Figure S1. Design of the study. GC, gastric cancer; Pre, precancerous lesions; miR, miRNA; CEA, carcinoembryonic antigen; CA, carbohydrate antigen; ROC, receiver operating characteristic.

```
┌──────────────────────────────────────────────┐
│ Screening phase: Differential expression      │
│ levels of miRNA-650, CEA, CA125,              │
│ CA211, and CA50                               │
│ in plasma of GC, Pre and health               │
│ controls                                       │
└──────────────────────────────────────────────┘
                        │
                        ▼
┌──────────────────────────────────────────────┐
│ Candidate phase: The multiple logistic        │
│ regression analysis provide miRNA-650         │
│ and CA211 as the markers                      │
│ for prediction of                             │
│ the presence of GC                            │
└──────────────────────────────────────────────┘
                        │
                        ▼
┌──────────────────────────────────────────────┐
│ ROC analysis further clarify                  │
│ their diagnostic efficacy for GC              │
│ and Pre                                        │
└──────────────────────────────────────────────┘
                        │
                        ▼
┌──────────────────────────────────────────────┐
│ Validation phase: Confirm the diagnostic      │
│ efficacy of the                               │
│ two markers combined                          │
│ with ROC analysis                             │
└──────────────────────────────────────────────┘
```