Low-dose preoperative chemoradiation therapy compared with surgery alone with or without postoperative radiotherapy in patients with head and neck carcinoma.

Several multimodal strategies have been developed to treat patients with squamous cell carcinoma of the oral cavity (OSCC), and many have shown survival benefits. The theoretical advantages of preoperative chemoradiotherapy are downstaging of the primary tumor, an increased resectability rate, and the elimination of micrometastases. We aimed to assess whether a short low-dose preoperative radiotherapy regimen with concurrent low-dose chemotherapy with cisplatin improves outcomes for patients with OSCC undergoing surgical treatment with curative intent. A total of 407 patients received preoperative low-dose radiotherapy of 20 Gy given in 10 fractions with concurrent low-dose chemotherapy with cisplatin (12.5 mg/m\(^2\)) as part of a pre-existing protocol. This was compared with 519 patients receiving surgery alone. Endpoints were overall survival, tumor response, and toxic effects. Analysis was controlled for tumor-related and demographic factors. After controlling for age, tumor stage, nodal stage, tumor grade, recurrence, and resection margin status, which were independent and dependent predictors of survival, preoperative radiotherapy was associated with improved survival (0.79; P = 0.002; 95% confidence interval (95% CI), 0.66-0.96), in patients receiving only preoperative radiation therapy or in combination with without postoperative...
radiotherapy (1.31; P = 0.041; 95% CI, 1.01-1.70 with postoperative radiotherapy; 1.40; P = 0.039; 95% CI, 1.01-1.85 without postoperative radiotherapy). Low-dose preoperative radiotherapy combined with low-dose chemotherapy with cisplatin significantly improves overall survival for patients with resectable OSCC compared with surgery alone.