

# New Staging System to Guide Lung Ca Therapy

BY BETSY BATES

SAN FRANCISCO — A revolutionary new staging system for lung cancer will profoundly influence treatment decisions and patients' eligibility for clinical trials.

Fully one in six lung cancer patients will receive a different staging category based on the 7th edition of the tumor, node, metastases (TNM) staging system, Dr. Peter Goldstraw, chair of the staging project of the International Association for the Study of Lung Cancer (IASLC), reported at the association's World Conference on Lung Cancer.

"Some of these patients, if not the majority of these patients, will therefore be considered for different modalities of care, and—commonly now, of course—multimodality care," said Dr. Goldstraw, consultant and professor of thoracic surgery at Royal Brompton Hospital in London.

The revisions to the TNM system are based on multidisciplinary contributions from the world lung cancer community, drawing on data from more than 100,000 lung cancer cases from 46 centers in 19 countries. The IASLC led the revision effort, but both the International Union Against Cancer (UICC) and the American Joint Committee on Cancer (AJCC) have accepted the recommendations.

"This represents the first real change [in staging] for the last 20 years ... [and a] radical departure from the past," Dr. Goldstraw said during a press briefing.

In the past, staging classifications were dictated by a small panel of experts, mostly surgeons, and were based on limited numbers of mostly surgical patients, he explained.

For staging non-small cell lung cancer (NSCLC), new subcategories of stage T1 (early-stage) disease are based on size: Tumors measuring 2 cm or smaller will now be classified as T1a, whereas tumors larger than 2 cm and up to 3 cm will be classified as T1b. T2 disease will also be subdivided into T2a (tumors larger than 3 cm and up to 5 cm) and T2b (tumors larger than 5 cm and up to 7

cm). A new category (T3) will be used to describe tumors larger than 7 cm.

The "N" classification within TNM that describes the number of involved lymph nodes will remain unchanged in the 7th edition.

"We should recognize that this simple statement reflects an enormous step forward, because this is the first time that these 'N' descriptions we have been using for decades have actually been validated," Dr. Goldstraw said. The "N" subcommittee, after exhaustive review, concluded that the current system is accurate and required no revisions, he explained.

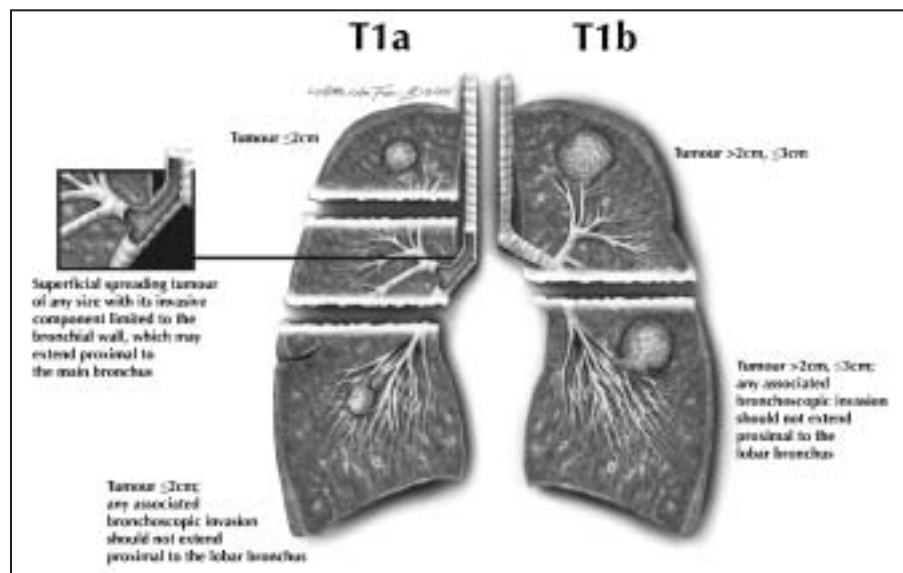
By analyzing survival in large databases based on tumor size and disease proliferation, the new staging system is expected to assess an individual patient's prognosis more accurately. It promises to considerably alter the discussion between clinicians and patients about the potential advantages of surgery, radiation, and/or chemotherapy, as well as to better categorize patients enrolled in clinical trials.

For example, patients who are downstaged because additional tumors are found in the same lobe as the primary tumor may now be considered candidates for adjunctive chemotherapy along with surgery. Similarly, there may be a greater role for surgery in patients with metastatic nodules in the bilateral lobe who previously would have been assigned a stage IV diagnosis, but are now stage IIIA.

The multidisciplinary nature of the new system is evident in the specificity of pathological and radiologic parameters used to characterize each stage of disease.

"Pathologists asked us to look at the issue of visceral pleural invasion," Dr. Goldstraw said. In the past, this has been difficult to define and categorize, he explained; as a result, a uniform definition has now been agreed upon for the first time.

The new guidelines address a host of prognostic variables, including performance status, age, sex, laboratory values,



**New subcategories of stage T1 disease based on tumor size have been created in an effort to more accurately assess an individual patient's prognosis.**

initial maximum standard uptake variable on initial PET scan, and biological markers.

In addition to changes in the staging of NSCLC, analysis of more than 13,000 cases of small cell lung cancer (SCLC)—the largest such database in the world—reaffirmed the usefulness of the TNM system in that disease.

Previously, staging guidelines for SCLC were used primarily by surgeons, whereas medical oncologists have tended to simply dichotomize patients as having extensive or limited disease, Dr. Goldstraw explained during the press briefing.

Upcoming steps in efforts to modernize lung cancer staging will include the correction of geographical and treatment biases within retrospective data, the inclusion of prospective data based on the new staging system, implementation of a Web-based system for world data collection, and the extension of staging updates to include neuroendocrine tumors and mesothelioma.

Dr. Edward F. Patz Jr., professor of radiology, pharmacology, and cancer biology at Duke University in Durham,

N.C., said the new size criteria within the guidelines will require precise specificity by radiologists.

"We need to be enormously careful about this," he said, cautioning that an overenthusiastic reading of tiny, likely benign nodules could serve to up-stage a patient, with significant treatment implications. "You can't write the patient off, because we do see small nodules," he said.

Dr. Patz recalled a mentor once telling him, "A radiologist with a ruler is a radiologist in trouble." He urged colleagues to be circumspect in writing their reports, and simply characterize what they see rather than make inferences about the malignant potential of the small lesions on a scan.

He also warned that current imaging modalities are not uniformly accurate when it comes to lymph nodes and nodal groups. CT scans are about 60% sensitive and specific in identifying involved nodes; PET scans increase the accuracy to about 80%. ■

A related video is at [www.youtube.com/InternalMedicineNews](http://www.youtube.com/InternalMedicineNews) (search for 68642).

## Lung Cancer Symptom Survey Will Include New Factors

BY ROBERT FINN

SAN FRANCISCO — A Web-based survey of 660 patients with lung cancer will lead to four items being added to a widely used quality of life measure, according to a report at the World Conference on Lung Cancer.

Independence, sleep, anxiety, and depression will be included in the Lung Cancer Symptom Survey (LCSS), which has been unchanged for 20 years, said Dr. Richard J. Gralla, who led the study.

The anonymous survey was conducted among patients with lung cancer who registered with NexCura Inc., which provides Web-based tools to assist patients, caregivers, and providers in making evidence-based decisions. It was posted for 1 week in mid-2007 at [www.nexcura.com](http://www.nexcura.com), and was completed by 660 people.

The respondents' median age was 62 years, 55% were female, and 77% reported having non-small cell lung cancer. In all, 25% of the patients reported having metastatic (stage IV) disease, 35% reported locally ad-

vanced (stage III) disease, 34% said they had no current evidence of disease, and 6% said they didn't know the extent of their disease, reported Dr. Gralla, chief of hematology and oncology at North Shore University Hospital in Manhasset, N.Y., and Long Island Jewish Medical Center in New Hyde Park, N.Y. He is a member of NexCura's medical editorial board.

At the time of the survey, 63% had received their diagnosis less than 1 year previously, 24% received it 1-2 years previously, and the remaining 13% had survived more than 2 years since their diagnosis.

Of 20 factors included in the survey, the top five that were rated as very important or most important were quality of life (80% of patients), independence (71%), not being a burden to others (65%), ability to perform normal activities (64%), and ability to sleep (63%). "We were surprised that the top five items were not symptoms of lung cancer," Dr. Gralla said. "They're more global issues, and the symptoms come in a little bit lower" on the scale.

The next five factors were pain (59%), fatigue (58%),

shortness of breath (58%), hemoptysis (58%), and depression (47%). Rated lowest were sexual difficulties (20% of patients ranked this as very important or most important), hoarseness (27%), problems with urination (27%), cough (28%), and meaning of life (32%).

Dr. Gralla acknowledged the limitations of the Web-based survey: Patients had to have access to a computer and some computer literacy. They had to have enough interest in their disease to go online for information and to complete a survey. And, as with all such surveys, patients who were very ill were less able to participate.

Still, the LCSS update is likely to be influential. "This hopefully will have some influence on how the [Food and Drug Administration] looks at evaluation of new drugs," Dr. Gralla said at the meeting, sponsored by the International Association for the Study of Lung Cancer.

Dr. Gralla stated that he serves as an adviser on lung cancer to NexCura, and two of the four authors of the study are NexCura employees. The study received no specific funding. ■