

Figure S1. Expression levels of miR-16-5a in CRCs and normal controls. (A) Log2 75th percentile normalization: Data were normalized per array, such that the 75th percentile of the signal intensity was adjusted to 1. (B) Global normalization: Data were globally normalized per array, such that the median of the signal intensity was adjusted to 25. CRC, colorectal cancer; N, normal controls;  $P_t$ , P-value for an unpaired Student's t-test;  $P_{MW}$ , P-value for Mann-Whitney's U test; miRNA, microRNA.

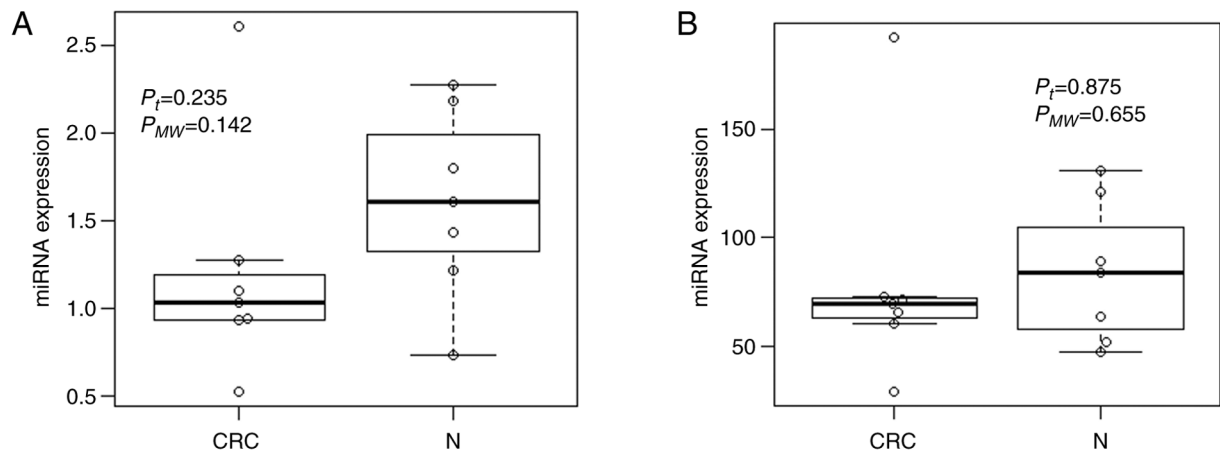


Figure S2. Expression levels of miR-26a-5p and miR-223-3p in the pre-clinical data set. Expression levels of miRNAs in (A) five advanced CRCs and five controls and (B) 12 early CRCs and 12 controls. CRC, colorectal cancer; N, normal controls;  $P_t$ , P-value for an unpaired Student's t-test;  $P_{MW}$ , P-value for Mann-Whitney's U test; miRNA, microRNA.

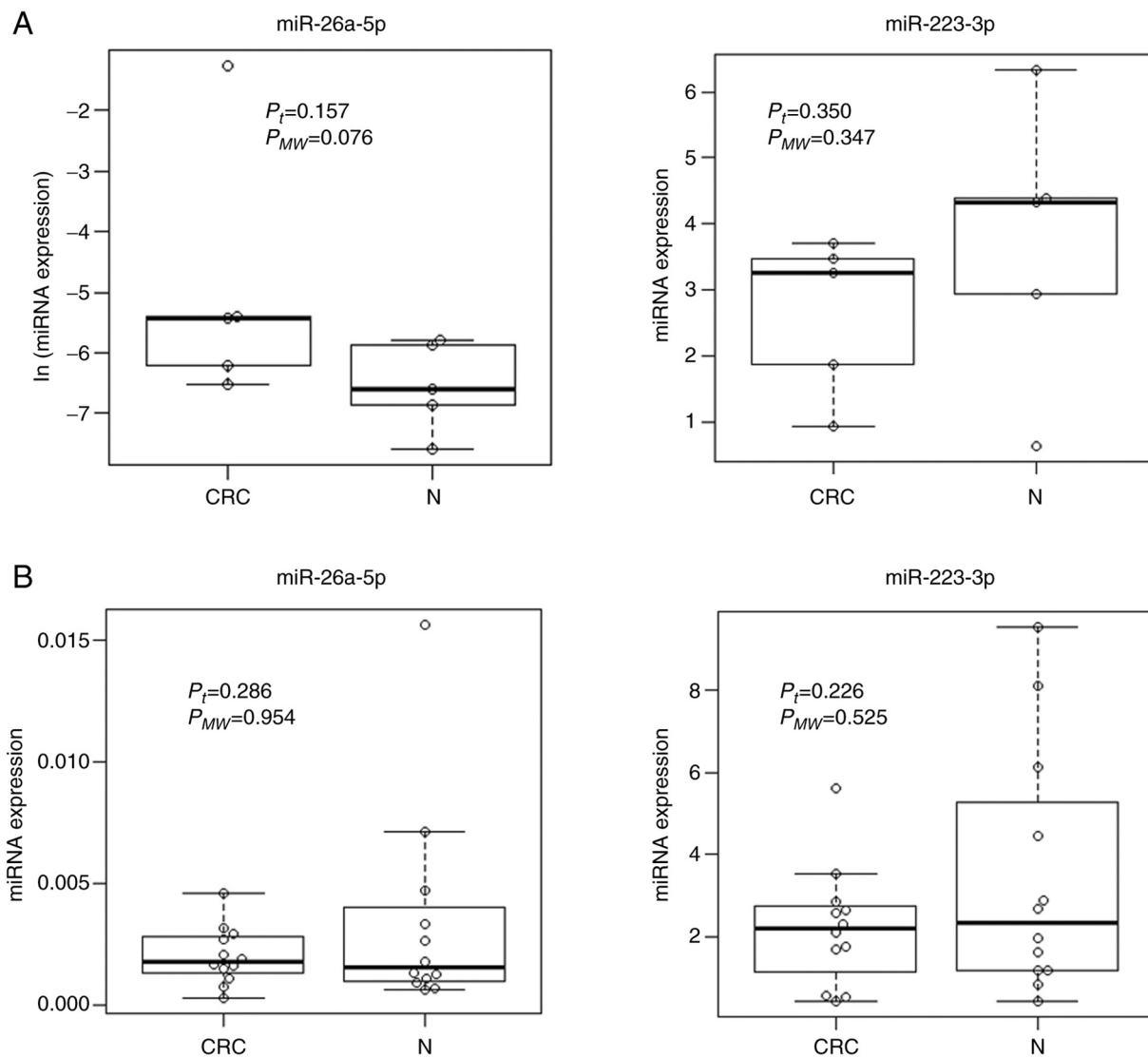


Figure S3. Early detectability of colorectal cancer before clinical diagnosis in cohort participants by ROC curves. ROC curves were generated using the pre-clinical cohort samples to detect levels of miR-26a-5p and miR-223-3p (12 early CRCs and 12 controls). CRC, colorectal cancer; advanced, advanced CRC; AUC, area under the curve; ROC curve, receiver operating characteristic curve.

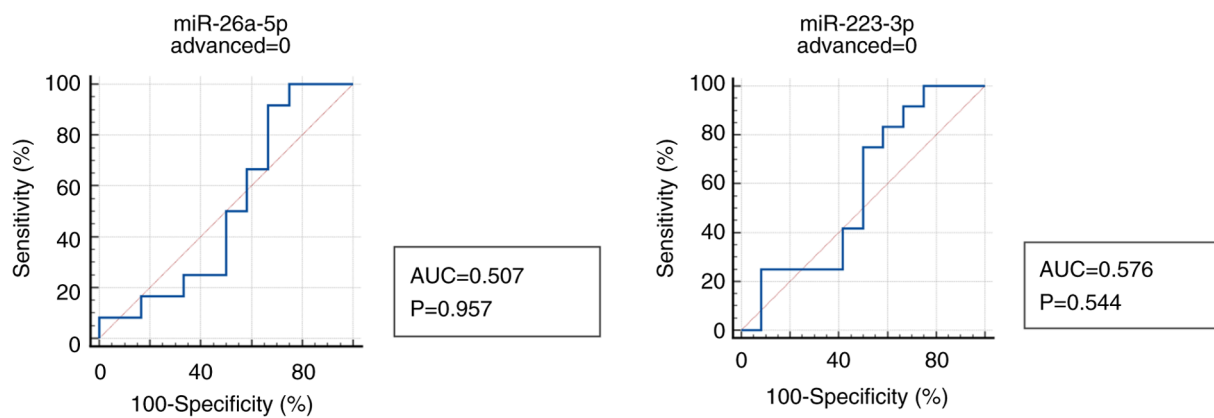


Figure S4. Expression levels of miR-26a-5p in the pre-clinical cohort samples by clinical stages. <sup>a</sup>P-value is calculated based on ANOVA. EarlyCRC, early colorectal cancer; AdvCRC, advanced colorectal cancer; N, normal controls; ANOVA, one-way analysis of variance.

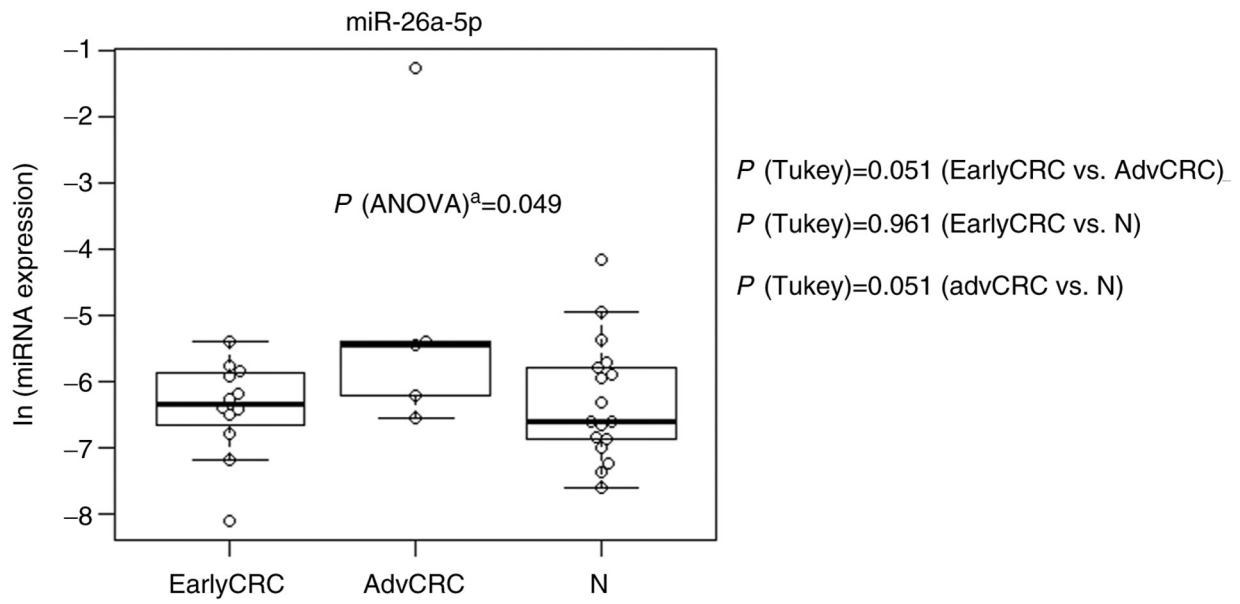


Table SI. Primers used for PCR in the validation set.

miRNA	iRbase ID	miRNA sequence (5'-3')	GeneGlobe ID <sup>a</sup>
miR-15a-5p	MIMAT0000068	UAGCAGCACAUAAUGGUUUGUG	YP00204066
miR-16-5p	MIMAT0000069	UAGCAGCACGUAAAUAUUGGCG	YP00205702
miR-21-5p	MIMAT0000076	UAGCUUAUCAGACUGAUGUUGA	YP00204230
miR-22-5p	MIMAT0004495	AGUUCUUCAGUGGCAAGCUUUA	YP00204255
miR-26a-5p	MIMAT0000082	UUCAAGUAAUCCAGGAUAGGCU	YP00206023
miR-223-3p	MIMAT0000280	UGUCAGUUUGUCAAAUACCCCA	YP00205986
miR-518e-5p	MIMAT0005450	CUCUAGAGGGAAGCGCUUUCUG	YP00206040
miR-572	MIMAT0003237	GUCCGCUCGGCGGUGGCCCA	YP00204696
miR-5100	MIMAT0022259	UUCAGAUCCCAGCGGUGCCUCU	YP02112520
miR-6765-3p	MIMAT0027431	UCACCUGGCUGGCCCGCCAG	YP02117264

<sup>a</sup>ID for miRCURY LNA miRNA PCR Assay (Qiagen, Inc.). miR, microRNA.