TABLE 3. Proposed Definitions for T, N, and M Descriptors

T (Primary Tumor)	
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)[a]
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[a] 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
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 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)
M (Distant Metastasis)	
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[b]
M1b	Distant metastasis

[a] The uncommon superficial spreading tumor of any size with its invasive component limited to the bronchial wall, which may extend proximally to the main bronchus, is also classified as T1.

[b] Most pleural (and pericardial) effusions with lung cancer are due to tumor. In a few patients, however, multiple cytopathologic examinations of pleural (pericardial) fluid are negative for tumor, and the fluid is nonbloody and is not an exudate. Where these elements and clinical judgment dictate that the effusion is not related to the tumor, the effusion should be excluded as a staging element and the patient should be classified as T1, T2, T3, or T4.

TABLE 4. Descriptors, Proposed T and M Categories, and Proposed Stage Groupings

Sixth Edition T/M Descriptor	Proposed T/M	N0	N1	N2	N3
T1 (≤2 cm)	T1a	IA	IIA	IIIA	IIIB
T1 (>2–3 cm)	T1b	IA	IIA	IIIA	IIIB
T2 (≤5 cm)	T2a	IB	**IIA**	IIIA	IIIB
T2 (>5–7 cm)	T2b	**IIA**	IIB	IIIA	IIIB
T2 (>7 cm)	T3	**IIB**	**IIIA**	IIIA	IIIB
T3 invasion		IIB	IIIA	IIIA	IIIB
T4 (same lobe nodules)		**IIB**	**IIIA**	**IIIA**	IIIB
T4 (extension)	T4	**IIIA**	**IIIA**	IIIB	IIIB
M1 (ipsilateral lung)		**IIIA**	**IIIA**	**IIIB**	**IIIB**
T4 (pleural effusion)	M1a	**IV**	**IV**	**IV**	**IV**
M1 (contralateral lung)		IV	IV	IV	IV
M1 (distant)	M1b	IV	IV	IV	IV

Cells in bold indicate a change from the sixth edition for a particular TNM category.

those cases with additional tumor nodules in the same lobe as the primary are moved to T3 from T4 as proposed, then such cases move from stage IIIB to IIB if node negative and to stage IIIA if associated with N1 or N2 disease. The changes to the T4 descriptor, the removal of cases with additional tumor nodules in the lobe of the primary and cases with pleural or pericardial disease, and the addition of cases with additional tumor nodules in other ipsilateral lobes result in a lower stage being assigned to most TNM subsets containing the T4 descriptor. Those cases with pleural or pericardial disease, if assigned to an M descriptor, would consequently fall within stage IV disease.

Figures 2 and 3 show survival by stage according to the sixth edition of TNM and by the newly proposed TNM stage based on the entire set of cases available for reclassification. (Cases without data on age, sex, and histology are excluded.) Tables 6 and 7 show the statistics from Cox proportional hazards regression modeling of the sixth edition of TNM and the proposed new system for clinical and pathologic stage, respectively. Stage was parameterized both as a set of indicator variables and also by ordered variables (Tables 6 and 7), adjusted for cell type, sex, region, and age (younger than 60 versus 60 and older).

The proposed system better delineates the early stage cases, where problems with overlap between IB and IIA have been noted with the sixth edition of TNM[8] and are clearly seen here on clinical staging. Improvement is also seen in the distinction between clinical IIA and IIB, as well as the proportion of cases assigned to stage IIA (a weakness of the sixth edition of TNM).

For both the clinical and pathologic stage models, there is an increase in the value for R^2, an estimate of the percentage of variance explained by the model.[9] The new system makes use of well-justified changes to T and M and may serve to identify subsets of patients with tumors of different sizes with differing prognoses. Both the proposed new system and the sixth edition of TNM yielded a reversal on pathologic staging from the expected hazards for advanced stage disease

