

Lower incidence of esophagitis in elderly NSCLC patients undergoing definitive radiation

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Elderly non-small cell lung cancer (NSCLC) patients undergoing definitive radiation have a lower incidence of esophagitis compared to younger patients and tolerate aggressive standard treatment regimens.

Lung cancer is the leading cause of cancer deaths worldwide, causing more deaths than breast, colon, and prostate cancers combined. NSCLC is the most common type of [lung cancer](#), accounting for roughly 85% of lung cancers. A large proportion of [patients](#) with lung cancer are elderly, over the age of 65, and are often poorly represented in clinical trials, undertreated, or don't receive aggressive standard treatment due to concerns about their ability to tolerate aggressive treatment regimens. While [elderly patients](#) are not different than younger patients in their willingness to accept aggressive treatment, even elderly patients with good performance status and lack of comorbidities are less likely than younger patients to be offered aggressive treatments on the basis of age. Radiotherapy is the standard treatment regimen for locally advanced NSCLC, but can lead to esophagitis and [radiation](#) pneumonitis, which are potentially life-altering toxicities of thoracic radiation.

A group of researchers in the United States conducted a study to evaluate elderly patients undergoing definitive lung radiation to assess how the elderly tolerate treatment compared to younger patients. Patients undergoing definitive radiation for lung cancer with or without chemotherapy from 2004-2013 were identified from a prospective

institutional database in which patients of all ages were eligible for inclusion (UM cohort). Patients were excluded if they were treated with stereotactic body radiation therapy (SBRT) or if complete dosimetric information was not available for review. Logistic regression modeling was performed to assess the impact of age on esophagitis grade ≥ 3 or ≥ 2 and pneumonitis grade ≥ 3 or ≥ 2 , adjusting for esophageal and lung dose, chemotherapy utilization, smoking status, and performance status. The analysis was validated in a large cohort of 691 patients from the Michigan Radiation Oncology Quality Consortium (MROQC) registry, an independent state-wide prospective database.

The results of the study published in the Journal of Thoracic Oncology, the official journal of the International Association for the Study of Lung Cancer (IASLC), reported that there were 179 patients extracted from the UM cohort, of which, after exclusions, 125 patients with lung cancer were included in the analysis. The median age in the UM cohort was 66, with 34% of the patients older than 70. Among the 125 patients in the UM cohort, 49 (39%) experienced grade ≥ 2 and 14 (11%) experienced grade ≥ 3 esophagitis. Of the 125 patients, 82 patients were

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