**Supplemental online material**

Extended bivariate and multivariable analysis

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| **Table 2. Extended bivariate analysis of factors associated with complaints after 6 weeks (T1) and 7 months (T2)** | | | | | | | | | | | | | | |  |  |  |  |  |  |
|  | **Change in FACT-ES** | | | | **Change in HFRS** | | | | **Change in SFQ** | | | | **Change in HADS depression** | | | | **Change in HADS anxiety** | | | |
|  | **6 weeks** | | **7 months** | | **6 weeks** | | **7 months** | | **6 weeks** | | **7 months** | | **6 weeks** | | **7 months** | | **6 weeks** | | **7 months** | |
| **Variables** |  | ***P* value** |  | ***P* value** |  | ***P* value** |  | ***P* value** |  | ***P* value** |  | ***P* value** |  | ***P* value** |  | ***P* value** |  | ***P* value** |  | ***P* value** |
| Age (yrs) | r 0.05 | 0.676 | r 0.02 | 0.834 | r 0.07 | 0.548 | r 0.13 | 0.271 | r -0.13 | 0.324 | r -0.22 | **0.094** | r 0.08 | 0.516 | r 0.11 | 0.347 | r -0.03 | 0.803 | r -0.12 | 0.289 |
| Marital status |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Married/living together | -4.7 ±10 | 0.100 | -6.0 ±9 | **0.096** | 0.9 ±2 | 0.783 | 1.1 ±2 | 0.813 | -18 ±34 | 0.306 | -12 ±32 | **0.046** | 0.7 ±3 | **0.076** | 1.0 ±3 | 0.741 | -0.25 ±4 | **0.070** | -0.3 ±3 | 0.261 |
| Single/divorced | 0.6 ±12 |  | -1.1 ±10 |  | 1.1 ±1 |  | 1.2 ±1 |  | -35 ±36 |  | -43 ±40 |  | -1.3 ±6 |  | 1.2 ±4 |  | -2 ±3 |  | -1.4 ±3 |  |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Primary school to middle level high school | -4.0 ±7 | 0.945 | -5.8 ±6 | 0.716 | 1.2 ±1 | 0.448 | 1.1 ±1 | 0.913 | -31 ±34 | **0.096** | -21 ±25 | 0.414 | 0.3 ±2 | 0.776 | 0.6 ±2 | 0.458 | -0.7 ±5 | 0.826 | -0.5 ±3 | 0.899 |
| Advanced vocational/ university | -3.8 ±11 |  | 5.0 ±10 |  | 0.8 ±2 |  | 1.1 ±2 |  | -15 ±33 |  | -12 ±37 |  | 0.5 ±4 |  | 1.2 ±3 |  | -0.5 ±3 |  | -0.4 ±3 |  |
| Employment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Full-time or part-time job | -4.3 ±9 | **0.040** | -5.1 ±9 | 0.641 | 1.0 ±2 | 0.069 | 1.1 ±2 | 0.629 | -21 ±34 | 0.820 | -17 ±33 | **0.070** | 0.4 ±3 | 0.751 | 0.9 ±3 | 0.636 | -0.5 ±4 | 0.783 | -0.4 ±3 | 0.736 |
| Housewife | -5.6 ±6 |  | -7.6 ±5 |  | 1.6 ±2 |  | 0.9 ±1 |  | -11 ±16 |  | -24 ±18 |  | 0.6 ±3 |  | 0.0 ±1 |  | -1.3 ±4 |  | -1.2 ±2 |  |
| Other | 6.4 ±17 |  | -2.2 ±10 |  | -0.5 ±1 |  | 0.2 ±0 |  | -13 ±54 |  | 23 ±49 |  | -0.7 ±7 |  | 1.8 ±2 |  | -1.5 ±4 |  | -1.3 ±2 |  |
| Children |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0 | -4.4 ±8 | 0.854 | -3.6 ±8 | 0.531 | 0.7 ±1 | 0.602 | 0.9 ±1 | 0.701 | -30 ±31 | 0.435 | -14 ±17 | 0.959 | -0.9 ±3 | 0.224 | 0.1 ±2 | 0.304 | -1.7 ±4 | 0.370 | -0.1 ±2 | 0.706 |
| 1 or more | -3.8 ±11 |  | -5.5 ±9 |  | 1.0 ±2 |  | 1.1 ±2 |  | -18 ±35 |  | -15 ±35 |  | 0.6 ±3 |  | 1.1 ±3 |  | -0.4 ±4 |  | -0.5 ±3 |  |
| BMI (kg/m²) | r 0.01 | 0.961 | r 0.11 | 0.359 | r 0.06 | 0.620 | r -0.03 | 0.809 | r -0.02 | 0.891 | r -0.04 | 0.760 | r -0.08 | 0.480 | r -0.166 | 0.154 | r 0.02 | 0.869 | r -0.08 | 0.483 |
| Comorbidities |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| yes | -4.5 ±9 | 0.415 | -3.6 ±10 | 0.289 | 0.9 ±2 | 0.814 | 1.3 ±2 | 0.458 | -4 ±27 | **0.007** | -20 ±27 | 0.107 | 0.5 ±3 | 0.823 | 1 ±3 | 0.979 | 0.2 ±4 | 0.167 | -0.1 ±3 | 0.579 |
| no | -2.5 ±12 |  | -6.0 ±9 |  | 1.0 ±1 |  | 1.0 ±1 |  | -28 ±35 |  | -5 ±43 |  | 0.3 ±5 |  | 1 ±3 |  | -1 ±4 |  | -0.6 ±3 |  |
| Gene mutation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Negative | -6.7 ±14 | 0.854 | -7.5 ±12 | 0.870 | 1.9 ±2 | 0.357 | 1.4 ±1 | 0.913 | -13 ±14 | 0.130 | -5 ±15 | 0.722 | 1.8 ±2 | 0.713 | 0.7 ±1 | 0.319 | 0.5 ±2 | 0.838 | 0.3 ±2 | 0.549 |
| Unknown | -2.5 ±7 |  | -6.7 ±6 |  | 0.8 ±1 |  | 1.1 ±1 |  | -92 ±0 |  | -39 ±10 |  | -0.4 ±2 |  | 0 ±1 |  | 1 ±4 |  | -0.3 ±3 |  |
| BRCA1 | -3.2 ±11 |  | -4.6 ±8 |  | 1.0 ±2 |  | 1.1 ±2 |  | -16 ±33 |  | -14 ±40 |  | 0.4 ±4 |  | 0.6 ±2 |  | -0.8 ±4 |  | -0.9 ±3 |  |
| BRCA2 | -4.5 ±9 |  | -5.4 ±11 |  | 0.6 ±1 |  | 0.9 ±2 |  | -25 ±36 |  | -16 ±27 |  | 0.2 ±3 |  | 1.9 ±4 |  | -0.4 ±4 |  | 0.1 ±3 |  |
| Oral contraceptive before surgery |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| yes | -4.5 ±15 | 0.858 | -2.8 ±10 | 0.389 | 1.0 ±2 | 0.982 | 1.0 ±2 | 0.819 | -17 ±34 | 0.842 | -4 ±23 | 0.418 | 0 ±6 | 0.738 | 0.4 ±2 | 0.555 | -0.7 ±4 | 0.930 | 0 ±2 | 0.643 |
| no | -3.8 ±10 |  | -5.6 ±9 |  | 0.9 ±2 |  | 1.0 ±1 |  | -20 ±34 |  | -16 ±35 |  | 0.5 ±3 |  | 1.1 ±3 |  | -0.6 ±4 |  | -0.5 ±3 |  |
| Regular menses |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| yes | -6.2 ±12 | **0.031** | -7.3 ±10 | **0.031** | 1.2 ±1 | 0.172 | 1.6 ±1 | **0.004** | -26 ±33 | 0.192 | -20 ±31 | 0.167 | 1 ±4 | 0.118 | 1.7 ±4 | **0.018** | -0.3 ±4 | 0.507 | -0.2 ±3 | 0.540 |
| no | -1.2 ±7 |  | -2.9 ±7 |  | 0.7 ±2 |  | 0.5 ±1 |  | -14 ±34 |  | -8 ±36 |  | -0.2 ±2 |  | 0.2 ±2 |  | -0.9 ±4 |  | -0.7 ±3 |  |
| History of Breast cancer |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| yes | -3.0 ±10 | 0.657 | -3.3 ±10 | 0.285 | 0.8 ±2 | 0.600 | 1.0 ±2 | 0.823 | -3 ±29 | **0.009** | -6 ±47 | 0.223 | 0.5 ±3 | 0.892 | 0.8 ±3 | 0.800 | 0.5 ±3 | **0.096** | -0.2 ±4 | 0.688 |
| no | -4.2 ±11 |  | -5.9 ±9 |  | 1 ±2 |  | 1.1 ±2 |  | -27 ±34 |  | -18 ±27 |  | 0.4 ±4 |  | 1.0 ±3 |  | -1.1 ±3 |  | -0.5 ±3 |  |
| Radiotherapy for breast cancer |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| yes | -1.5 ±11 | 0.360 | -5.9 ±9 | 0.112 | 0.5 ±2 | 0.287 | 0.5 ±2 | 0.175 | 2 ±36 | **0.017** | 1 ±63 | 0.120 | -0.2 ±2 | 0.512 | 1.2 ±4 | 0.805 | -0.9 ±4 | 0.182 | 0.7 ±3 | 0.237 |
| no | -4.3 ±10 |  | -1.1 ±10 |  | 1 ±2 |  | 1.2 ±2 |  | -25 ±32 |  | -18 ±25 |  | 0.5 ±4 |  | 1.0 ±3 |  | 0.7 ±3 |  | -0.6 ±3 |  |
| Chemotherapy for breast cancer |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| yes | -1.8 ±11 | 0.407 | -1.9 ±11 | 0.156 | 0.4 ±2 | 0.157 | 0.8 ±2 | 0.423 | -0,4 ±35 | **0.019** | 13 ±42 | **0.002** | 0.1 ±3 | 0.679 | -0.3 ±2 | 0.109 | -0.9 ±4 | 0.180 | -0.3 ±3 | 0.567 |
| no | -4.3 ±10 |  | -5.9 ±8 |  | 1.1 ±2 |  | 1.1 ±2 |  | -25 ±32 |  | -21 ±29 |  | 0.5 ±3 |  | 1.2 ±3 |  | 0.6 ±3 |  | -0.9 ±4 |  |
| Hormonal therapy for breast cancer |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| yes | 2.7 ±8 | 0.263 | 3.5 ±10 | **0.083** | -0.3 ±1 | 0.149 | -0.2 ±2 | 0.132 | 23 ±35 | **0.022** | 35 ±51 | **0.008** | -1.7 ±3 | 0.283 | -0.7 ±5 | 0.319 | 0 ±3 | 0.785 | -1.3 ±3 | 0.594 |
| no | -4.1 ±10 |  | -5.6 ±9 |  | 1.0 ±2 |  | 1.1 ±1 |  | -22 ±33 |  | -17 ±31 |  | 0.5 ±3 |  | 1.1 ±3 |  | -0.6 ±4 |  | -0.4 ±3 |  |
| Tamoxifen |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| yes | 1.5 ±7 | 0.288 | 3.5 ±10 | **0.083** | -0.3 ±1 | 0.116 | -0.2 ±2 | 0.132 | 16 ±32 | **0.030** | 35 ±51 | **0.008** | -1 ±3 | 0.397 | -0.7 ±5 | 0.319 | -0.5 ±3 | 0.961 | -1.3 ±3 | 0.594 |
| no | -4.1 ±10 |  | -5.6 ±9 |  | 1 ±2 |  | 1.1 ±1 |  | -22 ±33 |  | -17 ±31 |  | 0.5 ±3 |  | 1.1 ±3 |  | -0.6 ±4 |  | -0.4 ±3 |  |
| AMH level µg/l |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| (≤0.10) (N=36) | -3 ±11 | 0.804 | -3 ±9 | 0.161 | 1 ±2 | 0.643 | 1 ±2 | 0.798 | -11 ±30 | 0.202 | -9 ±37 | 0.579 | 2 ±4 | 0.301 | 1 ±3 | 0.161 | 0 ±3 | 0.513 | 0 ±3 | **0.052** |
| (0.10-1.00) (N=32) | -4 ±10 |  | -5 ±9 |  | 1 ±1 |  | 1 ±1 |  | -25 ±38 |  | -19 ±34 |  | 0 ±2 |  | 0 ±1 |  | -1 ±5 |  | -1 ±3 |  |
| (≥1.00) (N=23) | -5 ±11 |  | -8 ±9 |  | 1 ±2 |  | 1 ±1 |  | -29 ±33 |  | -17 ±29 |  | 0 ±5 |  | 2 ±4 |  | -1 ±4 |  | 0 ±3 |  |
| Pearson correlation indicated by r; **bold** indicates P<0.10; continuous variables as mean (±standard deviation); discrete variables as number (percentage). Abbreviations: SD standard deviation; BC breast cancer; AMH Anti-Müllerian hormone; SFQ sexual functioning questionnaire; HADS hospital anxiety and depression scale; HFRS hot flush rating scale; FACT-ES functional assessment of cancer therapy – endocrine symptoms | | | | | | | | | | | | | | | | | | | | |

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| Table 3 Complete mulitvariable analysis of factors associated with dependent variables | | | | | | | | | | | |
| **Change at 6 weeks** | **Regression coefficient (β) (95% CI)** | **Standard error** | ***P* value** | **Semipartial correlation** | **Total R2** | **Change at 7 months** | **Regression coefficient (β) (95% CI)** | **Standard error** | ***P* value** | **Semipartial correlation** | **Total R2** |
| *FACT-ES* |  |  |  |  | 0.143 | *FACT-ES* |  |  |  |  | 0.148 |
| Stable relationship (married/cohabitating) | -6 (-13 to -0.1) | 3 | **0.046** | -0.22 |  | Stable relationship (married/cohabitating) | -5 (-11 to 0.3) | 3 | 0.062 | -0.21 |  |
| Employment |  |  |  |  |  | Regular mensis (yes vs no) | -4 (-8 to 0.6) | 2 | 0.089 | -0.19 |  |
| Other | ref |  |  |  |  | Hormonal therapy for BC (yes vs no) | 7 (-3 to 17) | 5 | 0.175 | 0.15 |  |
| Working | -6 (-13 to 2) | 4 | 0.122 | -0.17 |  | AMH ≤0.10 µg/L | ref |  |  |  |  |
| Housewife | -8 (-19 to 3) | 6 | 0.175 | -0.15 |  | AMH 0.10-1.00 µg/L | -1 (-5 to 4) | 2 | 0.786 | -0.03 |  |
| Regular menses (yes vs no) | -6 (-11 to -1.2) | 2 | **0.015** | -0.27 |  | AMH ≥1.00 µg/L | -3 (-8 to 2) | 3 | 0.275 | -0.12 |  |
| AMH ≤0.10 µg/L | ref |  |  |  |  |  |  |  |  |  |  |
| AMH 0.10-1.00 µg/L | 1 (-4 to 7) | 3 | 0.622 | 0.05 |  |  |  |  |  |  |  |
| AMH ≥1.00 µg/L | 0.4 (-6 to 7) | 3 | 0.885 | 0.02 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| *HFRS* |  |  |  |  | 0.06 | *HFRS* |  |  |  |  | 0.171 |
| Employment |  |  |  |  |  | Regular mensis (yes vs no) | 1.3 (0.6 to 2.1) | 0.4 | **0.001** | 0.09 |  |
| Other | ref |  |  |  |  | AMH ≤0.10 µg/L | ref |  |  |  |  |
| Working | 1,0 (-0.2 to 2.1) | 1 | 0.111 | 0.19 |  | AMH 0.10-1.00 µg/L | -0.5 (-1.4 to 0.3) | 0.4 | 0.207 | -0.15 |  |
| Housewife | 1.5 (-0.3 to 3.2) | 1 | 0.104 | 0.20 |  | AMH ≥1.00 µg/L | -0.9 (-1.9 to 0.0) | 0.5 | 0.057 | -0.22 |  |
| AMH ≤0.10 µg/L | ref |  |  |  |  |  |  |  |  |  |  |
| AMH 0.10-1.00 µg/L | -0.5 (-1.3 to 0.4) | 0.4 | 0.299 | -0.12 |  |  |  |  |  |  |  |
| AMH ≥1.00 µg/L | -0.3 (-1.2 to 0.7) | 0.5 | 0.591 | -0.06 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| *SFQ* |  |  |  |  | 0.219 | *SFQ* |  |  |  |  | 0.348 |
| Education | 18 (-3 to 39) | 10 | 0.088 | 0.21 |  | Age (years) | -1 (-2.9 to 0.8) | 0.9 | 0.269 | -0.13 |  |
| History of BC (yes vs no) | 4 (-31 to 39) | 18 | 0.818 | 0.03 |  | Stable relationship (married/cohabitating) | 25 (-4 to 54) | 15 | 0.094 | 0.20 |  |
| Radiotherapy for BC (yes vs no) | 4 (-30 to 37) | 17 | 0.834 | 0.03 |  | Employment |  |  |  |  |  |
| Chemotherapy for BC (yes vs no) | 4 (-32 to 41) | 18 | 0.817 | 0.03 |  | Other | ref |  |  |  |  |
| Hormonal therapy for BC (yes vs no) | 7 (-75 to 88) | 41 | 0.870 | 0.02 |  | Working | -19 (-44 to 6) | 13 | 0.137 | -0.17 |  |
| Tamoxifen (yes vs no) | 29 (-47 to 105) | 38 | 0.441 | 0.10 |  | Housewife | -28 (-66 to 9) | 19 | 0.133 | -0.18 |  |
| AMH ≤0.10 µg/L | ref |  |  |  |  | Chemotherapy for BC (yes vs no) | 23 (1 to 45) | 11 | **0.041** | 0.24 |  |
| AMH 0.10-1.00 µg/L | -11 (-32 to 10) | 10 | 0.278 | -0.14 |  | Hormonal therapy for BC (yes vs no) | 36 ('-1 to 74) | 19 | 0.057 | 0.22 |  |
| AMH ≥1.00 µg/L | -16 (-42 to 10) | 13 | 0.229 | -0.15 |  | AMH ≤0.10 µg/L | ref |  |  |  |  |
|  |  |  |  |  |  | AMH 0.10-1.00 µg/L | -9 (-29 to 12) | 10 | 0.406 | -0.10 |  |
| *HADS Depression* |  |  |  |  | 0.078 | AMH ≥1.00 µg/L | -7 (-32 to 18) | 12 | 0.585 | -0.06 |  |
| Stable relationship (married/cohabitating) | 2.1 (-0.1 to 4.3) | 1 | 0.060 | 0.22 |  |  |  |  |  |  |  |
| AMH ≤0.10 µg/L | ref |  |  |  |  | *HADS Depression* |  |  |  |  | 0.132 |
| AMH 0.10-1.00 µg/L | -1.4 (-3 to 0.3) | 1 | 0.107 | -0.18 |  | Regular menses (yes vs no) | 1.7 (0.4 to 3.1) | 0.7 | **0.012** | 0.29 |  |
| AMH ≥1.00 µg/L | -1.1 (-3 to 0.8) | 1 | 0.251 | -0.13 |  | AMH ≤0.10 µg/L | ref |  |  |  |  |
|  |  |  |  |  |  | AMH 0.10-1.00 µg/L | -1.3 (-3 to 0.2) | 1 | 0.094 | -0.19 |  |
| *HADS Anxiety* |  |  |  |  | 0.092 | AMH ≥1.00 µg/L | 0.3 (-1.4 to 2.0) | 1 | 0.730 | 0.04 |  |
| Stable relationship (married/cohabitating) | 2.3 (-0.06 to 4.6) | 1 | 0.056 | 0.22 |  |  |  |  |  |  |  |
| History of BC (yes vs no) | 1.5 (-0.5 to 3.5) | 1 | 0.148 | 0.17 |  | *HADS Anxiety* |  |  |  |  | 0.080 |
| AMH ≤0.10 µg/L | ref |  |  |  |  | AMH ≤0.10 µg/L | ref |  |  |  |  |
| AMH 0.10-1.00 µg/L | -0.8 (-3 to 1) | 1 | 0.459 | -0.08 |  | AMH 0.10-1.00 µg/L | -1.5 (-3 to 0.1) | 1 | 0.060 | -0.22 |  |
| AMH ≥1.00 µg/L | -0.4 ('-3 to 2) | 1 | 0.755 | -0.04 |  | AMH ≥1.00 µg/L | 0.4 (-1.3 to 2.2) | 1 | 0.618 | 0.06 |  |
| **Bold** indicates statistical significance, *P* < 0.05. CI = Confidence interval, SD = standard deviation, SFQ = sexual functioning questionnaire, HADS = hospital anxiety and depression scale, HFRS = hot flush rating scale, FACT-ES = functional assessment cancer treat ment - endocrine symptoms, AMH = Anti-Müllerian hormone, BC = breast cancer | | | | | | | | | | | |