

Supplementary Table S1. Clinical and Treatment Characteristics of Colorectal Cancer Patients. This table provides detailed information on key clinical parameters and treatment regimens for colorectal cancer patients. Patient data includes unique codes, gender, weight, age, KRAS mutation status, TNM staging, effects on mesorectal fascia (MRF), extramural vascular invasion (EMVI), and type of treatments received.

| #  | Patient Code Number | SEX | weight | age | KRAS (N/P) | Tumour staging (TNM staging system) | T stage | N stage | Metastasis | Effects of mesorectal fascia (MRF) (N/P) | Extramural vascular invasion (EMVI) (N/P) | Type of treatments            |
|----|---------------------|-----|--------|-----|------------|-------------------------------------|---------|---------|------------|--|---|-------------------------------|
| 1  | 10172719            | F   | 61     | 42  | N          | T4b, N2, M0/ yT4aN0Mx               | T4b     | N2      | M0         | yes                                      | Positive                                  | 3 cycles of NAD XELOX         |
| 2  | 60661               | M   | 80     | 54  | N          | T3N2M0/ after treatment T1 N1       | T3      | N2      | MO         | NO                                       | Negative                                  | Neoadjuvant chemoradiotherapy |
| 3  | 340433              | M   | 110    | 62  | N          | T3N2                                | T3      | N2      | -          | NO                                       | Negative                                  | Neoadjuvant chemoradiotherapy |
| 4  | 449272              | F   | 78     | 58  | N          | t4n2                                | T4      | N2      | -          | Yes                                      | Positive                                  | CHEMO (XELOX) X 2             |
| 5  | 2322853             | M   | 57     | 45  | N          | T4b, N2, M0/ NO FU                  | T4b     | N2      | MO         | Yes                                      | Positive                                  | No data                       |
| 6  | 2539669             | F   | 85     | 50  | N          | T3 N2                               | T3      | N2      |            | Yes                                      | Positive                                  | Neoadjuvant chemoradiotherapy |
| 7  | 10010705            | M   | 81     | 55  | N          | T4AN2/ T3N0Mx after treatment       | T4A     | N2      | M0         | Yes                                      | Positive                                  | Neoadjuvant chemoradiotherapy |
| 8  | 10087230            | M   | 55     | 67  | N          | T2N2/ NO FU                         | T2      | N2      | M0         | No                                       | Negative                                  | CHEMO (XELOX) X 2             |
| 9  | 10089371            | M   | 100    | 80  | N          | T4AN2/ NO FU                        | T4A     | N2      | M0         | Yes                                      | Negative                                  | CHEMO (XELOX) X 3             |
| 10 | 10096833            | M   | 75     | 57  | N          | T2N2 / AFTER TREAT T1-2 N2          | T2      | N2      | M0         | No                                       | Negative                                  | Neoadjuvant chemoradiotherapy |
| 11 | 10103691            | M   | 100    | 44  | N          | T3N2 / AFTER TREATMENT T3N2         | T3      | N2      | M0         | Yes                                      | Positive                                  | Neoadjuvant chemoradiotherapy |
| 12 | 10134636            | M   | 90     | 57  | N          | T2N1/ AFTER T2N1                    | T2      | N1      | M0         | No                                       | Negative                                  | Neoadjuvant chemoradiotherapy |
| 13 | 10135968            | M   | 80     | 46  | N          | T4N2M1                              | T4      | N2      | M1         | Yes                                      | Positive                                  | Neoadjuvant chemoradiotherapy |
| 14 | 10138041            | M   | 85     | 69  | N          | T4 N2 M0/ NO FU                     | T4      | N2      | M0         | Yes                                      | -   | -                             |
| 15 | 10139959            | F   | 47     | 50  | N          | T3 N0                               | T3      | N0      | M0         | Yes                                      | Negative                                  | cycles of NAD XELOX           |
| 16 | 10140593            | M   | 70     | 73  | N          | T4B N2/ NO FU                       | T4B     | N2      | M0         | Yes                                      | Positive                                  | No data                       |
| 17 | 10143049            | F   | 100    | 52  | N          | T3N2M0                              | T3      | N2      | M0         | Yes                                      | Negative                                  | CHEMO (XELOX) X 2             |
| 18 | 10179989            | M   | 50     | 50  | N          | T3N0                                | T3      | N0      | M0         | Yes                                      | Positive                                  | CHEMO (XELOX) X 3             |
| 19 | 10184428            | F   | 98     | 57  | N          | T3 N0 MX/ypT1 N0 Mx                 | T3      | N0      | M0         | No                                       | Negative                                  | CHEMO (XELOX) X 4             |
| 20 | 10188227            | M   | 70     | 49  | N          | T3N2                                | T3      | N2      | M0         | Yes                                      | Positive                                  | Xeloda                        |
| 21 | 317873              | M   | 110    | 62  | N          | T2N2M0 / SURGERY                    | T2      | N2      | M0         | Yes                                      | Negative                                  | -                             |
| 22 | 534327              | M   | 85     | 61  | N          | T4N2/ AFTER TREAT ALMOST GONE       | T4      | N2      | M0         | Yes                                      | Positive                                  | Neoadjuvant chemoradiotherapy |
| 23 | 1135947             | F   | 55     | 46  | N          | T3 N1 M0                            | T3      | N1      | M0         | Yes                                      | Positive                                  | -                             |

|    |          |   |     |    |   |  |       |    |    |     |          |                               |
|----|----------|---|-----|----|---|--|-------|----|----|-----|----------|-------------------------------|
| 24 | 1199271  | M | 81  | 44 | N | T2N2M0/ NO FU  | T3    | N0 | M0 | No  | Positive | Neoadjuvant chemoradiotherapy |
| 25 | 2132915  | M | 66  | 59 | N | T3 N2 M1 / NO FU   | T3    | N2 | M1 | Yes | Positive | Neoadjuvant chemoradiotherapy |
| 26 | 10050980 | F | 85  | 64 | N | T4B N2 M1/ yT4N0/1                                       | T4B   | N2 | M1 | -   | Positive | chemo                         |
| 27 | 10051270 | F | 90  | 71 | N | T4N2M0/ NO FU  | T4    | N2 | M0 | -   | Positive | chemo                         |
| 28 | 10205635 | M | 70  | 54 | N | T3N2M0/ NO FU  | T3    | N2 | M0 | Yes | Positive | CHEMO (XELOX) X 4             |
| 29 | 10206130 | M | 55  | 53 | N | T3/ NO FU  | T3    | N0 | M0 | -   | Positive | Chemo                         |
| 30 | 10207469 | F | 85  | 52 | N | T4bN2M1/ No FU   | T4B   | N2 | M1 | -   | Positive | Neoadjuvant chemoradiotherapy |
| 31 | 10214476 | F | 70  | 44 | N | T3N2M0   | T3    | N2 | MO | Yes | Positive | Neoadjuvant chemoradiotherapy |
| 32 | 10216119 | F | 80  | 61 | N | T3N2/ NO FU  | T2    | N2 | M0 | Yes | Positive | chemo                         |
| 33 | 10233788 | M | 100 | 57 | N | T4N2M1/ NO FU  | T4    | N2 | M1 | Yes | Positive | -                             |
| 34 | 140777   | F | 79  | 59 | P | T2N2M1   | T2    | N2 | M1 | Yes | Negative | Neoadjuvant chemoradiotherapy |
| 35 | 340243   | M | 87  | 47 | P | T4AN2M0 / NO FU  | T4A   | N2 | M0 | Yes | Positive | Neoadjuvant chemoradiotherapy |
| 36 | 368356   | F | 80  | 59 | P | T4N2M0/ NO FU  | T4    | N2 | M0 | Yes | Positive | Neoadjuvant chemoradiotherapy |
| 37 | 502757   | M | 90  | 69 | P | T3 N 2 M0 / yT3, N1, Mx                                  | T3    | N2 | M0 | No  | Positive | Neoadjuvant chemoradiotherapy |
| 38 | 544515   | M | 95  | 62 | P | T4AN2M0  | T4A   | N2 | M0 | No  | Negative | chemo                         |
| 39 | 2236146  | M | 70  | 45 | P | T3N1 M0 / AFTER TREAT T4 N2 M0                           | T3    | N1 | M0 | Yes | Positive | Neoadjuvant chemoradiotherapy |
| 40 | 2443955  | M | 75  | 60 | P | T4N2M0   | T4    | N2 | M0 | Yes | Positive | Neoadjuvant chemoradiotherapy |
| 41 | 10015390 | M | 52  | 96 | P | T3 N 2 M0  | T3    | N2 | M0 | No  | Positive | chemo                         |
| 42 | 10019202 | M | 78  | 80 | P | T2-T3 N2 M0/ AFTER TREAT T2N2M0                          | T2-T3 | N2 | M0 | No  | Positive | -                             |
| 43 | 10026773 | M | 99  | 65 | P | T4N1M0   | T4    | N1 | M0 | Yes | Positive | Neoadjuvant chemoradiotherapy |
| 44 | 10076837 | M | 45  | 59 | P | T4N1M1/ NO FU  | T4    | N1 | M0 | Yes | Positive | Neoadjuvant chemoradiotherapy |
| 45 | 10150880 | F | 53  | 41 | P | T4N2 M0  | T4    | N2 | M0 | Yes | Positive | chemo                         |
| 46 | 10155918 | M | 60  | 75 | P | T3N1M1   | T3    | N1 | M1 | Yes | Positive | Neoadjuvant chemoradiotherapy |
| 47 | 432974   | M | 100 | 54 | P | T3N2/ Interval reduction on size with no change on stage | T3    | N2 | M0 | no  | Positive | Neoadjuvant chemoradiotherapy |
| 48 | 450518   | M | 74  | 65 | P | T2N0M0/ NO FU  | T2    | N0 | M0 | no  | Positive | Neoadjuvant chemoradiotherapy |
| 49 | 1207020  | F | 55  | 69 | P | T3 N1 / NO FU  | T3    | N1 | M0 | no  | Negative | Neoadjuvant chemoradiotherapy |
| 50 | 10047266 | F | 80  | 51 | P | T4 N1 M1/ POST SURGERY                                   | T4    | N1 | M1 | Yes | Positive | Neoadjuvant chemoradiotherapy |
| 51 | 10057014 | F | 51  | 46 | P | T3N1M0 / NO FU   | T3    | N1 | M0 | no  | Positive | Neoadjuvant chemoradiotherapy |
| 52 | 10096937 | F | 66  | 61 | P | T3N2/ POST SURGERY                                       | T3    | N1 | M0 | Yes | Positive | chemo                         |
| 53 | 10134812 | M | 70  | 57 | P | T2 N2/ NO FU   | T2    | N2 | M0 | no  | Negative | chemo                         |

|    |          |   |    |    |   |                                   |     |    |    |     |          |                                  |
|----|----------|---|----|----|---|-----------------------------------|-----|----|----|-----|----------|----------------------------------|
| 54 | 10147507 | F | 80 | 59 | P | T4 N2 M0                          | T4  | N2 | M0 | no  | Negative | Neoadjuvant<br>chemoradiotherapy |
| 55 | 10208084 | F | 75 | 62 | P | T3N2/ AFTER<br>TREATMENT<br>T3 N2 | T3  | N2 | M0 | no  | Positive | Neoadjuvant<br>chemoradiotherapy |
| 56 | 10214476 | F | 70 | 44 | P | T3 N2 M0                          | T3  | N2 | M0 | Yes | Positive | Neoadjuvant<br>chemoradiotherapy |
| 57 | 176761   | M | 85 | 51 | P | T4AN2M0 /<br>NO FU                | T4A | N2 | M1 | Yes | Positive | chemo                            |
| 58 | 517223   | F | 55 | 23 | P | T4B N2 M1/<br>NO FU               | T4B | N2 | M1 | no  | Positive | chemo                            |
| 59 | 10246553 | M | 62 | 32 | P | T3N2                              | T3  | N2 | M0 | no  | Negative | Neoadjuvant<br>chemoradiotherapy |
| 60 | 10254537 | F | 35 | 13 | P | T3N2 M0                           | T3  | N2 | M0 | Yes | Negative | Neoadjuvant<br>chemoradiotherapy |
| 61 | 10256859 | F | 50 | 56 | P | T4bN2M1/<br>Post surgery          | T4B | N2 | M1 | -   | -        | CONCOMITTENT<br>chemo rad        |