## **Supplementary Data**

### **Supplementary Methods**

#### *Immunohistochemistry*

To assess hormone receptor levels in formalin-fixed paraffin-embedded tumour tissue specimens, sections were deparaffinised and stained using the Benchmark ULTRA IHC/ISH automated slide staining module (Benchmark ULTRA, Ventana Medical Systems Inc., Tucson, AZ, USA) according to the manufacturers' instructions. The U ultraView DAB procedure was performed. This included: treatment with ULTRA Cell Conditioner #1 at 95°C for 8 mins to retrieve antigenicity; followed by incubation at 36°C with the specific primary rabbit monoclonal antibody (Ventana) for ER (24 mins, CONFIRM<sup>TM</sup> anti-ER (SP1), 1 μg/mL in 0.05 M Tris-HCl), PR (12 mins, CONFIRM<sup>TM</sup> anti-PR (1E2), 1 μg/mL in 0.05 M Tris-HCl) or HER2 (40 mins, CONFIRM<sup>TM</sup> anti-HER2 (4B5), 6 μg/mL in 0.05 M Tris-HCl) and development with the ultraView Universal DAB Detection Kit (Ventana). Positive and negative tissue controls were included in all staining procedures. Results were reviewed on a light microscope by a pathologist as part of routine clinical diagnosis. ER and PR expression was recorded as the percentage of stained tumour cells within an entire section. Cases were classified as positive for expression of the receptors (≥1% staining cells) or negative (<1%), irrespective of the staining intensity. HER2 expression was defined by the intensity level of the staining where it was scored 0 (no staining or staining in <10% of tumour cells), 1+ (faint staining in >10% of tumour cells or partial membrane staining), 2+ (weak to moderate staining in >10% of tumour cells) or 3+ (strong, complete membrane staining in >10% of tumour cells), as outlined by Boström et al (BMC Cancer 2011; 11:348).

#### Silver in situ hybridisation

To determine if the *HER2* gene was amplified in formalin-fixed paraffin-embedded tumour tissue specimens, sections were deparaffinised and stained using the Benchmark ULTRA IHC/ISH automated slide staining module (Benchmark ULTRA, Ventana Medical Systems Inc., Tucson, AZ, USA) according to the manufacturers' instructions. The *ultra*View HER2 SISH procedure was performed. This included: hybridisation of serial tissue sections with either the Dinitro-Phenol (DNP) labelled INFORM *HER2* 

DNA probe (10 µg/mL, Ventana) for 6 hours at 52°C; followed by visualisation of the DNP-labelled probe using the *ultra*View SISH Detection Kit (Ventana) according to the manufacturers' instructions. All reagents have been optimally formulated for use on the Benchmark ULTRA automated slide stainer (Ventana). Results were reviewed on a light microscope by a pathologist as part of routine clinical diagnosis. The internal control for the SISH staining was verified with 2 copy signals identified in normal stromal or lymphoid cells. The number of HER2 signals was then counted in thirty tumour nuclei, and scored as the average number of signals per nuclei; where a score of 1-4 copies/nuclei was classed as nonamplified (either diploid or polysomic for Chromosome 17 depending upon count numbers below or above 2.5 respectively), 4-6 copies/nuclei was classed as equivocal and >6 copies/nuclei was classed as amplified. In cases with 4-6 copies/nuclei, an additional 30 nuclei were examined and counted, bringing the average copy number calculation across a total of 60 cells. If the average copy number still then lay between 4 and 6, additional staining for Chromosome 17 (INFORM Chromosome 17 DNA probe; 10 ug/mL, Ventana) was undertaken to determine if polysomy was present. In these cases, *HER2* gene status was classed as negative (HER2:Chr17<1.8), equivocal (HER2:Chr17=1.8-2.2) or positive (HER2:Chr17>2.2) for HER2 gene amplification.

## Validation of miRNA multiplexed pre-amplified real-time PCR assays

To verify that the multiplex pre-amplification procedure did not alter the quantitation of the miRNAs used in the real time PCR assays, all pre-amplified multiplex assays were validated against the uniplex miRNA assays in triplicate. To do this, a standard curve was generated using 10-fold serially diluted pre-amplified or non-amplified reverse transcribed total RNA from T-47D breast cancer cells. A standard curve was prepared by plotting the Log<sub>10</sub> template amount versus Ct. PCR efficiencies were calculated using the slope of the standard curve and the following equation: PCR efficiency (%) = (10<sup>-1/slope</sup>-1) x 100. A PCR efficiency of 75-125% for an individual miRNA assay was considered acceptable (as per Sieuwerts *et al*, Clin Cancer Res 2011;17: 3600-18). hsa-miR-126\* and hsa-miR-205 were outside our range of acceptable PCR efficiencies and were not used for further validations. PCR linearity was determined using R<sup>2</sup>. Results are shown in Supplementary Table S1 and Supplementary Figure S3.

**Supplementary Table S1:** Validation of miRNA real-time PCR assay efficiency before and after multiplexed pre-amplification procedure.

miRNA assay	Median Ct in uniplex reaction without pre- amplification	Median Ct in multiplex reaction with pre- amplification	Ct gain due to multiplex pre- amplification	PCR efficiency (%) in uniplex reaction without pre- amplification	PCR efficiency (%) in multiplex reaction with pre- amplification	Linearity (R <sup>2</sup> ) in uniplex reaction without pre- amplification	Linearity (R <sup>2</sup> ) in multiplex reaction with pre- amplification
let-7a	23.80	20.45	3.35	92.37	78.27	0.9708	0.9844
let-7b	25.76	22.70	3.06	113.20	80.41	0.9777	0.9796
let-7c	29.19	24.96	4.23	110.00	77.11	0.9350	0.9724
mir-100	26.05	22.57	3.48	102.92	85.53	0.9778	0.9873
mir-101	29.38	25.50	3.87	112.82	96.11	0.9714	0.9309
mir-26a	26.29	18.65	7.64	82.73	99.83	0.9636	0.9973
mir-26b	27.41	20.67	6.75	90.36	82.84	0.9240	0.9982
miR-130a	27.13	20.12	7.01	97.13	85.43	0.9366	0.9894
miR-29c	26.40	20.44	5.96	87.62	97.38	0.9719	0.9873
miR-205	26.25	20.08	6.17	117.58	418.43	0.9877	0.8377
RNU44	25.61	16.92	8.69	101.04	124.39	0.9891	0.9928
mir-126*	33.73	27.23	6.50	96.09	43.76	0.8255	0.9603
miR-210	25.83	20.73	5.10	87.04	75.10	0.9941	0.9668

Supplementary Table S2: miRNAs differentially expressed in triple negative breast cancer. Fold change in expression of 71 miRNAs found to be significantly different in extracts from 31 TNBCs compared to extracts from 23 matched normal adjacent tissue specimens (>2-fold difference, p<0.05 and a false discovery rate (FDR) = 5.0%). miRNAs with no previous association with breast cancer are shown in bold.

Up-reg	gulated miRNAs		Down-regulated miRNAs		
Systematic name Fold regulation		p-value	Systematic name	Fold regulation	p-value
hsa-miR-151-3p	2.02	0.0136	hsa-miR-451	-5.51	1.42E-04
hsa-miR-185	2.03	0.0124	hsa-miR-145	-5.24	3.16E-06
hsa-miR-660	2.05	0.0160	hsa-miR-136	-4.80	1.18E-05
hsa-miR-1280	2.10	3.11E-04	hsa-miR-10b	-4.72	1.62E-07
hsa-miR-590-5p	2.15	0.0131	hsa-miR-199b-5p	-4.65	3.21E-06
hsa-miR-1290	2.15	0.0249	hsa-miR-99a	-4.44	9.37E-07
hsa-miR-200b	2.19	0.0054	hsa-miR-195	-3.95	3.21E-06
hsa-miR-425	2.23	0.0016	hsa-miR-125b	-3.94	2.14E-06
hsa-miR-19b	2.23	0.0090	hsa-miR-497	-3.43	4.30E-05
hsa-miR-1308	2.28	0.0035	hsa-miR-376a	-3.38	0.0098
hsa-miR-15b	2.29	7.56E-04	hsa-miR-376c	-3.34	0.0125
hsa-miR-663	2.35	0.0125	hsa-miR-127-3p	-3.25	0.0019
hsa-miR-200c	2.40	2.32E-04	hsa-miR-205	-3.14	0.0096
hsa-miR-20a	2.48	0.0017	hsa-miR-100	-3.01	0.0017
hsa-miR-200a	2.51	0.0096	hsa-miR-335	-2.77	0.0128
hsa-miR-146a	2.52	0.0099	hsa-let-7c	-2.71	4.50E-06
hsa-miR-25	2.60	3.11E-04	hsa-miR-542-3p	-2.69	0.0021
hsa-miR-20b	2.76	0.0030	hsa-miR-377	-2.69	0.0369
hsa-miR-155	2.81	0.0016	hsa-miR-450a	-2.62	0.0249
hsa-miR-301a	2.84	0.0016	hsa-miR-143	-2.61	0.0032
hsa-miR-429	2.91	0.0017	hsa-miR-214	-2.53	0.0012
hsa-miR-142-3p	2.98	0.0017	hsa-miR-299-5p	-2.53	0.0240
hsa-miR-7	3.00	0.0304	hsa-miR-486-5p	-2.39	0.0283
hsa-miR-17*	3.03	3.11E-04	hsa-miR-132	-2.38	0.0284
hsa-miR-141	3.30	4.56E-05	hsa-miR-542-5p	-2.35	0.0049
hsa-miR-106b	3.45	2.95E-05	hsa-miR-424	-2.23	0.0132
hsa-miR-19a	3.50	1.55E-04	hsa-miR-130a	-2.21	0.0160
hsa-miR-130b	3.54	2.31E-06	hsa-miR-10a	-2.14	0.0028
hsa-miR-93	3.59	7.43E-06	hsa-miR-199a-5p	-2.14	0.0189
hsa-miR-17	3.63	3.61E-05	hsa-miR-126	-2.11	0.0026
hsa-miR-363	3.66	0.0284	hsa-miR-199a-3p	-2.08	0.0098
hsa-miR-21	3.74	7.94E-07	hsa-let-7b	-2.06	0.0011
hsa-miR-203	3.87	0.0136			
hsa-miR-210	4.41	0.0012			
hsa-miR-18b	4.64	0.0026			
hsa-miR-18a	6.24	0.0455			
hsa-miR-96	6.29	1.62E-07			
hsa-miR-183	7.66	1.62E-07			
hsa-miR-135b	11.57	5.73E-04			

## Supplementary Table S3: miRNA families and clustered miRNAs differentially expressed in triple negative breast cancer.

Systematic name	No. of miRNAs	Fold over- representation	FDR corrected p-value
Clustered miRNAs		-	
hsa-mir-17-92 cluster	5	6.83	1.39E-03
hsa-mir-200a cluster	3	8.20	0.0118
hsa-mir-106b cluster	3	8.20	0.0119
hsa-mir-106a cluster	4	5.46	0.0167
miRNA families			
mir-17 family	7	7.17	5.11E-05
mir-200/miR-8 family	5	8.20	3.64E-04
mir-130 family	3	6.15	0.0382

# **Supplementary Table S4:** miRNAs differentially expressed in lymph node negative triple negative breast cancer. Fold change in expression of 37 miRNAs found to be significantly different in extracts from 15 lymph node negative TNBCs compared to 9 matched normal adjacent tissue specimens (>2-fold difference, p<0.05 and a false discovery rate (FDR) = 5.0%). miRNAs differentially expressed in lymph node positive patients are shown in bold.

Systematic name	Fold change	p-value	
hsa-miR-106b	5.40	0.00348	
hsa-miR-107	2.51	0.04619	
hsa-miR-10b	-3.60	0.01790	
hsa-miR-1280	2.40	0.02725	
hsa-miR-130b	4.51	0.00223	
hsa-miR-141	5.78	0.00372	
hsa-miR-142-3p	4.78	0.00850	
hsa-miR-145	-3.77	0.02881	
hsa-miR-146a	4.76	0.00719	
hsa-miR-155	3.60	0.02881	
hsa-miR-15b	3.23	0.00531	
hsa-miR-17	6.09	0.00204	
hsa-miR-17*	4.66	0.00820	
hsa-miR-181a	2.30	0.02881	
hsa-miR-181b	2.54	0.02881	
hsa-miR-183	11.46	0.00062	
hsa-miR-185	3.05	0.03114	
hsa-miR-1979	2.57	0.03832	
hsa-miR-19a	5.49	0.00369	
hsa-miR-19b	3.77	0.00531	
hsa-miR-200a	3.76	0.04956	
hsa-miR-200b	3.02	0.04619	
hsa-miR-200c	3.77	0.00531	
hsa-miR-20a	4.20	0.00348	
hsa-miR-20b	5.11	0.00223	
hsa-miR-21	4.86	0.00204	
hsa-miR-25	4.01	0.00495	
hsa-miR-301a	3.99	0.02186	
hsa-miR-425	2.76	0.04331	
hsa-miR-454	2.83	0.00695	
hsa-miR-590-5p	3.13	0.01780	
hsa-miR-660	2.78	0.04619	
hsa-miR-92a	2.73	0.01755	
hsa-miR-93	5.33	0.00348	
hsa-miR-96	9.52	0.00027	
hsa-miR-98	2.67	0.02576	
hsa-miR-99a	-3.19	0.03013	

# **Supplementary Table S5:** miRNAs differentially expressed in lymph node positive triple negative breast cancer. Fold change in expression of 46 miRNAs found to be significantly different in extracts from 16 lymph node positive triple negative breast cancers compared to 14 matched normal adjacent tissue specimens (>2-fold difference, p<0.05 and a false discovery rate (FDR) = 5.0%). miRNAs differentially expressed in lymph node negative patients are shown in bold.

Systematic name	Fold change	p-value
hsa-let-7a	-2.36	0.00419
hsa-let-7b	-2.99	0.00011
hsa-let-7c	-3.84	0.00006
hsa-miR-100	-4.37	0.00176
hsa-miR-101	-2.61	0.01750
hsa-miR-106b	2.41	0.03725
hsa-miR-10a	-2.37	0.02228
hsa-miR-10b	-5.64	0.00006
hsa-miR-125b	-5.18	0.00010
hsa-miR-126	-2.72	0.00451
hsa-miR-126*	-2.31	0.04409
hsa-miR-127-3p	-5.42	0.00463
hsa-miR-130a	-3.32	0.01446
hsa-miR-130b	2.82	0.00602
hsa-miR-135b	14.14	0.00012
hsa-miR-136	-6.18	0.00012
hsa-miR-140-3p	-2.21	0.04303
hsa-miR-141	2.08	0.04343
hsa-miR-143	-2.99	0.04343
hsa-miR-145	-6.30	0.01750
hsa-miR-183	5.80	0.00030
hsa-miR-18b	4.67	0.00199
hsa-miR-195	-5.70	0.04140
hsa-miR-1977_v14.0	-5.70 -2.28	0.00006
	-2.26 -2.50	0.00377
hsa-miR-199a-3p		0.01750
hsa-miR-199a-5p	-2.46 5.66	
hsa-miR-199b-5p	-5.66	0.00011
hsa-miR-203	4.47	0.02087
hsa-miR-205	-4.65	0.02890
hsa-miR-21	3.07	0.00366
hsa-miR-210	4.56	0.00862
hsa-miR-214	-2.64	0.01360
hsa-miR-26a	-2.67	0.01428
hsa-miR-26b	-2.43	0.01681
hsa-miR-29c	-2.33	0.04343
hsa-miR-320c	-2.15	0.02461
hsa-miR-34a	-2.12	0.02087
hsa-miR-376a	-5.12	0.04809
hsa-miR-376c	-5.56	0.04809
hsa-miR-432	-2.65	0.00377
hsa-miR-451	-8.36	0.00050
hsa-miR-497	-5.11	0.00006
hsa-miR-542-3p	-3.41	0.01360
hsa-miR-93	2.67	0.01446
hsa-miR-96	4.57	0.00366
hsa-miR-99a	-5.64	0.00011

Supplementary Table S6: miRNAs differentially expressed in lymph node metastases. Fold change in expression of 63 miRNAs found to be significantly different in extracts from 13 lymph node metastases compared to 14 matched normal adjacent tissue specimens (>2-fold difference, p<0.05 and a false discovery rate (FDR) = 5.0%).

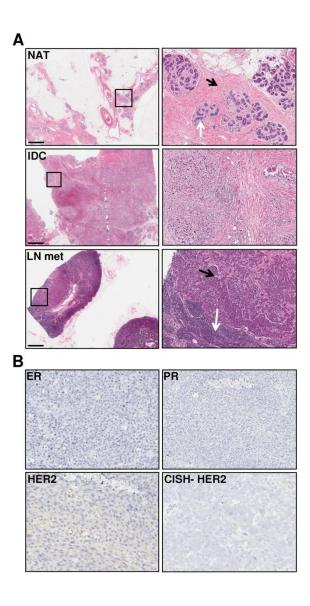
hsa-let-7a hsa-let-7b hsa-let-7c hsa-let-7c hsa-let-7c hsa-let-7c hsa-let-77 hsa-miR-100 hsa-miR-101 hsa-miR-101 hsa-miR-10a hsa-miR-10b hsa-miR-1202 hsa-miR-1202 hsa-miR-1225-5p hsa-miR-125b hsa-miR-125b hsa-miR-126b hsa-miR-126c hsa-miR-126b hsa-miR-1275 hsa-miR-1305 hsa-miR-1305 hsa-miR-1305 hsa-miR-1306 hsa-miR-135b hsa-miR-136b hsa-miR-136b hsa-miR-136b hsa-miR-136b hsa-miR-136b hsa-miR-136b hsa-miR-136b hsa-miR-136b hsa-miR-140-5p hsa-miR-136b hsa-miR-145-5p hsa-miR-145b hsa-miR-145	Systematic name	Fold change	p-value
hsa-let-7c         6.34         0.00001           hsa-let-7f         -2.07         0.03712           hsa-miR-100         -4.57         0.00331           hsa-miR-101         -3.30         0.02278           hsa-miR-10b         -8.61         0.00021           hsa-miR-1207-5p         -2.08         0.02278           hsa-miR-1207-5p         -2.08         0.02278           hsa-miR-125b         -8.41         0.00021           hsa-miR-125b         -8.41         0.00041           hsa-miR-126*         -2.63         0.02725           hsa-miR-126*         -2.63         0.02725           hsa-miR-1305         -2.12         0.04847           hsa-miR-136         -9.58         0.00235           hsa-miR-1300         -6.61         0.00430           hsa-miR-134         -2.32         0.02023           hsa-miR-135b         -6.92         0.02725           hsa-miR-136         -9.58         0.00223           hsa-miR-140-5p         -2.15         0.02725           hsa-miR-143         -3.04         0.03718           hsa-miR-145         -7.86         0.00029           hsa-miR-1826         -2.61         0.01068	hsa-let-7a	-3.33	0.00042
hsa-let-7e         -2.07         0.03712           hsa-let-7f         -2.26         0.02032           hsa-miR-100         -4.57         0.00331           hsa-miR-101         -3.30         0.02278           hsa-miR-10b         -8.61         0.00021           hsa-miR-1202         -3.07         0.00410           hsa-miR-1207-5p         -2.08         0.02278           hsa-miR-125b         -8.41         0.00001           hsa-miR-126         -3.76         0.00451           hsa-miR-126         -3.76         0.00451           hsa-miR-126         -3.76         0.00451           hsa-miR-1275         -2.87         0.00235           hsa-miR-1305         -2.12         0.04847           hsa-miR-1304         -2.32         0.02023           hsa-miR-134         -2.32         0.02725           hsa-miR-136         -9.58         0.00223           hsa-miR-136         -9.58         0.00223           hsa-miR-1440-5p         -2.15         0.02725           hsa-miR-145         -7.86         0.00062           hsa-miR-188         5.20         0.00371           hsa-miR-199-3p         -4.84         0.00331	hsa-let-7b	-4.67	0.00007
hsa-let-7f         -2.26         0.02032           hsa-miR-100         -4.57         0.00331           hsa-miR-101         -3.30         0.02278           hsa-miR-10a         -4.64         0.00496           hsa-miR-1202         -3.07         0.00410           hsa-miR-1205-5p         -2.08         0.02278           hsa-miR-125b         -8.41         0.00001           hsa-miR-1266         -3.76         0.00451           hsa-miR-1275         -2.87         0.00235           hsa-miR-1266*         -2.63         0.02725           hsa-miR-1275         -2.87         0.00235           hsa-miR-1275         -2.87         0.00235           hsa-miR-1305         -2.12         0.04847           hsa-miR-1306         -2.12         0.04847           hsa-miR-135b         6.92         0.02725           hsa-miR-136         -9.58         0.00223           hsa-miR-136         -9.58         0.00223           hsa-miR-1440-5p         -2.15         0.02725           hsa-miR-1445         -7.86         0.0062           hsa-miR-188-5p         -2.38         0.0012           hsa-miR-199a-3p         -4.84         0.0012 <t< td=""><td>hsa-let-7c</td><td>-6.34</td><td>0.00001</td></t<>	hsa-let-7c	-6.34	0.00001
hsa-let-7f         -2.26         0.02032           hsa-miR-100         -4.57         0.00331           hsa-miR-101         -3.30         0.02278           hsa-miR-10a         -4.64         0.00496           hsa-miR-1202         -3.07         0.00410           hsa-miR-1205-5p         -2.08         0.02278           hsa-miR-125b         -8.41         0.00001           hsa-miR-1266         -3.76         0.00451           hsa-miR-1275         -2.87         0.00235           hsa-miR-1266*         -2.63         0.02725           hsa-miR-1275         -2.87         0.00235           hsa-miR-1275         -2.87         0.00235           hsa-miR-1305         -2.12         0.04847           hsa-miR-1306         -2.12         0.04847           hsa-miR-135b         6.92         0.02725           hsa-miR-136         -9.58         0.00223           hsa-miR-136         -9.58         0.00223           hsa-miR-1440-5p         -2.15         0.02725           hsa-miR-1445         -7.86         0.0062           hsa-miR-188-5p         -2.38         0.0012           hsa-miR-199a-3p         -4.84         0.0012 <t< td=""><td>hsa-let-7e</td><td>-2.07</td><td></td></t<>	hsa-let-7e	-2.07	
hsa-miR-100         -4.57         0.00331           hsa-miR-101         -3.30         0.02278           hsa-miR-10b         -8.61         0.00496           hsa-miR-1207-5p         -2.08         0.02278           hsa-miR-1207-5p         -2.08         0.02278           hsa-miR-1225-5p         -2.52         0.00331           hsa-miR-125b         -8.41         0.00001           hsa-miR-126*         -2.63         0.02725           hsa-miR-126*         -2.63         0.00235           hsa-miR-1306         -2.12         0.04847           hsa-miR-1305         -2.12         0.04847           hsa-miR-1306         -6.61         0.00430           hsa-miR-134         -2.32         0.02023           hsa-miR-135b         6.92         0.02725           hsa-miR-140-5p         -2.15         0.007225           hsa-miR-143         -3.04         0.03718           hsa-miR-1443         -3.04         0.03718           hsa-miR-1826         -2.61         0.0062           hsa-miR-188-5p         -2.38         0.01123           hsa-miR-199a-3p         -4.84         0.00451           hsa-miR-199a-5p         -9.29         0.00029	hsa-let-7f		
hsa-miR-101         -3.30         0.02278           hsa-miR-10a         -4.64         0.00496           hsa-miR-10b         -8.61         0.00021           hsa-miR-1207-5p         -2.08         0.02278           hsa-miR-1225-5p         -2.08         0.02278           hsa-miR-1225-5p         -2.08         0.02278           hsa-miR-125b         -8.41         0.00001           hsa-miR-126         -3.76         0.00451           hsa-miR-126*         -2.63         0.02725           hsa-miR-1275         -2.87         0.00235           hsa-miR-1305         -2.12         0.04847           hsa-miR-1300         -6.61         0.00430           hsa-miR-134         -2.32         0.02023           hsa-miR-135b         6.92         0.02725           hsa-miR-136         -9.58         0.00223           hsa-miR-1440-5p         -2.15         0.02725           hsa-miR-1445         -7.86         0.00062           hsa-miR-183         5.20         0.00331           hsa-miR-1845         -7.86         0.00062           hsa-miR-199a-3p         -4.84         0.00168           hsa-miR-199a-3p         -4.84         0.0041			
hsa-miR-10a         -4.64         0.00496           hsa-miR-10b         -8.61         0.00021           hsa-miR-1202         -3.07         0.00410           hsa-miR-1205-5p         -2.08         0.02278           hsa-miR-125b         -8.41         0.00001           hsa-miR-126*         -3.76         0.00451           hsa-miR-1275         -2.87         0.00235           hsa-miR-1305         -2.12         0.04847           hsa-miR-1305         -2.12         0.04847           hsa-miR-1306         -6.61         0.00430           hsa-miR-134         -2.32         0.02023           hsa-miR-135b         6.92         0.02725           hsa-miR-136         -9.58         0.00223           hsa-miR-136         -9.58         0.00223           hsa-miR-140-5p         -2.15         0.02725           hsa-miR-145         -7.86         0.00062           hsa-miR-1483         5.20         0.00331           hsa-miR-188-5p         -2.38         0.01123           hsa-miR-199a-3p         -4.84         0.00451           hsa-miR-199a-3p         -4.84         0.00451           hsa-miR-199a-5p         -9.29         0.0020			
hsa-miR-10b         -8.61         0.00021           hsa-miR-1207-5p         -2.08         0.02278           hsa-miR-1255-5p         -2.08         0.02278           hsa-miR-125b         -8.41         0.00001           hsa-miR-126*         -2.52         0.00331           hsa-miR-126*         -2.63         0.02725           hsa-miR-1305         -2.12         0.04847           hsa-miR-1306         -6.61         0.00430           hsa-miR-1306         -6.61         0.00431           hsa-miR-134         -2.32         0.02023           hsa-miR-135b         6.92         0.02725           hsa-miR-140-5p         -2.15         0.02725           hsa-miR-140-5p         -2.15         0.02725           hsa-miR-1443         -3.04         0.03718           hsa-miR-145         -7.86         0.00062           hsa-miR-1826         -2.61         0.01068           hsa-miR-183         5.20         0.00321           hsa-miR-1845         -7.86         0.00062           hsa-miR-199-3p         -4.84         0.00431           hsa-miR-199-3p         -4.84         0.00451           hsa-miR-199-5p         -9.29         0.00021 <td></td> <td></td> <td></td>			
hsa-miR-1202         -3.07         0.00410           hsa-miR-1207-5p         -2.08         0.02278           hsa-miR-1255p         -2.52         0.00331           hsa-miR-126         -3.76         0.00451           hsa-miR-126         -3.76         0.00451           hsa-miR-1275         -2.87         0.00235           hsa-miR-1305         -2.12         0.04847           hsa-miR-1300         -6.61         0.00430           hsa-miR-135b         6.92         0.02725           hsa-miR-135b         6.92         0.02725           hsa-miR-136         -9.58         0.00223           hsa-miR-135b         6.92         0.02725           hsa-miR-140-5p         -2.15         0.02725           hsa-miR-143         -3.04         0.03718           hsa-miR-145         -7.86         0.00062           hsa-miR-183         5.20         0.00331           hsa-miR-184         -2.28         0.01123           hsa-miR-198-5p         -2.38         0.01123           hsa-miR-199a-3p         -4.84         0.00451           hsa-miR-199b-5p         -9.29         0.00021           hsa-miR-205         -5.18         0.0148 <t< td=""><td></td><td></td><td></td></t<>			
hsa-miR-1207-5p         -2.08         0.02278           hsa-miR-1225-5p         -2.52         0.00331           hsa-miR-126         -3.76         0.00451           hsa-miR-126*         -2.63         0.02725           hsa-miR-1305         -2.12         0.04847           hsa-miR-1300         -6.61         0.00430           hsa-miR-130         -6.61         0.00430           hsa-miR-134         -2.32         0.02023           hsa-miR-135b         6.92         0.02725           hsa-miR-136         -9.58         0.00223           hsa-miR-136         -9.58         0.00223           hsa-miR-143         -9.58         0.00223           hsa-miR-143         -3.04         0.03718           hsa-miR-145         -7.86         0.00062           hsa-miR-1826         -2.61         0.01068           hsa-miR-188-5p         -2.38         0.01123           hsa-miR-188-5p         -2.38         0.01123           hsa-miR-199a-3p         -4.84         0.00451           hsa-miR-199b-5p         -9.29         0.00029           hsa-miR-210         2.98         0.02389           hsa-miR-221         -2.96         0.02799			
hsa-miR-1225-5p         -2.52         0.00331           hsa-miR-125b         -8.41         0.00001           hsa-miR-126*         -2.63         0.02725           hsa-miR-1275         -2.87         0.00235           hsa-miR-1305         -2.12         0.04847           hsa-miR-1309         -6.61         0.00430           hsa-miR-134         -2.32         0.02023           hsa-miR-135b         6.92         0.02725           hsa-miR-136         -9.58         0.00223           hsa-miR-143         -9.58         0.00223           hsa-miR-1445         -7.86         0.0062           hsa-miR-145         -7.86         0.0062           hsa-miR-1826         -2.61         0.01068           hsa-miR-188-5p         -2.38         0.01123           hsa-miR-1995         -10.02         0.0023           hsa-miR-1995         -10.02         0.00029           hsa-miR-1999-3p         -4.84         0.00451           hsa-miR-1999-5p         -4.64         0.0069           hsa-miR-205         -5.18         0.01648           hsa-miR-214         -3.64         0.02023           hsa-miR-224         4.22         0.02799 <tr< td=""><td></td><td></td><td></td></tr<>			
hsa-miR-125b			
hsa-miR-126         -3.76         0.00451           hsa-miR-1275         -2.63         0.02725           hsa-miR-1275         -2.87         0.00235           hsa-miR-1305         -2.12         0.04847           hsa-miR-1300         -6.61         0.00430           hsa-miR-134         -2.32         0.02023           hsa-miR-136         -9.58         0.00223           hsa-miR-136         -9.58         0.00223           hsa-miR-143         -9.58         0.00223           hsa-miR-145         -7.86         0.00223           hsa-miR-1826         -2.61         0.01068           hsa-miR-1826         -2.61         0.01068           hsa-miR-188-5p         -2.38         0.01123           hsa-miR-199a-3p         -4.84         0.0029           hsa-miR-199a-5p         -4.64         0.00869           hsa-miR-210         2.98         0.02389           hsa-miR-224         -3.64         0.02023			
hsa-miR-126* hsa-miR-1275 hsa-miR-1305 hsa-miR-1300 hsa-miR-1300 hsa-miR-134 hsa-miR-135b hsa-miR-136 hsa-miR-136 hsa-miR-140-5p hsa-miR-145 hsa-miR-145 hsa-miR-145 hsa-miR-1826 hsa-miR-188-5p hsa-miR-195 hsa-miR-199a-3p hsa-miR-199a-5p hsa-miR-205 hsa-miR-224 hsa-miR-224 hsa-miR-23b hsa-miR-224 hsa-miR-23b hsa-miR-210 hsa-miR-206 hsa-miR-296 hsa-miR-296 hsa-miR-300 hsa-miR-3			
hsa-miR-1275         -2.87         0.00235           hsa-miR-1305         -2.12         0.04847           hsa-miR-1306         -2.12         0.04847           hsa-miR-134         -2.32         0.02023           hsa-miR-135b         6.92         0.02725           hsa-miR-136         -9.58         0.00223           hsa-miR-140-5p         -2.15         0.02725           hsa-miR-143         -3.04         0.03718           hsa-miR-145         -7.86         0.00062           hsa-miR-1826         -2.61         0.01068           hsa-miR-188-5p         -2.38         0.01123           hsa-miR-188-5p         -2.38         0.01123           hsa-miR-195         -10.02         0.00029           hsa-miR-199-3p         -4.84         0.00451           hsa-miR-199a-3p         -4.64         0.00869           hsa-miR-199b-5p         -9.29         0.00021           hsa-miR-205         -5.18         0.01648           hsa-miR-210         2.98         0.02389           hsa-miR-221         -2.96         0.02799           hsa-miR-224         -3.64         0.02023           hsa-miR-26b         -3.01         0.01308			0.00.0
hsa-miR-1305         -2.12         0.04847           hsa-miR-130a         -6.61         0.00430           hsa-miR-134         -2.32         0.02023           hsa-miR-135b         6.92         0.02725           hsa-miR-140-5p         -2.15         0.02725           hsa-miR-1445         -7.86         0.00062           hsa-miR-145         -7.86         0.00062           hsa-miR-1826         -2.61         0.01068           hsa-miR-1845         -7.86         0.000331           hsa-miR-188-5p         -2.38         0.01123           hsa-miR-195         -10.02         0.00029           hsa-miR-1977_v14.0         -2.91         0.00069           hsa-miR-199a-3p         -4.84         0.00451           hsa-miR-199a-5p         -4.64         0.00869           hsa-miR-199b-5p         -9.29         0.00021           hsa-miR-205         -5.18         0.01648           hsa-miR-214         -3.64         0.02023           hsa-miR-224         4.22         0.03274           hsa-miR-26b         -3.84         0.00223           hsa-miR-30a         -2.83         0.02278           hsa-miR-30a         -2.83         0.02278 <td></td> <td></td> <td></td>			
hsa-miR-130a         -6.61         0.00430           hsa-miR-134         -2.32         0.02023           hsa-miR-135b         6.92         0.02725           hsa-miR-136         -9.58         0.00223           hsa-miR-140-5p         -2.15         0.02725           hsa-miR-143         -3.04         0.03718           hsa-miR-145         -7.86         0.00062           hsa-miR-1826         -2.61         0.01068           hsa-miR-183         5.20         0.00331           hsa-miR-185         -10.02         0.00029           hsa-miR-195         -10.02         0.00029           hsa-miR-1977_v14.0         -2.91         0.00069           hsa-miR-199a-3p         -4.64         0.00451           hsa-miR-199b-5p         -4.64         0.00451           hsa-miR-199b-5p         -9.29         0.00021           hsa-miR-205         -5.18         0.01648           hsa-miR-210         2.98         0.02389           hsa-miR-221         -2.96         0.02799           hsa-miR-224         4.22         0.03274           hsa-miR-26a         -3.84         0.00223           hsa-miR-30a         -2.83         0.02278      <			
hsa-miR-134         -2.32         0.02023           hsa-miR-135b         6.92         0.02725           hsa-miR-136         -9.58         0.00223           hsa-miR-140-5p         -2.15         0.02725           hsa-miR-143         -3.04         0.03718           hsa-miR-145         -7.86         0.00062           hsa-miR-1826         -2.61         0.01068           hsa-miR-188-5p         -2.38         0.01123           hsa-miR-188-5p         -2.38         0.01123           hsa-miR-195         -10.02         0.00029           hsa-miR-199-3p         -4.84         0.00451           hsa-miR-199a-3p         -4.84         0.00451           hsa-miR-199a-5p         -9.29         0.00021           hsa-miR-199b-5p         -9.29         0.00021           hsa-miR-210         2.98         0.02389           hsa-miR-221         -2.96         0.02739           hsa-miR-224         -3.64         0.02023           hsa-miR-26a         -3.84         0.00223           hsa-miR-26b         -3.01         0.01308           hsa-miR-30a         -2.83         0.02278           hsa-miR-30b         -2.48         0.02799			
hsa-miR-135b         6.92         0.02725           hsa-miR-136         -9.58         0.00223           hsa-miR-140-5p         -2.15         0.02725           hsa-miR-143         -3.04         0.03718           hsa-miR-145         -7.86         0.00062           hsa-miR-1826         -2.61         0.01068           hsa-miR-188-5p         -2.38         0.01123           hsa-miR-195         -10.02         0.00029           hsa-miR-1977_v14.0         -2.91         0.00069           hsa-miR-199a-3p         -4.84         0.00451           hsa-miR-199a-5p         -4.64         0.00869           hsa-miR-199b-5p         -9.29         0.0021           hsa-miR-205         -5.18         0.01648           hsa-miR-214         -3.64         0.02023           hsa-miR-221         -2.96         0.02799           hsa-miR-224         4.22         0.03274           hsa-miR-26a         -3.84         0.00203           hsa-miR-26b         -3.01         0.01308           hsa-miR-30a         -2.83         0.02278           hsa-miR-30a         -2.83         0.02279           hsa-miR-30a         -2.83         0.02279			
hsa-miR-136         -9.58         0.00223           hsa-miR-140-5p         -2.15         0.02725           hsa-miR-143         -3.04         0.03718           hsa-miR-1826         -2.61         0.01068           hsa-miR-183         5.20         0.00331           hsa-miR-188-5p         -2.38         0.01123           hsa-miR-1977_v14.0         -2.91         0.00069           hsa-miR-199a-3p         -4.84         0.00451           hsa-miR-199a-5p         -4.64         0.00869           hsa-miR-199b-5p         -9.29         0.00021           hsa-miR-205         -5.18         0.01648           hsa-miR-210         2.98         0.02389           hsa-miR-214         -3.64         0.02023           hsa-miR-224         4.22         0.03274           hsa-miR-224         4.22         0.03274           hsa-miR-26a         -3.84         0.00247           hsa-miR-26b         -3.01         0.01308           hsa-miR-29c         -2.69         0.03676           hsa-miR-30a         -2.83         0.02278           hsa-miR-30b         -2.48         0.02799           hsa-miR-30c         -2.52         0.02399 <t< td=""><td></td><td></td><td></td></t<>			
hsa-miR-140-5p         -2.15         0.02725           hsa-miR-143         -3.04         0.03718           hsa-miR-145         -7.86         0.00062           hsa-miR-1826         -2.61         0.01068           hsa-miR-183         5.20         0.00331           hsa-miR-195         -10.02         0.00029           hsa-miR-1977_v14.0         -2.91         0.00069           hsa-miR-199a-3p         -4.84         0.00451           hsa-miR-199a-5p         -4.64         0.00869           hsa-miR-199b-5p         -9.29         0.00021           hsa-miR-205         -5.18         0.01648           hsa-miR-210         2.98         0.02389           hsa-miR-214         -3.64         0.02023           hsa-miR-214         -3.64         0.02023           hsa-miR-224         4.22         0.03274           hsa-miR-26a         -3.84         0.00247           hsa-miR-26b         -3.01         0.01308           hsa-miR-30a         -2.83         0.02278           hsa-miR-30a         -2.83         0.02278           hsa-miR-30b         -2.48         0.02799           hsa-miR-30c         -2.52         0.02306 <tr< td=""><td></td><td>6.92</td><td>0.02725</td></tr<>		6.92	0.02725
hsa-miR-143		-9.58	0.00223
hsa-miR-145         -7.86         0.00062           hsa-miR-1826         -2.61         0.01068           hsa-miR-183         5.20         0.00331           hsa-miR-188-5p         -2.38         0.01123           hsa-miR-195         -10.02         0.00029           hsa-miR-1977_v14.0         -2.91         0.00069           hsa-miR-199a-3p         -4.84         0.00451           hsa-miR-199a-5p         -4.64         0.00869           hsa-miR-199b-5p         -9.29         0.00221           hsa-miR-205         -5.18         0.01648           hsa-miR-210         2.98         0.02389           hsa-miR-214         -3.64         0.02023           hsa-miR-214         -3.64         0.02023           hsa-miR-224         4.22         0.03274           hsa-miR-26a         -3.84         0.00247           hsa-miR-26b         -3.01         0.01308           hsa-miR-30a         -2.83         0.02278           hsa-miR-30a         -2.83         0.02278           hsa-miR-30b         -2.48         0.02799           hsa-miR-30c         -2.52         0.02309           hsa-miR-320d         -2.25         0.02309 <t< td=""><td>hsa-miR-140-5p</td><td>-2.15</td><td>0.02725</td></t<>	hsa-miR-140-5p	-2.15	0.02725
hsa-miR-1826 hsa-miR-183 hsa-miR-188-5p hsa-miR-195 hsa-miR-195 hsa-miR-1977_v14.0 hsa-miR-199a-3p hsa-miR-199a-5p hsa-miR-205 hsa-miR-210 hsa-miR-221 hsa-miR-224 hsa-miR-224 hsa-miR-26a hsa-miR-26b hsa-miR-26b hsa-miR-30a hsa-miR-30a hsa-miR-30a hsa-miR-30a hsa-miR-30a hsa-miR-30a hsa-miR-30a hsa-miR-320a hsa-miR-320a hsa-miR-320d hsa-miR-34a hsa-miR-34a hsa-miR-34b hsa-miR-572 hsa-miR-638 hsa-miR-638 hsa-miR-638 hsa-miR-863p hsa-miR-866  0.00029 hsa-miR-866 hsa-miR-671-5p hsa-miR-638 -2.79 0.00421	hsa-miR-143		0.03718
hsa-miR-1826 hsa-miR-183 hsa-miR-188-5p hsa-miR-195 hsa-miR-195 hsa-miR-1977_v14.0 hsa-miR-199a-3p hsa-miR-199a-5p hsa-miR-205 hsa-miR-210 hsa-miR-221 hsa-miR-224 hsa-miR-224 hsa-miR-26a hsa-miR-26b hsa-miR-26b hsa-miR-30a hsa-miR-30a hsa-miR-30a hsa-miR-30a hsa-miR-30a hsa-miR-30a hsa-miR-30a hsa-miR-320a hsa-miR-320a hsa-miR-320d hsa-miR-34a hsa-miR-34a hsa-miR-34b hsa-miR-572 hsa-miR-638 hsa-miR-638 hsa-miR-638 hsa-miR-863p hsa-miR-866  0.00029 hsa-miR-866 hsa-miR-671-5p hsa-miR-638 -2.79 0.00421	hsa-miR-145	-7.86	0.00062
hsa-miR-188-5p         -2.38         0.01123           hsa-miR-195         -10.02         0.00029           hsa-miR-1977_v14.0         -2.91         0.00069           hsa-miR-199a-3p         -4.84         0.00451           hsa-miR-199a-5p         -4.64         0.00869           hsa-miR-199b-5p         -9.29         0.00021           hsa-miR-205         -5.18         0.01648           hsa-miR-210         2.98         0.02389           hsa-miR-214         -3.64         0.02023           hsa-miR-214         -3.64         0.02023           hsa-miR-224         4.22         0.03274           hsa-miR-23b         -3.40         0.02023           hsa-miR-26a         -3.84         0.00247           hsa-miR-26b         -3.01         0.01308           hsa-miR-30a         -2.83         0.02278           hsa-miR-30a         -2.83         0.02278           hsa-miR-30b         -2.48         0.02799           hsa-miR-30c         -2.52         0.0239           hsa-miR-320a         -2.42         0.0235           hsa-miR-320b         -2.35         0.02023           hsa-miR-34a         -3.59         0.0025	hsa-miR-1826		0.01068
hsa-miR-195'	hsa-miR-183	5.20	0.00331
hsa-miR-195'	hsa-miR-188-5p	-2.38	0.01123
hsa-miR-1977_v14.0 hsa-miR-199a-3p hsa-miR-199a-5p hsa-miR-199b-5p hsa-miR-205 hsa-miR-210 hsa-miR-214 hsa-miR-221 hsa-miR-224 hsa-miR-23b hsa-miR-26a hsa-miR-30a hsa-miR-30a hsa-miR-30a hsa-miR-320a hsa-miR-320a hsa-miR-320d hsa-miR-320d hsa-miR-34a hsa-miR-34b hsa-miR-35b hsa-miR-35b hsa-miR-361-5p hsa-miR-513a-5p hsa-miR-513b hsa-miR-572 hsa-miR-638 hsa-miR-886-3p hsa-miR-886-3p hsa-miR-800 hsa-miR-886-3p hsa-miR-8000297 hsa-miR-886-3p hsa-miR-896  0.00021 0.00029 0.00021 0.00021 0.000223 0.00023 0.00029 0.000			
hsa-miR-199a-3p hsa-miR-199a-5p hsa-miR-199b-5p hsa-miR-205 hsa-miR-210 hsa-miR-214 hsa-miR-221 hsa-miR-224 hsa-miR-23b hsa-miR-26b hsa-miR-26b hsa-miR-30a hsa-miR-30a hsa-miR-30a hsa-miR-30a hsa-miR-320a hsa-miR-320a hsa-miR-320a hsa-miR-320a hsa-miR-320d hsa-miR-320d hsa-miR-34a hsa-miR-34b hsa-miR-35p hsa-miR-34b hsa-miR-34b hsa-miR-31a-5p hsa-miR-513a-5p hsa-miR-572 hsa-miR-638 hsa-miR-886-3p hsa-miR-886-3p hsa-miR-886-3p hsa-miR-896  0.00238 0.00247 0.00451 0.00451 0.00452 0.00203 0.00021 0.00451 0.00451 0.00452 0.00203 0.00021 0.00451 0.00451 0.00451 0.00451 0.00451 0.00451 0.00451 0.00451 0.00451 0.00029 0.00451 0.00029 0.00625 0.00027 0.00027 0.00029 0.00027 0.00029 0.0			
hsa-miR-199a-5p hsa-miR-199b-5p hsa-miR-205 hsa-miR-210 hsa-miR-214 hsa-miR-214 hsa-miR-221 hsa-miR-224 hsa-miR-23b hsa-miR-26b hsa-miR-26b hsa-miR-26b hsa-miR-30a hsa-miR-30a hsa-miR-30c hsa-miR-320a hsa-miR-320a hsa-miR-320d hsa-miR-320d hsa-miR-320d hsa-miR-34a hsa-miR-34b hsa-miR-35b hsa-miR-35b hsa-miR-361-5p hsa-miR-513a-5p hsa-miR-513b hsa-miR-513b hsa-miR-572 hsa-miR-638 hsa-miR-886-3p hsa-miR-886-3p hsa-miR-896  0.02389 0.02799 0.0247 0.02023 0.020247 0.0247 0.0247 0.0247 0.02799 0.02452 0.02033 0.02023 0.00029 0.00027 0.00029 0.00029 0.00021			
hsa-miR-199b-5p hsa-miR-205 hsa-miR-210 hsa-miR-214 hsa-miR-214 hsa-miR-221 hsa-miR-224 hsa-miR-23b hsa-miR-26a hsa-miR-26b hsa-miR-26b hsa-miR-30a hsa-miR-30a hsa-miR-30b hsa-miR-30c hsa-miR-320a hsa-miR-320b hsa-miR-320a hsa-miR-320a hsa-miR-320a hsa-miR-320b hsa-miR-320a hsa-miR-320b hsa-miR-320a hsa-miR-320b hsa-miR-320b hsa-miR-320b hsa-miR-320c hsa-miR-320b hsa-miR-320c hsa-miR-320d hsa-miR-320d hsa-miR-34d hsa-miR-34d hsa-miR-34b* hsa-miR-34d hsa-miR-34b hsa-miR-34b hsa-miR-34b hsa-miR-34b hsa-miR-34b hsa-miR-34b hsa-miR-34b hsa-miR-34b hsa-miR-513b hsa-miR-513b hsa-miR-513b hsa-miR-638 hsa-miR-886-3p hsa-miR-8638 hsa-miR-868 -2.79 0.00223 hsa-miR-8638 hsa-miR-96 3.79 0.00421		_	
hsa-miR-205         -5.18         0.01648           hsa-miR-210         2.98         0.02389           hsa-miR-214         -3.64         0.02023           hsa-miR-221         -2.96         0.02799           hsa-miR-224         4.22         0.03274           hsa-miR-23b         -3.40         0.02023           hsa-miR-26a         -3.84         0.00247           hsa-miR-26b         -3.01         0.01308           hsa-miR-26b         -3.01         0.01308           hsa-miR-29c         -2.69         0.03676           hsa-miR-30a         -2.83         0.02278           hsa-miR-30b         -2.83         0.02278           hsa-miR-30b         -2.48         0.02799           hsa-miR-30c         -2.52         0.02309           hsa-miR-320a         -2.42         0.02356           hsa-miR-320b         -2.35         0.02023           hsa-miR-320c         -2.65         0.02023           hsa-miR-344a         -3.59         0.00825           hsa-miR-34b*         -2.60         0.02799           hsa-miR-34b+         -2.60         0.02799           hsa-miR-494         -2.57         0.0031           hsa-			
hsa-miR-210 hsa-miR-214 hsa-miR-221 hsa-miR-224 hsa-miR-224 hsa-miR-23b hsa-miR-26a hsa-miR-26b hsa-miR-30a hsa-miR-30a hsa-miR-30c hsa-miR-320a hsa-miR-320d hsa-miR-320d hsa-miR-320d hsa-miR-34a hsa-miR-34b hsa-miR-34b hsa-miR-34b hsa-miR-34b hsa-miR-34b hsa-miR-34b hsa-miR-34b hsa-miR-34b hsa-miR-34b hsa-miR-361-5p hsa-miR-427 hsa-miR-513a-5p hsa-miR-572 hsa-miR-638 hsa-miR-886-3p hsa-miR-886-3p hsa-miR-820 hsa-miR-886-3p hsa-miR-896 hsa-miR-820 hsa-miR-886-3p hsa-miR-896 hsa-miR-96 hsa-miR-96 hsa-miR-820 hsa-miR-820 hsa-miR-820 hsa-miR-886-3p hsa-miR-96 hsa-miR-96 hsa-miR-96 hsa-miR-96 hsa-miR-96 hsa-miR-96 hsa-miR-96 hsa-miR-886-3p hsa-miR-96			
hsa-miR-214 hsa-miR-221 hsa-miR-224 hsa-miR-224 hsa-miR-23b hsa-miR-26a hsa-miR-26a hsa-miR-26b hsa-miR-29c hsa-miR-30a hsa-miR-30a* hsa-miR-30b hsa-miR-30c hsa-miR-320a hsa-miR-320b hsa-miR-320d hsa-miR-320d hsa-miR-320d hsa-miR-34a hsa-miR-34a hsa-miR-34b hsa-miR-34b hsa-miR-34b hsa-miR-34b hsa-miR-361-5p hsa-miR-424 hsa-miR-513a-5p hsa-miR-572 hsa-miR-638 hsa-miR-638 hsa-miR-886-3p hsa-miR-820  0.02279 0.02023 0.02025 0.02023 0.02025 0.02023 0.02027 0.02278 0.00027			
hsa-miR-221         -2.96         0.02799           hsa-miR-224         4.22         0.03274           hsa-miR-23b         -3.40         0.02023           hsa-miR-26a         -3.84         0.00247           hsa-miR-26b         -3.01         0.01308           hsa-miR-29c         -2.69         0.03676           hsa-miR-30a         -2.83         0.02278           hsa-miR-30a*         -2.83         0.02278           hsa-miR-30b         -2.48         0.02799           hsa-miR-30c         -2.52         0.02309           hsa-miR-320a         -2.42         0.02356           hsa-miR-320b         -2.35         0.02023           hsa-miR-320c         -2.65         0.02023           hsa-miR-320d         -2.19         0.02452           hsa-miR-34a         -3.59         0.00825           hsa-miR-34b*         -2.60         0.02799           hsa-miR-361-5p         -2.57         0.02278           hsa-miR-424         -7.64         0.00158           hsa-miR-497         -7.91         0.00029           hsa-miR-513a-5p         -3.11         0.00112           hsa-miR-638         -2.31         0.00057			
hsa-miR-224         4.22         0.03274           hsa-miR-23b         -3.40         0.02023           hsa-miR-26a         -3.84         0.00247           hsa-miR-26b         -3.01         0.01308           hsa-miR-29c         -2.69         0.03676           hsa-miR-30a         -2.83         0.02278           hsa-miR-30a*         -2.83         0.02279           hsa-miR-30b         -2.48         0.02799           hsa-miR-30c         -2.52         0.02309           hsa-miR-320a         -2.42         0.02356           hsa-miR-320b         -2.35         0.02023           hsa-miR-320c         -2.65         0.02023           hsa-miR-320d         -2.19         0.02452           hsa-miR-34a         -3.59         0.00825           hsa-miR-34b*         -2.60         0.02799           hsa-miR-34b*         -2.60         0.02799           hsa-miR-424         -7.64         0.00158           hsa-miR-497         -7.91         0.00029           hsa-miR-513a-5p         -3.11         0.00112           hsa-miR-572         -2.38         0.00057           hsa-miR-638         -2.31         0.00029           <			
hsa-miR-23b         -3.40         0.02023           hsa-miR-26a         -3.84         0.00247           hsa-miR-26b         -3.01         0.01308           hsa-miR-29c         -2.69         0.03676           hsa-miR-30a         -2.83         0.02278           hsa-miR-30a*         -2.43         0.02799           hsa-miR-30b         -2.48         0.02799           hsa-miR-30c         -2.52         0.02309           hsa-miR-320a         -2.42         0.02356           hsa-miR-320b         -2.35         0.02023           hsa-miR-320d         -2.19         0.02452           hsa-miR-34a         -3.59         0.00825           hsa-miR-34b*         -2.60         0.02799           hsa-miR-34b*         -2.60         0.02799           hsa-miR-424         -7.64         0.00158           hsa-miR-497         -7.91         0.00029           hsa-miR-513a-5p         -3.11         0.00112           hsa-miR-513b         -3.18         0.00858           hsa-miR-638         -2.31         0.00029           hsa-miR-688-3p         -2.79         0.02877           hsa-miR-96         3.79         0.00421			
hsa-miR-26a         -3.84         0.00247           hsa-miR-26b         -3.01         0.01308           hsa-miR-29c         -2.69         0.03676           hsa-miR-30a         -2.83         0.02278           hsa-miR-30a*         -2.71         0.02799           hsa-miR-30b         -2.48         0.02799           hsa-miR-30c         -2.52         0.02309           hsa-miR-320a         -2.42         0.02356           hsa-miR-320b         -2.35         0.02023           hsa-miR-320c         -2.65         0.02023           hsa-miR-320d         -2.19         0.02452           hsa-miR-34a         -3.59         0.00825           hsa-miR-34b*         -2.60         0.02799           hsa-miR-34b*         -2.60         0.02799           hsa-miR-424         -7.64         0.00158           hsa-miR-497         -7.91         0.00029           hsa-miR-513a-5p         -3.11         0.00112           hsa-miR-513b         -3.18         0.00858           hsa-miR-638         -2.31         0.00029           hsa-miR-638         -2.31         0.001748           hsa-miR-866-3p         -2.79         0.02877			
hsa-miR-26b         -3.01         0.01308           hsa-miR-29c         -2.69         0.03676           hsa-miR-30a         -2.83         0.02278           hsa-miR-30a*         -2.71         0.02799           hsa-miR-30b         -2.48         0.02799           hsa-miR-30c         -2.52         0.02309           hsa-miR-320a         -2.42         0.02356           hsa-miR-320b         -2.35         0.02023           hsa-miR-320c         -2.65         0.02023           hsa-miR-320d         -2.19         0.02452           hsa-miR-34a         -3.59         0.00825           hsa-miR-34b*         -2.60         0.02799           hsa-miR-34b*         -2.60         0.02799           hsa-miR-424         -7.64         0.00158           hsa-miR-497         -7.91         0.00029           hsa-miR-513a-5p         -3.11         0.00112           hsa-miR-513b         -3.18         0.00858           hsa-miR-638         -2.31         0.00029           hsa-miR-638         -2.31         0.00029           hsa-miR-866-3p         -2.79         0.02877           hsa-miR-96         3.79         0.00421			
hsa-miR-29c         -2.69         0.03676           hsa-miR-30a         -2.83         0.02278           hsa-miR-30a*         -2.71         0.02799           hsa-miR-30b         -2.48         0.02799           hsa-miR-30c         -2.52         0.02309           hsa-miR-320a         -2.42         0.02356           hsa-miR-320b         -2.35         0.02023           hsa-miR-320c         -2.65         0.02023           hsa-miR-320d         -2.19         0.02452           hsa-miR-344a         -3.59         0.00825           hsa-miR-34b*         -2.60         0.02799           hsa-miR-361-5p         -2.57         0.02278           hsa-miR-424         -7.64         0.00158           hsa-miR-497         -7.91         0.00029           hsa-miR-513ab         -3.11         0.00112           hsa-miR-513b         -3.18         0.00858           hsa-miR-638         -2.31         0.00029           hsa-miR-638         -2.31         0.00029           hsa-miR-866-3p         -2.79         0.02877           hsa-miR-96         3.79         0.00421			
hsa-miR-30a         -2.83         0.02278           hsa-miR-30a*         -2.71         0.02799           hsa-miR-30b         -2.48         0.02799           hsa-miR-30c         -2.52         0.02309           hsa-miR-320a         -2.42         0.02356           hsa-miR-320b         -2.35         0.02023           hsa-miR-320c         -2.65         0.02023           hsa-miR-320d         -2.19         0.02452           hsa-miR-34a         -3.59         0.00825           hsa-miR-34b*         -2.60         0.02799           hsa-miR-361-5p         -2.57         0.02278           hsa-miR-424         -7.64         0.00158           hsa-miR-497         -7.91         0.00029           hsa-miR-513a-5p         -3.11         0.00112           hsa-miR-513b         -3.18         0.00858           hsa-miR-638         -2.31         0.00029           hsa-miR-638         -2.31         0.00029           hsa-miR-866-3p         -2.79         0.02877           hsa-miR-96         3.79         0.00421			
hsa-miR-30a*       -2.71       0.02799         hsa-miR-30b       -2.48       0.02799         hsa-miR-30c       -2.52       0.02309         hsa-miR-320a       -2.42       0.02356         hsa-miR-320b       -2.35       0.02023         hsa-miR-320c       -2.65       0.02023         hsa-miR-320d       -2.19       0.02452         hsa-miR-34a       -3.59       0.00825         hsa-miR-34b*       -2.60       0.02799         hsa-miR-361-5p       -2.57       0.02278         hsa-miR-424       -7.64       0.00158         hsa-miR-497       -7.91       0.00029         hsa-miR-513a-5p       -3.11       0.00112         hsa-miR-513b       -3.18       0.00858         hsa-miR-638       -2.31       0.00029         hsa-miR-638       -2.31       0.00029         hsa-miR-671-5p       -2.14       0.01748         hsa-miR-866-3p       -2.79       0.02877         hsa-miR-96       3.79       0.00421			
hsa-miR-30b         -2.48         0.02799           hsa-miR-30c         -2.52         0.02309           hsa-miR-320a         -2.42         0.02356           hsa-miR-320b         -2.35         0.02023           hsa-miR-320c         -2.65         0.02023           hsa-miR-320d         -2.19         0.02452           hsa-miR-34a         -3.59         0.00825           hsa-miR-34b*         -2.60         0.02799           hsa-miR-361-5p         -2.57         0.02278           hsa-miR-424         -7.64         0.00158           hsa-miR-497         -7.91         0.00029           hsa-miR-497         -7.91         0.00029           hsa-miR-513a-5p         -3.11         0.00112           hsa-miR-513b         -3.18         0.00858           hsa-miR-638         -2.31         0.00029           hsa-miR-638         -2.31         0.00029           hsa-miR-671-5p         -2.14         0.01748           hsa-miR-866-3p         -2.79         0.02877           hsa-miR-96         3.79         0.00421			
hsa-miR-30c         -2.52         0.02309           hsa-miR-320a         -2.42         0.02356           hsa-miR-320b         -2.35         0.02023           hsa-miR-320c         -2.65         0.02023           hsa-miR-320d         -2.19         0.02452           hsa-miR-34a         -3.59         0.00825           hsa-miR-34b*         -2.60         0.02799           hsa-miR-361-5p         -2.57         0.02278           hsa-miR-424         -7.64         0.00158           hsa-miR-497         -7.91         0.00029           hsa-miR-513a-5p         -3.11         0.0012           hsa-miR-513b         -3.18         0.00858           hsa-miR-672         -2.38         0.00057           hsa-miR-638         -2.31         0.00029           hsa-miR-671-5p         -2.14         0.01748           hsa-miR-886-3p         -2.79         0.02877           hsa-miR-96         3.79         0.00421			
hsa-miR-320a			
hsa-miR-320b       -2.35       0.02023         hsa-miR-320c       -2.65       0.02023         hsa-miR-320d       -2.19       0.02452         hsa-miR-34a       -3.59       0.00825         hsa-miR-34b*       -2.60       0.02799         hsa-miR-361-5p       -2.57       0.02278         hsa-miR-424       -7.64       0.00158         hsa-miR-497       -7.91       0.00029         hsa-miR-513a-5p       -3.11       0.00112         hsa-miR-513b       -3.18       0.00858         hsa-miR-672       -2.38       0.00057         hsa-miR-638       -2.31       0.00029         hsa-miR-671-5p       -2.14       0.01748         hsa-miR-886-3p       -2.79       0.02877         hsa-miR-96       3.79       0.00421		_	
hsa-miR-320c         -2.65         0.02023           hsa-miR-320d         -2.19         0.02452           hsa-miR-34a         -3.59         0.00825           hsa-miR-34b*         -2.60         0.02799           hsa-miR-361-5p         -2.57         0.02278           hsa-miR-424         -7.64         0.00158           hsa-miR-497         -7.91         0.00029           hsa-miR-513a-5p         -3.11         0.00112           hsa-miR-513b         -3.18         0.00858           hsa-miR-572         -2.38         0.00057           hsa-miR-638         -2.31         0.00029           hsa-miR-671-5p         -2.14         0.01748           hsa-miR-886-3p         -2.79         0.02877           hsa-miR-96         3.79         0.00421			
hsa-miR-320d     -2.19     0.02452       hsa-miR-34a     -3.59     0.00825       hsa-miR-34b*     -2.60     0.02799       hsa-miR-361-5p     -2.57     0.02278       hsa-miR-424     -7.64     0.00158       hsa-miR-497     -7.91     0.00029       hsa-miR-513a-5p     -3.11     0.00112       hsa-miR-513b     -3.18     0.00858       hsa-miR-672     -2.38     0.00057       hsa-miR-638     -2.31     0.00029       hsa-miR-671-5p     -2.14     0.01748       hsa-miR-886-3p     -2.79     0.02877       hsa-miR-96     3.79     0.00421	hsa-miR-320b		1.11111
hsa-miR-34a       -3.59       0.00825         hsa-miR-34b*       -2.60       0.02799         hsa-miR-361-5p       -2.57       0.02278         hsa-miR-424       -7.64       0.00158         hsa-miR-497       -2.57       0.00331         hsa-miR-513a-5p       -3.11       0.00129         hsa-miR-513b       -3.18       0.00858         hsa-miR-572       -2.38       0.00057         hsa-miR-638       -2.31       0.00029         hsa-miR-671-5p       -2.14       0.01748         hsa-miR-886-3p       -2.79       0.02877         hsa-miR-96       3.79       0.00421			
hsa-miR-34b*     -2.60     0.02799       hsa-miR-361-5p     -2.57     0.02278       hsa-miR-424     -7.64     0.00158       hsa-miR-494     -2.57     0.00331       hsa-miR-497     -7.91     0.00029       hsa-miR-513a-5p     -3.11     0.00112       hsa-miR-513b     -3.18     0.00858       hsa-miR-572     -2.38     0.00057       hsa-miR-638     -2.31     0.00029       hsa-miR-671-5p     -2.14     0.01748       hsa-miR-886-3p     -2.79     0.02877       hsa-miR-96     3.79     0.00421			
hsa-miR-361-5p         -2.57         0.02278           hsa-miR-424         -7.64         0.00158           hsa-miR-494         -2.57         0.00331           hsa-miR-497         -7.91         0.00029           hsa-miR-513a-5p         -3.11         0.00112           hsa-miR-513b         -3.18         0.00858           hsa-miR-572         -2.38         0.00057           hsa-miR-638         -2.31         0.00029           hsa-miR-671-5p         -2.14         0.01748           hsa-miR-886-3p         -2.79         0.02877           hsa-miR-96         3.79         0.00421		-3.59	
hsa-miR-424     -7.64     0.00158       hsa-miR-494     -2.57     0.00331       hsa-miR-497     -7.91     0.00029       hsa-miR-513a-5p     -3.11     0.00112       hsa-miR-513b     -3.18     0.00858       hsa-miR-572     -2.38     0.00057       hsa-miR-638     -2.31     0.00029       hsa-miR-671-5p     -2.14     0.01748       hsa-miR-886-3p     -2.79     0.02877       hsa-miR-96     3.79     0.00421			0.02799
hsa-miR-494     -2.57     0.00331       hsa-miR-497     -7.91     0.00029       hsa-miR-513a-5p     -3.11     0.00112       hsa-miR-513b     -3.18     0.00858       hsa-miR-572     -2.38     0.00057       hsa-miR-638     -2.31     0.00029       hsa-miR-671-5p     -2.14     0.01748       hsa-miR-886-3p     -2.79     0.02877       hsa-miR-96     3.79     0.00421	hsa-miR-361-5p	-2.57	0.02278
hsa-miR-497     -7.91     0.00029       hsa-miR-513a-5p     -3.11     0.00112       hsa-miR-513b     -3.18     0.00858       hsa-miR-572     -2.38     0.00057       hsa-miR-638     -2.31     0.00029       hsa-miR-671-5p     -2.14     0.01748       hsa-miR-886-3p     -2.79     0.02877       hsa-miR-96     3.79     0.00421	hsa-miR-424	-7.64	0.00158
hsa-miR-497     -7.91     0.00029       hsa-miR-513a-5p     -3.11     0.00112       hsa-miR-513b     -3.18     0.00858       hsa-miR-572     -2.38     0.00057       hsa-miR-638     -2.31     0.00029       hsa-miR-671-5p     -2.14     0.01748       hsa-miR-886-3p     -2.79     0.02877       hsa-miR-96     3.79     0.00421	hsa-miR-494	-2.57	0.00331
hsa-miR-513a-5p     -3.11     0.00112       hsa-miR-513b     -3.18     0.00858       hsa-miR-572     -2.38     0.00057       hsa-miR-638     -2.31     0.00029       hsa-miR-671-5p     -2.14     0.01748       hsa-miR-886-3p     -2.79     0.02877       hsa-miR-96     3.79     0.00421	hsa-miR-497		0.00029
hsa-miR-513b       -3.18       0.00858         hsa-miR-572       -2.38       0.00057         hsa-miR-638       -2.31       0.00029         hsa-miR-671-5p       -2.14       0.01748         hsa-miR-886-3p       -2.79       0.02877         hsa-miR-96       3.79       0.00421			
hsa-miR-572     -2.38     0.00057       hsa-miR-638     -2.31     0.00029       hsa-miR-671-5p     -2.14     0.01748       hsa-miR-886-3p     -2.79     0.02877       hsa-miR-96     3.79     0.00421			
hsa-miR-638       -2.31       0.00029         hsa-miR-671-5p       -2.14       0.01748         hsa-miR-886-3p       -2.79       0.02877         hsa-miR-96       3.79       0.00421			
hsa-miR-671-5p       -2.14       0.01748         hsa-miR-886-3p       -2.79       0.02877         hsa-miR-96       3.79       0.00421			
hsa-miR-886-3p -2.79 0.02877 hsa-miR-96 3.79 0.00421			
hsa-miR-96 3.79 0.00421			
	•	-	
	hsa-miR-99a	-10.84	0.00001

## Supplementary Table S7: TAM analysis for enriched functional categories of the 27 differentially expressed miRNAs that are associated with lymph node metastases.

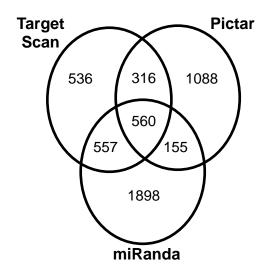
Function	No. of miRNAs	Fold over- representation	FDR corrected p-value	miRNAs involved
miRNAtumor suppressors	11	6.99	1.07E-05	let-7a, let-7b, let-7c, miR-125b, miR-126, miR-26b, miR-26a, miR-143, miR-195, miR-101, miR-34a
Folliculogenesis	5	16.80	1.91E-04	let-7a, let-7b, let-7c, miR-125b, miR-143
Human embryonic stem cell (hESC) regulation	13	3.60	4.14E-04	miR-125b, miR-126, miR-135b, miR-10a, miR-214, miR-199a, miR-26b, miR-26a, miR-199b, miR-143, miR-210, miR-195, miR-34a
Cell death	9	3.85	7.32E-03	let-7a, let-7b, let-7c, miR-125b, miR-497, miR-205, miR-143, miR-210, miR-34a
Angiogenesis	5	4.90	0.036	let-7b, miR-205, miR-34a, miR-126, miR-130a
Cell cycle related	8	2.85	0.0493	let-7a, let-7b, miR-125b, miR-205, miR-143, miR-210, miR-195, miR-34a
Adipocyte differentiation	5	4.36	0.0496	let-7a, let-7b, let-7c, miR-143, miR-130a

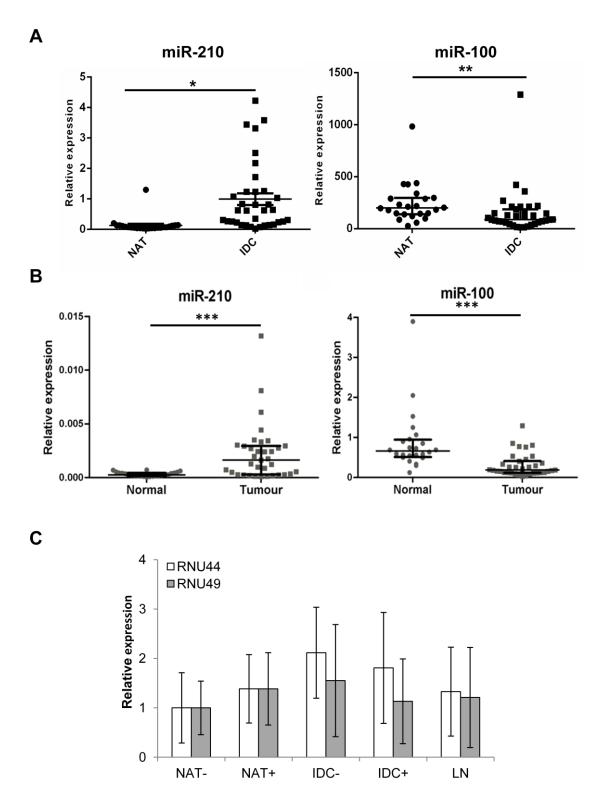
### Supplementary Figure S1: Photomicrographs of a representative triple negative breast cancer case.

Haemotoxylin and eosin stained sections (20x magnification) of **A**) normal adjacent tissue (NAT), invasive ductal carcinoma (IDC) and a lymph node metastasis (LN met) from a single patient diagnosed with TNBC. The black bar represents 2mm and the black square shows the magnified area in the adjacent photomicrograph. NAT- black arrow indicates stroma, white arrow indicates a terminal ductal lobular unit. LN met- black arrow indicates invasive cancer, white arrow indicates normal lymph node. **B**) Immunohistochemical detection of ER, PR and HER2, and chromosome *in situ* hybridisation (CISH) for HER2 (100x magnification).



Supplementary Figure S2: Venn diagram showing the overlap between gene targets predicted by Target Scan, Pictar and miRanda.





Supplementary Figure S3: Validation of RNU44 and RNU49 as normalisers. Relative quantification of miR-210 and miR-100 by real-time RT-PCR in normal (n=24) and tumour samples (n=35). Results are shown as a scatter plot of the relative normalised expression of the target miRNA to **A**) RNU 44 and **B**) RNU49 (2<sup>-ΔCt</sup>). Values represent the median ± interquartile range. \*p<0.0006, \*\*p=0.0016, \*\*\*p<0.0001.

C) The relative expression of RNU44 (white bars) and RNU 49 (grey bars) in NAT and IDC from lymph node negative tissues (-) and lymph node positive tissues (+). Values represent the mean ± SD.

Supplementary Figure S4: Correlation between real-time PCR on uniplex non-amplified cDNA and multiplexed pre-amplified cDNA. Correlation of Ct values using A) 5 ng or B) 25 ng total T-47D RNA. Statistical significance was determined using Spearmans' correlation. C) Relative quantification of individual miRNAs with (grey) or without (black) pre-amplification. Ct values for non-preamplified assays were adjusted for the median Ct gain for each assay (Supplementary Table 1) before calculating the relative expression levels. Results are shown as the mean relative normalised expression (target/RNU44) of the target miRNA  $(2^{-\Delta Ct}) \pm SD$ .

