SUPPLEMENTAL MATERIAL

Data Supplement Figure I. Log-log plots (entire cohort)

(A) The log-log plots of AAA-related mortality in the p-T2EL and the non-T2EL group (B) The log-log plot of AAA rupture after EVAR in the p-T2EL and the non-T2EL group (C) The log-log plot of aneurysm sac enlargement (≥5 mm) in the p-T2EL and the non-T2EL group (D) The log-log plot of reintervention in the p-T2EL and the non-T2EL group
## Supplemental Material

### Data Supplement Table I. Early and late results (entire cohort)

| Covariate                              | P-T2EL (4957) | Non-T2EL (12142) | P value |
|----------------------------------------|---------------|-----------------|---------|
| **In-hospital complications**          |               |                 |         |
| Stentgraft migration                   | 4 (0.08%)     | 6 (0.05%)       | 0.489   |
| Stentgraft stenosis or occlusion       | 49 (0.9%)     | 150 (1.2%)      | 0.182   |
| Access route injury                    | 24 (0.5%)     | 34 (0.3%)       | 0.042   |
| Infectious diseases                    | 21 (0.4%)     | 44 (0.4%)       | 0.584   |
| Paralysis                              | 9 (0.2%)      | 9 (0.07%)       | 0.066   |
| Wound complications                    | 43 (0.9%)     | 111 (0.9%)      | 0.858   |
| Reoperation for the complications      | 39 (0.8%)     | 110 (0.9%)      | 0.469   |
| **Intraoperative endoleaks**           |               |                 |         |
| Type I                                 | 2,199 (44.4%) | 2721 (22.4%)    | p<0.001 |
| Type II                                | 186 (3.8%)    | 338 (2.8%)      | p=0.001 |
| Type III                               | 1,568 (31.6%) | 1,329 (10.9%)   | p<0.001 |
| Type IV                                | 32 (0.6%)     | 60 (0.5%)       | 0.249   |
| Multiple type                          | 413 (8.3%)    | 994             | 0.759   |
| **The causes of late death during follow-up periods** | | | |
| Malignant tumor                        | 548 (11.1%)   | 1,255 (10.3%)   | -       |
| Pneumonia                              | 148 (3.0%)    | 441 (3.6%)      | -       |
| Haemorrhagic cerebrovascular events    | 71 (1.4%)     | 176 (1.4%)      | -       |
| Heart failure                          | 31 (0.6%)     | 76 (0.6%)       | -       |
| Sepsis                                 | 26 (0.5%)     | 50 (0.4%)       | -       |
| AAA rupture                            | 21 (0.4%)     | 6 (0.05%)       | -       |
| Gastrointestinal disorders             | 16 (0.3%)     | 31 (0.3%)       | -       |
| Thoracic aortic aneurysm rupture       | 15 (0.3%)     | 21 (0.2%)       | -       |
| Stentgraft infection                   | 14 (0.3%)     | 13 (0.1%)       | -       |
| Acute myocardial infarction            | 13 (0.3%)     | 44 (0.4%)       | -       |
| Acute aortic dissection                | 13 (0.3%)     | 14 (0.1%)       | -       |
| Liver dysfunction                      | 11 (0.2%)     | 14 (0.1%)       | -       |
| Stroke                                 | 9 (0.2%)      | 25 (0.2%)       | -       |
| Chronic kidney disease                 | 8 (0.2%)      | 24 (0.2%)       | -       |
| Thromboembolism                        | 3 (0.06%)     | 9 (0.07%)       | -       |
| Disasters                              | 3 (0.06%)     | 20 (0.2%)       | -       |
| Condition                              | 2 (0.04%) | 6 (0.05%) | - |
|----------------------------------------|-----------|-----------|---|
| Collagen diseases                      | 1 (0.02%) | 2 (0.02%) | - |
| ALS                                    | 1 (0.02%) | 3 (0.03%) | - |
| Suicide                                | 1 (0.02%) | 5 (0.05%) | - |
| DIC                                    | 102 (2.1%)| 221 (1.8%)| - |

Abbreviations: AAA; abdominal aortic aneurysm, ALS; amyotrophic lateral sclerosis, DIC; disseminated intravascular coagulation
Data Supplement Table II. Univariable predictors of sac enlargement (>5 mm) related to the side branches of abdominal aortic aneurysm in p-T2EL

| Source of persistent type II endoleak | N=4713 | HR  | 95% CI     | P value |
|--------------------------------------|--------|-----|------------|---------|
| 1 source                             |        |     |            |         |
| Inferior mesenteric artery (IMA)      | 669    | 1.00| -          | -       |
| Lumber artery (LA)                    | 3067   | 1.19| 0.992-1.437| 0.060   |
| Median sacral artery (MSA)            | 51     | 1.09| 0.604-1.970| 0.773   |
| 2 sources                             |        |     |            |         |
| IMA + MSA                            | 5      | 0.92| 0.129-6.604| 0.936   |
| IMA + LA                             | 842    | 1.88| 1.538-2.305| <0.001  |
| MSA + LA                             | 66     | 2.20| 1.503-3.226| <0.001  |
| 3 sources                             |        |     |            |         |
| IMA + MSA + LA                       | 18     | 2.55| 1.252-5.220| 0.010   |

Abbreviations: CI; confidence interval, HR; hazard ratio