

**Table S1.** Baseline clinicopathological characteristics. Values are the number (percentage) unless indicated otherwise. Percentages may not add to 100% due to rounding.

| Characteristics               | All panels<br>(N = 536) | TIL panel<br>(N = 520) | NK/MF panel<br>(N = 508) | APC Panel (N<br>= 498) |
|-------------------------------|-------------------------|------------------------|--------------------------|------------------------|
| Age                           |                         |                        |                          |                        |
| Average age in years $\pm$ SD | 69.69 $\pm$ 12.01       | 69.82 $\pm$ 12.02      | 69.77 $\pm$ 11.90        | 69.79 $\pm$ 11.82      |
| $\leq$ 75 years old           | 351 (65.5)              | 338 (65)               | 331 (65.2)               | 327 (65.7)             |
| > 75 years old                | 185 (34.5)              | 182 (35)               | 177 (34.8)               | 171 (34.3)             |
| Gender                        |                         |                        |                          |                        |
| Male                          | 290 (54.1)              | 282 (54.2)             | 274 (53.9)               | 273 (54.8)             |
| Female                        | 246 (45.9)              | 238 (45.8)             | 234 (46.1)               | 225 (45.2)             |
| Localization                  |                         |                        |                          |                        |
| Right Colon                   | 185 (34.5)              | 183 (35.2)             | 177 (34.8)               | 169 (33.9)             |
| Left Colon                    | 184 (34.3)              | 182 (35)               | 178 (35)                 | 165 (33.1)             |
| Rectum                        | 167 (31.2)              | 155 (29.8)             | 153 (30.1)               | 164 (32.9)             |
| T Stage                       |                         |                        |                          |                        |
| 0                             | 7 (1.3)                 | 3 (0.6)                | 5 (1)                    | 7 (1.4)                |
| 1                             | 39 (7.3)                | 39 (7.5)               | 37 (7.3)                 | 35 (7)                 |
| 2                             | 66 (12.3)               | 61 (11.7)              | 60 (11.8)                | 65 (13.1)              |
| 3                             | 314 (58.6)              | 309 (59.4)             | 304 (59.8)               | 291 (58.4)             |
| 4                             | 101 (18.8)              | 99 (19)                | 95 (18.7)                | 92 (18.5)              |
| Missing data                  | 9 (1.7)                 | 9 (1.7)                | 7 (1.4)                  | 8 (1.6)                |
| N Stage                       |                         |                        |                          |                        |
| 0                             | 283 (52.8)              | 273 (52.5)             | 266 (52.4)               | 261 (52.4)             |
| 1+                            | 243 (45.3)              | 237 (45.6)             | 236 (46.5)               | 228 (45.8)             |
| Missing data                  | 10 (1.9)                | 10 (1.9)               | 6 (1.2)                  | 9 (1.8)                |
| M Stage                       |                         |                        |                          |                        |
| 0                             | 450 (84)                | 437 (84)               | 426 (83.9)               | 421 (84.5)             |
| 1                             | 80 (14.9)               | 77 (14.8)              | 77 (15.2)                | 71 (14.3)              |
| Missing data                  | 6 (1.1)                 | 6 (1.2)                | 5 (1)                    | 6 (1.2)                |
| Differentiation Grade         |                         |                        |                          |                        |
| Low                           | 374 (69.8)              | 368 (70.8)             | 356 (70.1)               | 353 (70.9)             |
| High                          | 87 (16.2)               | 84 (16.2)              | 83 (16.3)                | 79 (15.9)              |
| Missing data                  | 75 (14)                 | 68 (13.1)              | 69 (13.6)                | 66 (13.3)              |
| Neural Invasion               |                         |                        |                          |                        |
| No                            | 375 (70)                | 361 (69.4)             | 352 (69.3)               | 347 (69.7)             |
| Yes                           | 80 (14.9)               | 80 (15.4)              | 78 (15.4)                | 73 (14.7)              |
| Missing data                  | 81 (15.1)               | 79 (15.2)              | 78 (15.4)                | 78 (15.7)              |
| Vascular Invasion             |                         |                        |                          |                        |
| No                            | 344 (64.2)              | 331 (63.7)             | 326 (64.2)               | 320 (64.3)             |
| Yes                           | 133 (24.8)              | 132 (25.4)             | 125 (24.6)               | 120 (24.1)             |
| Missing data                  | 59 (11)                 | 57 (11.0)              | 57 (11.2)                | 58 (11.6)              |
| MSS T Status                  |                         |                        |                          |                        |
| MSS                           | 454 (84.7)              | 441 (84.8)             | 432 (85)                 | 423 (84.9)             |
| MSI-H                         | 68 (12.7)               | 66 (12.7)              | 64 (12.6)                | 63 (12.7)              |
| Missing data                  | 14(2.6)                 | 13 (2.5)               | 12 (2.4)                 | 12 (2.4)               |
| BRAF Mutation                 |                         |                        |                          |                        |
| No                            | 210 (39.2)              | 206 (39.6)             | 201 (39.6)               | 194 (39)               |
| Yes                           | 46 (8.6)                | 46 (8.8)               | 45 (8.9)                 | 42 (8.4)               |

|  |            |            |            |            |
|--|------------|------------|------------|------------|
| Missing data                             | 280 (52.2) | 268 (51.5) | 262 (51.5) | 262 (52.6) |
| MSI: BRAF Mutation                       |            |            |            |            |
| MSI-H + BRAF Mutation                    | 21 (30.9)  | 21 (31.8)  | 21 (32.8)  | 20 (31.7)  |
| MSI-H + BRAF WT                          | 29 (42.6)  | 17 (25.8)  | 17 (26.6)  | 17 (27)    |
| Missing data                             | 18 (26.5)  | 28 (42.4)  | 26 (40.6)  | 26 (41.3)  |
| Neoadjuvant treatment in colon cancer    |            |            |            |            |
| No                                       | 364 (98.6) | 360 (98.6) | 350 (98.6) | 329 (98.5) |
| Yes                                      | 2 (0.5)    | 2 (0.5)    | 2 (0.6)    | 2 (0.6)    |
| Missing data                             | 3 (0.8)    | 3 (0.8)    | 3 (0.8)    | 3 (0.9)    |
| Neoadjuvant treatment in rectal cancer   |            |            |            |            |
| No                                       | 52 (31.1)  | 51 (32.9)  | 48 (31.4)  | 50 (30.5)  |
| Yes                                      | 102 (61.1) | 91 (58.7)  | 93 (60.8)  | 101 (61.6) |
| Missing data                             | 13 (7.8)   | 13 (8.4)   | 12 (7.8)   | 13 (7.9)   |
| Neoadjuvant Treatment Type (Rectum only) |            |            |            |            |
| No treatment                             | 54 (32.3)  | 52 (33.5)  | 49 (32.1)  | 52 (31.7)  |
| scRT+delayed surgery                     | 33 (19.8)  | 32 (20.6)  | 31 (20.3)  | 32 (19.5)  |
| scRT+immediate surgery                   | 30 (18)    | 29 (18.7)  | 28 (18.3)  | 30 (18.3)  |
| scRT+CT                                  | 15 (9.0)   | 10 (6.5)   | 11 (7.2)   | 15 (9.1)   |
| CRT                                      | 10 (6.0)   | 8 (5.2)    | 10 (6.5)   | 10 (6.1)   |
| CT                                       | 1 (0.6)    | 1 (0.6)    | 1 (0.7)    | 1 (0.6)    |
| Long-course RT                           | 1 (0.6)    | 1 (0.6)    | 1 (0.7)    | 1 (0.6)    |
| Missing data                             | 23 (13.8)  | 22 (14.2)  | 22 (14.4)  | 23 (14)    |