| **Online Supplements Table 1. Baseline characteristic of patients with and without failure to cure in 2015-2018.** | | | | |
| --- | --- | --- | --- | --- |
|  | All patients (N=3,239) | No failure to cure (N=2,753) | failure to cure (N=486) | P-value (χ2) |
| **Sex**, n (%) |  |  |  | 0.912 |
| Male | 2,513 (77.6%) | 2,135 (77.6%) | 378 (77.8%) |  |
| Female | 726 (22.4%) | 618 (22.4%) | 108 (22.2%) |  |
| **Age**, n (%) |  |  |  | 0.001\* |
| <60 years | 747 (23.1%) | 645 (23.4%) | 102 (21.0%) |  |
| 60-75 | 2,025 (62.5%) | 1,737 (63.1%) | 288 (59.3%) |  |
| ≥75 years | 467 (14.4%) | 371 (13.5%) | 96 (19.8%) |  |
| **Charlson Comorbidity Index**, n (%) |  |  |  | 0.024\* |
| 0 | 1,609 (49.7%) | 1,388 (50.4%) | 221 (45.5%) |  |
| 1 | 944 (29.1%) | 801 (29.1%) | 143 (29.4%) |  |
| 2+ | 534 (16.5%) | 432 (15.7%) | 102 (21.0%) |  |
| Missing | 152 (4.7%) | 132 (4.8%) | 20 (4.1%) |  |
| **Tumor location**, n (%) |  |  |  | <.0001\* |
| Intrathoracic | 2,607 (80.5%) | 2,251 (81.8%) | 356 (73.3%) |  |
| Gastro-esophageal junction | 545 (16.8%) | 428 (15.5%) | 117 (24.1%) |  |
| Esophagus non-specified | 87 (2.7%) | 74 (2.7%) | 13 (2.7%) |  |
| **Histology**, n (%) |  |  |  | <.0001\* |
| Squamous cell | 519 (16.0%) | 451 (16.4%) | 68 (14.0%) |  |
| Adenocarcinoma - intestinal | 1,559 (48.1%) | 1,365 (49.6%) | 194 (39.9%) |  |
| Adenocarcinoma - diffuse | 354 (10.9%) | 264 (9.6%) | 90 (18.5%) |  |
| Adenocarcinoma - other | 791 (24.4%) | 659 (23.9%) | 132 (27.2%) |  |
| Unknown | 16 (0.5%) | 14 (0.5%) | 2 (0.4%) |  |
| **Clinical T-stage**, n (%) |  |  |  | 0.058 |
| T1-2 | 1,124 (34.7%) | 966 (35.1%) | 158 (32.5%) |  |
| T3-4 | 1,842 (56.9%) | 1,568 (57.0%) | 274 (56.4%) |  |
| TxA | 273 (8.4%) | 219 (8.0%) | 54 (11.1%) |  |
| **Clinical N-stage**, n (%) |  |  |  | 0.574 |
| N0 | 1,495 (46.2%) | 1,260 (45.8%) | 235 (48.4%) |  |
| N+ | 1,605 (49.6%) | 1,374 (49.9%) | 231 (47.5%) |  |
| NxA | 139 (4.3%) | 119 (4.3%) | 20 (4.1%) |  |
| **Neoadjuvant treatment**, n (%) |  |  |  | <.0001\* |
| None | 540 (16.7%) | 405 (14.7%) | 135 (27.8%) |  |
| Neoadjuvant chemoradiotherapy | 2,390 (73.8%) | 2,109 (76.6%) | 281 (57.8%) |  |
| Other neoadjuvant treatment | 309 (9.5%) | 239 (8.7%) | 70 (14.4%) |  |
| **Year of diagnosis**, n (%) |  |  |  | 0.068 |
| 2015 | 717 (22.1%) | 619 (22.5%) | 98 (20.2%) |  |
| 2016 | 784 (24.2%) | 668 (24.3%) | 116 (23.9%) |  |
| 2017 | 885 (27.3%) | 764 (27.8%) | 121 (24.9%) |  |
| 2018 | 853 (26.3%) | 702 (25.5%) | 151 (31.1%) |  |
| \**Indicating statistical significance*  A *Clinical tumor and/or node stage could not be assessed* | | | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Online Supplements Table 2. Multilevel multivariable logistic regression of the association between baseline characteristics and *failure to cure*. Model 1: without the O/E ratio of a hospitals tendency to treat patients surgically. Model 2: model with the O/E ratio. | | | | | | | |
|  |  | Model 1 | |  | Model 2 | | |
|  |  |  | |  |  | | |
|  | aORA | 95% CIB | P-value |  | aORA | 95% CIB | P-value |
| **Sex**  Male  Female | 1  0.98 | 0.73 – 1.31 | 0.884 |  | 1  0.98 | 0.74 – 1.29 | 0.863 |
| **Age (in years)**  < 60  60 – 75  > 75 | 1  1.05  1.49 | 0.79 – 1.40  1.03 – 2.14 | 0.728  0.035\* |  | 1  1.04  1.47 | 0.79 – 1.37  1.03 – 2.09 | 0.779  0.034\* |
| **Charlson Comorbidity Index**  0  1  2+ | 1  1.08  1.39 | 0.83 – 1.39  1.03 – 1.88 | 0.574  0.032\* |  | 1  1.10  1.42 | 0.86 – 1.42  1.06 – 1.89 | 0.426  0.019\* |
| **Tumor location**  Intrathoracic  Gastro-eesophageal junction | 1  1.66 | 1.24 – 2.23 | 0.002\* |  | 1  1.55 | 1.17 – 2.05 | 0.005\* |
| **Histology**  Squamous cell  Adenocarcinoma – intestinal  Adenocarcinoma – diffuse  Adenocarcinoma – other | 1  0.80  2.13  1.29 | 0.56 – 1.14  1.40 – 3.23  0.88 – 1.89 | 0.204  <0.001\*  0.186 |  | 1  0.86  2.22  1.42 | 0.61 – 1.22  1.47 – 3.33  0.98 – 2.05 | 0.399  <0.001\*  0.061 |
| **Clinical T-stage**  T1-2  T3-4  TxC | 1  0.96  1.51 | 0.74 – 1.24  0.97 – 2.34 | 0.727  0.067 |  | 1  1.03  1.49 | 0.80 – 1.33  0.98 – 2.25 | 0.809  0.060 |
| **Clinical N-stage**  N0  N+  NxC | 1  0.96  0.77 | 0.75 – 1.23  0.41 – 1.45 | 0.729  0.402 |  | 1  0.94  0.67 | 0.74 – 1.19  0.36 – 1.25 | 0.581  0.200 |
| **Year of diagnosis**  2015  2016  2017  2018 | 1  1.10  0.96  1.35 | 0.78 – 1.54  0.68 – 1.35  0.97 – 1.88 | 0.588  0.788  0.074 |  | 1  1.06  0.94  1.29 | 0.77 – 1.47  0.68 – 1.31  0.95 – 1.77 | 0.705  0.718  0.106 |
| **O / E ratio D**  Tertile 1 (<0.94)  Tertile 2 (0.94 – 1.01)  Tertile 3 (>1.01) | - | - | - |  | 1  0.63  0.76 | 0.38 – 1.05  0.46 – 1.24 | 0.072  0.242 |
| **Range of random effect of each hospital (i.e. range of** ***failure to cure* aOR’s among hospitals)** | 0.49 (0.28 – 0.88) – 1.74 (1.18 – 2.57) | | |  | 0.58 (0.33 – 1.02) – 1.37 (0.84 – 2.22) | | |
| \* *Indicating statistical significance*  A *adjusted Odds Ratio.*  B *95% Confidence interval.*  C *Clinical tumor and/or node stage could not be assessed*  D *O / E ratio of a hospital’s tendency to treat patients surgically. Tertile 1 hospitals treat relatively few potentially curable patients with surgery, Tertile 2 hospitals are average and Tertile 3 hospitals treat relatively many patients surgically.* | | | | | | | |