Supplementary Table S1. Upregulated and downregulated miRNAs in childhood ALL subtypes.

Subtype	Upregulation	Downregulation
T-ALL vs controls	let-7b* [1], miR-7-1* [1], miR-16 [2, 3], miR-18b [4], miR-19b [2, 5], miR-20a [2], miR-20b [4], miR-26a [2], miR-27a [5], miR-27b [1], miR-28 [1], miR-29b [5], miR-30b [6], miR-30e [2], miR-92 [2], miR-92a-1* [1], miR-93 [2], miR-128 [4], miR-128b [7], miR-130a [4], miR-130b [1, 4], miR-142 [2], miR-144 [5], miR-146a [2, 8], miR-150 [2], miR-151 [6], miR-153 [4, 5], miR-155 [1], miR-181a [1, 4], miR-181a* [1], miR-181a-2 [4], miR-181a-2* [1], miR-181b [1, 4], miR-181c [1], miR-210 [4], miR-221 [8, 9], miR-223 [2], miR-299 [1], miR-331 [4], miR-342 [2], miR-361 [1], miR-363 [4], miR-374 [9], miR-376a [2], miR-449a [1], miR-466 [4], miR-486 [5], miR-548a [4], miR-548d [1], miR-548i [1], miR-582 [5], miR-587 [1], miR-625 [4], miR-662 [2], miR-663b [10], miR-1277 [5], miR-1307 [5], miR-1323 [1], miR-1827 [1], miR-	miR-7 [2], miR-10a [4], miR-10b [4], miR-21 [7], miR-23a [4], miR-24 [7], miR-24-2 [4], miR-27a [4], miR-29a [2, 12], miR-29b [7], miR-30a [4], miR-100 [13], miR-143 [4], miR-145 [4], miR-148a [6], miR-151a [4], miR-195 [2], miR-196b [6], miR-199b [4], miR-210 [13], miR-223 [4], miR-296 [2], miR-326 [1], miR-335 [14], miR-338 [4], miR-451 [15], miR-501 [1], miR-504 [4], miR-550a [4], miR-574 [4], miR-582 [4], miR-606 [1], miR-618 [4], miR-633 [1], miR-640 [1], miR-802 [1], miR-941 [4], miR-1275 [4], miR-2115 [4], miR-3150b [4], miR-3154 [4], miR-3690 [4], miR-3909 [4], miR-4260 [1], miR-4494 [4], miR-4695 [4], miR-4745 [4], miR-6823 [4], miR-6865 [4], miR-7849 [4]

	2909 [11], miR-3115 [1], miR-3140 [1], miR-3609 [4], miR-4421 [4], miR-4437 [4], miR-4687 [4], miR-6500 [4]	
B-ALL vs controls	miR-7 [16], miR-10b [17], miR-10b* [16], miR-15b [17], miR-16 [16, 18], miR-19a [16], miR-19b [16], miR-20b [16], miR-21 [18, 19], miR-23a [17], miR-25 [16], miR-29a [16], miR-30d [18], miR-30e [16], miR-34a [16, 18], miR-34a* [16], miR-92a [18], miR-93 [18], miR-95 [16], miR-99a [16], miR-100 [13, 20], miR-125b [18], miR-128 [1, 18], miR-128b [7], miR-129 [17], miR-133b [17], miR-138-1* [16], miR-140 [16], miR-142 [21], miR-144* [16], miR-146a [1, 16, 18], miR-155 [1, 7, 16–18], miR-181a [16, 18], miR-181b [1, 18, 22], miR-181c [16, 18], miR-187 [23], miR-190 [17], miR-190b [16], miR-192 [16], miR-195 [1, 16], miR-210 [13, 22], miR-217 [17], miR-222 [16, 18, 21], miR-223* [16], miR-302 [17], miR-320a [16, 18], miR-330 [17], miR-339 [21], miR-361 [18], miR-362 [17], miR-363 [16], miR-	let-7d [16], miR-7d [17], miR-7g [17], miR-15b [16], miR-18a [16], miR-20a [17], miR-22 [17], miR-25 [17], miR-26a [16], miR-27a [16, 22], miR-28 [16], miR-29a [17], miR-30b [16], miR-30c [16, 17], miR-30e [17], miR-99b [16], miR-100 [17], miR-101 [17], miR-126 [17], miR-126 [16], miR-126* [16], miR-143 [1], miR-145 [1], miR-146 [17], miR-148b [16], miR-148b* [16], miR-151 [16], miR-152 [16], miR-193b [17], miR-196b [16, 25], miR-199a [16], miR-206 [17], miR-216 [17], miR-221 [16], miR-223 [16, 18], miR-224 [16], miR-299 [17], miR-301a [16], miR-302d [17], miR-324 [16], miR-325 [17], miR-326 [26], miR-330 [16], miR-331 [16], miR-335 [16], miR-339 [16], miR-340 [16], miR-340* [16], miR-345 [22], miR-373* [21], miR-374a [16–18], miR-374b [16], miR-425* [16], miR-451 [21], miR-452 [16], miR-454* [16], miR-491 [16], miR-494 [17, 18], miR-514

	368 [17], miR-369 [1, 17], miR-422a [16], miR-425 [17], miR-451 [16], miR-500 [16], miR-501 [17], miR-502 [16], miR-511 [16], miR-513 [17], miR-515 [17], miR-517b [17], miR-520 [17], miR-532 [18], miR-565 [16], miR-576 [17], miR-579 [16], miR-585 [17], miR-610 [16], miR-617 [17], miR-630 [16], miR-645 [17], miR-660 [16, 18], miR-708 [1, 22, 24], miR-768 [16], miR-886 [16], miR-2909 [11]	[17], miR-532 [17], miR-652 [16], miR-671 [16], miR-744 [16], miR-3173 [27]
KMT2A-r vs controls	miR-30e [25], miR-34b [25], miR-128a [25], miR-142 [25], miR-150 [25], miR-181a [25], miR-181b [25], miR-181c [25], miR-193a [25], miR-196b [25], miR-223 [2], miR-365 [25], miR-376a [2], miR-506 [28], miR-582 [25], miR-662 [2], miR-708 [25], miR-922 [28]	let-7b [29, 30], let-7e [25], miR-7 [2], miR-10a [31], miR-29a [2], miR-99a [25, 32], miR-100 [25, 32], miR-101 [31], miR-125b [25], miR-148a [31], miR-152 [31], miR-195 [2], miR-200a [31], miR-200b [31], miR-424 [31], miR-429 [31], miR-432 [31], miR-486 [31], miR-503 [31]
Hyperdiploid vs controls	miR-128 [18], miR-146a [18], miR-181b [18], miR-222 [18], miR-365 [33], miR-532 [18]	
t(12;21) vs controls	miR-128 [18], miR-146a [18], miR-181b [18], miR-222 [18], miR-532 [18]	

T-ALL vs B-ALL	miR-29c [34], miR-100 [35], miR-190 [36], miR-196a [35], miR-196b [37–39], miR-322 [37], miR-342 [36], miR-424 [34], miR-450a [34], miR-450b [34], miR-542 [34, 36, 40], miR-629 [34], miR-1246 [37], miR-1273 [37], miR-1290 [37], miR-1915 [37], miR-3136 [41]	miR-21 [42], miR-34a [37], miR-99a [32], miR-100 [32], miR-125b [43], miR-126 [37], miR-132 [36], miR-150 [37], miR-151a [34, 36, 37], miR-151b [34], miR-191 [36], miR-195 [34], miR-222 [37], miR-222* [36], miR-371 [34], miR-425 [34, 36], miR-451 [37], miR-455 [34], miR-497 [34, 37], miR-574 [34], miR-708 [24, 34, 36, 37, 40, 41, 44], miR-1266 [34], miR-3150b [41]
B-other vs controls	miR-30e [25], miR-34b [25], miR-128a [25], miR-142 [25], miR-150 [25], miR-151 [25], miR-181a [25], miR-181b [25], miR-181c [25], miR-193a [25], miR-365 [25], miR-582 [25], miR-708 [25]	let-7e [25], miR-99a [25], miR-100 [25], miR-125b [25], miR-196b [25]
Biphenotypic vs ALL	miR-146a [35]	
ETV6-RUNX1 vs BCP-ALL or pre-B-ALL	let-7c [45, 46], miR-99a [36, 45, 46], miR-100 [36, 45], miR-125b [36, 45], miR-125b-2 [46], miR-126 [36, 45], miR-126* [36], miR-151 [37], miR-218 [45], miR-320b-1 [47], miR-345	let-7a [48], let-7b [48], miR-19a [48], miR-30e [48], miR-92 [48], miR-130b [48], miR-155 [48], miR-181a-1 [48], miR-181c [48], miR-181d [48], miR-195 [48], miR-200c [45, 47], miR-213 [36], miR-221 [36, 45, 48], miR-222 [45, 48], miR-320a [47, 49],

	[45], miR-383 [36], miR-629 [36], miR-922 [47], miR-4747 [47]	miR-342 [48], miR-361 [36], miR-423 [48], miR-425 [48], miR-494 [49], miR-660 [48], miR-1976 [47]
ETV6-RUNX1 vs ALL	miR-100 [38], miR-335 [50], miR-3117 [41], miR-3136 [41], miR-3150b [41], miR-3154 [41], miR-5195 [41]	
ETV6 del vs ALL	miR-708 [40]	
PAR1 del vs ALL	miR-24 [40], miR-542 [40]	
PAX5 del vs ALL		miR-24 [40], miR-31 [40], miR-128 [40], miR-708 [40]
miR-31 del vs ALL		miR-542 [40], miR-24 [40]
CDKN2A/B del vs ALL		miR-542 [40]
IKZF1 del vs ALL		miR-128 [40]

BCR-ABL1 vs BCP-ALL	miR-17 [51], miR-18 [51], miR-19a [51], miR-19b [51], miR-20a [51], miR-29a [45], miR-146a [45]	miR-32 [45], miR-93 [36, 45], miR-103 [36, 45], miR-106b [45], miR-148b [36], miR-186 [45], miR-210 [36], miR-301 [36], miR-324 [36, 45], miR-331 [36], miR-345 [36, 45], miR-451 [45], miR-484 [36], miR-1226 [36]
BCR-ABL1 vs ALL		miR-708 [44]
BCR-ABL1-like vs BCP-ALL	miR-101 [45]	miR-103 [45], miR-130a [45], miR-152 [45], miR-190 [45], miR-191 [45], miR-197 [45], miR-324 [45], miR-345 [45], miR-545 [45]
BCR-ABL1 vs controls	let-7b [52], miR-17 [51], miR-18 [51], miR-19a [51], miR-19b [51], miR-20a [51], miR-92 [51]	miR-99a [32], miR-100 [32]
ERG-related vs BCP-ALL	let-7c [53], miR-92a [53], miR-99a [53], miR-100 [53], miR-125a [53], miR-125b [53], miR-126 [53], miR-125b-2* [53], miR-181a [53], miR-181d [53], miR-491 [53], miR-1275 [53]	miR-15b [53], miR-24 [53], miR-27a [53], miR-132* [53], miR-155 [53], miR-625 [53]
HOXA-r vs T-ALL	miR-9 [5], miR-10a [5], miR-182 [5], miR-183 [5], miR-196b [5], miR-200a [5], miR-200b [5], miR-429 [5], miR-1468 [5]	

TAL-r vs T-ALL	miR-15b [5], miR-16 [5], miR-16-2 [5], miR-29c [5], miR-130b [5], miR-182 [5], miR-450b [5], miR-454 [5], miR-3615 [5]	
TLX1/3 vs T-ALL	let-7e [5], miR-17 [5], miR-20a [5], miR-92a [5], miR-92b [5], miR-99a [54], miR-99b [5], miR-107 [5], miR-125a [5], miR-125b-2 [54], miR-671 [5]	
TLX1 vs controls	miR-223 [2], miR-376a [2], miR-574 [2], miR-662 [2]	miR-7 [2], miR-29a [2], miR-95 [2], miR-181d [2], miR-195 [2], miR-213 [2], miR-296 [2], miR-345 [2], miR-422a [2]
TLX3 vs controls	miR-30e [2], miR-223 [2], miR-376a [2], miR-662 [2]	miR-7 [2], miR-29a [2], miR-148a [2], miR-195 [2], miR-296 [2]
Immature T- vs T-ALL	miR-21 [5], miR-30b [5], miR-101 [5], miR-126 [5], miR-146a [5], miR-181a [5], miR-191 [5], miR-221 [5], miR-222 [5], miR-425 [5]	
SIL-TAL1 (<T) vs ALL	miR-146a [55]	

SIL-TAL1 (<T) vs controls	miR-182 [2], miR-223 [2], miR-376a [2], miR-662 [2]	miR-7 [2], miR-29a [2], miR-99a [2], miR-195 [2], miR-196a [2], miR-196b [2], miR-296 [2]
CALM-AF10 (<T) vs controls	miR-223 [2], miR-376a [2], miR-662 [2] + miR-196b [39] vs ALL	miR-7 [2], miR-29a [2], miR-195 [2], miR-627 [2]
Inv7 (<T) vs controls	miR-146a [2], miR-223 [2], miR-376a [2], miR-662 [2] + miR-196b [39] in inv(7)(p15q35) vs ALL	miR-7 [2], miR-29a [2], miR-99a [2], miR-195 [2], miR-296 [2], miR-422a [2], miR-532 [2]
T-subtypes vs controls+	miR-182 X4, miR-196b X3, miR-223 X5, miR-376a X5, miR-146a X3, miR-662 X5	miR-7 X5, miR-29a X5, miR-195 X5, miR-296 X4, miR-422a X2, miR-99a X2
SET-NUP214 vs ALL	miR-196b [39]	
14q32 LOH vs ALL		miR-127 [56], miR-382 [56], miR-412 [56], miR-433 [56]
KMT2A-r early relapse vs remission	miR-99a [57], miR-103b [57], miR-548 [57], miR-1973 [57], miR-4260 [57], miR-4436b [57], miR-4498 [57], miR-4507	

	[57], miR-4699 [57], miR-6805 [57], miR-7113 [57], miR-7161 [57]	
Hyperdiploid vs pre-B-ALL	miR-5196 [58]	
Hyperdiploid vs BCP-ALL	miR-98 [36, 45], miR-195 [45], miR-222 [36, 45], miR-222* [36], miR-223 [36, 45], miR-324 [45], miR-342 [45], miR-345 [45], miR-361 [36], miR-374a [36, 45], miR-501 [36], miR-511 [36, 45], miR-532 [36], miR-660 [36, 45]	
Hyperdiploid vs ALL	miR-361 [41], miR-3154 [41]	miR-100 [38]
KMT2A-r vs B-ALL	miR-574 [59], miR-6735 [59]	
KMT2A-r vs BCP-ALL	miR-24 [45], miR-133a [36], miR-186 [45], miR-196a [36], miR-196b [25, 39, 45], miR-425 [45], miR-484 [45]	let-7b [30, 36, 45], let-7c [36, 45], let-7e [25], miR-20b [36, 45], miR-30e [25], miR-34b [25], miR-151 [25], miR-192 [36, 45], miR-193 [25], miR-194 [36, 45], miR-372 [36], miR-497 [36], miR-582 [25], miR-708 [25, 36]

KMT2A-r vs ALL	miR-128a [38], miR-181b [38], miR-196b [41], miR-3151 [41], miR-3154 [41]	miR-708 [41], miR-3150b [41] + miR-128b & miR-221 KMT2A-AFF1 [60]
TCF3-PBX1 vs B-ALL	miR-574 [59], miR-6735 [59]	
TCF3-r vs BCP-ALL	miR-191 [45], miR-425 [45]	miR-24 [33, 36, 45], miR-26a [45], miR-29a [36, 45], miR-30d [36], miR-126 [33, 36, 45], miR-126* [36], miR-146a [36, 45], miR-193a [36], miR-223 [45], miR-365 [33, 36, 45], miR-511 [36, 45], miR-545 [36]
TCF3-PBX1 vs ALL	miR-3136 [41], miR-3150b [41], miR-3154 [41]	
BCP-ALL vs B-ALL	miR-574 [59], miR-6735 [59]	
Infant vs childhood T-ALL	miR-18a [61], miR-29c [61], miR-30c [61], miR-125b-2 [61], miR-128-1 [61], miR-128-2 [61], miR-148b [61], miR-183 [61], miR-185 [61], miR-190a [61], miR-200c [61], miR-210 [61], miR-223 [61], miR-324 [61], miR-331 [61], miR-421	let-7b [61], let-7f [61], miR-31 [61], miR-196b [61], miR-205 [61], miR-4485 [61], miR-6503 [61]

	[61], miR-502 [61], miR-561 [61], miR-652 [61], miR-664b [61], miR-671 [61], miR-766 [61], miR-874 [61], miR-1180 [61], miR-1226 [61], miR-1249 [61], miR-1276 [61], miR-1301 [61], miR-1306 [61], miR-3143 [61], miR-3186 [61], miR-3620 [61], miR-3661 [61], miR-3909 [61], miR-3922 [61], miR-4687 [61], miR-5010 [61], miR-5581 [61], miR-5683 [61], miR-6802 [61], miR-6803 [61], miR-6806 [61], miR-6855 [61], miR-6769b [61], miR-6894 [61], miR-7706 [61]	

[18] = BCP-ALL

[22] = common-ALL

[25] = B-other

[21] = pre-B-ALL

[57] = 3 KMT2A-ENL & 3 KMT2A-AF4

[58] = SNP G>A rs10406069 in miR-5196 associated with higher levels and hyperdiploid subtype → AG significantly lower SMC1A expression ($p<0.01$) than GG, a gene involved in sister chromatin cohesion and lower ARHGEF3 expression, a guanine

nucleotide exchange factor for Rho GTPase. We also have to take into account that miR-5196 is hosted in the CD22 gene, where rs10406069 produces a missense mutation (p.Gly745Asp) in exon 12. Although the association could be due to its impact on the host gene, the effect of this SNP in the protein is predicted to be benign.

[13] = common-ALL not just B-ALL

[5] = includes adult cases too

[54] = TLX3-related vs T-ALL

[36] = has data comparing ALL subgroups with normal cells https://www.haematologica.org/article/view/5966

[62] = pro-B-ALL highest DICER expression and lowest AGO2 expression vs controls (pre-B-ALL significant difference -but not in that extent)

ERG-related cases = remarkably favorable outcome despite a high incidence of inauspicious IKZF1 aberrations

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