

Supplementary Table 1 Candidate of biomarkers for early diagnosis, recurrence forecast, and chemotherapy benefits assessment in gastric cancer

	Early diagnosis	Recurrence forecast	Chemotherapy benefits assessment
Metastasis related genes	CDH1	TP53	FGFR2 (S-1), MET (irinotecan), VEGF-D (ramucirumab), TP53 codon 72 SNP (paclitaxel, cisplatin) MSI (pembrolizumab)
Comprehensive gene analysis	<i>CEACAM6, CDH17, OLMF4, TSPAN8</i>	<i>CEACAM6, REG4</i> (peritoneal metastasis), <i>OLMF4</i> (lymph node metastasis)	<i>REG4</i> (5-Fluorouracil)
Microsatellite instability	MSI	-	MSI frequency
Epigenetic alterations	<i>DAPK, CDH1, GSTP1, p15, p16, RASSF1A, RUNX3</i>	-	<i>CHFR</i> (docetaxel)
Genetic polymorphism	-	<i>CD44</i> rs187116, <i>PIK3CA</i> (bone metastasis)	-
CTCs	-	pan-CK, E-cadherin, N-cadherin, vimentin	-
cfDNA	<i>RASSF1A</i> and <i>APC</i> promoter hypermethylation	-	<i>ERBB2</i> copy number (lapatinib plus Capecitabine)
miRNAs	<u>Upregulated</u>	miR-21, miR125a, miR212,	miR-27a (fluoropyrimidine)

	miR-21, miR27a, miR-106b~25, miR141, miR196a, miR199a, miR218, miR-221, miR-222, miR-331, miR370, miR486, miR10b-5p, miR132-3p, miR185-5p, miR195-5p, miR-20a3p, miR296-5p <u>Downregulated</u> miR181c, miR218, miR375, miR449, miR486 , miR506	miR146a (lymph node metastasis) miR-375	miR146a (oxaliplatin) miR-215-5p (pralatrexate)
Long noncoding RNAs	ncRuPAR	-	-
Exosomes	Plasma exosomal miR-19b, miR-106a	Exosomal miR-21 and miR-1225-5p in peritoneal fluid (peritoneal metastasis)	-
Gastric wasdhes/ juice	miR-21, miR-106a and miR-129, miR-421 <i>BARHL2</i>	-	-
Other Satomach specific biomarker	CagA, vacA, GKN1	-	-

CTCs: Circulating tumor cells; cfDNA: Circulating cell-free DNA; FGFR: Fibroblast growth factor receptor; VEGF: Vascular endothelial growth factor; MSI: Microsatellites instability; CagA: *H. pylori* Cytotoxin-associated gene A; VacA: Vacuolating toxin A; GKN: Gastrophilin.