

## Supplementary Information

### Differential expression of microRNAs in preneoplastic gastric mucosa

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## Figure legends

**Supl. Figure S1. Study design.** In discovery phase, we first performed systematic characterization of miRNA expression in various cohorts of patients. In the training phase, we calculated various miRNA expression scores to estimate potential diagnostic usefulness to discriminate atrophic gastritis from normal controls. In the validation phase, we performed conformational analyses to validate the results using independent cohort of antrum biopsies from patients with atrophic gastritis.

**Supl. Figure S2. MiRNA expression in the normal mucosa and gastric cancer.** Expression values of (A) miR-21, (B) miR-155 and (C) miR-223 are shown as normalized  $2^{\Delta\Delta Ct}$ -values. RNU6b was used for normalization. \*\*\*- $p < 0.0001$ ; \*\*- $p < 0.001$ ; \*-  $p < 0.05$ . N – controls (n=19) from both corpus and antrum; GC – gastric cancer tissue (n=10).

**Supl. Figure S3. MiRNA expression in different regions of the stomach from gastric cancer patients.** The expression of miR-21 (A), miR-155 (B) and miR-223 (C) was evaluated in corpus (n=14), antrum (n=16), near tumor (NT; n=7) or in tumor tissues (n=10) from GC patients. The data are presented as  $2^{\Delta\Delta Ct}$ -values normalized to RNU6b. \*\*\*- $p < 0.0001$ ; \*\*- $p < 0.001$ ; \*-  $p < 0.05$ .

**Supl. Figure 4. Correlation between miRNA expression scores and OLGA and OLGIM grading scores in gastric mucosa. (A and B)**  $\Delta Ct$ -values of miR-21, miR-155, and miR-223 were added together to calculate the  $\sum \Delta Ct$ -value following normalization of each miRNA to RNU6b. Correlation analyses between miRNA expression score and (A) OLGA and (B) OLGIM grading scores were performed using Spearman's test.

Suppl. Figure S1.







