0 to 1. The median radiation dose was 50.4 cGy (range, 45 to 59.4 cGy); 51% of patients received PF while 49% received PT. Most patients had adenocarcinoma (93%) of the esophagus and were male (86%) with a median age of 65 (range, 29 to 78). Follow-up assessments were examined, and perioperative complications were categorized as composite toxicity (hospital readmission) or acute toxicities in the pulmonary, cardiac, and gastrointestinal systems.

There was no difference in overall survival in PF versus PT patients (76% vs 70%; $P = .70$). Pathologic complete response was similar in patients treated with PF and PT (24% vs 25%; $P = .91$). There were also comparable rates of locoregional recurrence (18% vs 10%; $P = .28$) and distant metastases (22% vs 18%; $P = .65$).

There were no significant differences in baseline characteristics between the 2 groups or in pulmonary, cardiac, or gastrointestinal complications. However, patients treated with PF were readmitted more often than patients treated with PT (42% vs 22%; $P = .04$).

This study showed that PT nCRT and PF nCRT have comparable effects on a variety of outcomes. The authors concluded that reduced readmission rates suggest that PT may produce less composite toxicity during nCRT of LAEC.

Radiation Method Comparison for Esophageal Carcinoma

Written by Emma Hitt Nichols, PhD

Esophageal carcinoma treatment response to intensity-modulated radiation therapy (IMRT) was not significantly different from 3-dimensional conformal radiation therapy (3DCRT). Jie Kong, MD, Department of Radiation Oncology, The Fourth Hospital of Hebei Medical University, Shijiazhuang, China, presented results from this retrospective analysis.

IMRT and 3DCRT are common radiation methods used to treat patients with esophageal cancer at Dr Kong's institution. This retrospective study examined differences in patient response and the extent of dosage to organs at risk (OAR) of these targeted radiation techniques.

Treatment response, overall survival, and dosage of OAR were assessed in 510 consecutive patients. Most patients had squamous cell esophageal carcinoma (92.8%). At the discretion of the radiation oncologist, IMRT was administered to 66 patients and 3DCRT to 444 patients. Regardless of method, patients received roughly 2 Gy per day, 5 days a week and may have received concurrent and/or subsequent chemotherapy.

There were no significant differences in any of the measured outcomes between IMRT and 3DCRT. Overall survival rates were similar (27.3% vs 23.4%), as were 1-year (72.7% vs 68.2%) and 5-year (32.3% vs 25.5%) survival rates. Although the complete response rate for patients treated with IMRT was slightly higher than 3DCRT (60.6% vs 53.2%), it was not statistically different.

The dosage of OAR in the lung and heart showed no overall differences, but there was less variation for IMRT vs 3DCRT. The median percentage of pulmonary volume receiving radiation >20 Gy for IMRT) was similar to 3DCRT (25.2 vs 24) but showed less variation (Q1–Q3 range, 22.6–26.9 for IMRT vs 18.6–27.4 for 3DCRT). The V40 for the heart was also more variable with IMRT (median 20.2; range, 5.9–28.4) compared with 3DCRT (median 17.3; range, 11.2–40.4).

Dr Kong concluded that IMRT was no more effective than 3DCRT, but further investigation of the variability of dosage of OAR may be warranted.

Invasive Mediastinal Staging Is Not Necessary for Early-Stage NSCLC Before SBRT

Written by Emma Hitt Nichols, PhD

Invasive mediastinal staging methods did not provide added outcome benefits over positron emission tomographic (PET) imaging alone in patients with non–small cell lung cancer (NSCLC). Roy Decker, MD, PhD, Yale University School of Medicine, New Haven, Connecticut, USA, presented data from this retrospective analysis.

Stereotactic body radiotherapy (SBRT) is a treatment option for patients with NSCLC who are not eligible for surgical intervention. The staging workup for patients with NSCLC receiving stereotactic SBRT requires an initial PET imaging. However, in some cases, nodal status is confirmed by mediastinoscopy or endobronchial ultrasonography. The supplementary information obtained by these invasive mediastinal procedures has not been well studied in NSCLC. This study assessed whether additional staging improved outcomes in patients with NSCLC.

A total of 286 patients with early-stage NSCLC who received either PET-only (68%) or PET-plus-invasive mediastinal staging (32%) were included in the analysis. Patients with larger tumors (>3 cm), synchronous primary lesions, and central lesions were more likely to receive PET-plus-invasive mediastinal staging. Survival distributions and hazard ratio analyses were completed in this assessment.