| **Online Supplements Table 1. Baseline characteristic of patients with and without failure to cure in 2015-2018.** |
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|   | 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* |

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| 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**MaleFemale | 10.98 | 0.73 – 1.31 | 0.884 |  | 10.98 | 0.74 – 1.29 | 0.863 |
| **Age (in years)**< 6060 – 75> 75 | 11.051.49 | 0.79 – 1.401.03 – 2.14 | 0.7280.035\* |  | 11.041.47 | 0.79 – 1.371.03 – 2.09 | 0.7790.034\* |
| **Charlson Comorbidity Index**012+ | 11.081.39 | 0.83 – 1.391.03 – 1.88 | 0.5740.032\* |  | 11.101.42 | 0.86 – 1.421.06 – 1.89 | 0.4260.019\* |
| **Tumor location**IntrathoracicGastro-eesophageal junction | 11.66 | 1.24 – 2.23 | 0.002\* |  | 11.55 | 1.17 – 2.05 | 0.005\* |
| **Histology**Squamous cellAdenocarcinoma – intestinalAdenocarcinoma – diffuseAdenocarcinoma – other | 10.802.131.29 | 0.56 – 1.141.40 – 3.230.88 – 1.89 | 0.204<0.001\*0.186 |  | 10.862.221.42 | 0.61 – 1.221.47 – 3.330.98 – 2.05 | 0.399<0.001\*0.061 |
| **Clinical T-stage**T1-2T3-4TxC | 10.961.51 | 0.74 – 1.240.97 – 2.34 | 0.7270.067 |  | 11.031.49 | 0.80 – 1.330.98 – 2.25 | 0.8090.060 |
| **Clinical N-stage**N0N+NxC | 10.960.77 | 0.75 – 1.230.41 – 1.45 | 0.7290.402 |  | 10.940.67 | 0.74 – 1.190.36 – 1.25 | 0.5810.200 |
| **Year of diagnosis**2015201620172018 | 11.100.961.35 | 0.78 – 1.540.68 – 1.350.97 – 1.88 | 0.5880.7880.074 |  | 11.060.941.29 | 0.77 – 1.470.68 – 1.310.95 – 1.77 | 0.7050.7180.106 |
| **O / E ratio D**Tertile 1 (<0.94)Tertile 2 (0.94 – 1.01)Tertile 3 (>1.01) | - | - | - |  | 10.630.76 | 0.38 – 1.050.46 – 1.24 | 0.0720.242 |
| **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.*  |