LETTER TO THE EDITOR

Von Willebrand factor in the plasma and in the tumor tissue predicts cancer-associated thrombosis and mortality

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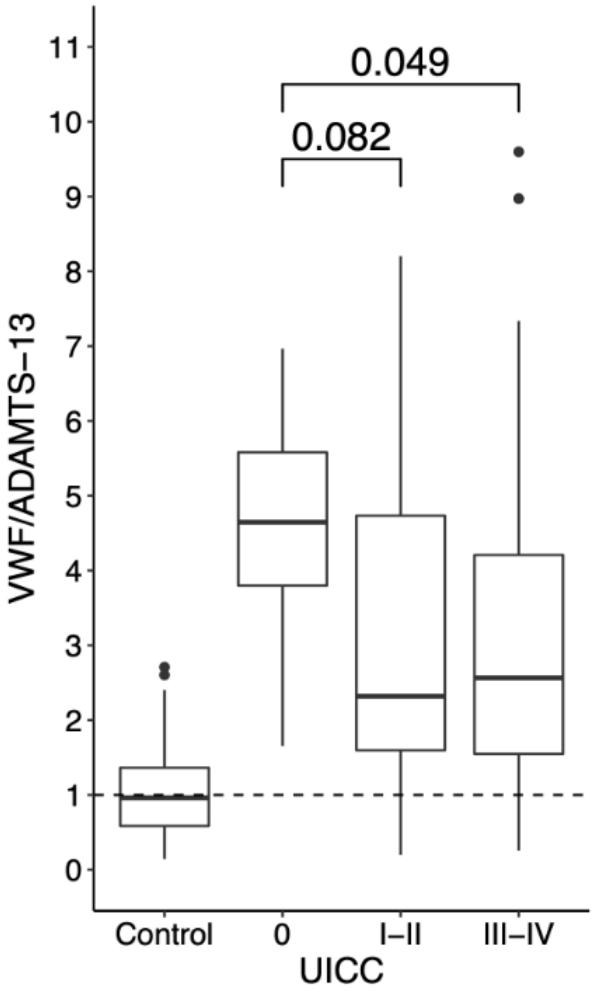
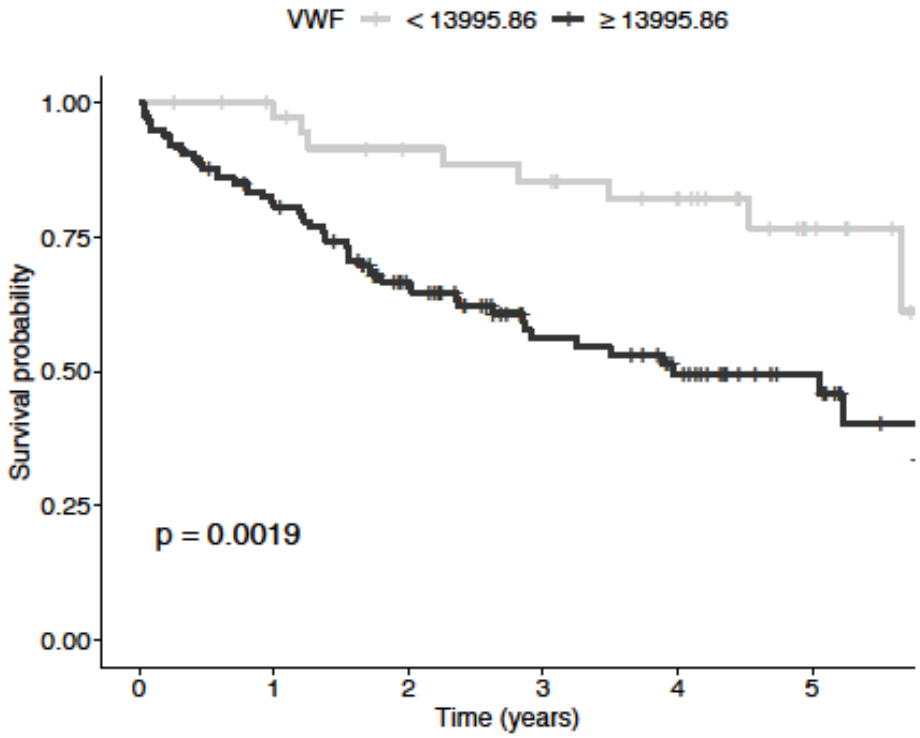
Supplementary data



Supplemental Figure 1: The VWF/ADAMTS-13 ratio is elevated in all tumor stages. Comparison of the plasmatic VWF / ADAMTS-13 ratio of tumor patients (without lung cancer) with healthy control and semi-malignant BCC (Control) according the tumor stages (0: tumor *in situ*; I-II: primary tumor only; III-IV: lymph node and/or organ metastases) according to the criteria of the AJCC. Data are presented as box blots showing the median.

A



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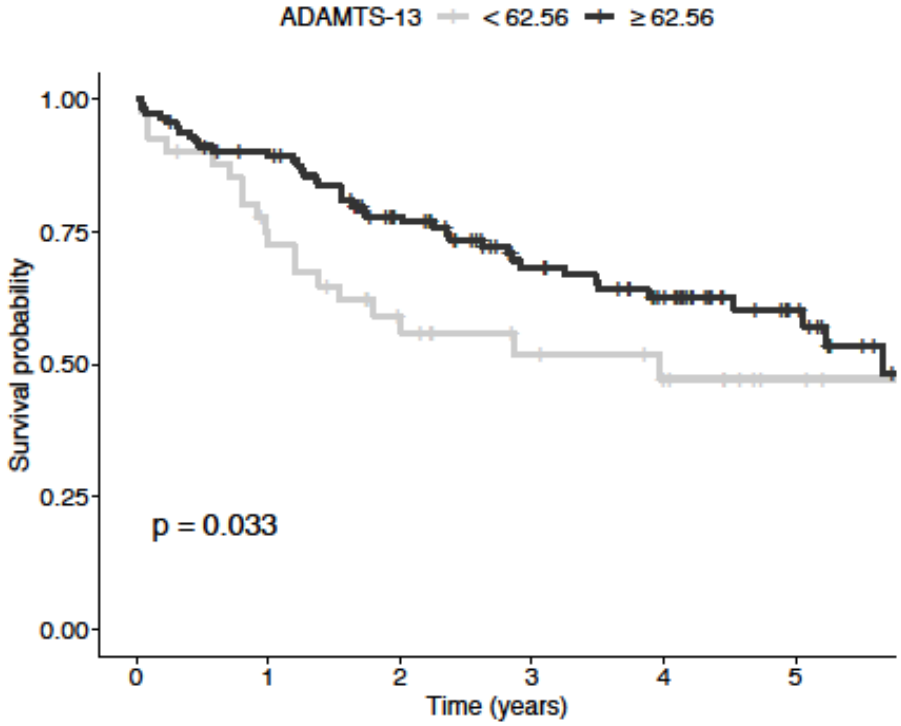
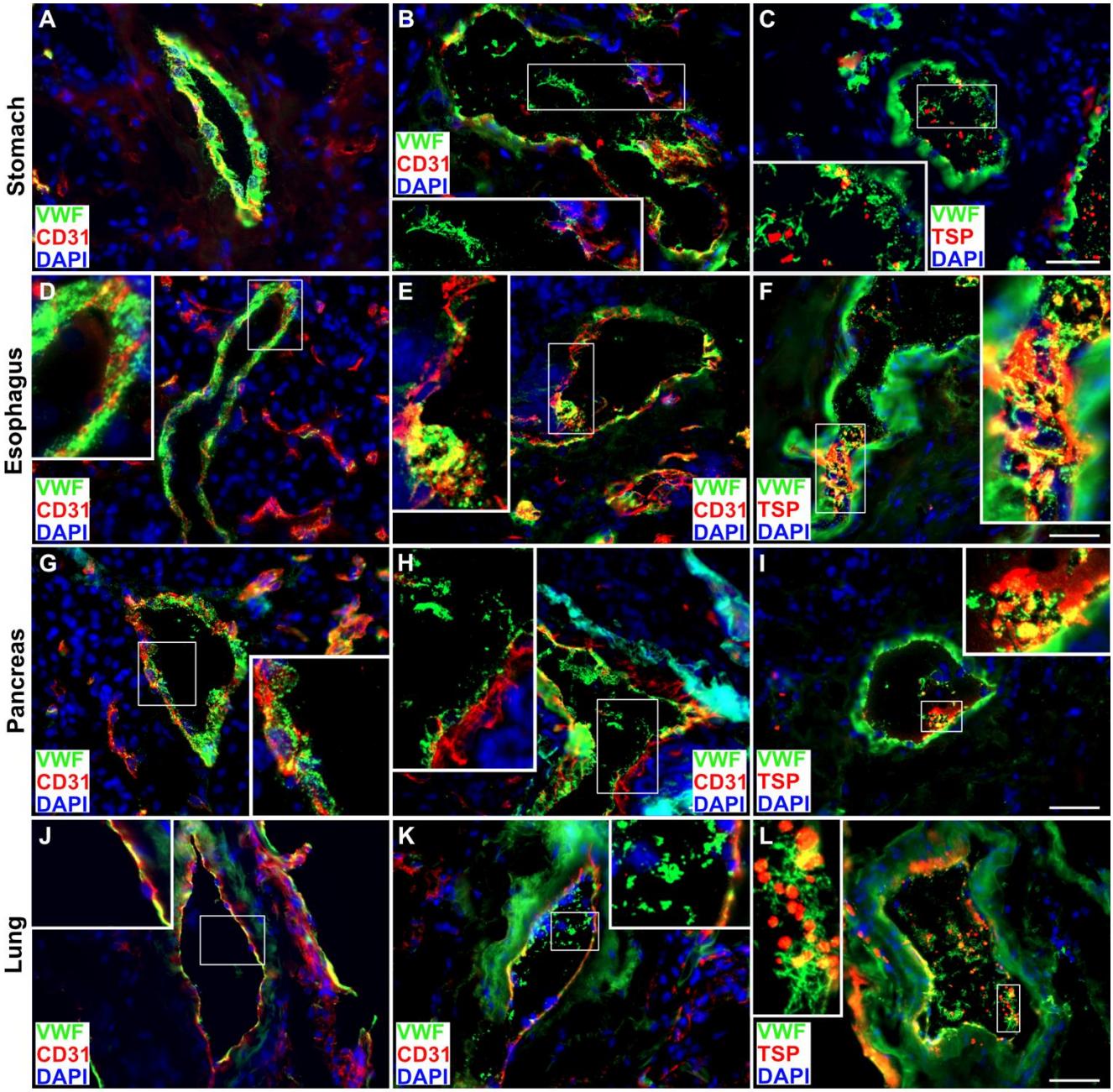


Supplemental Figure 2: Impact of the plasmatic VWF (ng/ml) and the ADAMTS-13 activity (%) on survival of tumor patients. (**A**) Kaplan-Meier analysis for overall survival (OS; years) of tumor patients according to elevated and non-elevated plasmatic VWF (cutoff level, 13996 ng/ml). (**B**) Kaplan-Meier analysis for overall survival (OS; years) of tumor patients according to elevated and non-elevated plasmatic ADAMTS-13 activity (cutoff level, 62.6%).



M

	Colorectal (n = 24)		Stomach (n = 18)		Esophagus (n = 26)		Pancreas (n = 12)		Lung (n = 15)		**total**
	peri	tu	peri	tu	peri	tu	peri	tu	peri	tu	
Vessels ULVWF	712	1478	451	670	705	1207	176	312	585	704	**7000**
Vessels w/o ULVWF	946	1455	364	264	700	636	400	206	691	524	**6186**
total	1658	2933	815	934	1405	1843	576	518	1276	1228	**13186**

Supplemental Figure 3: Von Willebrand factor fibers (VWF) lead to platelet aggregation in tumor tissue. Consecutive cryosections (10 µm) of primary tumor and peritumoral regions were stained for VWF (green), CD 31 (red) as endothelial cell (EC) marker or thrombospondin (TSP; red) as platelet marker and DAPI (blue) as cell nuclear marker. (**A**) Representative images present peritumoral stomach tissue with VWF stored in ECs of the vessel wall. (**B**) In tumor tissue, VWF fibers are visible in the vessel lumen. (**C**) Platelets bind to the strongly adhesive VWF fibers, followed by platelet aggregation. (**D**) Representative images present peritumoral esophageal tissue with VWF stored in ECs of the vessel wall. (**E**) In tumor tissue, VWF fibers are visible in the vessel lumen. (**F**) Platelets bind to the strongly adhesive VWF fibers, followed by platelet aggregation and vessel occlusion. (**G**) Representative images present peritumoral pancreatic tissue with VWF stored in ECs of the vessel wall. (**H**) In tumor tissue, VWF fibers are visible in the vessel lumen. (**I**) Platelets bind to the strongly adhesive VWF fibers, followed by platelet aggregation. (**J**) Representative images present peritumoral lung tissue with VWF stored in ECs of the vessel wall. (**K**) In tumor tissue, VWF fibers are visible in the vessel lumen. (**L**) Platelets bind to the strongly adhesive VWF fibers, followed by platelet aggregation. Scale bar: 50 µm. (**M**) Number of vessels in peritumoral (peri) and tumoral (tu) tissue with and without (w/o) ultra-large von Willebrand Factor (ULVWF) fibers stained by immunofluorescence to detect VWF fibers and platelets in the vessel lumen.