Supplementary Materials

Suppl 1. Comparisons of baseline characteristics of SHNC patients by therapeutic modality types include NRT and RT.

| | NRT for EC | RT for EC (N = 110) | P-value |
|-------------------------|------------|---------------------|---------|
| | (N=36) | | |
| Race | | | 0.576 |
| Black | 8 (22.2%) | 34 (30.9%) | |
| White | 26 (72.2%) | 68 (61.8%) | |
| Other | 2 (5.6%) | 8 (7.3%) | |
| Year of SHNC diagnosis | | | 0.777 |
| 1975-1984 | 1 (2.8%) | 7 (6.4%) | |
| 1985-1994 | 11 (30.6%) | 26 (23.6%) | |
| 1995-2004 | 11 (30.6%) | 32 (29.1%) | |
| ≥2005 | 13 (36.1%) | 45 (40.9%) | |
| Age of SHNC diagnosis | , | , | 0.646 |
| 20-49 | 1 (2.8%) | 6 (5.5%) | |
| 50-74 | 27 (75.0%) | 87 (79.1%) | |
| ≥75 | 8 (22.2%) | 17 (15.5%) | |
| Sex | | | 0.226 |
| Female | 9 (25.0%) | 41 (37.3%) | |
| Male | 27 (75.0%) | 69 (62.7%) | |
| Fumor stage of SHNC | | | 0.357 |
| Distant | 4 (11.1%) | 9 (8.2%) | |
| Localized | 11 (30.6%) | 21 (19.1%) | |
| Regional | 15 (41.7%) | 50 (45.5%) | |
| Unknown | 6 (16.7%) | 30 (27.3%) | |
| Fumor histology of SHNC | | , , | 0.137 |
| Adenocarcinoma | 0 (0%) | 1 (0.9%) | |
| Squamous carcinoma | 32 (88.9%) | 106 (96.4%) | |

| Others | 4 (11.1%) | 3 (2.7%) | | | |
|--|--------------------|----------------------|--------|--|--|
| Tumor grade of SHNC | | | 0.0442 | | |
| Grade I/II | 13 (36.1%) | 57 (51.8%) | | | |
| Grade III/IV | 14 (38.9%) | 20 (18.2%) | | | |
| Unknown | 9 (25.0%) | 33 (30.0%) | | | |
| Tumor size of SHNC | | | 0.803 | | |
| <2cm | 2 (5.6%) | 5 (4.5%) | | | |
| ≥2cm | 6 (16.7%) | 16 (14.5%) | | | |
| Unknown | 28 (77.8%) | 89 (80.9%) | | | |
| Chemotherapy of SHNC | | | 0.527 | | |
| No/Unknown | 24 (66.7%) | 80 (72.7%) | | | |
| Yes | 12 (33.3%) | 30 (27.3%) | | | |
| Surgery of SHNC | | | 0.848 | | |
| No Surgery | 19 (52.8%) | 61 (55.5%) | | | |
| Surgery performed | 17 (47.2%) | 49 (44.5%) | | | |
| Radiotherapy of SHNC | | | 0.556 | | |
| NRT | 12 (33.3%) | 44 (40.0%) | | | |
| RT | 24 (66.7%) | 66 (60.0%) | | | |
| Median age of SHNC diagnosis (IQR), years | 67 (62.8-74.0) | 65 (59.0-72.0) | 0.105 | | |
| Median year of SHNC diagnosis (IQR) | 2001 (1991-2010.3) | 2001.5 (1992-2012.8) | 0.730 | | |
| Median follow-up time of patients with SHNC (IQR), months | 24.5 (8.5-62.3) | 17 (5.3-32.0) | 0.151 | | |
| EC. somboad some CINC social day had and not some DT radiction the conv. NDT, no adjution the conv. IOD, interconvertile conse | | | | | |

EC: esophageal cancer; SHNC: secondary head, and neck cancer; RT: radiation therapy; NRT: no radiation therapy; IQR: interquartile range.