

**Clinicopathological features and prognosis of young gastric cancer patients  
following radical gastrectomy: a propensity score matching analysis**

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**Supplementary Table 1.** Univariate and multivariate analyses of prognostic factors for overall survival after radical resection of gastric cancer in the entire cohort (n = 1661)

| Variables                            | N    | 3-, 5-year<br>OS rates | UV<br><i>P</i> value | MV<br>HR (95% CI)      | MV<br><i>P</i> value |
|--------------------------------------|------|------------------------|----------------------|------------------------|----------------------|
| Gender                               |      |                        | 0.893                |                        |                      |
| Male                                 | 1095 | 71.1%, 61.4%           |                      |                        |                      |
| Female                               | 566  | 70.2%, 62.0%           |                      |                        |                      |
| Age (years)                          |      |                        | 0.724                |                        | 0.882                |
| > 45                                 | 1344 | 68.9%, 60.9%           |                      |                        |                      |
| ≤ 45                                 | 317  | 70.4%, 64.3%           |                      |                        |                      |
| Body mass index (kg/m <sup>2</sup> ) |      |                        | 0.018                |                        | 0.057                |
| ≥ 25                                 | 226  | 77.8%, 66.4%           |                      |                        |                      |
| < 25                                 | 1435 | 69.7%, 60.9%           |                      |                        |                      |
| Any comorbidities                    |      |                        | 0.103                |                        |                      |
| Yes                                  | 493  | 72.9%, 65.0%           |                      |                        |                      |
| No                                   | 1168 | 69.9%, 60.4%           |                      |                        |                      |
| Pre-operative hemoglobin (g/L)       |      |                        | <0.001               |                        | 0.863                |
| ≥ 100                                | 1324 | 72.9%, 64.3%           |                      |                        |                      |
| < 100                                | 337  | 61.8%, 51.1%           |                      |                        |                      |
| Pre-operative albumin (g/L)          |      |                        | 0.046                |                        | 0.583                |
| ≥ 35                                 | 1277 | 71.8%, 63.4%           |                      |                        |                      |
| < 35                                 | 384  | 67.1%, 57.0%           |                      |                        |                      |
| Surgical procedure                   |      |                        | <0.001               |                        | 0.320                |
| Laproscopy                           | 198  | 78.9%, 73.2%           |                      |                        |                      |
| Open                                 | 1463 | 68.7%, 59.9%           |                      |                        |                      |
| Type of resection                    |      |                        | <0.001               |                        | <0.001               |
| Total gastrectomy                    | 375  | 46.3%, 38.2%           |                      | 1.811<br>(1.502-2.184) |                      |
| Sub-total gastrectomy                | 1286 | 77.1%, 67.5%           |                      |                        |                      |
| Operation time (min)                 |      |                        | <0.001               |                        | 0.464                |
| ≥ 240                                | 383  | 61.8%, 54.6%           |                      |                        |                      |
| < 240                                | 1278 | 72.9%, 62.7%           |                      |                        |                      |
| Intra-operative blood loss (mL)      |      |                        | <0.001               |                        | 0.015                |
| ≥ 300                                | 335  | 58.9%, 44.5%           |                      | 1.286<br>(1.050-1.575) |                      |
| < 300                                | 1326 | 73.8%, 64.9%           |                      |                        |                      |
| Tumor location                       |      |                        | <0.001               |                        | 0.793                |
| Lower third                          | 1121 | 77.6%, 68.3%           |                      |                        |                      |
| Upper, middle third or diffused      | 540  | 56.4%, 47.8%           |                      |                        |                      |
| Differentiation                      |      |                        | <0.001               |                        | 0.017                |
| Well-differentiated                  | 299  | 83.8%, 73.6%           |                      | 1.406<br>(1.062-1.861) |                      |
| Moderate- or poor-differentiated     | 1362 | 67.5%, 59.3%           |                      |                        |                      |

|                                  |      |              |                        |        |
|----------------------------------|------|--------------|------------------------|--------|
| Tumor size (cm)                  |      |              | <0.001                 | 0.233  |
| ≥ 5                              | 594  | 56.7%, 45.9% |                        |        |
| < 5                              | 1067 | 78.0%, 70.6% |                        |        |
| Depth of invasion                |      |              | <0.001                 | <0.001 |
| T4                               | 1002 | 58.1%, 49.3% | 3.050<br>(2.309-4.029) |        |
| T1-3                             | 659  | 91.4%, 85.6% |                        |        |
| Lymph node metastasis            |      |              | <0.001                 | <0.001 |
| Yes                              | 991  | 57.4%, 49.1% | 2.772<br>(2.141-3.587) |        |
| No                               | 670  | 91.0%, 83.1% |                        |        |
| Peri-operative blood transfusion |      |              | <0.001                 | 0.011  |
| Yes                              | 325  | 57.7%, 48.6% | 1.299<br>(1.061-1.591) |        |
| No                               | 1336 | 73.9%, 64.9% |                        |        |

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OS, overall survival; CI, confidence interval; HR, hazard ratio; UV, univariate analysis; MV, multivariate analysis.

**Supplementary Table 2.** Univariate and multivariate analyses of prognostic factors for disease-free survival after radical resection of gastric cancer in the entire cohort (n = 1661)

| Variables                            | N    | 4-, 5-year<br>DFS rates | UV<br><i>P</i> value | MV<br>HR (95% CI)      | MV<br><i>P</i> value |
|--------------------------------------|------|-------------------------|----------------------|------------------------|----------------------|
| Gender                               |      |                         | 0.841                |                        |                      |
| Male                                 | 1095 | 70.1%, 59.3%            |                      |                        |                      |
| Female                               | 566  | 69.0%, 61.1%            |                      |                        |                      |
| Age (years)                          |      |                         | 0.661                |                        | 0.483                |
| > 45                                 | 1344 | 67.3%, 59.6%            |                      |                        |                      |
| ≤ 45                                 | 317  | 68.9%, 63.5%            |                      |                        |                      |
| Body mass index (kg/m <sup>2</sup> ) |      |                         | 0.037                |                        | 0.149                |
| ≥ 25                                 | 226  | 76.2%, 65.2%            |                      |                        |                      |
| < 25                                 | 1435 | 68.4%, 59.7%            |                      |                        |                      |
| Any comorbidities                    |      |                         | 0.126                |                        |                      |
| Yes                                  | 493  | 71.6%, 64.5%            |                      |                        |                      |
| No                                   | 1168 | 69.0%, 57.9%            |                      |                        |                      |
| Pre-operative hemoglobin (g/L)       |      |                         | <0.001               |                        | 0.626                |
| ≥ 100                                | 1324 | 72.1%, 63.0%            |                      |                        |                      |
| < 100                                | 337  | 60.8%, 49.4%            |                      |                        |                      |
| Pre-operative albumin (g/L)          |      |                         | 0.051                |                        |                      |
| ≥ 35                                 | 1277 | 70.9%, 62.2%            |                      |                        |                      |
| < 35                                 | 384  | 66.2%, 55.4%            |                      |                        |                      |
| Surgical procedure                   |      |                         | <0.001               |                        | 0.118                |
| Laproscopy                           | 198  | 77.1%, 71.8%            |                      |                        |                      |
| Open                                 | 1463 | 67.3%, 58.6%            |                      |                        |                      |
| Type of resection                    |      |                         | <0.001               |                        | <0.001               |
| Total gastrectomy                    | 375  | 45.4%, 36.5%            |                      | 1.838<br>(1.522-2.220) |                      |
| Sub-total gastrectomy                | 1286 | 76.2%, 66.4%            |                      |                        |                      |
| Operation time (min)                 |      |                         | <0.001               |                        | 0.102                |
| ≥ 240                                | 383  | 60.7%, 53.2%            |                      |                        |                      |
| < 240                                | 1278 | 71.8%, 61.5%            |                      |                        |                      |
| Intra-operative blood loss (mL)      |      |                         | <0.001               |                        | 0.080                |
| ≥ 300                                | 335  | 57.8%, 42.6%            |                      |                        |                      |
| < 300                                | 1326 | 72.6%, 63.7%            |                      |                        |                      |
| Tumor location                       |      |                         | <0.001               |                        | 0.399                |
| Lower third                          | 1121 | 76.4%, 67.2%            |                      |                        |                      |
| Upper, middle third or diffused      | 540  | 55.8%, 45.9%            |                      |                        |                      |
| Differentiation                      |      |                         | <0.001               |                        | 0.027                |
| Well-differentiated                  | 299  | 82.8%, 72.5%            |                      | 1.376<br>(1.037-1.825) |                      |
| Moderate- or poor-differentiated     | 1362 | 66.4%, 58.4%            |                      |                        |                      |
| Tumor size (cm)                      |      |                         | <0.001               |                        | 0.077                |

|                                  |      |              |                        |        |
|----------------------------------|------|--------------|------------------------|--------|
| ≥ 5                              | 594  | 55.8%, 44.6% |                        |        |
| < 5                              | 1067 | 76.6%, 69.5% |                        |        |
| Depth of invasion                |      |              | <0.001                 | <0.001 |
| T4                               | 1002 | 57.4%, 47.3% | 2.958<br>(2.238-3.910) |        |
| T1-3                             | 659  | 89.7%, 84.2% |                        |        |
| Lymph node metastasis            |      |              | <0.001                 | <0.001 |
| Yes                              | 991  | 56.3%, 47.6% | 3.13<br>(2.392-4.095)  |        |
| No                               | 670  | 89.8%, 81.9% |                        |        |
| Peri-operative blood transfusion |      |              | <0.001                 | 0.050  |
| Yes                              | 325  | 54.7%, 44.9% | 1.230<br>(1.000-1.511) |        |
| No                               | 1336 | 72.4%, 63.9% |                        |        |

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DFS, disease-free survival; CI, confidence interval; HR, hazard ratio; UV, univariate analysis; MV, multivariate analysis.