

# SUPPLEMENTARY MATERIALS

## Supplementary Methods

### HRQoL questionnaire (pre- and during COVID-19)

For this analysis, we used 8 HRQoL scales, including global health status (score composed of two items, both with a 7-point ordinal scale ranging from 'very poor' to 'excellent'), five functional scales (i.e. physical, role, emotional, cognitive, and social functioning: five, two, four, two, and two items, respectively), one multi-item symptom scale (fatigue: three items), and one single-item symptom scale (sleep disturbances). Only during COVID-19, an additional single-item scales was used to assess worries about future health (obtained from EORTC library).

All items could be answered on a 4-point ordinal scale ranging from 'not at all' to 'very much'. Linear transformation was used to standardize the raw scores to scores ranging from 0 to 100, where a higher score represents a higher ('better') level of functioning or a higher ('worse') level of symptoms.

### HADS questionnaire (pre- and during COVID-19)

This questionnaire consists of 14 items (7 anxiety-related and 7 depression-related), all answered on a 4-point Likert scale. Total scores range from 0 to 21, where a higher score represents more anxiety or depression. To identify a clinically relevant level of anxiety or depression, a cut-off score of 8 was used.

### De Jong Gierveld short scales for loneliness questionnaire (only during COVID-19)

This questionnaire was used to measure social and emotional loneliness. All six items use a 3-point ordinal scale including 'no' (score 0), 'more or less' (1), and 'yes' (1). Patients were classified as not lonely (sum score 0-1), moderately lonely (score 2-4), or very lonely (5-6).

### Categorization of sociodemographic data

|                                |  |
|--------------------------------|--|
| Educational level              | high, intermediate, low  |
| Marital status/partnership     | yes, no  |
| Living situation               | living alone, with partner and/or children   |
| Body mass index                | <25, 25- <30, ≥30 kg/m <sup>2</sup>  |
| Current presence of metastases | yes, no  |
| Current treatment              | radiotherapy, surgery, chemotherapy, immunotherapy, targeted therapy, active surveillance, symptom management, other |
| Presence of comorbidities      | 0, 1, ≥2 conditions  |

**Supplementary Table 1.** Changes cancer care planning and contact with health care professionals in case of physical complaints, questions or concerns during COVID-19

|   | Total population<br>of CRC patients | CRC patients<br>in follow-up | CRC patients<br>in treatment | Matched control<br>population | p-value |
|---|-------------------------------------|------------------------------|------------------------------|-------------------------------|---------|
| N (%)   | 3,247                               | 2,456                        | 594                          | 1,114                         |         |
| Contact with general practitioner (GP) during COVID-19 <sup>a</sup> |                                     |                              |                              |                               |         |
| Less quickly  | 571 (17.6)                          | 464 (18.9)                   | 67 (11.3)                    | 240 (37.9)                    | <0.001  |
| Equally quickly   | 2,336 (71.9)                        | 1,739 (70.8)                 | 468 (78.8)                   | 368 (58.1)                    |         |
| More quickly  | 41 (1.3)                            | 29 (1.2)                     | 8 (1.3)                      | 17 (2.7)                      |         |
| I never contact my GP myself  | 262 (8.1)                           | 206 (8.4)                    | 43 (7.2)                     | 7 (1.1)                       |         |
| N/a, currently no need to contact a GP <sup>c</sup>                 | -                                   | -                            | -                            | 481 (-)                       |         |
| Contact with medical specialist/nurse during COVID-19 <sup>b</sup>  |                                     |                              |                              |                               |         |
| Less quickly  | 397 (12.2)                          | 344 (14.0)                   | 38 (6.4)                     | 156 (31.3)                    | <0.001  |
| Equally quickly   | 2,036 (62.7)                        | 1,478 (60.2)                 | 473 (79.6)                   | 232 (46.5)                    |         |
| More quickly  | 30 (0.9)                            | 15 (0.6)                     | 15 (2.5)                     | 8 (1.6)                       |         |
| I never contact the hospital myself                                 | 737 (22.7)                          | 590 (24.0)                   | 60 (10.1)                    | 103 (20.6)                    |         |
| N/a, currently no need to contact the hospital <sup>c</sup>         | -                                   | -                            | -                            | 615 (-)                       |         |
| Patient-reported changes in cancer care planning                    |                                     |                              |                              |                               |         |
| Hospital visits   |                                     |                              |                              |                               |         |
| - postponed and/or cancelled  | 454 (14.0)                          | 363 (14.8)                   | 86 (14.5)                    | -                             | n/a     |
| - changed to TC/VC  | 395 (12.2)                          | 259 (10.5)                   | 128 (21.5)                   | -                             |         |
| Treatments  |                                     |                              |                              |                               |         |
| - adjusted  | 34 (5.7)                            | -                            | 34 (5.7)                     | -                             |         |
| - postponed   | 48 (8.1)                            | -                            | 48 (8.1)                     | -                             |         |
| - cancelled   | 4 (0.7)                             | -                            | 4 (0.7)                      | -                             |         |

<sup>a</sup> Missing: N=18 patients in follow-up, N=8 patients in treatment. <sup>b</sup> Missing: N=29 patients in follow-up, N=8 patients in treatment. <sup>c</sup> This answer option was only available for the norm population and therefore not included in the statistical test, but only presented as count. Percentages do not always add up to 100 because of rounding to whole numbers. CRC = Colorectal cancer; GP = General practitioner; COVID-19 = Coronavirus disease 2019; TC = Telephone consultations; VC = Video consultations.

**Supplementary Table 2.** Factors associated with changes in global quality of life, anxiety and depression from <1 year pre- to during the COVID-19 pandemic in patients with CRC (N=2,338)

|  | Global quality of life<br>(0-100) change (95% CI) | Anxiety (0-21)<br>change (95% CI) | Depression (0-21)<br>change (95% CI) |
|--|---|-----------------------------------|--------------------------------------|
| Age (year)   | -0.05 (-0.12, 0.02)                               | 0.01 (0.00, 0.03) *               | 0.02 (0.01, 0.03) **                 |
| Sex  |   |                                   |                                      |
| Male   | ref.  | ref.                              | ref.                                 |
| Female   | 1.0 (-0.3, 2.3)                                   | 0.1 (-0.1, 0.3)                   | 0.2 (0.0, 0.4) *                     |
| Marital status   |   |                                   |                                      |
| No partner   | ref.  | ref.                              | ref.                                 |
| Partner  | 0.9 (-2.3, 4.1)                                   | 0.5 (0.0, 1.0)                    | 0.1 (-0.4, 0.6)                      |
| Living situation   |   |                                   |                                      |
| Alone  | ref.  | ref.                              | ref.                                 |
| With partner, no children                                  | -0.3 (-3.3, 2.8)                                  | -0.6 (-1.1, -0.1) *               | -0.1 (-0.6, 0.4)                     |
| With partner and children                                  | -0.2 (-4.0, 3.5)                                  | -0.4 (-1.1, 0.2)                  | -0.1 (-0.7, 0.6)                     |
| No partner with children                                   | -2.2 (-6.0, 1.5)                                  | -0.4 (-1.0, 0.2)                  | 0.1 (-0.5, 0.7)                      |
| Comorbidities  |   |                                   |                                      |
| 0  | ref.  | ref.                              | ref.                                 |
| 1  | 0.4 (-1.2, 1.9)                                   | 0.2 (-0.1, 0.4)                   | 0.1 (-0.2, 0.3)                      |
| 2 or more  | -1.0 (-2.5, 0.5)                                  | 0.0 (-0.3, 0.2)                   | 0.0 (-0.2, 0.3)                      |
| Metastatic disease   |   |                                   |                                      |
| No   | ref.  | ref.                              | ref.                                 |
| Yes  | -0.2 (-2.2, 1.8)                                  | -0.3 (-0.6, 0.1)                  | -0.4 (-0.8, -0.1) **                 |
| Treatment phase  |   |                                   |                                      |
| Completed treatment (follow-up)                            | ref.  | ref.                              | ref.                                 |
| Prior to or currently in treatment                         | -3.6 (-5.8, -1.4) **                              | 0.0 (-0.3, 0.4)                   | 0.6 (0.3, 1.0) **                    |
| Changes in cancer care                                     |   |                                   |                                      |
| No changes   | ref.  | ref.                              | ref.                                 |
| Hospital visits cancelled, postponed or changed into TC/VC | 0.3 (-1.3, 2.0)                                   | 0.1 (-0.1, 0.4)                   | -0.177 (-0.446, 0.093)               |
| Treatment adjusted, postponed, or cancelled                | 1.5 (-1.3, 4.3)                                   | 0.3 (-0.2, 0.7)                   | 0.075 (-0.384, 0.535)                |
| Current supportive care                                    |   |                                   |                                      |
| No   | ref.  | ref.                              | ref.                                 |
| Yes  | 0.4 (-1.0, 1.8)                                   | 0.1 (-0.2, 0.3)                   | 0.2 (0.0, 0.5)                       |
| Worried about SARS-CoV-2 infection                         |   |                                   |                                      |
| Not at all/a little  | ref.  | ref.                              | ref.                                 |
| Quite a bit/very much                                      | -3.1 (-4.6, -1.5) **                              | 1.0 (0.7, 1.3) **                 | 0.7 (0.5, 0.9) **                    |

\* p<0.05, \*\* p<0.01. CRC = Colorectal cancer; COVID-19 = Coronavirus disease 2019; TC = Telephone consultations; VC = Video consultations; SARS-CoV-2 = Severe Acute Respiratory Syndrome coronavirus 2.