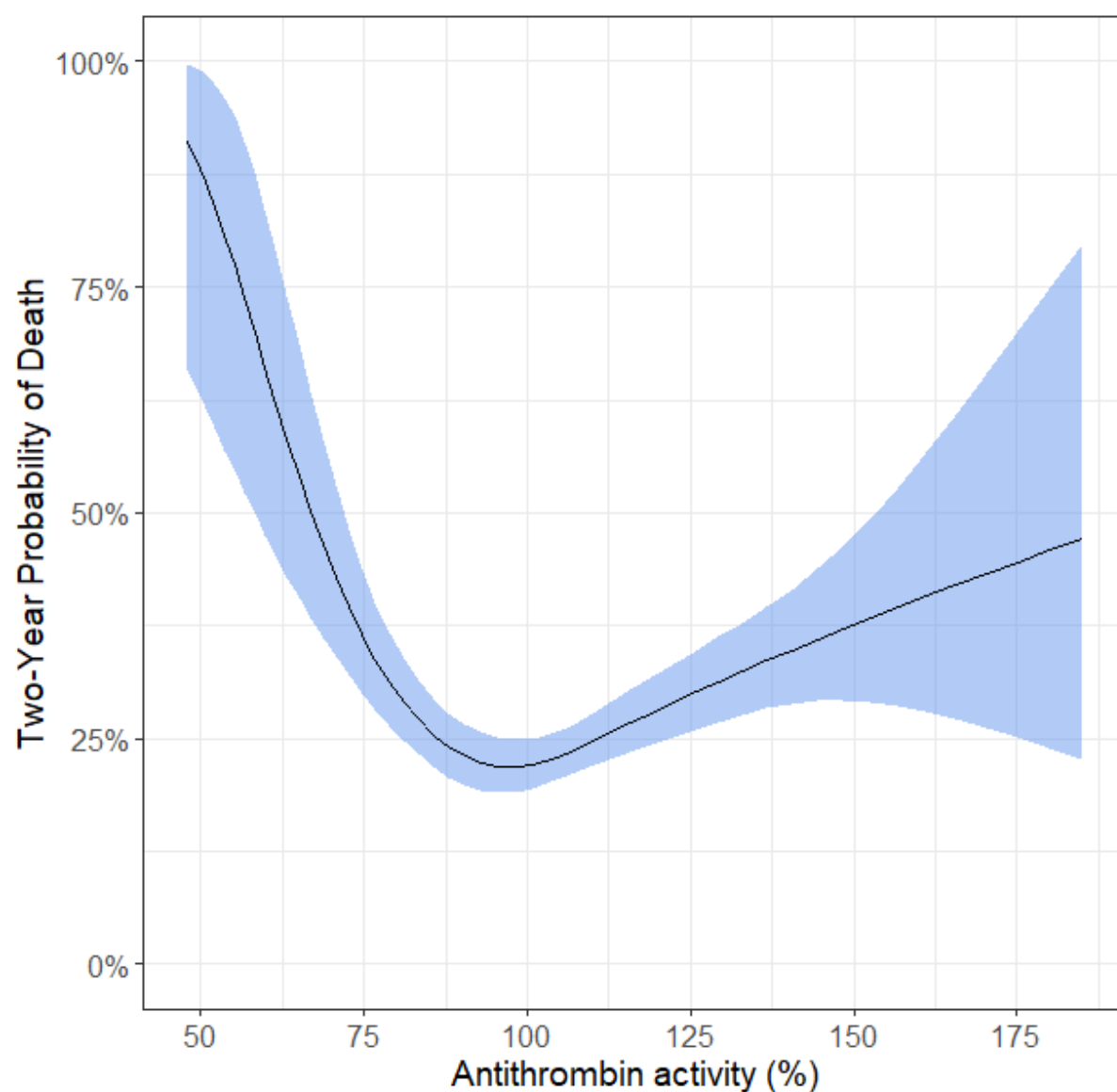


## Supplementary Materials



**Supplementary Figure S1. Probability of death after 1 year of follow-up depending on antithrombin activity level.** Y axis depicts the one-year probability of death in %, i.e. 100% meaning a 100% probability of death at 1 year follow-up. Blue shaded area indicates 95% Confidence Interval.

**Supplementary Table S1. Events (VTE/ATE) in patients that died during the follow-up period (n=563)**

| Event             | n          |             |
|-------------------|------------|-------------|
|                   | Yes        | No          |
| <b>VTE, n (%)</b> | 65 (11.5%) | 498 (88.5%) |
| <b>ATE, n (%)</b> | 21 (3.7%)  | 542 (96.3%) |

**Supplementary Table S2. Antithrombin activity levels according to different cancer types.**

| Antithrombin activity levels |     |         |                             |        |                             |         |
|------------------------------|-----|---------|-----------------------------|--------|-----------------------------|---------|
| Cancer type                  | n   | Minimum | 25 <sup>th</sup> percentile | Median | 75 <sup>th</sup> percentile | Maximum |
| Brain <sup>+</sup>           | 194 | 48      | 109                         | 120    | 131.25                      | 185     |
| Breast                       | 156 | 67      | 98                          | 108    | 115                         | 139     |
| Lung                         | 253 | 50      | 91,5                        | 101    | 111                         | 149     |
| Stomach                      | 33  | 68      | 90                          | 98     | 108.5                       | 131     |
| Colorectal                   | 113 | 54      | 91.5                        | 98     | 108                         | 134     |
| Pancreatic                   | 104 | 51      | 88                          | 98.5   | 108.75                      | 167     |
| Kidney                       | 27  | 75      | 94                          | 102    | 108                         | 118     |
| Prostate                     | 107 | 73      | 92                          | 100    | 108                         | 125     |
| Multiple                     | 7   | 67      | 89                          | 97     | 101                         | 106     |
| Myeloma                      |     |         |                             |        |                             |         |
| Lymphoma                     | 45  | 71      | 92                          | 100    | 108.5                       | 121     |
| Others*                      | 98  | 68      | 95                          | 104.5  | 11.25                       | 134     |

\*Esophageal, sarcoma, testis, hepatocellular, thymus, genitourinary, thyroidal, mesothelioma

<sup>+</sup>Including only primary brain tumors: glioma, medulloblastoma, meningioma

**Supplementary Table S3. Correlation of Antithrombin activity levels and acute-phase proteins.**

|                             | r      | 95% Confidence Intervall | p      |
|-----------------------------|--------|--------------------------|--------|
| Antithrombin and D-dimer    | -0.119 | (-0.179) – (-0.058)      | <0.001 |
| Antithrombin and CRP        | -0.346 | (-0.429) – (-0.257)      | <0.001 |
| Antithrombin and Fibrinogen | -0.113 | (-0.172) – (-0.053)      | <0.001 |

**Supplementary Table S4. Hazard ratios for all-cause mortality with varying antithrombin activity levels.** Ref - Reference

|  | Hazard ratio (95% Confidence Interval) |
|--|--|
| <b>1<sup>st</sup> quartile</b>   | 1.49 (1.14-1.95)                       |
| <b>2<sup>nd</sup> quartile</b>   | Ref.                                   |
| <b>3<sup>rd</sup> quartile</b>   | 0.99 (0.75-1.31)                       |
| <b>4<sup>th</sup> quartile</b>   | 1.52 (1.18-1.97)                       |
|  |  |
| <b>1<sup>st</sup> quartile</b>   | 1.51 (1.16-1.97)                       |
| <b>2<sup>nd</sup> quartile</b>   | 1.01 (0.77-1.33)                       |
| <b>3<sup>rd</sup> quartile</b>   | Ref.                                   |
| <b>4<sup>th</sup> quartile</b>   | 1.54 (1.19-1.98)                       |
|  |  |
| <b>1<sup>st</sup> quartile</b>   | 1.51 (1.2-1.89)                        |
| <b>2<sup>nd</sup> quartile</b>   | Ref.                                   |
| <b>3<sup>rd</sup> quartile</b>   | Ref.                                   |
| <b>4<sup>th</sup> quartile</b>   | 1.53 (1.23-1.89)                       |
|  |  |
| <b>1<sup>st</sup>/4<sup>th</sup> vs 2<sup>nd</sup>/3<sup>rd</sup> quartile</b> | 1.52 (1.26-1.82)                       |

**Supplementary Table S5. Hazard ratios for all-cause mortality in brain tumor patients with varying antithrombin activity levels.** Ref - Reference

|   | Hazard ratio (95% Confidence Interval) |
|---|--|
| <b>1<sup>st</sup> quartile</b>              | Ref.                                   |
| <b>2<sup>nd</sup> quartile</b>              | 1.85 (1.02-3.36)                       |
| <b>3<sup>rd</sup> quartile</b>              | 1.66 (0.91-3.02)                       |
| <b>4<sup>th</sup> quartile</b>              | 2.76 (1.56-4.88)                       |
|   |  |
| <b>≤120 % Antithrombin activity level</b>   | Ref.                                   |
| <b>&gt;120% Antithrombin activity level</b> | 1.59 (1.07-2.36)                       |