## Supplementary materials



**Supplementary Figure 1.** Routine laboratory parameters of grade III (n = 21) and grade IV (n = 26) IVH patients as well as clinical control subjects (n = 14). In baseline cerebrospinal fluid samples, RBC count (**A**) and the levels of S100B (**B**), total protein (**C**), and lactate (**D**) were significantly higher in both IVH severity groups versus controls; however, there was no difference between the two subcohorts. For comparison, Kruskal-Wallis test with Dunn's multiple comparisons test was performed. IVH: intraventricular hemorrhage, RBC: red blood cell, S100B: S100 calcium-binding protein B.



**Supplementary Figure 2.** Reduced E-selectin (**A**), ICAM-1 (**B**), and VCAM-1 (**C**) concentrations were analyzed in the follow-up (oxidized Hb negative) CSF samples in comparison to baseline specimens containing oxidized Hb forms (n = 11). In contrast, IL-8 (**D**) did not show a significant alteration over time (9 samples were available for this analysis). Dots represent single values of the pairs. Wilcoxon matched-pairs sign rank test or paired t-test were performed for the comparisons. CSF: cerebrospinal fluid, Hb: hemoglobin, ICAM-1: intercellular adhesion molecule 1, IL-8: interleukin-8, IVH: intraventricular hemorrhage, VCAM-1: vascular cell adhesion molecule 1.



Degree of RBC contamination

**Supplementary Figure 3.** Graphical representation of in vitro controlled hemolysis experiments. Top panel (**A**) illustrates the performance of RBC contamination (0-50 % v/v) of plasma samples (n=5/condition), while the bottom part of the figure (**B**) depicts the colorimetric scale of induced hemolysis (tube 0 means the non-hemolytic control sample, and tube 5 contains the highest amount of RBC). RBC: red blood cell.

**Supplementary Table 1.** Sequences of primers for the analysis of cell-free mature miRNAs. In case of stem-loop reverse transcription primers, the miRNA specific sequences are highlighted in red. Universal ProbeLibrary probe #21 (5' – TGGCTCTG – 3') was used for the RT-qPCR measurements. miRNA: microRNA, RT-qPCR: real-time quantitative polymerase chain reaction.

miRNAs	Stem-loop primers for reverse transcription (5' – 3')	Forward primers (5' – 3')	Universal reverse primer (5' – 3')
miR-223-3p	GTTGGCTCTGGTGCAGGGTCCGAGG	GTTGGGTGTCAGTTTGTC	GTGCAGGGTCCGAGGT
	TATTCGCACCAGAGCCAAC TGGGGT	AAAT	
miR-155-5p	GTTGGCTCTGGTGCAGGGTCCGAGG	GTGGGTTAATGCTAATCG	GTGCAGGGTCCGAGGT
	TATTCGCACCAGAGCCAAC ACCCCT	TGAT	
miR-181b-5p	GTTGGCTCTGGTGCAGGGTCCGAGG	GTTTGAACATTCATTGCT	GTGCAGGGTCCGAGGT
	TATTCGCACCAGAGCCAAC ACCCAC	GTCG	
miR-126-3p	GTTGGCTCTGGTGCAGGGTCCGAGG	GGGTCGTACCGTGAGTAAT	GTGCAGGGTCCGAGGT
	TATTCGCACCAGAGCCAAC CGCATT		
miR-16-5p	GTTGGCTCTGGTGCAGGGTCCGAGG	GTTTGGTAGCAGCACGTA	GTGCAGGGTCCGAGGT
	TATTCGCACCAGAGCCAAC CGCCAA	AATA	
cel-miR-39-3p	GTTGGCTCTGGTGCAGGGTCCGAGG	GTGTCACCGGGTGTAAATC	GTGCAGGGTCCGAGGT
	TATTCGCACCAGAGCCAAC CAAGCT		