

Lung cancer radiation uses questioned

A review of cancer studies over the past 30 years yields disturbing results about the use of radiation to treat some types of lung cancer.

Data from nine studies of patients with non-small-cell lung cancers show that radiation treatments after surgery actually hurt the survival chances of many patients, particularly those whose cancer hadn't spread initially. The findings appear in the July 25 LANCET.

Non-small-cell malignancies include about a dozen forms of lung cancer and account for 80 percent of cases. Of these, about a fifth are treatable with surgery, which may be followed by radiation treatment or chemotherapy.

Lesley A. Stewart of the Medical Research Council Cancer Trials Office in Cambridge, England, and her colleagues examined data on 2,128 patients in several countries. About half had been randomly assigned to receive post-operative radiotherapy. This group included some patients whose lung cancers had not spread to lymph nodes.

The survival rate 2 years after surgery was 48 percent for those getting radiation treatments and 55 percent for surgery-only patients. The sole study showing a clear benefit of radiation examined only patients with advanced cancer. The greatest detriments of radiation treatment showed up in three studies that included patients whose cancer hadn't spread to lymph nodes.

"In centers where radiotherapy might be given routinely for non-small-cell lung cancer, [doctors] may have to rethink their standard policy," says Stewart, a biologist and statistician.

Many physicians have already done so, says Allen S. Lichter, a radiation oncologist at the University of Michigan Medical Center in Ann Arbor.

"No one I know recommends radiating patients with [limited] disease," Lichter says. Instead, doctors now use radiation after surgery mainly to combat tumors that the surgeon could not reach or cancer that had spread to lymph nodes in and around the lungs, he says.

The treatments examined in the study have been modified in recent years, Lichter says. Diagnostic advances in using CT scans to pinpoint lymph node location, as well as improvements in beaming radiation accurately onto a tumor or cancerous lymph node, have greatly improved the effectiveness of radiation against lung cancer and lessened its risks. Also, Lichter notes, "we're treating smaller volumes [of tissue] in patients than we did in the past.

"I worry that a person not involved in this field might read this paper and conclude that patients with lung cancer operations should not get radiated," he says.

In a commentary accompanying the study, Alastair J. Munro of Ninewells Hospital in Dundee, Scotland, suggests that radiation doses used after lung cancer surgery "have been too high" in the past, apparently to the point of being toxic. Overtreatment can bring on radiation pneumonitis, which mimics bronchopneumonia. Deaths attributed to complications of cancer may in fact be due to the radiation, he suggests.

—N. Seppa