

**Clinical cases : TNM staging quiz**

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Brussels, Belgium**

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**OLD T: extent of primary tumor**

- T0: no tumor evidence
- Tis: carcinoma *in situ*
- T1: size ≤ 3 cm without invasion of pleura and without endoscopic invasion more proximal than lobar bronchus
- T2: size > 3 cm
  - or involvement of mainstem bronchus ≥ 2 cm from carina
  - or invasion of visceral pleura
  - or association with atelectasis or obstructive pneumonitis extending to hilum
- T3: invasion of chest wall or diaphragm or mediastinal pleura or parietal pericardium
  - or endoscopic invasion <2 cm of the carina without carina invasion
  - or entire lung atelectasis or pneumonia
- T4: invasion of mediastinum, heart, great vessels, trachea, esophagus, vertebral body or carina
  - or malignant pleural or pericardial effusion
  - or satellite node within ipsilateral primary tumor lobe

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**OLD N: extent of regional lymph node involvement**

- N0: no regional lymph node involvement
- N1: ipsilateral lymph nodes, either
  - peribronchial
  - intrapulmonary
  - hilar
- N2: ipsilateral mediastinal lymph nodes or subcarinal lymph nodes
- N3:
  - contralateral lymph nodes, either
    - mediastinal
    - hilar
  - ipsi or contralateral scalene or supraclavicular lymph nodes

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 **OLD M: presence of distant metastasis**

●MO: no (known) metastasis

●M1: metastasis  
Ipsilateral satellite nodule in a different lobe from the primary tumor is M1

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 **OLD: Disease stage**

●Stage 0: TisN0M0

●Stage IA: T1N0M0  
IB: T2N0M0

●Stage IIA: T1N1M0  
IIB: T2N1M0  
T3N0M0

●Stage IIIA: T3N1M0  
T3N2M0  
T1N2M0  
T2N2M0

●IIB: any T4, any N3, M0

●Stage IV: any T, any N, M1

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 **New : proposed definitions for T descriptor**

●TX Primary tumor cannot be assessed, or tumor proven by the presence of malignant cells in sputum or bronchial washings but not visualized by imaging or bronchoscopy

●T0 No evidence of primary tumor

●Tis Carcinoma in situ

●T1 Tumor ≤3 cm in greatest dimension, surrounded by lung or visceral pleura, without bronchoscopic evidence of invasion more proximal than the lobar bronchus (i.e., not in the main bronchus)

●T1a Tumor ≤ 2 cm in greatest dimension

●T1b Tumor >2 cm but ≤3 cm in greatest dimension

●T2 Tumor >3 cm but ≤7 cm or tumor with any of the following features (T2 tumors with these features are classified T2a if ≤5 cm)

- Involves main bronchus, ≥2 cm distal to the carina
- Invades visceral pleura
- Associated with atelectasis or obstructive pneumonitis that extends to the hilar region but does not involve the entire lung

●T2a Tumor >3 cm but ≤ 5 cm in greatest dimension

●T2b Tumor >5 cm but ≤ 7 cm in greatest dimension

●T3 Tumor >7 cm or one that directly invades any of the following: chest wall (including superior sulcus tumors), diaphragm, phrenic nerve, mediastinal pleura, parietal pericardium; or tumor in the main bronchus < 2 cm distal to the carina but without involvement of the carina or associated atelectasis or obstructive pneumonitis of the entire lung or separate tumor nodule(s) in the same lobe

●T4 Tumor of any size that invades any of the following: mediastinum, heart, great vessels, trachea, recurrent laryngeal nerve, esophagus, vertebral body, carina; separate tumor nodule(s) in a different ipsilateral lobe

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**New : Proposed definitions for N and M descriptors**

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Metastasis in ipsilateral peribronchial and/or ipsilateral hilar lymph nodes and intrapulmonary nodes, including involvement by direct extension
- N2 Metastasis in ipsilateral mediastinal and/or subcarinal lymph node(s)
- N3 Metastasis in contralateral mediastinal, contralateral hilar, ipsilateral or contralateral scalene, or supraclavicular lymph node(s)
- MX Distant metastasis cannot be assessed
- M0 No distant metastasis
- M1 Distant metastasis
- M1a Separate tumor nodule(s) in a contralateral lobe; tumor with pleural nodules or malignant pleural (or pericardial) effusion
- M1b Distant metastasis

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**New : Proposed TNM stage grouping**

Occult carcinoma	TX	N0	M0
Stage 0	Tis	N0	M0
Stage IA	Any T1	N0	M0
Stage IB	T2a	N0	M0
Stage IIA	Any T1	N1	M0
	T2a	N1	M0
	T2b	N0	M0
Stage IIB	T2b	N1	M0
	T3	N0	M0
Stage IIIA	T1,T2,T3	N2	M0
	T3	N1	M0
	T4	N0,N1	M0
Stage IIIB	T4	N2	M0
	Any T	N3	M0
Stage IV	Any T	Any N	M1a or b

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**OLD STAGING SYSTEM : Tumor, 3 cms with ipsilateral hilar lymph nodes and contralateral nodule is....**

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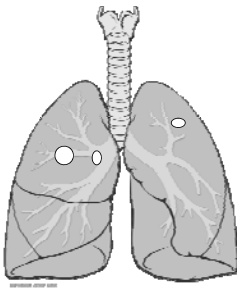
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**OLD STAGING SYSTEM** : Tumor, 3 cms with ipsilateral hilar lymph nodes and contralateral nodule is....



T1 N1 M1

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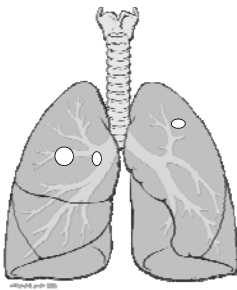
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**NEW STAGING SYSTEM**: Tumor, 3 cms with ipsilateral hilar lymph nodes and contralateral nodule is....



1.T2a N1 M1a  
2.T2a N1 M1b  
3.T1b N1 M1a  
4.T1b N1 M1b

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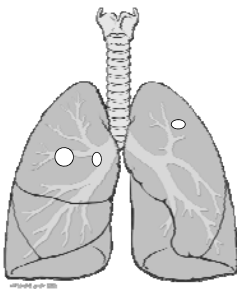
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**NEW STAGING SYSTEM** : Tumor, 3 cms with ipsilateral hilar lymph nodes and contralateral nodule is....



1.T2a N1 M1a  
2.T2a N1 M1b  
**3.T1b N1 M1a**  
4.T1b N1 M1b

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**New : proposed definitions for T descriptor**

- TX Primary tumor cannot be assessed, or tumor proven by the presence of malignant cells in sputum or bronchial washings but not visualized by imaging or bronchoscopy
- T0 No evidence of primary tumor
- Tis Carcinoma in situ
- T1 Tumor ≤3 cm in greatest dimension, surrounded by lung or visceral pleura, without bronchoscopic evidence of invasion more proximal than the lobar bronchus (i.e., not in the main bronchus)
  - T1a Tumor ≤ 2 cm in greatest dimension
  - T1b Tumor >2 cm but ≤3 cm in greatest dimension
- T2 Tumor >3 cm but ≤7 cm or tumor with any of the following features (T2 tumors with these features are classified T2a if ≤5 cm)
  - Involves main bronchus, ≥2 cm distal to the carina
  - Invades visceral pleura
  - Associated with atelectasis or obstructive pneumonitis that extends to the hilar region but does not involve the entire lung
- T2a Tumor >3 cm but ≤ 5 cm in greatest dimension
- T2b Tumor >5 cm but ≤ 7 cm in greatest dimension
- T3 Tumor >7 cm or one that directly invades any of the following: chest wall (including superior sulcus tumors), diaphragm, phrenic nerve, mediastinal pleura, parietal pericardium; or tumor in the main bronchus < 2 cm distal to the carina but without involvement of the carina; or associated atelectasis or obstructive pneumonitis of the entire lung or separate tumor nodule(s) in the same lobe
- T4 Tumor of any size that invades any of the following: mediastinum, heart, great vessels, trachea, recurrent laryngeal nerve, esophagus, vertebral body, carina; separate tumor nodule(s) in a different ipsilateral lobe

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**New : Proposed definitions for N and M descriptors**

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Metastasis in ipsilateral peribronchial and/or ipsilateral hilar lymph nodes and intrapulmonary nodes, including involvement by direct extension
- N2 Metastasis in ipsilateral mediastinal and/or subcarinal lymph node(s)
- N3 Metastasis in contralateral mediastinal, contralateral hilar, ipsilateral or contralateral scalene, or supraclavicular lymph node(s)
- MX Distant metastasis cannot be assessed
- M0 No distant metastasis
- M1 Distant metastasis
  - M1a Separate tumor nodule(s) in a contralateral lobe; tumor with pleural nodules or malignant pleural (or pericardial) effusion
  - M1b Distant metastasis

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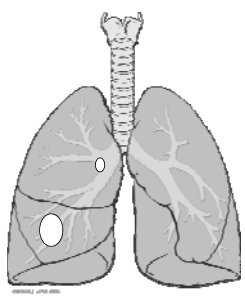
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**OLD STAGING SYSTEM / Tumor, 3.5 cms with ipsilateral lymph node and without metastasis belongs to (STAGE)...**



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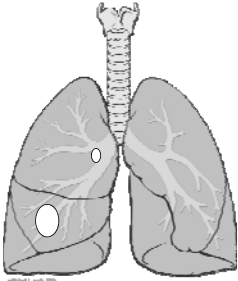
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**OLD STAGING SYSTEM / Tumor, 3.5 cms with ipsilateral lymph node and without metastasis belongs to (STAGE)...**



●T2N1M0 (STAGE IIB)

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**OLD: Disease stage**

- Stage 0: TisN0M0
- Stage IA: T1N0M0
- IB: T2N0M0
- Stage IIA: T1N1M0
- IIB: T2N1M0
- T3N0M0
- Stage IIIA: T3N1M0
- T3N2M0
- T1N2M0
- T2N2M0
- IIIB: any T4, any N3, M0
- Stage IV: any T, any N, M1

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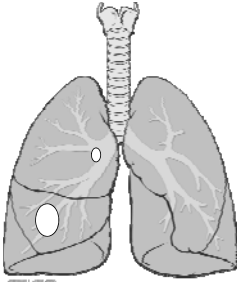
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**NEW STAGING SYSTEM: Tumor, 3.5 cms with ipsilateral lymph node and without metastasis belongs to...**



1.Stage IA  
2.Stage IB  
3.Stage IIA  
4.Stage IIB

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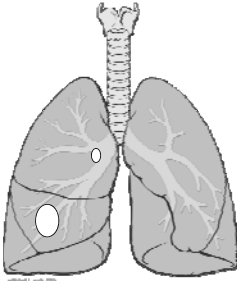
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**NEW STAGING SYSTEM:** Tumor, 3.5 cms with ipsilateral lymph node and without metastasis belongs to...



1. Stage IA
2. Stage IB
- 3. Stage IIA**
4. Stage IIB

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**New : Proposed TNM stage grouping**

Occult carcinoma	TX	N0	M0
Stage 0	Tis	N0	M0
Stage IA	Any T1	N0	M0
Stage IB	T2a	N0	M0
Stage IIA	Any T1	N1	M0
	T2a	N1	M0
	T2b	N0	M0
Stage IIB	T2b	N1	M0
	T3	N0	M0
Stage IIIA	T1,T2,T3	N2	M0
	T3	N1	M0
	T4	N0,N1	M0
Stage IIIB	T4	N2	M0
	Any T	N3	M0
Stage IV	Any T	Any N	M1a or b

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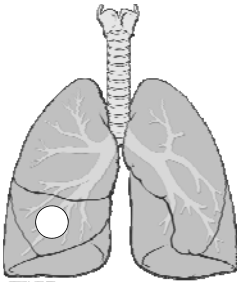
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**OLD STAGING SYSTEM:** Tumor, 5.5 cms without lymph node and without metastasis belongs to (Stage)...



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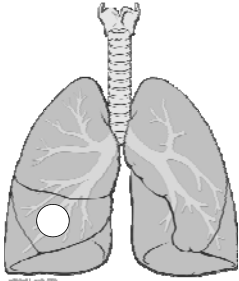
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**OLD STAGING SYSTEM: Tumor, 5.5 cms without lymph node and without metastasis belongs to...**



● T2N0M0 (Stage IB)

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**OLD: Disease stage**

- Stage 0: TisN0M0
- Stage IA: T1N0M0
- IB: T2N0M0
- Stage IIA: T1N1M0
- IIB: T2N1M0
- T3N0M0
- Stage IIIA: T3N1M0
- T3N2M0
- T1N2M0
- T2N2M0
- Stage IIIB: any T4, any N3, M0
- Stage IV: any T, any N, M1

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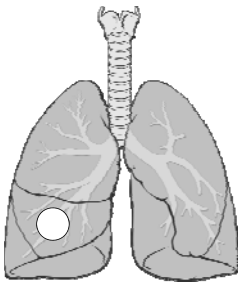
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**NEW STAGING SYSTEM : Tumor, 5.5 cms without lymph node and without metastasis belongs to...**



1. Stage IA  
2. Stage IB  
3. Stage IIA  
4. Stage IIB

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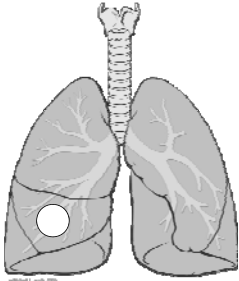
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**Tumor, 5.5 cms without lymph node and without metastasis belongs to...**



1. Stage IA  
 2. Stage IB  
**3. Stage IIA**  
 4. Stage IIB

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**New : Proposed TNM stage grouping**

Occult carcinoma	TX	N0	M0
Stage 0	Tis	N0	M0
Stage IA	Any T1	N0	M0
Stage IB	T2a	N0	M0
Stage IIA	Any T1	N1	M0
	T2a	N1	M0
	T2b	N0	M0
Stage IIB	T2b	N1	M0
	T3	N0	M0
Stage IIIA	T1,T2,T3	N2	M0
	T3	N1	M0
	T4	N0,N1	M0
Stage IIIB	T4	N2	M0
	Any T	N3	M0
Stage IV	Any T	Any N	M1a or b

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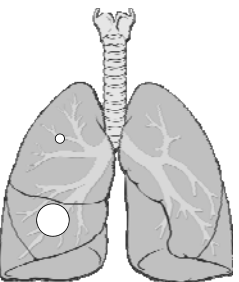
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**OLD STAGING SYSTEM: Tumor, 5.5 cms, with ipsilateral nodule and without lymph node and without metastasis is...**



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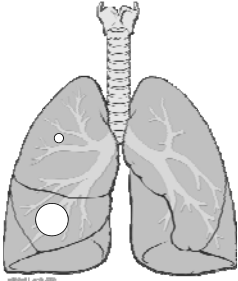
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**OLD STAGING SYSTEM:** Tumor, 5.5 cms, with ipsilateral nodule and without lymph node and without metastasis is...



● T2N0M1

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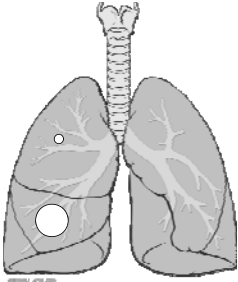
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**NEW STAGING SYSTEM:** Tumor, 5.5 cms, with ipsilateral nodule and without lymph node and without metastasis is...



1. T2aN0M1  
2. T4N0M0  
3. T3N0M0  
4. T2bN0M1

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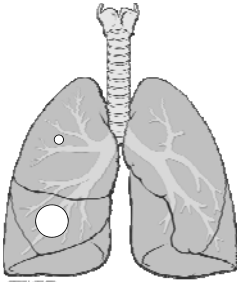
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**NEW STAGING SYSTEM:** Tumor, 5.5 cms, with ipsilateral nodule and without lymph node and without metastasis is...



1. T2aN0M1  
**2. T4N0M0**  
3. T3N0M0  
4. T2bN0M1

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**New : proposed definitions for T descriptor**

- TX Primary tumor cannot be assessed, or tumor proven by the presence of malignant cells in sputum or bronchial washings but not visualized by imaging or bronchoscopy
- T0 No evidence of primary tumor
- Tis Carcinoma in situ
- T1 Tumor ≤3 cm in greatest dimension, surrounded by lung or visceral pleura, without bronchoscopic evidence of invasion more proximal than the lobar bronchus (i.e., not in the main bronchus)
  - T1a Tumor ≤ 2 cm in greatest dimension
  - T1b Tumor >2 cm but ≤3 cm in greatest dimension
- T2 Tumor >3 cm but ≤7 cm or tumor with any of the following features (T2 tumors with these features are classified T2a if ≤5 cm)
  - Involves main bronchus, ≥2 cm distal to the carina
  - Invades visceral pleura
  - Associated with atelectasis or obstructive pneumonitis that extends to the hilar region but does not involve the entire lung
- T2a Tumor >3 cm but ≤ 5 cm in greatest dimension
- T2b Tumor >5 cm but ≤ 7 cm in greatest dimension
- T3 Tumor >7 cm or one that directly invades any of the following: chest wall (including superior sulcus tumors), diaphragm, phrenic nerve, mediastinal pleura, parietal pericardium; or tumor in the main bronchus < 2 cm distal to the carina but without involvement of the carina; or associated atelectasis or obstructive pneumonitis of the entire lung or separate tumor nodule(s) in the same lobe
- T4 Tumor of any size that invades any of the following: mediastinum, heart, great vessels, trachea, recurrent laryngeal nerve, esophagus, vertebral body, carina; separate tumor nodule(s) in a different ipsilateral lobe

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**New : Proposed definitions for N and M descriptors**

- NX Regional lymph nodes cannot be assessed
- N0 No regional lymph node metastasis
- N1 Metastasis in ipsilateral peribronchial and/or ipsilateral hilar lymph nodes and intrapulmonary nodes, including involvement by direct extension
- N2 Metastasis in ipsilateral mediastinal and/or subcarinal lymph node(s)
- N3 Metastasis in contralateral mediastinal, contralateral hilar, ipsilateral or contralateral scalene, or supraclavicular lymph node(s)
- MX Distant metastasis cannot be assessed
- M0 No distant metastasis
- M1 Distant metastasis
  - M1a Separate tumor nodule(s) in a contralateral lobe; tumor with pleural nodules or malignant pleural (or pericardial) effusion
  - M1b Distant metastasis

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**OLD STAGING SYSTEM : Tumor, 7.5 cms with contralateral hilar lymph nodes, contralateral lung nodule and ipsilateral pleural effusion is....**

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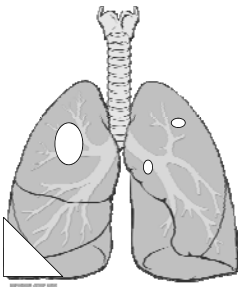
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**OLD STAGING SYSTEM** : Tumor, 7.5 cms with contralateral hilar lymph nodes, contralateral lung nodule and ipsilateral pleural effusion is....



T4 N3 M1

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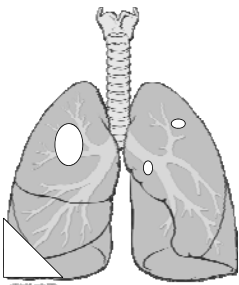
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**NEW STAGING SYSTEM** : Tumor, 7.5 cms with contralateral hilar lymph nodes, contralateral lung nodule and ipsilateral pleural effusion is....



1.T2a N2 M1a  
2.T3 N3 M1a  
3.T3 N3 M1b  
4.T4 N3 M1a

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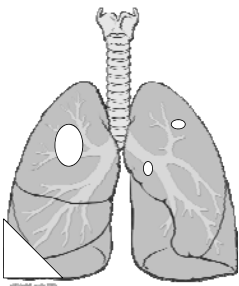
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**Tumor, 7.5 cms with contralateral hilar lymph nodes, contralateral lung nodule and ipsilateral pleural effusion is....**



1.T2a N2 M1a  
**2.T3 N3 M1a**  
3.T3 N3 M1b  
4.T4 N3 M1a

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 **New : proposed definitions for T descriptor**

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- **Tis** Carcinoma in situ
- **T1** Tumor ≤3 cm in greatest dimension, surrounded by lung or visceral pleura, without bronchoscopic evidence of invasion more proximal than the lobar bronchus (i.e., not in the main bronchus)
  - **T1a** Tumor ≤ 2 cm in greatest dimension
  - **T1b** Tumor >2 cm but ≤3 cm in greatest dimension
- **T2** Tumor >3 cm but ≤7 cm or tumor with any of the following features (T2 tumors with these features are classified T2a if ≤5 cm)
  - Involves main bronchus, ≥2 cm distal to the carina
  - Invades visceral pleura
  - Associated with atelectasis or obstructive pneumonitis that extends to the hilar region but does not involve the entire lung
- **T2a** Tumor >3 cm but ≤ 5 cm in greatest dimension
- **T2b** Tumor >5 cm but ≤ 7 cm in greatest dimension
- **T3** Tumor >7 cm or one that directly invades any of the following: chest wall (including superior sulcus tumors), diaphragm, phrenic nerve, mediastinal pleura, parietal pericardium; or tumor in the main bronchus < 2 cm distal to the carina but without involvement of the carina; or associated atelectasis or obstructive pneumonitis of the entire lung or separate tumor nodule(s) in the same lobe
- **T4** Tumor of any size that invades any of the following: mediastinum, heart, great vessels, trachea, recurrent laryngeal nerve, esophagus, vertebral body, carina; separate tumor nodule(s) in a different ipsilateral lobe

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 **New : Proposed definitions for N and M descriptors**

- **NX** Regional lymph nodes cannot be assessed
- **N0** No regional lymph node metastasis
- **N1** Metastasis in ipsilateral peribronchial and/or ipsilateral hilar lymph nodes and intrapulmonary nodes, including involvement by direct extension
- **N2** Metastasis in ipsilateral mediastinal and/or subcarinal lymph node(s)
- **N3** Metastasis in contralateral mediastinal, contralateral hilar, ipsilateral or contralateral scalene, or supraclavicular lymph node(s)
- **MX** Distant metastasis cannot be assessed
- **M0** No distant metastasis
- **M1** Distant metastasis
- **M1a** Separate tumor nodule(s) in a contralateral lobe; tumor with pleural nodules or malignant pleural (or pericardial) effusion
- **M1b** Distant metastasis

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 **●Thank you !**

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