

Table S1 Clinical information on the samples of the 12 patients highthrough-sequenced in this study.

Characteristics	Gallbladder stones	Gallbladder polyps	P value
Sample Number	6	6	
Sex(male/female)	2/4	2/4	
Age(years)	41(26-58)	49.67(32-64)	0.798
ALT(U/L)	30.27(15.80-44.70)	33.43(22.40-44.70)	0.667
AST(U/L)	39.88(32.10-50.20)	38.60(12.70-50.10)	0.320
BMI(kg/m ²)	22.60(19.70-25.90)	22.67(18.40-26.90)	0.559

Table S2 characterization of mRNA data analysis

Sample	Length	Reads number	Bases number	Q20%	Q30%	GC%	N(ppm)
Raw Data							
GS	51	15981246	815043546	98.69	96.91	50.76	30.36
GP	51	15272975	778921725	98.54	96.56	53.49	31.03
Clean Data							
GS	50	13470672	673533600	99.57	98.4	48.98	21.76
GP	50	12461011	623050550	99.55	98.27	51.65	22.17

GS, Gallbladder stones; GP, Gallbladder polyps.

Table S3 characterization of miRNA data analysis

Sample	Total reads	Total bases	Min length	Max length	Average length	Q20%	Q30%
Raw Data							
GS	4452180	227061180	51	51	51	99.08	96.78
GP	2908867	148352217	51	51	51	99.06	96.84
Clean Data							
GS	2215832	5033114	18	32	22.71	99.54	97.44
GP	1424770	32308109	18	32	22.68	99.56	97.56

GS, Gallbladder stones; GP, Gallbladder polyps.

Table S4 microRNAs differentially expressed at the 0.05 FDR level.

miRNA-ID	logFC(GS/GP)	P-Value
hsa-miR-194-3p	7.313351	0.000391
hsa-miR-31-5p	2.931081	0.000871
hsa-miR-141-5p	2.204408	0.009812
hsa-miR-3934-5p	-6.22768	0.014079
hsa-miR-1302	-6.22768	0.014079
hsa-miR-429	1.555024	0.021193
hsa-miR-891a-5p	-6.0921	0.0219
hsa-miR-141-3p	1.528212	0.022437
hsa-miR-7641	-1.52236	0.023862

hsa-miR-210-3p	1.641284	0.026135
hsa-miR-194-5p	1.422115	0.03287
hsa-miR-146b-5p	-1.38148	0.037954
hsa-miR-585-3p	-1.8239	0.038112
hsa-miR-133a-5p	-2.06098	0.042606
hsa-miR-192-5p	1.340747	0.043696
hsa-miR-200c-3p	1.313953	0.048176
hsa-miR-3910	-2.55518	0.049336

GS, Gallbladder stones; GP, Gallbladder polyps.

Table S5 mRNAs differentially expressed at the 0.05 FDR thresholds. (XLS)

Table S6 Characteristics of the Novel miRNAs

novel miRNA id	total read count	consensus mature sequence
Sample with GP		
chr1_2407	28	uauggaggucucugucuggcu
chr22_2692	30	ucccuguccuccaggagcucacc
chr16_1415	14	agcaggacgguggccaug
chr3_3401	62	uguaaacaucuuugacug
chr8_4459	241	aucugugggauaugacug
chr9_4615	64	ccugucugagcgccgcuc

chr4_3587	37	ccgacgggcgugacccc
chr5_3627	4	uugcagcugccugggagugg
chr8_4407	79	aaggagcucacagucuauug
chr20_2539	10	gucccuguauucgaaagugaucgug
chr1_2159	10	aaauugcacaacucucacauuc

Sample with GS

chr22_3126	47	ucccuguccuccaggagcuca
chr2_3453	17	agugcuuggcugaggagcu
chr16_1607	33	agcaggacgguggccaug
chr3_3991	83	uguaaacauccuugacug
chr8_5289	973	aucugugggauuauugacug
chr18_1997	13	caggaguucugggcuguagc
chr6_4700	18	accuugccucucggcgcccc
chr3_3824	33	aggggcccaggagcgag
chr2_3454	17	agugcuuggcugaggagcu
chr17_1815	9	cggcgccgccccecccc
chrX_6010	12	augacagauugacauggacaauu
chr6_4764	148	ggggauguagcucaguggu
chr17_1816	9	cggcgccgccccecccc
chr1_2597	11	ugaggcaguagauuguauu
chr19_2180	9	cccgcgccuccccgcc
chr8_5215	134	aaggagcucacagucuauug

chr20_2960	21	aaacucuggagcuuucguacaugc
chr7_5104	13	uacucucucggacaagcuguaggu
chr10_158	10	aggaaggugggggaugacgg
chr19_2093	2	gggguugggacaagaagagacu

GS, Gallbladder stones; GP, Gallbladder polyps.

Table S7 Enriched GO Ontology and KEGG pathways in differentially expressed genes in gallstones. (Tab-delimited table. Col1: GO/Pathway ID, Col2: Ontology Source, Col3: GOTerm name. The p-value cutoff for functional enrichment with the hypergeometric test was 0.05.) (XLS)

Table S8 Enriched GO Ontology and KEGG pathways in differentially expressed miRNAs in gallstones. (Tab-delimited table. Col1: GO/Pathway ID, Col2: Ontology Source, Col3: GOTerm name. The p-value cutoff for functional enrichment with the hypergeometric test was 0.05.) (XLS)

Table S9 Enriched GO Ontology and KEGG pathways in combining mRNA and miRNA data in gallstones. (XLS)

Table S10 RT-qPCR primers used in the validation assays.

Gene Name	Sense primer sequecen	Antisense primer sequence	Annealing
ATP11A	CTGACCAGAGACAACCTGTCCG	CGGCAGATTTCAGGAAGAGC	60°C
		T	
USP9Y	GAGGTGGAAAGTTGTTTGCCTGG	TGCTCCATCTCTAAGAGGTGGC	59.2°C

RPS4Y1	GCCGTTTTGCTGTTACCCGCAT	ATCTGGGTAGCGGATGGTTCGA	59.8°C
TRDN	GGAGGACAAAGAGAAAGCAGCTG	AGGTGGAATGGCTGGGCTTTGT	60°C
MYL3	CAAGGACACAGGCACCTATGAG	CTCCACTTCGTCTTCTGTCAGC	59.5°C
AMH	CGCTGCTTCACACGGATGACC	GGTGGCGACTCCTCGAGTTCC	60°C
IFI27	CGTCCTCCATAGCAGCCAAGAT	ACCCAATGGAGCCCAGGATGA	60°C
		A	
SLC28A2	GGAGTCCAAGTTCAAGAGTGAGG	AGGCAATCAGGTTGGCTGCTAC	60°C
GAPDH	TGACTTCAACAGCGACACCCA	CACCCTGTTGCTGTAGCCAAA	60°C
Hsa-miR-192	GACCTATGAATTGACAGC	GAACATGTCTGCGTATCTC	59.5°C
Hsa-miR-133a1	TTTGGTCCCCTTCAACC	GAACATGTCTGCGTATCTC	60°C
Hsa-miR-210	TGTGCGTGTGACAGCG	GAACATGTCTGCGTATCTC	60°C
Hsa-miR-200c	GTCTTACCCAGCAGTGT	GAACATGTCTGCGTATCTC	59.5°C
hsa-miR-194	ACAGCAACTCCATGTGG	GAACATGTCTGCGTATCTC	60°C
hsa-miR-891a	AACGAACCTGAGCCACT	GAACATGTCTGCGTATCTC	60°C
U6	CTCGCTTCGGCAGCACA	AACGCTTCACGAATTTGCGT	60°C
