# Supplementary Table 1: (Non)response analysis: Participation by sociodemographic and clinical characteristics

|  |  |  |  |
| --- | --- | --- | --- |
|  | Entire CAESAR study population (age 18-79 years at diagnosis) |  | Subpopulation for this analysis (age 18-59 years at diagnosis) |
|  | Contacted | Participants1 |  | Contacted | Participants1 |
|  | N | N | Row % |  | N | N | Row % |
|  |  |  |  |  |  |  |  |
| Tumor site and sex |  |  |  |  |  |  |  |
|  Breast (females) | 6061 | 2654 | 43.8% |  | 3190 | 1453 | 45.6% |
|  Colorectum (females) | 1668 | 504 | 30.2% |  | 461 | 179 | 38.8% |
|  Colorectum (males) | 1972 | 713 | 36.2% |  | 569 | 227 | 39.9% |
|  Prostate (males) | 4824 | 2186 | 45.3% |  | 676 | 304 | 45.0% |
|  |  |  |  |  |  |  |  |
| Age at diagnosis |  |  |  |  |  |  |  |
|  18-44 | 993 | 394 | 39.7% |  | 993 | 394 | 39.7% |
|  45-49 | 844 | 369 | 43.7% |  | 844 | 369 | 43.7% |
|  50-54 | 1217 | 519 | 42.7% |  | 1217 | 519 | 42.7% |
|  55-59 | 1842 | 881 | 47.8% |  | 1842 | 881 | 47.8% |
|  60-64 | 3265 | 1523 | 46.7% |  | --- | --- | --- |
|  65-69 | 3307 | 1359 | 41.1% |  | --- | --- | --- |
|  70-74 | 2479 | 810 | 32.7% |  | --- | --- | --- |
|  75-79 | 535 | 160 | 29.9% |  | --- | --- | --- |
|  |  |  |  |  |  |  |  |
| Years since diagnosis |  |  |  |  |  |  |  |
|  5-9 years | 10995 | 4824 | 43.9% |  | 3483 | 1602 | 46.0% |
|  10-15 years | 3488 | 1192 | 34.2% |  | 1413 | 561 | 39.7% |
|  |  |  |  |  |  |  |  |
| UICC Stage |  |  |  |  |  |  |  |
|  I/II | 8821 | 3712 | 42.1% |  | 3449 | 1539 | 44.6% |
|  III/IV | 2749 | 1183 | 43.0% |  | 788 | 353 | 44.8% |
|  missing | 2956 | 1162 | 39.3% |  | 659 | 271 | 41.1% |
|  |  |  |  |  |  |  |  |
| Overall | 14526 | 6057 | 41.7% |  | 4896 | 2163 | 44.2% |

Numbers do not add up to overall number of participants due to missing data regarding sex, age and date of diagnosis (e.g. due to data privacy concerns).
1 Participants = Respondents who completed the full-length questionnaire with questions regarding RTW status (before approval of employment status).

# Supplementary Table 2: Algorithm and criteria to determine return to work status

|  |  |  |  |
| --- | --- | --- | --- |
| Step | Scenario | Criteria | Classified as |
| 1 | No change in employment and still working. | [Change in employment] = ‘No’ | Returned to former job |
| 2 | Returned to former job, no other job | ([Returned to former job] = ‘Yes’ OR ([Reduced working hours] = ‘Yes’) AND [Uptake of new job] = ‘No’ | Returned to former job |
| 3 | Direct uptake of a new job without prior retraining nor unemployment | [Returned to former job] = ‘No’ AND [Uptake of new job] = ‘Yes’ AND ([Unemployment]=’No’ OR [Uptake of new job] PRIOR TO [Unemployment]) AND ([Vocational retraining] = ‘No’ OR [Uptake of new job] PRIOR TO [Vocational retraining]) | Uptake of a new job |
| 4 | Uptake of a new job following a period of unemployment and/or vocational retraining | [Returned to former job] = ‘No’ AND [Uptake of new job] = ‘Yes’ AND ([Unemployment] OR [Vocational retraining] PRIOR TO [Uptake of new job]) | Uptake of a new job |
| 5 | Returned initially to former job, switched later to other job | [Returned to former job] PRIOR TO [Uptake of new job] AND ([Unemployment]=’No’ OR [Uptake of new job] PRIOR TO [Unemployment]) AND ([Vocational retraining] = ‘No’ OR [Uptake of new job] PRIOR TO [Vocational retraining]) | Returned to former job |
| 6 | Returned initially to former job, followed by a period of unemployment and/or vocational retraining and uptake of another job | [Returned to former job] PRIOR TO [Uptake of new job] AND ([Unemployment] PRIOR TO [Uptake of new job] OR [Vocational retraining] PRIOR TO [Uptake of new job]) | Returned to former job |
| 7 | Unemployment, no return to work, no pension | [Unemployment]=’Yes’ AND [Returned to former job] = ‘No’ AND [Reduced working hours] = ‘No’) AND [Uptake of new job] = ‘No’ | Unemployment |
| 8 | Being granted disability pension without prior return to work | [Early retirement/disability] =’Cancer related’ AND [Returned to former job] = ‘No’ AND [Reduced working hours] = ‘No’) AND [Uptake of new job] = ‘No’ AND [Unemployment]=’No’  | Disability pension (related to cancer) |
| 9 | Being granted early retirement pension without prior return to work | [Early retirement/disability] =’Not cancer related’ AND [Returned to former job] = ‘No’ AND [Reduced working hours] = ‘No’) AND [Uptake of new job] = ‘No’ AND [Unemployment]=’No’ AND [Vocational disability related to cancer] = ‘No’ | Early retirement (not cancer related) |
| 10 | Other (house wife, house husband) | [All other cases (e.g. becoming housewife/house husband) AND NOT WORKING AT TIME OF SURVEY]  | Other |

# Supplementary Table 3: Return to work (former job) by tumor site and sex according to sociodemographic and clinical characteristics

|  | Breast Ca (Females) |  | Colorectal Ca (Females) |  | Colorectal Ca (Males) |  | Prostate Ca(Males) |  | Total |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | N | % |  | N | % |  | N | % |  | N | % |  | N | % | P |
| Age1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | <0.0001 |
|  18-44 | 216 | 73.0% |  | 15 | 55.6% |  | 15 | 62.5% |  | 0 | 0.0% |  | 246 | 70.7% |
|  45-49 | 173 | 70.0% |  | 11 | 68.8% |  | 25 | 75.8% |  | 8 | 72.7% |  | 217 | 70.7% |
|  50-54 | 164 | 65.9% |  | 21 | 75.0% |  | 26 | 65.0% |  | 46 | 83.6% |  | 257 | 69.1% |
|  55-59 | 135 | 48.6% |  | 20 | 50.0% |  | 35 | 47.9% |  | 75 | 53.6% |  | 265 | 49.9% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Years since diagnosis |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.064 |
|  5-9 years | 542 | 65.1% |  | 43 | 61.4% |  | 73 | 64.0% |  | 105 | 63.3% |  | 763 | 64.5% |
|  10-15 years | 146 | 61.6% |  | 24 | 58.5% |  | 28 | 50.0% |  | 24 | 58.5% |  | 222 | 59.2% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Nationality |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.56 |
|  German | 678 | 64.3% |  | 66 | 60.0% |  | 99 | 60.0% |  | 127 | 62.6% |  | 970 | 63.3% |
|  Other | 10 | 62.5% |  | 1 | 100.0% |  | 2 | 40.0% |  | 2 | 50.0% |  | 15 | 57.7% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |  | <0.0001 |
|  <10 years | 220 | 53.9% |  | 30 | 57.7% |  | 46 | 53.5% |  | 44 | 50.6% |  | 340 | 53.7% |
|  10 years | 245 | 67.5% |  | 17 | 60.7% |  | 18 | 60.0% |  | 28 | 63.6% |  | 308 | 66.2% |
|  12+ years | 223 | 74.6% |  | 20 | 64.5% |  | 37 | 68.5% |  | 57 | 75.0% |  | 337 | 73.3% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Occupation1  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0007 |
|  Manual worker | 64 | 59.3% |  | 7 | 53.8% |  | 21 | 50.0% |  | 16 | 38.1% |  | 108 | 52.7% |
|  Non-manual employee  | 527 | 65.3% |  | 49 | 61.3% |  | 57 | 58.8% |  | 90 | 68.2% |  | 723 | 64.8% |
|  Self-employed | 58 | 72.5% |  | 4 | 57.1% |  | 11 | 78.6% |  | 15 | 71.4% |  | 88 | 72.1% |
|  Other  | 39 | 52.0% |  | 7 | 63.6% |  | 12 | 70.6% |  | 8 | 66.7% |  | 66 | 57.4% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Married/with partner |  |  |  |  |  |  |  |  |  |  |  |  | 0.89 |
|  Yes | 491 | 64.4% |  | 50 | 62.5% |  | 90 | 60.4% |  | 105 | 61.8% |  | 736 | 63.3% |
|  No | 197 | 64.2% |  | 17 | 54.8% |  | 11 | 52.4% |  | 24 | 64.9% |  | 249 | 62.9% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| UICC Stage1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.009 |
|  I/II | 627 | 64.7% |  | 39 | 65.0% |  | 66 | 65.3% |  | 80 | 65.6% |  | 812 | 64.9% |
|  III/IV | 61 | 60.4% |  | 28 | 54.9% |  | 35 | 50.7% |  | 49 | 57.6% |  | 173 | 56.5% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Surgery (open) |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.005 |
|  Yes | 685 | 64.4% |  | 57 | 59.4% |  | 90 | 62.1% |  | 115 | 65.7% |  | 947 | 64.0% |
|  No | 3 | 42.9% |  | 10 | 66.7% |  | 11 | 44.0% |  | 14 | 43.8% |  | 38 | 48.1% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Chemotherapy |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.59 |
|  Yes | 495 | 64.0% |  | 33 | 50.8% |  | 59 | 62.8% |  | 11 | 47.8% |  | 598 | 62.6% |
|  No | 193 | 65.0% |  | 34 | 73.9% |  | 42 | 55.3% |  | 118 | 64.1% |  | 387 | 64.2% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Radiotherapy |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.61 |
|  Yes | 586 | 64.0% |  | 15 | 44.1% |  | 27 | 58.7% |  | 55 | 59.8% |  | 683 | 62.8% |
|  No | 102 | 65.8% |  | 52 | 67.5% |  | 74 | 59.7% |  | 74 | 64.3% |  | 302 | 64.1% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hormone therapy |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.55 |
|  Yes | 378 | 65.2% |  | --- | --- |  | --- | --- |  | 27 | 51.9% |  | 405 | 64.1% |
|  No | 310 | 63.3% |  | 67 | 60.4% |  | 101 | 59.4% |  | 102 | 65.8% |  | 580 | 62.6% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rehabilitation |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.012 |
|  Yes | 455 | 61.0% |  | 48 | 64.0% |  | 64 | 61.0% |  | 75 | 60.5% |  | 642 | 61.1% |
|  No | 233 | 71.9% |  | 19 | 52.8% |  | 37 | 56.9% |  | 54 | 65.1% |  | 343 | 67.5% |
| Total | 688 | 64.3% |  | 67 | 60.4% |  | 101 | 59.4% |  | 129 | 62.3% |  | 985 | 63.2% | 0.56 |

The corresponding numerators are displayed in Table 1; *p:* p-values derived from chi²-statistic referring to null hypothesis: No association between sociodemographic resp. clinical characteristics and return to work (entire study population)

1 at time of diagnosis.