

| Cancer Type | Timepoint | Mean | 95% CI | | Differences over time t1-t2, t1-t3 | Differences between groups Reference: | | | | | | |
|-------------------------------|----------------|-------|--------|-------|---------------------------------------|--|--------------|--------------------|--------------------|-------------|-----------------|----------|
| | | | lower | upper | | Breast | Skin | Gyneco- logical | Digestive tract | Lung | Oral/ facial | Prostate |
| Breast (C50) | Baseline (t1) | 37.19 | 35.51 | 38.86 | - | - | - | - | - | - | - | - |
| | 6 months (t2) | 37.52 | 35.77 | 39.27 | 0.33 | - | - | - | - | - | - | - |
| | 12 months (t3) | 39.42 | 37.73 | 41.11 | 2.23 | - | - | - | - | - | - | - |
| Skin (C34, C44) | Baseline (t1) | 39.72 | 37.99 | 41.45 | - | 2.53 | - | - | - | - | - | - |
| | 6 months (t2) | 40.56 | 38.74 | 42.39 | 0.84 | 3.04 | - | - | - | - | - | - |
| | 12 months (t3) | 40.59 | 38.67 | 42.50 | 0.87 | 1.17 | - | - | - | - | - | - |
| Gynecological (C51-C58) | Baseline (t1) | 32.40 | 30.53 | 34.26 | - | -4.79 | -7.32 | - | - | - | - | - |
| | 6 months (t2) | 36.37 | 34.26 | 38.48 | 3.97 | -1.15 | -4.19 | - | - | - | - | - |
| | 12 months (t3) | 37.10 | 34.95 | 39.26 | 4.70 | -2.32 | -3.49 | - | - | - | - | - |
| Digestive tract (C16-C21) | Baseline (t1) | 36.12 | 34.33 | 37.91 | - | -1.07 | -3.60 | 3.72 | - | - | - | - |
| | 6 months (t2) | 38.11 | 36.25 | 39.98 | 1.99 | 0.59 | -2.45 | 1.74 | - | - | - | - |
| | 12 months (t3) | 38.63 | 36.65 | 40.61 | 2.51 | -0.79 | -1.96 | 1.53 | - | - | - | - |
| Lung (C34) | Baseline (t1) | 33.90 | 31.94 | 35.86 | - | -3.29 | -5.82 | 1.5 | -2.22 | - | - | - |
| | 6 months (t2) | 34.31 | 32.03 | 36.59 | 0.41 | -3.21 | -6.25 | -2.06 | -3.8 | - | - | - |
| | 12 months (t3) | 33.74 | 31.22 | 36.26 | -0.16 | -5.68 | -6.85 | -3.36 | -4.89 | - | - | - |
| Oral/facial (C01-C14) | Baseline (t1) | 35.93 | 33.68 | 38.18 | - | -1.26 | -3.79 | 3.53 | -0.19 | 2.03 | - | - |
| | 6 months (t2) | 36.72 | 34.13 | 39.30 | 0.79 | -0.80 | -3.84 | 0.35 | -1.39 | 2.41 | - | - |
| | 12 months (t3) | 38.35 | 35.53 | 41.17 | 2.42 | -1.07 | -2.24 | 1.25 | -0.28 | 4.61 | - | - |
| Prostate/germ cell (C61, C62) | Baseline (t1) | 34.97 | 32.27 | 37.66 | - | -2.22 | 4.75 | 2.57 | -1.15 | 1.07 | -0.96 | - |
| | 6 months (t2) | 39.55 | 36.70 | 42.4 | 4.58 | 2.03 | 1.01 | 3.18 | 1.44 | 5.24 | 2.83 | - |
| | 12 months (t3) | 39.61 | 36.75 | 42.48 | 4.64 | 0.19 | 0.98 | 2.51 | 0.98 | 5.87 | 1.26 | - |
| Other | Baseline (t1) | 36.26 | 34.61 | 37.91 | - | -0.93 | 3.46 | 3.86 | 0.14 | 2.36 | 0.33 | 1.29 |
| | 6 months (t2) | 37.42 | 35.41 | 39.44 | 1.16 | -0.10 | 3.14 | 1.05 | -0.69 | 3.11 | 0.7 | -2.13 |
| | 12 months (t3) | 38.32 | 36.28 | 40.35 | 2.06 | -1.10 | 2.27 | 1.22 | -0.31 | 4.58 | -0.03 | -1.29 |

Table S1: Trajectories (values) of HRQoL-scores (PCS) after hospitalisation at baseline. PCS= SF 12 Physical Health Summary Scale. Values adjusted for: age at diagnosis, sex, time of survey, time since diagnosis, metastatic disease, T-stage, N-stage, disease status, reason for hospitalisation, physical comorbidities, emotional comorbidities, radiotherapy, chemotherapy, surgery, education, partnership, occupation, interactions: time of survey by cancer type and time since diagnosis by cancer type. Bold: Significant differences. 95% CI: 95% confidence interval.

| Cancer Type | Timepoint | Mean | 95% CI | | Differences over time t1-t2, t1-t3 | Differences between groups Reference: | | | | | | |
|-------------------------------|----------------|-------|--------|-------|---------------------------------------|--|-------|--------------------|--------------------|-------|-----------------|----------|
| | | | lower | upper | | Breast | Skin | Gyneco- logical | Digestive tract | Lung | Oral/ facial | Prostate |
| Breast (C50) | Baseline (t1) | 42.17 | 40.06 | 44.28 | - | - | - | - | - | - | - | - |
| | 6 months (t2) | 44.97 | 42.79 | 47.14 | 2.80 | - | - | - | - | - | - | - |
| | 12 months (t3) | 44.98 | 42.76 | 47.2 | 2.81 | - | - | - | - | - | - | - |
| Skin (C34, C44) | Baseline (t1) | 43.80 | 41.50 | 46.11 | - | 1.63 | - | - | - | - | - | - |
| | 6 months (t2) | 44.99 | 42.69 | 47.28 | 1.19 | 0.02 | - | - | - | - | - | - |
| | 12 months (t3) | 45.01 | 42.60 | 47.42 | 1.21 | 0.03 | - | - | - | - | - | - |
| Gynecological (C51-C58) | Baseline (t1) | 42.93 | 40.54 | 45.32 | - | 0.76 | -0.87 | - | - | - | - | - |
| | 6 months (t2) | 44.04 | 41.30 | 46.78 | 1.11 | -0.93 | -0.95 | - | - | - | - | - |
| | 12 months (t3) | 46.07 | 43.42 | 48.73 | 3.14 | 1.09 | 1.06 | - | - | - | - | - |
| Digestive tract (C16-C21) | Baseline (t1) | 43.57 | 41.37 | 45.77 | - | 1.40 | -0.23 | 0.64 | - | - | - | - |
| | 6 months (t2) | 43.38 | 40.91 | 45.84 | -0.19 | -1.59 | -1.61 | -0.66 | - | - | - | - |
| | 12 months (t3) | 43.98 | 41.44 | 46.52 | 0.41 | -1.00 | -1.03 | -2.09 | - | - | - | - |
| Lung (C34) | Baseline (t1) | 43.39 | 40.79 | 45.99 | - | 1.22 | -0.41 | 0.46 | -0.18 | - | - | - |
| | 6 months (t2) | 42.22 | 39.04 | 45.41 | -1.17 | -2.75 | -2.77 | -1.82 | -1.16 | - | - | - |
| | 12 months (t3) | 40.94 | 37.58 | 44.30 | -2.45 | -4.04 | -4.07 | -5.13 | -3.04 | - | - | - |
| Oral/facial (C01-C14) | Baseline (t1) | 42.43 | 39.63 | 45.23 | - | 0.26 | -1.37 | -0.5 | -1.14 | -0.96 | - | - |
| | 6 months (t2) | 43.63 | 40.33 | 46.94 | 1.20 | -1.34 | -1.36 | -0.41 | 0.25 | 1.41 | - | - |
| | 12 months (t3) | 44.08 | 40.73 | 47.43 | 1.65 | -0.90 | -0.93 | -1.99 | 0.1 | 3.14 | - | - |
| Prostate/germ cell (C61, C62) | Baseline (t1) | 40.84 | 35.99 | 45.68 | - | -1.33 | -2.96 | -2.09 | -2.73 | -2.55 | -1.59 | - |
| | 6 months (t2) | 41.33 | 36.39 | 46.28 | 0.49 | -3.64 | -3.66 | -2.71 | -2.05 | -0.89 | -2.3 | - |
| | 12 months (t3) | 43.15 | 38.26 | 48.03 | 2.31 | -1.83 | -1.86 | -2.92 | -0.83 | 2.21 | -0.93 | - |
| Other | Baseline (t1) | 43.19 | 41.21 | 45.18 | - | 1.02 | -0.61 | 0.26 | -0.38 | -0.20 | 0.76 | 2.35 |
| | 6 months (t2) | 43.73 | 41.31 | 46.15 | 0.54 | -1.24 | -1.26 | -0.31 | 0.35 | 1.51 | 0.1 | 2.4 |
| | 12 months (t3) | 45.20 | 42.77 | 47.63 | 2.01 | 0.22 | 0.19 | -0.87 | 1.22 | 4.26 | 1.12 | 2.05 |

Table S2: Trajectories (values) of HRQoL-scores (MCS) after hospitalisation at baseline. MCS= SF 12 Mental Health Summary Scale. Values adjusted for: age at diagnosis, sex, time of survey, time since diagnosis, metastatic disease, T-stage, N-stage, disease status, reason for hospitalisation, physical comorbidities, emotional comorbidities, radiotherapy, chemotherapy, surgery, education, partnership, occupation, interactions: time of survey by cancer type and time since diagnosis by cancer type. Bold: Significant differences. 95% CI: 95% confidence interval.

Results of the Generalized Linear Model. Interaction terms

| | | Modell PCS | | | Modell MCS | | |
|----------------------------------|----------------------------------|---------------|---------------|-------|---------------|--------------|-------|
| Variable | Value | B | 95% CI | p | B | 95% CI | p |
| Time point*cancer type | | | | | | | |
| | t1 x breast (ref) | | | | | | |
| | t1 * skin | 0.51 | -1.07; 2.09 | 0.53 | -1.61 | -3.51; 0.29 | 0.10 |
| | t1 * gynecological | 3.64 | 1.73; 5.55 | <0.01 | -1.69 | -3.83; 0.46 | 0.12 |
| | t1 * digestive tract | 1.66 | -0.13; 3.44 | 0.07 | -2.99 | -5.26; -0.72 | 0.01 |
| | t1 * lung | 0.08 | -2.08; 2.23 | 0.95 | -3.96 | -6.72; -1.20 | 0.01 |
| | t1 * oral/facial | 0.45 | -2.12; 3.01 | 0.73 | -1.59 | -4.43; 1.25 | 0.27 |
| | t1 * prostate/germ cell | 4.25 | 2.14; 6.35 | <0.01 | -2.30 | -4.58; -0.03 | <0.05 |
| | t1 * other | 0.83 | -1.07; 2.72 | 0.39 | -2.26 | -4.50; -0.01 | <0.05 |
| | t2 * breast | | | | | | |
| | t2 * skin | -1.36 | -2.93; 0.20 | 0.09 | -1.60 | -3.63; 0.43 | 0.12 |
| | t2 * gynecological | 2.47 | 0.57; 4.38 | 0.01 | 0.33 | -1.87; 2.53 | 0.77 |
| | t2 * digestive tract | 0.28 | -1.54; 2.10 | 0.76 | -2.40 | -4.71; -0.08 | 0.04 |
| | t2 * lung | -2.39 | -4.73; -0.05 | <0.05 | -5.25 | -8.27; -2.24 | <0.01 |
| | t2 * oral/facial | 0.19 | -2.52; 2.89 | 0.89 | -1.16 | -3.97; 1.66 | 0.42 |
| | t2 * prostate/germ cell | 2.42 | 0.36; 4.47 | 0.02 | -0.50 | -2.89; 1.89 | 0.68 |
| | t2 * other | -0.18 | -2.10; 1.75 | 0.86 | -0.80 | -3.09; 1.49 | 0.49 |
| Time since diagnosis*cancer type | | | | | | | |
| | skin * 0/1 month | | | | | | |
| | skin * 2-4 months | 0.04 | -3.44; 3.51 | 0.98 | 1.64 | -3.07; 6.35 | 0.49 |
| | skin * 5-12 months | -3.60 | -7.76; 0.57 | 0.09 | -0.41 | -6.05; 5.22 | 0.89 |
| | skin * >12 months | 0.38 | -4.46; 5.22 | 0.88 | 1.75 | -4.41; 7.91 | 0.58 |
| | skin * unknown | 1.08 | -3.58; 5.74 | 0.65 | 0.55 | -5.19; 6.30 | 0.85 |
| | gynecological * 0/1 month | | | | | | |
| | gynecological * 2-4 months | -0.94 | -4.11; 2.24 | 0.56 | -0.23 | -4.36; 3.91 | 0.91 |
| | gynecological * 5-12 months | -2.11 | -5.92; 1.70 | 0.28 | 0.66 | -4.79; 6.11 | 0.81 |
| | gynecological * >12 months | -1.89 | -7.19; 3.41 | 0.48 | -2.41 | -8.22; 3.40 | 0.42 |
| | gynecological * unknown | -5.81 | -10.81; -0.80 | 0.02 | 0.07 | -6.34; 6.48 | 0.98 |
| | digestive tract * 0/1 month | | | | | | |
| | digestive tract * 2-4 months | -2.19 | -5.66; 1.28 | 0.22 | 0.12 | -4.42; 4.65 | 0.96 |
| | digestive tract * 5-12 months | -2.37 | -6.64; 1.90 | 0.28 | 0.07 | -5.30; 5.44 | 0.98 |
| | digestive tract * >12 months | -1.32 | -5.96; 3.32 | 0.58 | 1.23 | -4.43; 6.89 | 0.67 |
| | digestive tract * unknown | -2.30 | -7.67; 3.07 | 0.40 | -0.07 | -5.59; 5.46 | 0.98 |
| | lung * 0/1 month | | | | | | |
| | lung * 2-4 months | 1.31 | -3.53; 6.15 | 0.60 | -0.77 | -7.56; 6.03 | 0.83 |
| | lung * 5-12 months | 0.24 | -4.68; 5.17 | 0.92 | -0.50 | -7.43; 6.42 | 0.89 |
| | lung * >12 months | 3.24 | -3.14; 9.62 | 0.32 | 1.76 | -6.17; 9.69 | 0.66 |
| | lung * unknown | -0.17 | -6.20; 5.85 | 0.96 | 2.51 | -5.77; 10.79 | 0.55 |
| | oral/facial * 0/1 month | | | | | | |
| | oral/facial * 2-4 months | 1.87 | -4.07; 7.81 | 0.54 | 5.74 | -2.76; 14.23 | 0.19 |
| | oral/facial * 5-12 months | -0.59 | -7.30; 6.12 | 0.86 | 4.15 | -5.17; 13.48 | 0.38 |
| | oral/facial * >12 months | 1.69 | -6.28; 9.65 | 0.68 | 8.56 | -0.30; 17.41 | 0.06 |
| | oral/facial * unknown | -1.66 | -8.58; 5.27 | 0.64 | 3.58 | -6.22; 13.37 | 0.47 |
| | prostate/germ cell * 0/1 month | | | | | | |
| | prostate/germ cell * 2-4 months | -4.74 | -10.58; 1.12 | 0.11 | -4.11 | -14.01; 5.79 | 0.42 |
| | prostate/germ cell * 5-12 months | -7.90 | -14.63; -1.17 | 0.02 | 0.21 | -7.91; 8.32 | 0.96 |
| | prostate/germ cell * >12 months | -9.28 | -18.40; -0.17 | <0.05 | -17.38 | -36.87; 2.11 | 0.08 |
| | prostate/germ cell * unknown | -2.82 | -7.28; 1.65 | 0.22 | -4.53 | -10.22; 1.17 | 0.12 |
| | other * 0/1 month | | | | | | |
| | other * 2-4 months | -1.91 | -5.21; 1.39 | 0.26 | -3.81 | -8.22; 0.61 | 0.09 |
| | other * 5-12 months | -0.98 | -4.85; 2.89 | 0.62 | -4.17 | -9.22; 0.89 | 0.11 |
| | other * >12 months | 0.69 | -4.40; 5.78 | 0.79 | -1.11 | -7.27; 5.05 | 0.72 |
| | other * unknown | -2.85 | -7.32; 1.63 | 0.21 | -5.34 | -10.71; 0.02 | 0.05 |

Table S3: Results of the Generalized Linear Model. Interaction terms (all other results in table 3). PCS= SF12 Physical Health Summary Scale, MCS= SF12 Mental Health Summary Scale, B= non-standardized regression coefficient (indicating a B point increase or decrease in the respective scale); 95% CI: 95% confidence interval; p = p-value.