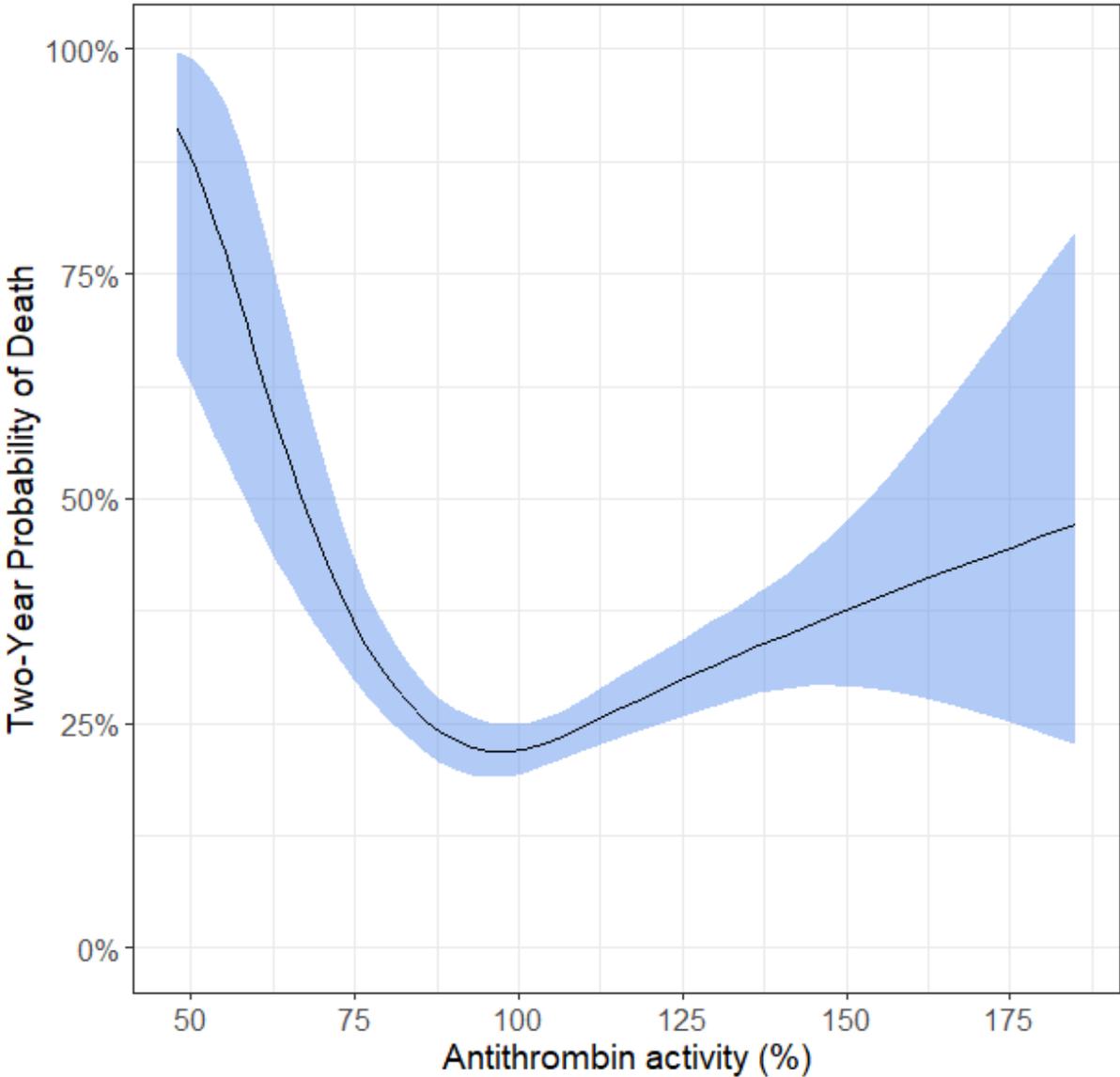


Supplementary Materials



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 |
| VTE, n (%) | 65 (11.5%) | 498 (88.5%) |
| ATE, n (%) | 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 th percentile | Median | 75 th percentile | Maximum |
| Brain ⁺ | 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

⁺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) |
|--|---|
| 1st quartile | 1.49 (1.14-1.95) |
| 2nd quartile | Ref. |
| 3rd quartile | 0.99 (0.75-1.31) |
| 4th quartile | 1.52 (1.18-1.97) |
| | |
| 1st quartile | 1.51 (1.16-1.97) |
| 2nd quartile | 1.01 (0.77-1.33) |
| 3rd quartile | Ref. |
| 4th quartile | 1.54 (1.19-1.98) |
| | |
| 1st quartile | 1.51 (1.2-1.89) |
| 2nd quartile | Ref. |
| 3rd quartile | Ref. |
| 4th quartile | 1.53 (1.23-1.89) |
| | |
| 1st/4th vs 2nd/3rd quartile | 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) |
|---|---|
| 1st quartile | Ref. |
| 2nd quartile | 1.85 (1.02-3.36) |
| 3rd quartile | 1.66 (0.91-3.02) |
| 4th quartile | 2.76 (1.56-4.88) |
| | |
| ≤120 % Antithrombin activity level | Ref. |
| >120% Antithrombin activity level | 1.59 (1.07-2.36) |