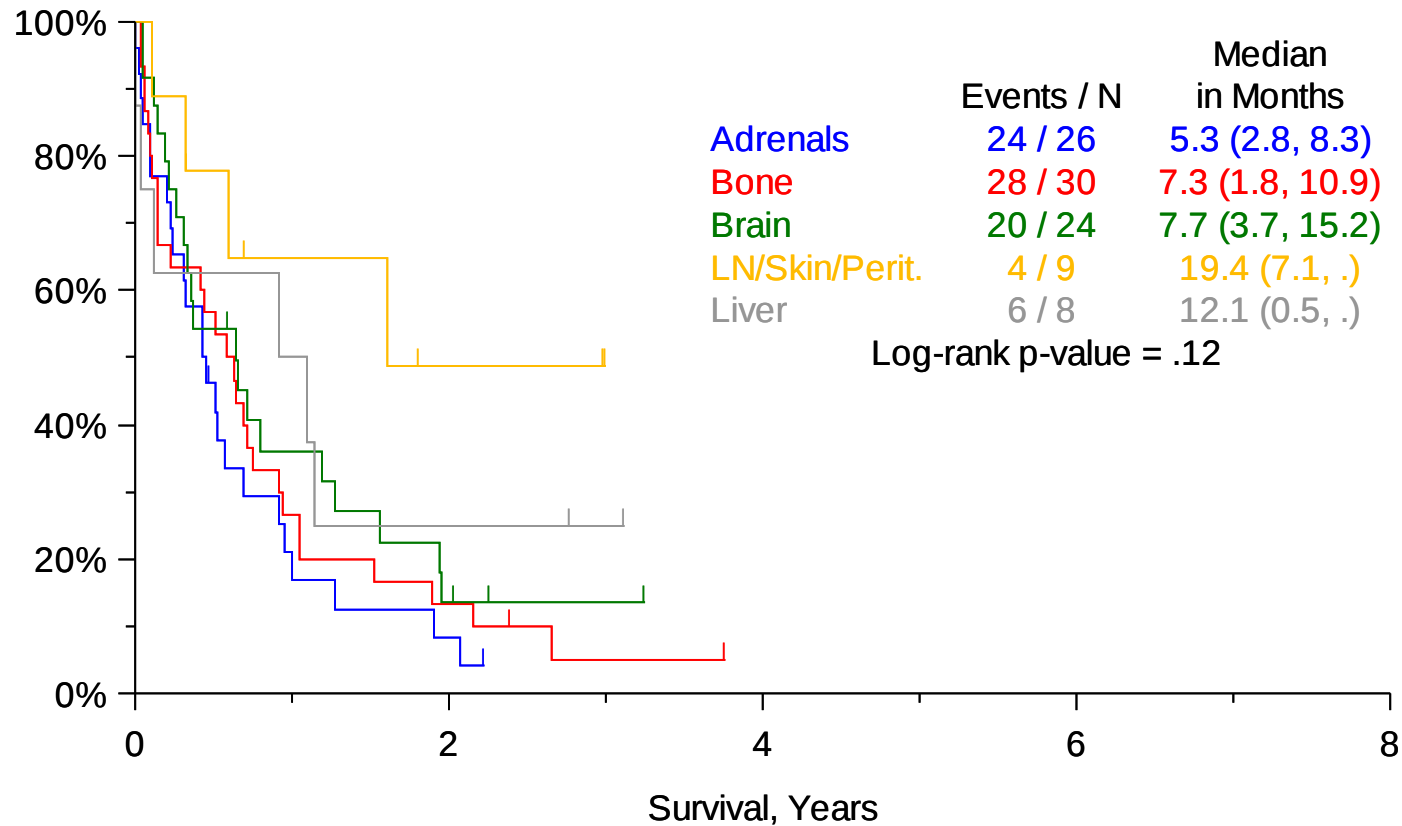
multiple metastatic
lesions
in multiple organ sites

M1c

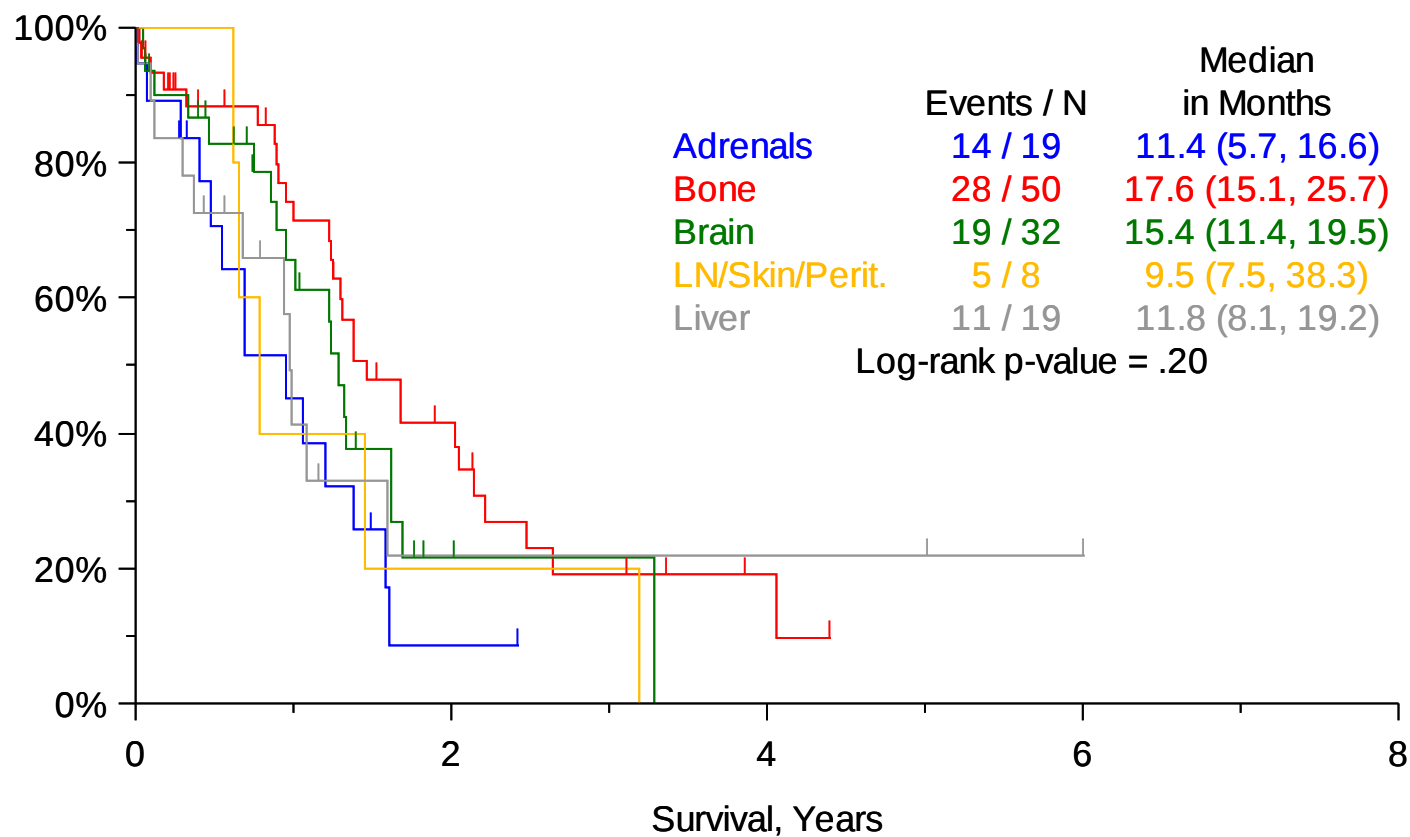
7th Edition M1b - Single Lesion at Single Site
By Organ
EDC Data Only



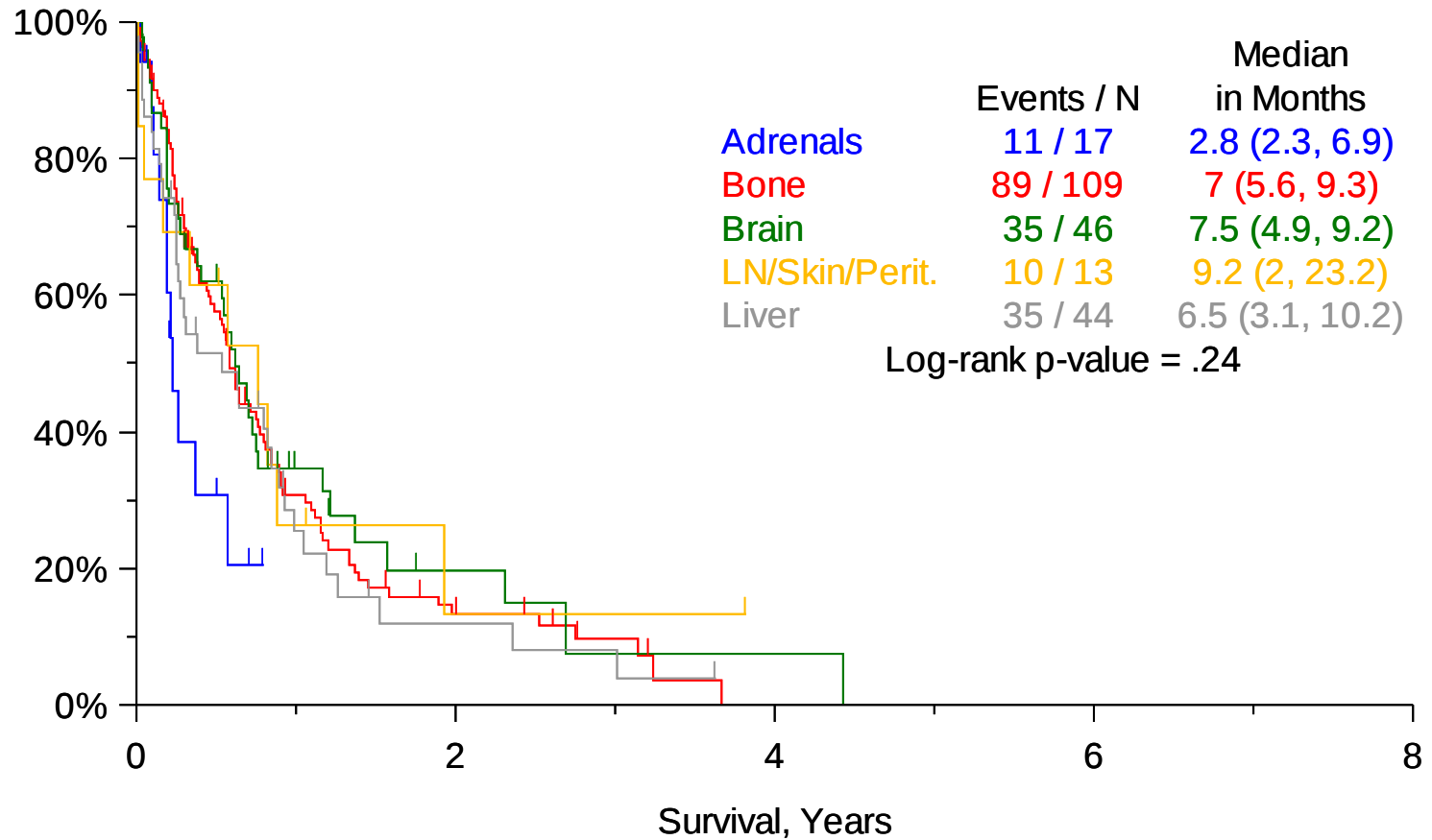
7th Edition M1b - Single Lesion at Single Site
By Organ
EDC Data Only - GCCB



7th Edition M1b - Single Lesion at Single Site
By Organ
EDC Data Only - China and Others



7th Edition M1b - Multiple Lesions at Single Site
By Organ
EDC Data Only



Recommended changes for the M-descriptors

In this revision of the staging system

Newly designated to the *M1b category*

Single metastatic lesions in a single distant organ

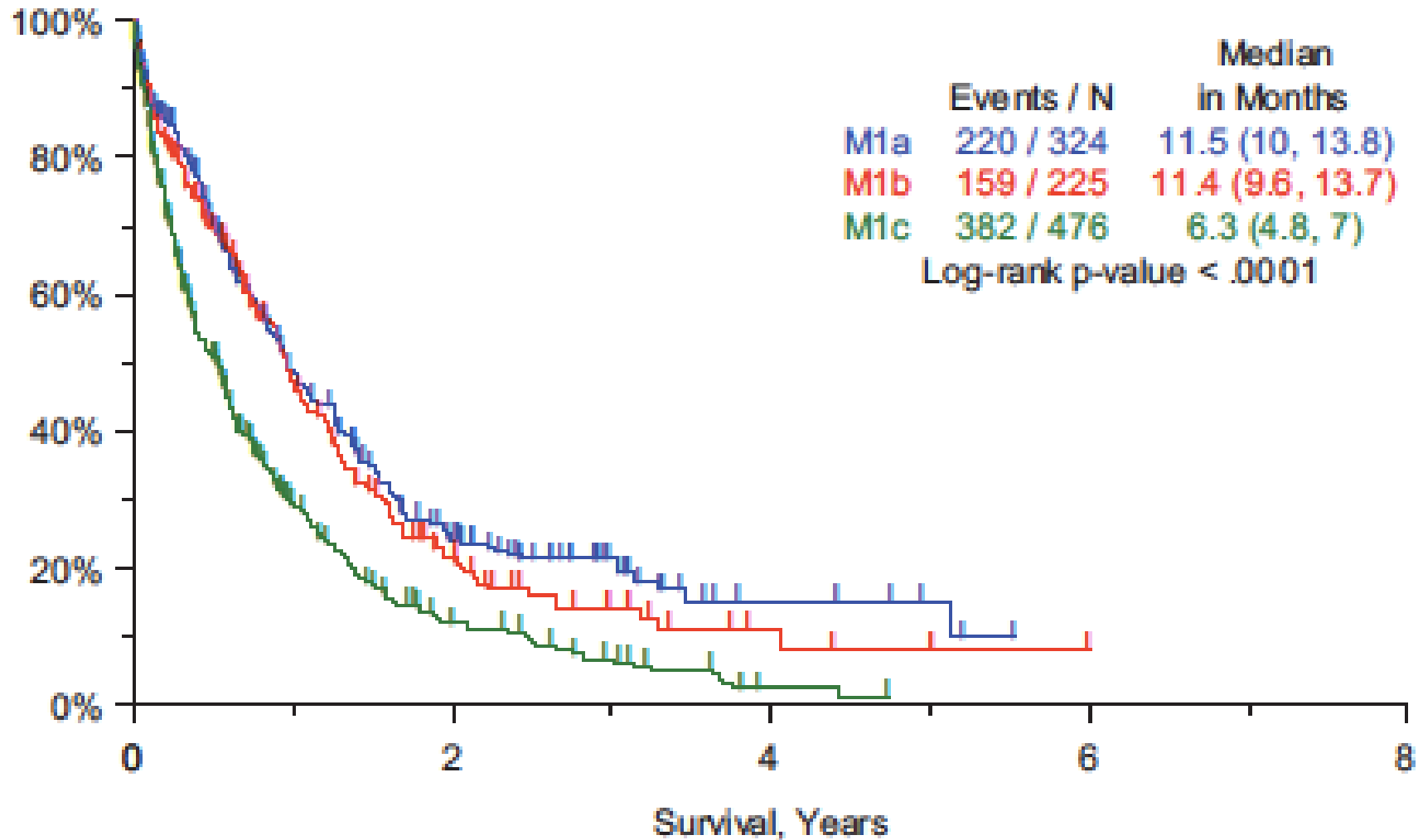
Reclassified as *M1c category*

Multiple lesions in a single organ

Multiple lesions in multiple organs

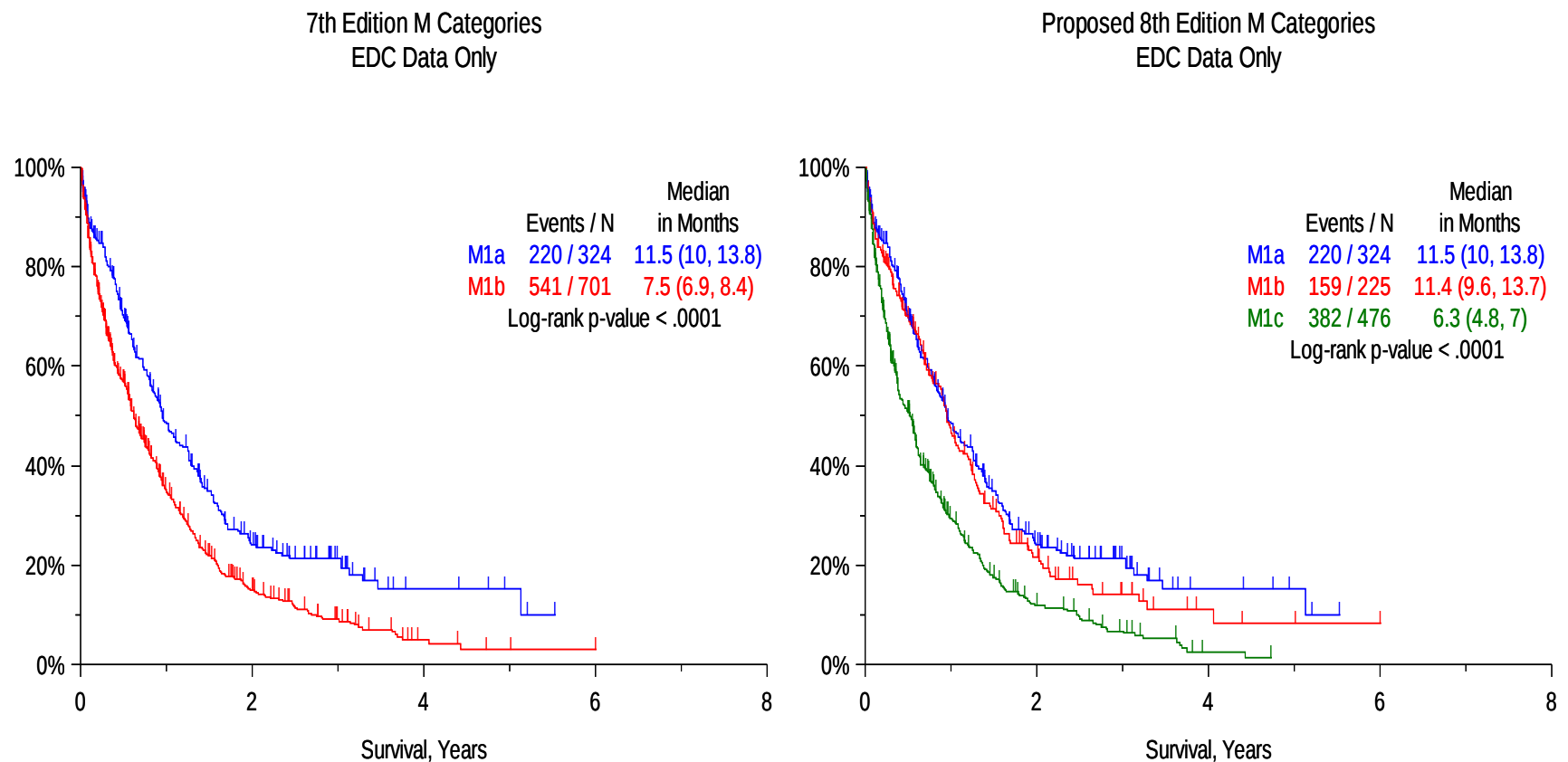
This new division can serve as a first step into providing rational definitions for an oligometastatic disease stage in non-small cell lung cancer in the future

Proposed 8th Edition M Categories
EDC Data Only



WEE Eberhardt et al, JTO 2015

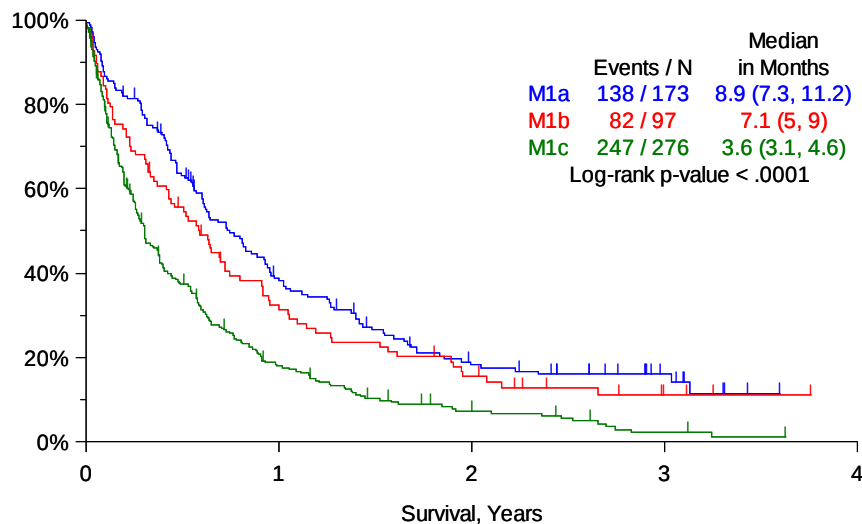
Figure 8. Proposed 8th Edition M Categories



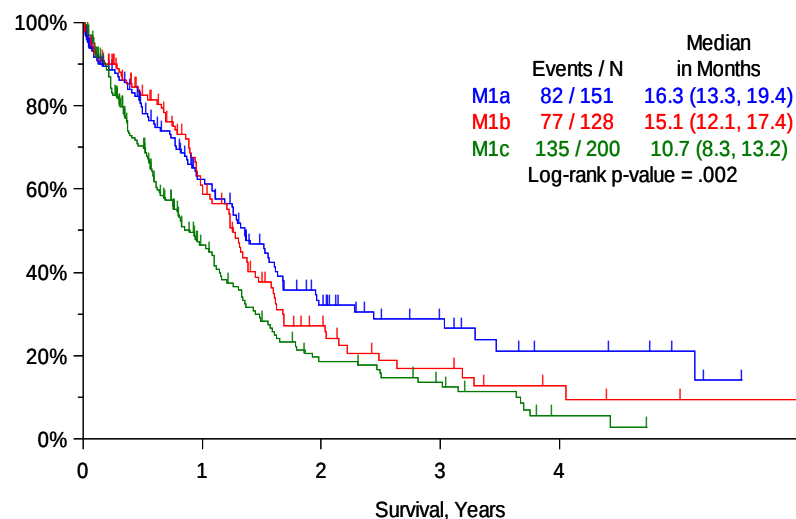
Discussion Issues

Stratified Multivariate Regression Model			Overall Survival	
	Variable	n/N (%)	HR (95% CI)	P-value
	M1a	324/1025 (32%)	Reference Group	
	M1b, Single Organ/Lesion	225/1025 (22%)	1.195 (0.97, 1.47)	0.0943
	M1b, Single Organ/Mult. Lesions	229/1025 (22%)	1.646 (1.345, 2.013)	<.0001
	M1b, Multiple Organs	247/1025 (24%)	1.997 (1.641, 2.430)	<.0001
HR- Hazard Ratio, 95% CI- 95% Confidence Interval, P-value from Score Chi-Square Test in Cox Regression Model stratified by Histology (Squamous, Adenocarcinoma, Non-Small Cell NOS, Other) and Country/Data Source (GCCB/Spain, China, USA, Others).				

Proposed 8th Edition M Categories
EDC Data Only - GCCB



Proposed 8th Edition M Categories
EDC Data Only - China and Others



Recommended changes for the M-descriptors

In this revision of the staging system

Continued to be grouped as *M1a category*

pleural/pericardial effusions

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Multiple lesions in a single organ

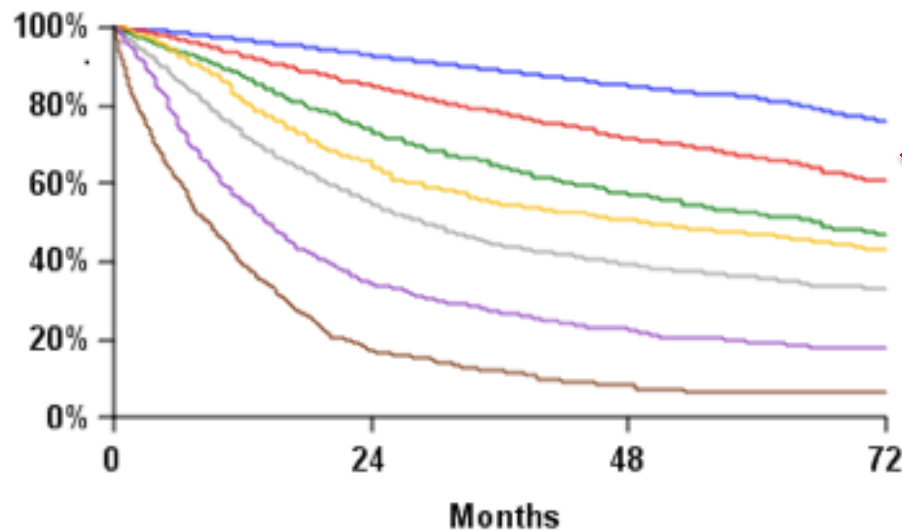
Multiple lesions in multiple organs

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WEE Eberhardt, ELCC Geneva 2016

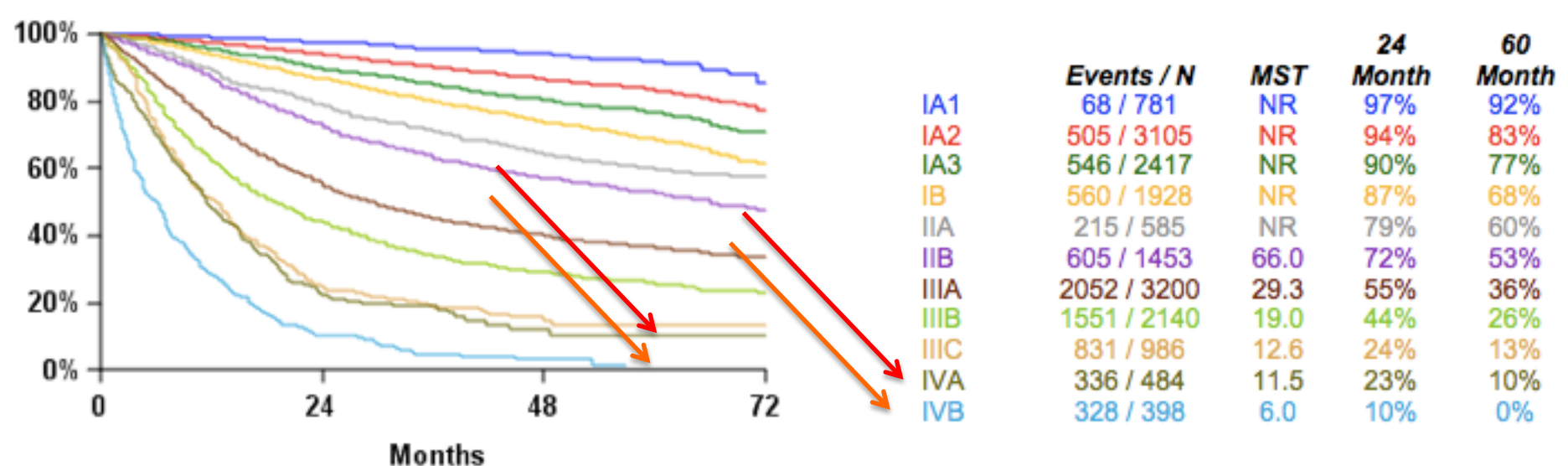
7th edition UICC staging system NSCLC-database



	Events / N	MST	24 Month	60 Month
IA	1119 / 6303	NR	93%	82%
IB	768 / 2492	NR	85%	66%
IIA	424 / 1008	66.0	74%	52%
IIB	382 / 824	49.0	64%	47%
IIIA	2139 / 3344	29.0	55%	36%
IIIB	2101 / 2624	14.1	34%	19%
IV	664 / 882	8.8	17%	6%

Goldstraw et al, JTO 2016
WEE Eberhardt, ELCC Geneva 2016

8th edition IASLC Staging Proposal NSCLC-database



Goldstraw et al, JTO 2016
WEE Eberhardt, ELCC Geneva 2016

Table 4. Descriptors and T and M categories in the 7th edition and as proposed for the 8th edition.

Resultant stage groupings proposed for the 8th edition are highlighted in bold where there is a change and the 7th edition stage is given in parenthesis.

		N-Categories			
		Overall Stage			
Seventh Edition Descriptor	Proposed T/M	N0	N1	N2	N3
T1 ≤1cm	T1a	IA1 (IA)	IIB (IIA)	IIIA	IIIB
T1 >1-2cm	T1b	IA2 (IA)	IIB (IIA)	IIIA	IIIB
T1 >2-3cm	T1c	IA3 (IA)	IIB (IIA)	IIIA	IIIB
T2 >3-4cm	T2a	IB	IIB (IIA)	IIIA	IIIB
T2 >4-5cm	T2b	IIA (IB)	IIB (IIA)	IIIA	IIIB
T2 >5-7cm	T3	IIB (IIA)	IIIA (IIB)	IIIB (IIIA)	IIIC (IIIB)
T3 structures	T3	IIB	IIIA	IIIB (IIIA)	IIIC (IIIB)
T3 >7cm	T4	IIIA (IIB)	IIIA	IIIB (IIIA)	IIIC (IIIB)
T3 Diaphragm	T4	IIIA (IIB)	IIIA	IIIB (IIIA)	IIIC (IIIB)
T3 endobronch location/atelectasis 3-4cm	T2a	IB (IIB)	IIB (IIIA)	IIIA	IIIB
T3 endobronch location/atelectasis 4-5cm	T2b	IIA (IIB)	IIB (IIIA)	IIIA	IIIB
T4	T4	IIIA	IIIA	IIIB	IIIC (IIIB)
M1a	M1a	IVA (IV)	IVA (IV)	IVA (IV)	IVA (IV)
M1b single lesion	M1b	IVA (IV)	IVA (IV)	IVA (IV)	IVA (IV)
M1c multiple lesions	M1c	IVB (IV)	IVB (IV)	IVB (IV)	IVB (IV)

IASLC STAGING PUBLICATIONS

1. **Rami-Porta R et al.** The IASLC Lung Cancer Staging Project: The New Database to Inform the Eighth Edition of the TNM Classification of Lung Cancer, J Thorac Oncol. 2014; 9: 1818-1624
2. **Rami-Porta R et al.** 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. J Thorac Oncol. 2015 Jul;10(7):990-1003. doi: 10.1097/JTO.0000000000000559.
3. **Hisao Asamura et al.** The International Association for the Study of Lung Cancer Lung Cancer Staging Project: Proposals for the Revision of the N Descriptors in the Forthcoming Eighth Edition of the TNM Classification for Lung Cancer. J Thorac Oncol. 2015 Dec; 10(12): 1675-84
4. **Eberhardt WE et al.** 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. J Thorac Oncol. 2015 Nov;10(11):1515-22. doi: 10.1097/JTO.0000000000000673.
5. **Nicholson A et al.** The IASLC 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. J Thorac Oncol. 2016, in press
6. **Goldstraw P et al.** The IASLC Lung Cancer Staging Project: Proposals for the Revision of the TNM Stage Groupings in the Forthcoming (Eighth) Edition of the TNM Classification for Lung Cancer. J Thorac Oncol. 2016, in press

IASLC STAGING PROJECT INSTITUTIONS

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INTERNATIONAL ASSOCIATION FOR THE STUDY OF LUNG CANCER

17TH WORLD CONFERENCE ON LUNG CANCER

December 4–7, 2016
VIENNA, AUSTRIA

CONFERENCE PRESIDENT:
ROBERT PIRKER, MD

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