**Table S1: Cancer types**

|  |  |  |
| --- | --- | --- |
| **Cancer diagnosis** | **Solid / haematological cancer** | **Number of all patients,** n (%) |
| Breast cancer  | Solid | 33 (11) |
| Colorectal cancer  | Solid | 33 (11) |
| Non-small cell lung cancer  | Solid | 29 (10) |
| Pancreatic cancer | Solid | 14 (5) |
| Oral cavity and salivary glands cancer | Solid | 9 (3) |
| Malignant melanoma of choroid | Solid | 9 (3) |
| Prostatic cancer | Solid | 6 (2) |
| Oesophagus | Solid | 5 (2) |
| Hepatic-biliary tract cancer | Solid | 5 (2) |
| Stomach | Solid | 4 (1) |
| Gynaecologic cancer (vulva, cervix, fallopian tube, ovary, uterus) | Solid | 4 (1) |
| Soft tissue sarcoma | Solid | 3 (1) |
| Larynx | Solid | 2 (1) |
| Other cancer (major salivary glands, brain, thyroid gland, kidney, testicular, malignant melanoma of the skin, unknown) | Solid | 14 (5) |
| Non-Hodgkin lymphoma  | Haematological | 83 (29) |
| Classic Hodgkin lymphoma  | Haematological | 26 (9) |
| Multiple myeloma  | Haematological | 11 (4) |

**Table S2: Summary score and subscales of HeartQoL and EORTC QLQ-C30**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Controls** (n=50) | **Patients with cancer**(n=290) | *p-value* | **Patients with cancer** **with HeartQoL <1.50** (n=106) | **Patients with cancer** **with HeartQoL ≥1.50** (n=184) | *p-value* | **Patients with cancer with EORTC QLQ-C30 <82.69** (n=222) | **Patients with cancer with****EORTC QLQ-C30 ≥82.69** (n=68) | *p-value* |
| **HeartQoL**  |  |  |
| Summary score | 2.71 ± 0.45 | 1.77 ± 0.79 | **<0.001** | **-** | **-** | **-** | 1.54 ± 0.72 | 2.53 ± 0.46 | **<0.001** |
| Physical subscale | 2.76 ± 0.46 | 1.68 ± 0.90 | **<0.001** | 0.68 ± 0.39 | 2.25 ± 0.54 | **<0.001** | 1.42 ± 0.83 | 2.51 ± 0.55 | **<0.001** |
| Emotional subscale | 2.57 ± 0.54 | 2.00 ± 0.85 | **<0.001** | 1.41 ± 0.85 | 2.35 ± 0.63 | **<0.001** | 1.82 ± 0.84 | 2.59 ± 0.56 | **<0.001** |
| **EORTC QLQ-C30**  |
| Summary Score (Giesinger) | 90.69 ± 10.71 | 66.63 ± 20.16 | **<0.001** | 50.32 ± 17.44 | 76.03 ± 14.98 | **<0.001** | **-** | **-** | **-** |
| Global health score | 81.17 ± 16.41 | 48.59 ± 22.84 | **<0.001** | 33.73 ± 18.42 | 57.16 ± 20.67 | **<0.001** | 42.04 ± 20.11 | 69.98 ± 17.58 | **<0.001** |
| Physical functioning score  | 96.53 ± 9.83 | 64.90 ± 28.61 | **<0.001** | 39.18 ± 23.52 | 79.71 ± 19.26 | **<0.001** | 57.27 ± 27.84 | 89.80 ± 12.32 | **<0.001** |
| Role functioning score | 100[100] | 50 [16.67-83.33] | **<0.001** | 16.67 [0-33.33] | 66.67 [50-100] | **<0.001** | 33.33 [0-66.67] | 100 [83.33-100] | **<0.001** |
| Emotional functioning score | 81.83 ± 23.19 | 60.09 ± 28.08 | **<0.001** | 44.42 ± 25.71 | 69.11 ± 25.34 | **<0.001** | 52.21 ± 26.17 | 85.78 ± 16.36 | **<0.001** |
| Cognitive functioning score | 86.67 ± 20.48 | 75.75 ± 26.05 | **<0.001** | 63.52 ± 30 | 82.79 ± 20.46 | **<0.001** | 70.12 ± 26.73 | 94.12 ± 11.06 | **<0.001** |
| Social functioning score | 94.00 ± 15.34 | 55.12 ± 33.79 | **<0.001** | 38.21 ± 33.65 | 64.86 ± 29.87 | **<0.001** | 46.17 ± 31.66 | 84.31 ± 22.1 | **<0.001** |
| Fatigue score | 14.44 ± 19.73 | 50.00 ± 28.87 | **<0.001** | 70.23 ± 22.77 | 38.35 ± 25.39 | **<0.001** | 60.36 ± 23.92 | 16.18 ± 13.77 | **<0.001** |
| Nausea & vomiting score | 0 [0] | 0 [0-16.67] | **<0.001** | 16.67 [0-33.33] | 0 [0-16.67] | **<0.001** | 0 [0-16.67] | 0 [0] | **<0.001** |
| Pain score | 0 [0-16.67] | 33.33 [0-66.67] | **<0.001** | 50 [16.67-83.33] | 16.67 [0-50] | **<0.001** | 33.33 [0-66.67] | 0 [0-16.67] | **<0.001** |
| Dyspnea score | 0 [0] | 33.33 [0-66.67] | **<0.001** | 66.67 [25-100] | 0 [0-33.33] | **<0.001** | 33.33 [0-66.67] | 0 [0] | **<0.001** |
| Insomnia score | 33.33 [0-41.67] | 33.33 [0-66.67] | **0.046** | 66.67 [33.33-100] | 33.33 [0-66.67] | **<0.001** | 33.33 [33.33-66.67] | 0 [0-33.33] | **<0.001** |
| Appetite loss score | 0 [0] | 33.33 [0-66.67] | **<0.001** | 33.33 [33.33-100] | 0 [0-33.33] | **<0.001** | 33.33 [0-66.67] | 0 [0] | **<0.001** |

**Table S3: Cox regression survival analysis – subscales**

|  |  |  |
| --- | --- | --- |
|  | **Univariable model** | **Multivariable model \*** |
| **EORTC QLQ-C30 (n=290)** | **HR** | **95% CI** | ***p*-value** | **HR** | **95% CI** | ***p*-value** | ***Harrell's C*** | ***AIC*** | ***BIC*** |
| Global health score (per 10 points)  | 1.10 | 1.01-1.19 | **0.020** | 1.08 | 0.99-1.17 | 0.084 | 0.674 | 885.51 | 914.56 |
| Physical functioning score (per 10 points) | 1.15 | 1.08-1.22 | **<0.001** | 1.13 | 1.05-1.21 | **0.001** | 0.674 | 878.56 | 907.61 |
| Role functioning score (per 10 points) | 1.09 | 1.03-1.14 | **0.001** | 1.06 | 1.01-1.13 | **0.028** | 0.671 | 883.60 | 912.65 |
| Emotional functioning score (per 10 points) | 1.03 | 0.97-1.09 | 0.373 | - | - | - | - | - | - |
| Cognitive functioning score (per 10 points) | 1.01 | 0.95-1.08 | 0.739 | - | - | - | - | - | - |
| Social functioning score (per 10 points) | 1.08 | 1.02-1.14 | **0.006** | 1.04 | 0.97-1.10 | 0.281 | 0.662 | 887.33 | 916.38 |
| Fatigue score (per 10 points) | 0.91 | 0.86-0.97 | **0.006** | 0.92 | 0.85-0.99 | **0.020** | 0.662 | 883.12 | 912.17 |
| Nausea & vomiting score (per 10 points) | 0.99 | 0.91-1.08 | 0.847 | - | - | - | - | - | - |
| Pain score (per 10 points) | 0.89 | 0.85-0.94 | **<0.001** | 0.89 | 0.84-0.94 | **<0.001** | 0.682 | 871.36 | 900.41 |
| Dyspnea score (per 10 points) | 0.97 | 0.92-1.02 | 0.181 | - | - | - | - | - | - |
| Insomnia score (per 10 points) | 1.04 | 0.99-1.09 | 0.151 | - | - | - | - | - | - |
| Appetite loss score (per 10 points) | 0.93 | 0.89-0.98 | **0.002** | 0.94 | 0.89-0.99 | **0.012** | 0.678 | 882.32 | 911.37 |
| **HeartQoL** | **HR** | **95% CI** | ***p*-value** | **HR** | **95% CI** | ***p*-value** | ***Harrell's C*** | ***AIC*** | ***BIC*** |
| Physical subscale (per 0.3 points) | 1.12 | 1.05-1.19 | **0.001** | 1.10 | 1.02-1.18 | **0.015** | 0.677 | 882.58 | 911.62 |
| Emotional subscale (per 0.3 points) | 1.01 | 0.95-1.08 | 0.714 | - | - | - | - | - | - |

\* adjusted for age, cancer stage, LVEF, NT-proBNP, hs Troponin T; sex and solid cancer vs. haematological cancer as strata

AIC: Akaike's Information Criterion, BIC: Bayesian information criterion