



Lung Cancer T Classification – 9th Edition

T1a, T1b

T1c

T1a:
Tumor ≤ 1 cm

T1b: Tumor
 >1 cm, ≤ 2 cm

T1c: Tumor
 >2 cm, ≤ 3 cm



Superficial spreading tumor of any size with its invasive component limited to the bronchial wall, which may extend proximal to the main bronchus, is T1

Tumor ≤ 3 cm; without endobronchial extension proximal to the lobar bronchus

T2a

T2b

Tumor > 3 cm, ≤ 4 cm

Tumor ≤ 4 cm, invasion of the visceral pleura

Tumor involves main bronchus, regardless of distance from carina but without carinal involvement

Associated atelectasis or obstructive pneumonitis that extends to the hilar region, either involving part of the lung or the entire lung

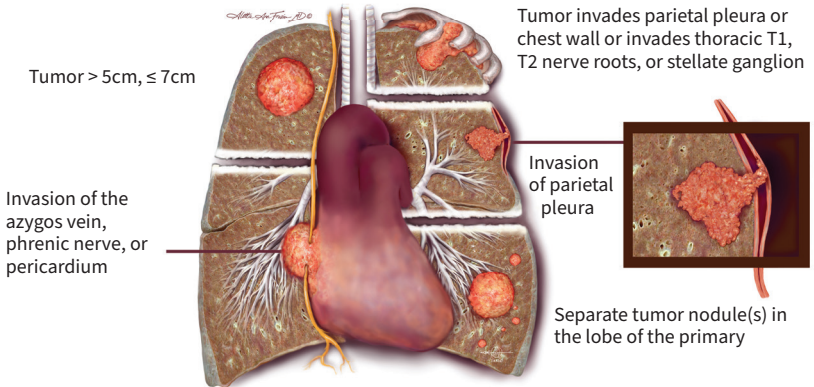
Tumor > 4 cm, ≤ 5 cm
(with or without other T2 descriptors)

Note: if the tumor is associated with atelectasis or pneumonitis, it is T2a if lesion ≤ 4 cm or if tumor size cannot be measured; it is T2b if lesion > 4 cm, ≤ 5 cm.

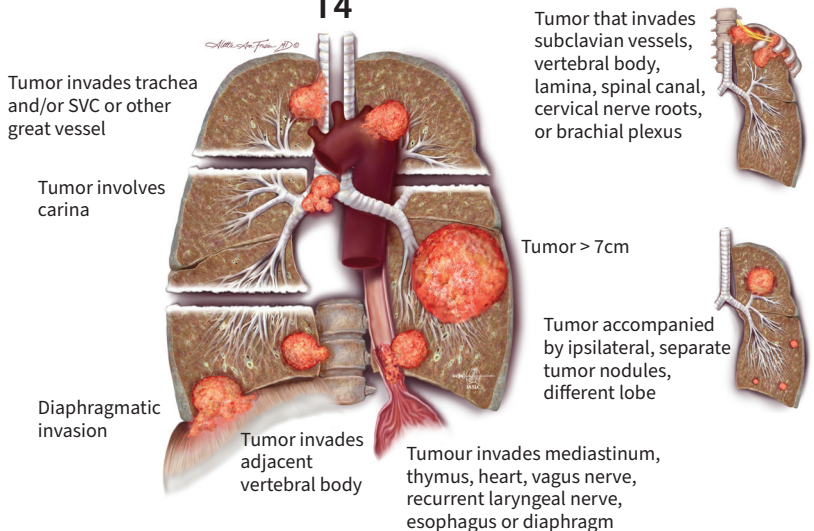


Lung Cancer T Classification – 9th Edition

T3

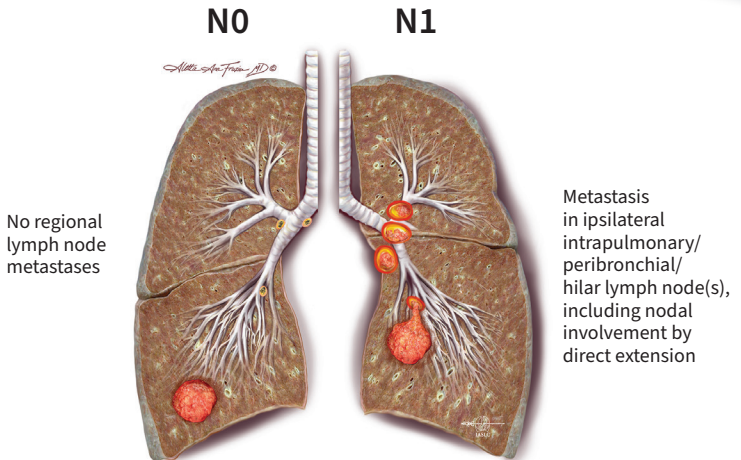


T4





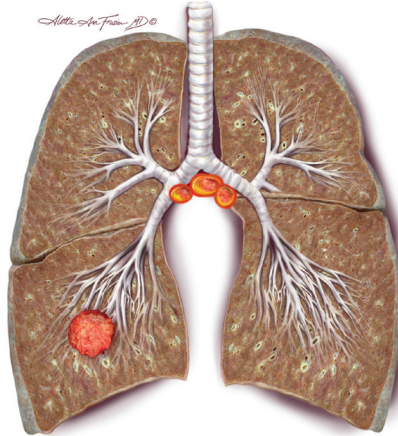
Lung Cancer N Classification – 9th Edition





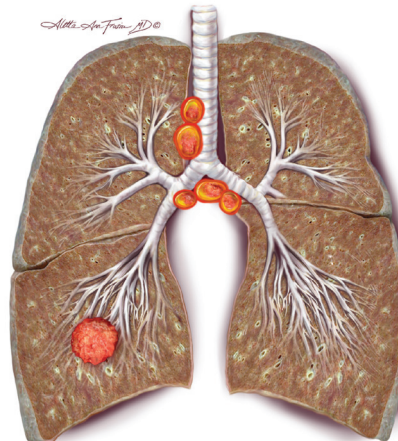
Lung Cancer N Classification – 9th Edition

N2a



Metastasis to
single ipsilateral
mediastinal or
subcarinal lymph
node station

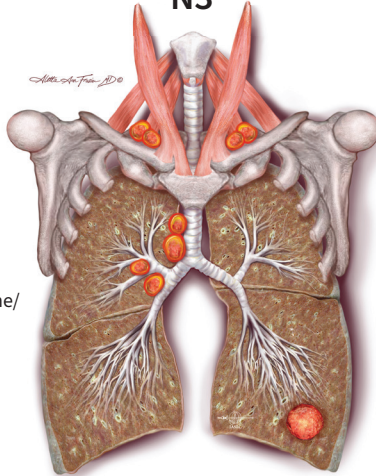
N2b



Metastasis to
multiple ipsilateral
mediastinal and/or
subcarinal lymph
node stations



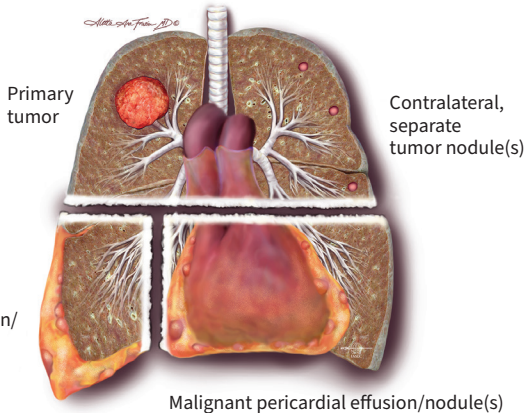
N3



Metastasis in
contralateral hilar/
mediastinal/scalene/
supraclavicular
lymph node(s)

Metastasis in
ipsilateral scalene/
supraclavicular
lymph node(s)

M1a



Primary
tumor

Contralateral,
separate
tumor nodule(s)

Malignant
pleural effusion/
nodule(s)

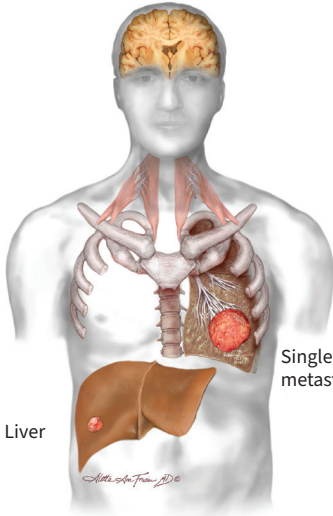
Malignant pericardial effusion/nodule(s)

Note: when the pleural (pericardial) effusions are negative after multiple microscopic examinations, and the fluid is non-bloody and not an exudate, they should be excluded as a staging descriptor.



Lung Cancer M Classification—9th Edition

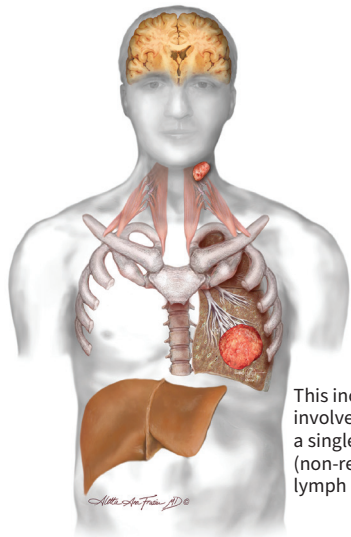
M1b



Single extrathoracic
metastasis

Liver

M1b

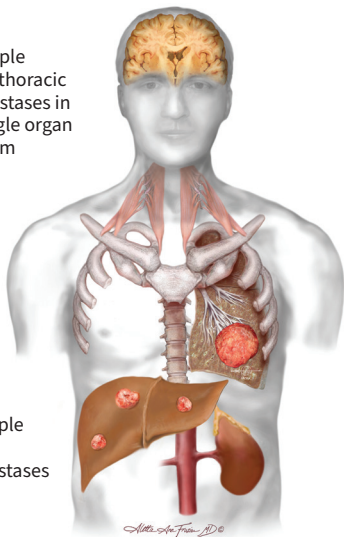


This includes
involvement of
a single distant
(non-regional)
lymph node



M1c1

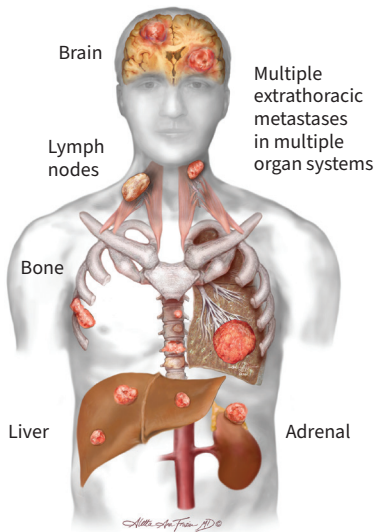
Multiple extrathoracic metastases in a single organ system



Multiple liver metastases

An organ system denotes all sites of an organ that is distributed in the body (e.g. the skeletal system, skin, extrathoracic lymphatic system) or of a paired organ (e.g. adrenal, kidney)

M1c2



Brain

Multiple extrathoracic metastases in multiple organ systems

Lymph nodes

Bone

Liver

Adrenal

Fong KM, Rosenthal A, Giroux DJ, et al. The International Association for the Study of Lung Cancer staging project for lung cancer: Proposals for the revision of the M descriptors in the forthcoming ninth edition of the TNM classification of lung cancer. *J Thorac Oncol.* 2024; 19(5):786-802.

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Lung TNM Definitions–9th Edition

T: Primary tumor	
Tx	Primary tumor cannot be assessed ^a
T0	No evidence of primary tumor
Tis	Carcinoma in situ ^b
T1	Tumor surrounded by lung or visceral pleura, or in a lobar or more peripheral bronchus ^c
T1mi	Minimally invasive adenocarcinoma ^d
T1a	Tumor ≤ 1 cm in greatest dimension
T1b	Tumor >1 cm but ≤ 2 cm in greatest dimension
T1c	Tumor >2 cm but ≤ 3 cm in greatest dimension
T2	Tumor with any of the following features:
T2a	<ul style="list-style-type: none"> tumor >3 cm but ≤ 4 cm in greatest dimension; invades visceral pleura; invades an adjacent lobe; involves main bronchus (up to but not including the carina) or is associated with atelectasis or obstructive pneumonitis extending to the hilar region, involving either part of or the entire lung
T2b	Tumor >4 cm but ≤ 5 cm in greatest dimension
T3	Tumor with any of the following features: <ul style="list-style-type: none"> tumor >5 cm but ≤ 7 cm in greatest dimension; invades parietal pleura or chest wall; invades pericardium, phrenic nerve, or azygos vein^e; invades thoracic nerve roots (i.e. T1, T2) or stellate ganglion; separate tumor nodule(s) in the same lobe as the primary
T4	Tumor with any of the following features: <ul style="list-style-type: none"> tumor >7 cm in greatest dimension; invades mediastinum, thymus, trachea, carina, recurrent laryngeal nerve, vagus nerve, esophagus or diaphragm; invades heart, great vessels (aorta, superior/inferior vena cava, intrapericardial pulmonary arteries/veins), supra-aortic arteries, or brachiocephalic veins; invades subclavian vessels, vertebral body, lamina, spinal canal, cervical nerve roots, or brachial plexus (i.e. trunks, divisions, cords, or terminal nerves); separate tumor nodule(s) in a different ipsilateral lobe than that of the primary

N: Regional Lymph Nodes	
NX	Regional lymph nodes cannot be assessed
N0	No regional lymph node metastasis
N1	Metastasis in ipsilateral peribronchial and/or ipsilateral hilar and/or intrapulmonary lymph nodes, including involvement by direct extension
N2	Metastasis in ipsilateral mediastinal and/or subcarinal lymph node(s)
	N2a – Single N2 station involvement
	N2b – Multiple N2 station involvement
N3	Metastasis in contralateral mediastinal, contralateral hilar, ipsilateral or contralateral scalene or supraclavicular lymph node(s)

M: Distant Metastasis	
M0	No distant metastasis
M1	Distant metastasis
M1a	Tumor with pleural or pericardial nodules or malignant pleural or pericardial effusions, separate tumor nodule(s) in a contralateral lobe
M1b	Single extrathoracic metastasis in a single organ system
M1c	Multiple extrathoracic metastases
M1c1	Multiple extrathoracic metastases in a single organ system
M1c2	Multiple extrathoracic metastases in multiple organ systems

^a This includes tumors proven by the presence of malignant cells in sputum or bronchial washings but not visualized by imaging or bronchoscopy.

^b This includes adenocarcinoma in situ – Tis (AIS) – and squamous cell carcinoma in situ – Tis (SCIS).

^c The uncommon superficial spreading tumor of any size with its invasive component limited to the bronchial wall, which may extend proximal to the main bronchus, is also classified as T1a.

^d Solitary adenocarcinoma (not more than 3 cm in greatest dimension), with a predominantly lepidic pattern and not more than 5 mm invasion in greatest dimension.

^e Although these structures lie within the mediastinum, the degree of mediastinal penetration by the tumor needed to invade these structures is not counted as T4.

T-klassifikation af lepidic adenocarcinom

Ved solitær sygdom:

- Ren matglasnodulus ≤ 5 mm klassificeres som atypisk adenomatøs hyperplasi (AAH) (benign)
- Ren matglasnodulus på **6-30 mm** klassificeres som **Tis**, og hvis **> 30 mm** som **T1a**.
- Delvist solidt infiltrat (= matglasnodulus med en solid komponent) **≤ 30 mm med en solid komponent på ≤ 5 mm** klassificeres som **cTmi** (se også forrige side).
- Delvist solide infiltrater med en **solid komponent > 5 mm** klassificeres efter størrelsen af den solide komponent, som vurderes at være den invasive komponent.

Ved multifokal sygdom:

- **Matglasforandringen med den største solide komponent** (= delvist solidt infiltrat) betegnes som **primærtumor (T)**, alternativt den største matglasforandring, såfremt alle forandringerne er uden solid komponent. T-kategorien for primærtumor følger herefter ovenstående T-klassifikation.
- T-kategorien ændrer sig ikke, uanset om der er en eller flere forandringer i samme lungelap eller anden lungelap på samme side.
- De øvrige forandrings antal angives i parentes efter T - enten et eksakt tal eller **m** for multiple forandringer ≥ 6 mm.
- M = 0 uanset om der er forandringer i modsidige lunge.

Eksempel på stadiering af multifokalt lepidic adenocarcinom:

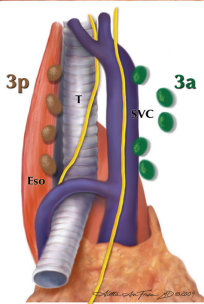
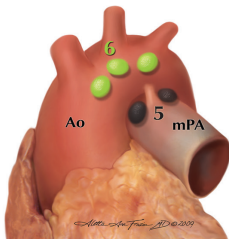
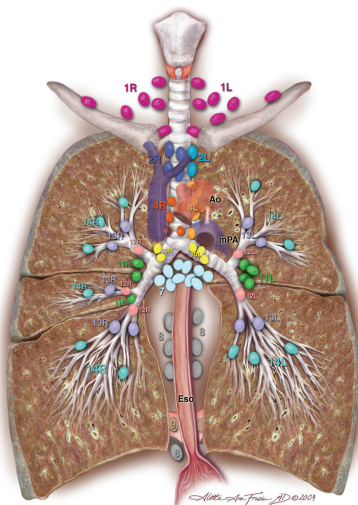
Delvist solidt infiltrat på 25 mm med en solid komponent på 16 mm i venstre overlap.
Endvidere 2 matglasnoduli på mellem 10-20 mm i samme lap og flere matglasnoduli på 10-20 mm i venstre underlap. Tillige flere subsolide noduli (både matglasnoduli på 10-20 mm og delvist solide noduli på 10-20 mm med solide komponenter under 10 mm) i højre lunge.
Ingen lymfeknudemetastaser i mediastinum.

TNM-stadiet for multifokal lepidic adenocarcinom bliver derfor: cT1b (m) N0 M0.

SKS-koder for hver kategori i TNM-9 for registrering i LPR

Kategori	SKS_kode	Kategori	SKS_kode	Kategori	SKS_kode
cT0	AZCD10	cN0	AZCD30	cM0	AZCD40
cTis	AZCD12	cN1	AZCD31	cM1a	AZCD41A
cT1mi	AZCD131	cN2	AZCD32	cM1b	AZCD41B
cT1a	AZCD13A	cN2a	AZCD32A	cM1c	AZCD41C
cT1b	AZCD13B	cN2b	AZCD32B	cM1c1	AZCD41C2
cT1c	AZCD13C	cN3	AZCD33	cM1c2	AZCD41C3
cT2a	AZCD14A	cNx	AZCD39		
cT2b	AZCD14B				
cT3	AZCD15				
cT4	AZCD16				
cTx	AZCD19				

Nodal Chart–9th Edition

*Supraclavicular zone*

- 1 Low cervical, supraclavicular, and sternal notch nodes

SUPERIOR MEDIASTINAL NODES*Upper zone*

- 2R Upper Paratracheal (right)
- 2L Upper Paratracheal (left)
- 3a Prevascular
- 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

N1 NODES*Hilar/Interlobar zone*

- 10 Hilar
- 11 Interlobar

Peripheral zone

- 12 Lobar
- 13 Segmental
- 14 Subsegmental



IASLC Nodal Definitions–9th Edition

#1 (Left/Right) Low cervical, supraclavicular and sternal notch nodes

Upper border: Lower margin of cricoid cartilage

Lower border: Clavicles bilaterally and, in the midline, the upper border of the manubrium

#L1 and #R1 limited by the midline of the trachea.

#2 (Left/Right) Upper paratracheal nodes

2R: Upper border: Apex of lung and pleural space and, in the midline, the upper border of the manubrium

Lower border: Intersection of caudal margin of innominate vein with the trachea

2L: Upper border: Apex of the lung and pleural space and, in the midline, the upper border of the manubrium

Lower border: Superior border of the aortic arch

As for #4, in #2 the oncologic midline is along the left lateral border of the trachea.

#3 Pre-vascular and retrotracheal nodes

3a: Prevascular – On the right

Upper border: Apex of chest

Lower border: Level of carina

Anterior border: Posterior aspect of sternum

Posterior border: Anterior border of superior vena cava

3a: Prevascular – On the left

Upper border: Apex of chest

Lower border: Level of carina

Anterior border: Posterior aspect of sternum

Posterior border: Left carotid artery

3p: Retrotracheal

Upper border: Apex of chest

Lower border: Carina

#4 (Left/Right) Lower paratracheal nodes

4R: Includes right paratracheal nodes, and pretracheal nodes extending to the left lateral border of trachea

Upper border: Intersection of caudal margin of innominate vein with the trachea

Lower border: Lower border of azygos vein

4L: Includes nodes to the left of the left lateral border of the trachea, medial to the ligamentum arteriosum

Upper border: Upper margin of the aortic arch

Lower border: Upper rim of the left main pulmonary artery

#5 Subaortic (aorto-pulmonary window)

Subaortic lymph nodes lateral to the ligamentum arteriosum

Upper border: The lower border of the aortic arch

Lower border: Upper rim of the left main pulmonary artery

#6 Para-aortic nodes (ascending aorta or phrenic)

Lymph nodes anterior and lateral to the ascending aorta and aortic arch

Upper border: A line tangential to the upper border of the aortic arch

Lower border: The lower border of the aortic arch

#7 Subcarinal nodes

Upper border: The carina of the trachea

Lower border: The upper border of the lower lobe bronchus on the left; the lower border of the bronchus intermedius on the right

#8 (Left/Right) Para-esophageal nodes (below carina)

Nodes lying adjacent to the wall of the esophagus and to the right or left of the midline, excluding subcarinal nodes

Upper border: The upper border of the lower lobe bronchus on the left; the lower border of the bronchus intermedius on the right

Lower border: The diaphragm

#9 (Left/Right) Pulmonary ligament nodes

Nodes lying within the pulmonary ligament

Upper border: The inferior pulmonary vein

Lower border: The diaphragm

#10 (Left/Right) Hilar nodes

Includes nodes immediately adjacent to the mainstem bronchus and hilar vessels including the proximal portions of the pulmonary veins and main pulmonary artery

Upper border: The lower rim of the azygos vein on the right; upper rim of the pulmonary artery on the left

Lower border: Interlobar region bilaterally

#11 Interlobar nodes

Between the origin of the lobar bronchi

*#11s: Between the upper lobe bronchus and bronchus intermedius on the right

*#11i: Between the middle and lower lobe bronchi on the right

*optional sub-categories

#12 Lobar nodes

Adjacent to the lobar bronchi

#13 Segmental nodes

Adjacent to the segmental bronchi

#14 Sub-segmental nodes

Adjacent to the subsegmental bronchi



Lung Cancer TNM Stages–9th Edition

Stage Groups of the 9th Edition of the Tumor, Node, Metastasis (TNM) Classification of Lung Cancer

9th Edition TNM Descriptors and Stages						
T/M	Categories and Descriptors	N0	N1	N2		N3
				N2a	N2b	
T1	T1a ≤1 cm	IA1	IIA	IIB	IIIA	IIIB
	T1b >1 to ≤2 cm	IA2	IIA	IIB	IIIA	IIIB
	T1c >2 to ≤3 cm	IA3	IIA	IIB	IIIA	IIIB
T2	T2a Visceral pleura / central invasion	IB	IIB	IIIA	IIIB	IIIC
	T2a >3 to ≤4 cm	IB	IIB	IIIA	IIIB	IIIC
	T2b >4 to ≤5 cm	IIA	IIB	IIIA	IIIB	IIIC
T3	T3 >5 to ≤7 cm	IIB	IIIA	IIIA	IIIB	IIIC
	T3 Invasion	IIB	IIIA	IIIA	IIIB	IIIC
	T3 Same lobe separate tumor nodules	IIB	IIIA	IIIA	IIIB	IIIC
T4	T4 >7 cm	IIIA	IIIA	IIIB	IIIB	IIIC
	T4 Invasion	IIIA	IIIA	IIIB	IIIB	IIIC
	T4 Ipsilateral separate tumor nodules	IIIA	IIIA	IIIB	IIIB	IIIC
M1	M1a Contralateral tumor nodules	IVA	IVA	IVA	IVA	IVA
	M1a Pleural / pericardial effusion, nodules	IVA	IVA	IVA	IVA	IVA
	M1b Single extrathoracic metastasis	IVA	IVA	IVA	IVA	IVA
	M1c1 Multiple metastases in 1 organ system	IVB	IVB	IVB	IVB	IVB
	M1c2 Multiple metastases in >1 organ systems	IVB	IVB	IVB	IVB	IVB

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