Material and Methods: This study reviewed cancer registry data of our hospital from 2004 to 2012 with following inclusion criteria: ESC were found at least 90 days after HNC in the same patient, and both were diagnosed with pathology of invasive cancer. Patients would be excluded with following criteria: ESC was an extension of HNC or vice versa, and no available information of treatment could be retrieved. Treatment was composed of combinations of radiotherapy, chemotherapy, and surgery depending on disease status and performance status of the patient. The primary end point was overall survival (OS), and the second endpoint was progression-free survival (PFS).

Results: 77 patients were eligible. The median time from HNC to ESC was 32 months (4 - 147 months). Fifty-three patients (69%) were stage III/IV and 15 patients received best supportive care only after diagnosis of ESC. After excluding the ESC group, the 2-year OS were 34.9%. Fifteen patients were alive and one of them still had ESC. Thirty-five, 10, and 2 patients died from ESC, treatment related complications, and other disease, respectively. Univariate analysis revealed that ECOG > 1, tube feeding, anemia, and no esophagectomy correlated with poor OS (p < 0.05). Multivariate analysis showed that lower hemoglobin level, habit of smoking, ECOG score = 2, and no esophagectomy were independent poor prognostic factors (p < 0.05). The 2-year PFS rate for all patients was 30.7%. In the univariate analysis, ECOG > 1, tube feeding, body weight loss > 5%, anemia, no esophagectomy, and ESC stage III/IV were significantly correlated with poor PFS (p < 0.05). In the multivariate analysis, anemia and no esophagectomy were independently correlated with tumor recurrence (p < 0.05). Treatment outcome of patients who received esophagectomy were similar to ESC patients without prior history of HNC. The 2-year OS and PFS were 63.9% and 50.6%, respectively. Both were significantly higher than patients who did not receive esophagectomy (11.8% and 9.9%, p < 0.01).

Conclusion: the treatment result of metachronous ESC after HNC varied with disease and patient status. If esophagectomy was possible, the treatment outcome was not inferior to esophageal cancer without prior head and neck cancer history. But the treatment outcome was poor in patients with unresectable disease or poor performance status. A screening program for metachronous ESC should be considered for high risk patients to detect resectable ESC and improve treatment outcome.

PO-0700 Salvage radiotherapy in the patients with supravacular lymph node metastases after esophagectomy
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Purpose or Objective: Evaluate the salvage radiotherapy outcome in patients with supravacular lymph node metastases (SCLN) after esophagectomy.

Material and Methods: A total of 117 patients with esophageal squamous cell carcinoma after initial esophagectomy (R0 resection) were retrospectively analyzed and they were diagnosed supravacular lymph node metastases during follow-up time. All patients were divided into salvage radiotherapy group (SR, n=89) and no salvage radiotherapy group (NSR, n=27).

Results: The 1, 3, 5-year overall survival rates were 81.6%, 31.4%, 8.6%, respectively. In all patients the 1, 3-year survival (SASMs) rates were 40.2%, 14.5%, and the median ASMS time was 10 months. The 1, 3, 5-year ASMS rates were 48.1%, 18.9% in SR group and 12.0%, 0% in NSR group, respectively (P=0.001). In SR group, the 1, 3-year ASMS rates in the patients with combined radiochemotherapy and single radiotherapy were 62.6%, 33.4% and 41.9%, 16.5% (P=0.001). In the subgroup analysis, in combining visceral metastases group (CVM), the 1, 3-year ASMS rates were 35.5%, 0%, and 42.3%, 21.5% in no combining visceral metastases group (NCVM) (P = 0.004). The 3-year ASMS rate with the patients in no combining mediastinal failure group (NCMF) (22.2%) was higher than those in combining mediastinal failure group (CMF) (7.0%) (p=0.041). According to the salvage radiation dose, the 1, 3-year ASMS rates were 56.5%, 23.4% in ≥60Gy group and 29.2%, 7.5% in <60Gy group (p<0.001). Multivariate factor analysis revealed that combining visceral metastases, combining mediastinal failure, salvage radiotherapy, salvage radiation dose and salvage treatment model could be considered favourable prognostic factors.

Conclusion: Salvage radiotherapy may improve survival of patients with supravacular lymph node metastases after esophagectomy. Combined radiochemotherapy and no combining visceral metastases and a salvage radiation dose ≥60 Gy were associated with a better prognosis for those patients.

PO-0701 Dose-response relationship for locoregional control in esophageal cancer treated with curative CRT
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Purpose or Objective: To evaluate the correlation between radiation dose and locoregional control (LRC) for patients with stage II-III esophageal cancer treated with definitive concurrent chemoradiotherapy (CCRT).

Material and Methods: The medical records of 236 patients with clinical stage II and III esophageal cancer treated with definitive CCRT at the Yonsei Cancer Center between Feb 1994 and May 2013 were retrospectively reviewed. Among these patients, 120 received a radiation dose of < 60 Gy (standard-dose group), while 116 received a radiation dose of ≥ 60 Gy (high-dose group). The median dose of radiation in the standard and high dose groups was 50.4 Gy (range, 45.0-59.4 Gy) and 63 Gy (range, 60.0-66.6 Gy). Concurrent 5-FU/cisplatin (FP) chemotherapy (CHT) was performed in 82.2 % of patients.

Results: The patient characteristics had no differences in age, sex, pathology, grade, tumor length, and clinical stage between the two groups. Patients with high Karnofsky performance status scale and lower thoracic esophageal tumor were included more in standard dose group (p = 0.017 and 0.038). Maintenance CHT was performed more in standard dose group (45% versus 30.2%, p = 0.037) and FP CHT was more frequently used in high dose group (76.7% vs. 87.9%, p = 0.019). The median follow-up time for all patients was 19.2 months (range, 2.2-164.7). Of all patients, 2-yr and 5-yr LRC rate were 60.0% and 48.4%. The median progression-free survival (PFS) and overall survival (OS) were 13.2 months and 26.2 months, respectively. Patients in the high-dose group had a significantly better LRC (2-yr LRC rate, 50.3% vs. 69.1%, p = 0.002), PFS (median, 11.7 vs. 16.7 months, p = 0.029) and OS (median, 22.3 vs. 35.1 months, p = 0.043). The complete clinical response (CR) rate was significantly higher in the high-dose group (44.2% vs. 62.1%, p = 0.007). The treatment-related toxicities did not show a significant difference between the both groups (p = 0.936), although it was difficult to assess due to a retrospective fashion. On multivariate analysis, sex (female), radiation dose ≥ 60 Gy) and use of maintenance CHT were independent predictors for improved LRC, and sex (female), clinical stage (stage II vs. III), radiation dose ≥ 60 Gy) and use of maintenance CHT were significant predictive factors for improved LRC.

Conclusion: A higher radiation dose of ≥ 60 Gy is associated with increased LRC, PFS and OS for patients with stage II-III esophageal cancer treated with definitive CCRT.