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| **Supplementary Table 1. Characteristics of 88 patients according to the presence of complications** | | | | | | | | | |
| Variables | Overall | | | Pulmonary | | | Anastomotic leakage | | |
| Yes  (n=48) | No  (n=40) | *P* value | Yes  (n=18) | No  (n=70) | *P* value | Yes  (n=20) | No  (n=68) | *P* value |
| Age, y  Median (range)  Sex, male  Comorbidity (CCI≥2)  Location  Lt  Mt  Ut  Neoadjuvant chemotherapy  Surgery  TTE  TME  Tissue Type  SCC  AC  pStaging  pStage0-I  pStageII  pStageIII  pStageIV  Lymphadenectomy  2 fields  3 fields  No. of retrieved LNs  Median (range)  Curability, R1-2 | 66 (47-84)  35 (72.9)  6 (12.5)  15 (31.3)  29 (60.4)  4 (8.3)  12 (25.5)  18 (37.5)  30 (62.5)  44 (91.7)  4 (8.3)  22 (45.8)  15 (31.3)  11 (22.9)/  0 (-)  7 (14.6)  41 (85.4)  68 (19-109)  2 (4.2) | 67 (43-82)  28 (70.0)  2 (5.0)  14 (35.0)  22 (55.0)  4 (10.0)  20 (50.0)  12 (30.0)  28 (70.0)  39 (97.5)  1 (2.5)  15 (37.5)  10 (25.0)  12 (30.0)  3 (7.5)  6 (15.0)  34 (85.0)  61 (9-158)  1 (2.5) | 0.97  0.76  0.21  0.50  0.02  0.42  0.22  0.21  0.96  0.21  0.66 | 69 (55-78)  14 (77.8)  3 (16.7)  4 (22.2)  13 (72.2)  1 (5.6)  5 (27.8)  9 (50.0  9 (50.0)  16 (88.9)  2 (11.1)  7 (38.9)  6 (33.3)  5 (27.8)  0 (-)  3 (16.7)  15 (83.3)  58 (27-89)  2 (11.1) | 66 (43-84)  49 (70.0)  5 (7.1)  25 (35.7)  38 (54.3)  7 (10.0)  27 (39.1)  49 (70.0)  21 (30.0)  67 (95.7)  3 (4.3)  30 (42.9)  19 (27.1)  18 (25.7)  3 (4.3)  10 (14.3)  60 (85.7)  65 (9-158)  1 (1.4) | 0.97  0.40  0.24  0.07  0.37  0.53  0.30  0.64  0.81  0.64  0.08 | 65 (47-78)  15 (75.0)  2 (10.0)  5 (25.0)  13 (65.0)  2 (10.0)  4 (20.0)  15 (75.0)  5 (25.0)  20 (100)  0 (-)  10 (50.0)  6 (30.0)  4 (20.0)  0 (-)  0 (-)  20 (100.0)  61 (37-92)  1 (5.0) | 67 (43-84)  48 (70.6)  6 (8.8)  24 (35.3)  38 (55.9)  6 (8.8)  28 (41.8)  43 (63.2)  25 (36.8)  63 (92.7)  5 (7.3)  27 (39.8)  19 (27.9)  19 (27.9)  3 (4.4)  13 (19.1)  55 (80.9)  64 (9-158)  2 (2.9) | 0.77  0.69  0.87  0.87  0.07  0.60  0.10  0.58  0.007  0.84  0.67 |
| Abbreviations: CCI, Charlson comorbidity index; TTE, transthoracic esophagectomy; TME. transmediastinal esophagectomy; SCC, squamous cell carcinoma; AC, adenocarcinoma; LN, lymph node | | | | | | | | | |

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| **Supplementary Table 2. Global QOL and functional scales (EORTC QLQ-C30): comparison between patients with and without predefined complications for up to 2 years after esophageal cancer surgery** | | | | | |
|  | Time Point of HRQoL measurement | | | | |
| Pre | 3 months | 6 months | 1 year | 2 years |
| **Overall complications; yes (n=48) vs. no (n=40)** | | | | | |
| Global quality of life  Functions  Physical  Role  Emotional  Cognitive  Social | 0.19  0.23  0.55  0.69  0.72  0.83 | 0.53  0.68  0.89  0.44  0.56  0.31 | 0.82  0.99  0.46  0.23  0.12  0.19 | 0.81  0.6  0.89  0.4  0.14  0.42 | 0.91  0.25  0.34  0.17  0.65  0.92 |
| **Pulmonary complications; yes (n=18) vs. no (n=70)** | | | | | |
| Global quality of life  Functions  Physical  Role  Emotional  Cognitive  Social | **0.003**  **0.006**  0.43  0.7  0.58  0.76 | 0.85  0.21  0.59  0.91  0.33  0.66 | 0.51  0.12  0.37  0.83  0.44  0.87 | 0.74  0.33  0.84  0.48  0.71  0.62 | 0.22  0.32  0.56  **0.006**  0.06  0.84 |
| **Anastomotic leakage; yes (n=20) vs. no (n=68)** | | | | | |
| Global quality of life  Functions  Physical  Role  Emotional  Cognitive  Social | 0.37  0.48  0.45  0.68  0.44  0.71 | 0.16  0.55  0.19  **0.01**  0.99  **0.02** | 0.89  0.78  0.41  0.07  0.19  0.09 | 0.61  0.56  0.89  0.6  0.27  0.22 | 0.16  0.09  0.14  0.69  0.22  0.75 |
| \* Data are presented with *P* values for significance of difference between the groups.  \*\* HRQoL outcomes that are significantly poorer in patients with than in those without complications are in **bold** type.  Abbreviations: HRQoL, health-related quality of life | | | | | |

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| **Supplementary Table 3. General and esophageal-related symptoms: comparison between patients with and without overall complications** | | | | | |
|  | Time Point of HRQoL measurement | | | | |
| Pre | 3 months | 6 months | 1 year | 2 years |
| **Overall complication; yes (n=48) vs. no (n=40)** | | | | | |
| EORTC QLQ-C30  Fatigue  Nausea and vomiting  Pain  Dyspnea  Insomnia  Appetite loss  Constipation  Diarrhea  Financial difficulties  EORTC QLQ-OES18  Eating difficulties  Reflux  Esophageal Pain  Swallowing saliva  Choking when swallowing  Dry mouth  Taste abnormality  Trouble with coughing  Difficulty speaking  Dysphagia | 0.94  0.91  0.15  0.65  0.33  0.76  **0.007**  0.35  0.47  0.62  0.79  0.88  0.79  0.16  0.53  0.3  0.79  0.32  0.96 | 0.47  0.6  0.6  0.89  0.63  0.47  0.49  0.98  0.47  0.84  0.82  0.29  0.6  0.72  0.87  0.78  0.84  0.26  0.84 | 0.58  0.97  0.21  0.59  0.86  0.93  0.22  0.86  0.25  0.59  0.64  0.31  0.34  0.73  0.88  0.58  0.54  **0.03**  0.052 | 0.53  0.8  0.51  0.52  0.97  0.63  0.86  0.53  0.26  0.43  0.72  0.39  0.82  0.24  0.91  0.32  0.22  0.11  0.91 | 0.28  0.96  0.88  0.66  0.68  0.39  0.97  0.65  0.91  0.32  0.44  0.43  0.68  0.46  0.16  0.94  0.55  0.93  0.36 |
| \* Data are represented with *P* values for significance of difference between the groups.  \*\* HRQoL outcomes that are significantly poorer in the patients with than in those without complications are in **bold** type.  Abbreviations: HRQoL, health-related quality of life | | | | | |

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| **Supplementary Table 4. Body composition data and nutritional markers: comparison between patients with and without predefined complications for up to 2 years after esophageal cancer surgery** | | | | | |
|  | Time Point of measurement | | | | |
| Pre | 3 months | 6 months | 1 year | 2 years |
| **Overall complication; yes (n=48) vs. no (n=40)** | | | | | |
| Body composition data  Body weight  BMI  Fat mass (%)  Skeletal muscle mass (%)  Handgrip strength  Nutritional markers  Albumin  Pre-albumin  PNI | 0.44  0.36  0.42  0.77  0.49  **0.04**  0.99  0.06 | 0.82  0.91  0.59  0.73  0.62  0.62  0.37  0.94 | 0.73  0.91  0.59  0.57  0.52  0.96  0.15  0.55 | 0.44  0.52  0.45  0.66  0.31  0.7  0.07  0.11 | 0.35  0.36  0.39  0.18  0.92  0.26  0.14  0.76 |
| **Pulmonary complication; yes (n=18) vs. no (n=70)** | | | | | |
| Body composition data  Body weight  BMI  Fat mass (%)  Skeletal muscle mass (%)  Handgrip strength  Nutritional markers  Albumin  Pre-albumin  PNI | 0.44  0.99  0.89  0.49  0.54  0.38  0.23  0.53 | 0.49  0.54  0.51  0.15  0.09  0.69  **0.049**  0.79 | 0.52  0.87  0.86  0.43  0.32  0.41  **0.01**  0.18 | 0.45  0.69  0.9  0.8  0.38  0.19  **0.02**  0.058 | 0.37  0.51  0.23  0.86  0.23  0.18  **0.008**  0.09 |
| **Anastomotic leakage; yes (n=20) vs. no (n=68)** | | | | | |
| Body composition data  Body weight  BMI  Fat mass (%)  Skeletal muscle mass (%)  Handgrip strength  Nutritional markers  Albumin  Pre-albumin  PNI | 0.13  0.13  0.06  0.28  0.32  0.14  0.79  0.06 | 0.94  0.83  0.93  0.76  0.69  0.99  0.45  0.39 | 0.77  0.8  0.88  0.64  0.49  0.94  0.39  0.79 | 0.34  0.47  0.39  0.91  0.63  0.81  0.07  0.58 | 0.39  0.66  0.41  0.21  0.78  0.81  0.06  0.86 |
| \* Data are represented with *P* values for the significance of differences between the groups.  \*\* Values that are significantly lower in patients with than in those without complications are in **bold** type.  Abbreviations: BMI, body mass index; PNI, prognostic nutritional index | | | | | |