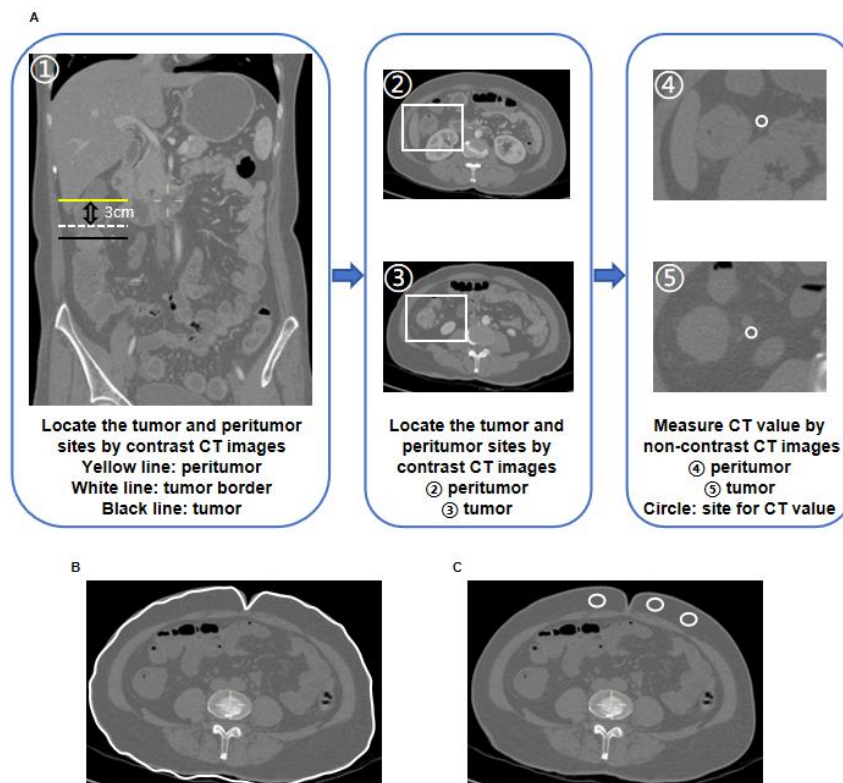




**Supplementary Figure 1 The diagram of the procedures.** A: The diagram showing the procedures of calculating tumor-contributed computed tomography value (CT-T value); B: A typical image showing abdominal area of the subcutaneous adipose tissues measurement; C: A typical image showing CT value of the subcutaneous adipose tissues measurement. CT: Computed tomography.

**Supplementary Table 1 Patient characteristics in the T1/2 vs T3/4, *n* (%)**

|                                      | T1/2 ( <i>n</i> = 55) | T3/4 ( <i>n</i> = 293) | <i>P</i> value |
|--------------------------------------|-----------------------|------------------------|----------------|
| Age (years)                          | 64 (13)               | 66 (16)                | 0.241          |
| Gender                               |                       |                        | 0.839          |
| Male                                 | 29 (52.7)             | 162 (55.3)             |                |
| Female                               | 26 (47.3)             | 131 (44.7)             |                |
| Height (cm)                          | 162.00 (12.50)        | 163.00 (13.0)          | 0.988          |
| Weight (kg)                          | 63.00 (19.0)          | 59.25 (15.0)           | 0.029          |
| Body mass index (kg/m <sup>2</sup> ) | 23.14 (4.06)          | 22.29 (3.78)           | 0.006          |
| Carbohydrate antigen 19-9            | 10.09 (7.02)          | 12.39 (19.11)          | 0.014          |

|                                               |                 |                |         |  |
|-----------------------------------------------|-----------------|----------------|---------|--|
| (U/mL)                                        |                 |                |         |  |
| Carcinoembryonic antigen                      | 1.88 (1.89)     | 4.28 (8.61)    | < 0.001 |  |
| (ng/mL)                                       |                 |                |         |  |
| Total cholesterol (mmol/L)                    | 4.93 (1.60)     | 4.64 (1.23)    | 0.168   |  |
| Triglyceride (mmol/L)                         | 1.15 (0.68)     | 1.21 (0.57)    | 0.467   |  |
| High-density lipoprotein cholesterol (mmol/L) | 1.12 (0.37)     | 1.04 (0.32)    | 0.079   |  |
| Low-density lipoprotein cholesterol (mmol/L)  | 3.24 (1.22)     | 3.03 (1.03)    | 0.205   |  |
| Glycosylated hemoglobin                       | 5.70 (1.00)     | 5.70 (0.70)    | 0.529   |  |
| Periumbilical area                            | 564.00 (132.55) | 534.00 (159.1) | 0.068   |  |
| Periumbilical computed tomography (HU)        | -112.67 (7.33)  | -110.33 (8)    | 0.018   |  |
| Diabetes mellitus                             |                 |                | 0.433   |  |
| Yes                                           | 12 (21.8)       | 48 (16.4)      |         |  |
| No                                            | 43 (78.2)       | 245 (83.6)     |         |  |
| Dyslipidemia                                  |                 |                | 0.151   |  |
| Yes                                           | 37 (68.5)       | 220 (78.9)     |         |  |
| No                                            | 17 (31.5)       | 59 (21.1)      |         |  |
| Primary site                                  |                 |                | 0.289   |  |
| Cecum-ascending colon                         | 14 (25.5)       | 97 (33.1)      |         |  |
| Transverse colon                              | 5 (9.1)         | 39 (13.3)      |         |  |
| Descending colon                              | 6 (10.9)        | 38 (13.0)      |         |  |
| Sigmoid colon                                 | 30 (54.5)       | 119 (40.6)     |         |  |
| Pathology                                     |                 |                | 0.344   |  |
| Adenocarcinoma                                | 54 (98.2)       | 273 (93.2)     |         |  |
| Mucinous adenocarcinoma                       | 1 (1.8)         | 16 (5.5)       |         |  |
| Signet ring cell carcinoma                    | 0 (0.0)         | 4 (1.4)        |         |  |
| Mesentery location                            |                 |                | 0.657   |  |

|                |           |            |
|----------------|-----------|------------|
| Mesenteric     | 36 (65.5) | 207 (70.6) |
| Antimesenteric | 19 (34.5) | 85 (29.0)  |

**Supplementary Table 2 Patient characteristics in the N0 vs N1/N2, *n* (%)**

|                                               | N0 ( <i>n</i> = 188) | N1/2 ( <i>n</i> = 160) | <i>P</i> value |
|-----------------------------------------------|----------------------|------------------------|----------------|
| Age (years)                                   | 66 (15)              | 64 (18)                | 0.237          |
| Gender                                        |                      |                        | 1              |
| Male                                          | 103 (54.8)           | 88 (55.0)              |                |
| Female                                        | 85 (45.2)            | 72 (45.0)              |                |
| Height (cm)                                   | 162.00 (13.0)        | 163.00 (12.0)          | 0.75           |
| Weight (kg)                                   | 60.00 (18.75)        | 59.80 (11.23)          | 0.725          |
| Body mass index (kg/m <sup>2</sup> )          | 22.64 (4.38)         | 22.46 (3.69)           | 0.84           |
| Carbohydrate antigen 19-9 (U/mL)              | 10.97 (13.1)         | 12.83 (21.05)          | 0.047          |
| Carcinoembryonic antigen (ng/mL)              | 2.73 (5.04)          | 4.84 (8.58)            | 0.003          |
| Total cholesterol (mmol/L)                    | 4.75 (1.30)          | 4.66 (1.41)            | 0.414          |
| Triglyceride (mmol/L)                         | 1.16 (0.63)          | 1.22 (0.58)            | 0.272          |
| High-density lipoprotein cholesterol (mmol/L) | 1.06 (0.37)          | 1.04 (0.29)            | 0.11           |
| Low-density lipoprotein cholesterol (mmol/L)  | 3.05 (0.98)          | 3.03 (1.26)            | 0.62           |
| Glycosylated hemoglobin                       | 5.70 (0.65)          | 5.75 (0.70)            | 0.522          |
| Periumbilical area                            | 531.00 (171.12)      | 547.50 (121.2)         | 0.421          |
| Periumbilical computed tomograph (HU)         | -111.00 (6.7)        | -110.33 (8.67)         | 0.169          |
| Diabetes mellitus                             |                      |                        | 1              |
| Yes                                           | 32 (17.0)            | 28 (17.5)              |                |
| No                                            | 156 (83.0)           | 132 (82.5)             |                |

|                            |            |            |       |
|----------------------------|------------|------------|-------|
| Dyslipidemia state         |            |            | 0.313 |
| Yes                        | 133 (74.7) | 124 (80.0) |       |
| No                         | 45 (25.3)  | 31 (20.0)  |       |
| Primary site               |            |            | 0.996 |
| Cecum-ascending colon      | 60 (31.9)  | 51 (31.9)  |       |
| Transverse colon           | 23 (12.2)  | 21 (13.1)  |       |
| Descending colon           | 24 (12.8)  | 20 (12.5)  |       |
| Sigmoid colon              | 81 (43.1)  | 68 (42.5)  |       |
| Pathology                  |            |            | 0.092 |
| Adenocarcinoma             | 179 (95.2) | 148 (92.5) |       |
| Mucinous adenocarcinoma    | 9 (4.8)    | 8 (5.0)    |       |
| Signet ring cell carcinoma | 0 (0.0)    | 4 (2.5)    |       |
| Mesentery location         |            |            | 0.548 |
| Mesenteric                 | 131 (69.7) | 112 (70.4) |       |
| Antimesenteric             | 57 (30.3)  | 47 (29.6)  |       |

**Supplementary Table 3 Diagnostic accuracy for T and N stages of mesenteric tumor-contributed computed tomography value and computed tomography report, *n* (%)**

| Stages              |       | Whole cohort<br>( <i>n</i> = 348) |            | Training cohort<br>( <i>n</i> = 232) |            | Validation cohort<br>( <i>n</i> = 116) |           | Validation cohort ( <i>n</i> = 116) |                    |
|---------------------|-------|-----------------------------------|------------|--------------------------------------|------------|----------------------------------------|-----------|-------------------------------------|--------------------|
|                     | value | T1/2                              | T3/4       | T1/2                                 | T3/4       | T1/2                                   | T3/4      | Errorprediction                     | Correct prediction |
| CT-T (T)            |       |                                   |            |                                      |            |                                        |           |                                     |                    |
| CT-T high (> 11.83) |       | 15 (4.3)                          | 249 (71.6) | 11 (4.7)                             | 158 (68.1) | 4 (3.4)                                | 91 (78.4) | 4 (4.2)                             | 91 (95.8)          |
| CT-T low (≤ 11.83)  |       | 40 (11.5)                         | 44 (12.6)  | 31 (13.4)                            | 32 (13.8)  | 9 (7.8)                                | 12 (10.3) | 12 (57.1)                           | 9 (42.9)           |
| CT-T                | value | N0                                | N1/2       | N0                                   | N1/2       | N0                                     | N1/2      | Errorprediction                     | Correct            |

| (N)                       |              |               |              |              |              |              |                                          | prediction |
|---------------------------|--------------|---------------|--------------|--------------|--------------|--------------|------------------------------------------|------------|
| CT-T high (> 30<br>17.17) | 111<br>(8.6) | 17<br>(7.3)   | 62<br>(26.7) | 13<br>(11.2) | 49<br>(42.2) | 13 (21.0)    | 49 (79.0)                                |            |
| CT-T low (≤ 158<br>17.17) | 49<br>(45.4) | 114<br>(14.1) | 39<br>(49.1) | 44<br>(16.8) | 10<br>(37.9) | 10 (18.5)    | 44 (81.5)                                |            |
| CT-reported<br>LN status  | N0           | N1/2          | N0           | N1/2         | N0           | N1/2         | Errorprediction<br>Correct<br>prediction |            |
| LN-negative               | 98<br>(28.2) | 55<br>(15.8)  | 69<br>(29.7) | 34<br>(14.7) | 29<br>(25.0) | 21<br>(18.1) | 21 (42.0)<br>29 (58.0)                   |            |
| LN-positive               | 90<br>(25.8) | 105<br>(30.2) | 62<br>(26.7) | 67<br>(28.9) | 28<br>(24.1) | 38<br>(32.8) | 28 (42.4)<br>38 (57.6)                   |            |

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CT: Computed tomography; CT-T: Tumor-contributed computed tomography; LN:  
Lymph node.