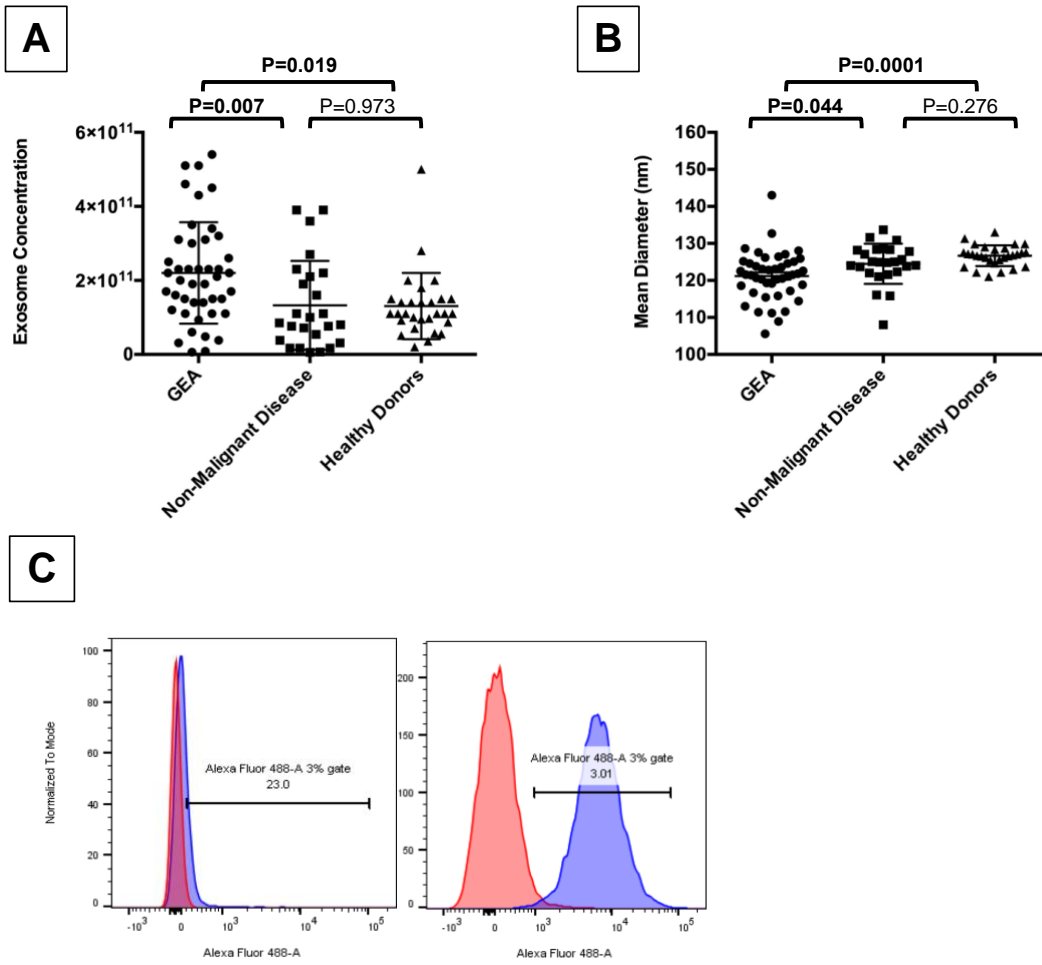
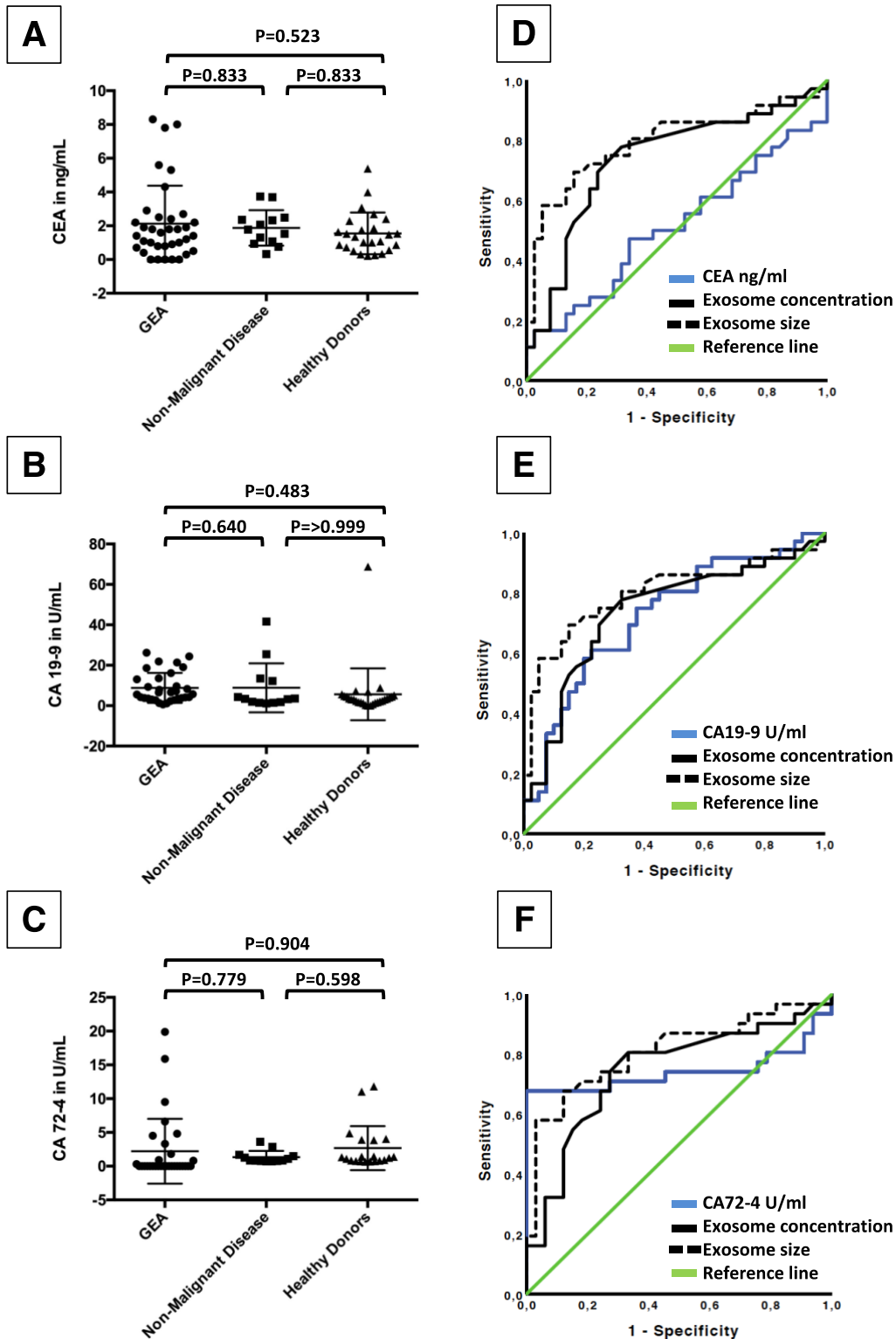


## Supplementary Figure 1



**Supplementary Figure 1.** (A) and (B) Dot plots showing the exosome concentration and mean exosome size of selected samples of 44 patients with GEA, 25 patients with non-malignant disease and 29 healthy donors. (C) Two representative histograms of GPC3 on exosome-bound latex beads isolated serum samples of a patient with histologically confirmed GEA (left panel) and a healthy donor (right panel) using flow cytometry.

## Supplementary Figure 2



**Supplementary Figure 2.** (A), (B) and (C) Dot plots of the expression of CEA, CA 19-9, and CA 72-4 in human serum samples from patients with GEA, patients with non-malignant disease and healthy donors measured by immunoassays. (D), (E) and (F) ROC curves of the diagnostic sensitivity and specificity of the expression of CEA, CA 19-9 and CA 72-4 in human serum samples from patients with GEA vs. control subjects (non-malignant disease and healthy donors).

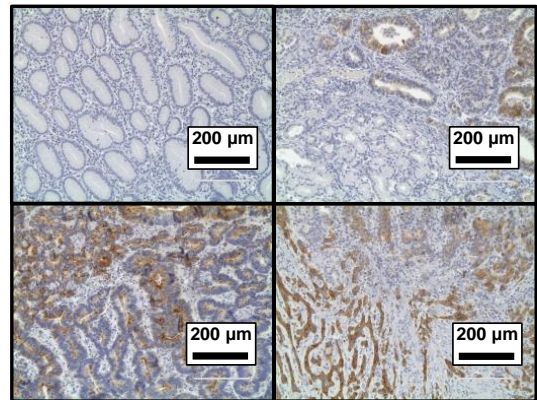
## Supplementary Figure 3

**A**

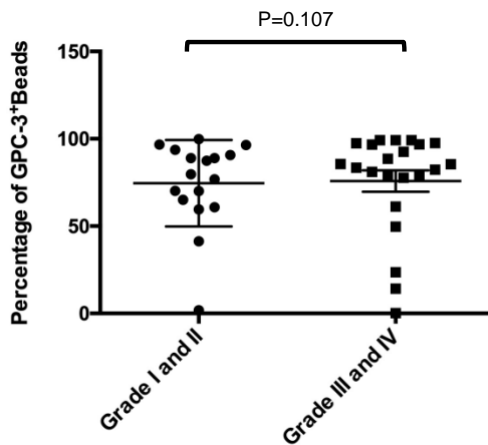
Pairwise comparison of ROC curves					
Variable	CA19-9	CA72-4	CEA	eGPC3	Combined Score
CA19-9	N.A.	P = 0.65	P = 0.03	P = 0.02	P = 0.004
CA72-4		N.A.	P = 0.04	P = 0.09	P = 0.006
CEA			N.A.	P < 0.0001	P < 0.0001
eGPC3				N.A.	P = 0.84
Combined Score					N.A.

**B**

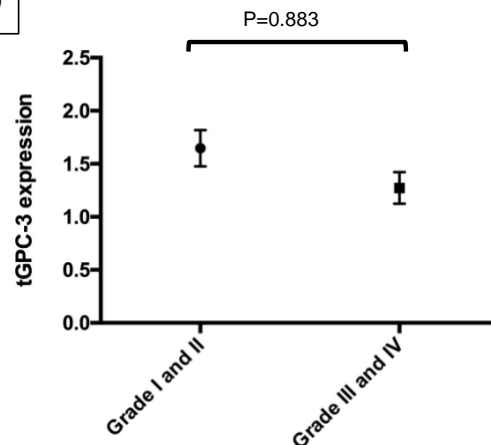
Immunohistochemistry of GPC3



**C**



**D**



**E**

Low-grade GEA

	tGPC3 <sup>low</sup>	tGPC3 <sup>high</sup>	P-Value
eGPC3 <sup>low</sup>	2	7	1.0
eGPC3 <sup>high</sup>	2	6	

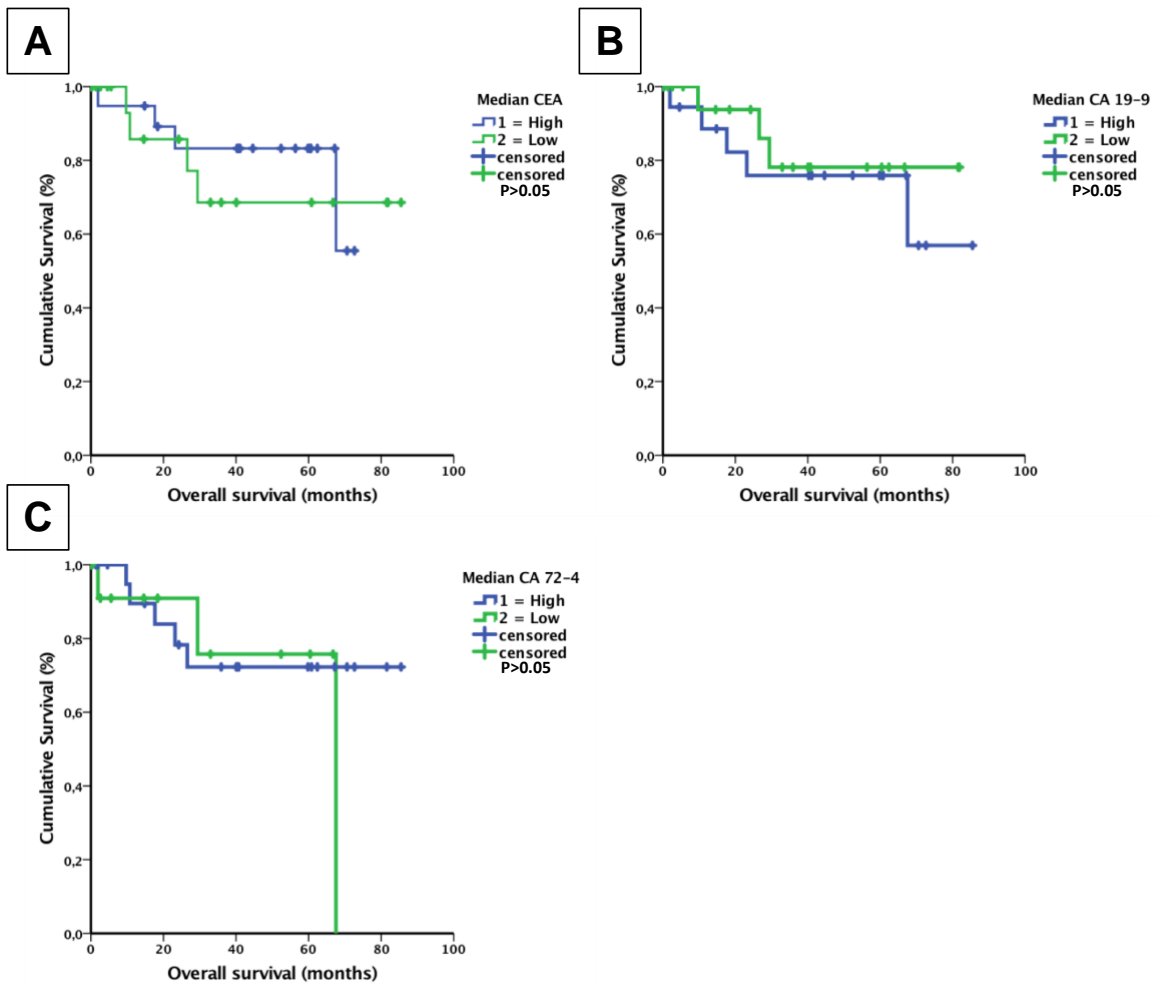
**F**

High-grade GEA

	tGPC3 <sup>low</sup>	tGPC3 <sup>high</sup>	P-Value
eGPC3 <sup>low</sup>	4	6	0.19
eGPC3 <sup>high</sup>	9	3	

**Supplementary Figure 3. (A)** Pairwise comparison of the AUC of ROC curves of selected markers including CA19-9, CA72-4, CEA, eGPC3 and a Combined Score. **(B)** Immunohistochemistry of GPC3 antibody on normal foveolar gastric mucosa (upper left panel) and GEA tissue. Representative images of GPC3 staining intensity of 1 (upper right panel), staining intensity of 2 (lower left panel) and staining intensity of 3 (lower right panel). **(C) and (D)** Dot plots of the association of the percentage of eGPC3+Beads (left panel) and tGPC3 expression (right panel) with tumor grade. **(E) and (F)** Association of eGPC3 and tGPC3 expression in relation to tumor grade in low-grade GEA (including grade I and II tumors, left panel) and high-grade GEA (including grade III and IV tumor, right panel).

## Supplementary Figure 4



**Supplementary Figure 4.** Kaplan-Meier curves displaying overall survival in patients with GEA with high (blue line) and low (green line) expression of **(A)** CEA, **(B)** CA 19-9 and **(C)** CA 72-4 in blood serum samples. None of the three markers has been associated with significant dismal prognosis.