

**Table S1** Definition of locally advanced gastric cancer\*

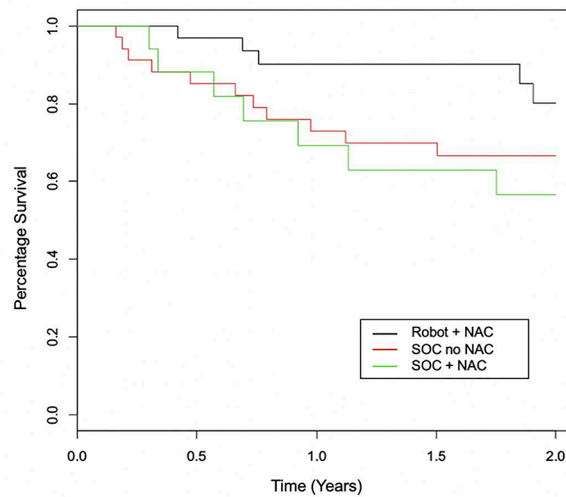
| Author, year                        | Type of study | Country (E/W)   | Patients | Staging method                                    | Definition                           |
|-------------------------------------|---------------|-----------------|----------|---|--------------------------------------|
| Yu <i>et al.</i> 2019 (43)          | RCT           | China (E)       | 1,056    | Histology, EUS, CT scan                           | cT2–4a, N0–3, M0                     |
| Li <i>et al.</i> 2019 (44)          | RCT           | China (E)       | 96       | Histology, CT/MRI, or diagnostic laparoscopy      | cT2–4a, N+, M0                       |
| Lee <i>et al.</i> 2019 (45)         | RCT           | Korea (E)       | 1,050    | Histology, EUS, CT scan                           | cT2–4a, N0–1, M0                     |
| Guo <i>et al.</i> 2019 (46)         | RCT           | China (E)       | 550      | Histology, CT scan or diagnostic laparoscopy      | cT3/4, Nany, M0                      |
| Wang <i>et al.</i> 2019 (47)        | RCT           | China (E)       | 446      | Histology, EUS, CT scan                           | cT2–4aN0–3M0                         |
| Shi <i>et al.</i> 2019 (48)         | RCT           | China (E)       | 328      | Histology, EUS, CT scan                           | cT2–4aN0–3M0                         |
| Zhao <i>et al.</i> 2018 (49)        | RCT           | China (E)       | 114      | Histology, CT scan                                | cT2–4aN0–3M0                         |
| Shi <i>et al.</i> 2018 (50)         | RCT           | China (E)       | 328      | Histology, EUS, CT scan                           | cT2–3, N0–3, M0                      |
| Wang <i>et al.</i> 2016 (28)        | RCT           | China (E)       | 73       | Histology, CT scan                                | cT2–cT4, N+, M0                      |
| He <i>et al.</i> 2016 (51)          | RCT           | China (E)       | 105      | Histology, EUS, CT scan                           | cT3–4N1–3M0                          |
| Hwang <i>et al.</i> 2015 (52)       | RCT           | Korea (E)       | 136      | Histology, CT scan                                | Clinical stage IIA–IIIC (M0)         |
| Ma <i>et al.</i> 2015 (53)          | RCT           | China (E)       | 80       | Histology, CT scan                                | cT3–4, N1–3, M0                      |
| Inaki <i>et al.</i> 2015 (54)       | RCT           | Japan (E)       | 180      | Histology, CT scan                                | cT any, N0–2, M0                     |
| Ahn <i>et al.</i> 2014 (55)         | RCT           | Korea (E)       | 51       | Histology, CT scan                                | Clinical stage IB, II, IIIA, or IIIB |
| Tsuburaya <i>et al.</i> 2013 (56)   | RCT           | Japan (E)       | 52       | Histology, EUS, CT scan                           | Clinical stage III–IV (M0)           |
| Inoue <i>et al.</i> 2012 (57)       | RCT           | Japan (E)       | 27       | Histology, CT scan                                | cT2–3N2–3M0 or cT4NanyM0             |
| Shi <i>et al.</i> 2012 (58)         | RCT           | China (E)       | 158      | Histology, CT scan                                | Clinical stage III–IV(M0)            |
| Lee <i>et al.</i> 2012 (59)         | RCT           | Korea (E)       | 31       | Histology, CT scan                                | Clinical stage T2N+, T3–T4 and/or N+ |
| Batista <i>et al.</i> 2015 (60)     | Prospective   | Brazil (W)      | 16       | Histology, CT scan                                | cT3–4 and/or N+, M0                  |
| Trip <i>et al.</i> 2014 (61)        | Prospective   | Netherlands (W) | 25       | Histology, EUS, CT scan, PET scan                 | Clinical stage IB–IV(M0)             |
| Badakhshi <i>et al.</i> 2013 (62)   | Prospective   | Germany (W)     | 25       | Histology, CT scan, EUS or diagnostic laparoscopy | cT2–4 and N2–3, M0                   |
| Schuhmacher <i>et al.</i> 2010 (63) | RCT           | Germany (W)     | 144      | Histology, CT scan                                | Clinical stage III and IV (cM0)      |
| Orditura <i>et al.</i> 2010 (64)    | RCT           | Italy (W)       | 29       | Histology, CT scan                                | Clinical stages III–IV (M0)          |
| Biffi <i>et al.</i> 2010 (65)       | RCT           | Italy (W)       | 70       | Histology, CT scan or diagnostic laparoscopy      | cT3–4 any NM0 or any T, N1–3, M0     |

\*, High grade evidence studies were included if histologically proven adenocarcinoma of the stomach and clinically staged using AJCC staging system. RCT, Randomized Clinical Trial; (E), Eastern country; (W), Western country; EUS, Endoscopic Ultrasound; CT, computed tomography; AJCC, American Joint Committee on Cancer.

**Table S2** Subgroup analysis NAC treatment burden

| XXXX                                    | Robotic + NAC (n=32) | Open + NAC (n=19) | P value |
|---|----------------------|-------------------|---------|
| Efficiency                              | 7 (21.9)             | 8 (42.1)          | 0.125   |
| Readmission within 90-day, No. (%)      | 7 (21.9)             | 7 (36.8)          | 0.246   |
| LOS > 75th percentile, No. (%)          | 7 (21.9)             | 9 (47.4)          | 0.057   |
| Oncological efficacy                    | 10 (31.3)            | 8 (42.1)          | 0.432   |
| Positive margin (R1/R2), No. (%)        | 2 (6.3)              | 2 (10.5)          | 0.582   |
| <16 Lymph Node resected, No. (%)        | 8 (25.0)             | 6 (31.6)          | 0.610   |
| Major morbidity                         | 7 (21.8)             | 8 (42.1)          | 0.125   |
| Clavien-Dindo $\geq$ 3A, No. (%)        | 7 (21.9)             | 8 (42.1)          | 0.432   |
| CCI $\geq$ 32, No. (%)                  | 5 (15.6)             | 7 (36.8)          | 0.084   |
| Reoperation within 90-day, No. (%)      | 0 (0.0)              | 2 (10.5)          | 0.061   |
| Narcotic use                            |                      |                   |         |
| Narcotic use > 75th percentile, No. (%) | 3 (9.4)              | 8 (44.0)          | 0.004   |
| Composite treatment burden, No. (%)     | 18 (56.3)            | 18 (94.7)         | 0.003   |

\*, Clavien-Dindo classification of complications. NAC, Neoadjuvant chemotherapy; LOS, Length of Stay; CCI, Comprehensive Complication Index.



**Figure S1** Kaplan-Meier curves illustrating percentage survival at 2-year for the Robotic + NAC, SOC + NAC subgroups and SOC no NAC respectively. NAC, neoadjuvant chemotherapy; SOC, standard of care.

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