Online supplement to “Cancer worry frequency vs intensity and self-reported colorectal cancer screening uptake: a population-based study” by C Vrinten, S Stoffel, RH Dodd, J Waller, Y Lyraztopoulos, C von Wagner.

### Table S1. Descriptive statistics for overall sample without weights (age 60-70 years without any cancer diagnosis)

|                      | ABACUS 1 | ABACUS 2 | ABACUS 3 | ABACUS 4 | TOTAL |
|----------------------|----------|----------|----------|----------|-------|
|                      | N=1,381  | N=719    | N=369    | N=409    | N=2,878|
| **Age (mean and SD)**| 65.14    | (3.20)   | 65.06    | (3.19)   | 65.58  | (3.27) | 65.34 | (3.47) | 65.21 | (3.25) |
| **Gender: n (%)**    |          |          |          |          |       |
| Male                 | 701      | (50.8%)  | 353      | (49.1%)  | 201    | (54.5%) | 200   | (48.9%) | 1,455 | (50.6%) |
| Female               | 680      | (49.2%)  | 366      | (50.9%)  | 168    | (45.5%) | 209   | (51.1%) | 1,423 | (49.4%) |
| **Ethnicity: n (%)** |          |          |          |          |       |
| White                | 1316     | (95.3%)  | 681      | (94.7%)  | 346    | (93.8%) | 385   | (94.1%) | 2,728 | (94.8%) |
| Other                | 65       | (4.7%)   | 38       | (5.3%)   | 22     | (6.2%)  | 24    | (5.9%)  | 150   | (5.2%)  |
| **Marital status: n (%)** |       |          |          |          |       |
| Married or living with asmarried | 901 | (65.2%) | 442 | (61.5%) | 236 | (64.0%) | 254 | (62.1%) | 1,833 | (63.7%) |
| Single               | 122      | (8.8%)   | 76       | (10.8%)  | 50     | (13.6%) | 47    | (11.5%) | 297   | (10.3%) |
| Widowed, separated or divorced | 358 | (25.9%) | 199 | (27.7%) | 83    | (22.5%) | 108   | (26.4%) | 748   | (26.0%) |
| **Social grade: n (%)** |       |          |          |          |       |
| A/B                  | 347      | (25.1%)  | 153      | (21.3%)  | 85     | (23.0%) | 84    | (22.2%) | 669   | (23.5%) |
| C1                   | 301      | (21.8%)  | 142      | (19.7%)  | 81     | (22.0%) | 91    | (24.0%) | 615   | (21.6%) |
| C2                   | 255      | (18.5%)  | 152      | (21.1%)  | 66     | (16.3%) | 43    | (11.3%) | 510   | (17.9%) |
| D/E                  | 478      | (34.6%)  | 272      | (37.8%)  | 143    | (38.8%) | 161   | (42.5%) | 1,054 | (37.0%) |
| **Cancer worry (frequency): n (%)** |       |          |          |          |       |
| Never                | 484      | (35.0%)  | 360      | (50.1%)  | 142    | (38.5%) | 176   | (43.0%) | 1,162 | (40.4%) |
| Occasionally         | 382      | (27.7%)  | 237      | (33.0%)  | 150    | (40.7%) | 145   | (35.5%) | 914   | (31.8%) |
| Sometimes            | 257      | (18.6%)  | 80       | (11.1%)  | 57     | (15.4%) | 63    | (15.4%) | 457   | (15.9%) |
| Often                | 66       | (4.8%)   | 12       | (1.7%)   | 8      | (2.2%)  | 11    | (2.7%)  | 97    | (3.4%)  |
| Very often           | 21       | (1.5%)   | 6        | (0.8%)   | 3      | (0.8%)  | 4     | (1.0%)  | 34    | (1.2%)  |
| Missing              | 171      | (12.4%)  | 24       | (3.3%)   | 9      | (2.4%)  | 10    | (2.4%)  | 214   | (7.4%)  |
| **Cancer worry (intensity): n (%)** |       |          |          |          |       |
| Not at all           | 461      | (33.4%)  | 315      | (43.8%)  | 138    | (37.4%) | 165   | (40.3%) | 1,079 | (37.5%) |
| Slightly             | 511      | (37.0%)  | 283      | (39.4%)  | 164    | (44.4%) | 172   | (42.1%) | 1,130 | (39.3%) |
| Quite                | 244      | (17.7%)  | 75       | (10.4%)  | 38     | (10.3%) | 51    | (12.5%) | 408   | (14.2%) |
| Extremely            | 110      | (8.0%)   | 18       | (2.5%)   | 19     | (5.1%)  | 11    | (2.7%)  | 158   | (5.5%)  |
| Missing              | 55       | (4.0%)   | 26       | (3.9%)   | 10     | (2.7%)  | 10    | (2.4%)  | 103   | (3.6%)  |
| **Cancer worry (combined): n (%)** |       |          |          |          |       |
| No fear              | 323      | (23.4%)  | 267      | (37.1%)  | 103    | (27.9%) | 130   | (31.8%) | 823   | (28.6%) |
| Moderate fear        | 545      | (39.5%)  | 322      | (44.8%)  | 196    | (53.1%) | 203   | (49.6%) | 1,286 | (44.0%) |
| High fear            | 328      | (23.8%)  | 93       | (12.9%)  | 57     | (15.4%) | 65    | (15.9%) | 543   | (18.9%) |
| Missing              | 185      | (13.4%)  | 37       | (5.1%)   | 13     | (3.5%)  | 11    | (2.7%)  | 246   | (8.5%)  |
| **Uptake: n (%)**    |          |          |          |          |       |
| No                   | 214      | (15.5%)  | 122      | (17.0%)  | 106    | (28.7%) | 112   | (27.4%) | 554   | (19.2%) |
| Yes                  | 913      | (66.1%)  | 480      | (66.8%)  | 252    | (68.3%) | 273   | (66.7%) | 1,918 | (66.6%) |
| Missing              | 254      | (18.4%)  | 117      | (16.3%)  | 11     | (3.0%)  | 24    | (5.9%)  | 406   | (14.1%) |
| **Screening intentions: n (%)** |       |          |          |          |       |
| No                   | 180      | (13.0%)  | 105      | (14.6%)  | 58     | (15.4%) | 48    | (11.7%) | 291   | (13.6%) |
| Yes                  | 1076     | (77.9%)  | 555      | (77.2%)  | 298    | (79.3%) | 334   | (81.7%) | 2,263 | (78.4%) |
| Missing              | 125      | (9.1%)   | 59       | (8.2%)   | 20     | (5.3%)  | 27    | (6.6%)  | 231   | (8.0%)  |
## Table S2. Adjusted logistic regression for FOBt screening intentions with 95% confidence intervals (N=2,463)

|                                      | Cancer worry frequency (Model 1 - Linear) | Cancer worry frequency (Model 2 - Curvilinear) | Cancer worry intensity (Model 3 - Linear) | Cancer worry intensity (Model 4 - Curvilinear) |
|--------------------------------------|------------------------------------------|-----------------------------------------------|------------------------------------------|-----------------------------------------------|
|                                      | OR            | CI              | OR             | CI              | OR             | CI              | OR             | CI              |
| Age                                  | 0.994         | 0.959 - 1.031   | 0.996          | 0.961 - 1.033   | 0.993          | 0.958 - 1.029   | 0.993          | 0.958 - 1.030   |
| Gender                               |              |                 |                |                 |                |                 |                |                 |
| Male                                 | Ref          |                 | Ref            |                 | Ref            |                 | Ref            |                 |
| Female                               | 0.819        | 0.646 - 1.037   | 0.811          | 0.640 - 1.028   | 0.820          | 0.647 - 1.038   | 0.805          | 0.635 - 1.022   |
| Ethnicity                            |              |                 |                |                 |                |                 |                |                 |
| White                                | Ref          |                 | Ref            |                 | Ref            |                 | Ref            |                 |
| Non-white                            | 0.682        | 0.417 - 1.114   | 0.701          | 0.428 - 1.147   | 0.675          | 0.413 - 1.104   | 0.706          | 0.431 - 1.158   |
| Marital status                       |              |                 |                |                 |                |                 |                |                 |
| Married/living as married            | Ref          |                 | Ref            |                 | Ref            |                 | Ref            |                 |
| Single                               | 0.551        | 0.387 - 0.785** | 0.549          | 0.385 - 0.782** | 0.558          | 0.392 - 0.795** | 0.543          | 0.381 - 0.775** |
| Wid/sep/div                          | 0.758        | 0.582 - 0.988*  | 0.762          | 0.585 - 0.994*  | 0.756          | 0.580 - 0.986*  | 0.754          | 0.578 - 0.984*  |
| Social grade                         |              |                 |                |                 |                |                 |                |                 |
| A/B                                  | Ref          |                 | Ref            |                 | Ref            |                 | Ref            |                 |
| C1                                   | 0.580        | 0.390 - 0.862** | 0.586          | 0.394 - 0.871** | 0.577          | 0.388 - 0.858** | 0.588          | 0.395 - 0.875** |
| C2                                   | 0.487        | 0.327 - 0.725** | 0.495          | 0.333 - 0.738** | 0.476          | 0.320 - 0.708** | 0.482          | 0.324 - 0.719** |
| D/E                                  | 0.407        | 0.284 - 0.582** | 0.417          | 0.291 - 0.597** | 0.395          | 0.276 - 0.565** | 0.418          | 0.291 - 0.598** |
| ABACUS wave                          |              |                 |                |                 |                |                 |                |                 |
| Wave 1                               | Ref          |                 | Ref            |                 | Ref            |                 | Ref            |                 |
| Wave 2                               | 1.015        | 0.767 - 1.344   | 1.015          | 0.766 - 1.345   | 1.018          | 0.769 - 1.348   | 0.993          | 0.749 - 1.318   |
| Wave 3                               | 1.032        | 0.727 - 1.466   | 1.007          | 0.709 - 1.432   | 1.045          | 0.735 - 1.484   | 1.011          | 0.711 - 1.439   |
| Wave 4                               | 1.288        | 0.904 - 1.836   | 1.280          | 0.898 - 1.826   | 1.314          | 0.921 - 1.874   | 1.272          | 0.889 - 1.819   |
| Cancer worry frequency               |              |                 |                |                 |                |                 |                |                 |
| Linear (1-5)                         | 1.216        | 1.064 - 1.391** | 2.080          | 1.261 - 3.431** | 2.089          | 1.261 - 3.431** | 2.081          | 1.261 - 3.431** |
| Curvilinear (1-25)                   |              |                 |                |                 |                |                 |                |                 |
| Cancer worry intensity               |              |                 |                |                 |                |                 |                |                 |
| Linear (1-4)                         | 1.248        | 1.084 - 1.438** | 5.248          | 2.859 - 9.635** | 1.248          | 1.084 - 1.438** | 5.248          | 2.859 - 9.635** |
| Curvilinear (1-16)                   | 0.721        | 0.631 - 0.823** | 0.049          | 0.049           | 0.049          | 0.049           | 0.049          | 0.049           |
| R² (Nagelkerke)                      | 0.048        | 0.051           | 0.049          | 0.049           | 0.049          | 0.049           | 0.049          | 0.049           |

* wid = widowed, sep = separated, div=divorced  ** p<0.01
|                | Cancer worry frequency and intensity | Cancer worry frequency*intensity (interaction) |
|----------------|-------------------------------------|-----------------------------------------------|
|                | Model 5 - Linear                     | Model 6 - Curvilinear                         | Model 7 - Linear | Model 8 - Curvilinear |
|                | OR   | CI   | OR   | CI   | OR   | CI   | OR   | CI   | OR   | CI   |
| Age            | 0.994 | 0.959 - 1.030 | 0.994 | 0.958 - 1.031 | 0.995 | 0.960 - 1.032 | 0.994 | 0.958 - 1.031 |
| Gender         | Male | Ref | Female | 0.810 | 0.639 - 1.027 | 0.799 | 0.629 - 1.014 | 0.808 | 0.637 - 1.024 | 0.796 | 0.627 - 1.011 |
| Ethnicity      | White | Ref | Non-white | 0.680 | 0.416 - 1.112 | 0.710 | 0.433 - 1.164 | 0.689 | 0.421 - 1.127 | 0.714 | 0.436 - 1.171 |
| Marital status | Married/living as married | Ref | Single | 0.554 | 0.389 - 0.790** | 0.541 | 0.379 - 0.773** | 0.548 | 0.384 - 0.781** | 0.542 | 0.380 - 0.775** |
|                | Wid/sep/div* | 0.759 | 0.583 - 0.990* | 0.757 | 0.580 - 0.988* | 0.760 | 0.563 - 0.992* | 0.758 | 0.561 - 0.989* |
| Social grade   | A/B | Ref | C1 | 0.581 | 0.390 - 0.863** | 0.590 | 0.396 - 0.878** | 0.585 | 0.393 - 0.869** | 0.589 | 0.396 - 0.877** |
|                | C2 | 0.482 | 0.324 - 0.717** | 0.487 | 0.327 - 0.726** | 0.485 | 0.326 - 0.723** | 0.487 | 0.326 - 0.726** |
|                | D/E | 0.400 | 0.290 - 0.573** | 0.421 | 0.294 - 0.604** | 0.406 | 0.283 - 0.581** | 0.423 | 0.295 - 0.606** |
| ABACUS wave    | Wave 1 | Ref | Wave 2 | 1.033 | 0.779 - 1.369 | 1.003 | 0.755 - 1.333 | 1.039 | 0.783 - 1.377 | 0.999 | 0.751 - 1.327 |
|                | Wave 3 | 1.046 | 0.736 - 1.487 | 1.010 | 0.709 - 1.438 | 1.036 | 0.729 - 1.472 | 1.008 | 0.707 - 1.436 |
|                | Wave 4 | 1.316 | 0.922 - 1.878 | 1.274 | 0.890 - 1.822 | 1.314 | 0.920 - 1.876 | 1.269 | 0.887 - 1.816 |
| Cancer worry frequency | Linear (1-5) | 1.121 | 0.955 - 1.317 | 1.170 | 0.663 - 2.067 | 1.553 | 1.098 - 2.196* | 0.915 | 0.333 - 2.515 |
|                | Curvilinear (1-25) | 0.981 | 0.874 - 1.101 | 0.981 | 0.874 - 1.101 | 0.978 | 0.817 - 1.170 | 0.978 | 0.817 - 1.170 |
| Cancer worry intensity | Linear (1-4) | 1.166 | 0.985 - 1.380 | 4.685 | 2.368 - 9.267** | 1.510 | 1.124 - 2.030* | 3.909 | 1.543 - 9.903** |
|                | Curvilinear (1-16) | 0.732 | 0.633 - 0.847** | 0.732 | 0.633 - 0.847** | 0.725 | 0.610 - 0.860** | 0.725 | 0.610 - 0.860** |
| Cancer worry frequency*intensity | Linear (1-20) | 0.867 | 0.761 - 0.988** | 1.182 | 0.806 - 1.734 | 0.996 | 0.982 - 1.011 | 0.996 | 0.982 - 1.011 |
|                | Curvilinear (1-400) | 0.867 | 0.761 - 0.988** | 1.182 | 0.806 - 1.734 | 0.996 | 0.982 - 1.011 | 0.996 | 0.982 - 1.011 |

R^2 (Nagelkerke) 0.055 0.065 0.053 0.056

*p<0.05

*wid = widowed, sep = separated, div = divorced
R² changes for FOBT screening intention models

- Model 1 vs Model 2 (cancer worry frequency): p = 0.0317
- Model 3 vs Model 4 (cancer worry intensity): p < 0.0001
- Model 5 vs Model 6 (cancer worry frequency and intensity): p < 0.0001
- Model 7 vs Model 8 (cancer worry frequency*intensity): p = 0.0004
- Model 5 vs Model 7 (no interaction vs interaction): p = 0.0363
Table S3. Adjusted logistic regression regression for self-reported FOBT uptake with 95% confidence intervals (N=2,318)

|                        | Cancer worry frequency |                      | Cancer worry intensity |                      |
|------------------------|------------------------|----------------------|------------------------|----------------------|
|                        | Model 1 - Linear       | Model 2 - Curvilinear | Model 3 - Linear       | Model 4 - Curvilinear |
|                        | OR         CI          | OR         CI          | OR         CI          | OR         CI          |
| Age                    | 1.059      1.027 - 1.093** | 1.059      1.026 - 1.093** | 1.060      1.027 - 1.094** | 1.060      1.027 - 1.094** |
| Gender                 |                        |                      |                        |                      |
| Male                   |                        |                      |                        |                      |
| Female                 | 1.095      0.892 - 1.344 | 1.096      0.892 - 1.345 | 1.065      0.867 - 1.308 | 1.064      0.866 - 1.307 |
| Ethnicity              |                        |                      |                        |                      |
| White                  |                        |                      |                        |                      |
| Non-white              | 0.723      0.460 - 1.137 | 0.720      0.458 - 1.134 | 0.728      0.462 - 1.149 | 0.744      0.472 - 1.174 |
| Marital status         |                        |                      |                        |                      |
| Married/living as married |                      |                      |                        |                      |
| Single                 | 0.483      0.355 - 0.657** | 0.483      0.355 - 0.657** | 0.486      0.357 - 0.661** | 0.480      0.352 - 0.654** |
| Wid/sep/div*           | 0.871      0.685 - 1.106 | 0.870      0.684 - 1.106 | 0.876      0.689 - 1.114 | 0.877      0.689 - 1.115 |
| Social grade           |                        |                      |                        |                      |
| A/B                    |                        |                      |                        |                      |
| C1                     | 0.832      0.607 - 1.140 | 0.830      0.606 - 1.139 | 0.838      0.611 - 1.150 | 0.849      0.618 - 1.165 |
| C2                     | 0.700      0.508 - 0.964* | 0.698      0.506 - 0.961* | 0.696      0.505 - 0.959* | 0.704      0.510 - 0.970* |
| D/E                    | 0.543      0.409 - 0.719** | 0.540      0.407 - 0.717** | 0.537      0.405 - 0.713** | 0.556      0.419 - 0.738** |
| ABACUS wave            |                        |                      |                        |                      |
| Wave 1                 |                        |                      |                        |                      |
| Wave 2                 | 1.051      0.808 - 1.367 | 1.052      0.808 - 1.369 | 1.089      0.837 - 1.417 | 1.071      0.822 - 1.396 |
| Wave 3                 | 0.614      0.462 - 0.816** | 0.616      0.463 - 0.820** | 0.627      0.471 - 0.833** | 0.615      0.462 - 0.818** |
| Wave 4                 | 0.631      0.479 - 0.832** | 0.632      0.479 - 0.833** | 0.651      0.493 - 0.859** | 0.636      0.481 - 0.840** |
| Cancer worry frequency |                        |                      |                        |                      |
| Linear (1-5)           | 1.054      0.942 - 1.180 | 0.967      0.617 - 1.517 | 1.019      0.926 - 1.121 |
| Curvilinear (1-25)     |                        |                      |                        |                      |
| Cancer worry intensity |                        |                      |                        |                      |
| Linear (1-4)           |                      | 1.211      1.070 - 1.369** | 2.664      1.563 - 4.543** |                      |
| Curvilinear (1-16)     |                      | 0.833      0.740 - 0.939** |                      |                      |

N* (Nagelkerke) 0.056 0.056 0.064 0.069

* wid = widowed, sep = separated, div=divorced
* p<0.05; ** p<0.01
|                  | Cancer worry frequency and intensity | Cancer worry frequency*intensity (interaction) |
|------------------|-------------------------------------|-----------------------------------------------|
|                  | OR        | CI                  | OR | CI     | OR        | CI     | OR | CI     | OR        | CI     |
| Age              | 1.059     | 1.026 - 1.093**     | 1.057 | 1.024 - 1.091**     | 1.059 | 1.027 - 1.093**     | 1.057 | 1.024 - 1.091**     |
| Gender           |          |                    |     |                   |          |        |     |        |
| Male             | Ref      |                    |     |                   | Ref      |        |     |        |
| Female           | 1.073    | 0.873 - 1.318       | 1.077 | 0.875 - 1.324       | 1.073 | 0.873 - 1.319       | 1.077 | 0.875 - 1.324       |
| Ethnicity        |          |                    |     |                   |          |        |     |        |
| White            | Ref      |                    |     |                   | Ref      |        |     |        |
| Non-white        | 0.728    | 0.462 - 1.149       | 0.736 | 0.465 - 1.163       | 0.730 | 0.463 - 1.151       | 0.736 | 0.466 - 1.164       |
| Marital status   |          |                    |     |                   |          |        |     |        |
| Married/living as married | Ref |        |     |                   | Ref      |        |     |        |
| Single           | 0.487    | 0.357 - 0.662**     | 0.480 | 0.352 - 0.654**     | 0.485 | 0.356 - 0.660**     | 0.481 | 0.353 - 0.655**     |
| Wid/sep/diva     | 0.873    | 0.687 - 1.110       | 0.868 | 0.682 - 1.105       | 0.873 | 0.687 - 1.110       | 0.868 | 0.682 - 1.106       |
| Social grade     |          |                    |     |                   |          |        |     |        |
| A/B              | Ref      |                    |     |                   | Ref      |        |     |        |
| C1               | 0.836    | 0.609 - 1.147       | 0.842 | 0.613 - 1.157       | 0.839 | 0.611 - 1.151       | 0.842 | 0.613 - 1.157       |
| C2               | 0.691    | 0.501 - 0.953*      | 0.690 | 0.500 - 0.953*      | 0.694 | 0.503 - 0.957*      | 0.690 | 0.500 - 0.953*      |
| D/E              | 0.533    | 0.402 - 0.707**     | 0.543 | 0.408 - 0.721**     | 0.537 | 0.405 - 0.713**     | 0.543 | 0.408 - 0.722**     |
| ABACUS wave      |          |                    |     |                   |          |        |     |        |
| Wave 1           | Ref      |                    |     |                   | Ref      |        |     |        |
| Wave 2           | 1.078    | 0.827 - 1.404       | 1.055 | 0.809 - 1.376       | 1.078 | 0.827 - 1.404       | 1.054 | 0.808 - 1.375       |
| Wave 3           | 0.625    | 0.470 - 0.831**     | 0.622 | 0.467 - 0.828**     | 0.622 | 0.467 - 0.827**     | 0.621 | 0.466 - 0.827**     |
| Wave 4           | 0.650    | 0.492 - 0.858**     | 0.635 | 0.480 - 0.840**     | 0.648 | 0.491 - 0.855**     | 0.634 | 0.480 - 0.839**     |
| Cancer worry frequency |          |                    |     |                   |          |        |     |        |
| Linear (1-5)     | 0.925    | 0.805 - 1.063       | 0.557 | 0.333 - 0.931*      | 1.049 | 0.785-1.401         | 0.606 | 0.251 -1.467        |
| Curvilinear (1-25) | 1.109 | 0.997 - 1.233       | 1.049 | 0.785-1.401         | 1.049 | 0.933 -1.282        |
| Cancer worry intensity |          |                    |     |                   |          |        |     |        |
| Linear (1-4)     | 1.273    | 1.092 - 1.483**     | 3.759 | 2.053 - 6.882**     | 1.423 | 1.083-1.871*        | 4.039 | 1.715 -9.513*       |
| Curvilinear (1-16) | 0.784 | 0.688 - 0.893**     | 0.784 | 0.688 - 0.893**     | 0.776 | 0.659 -0.914**      |
| Cancer worry frequency*intensity |          |                    |     |                   |          |        |     |        |
| Linear (1-20)    | 0.944    | 0.842 - 1.059       | 0.968 | 0.677 - 1.385       | 1.002 | 0.988 - 1.015       |
| Curvilinear (1-400) | 0.064 | 0.073            | 0.085 | 0.073              |

* wid = widowed, sep = separated, div=divorced  
* p<0.05
R² changed for self-reported FOBT screening uptake models

- Model 1 vs Model 2 (cancer worry frequency): p = 0.6977
- Model 3 vs Model 4 (cancer worry intensity): p = 0.0030
- Model 5 vs Model 6 (cancer worry frequency and intensity): p = 0.0012
- Model 7 vs Model 8 (cancer worry frequency*intensity): p = 0.0058
- Model 5 vs Model 7 (no interaction vs interaction): p = 0.3327