| Category                        | WSI          | TCGA         | P value   |
|--------------------------------|--------------|--------------|-----------|
| Age [median (IQR)]             | 54 (45-63)   | 58 (49-68)   | 8.6 x 10^{-11} |
| Menopause status               |              |              |           |
| Pre-menopausal                 | 92 (30.5%)   | 192 (24.2%)  | 0.038     |
| Post-menopausal                | 210 (69.5%)  | 600 (75.8%)  |           |
| Grade                          |              |              |           |
| I                              | 40 (8.3%)    | 51 (8.7%)    | 0.076     |
| II                             | 165 (34.2%)  | 238 (40.6%)  |           |
| III                            | 277 (57.5%)  | 297 (50.7%)  |           |
| ER                             |              |              |           |
| Positive                       | 366 (65.4%)  | 677 (76.8%)  | 3.2 x 10^{-6} |
| Negative                       | 194 (34.6%)  | 205 (23.2%)  |           |
| PR                             |              |              |           |
| Positive                       | 313 (56.8%)  | 588 (66.8%)  | 1.6 x 10^{-4} |
| Negative                       | 238 (43.2%)  | 292 (33.2%)  |           |
| HER2                           |              |              |           |
| Positive                       | 73 (13.0%)   | 78 (15.3%)   | 0.30      |
| Negative                       | 487 (87.0%)  | 431 (84.7%)  |           |
| TNBC                           |              |              |           |
| No                             | 388 (70.4%)  | 422 (83.2%)  | 1.0 x 10^{-5} |
| Yes                            | 163 (29.6%)  | 85 (16.8%)   |           |
| BRCA1/2 status                 |              |              |           |
| BRCA-proficient                | 483 (86.3%)  | 874 (94.1%)  | 2.2 x 10^{-6} |
| BRCA1-deficient                | 47 (8.4%)    | 31 (3.3%)    |           |
| BRCA2-deficient                | 30 (5.4%)    | 24 (2.6%)    |           |
| BRCA1/2 germline status        |              |              |           |
| BRCA-proficient                | 471 (89.5%)  | 867 (96.4%)  | 1.2 x 10^{-6} |
| BRCA1-deficient                | 30 (5.7%)    | 15 (1.7%)    |           |
| BRCA2-deficient                | 25 (4.8%)    | 17 (1.9%)    |           |
| BRCA1/2 somatic status         |              |              |           |
| BRCA-proficient                | 471 (95.5%)  | 867 (97.4%)  | 0.15      |
| BRCA1-deficient                | 17 (3.4%)    | 16 (1.8%)    |           |
| BRCA2-deficient                | 5 (1.0%)     | 7 (0.8%)     |           |

* Unless otherwise specified, data are presented in no. (%). For each data type, the total number of subjects may differ because of missing or incomplete data. Samples with either genomic or transcriptomic data available included.