Table S1: Pharmacokinetics of IVO+VEN and IVO+VEN+AZA

Pharmacokinetics by cohort	Dose level 0 (N=6)	Dose level 1 (N=6)	Dose level 2 (N=13)	Dose level 3 (N=6)
Venetoclax $AUC_{0\text{-}24h}$ (µg*hr/mL)				
Cycle 1 Day 14	36.5 (53)[a] (4.21, 75.2)	47.8 (86) (12.2, 171)	20.4 (52)[b] (9.37, 39.6)	32.4 (71)[a] (10.4, 80.0)
Cycle 2 Day 14	11.0 (74) (2.54, 31.2)	31.3 (32) (20.2, 50.1)	13.0 (51)[c] (3.78, 25.1)	17.9 (56)[e] (10.2, 34.1)
Venetoclax C_{max} (µg/mL)				
Cycle 1 Day 14	2.34 (57)[a] (0.25, 5.08)	3.15 (77) (1.05, 9.74)	1.31 (56)[b] (0.64, 2.99)	2.43 (63) (0.83, 5.07)
Cycle 2 Day 14	0.924 (65) (0.22, 2.24)	2.27 (39) (1.11, 3.46)	1.01 (53)[d] (0.19, 2.18)	1.30 (56)[e] (0.66, 2.49)

$AUC_{0\text{-}24h}$ and C_{max} values are presented as geometric mean (% coefficient of variation) (minimum, maximum)
$AUC_{0\text{-}24h}$ = area under the plasma concentration-time curve from time 0 to 24 hours; C_{max} = maximum observed plasma concentration.
Some subjects were excluded due to incomplete concentration time profiles. The N that differed from what is in the column header was noted in footnotes:

a. N=5
b. N=11
c. N=8
d. N=9
e. N=4

Table S2: Treatment characteristics across the four dose levels in the phase 1b study population.

	Study Cohort					
Characteristic	**Overall, N = 31[1]**	**Dose level 1, N = 6[1]**	**Dose level 2, N = 6[1]**	**Dose level 3, N = 13[1]**	**Dose level 4, N = 6[1]**	p-value[2]
Cycles received	4 (1 - 49)	8 (2 - 49)	6 (3 - 41)	4 (1 - 25)	4 (2 - 11)	0.9
Cycle length, days (median [range])						
Cycle 1	32 (23 - 105)	27 (23 - 31)	28 (27 - 30)	38 (29 - 79)	38 (28 - 105)	<0.001
Cycle 2	31 (27 - 62)	28 (27 - 29)	28 (28 - 34)	33 (27 - 62)	38 (28 - 48)	0.14
Cycle 3	28.0 (21.0 - 36.0)	28.0 (28.0 - 28.0)	28.0 (21.0 - 35.0)	33.0 (28.0 - 36.0)	32.0 (22.0 - 35.0)	0.4
Cycle 4	28.0 (25.0 - 42.0)	28.0 (27.0 - 28.0)	28.0 (28.0 - 34.0)	30.5 (25.0 - 35.0)	35.0 (28.0 - 42.0)	0.5
Time on study, months (median [95% CI])	5.26 (3.68-NE)	8.17 (2.2-NE)	5.43 (3.88-NE)	4.34 (3.06-NE)	6.30 (4.44-NE)	0.89
Cause of study discontinuation, N (%)						0.2
Deceased	1 / 31 (3.2%)	1 / 6 (17%)	0 / 6 (0%)	0 / 13 (0%)	0 / 6 (0%)	
No Response	1 / 31 (3.2%)	1 / 6 (17%)	0 / 6 (0%)	0 / 13 (0%)	0 / 6 (0%)	
On Study	9 / 31 (29%)	2 / 6 (33%)	1 / 6 (17%)	4 / 13 (31%)	2 / 6 (33%)	
Progression	8 / 31 (26%)	2 / 6 (33%)	3 / 6 (50%)	3 / 13 (23%)	0 / 6 (0%)	
HCT	12 / 31 (39%)	0 / 6 (0%)	2 / 6 (33%)	6 / 13 (46%)	4 / 6 (67%)	
Treatment drug adherence cycles 1-4, mean (SD)						
Venetoclax	0.93 (0.25)	1.00 (0.05)	1.03 (0.14)	0.89 (0.25)	0.83 (0.37)	0.028
Ivosidenib	0.96 (0.14)	0.93 (0.22)	0.99 (0.03)	0.96 (0.12)	0.95 (0.17)	>0.9
Azacitidine	0.89 (0.29)			0.91 (0.25)	0.86 (0.36)	0.8

[1] Median (Range)
[2] Kruskal-Wallis rank sum test;Pearson's Chi-squared test; Wilcoxon rank sum test

Table S3: Study medication adherence. (A), Adherence to protocol administered medications during DLT evaluation period (cycles 1 and 2) of protocol directed therapy. (B), Adherence to protocol administered medications during the first 12 months of protocol directed therapy.

A

Mean dose adherence by study agent across DLT evaluation period	Dose Level 1 (N=6)	Dose Level 2 (N=6)	Dose Level 3 (N=13)	Dose Level 4 (N=6)
Venetoclax				
Cycle 1	102%	100%	95%	100%
Cycle 1 and 2	101%	100%	95%	93%
Ivosidenib				
Cycle 1	98%	100%	94%	87%
Cycle 1 and 2	98%	99%	94%	93%
Azacitidine				
Cycle 1	-	-	100%	100%
Cycle 1 and 2	-	-	95%	92%

B

Mean dose adherence by study agent across cycles 1-12*	Dose Level 1 (N=6)	Dose Level 2 (N=6)	Dose Level 3 (N=13)	Dose Level 4 (N=6)
Venetoclax	100%	80%	72%	67%
Ivosidenib	97%	98%	98%	98%
Azacitidine	-	-	74%	85%

*N.B. One patient in DL3 and DL4 had AZA and VEN omitted starting with cycle 2 and cycle 3, respectively, accounting for the decreased VEN adherence observed in these dose levels

Table S4: Dose modifications in patients experiencing hematologic adverse events during the entire study period until data cut-off on March 15th, 2022.

Accession #	Cohort	Treatment	Disease	Event	Cycle	Action
14	Dose Level 2	IVO+ VEN 800 mg	MDS or MPN	Thrombocytopenia	2	VEN reduction to 7 days
10	Dose Level 2	IVO+ VEN 800 mg	R/R-AML	Thrombocytopenia	8	VEN dose reduced from 800 mg to 400 mg
16	Dose Level 3	IVO+VEN 400 mg +AZA	ND-AML	Cytopenias	3	Azacitidine reduced to 5 days
18	Dose Level 3	IVO+VEN 400 mg +AZA	ND-AML	Neutropenia	3	VEN dose reduced to 10 days
18	Dose Level 3	IVO+VEN 400 mg +AZA	ND-AML	Cytopenias	9	AZA dose reduced to 5 days
18	Dose Level 3	IVO+VEN 400 mg +AZA	ND-AML	Cytopenias	10	VEN dose reduced to 7 days
18	Dose Level 3	IVO+VEN 400 mg +AZA	ND-AML	Cytopenias	11	VEN dose reduced to 5 days
18	Dose Level 3	IVO+VEN 400 mg +AZA	ND-AML	Cytopenias	11	AZA dose reduced to 3 days
20	Dose Level 3	IVO+VEN 400 mg +AZA	ND-AML	Cytopenias	3	AZA and VEN omitted
22	Dose Level 3	IVO+VEN 400 mg +AZA	ND-AML	Cytopenias	2	AZA reduced to 5 days
22	Dose Level 3	IVO+VEN 400 mg +AZA	ND-AML	Cytopenias	2	VEN reduced to 7 days
26	Dose Level 3	IVO+VEN 400 mg +AZA	ND-AML	Neutropenia	5	AZA reduced to 5 days
26	Dose Level 3	IVO+VEN 400 mg +AZA	ND-AML	Neutropenia	9	VEN dose reduced to 10 days
27	Dose Level 3	IVO+VEN 400 mg +AZA	ND-AML	Anemia	10	AZA dose reduced to 5 days
29	Dose Level 4	IVO+VEN 800 mg +AZA	ND-AML	Cytopenias	4	VEN dose reduced to 7 days
29	Dose Level 4	IVO+VEN 800 mg +AZA	ND-AML	Cytopenias	6	AZA dose reduced to 5 days
31	Dose Level 4	IVO+VEN 800 mg +AZA	MDS or MPN	Thrombocytopenia	2	AZA and VEN omitted
33	Dose Level 4	IVO+VEN 800 mg +AZA	MDS or MPN	Cytopenias	4	IVO held 6 days
33	Dose Level 4	IVO+VEN 800 mg +AZA	MDS or MPN	Cytopenias	5	VEN dose reduced to 10 days

Table S5: Regions covered by institutional next-generation sequencing (NGS) interrogating the entire exonic or hotspot regions of 81-genes frequently mutated in myeloid malignancies.

Coverage by gene and codon(s) tested with >250x coverage	
Gene	Exons (codons) tested
ANKRD26 (NM_014915)	1 (1-6)
ASXL1 (NM_015338)	11-12 (362-892), 12 (897-932), 12 (939-1290), 12 (1300-1442), 12 (1450-1542)
ASXL2 (NM_018263)	11 (381-604), 12 (621-1436)
BCOR (NM_017745)	2 (1-15), 3-4 (29-62), 4 (71-181), 4 (206-219), 4 (227-323), 4 (331-431), 4 (465-509), 4 (538-576), 4 (579-636), 4 (642-660), 4 (685-751), 4 (764-774), 4-6 (778-1080), 8 (1181-1207), 8 (1215-1234), 9 (1274-1289), 9 (1314-1336), 10 (1360-1366), 10 (1407-1442), 11 (1471-1490), 11 (1468), 12 (1498-1511), 13-14 (1556-1603), 14 (1608-1625), 15 (1664-1722)
BCORL1 (NM_021946)	1-2 (1-59), 3 (63-112), 3 (124-213), 3 (220-246), 3 (252-279), 3 (283-320), 3 (323-383), 3 (392-412), 3 (425-558), 3 (575-608), 3 (613-725), 3 (738-807), 3 (862-1069), 3 (1080-1101), 3-4 (1132-1203), 5 (1206-1230), 6 (1235-1252), 6 (1292-1311), 6 (1326), 7 (1360-1365), 7 (1377-1378), 7 (1382-1428), 7 (1431-1435), 8 (1452-1479), 9 (1491-1540), 10-11 (1548-1582), 11 (1584-1588), 12 (1618-1664), 12 (1710-1712)
BRAF (NM_004333)	11 (439-478), 15 (581-620)
BRINP3 (NM_199051)	2-6 (1-314), 7-8 (335-471), 8 (475-500), 8 (503-767)
CALR (NM_004343)	9 (352-417)
CBL (NM_005188)	7-9 (336-449), 9 (454-477)
CBLB (NM_170662)	7 (282-287), 7 (297-328), 8 (332-357), 9 (372-397), 10 (402-469)
CBLC (NM_012116)	7-9 (336-454), 10 (465-475)
CEBPA (NM_004364)	1 (1-70), 1 (128-175), 1 (178-201), 1 (249-358)
CREBBP (NM_004380)	1-8 (1-608), 9-10 (615-705), 12-14 (720-837), 14-16 (840-1084), 17-22 (1094-1287), 22-31 (1297-1943), 31 (1950-2115), 31 (2121-2443)
CSF3R (NM_156039)	14 (575-622), 17 (681-800), 17 (822-864)
CUX1 (NM_181552)	2 (11-46), 3-6 (48-172), 6-9 (174-241), 10-12 (266-359), 13 (368-375), 14 (378-408)
DDX41 (NM_016222)	1-5 (1-129), 5-10 (134-366), 11 (387-410), 12-17 (420-623)
DNMT3A (NM_022552)	8-9 (288-347), 9-22 (349-862), 23 (866-913)
EED (NM_003797)	1-2 (1-57), 2 (66-69), 2-8 (71-287), 9-12 (289-442)
ELANE (NM_001972)	1-2 (1-48), 2 (69-75), 4-5 (123-268)

ETNK1 (NM_018638)	3 (228-275)
ETV6 (NM_001987)	1-3 (1-97), 4 (110-147), 5-6 (155-378), 7-8 (385-453)
EZH2 (NM_004456)	2-3 (3-48), 3-4 (57-121), 5 (158), 7 (209-217), 8 (243-303), 9-12 (320-494), 13 (502-512), 14 (516-538), 14 (547-558), 15 (616-617), 15 (558-569), 15 (571-613), 16-19 (618-732), 20 (752)
FBXW7 (NM_033632)	9-12 (413-708)
FLT3 (NM_004119)	11-18 (437-758), 19-20 (764-847)
GATA1 (NM_002049)	2 (12-51), 2 (57-60), 2 (65-74), 3 (83-84)
GATA2 (NM_032638)	2-5 (22-377), 5 (379-381), 6 (383-481)
GFI1 (NM_005263)	2 (2-39)
GNAS (NM_000516)	8 (200-202), 11 (315-324)
HNRNPK (NM_002140)	3-6 (1-86), 8-11 (111-270), 11 (290-318), 11 (270), 11 (278-283), 12-16 (318-454)
HRAS (NM_005343)	2-3 (1-59), 3-4 (87-150)
IDH1 (NM_005896)	4 (132-133)
IDH2 (NM_002168)	4 (125-178)
IKZF1 (NM_006060)	2-8 (1-377), 8 (382-392), 8 (403-430), 8 (445)
IL2RG (NM_000206)	1 (15), 1 (27-39), 2 (88-90), 2 (60-67), 2 (78), 3 (90-148), 4 (152-196), 5-6 (199-285), 7-8 (296-339)
IL7R (NM_002185)	5-7 (180-292)
JAK1 (NM_002227)	3-9 (3-445), 10 (453-465), 10-22 (470-1023), 22-24 (1026-1123)
JAK2 (NM_004972)	10 (405-442), 12-14 (505-622), 16 (665-711), 18 (762-802)
JAK3 (NM_000215)	2-6 (1-224), 6 (261-284), 7-23 (288-1069)
KDM6A (NM_021140)	1-2 (1-70), 3 (76-106), 6 (148-186), 8 (207-218), 10 (268-292), 12 (325-339), 12-13 (347-443), 15 (476-503), 16 (510-526), 16 (545-559), 16 (574-610), 17 (642-700), 17 (709-899), 19 (945-956), 20 (1006-1030), 20 (1036-1048), 23 (1097), 24 (1145-1180), 25-26 (1235-1249), 27 (1298-1304), 27-28 (1309-1388), 29 (1393-1402)
KIT (NM_000222)	8-9 (411-514), 11 (550-592), 17 (788-828)
KMT2A (NM_005933)	2-3 (145-544), 3 (553-902), 3 (915-1032), 3-4 (1034-1075), 4-7 (1081-1277), 7 (1286-1334), 8-10 (1338-1441), 11 (1445-1493), 12-13 (1505-1560), 14-15 (1566-1665), 27 (2178), 27 (2201-2362), 27 (2395-2412), 27 (2427-2452), 27 (2472-2715), 27 (2720-3210), 27 (3219-3327), 27 (3342-3541), 27 (3545-3582)
KRAS (NM_004985)	2-4 (1-150)
MAP2K1 (NM_002755)	2 (27-90), 3 (99-146)
MPL (NM_005373)	10 (490-522), 12 (552-636)

NF1 (NM_001042492)	2-4 (21-160), 5 (165-190), 6 (201-218), 8-9 (244-305), 9 (310-354), 10-11 (359-398), 12-13 (421-468), 13-14 (478-547), 16 (574-612), 17 (645-667), 18 (674-728), 18-21 (746-819), 21 (836-950), 23 (1018-1038), 25 (1066-1078), 25-26 (1081-1146), 27-30 (1166-1330), 30 (1353-1370), 32-34 (1392-1490), 35 (1526-1549), 35 (1563-1575), 36-38 (1601-1868), 39 (1870-1884), 39-40 (1886-1947), 40-43 (1961-2211), 44-47 (2215-2322), 47-48 (2325-2394), 49 (2397-2436), 49 (2439), 50-51 (2441-2490), 51 (2495-2539), 53-58 (2580-2840)
NOTCH1 (NM_017617)	26 (1529-1594), 26-28 (1604-1795), 34 (2069-2230), 34 (2234-2256), 34 (2266-2273), 34 (2294-2309), 34 (2294-2556), 34 (2266-2273), 34 (2069-2230), 34 (2234-2256), 34 (2309-2556)
NPM1 (NM_002520)	11 (283-294)
NRAS (NM_002524)	2-4 (1-150)
PAX5 (NM_016734)	1-10 (1-392)
PHF6 (NM_032458)	2 (4), 2-3 (11-78), 4 (110-122), 6 (140-166), 6-7 (172-228), 7 (232-236), 8 (260-265), 9 (279-297), 9-10 (305-337), 10 (352-366)
PIGA (NM_002641)	2 (6), 2 (16-134), 2 (151-162), 2 (194-209), 3 (239-256), 3 (262-283), 4 (312-314), 5 (328-337), 5 (386-390), 6 (422-485)
PML (NM_033238)	3 (201-255)
PRPF40B (NM_001031698)	2 (2-15), 2-10 (20-228), 10-19 (232-609), 19 (611-626), 20 (629-638), 20 (647-658), 20-25 (661-821), 25-26 (824-893)
PTEN (NM_000314)	7-8 (212-286), 8 (309-338)
PTPN11 (NM_002834)	3-4 (46-125), 7 (253-285), 12 (460-462), 12-13 (465-533)
RAD21 (NM_006265)	2-3 (1-75), 4 (92-125), 5-7 (131-249), 7 (261-272), 8-12 (275-540), 13 (544-560), 14 (569-632)
RARA (NM_000964)	6-7 (211-338)
RUNX1 (NM_001754)	2-9 (1-437), 9 (456-474)
SETBP1 (NM_015559)	4 (838-885)
SF1 (NM_004630)	1-2 (1-54), 3-13 (57-579), 13 (582-640)
SF3A1 (NM_005877)	1-7 (1-322), 7-9 (355-424), 9-12 (427-646), 13-16 (651-794)
SF3B1 (NM_012433)	13 (574-593), 14 (603-638), 14-16 (649-790)
SH2B3 (NM_005475)	2 (1-98), 2 (132-164), 2-6 (212-374), 6-8 (380-576)
SMC1A (NM_006306)	1 (13-37), 2 (90-100), 2 (37-66), 2 (78-82), 3-4 (100-202), 5 (206-223), 5 (238-283), 6 (285-311), 6 (321-369), 7 (372-386), 8-14 (419-749), 14 (758-771), 15 (791-807), 16 (828-851), 17-18 (855-935), 18-19 (943-973), 20-22 (997-1146), 24 (1173-1186), 24 (1204-1205), 25 (1223-1234)
SMC3 (NM_005445)	1 (1-5), 2 (19), 3-4 (31-65), 5-6 (67-110), 7-11 (117-298), 11-13 (308-435), 14-15 (446-477), 15-16 (498-504), 16-17 (507-580), 17-19 (591-

	706), 20 (708-728), 21-24 (762-894), 24-25 (913-975), 25 (983-1035), 26-27 (1038-1150), 28-29 (1159-1202)
SRSF2 (NM_003016)	1 (1-38), 1 (45-121)
STAG1 (NM_005862)	2 (1-4), 3 (10-27), 4-5 (45-101), 5-6 (121-153), 6-7 (156-188), 7-8 (194-276), 10-12 (301-392), 13-19 (408-679), 20 (684-703), 21-22 (724-738), 22-24 (740-808), 24-25 (831-895), 26-27 (897-953), 27 (955-979), 28 (985-1008), 29-34 (1022-1259)
STAG2 (NM_006603)	2 (1-11), 4 (42-94), 6 (129-144), 6-8 (152-259), 10 (298-339), 12 (375-386), 12-13 (394-422), 14 (462-468), 15 (473-512), 18 (581-592), 18 (594-595), 18-19 (600-675), 22 (735-746), 23-24 (765-802), 24 (822-843), 25 (847-891), 26 (913-925), 27 (928-970), 28 (975-982), 28-29 (996-1083), 30 (1093-1125), 30-31 (1133-1177), 33 (1225-1232)
STAT3 (NM_139276)	17 (489-503), 17-22 (506-715)
STAT5A (NM_003152)	3-6 (1-177), 6-7 (181-189), 8-14 (268-506), 14-20 (516-795)
STAT5B (NM_012448)	16 (636-673)
SUZ12 (NM_015355)	1 (20-44), 1 (46-83), 4 (129-132), 5 (158-169), 7-9 (198-319), 10 (342-401), 11 (403-425), 12-16 (468-687), 16 (697-740)
TERC (NR_001566)	1 (1-36)
TERT (NM_198253)	1 (1-24), 2 (74-165), 2 (258-300), 2 (312-342), 2 (349-474), 2-4 (477-630), 4-5 (633-677), 6 (711-749), 6-8 (753-800), 8-12 (805-954), 12-16 (957-1133)
TET2 (NM_001127208)	3 (1-42), 3 (45-77), 3 (91-92), 3 (98-725), 3 (735-796), 3 (805-815), 3 (883-1137), 4-7 (1139-1318), 8-10 (1333-1434), 10 (1448-1454), 10-11 (1467-2003)
TP53 (NM_000546)	2 (1-25), 4 (80-125), 5-11 (133-394)
U2AF1 (NM_006758)	2 (15-44), 6 (117-161)
U2AF2 (NM_007279)	1 (1-17), 3-5 (62-161), 6-12 (163-437), 12 (441-448), 12 (452-476)
WT1 (NM_024426)	1 (2-44), 1 (122-166), 1-10 (179-518)
ZRSR2 (NM_005089)	1 (1-14), 2 (24-37), 3 (41-64), 7 (147-159), 7 (172-186), 8 (239-257), 10 (276-296), 10-11 (302-413), 11 (481-483)

Table S6: Variants identified using targeted 81-gene myeloid NGS panel

Accession	Report	Gene	HGVS	dbSNP	COSMIC	Strand	Loc	Type	Freq (%)	Coverage	Variant(+)	varcov	chromosome	coordinates	genomic position	ref	variant
1	Diagnosis	SMC3	NM_005445.3(SMC3):c.920T>C p.L307P			+	Exon 11	SNV	32	1309	T->C	417	chr10	chr10:112343257	112343257	T	C
1	Diagnosis	IDH1	NM_005896.3(IDH1):c.395G>A p.R132H	rs121913500	COSM28746	-	Exon 4	SNV	10	2661	G->A	255	chr2	chr2:209113112	209113112	C	T
1	Diagnosis	NPM1	NM_002520.6(NPM1):c.860_863dupTCTG			+	Exon 11	Indel	35	2904	G->GTCTG	1022	chr5	chr5:170837547	170837547	G	GTCTG
1	Diagnosis	NRAS	NM_002524.5(NRAS):c.35G>A p.G12D	rs121913237	COSM564	-	Exon 2	SNV	22	5199	G->A	1168	chr1	chr1:115258747	115258747	C	T
3	Diagnosis	NPM1	NM_002520.6(NPM1):c.860_863dupTCTG			+	Exon 11	Indel	28	3175	G->GTCTG	896	chr5	chr5:170837547	170837547	G	GTCTG
3	Diagnosis	DNMT3A	NM_022552.4(DNMT3A):c.2644C>T		COSM53042	-	Exon 23	SNV	19	2528	C->T	485	chr2	chr2:25457243	25457243	G	A
3	Diagnosis	NRAS	NM_002524.5(NRAS):c.38G>A p.G13D	rs121434596	COSM573	-	Exon 2	SNV	24	5200	G->A	1254	chr1	chr1:115258744	115258744	C	T
3	Diagnosis	IDH1	NM_005896.3(IDH1):c.395G>A p.R132H	rs121913500	COSM28746	-	Exon 4	SNV	18	3040	G->A	552	chr2	chr2:209113112	209113112	C	T
4	Diagnosis	JAK2	NM_004972.3(JAK2):c.1849G>T p.V617F	rs77375493	COSM12600	+	Exon 14	SNV	3	4605	G->T	153	chr9	chr9:5073770	5073770	G	T
4	Diagnosis	IDH1	NM_005896.3(IDH1):c.395G>A p.R132H	rs121913500	COSM28746	-	Exon 4	SNV	38	2013	G->A	759	chr2	chr2:209113112	209113112	C	T
4	Diagnosis	SRSF2	NM_003016.4(SRSF2):c.284C>A p.P95H			-	Exon 1	SNV	42	1226	C->A	520	chr17	chr17:74732959	74732959	G	T
4	Diagnosis	SH2B3	NM_005475.3(SH2B3):c.1226G>C p.G409A			+	Exon 6	SNV	34	689	G->C	233	chr12	chr12:111885338	111885338	G	C
4	Diagnosis	ASXL2	NM_018263.6(ASXL2):c.1780C>T p.Q594*			-	Exon 12	SNV	42	1359	C->T	566	chr2	chr2:25972645	25972645	G	A
4	Relapse	SRSF2	NM_003016.4(SRSF2):c.284C>A p.P95H			-	Exon 1	SNV	33	1841	C->A	613	chr17	chr17:74732959	74732959	G	T
4	Relapse	JAK2	NM_004972.3(JAK2):c.1849G>T p.V617F	rs77375493	COSM12600	+	Exon 14	SNV	2	4950	G->T	84	chr9	chr9:5073770	5073770	G	T
4	Relapse	IDH1	NM_005896.3(IDH1):c.395G>A p.R132H	rs121913500	COSM28746	-	Exon 4	SNV	29	1998	G->A	574	chr2	chr2:209113112	209113112	C	T
4	Relapse	SH2B3	NM_005475.3(SH2B3):c.1226G>C p.G409A			+	Exon 6	SNV	28	1099	G->C	305	chr12	chr12:111885338	111885338	G	C
4	Relapse	ASXL2	NM_018263.6(ASXL2):c.1780C>T p.Q594*			-	Exon 12	SNV	32	1849	C->T	591	chr2	chr2:25972645	25972645	G	A
4	Relapse	TET2	NM_001127208.2(TET2):c.5698G>C			+	Exon 11	SNV	1	2565	G->C	31	chr4	chr4:106197365	106197365	G	C
4	Relapse	ETV6	NM_001987.5(ETV6):c.775dupC			+	Exon 5	Indel	2	2358	G->GC	38	chr12	chr12:12022669	12022669	G	GC

4	Relapse	ETV6	NM_001987.5(ETV6):c.1075C>G p.R359G			+	Exon 6	SNV	3	665	C->G	25	chr12	chr12:12037444	12037444	C	G
5	Diagnosis	RUNX1	NM_001754.4(RUNX1):c.485G>A p.R162K		COSM96546	-	Exon 5	SNV	16	620	G->A	100	chr21	chr21:36252877	36252877	C	T
5	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	22	2111	C->T	463	chr2	chr2:209113113	209113113	G	A
5	Diagnosis	TET2	NM_001127208.2(TET2):c.2665A>T			+	Exon 3	SNV	4	1932	A->T	73	chr4	chr4:106157764	106157764	A	T
5	Remission	SF3B1	NM_012433.3(SF3B1):c.2098A>G p.K700E		COSM84677	-	Exon 15	SNV	4	2754	A->G	105	chr2	chr2:198266834	198266834	T	C
5	Remission	TET2	NM_001127208.2(TET2):c.4138C>T		COSM87161	+	Exon 9	SNV	1	2959	C->T	34	chr4	chr4:106190860	106190860	C	T
5	Remission	TET2	NM_001127208.2(TET2):c.2665A>T			+	Exon 3	SNV	15	779	A->T	115	chr4	chr4:106157764	106157764	A	T
5	Remission	TET2	NM_001127208.2(TET2):c.4138C>T		COSM87161	+	Exon 9	SNV	2	3014	C->T	46	chr4	chr4:106190860	106190860	C	T
5	Remission	TET2	NM_001127208.2(TET2):c.2290del			+	Exon 3	Indel	2	1015	C->	19	chr4	chr4:106157389	106157389	C	
5	Remission	TET2	NM_001127208.2(TET2):c.2665A>T			+	Exon 3	SNV	12	731	A->T	86	chr4	chr4:106157764	106157764	A	T
5	Remission	SF3B1	NM_012433.3(SF3B1):c.2098A>G p.K700E		COSM84677	-	Exon 15	SNV	3	3303	A->G	94	chr2	chr2:198266834	198266834	T	C
5	Relapse	SF3B1	NM_012433.3(SF3B1):c.2098A>G p.K700E		COSM84677	-	Exon 15	SNV	2	3001	A->G	59	chr2	chr2:198266834	198266834	T	C
5	Relapse	TET2	NM_001127208.2(TET2):c.4138C>T		COSM87161	+	Exon 9	SNV	1	3282	C->T	45	chr4	chr4:106190860	106190860	C	T
5	Relapse	TET2	NM_001127208.2(TET2):c.2665A>T			+	Exon 3	SNV	13	1026	A->T	132	chr4	chr4:106157764	106157764	A	T
5	Relapse	TET2	NM_001127208.2(TET2):c.2290del			+	Exon 3	Indel	2	1451	C->	23	chr4	chr4:106157389	106157389	C	
6	Diagnosis	ASXL1	NM_015338.6(ASXL1):c.1934dupG			+	Exon 13	Indel	38	1005	T->TG	381	chr20	chr20:31022449	31022449	T	TG
6	Diagnosis	JAK2	NM_004972.3(JAK2):c.1849G>T p.V617F	rs77375493	COSM12600	+	Exon 14	SNV	45	6354	G->T	2868	chr9	chr9:5073770	5073770	G	T
6	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	48	2890	C->T	1383	chr2	chr2:209113113	209113113	G	A
6	Diagnosis	U2AF1	NM_006758.2(U2AF1):c.470A>C p.Q157P			-	Exon 6	SNV	47	3733	A->C	1766	chr21	chr21:44514777	44514777	T	G
8	Diagnosis	TET2	NM_001127208.2(TET2):c.2872C>T			+	Exon 3	SNV	5	2861	C->T	153	chr4	chr4:106157971	106157971	C	T
8	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>A p.R132S	rs121913499	COSM28748	-	Exon 4	SNV	7	2524	C->A	173	chr2	chr2:209113113	209113113	G	T
8	Remission	TET2	NM_001127208.2(TET2):c.2872C>T			+	Exon 3	SNV	5	3483	C->T	178	chr4	chr4:106157971	106157971	C	T

8	Remission	IDH1	NM_005896.3(IDH1):c.394C>A p.R132S	rs121913499	COSM28748	-	Exon 4	SNV	5	2803	C->A	155	chr2	chr2:209113113	209113113	G	T
8	Remission	IDH1	NM_005896.3(IDH1):c.394C>A p.R132S	rs121913499	COSM28748	-	Exon 4	SNV	3	1489	C->A	40	chr2	chr2:209113113	209113113	G	T
8	Remission	TET2	NM_001127208.2(TET2):c.2872C>T			+	Exon 3	SNV	9	2611	C->T	229	chr4	chr4:106157971	106157971	C	T
8	Remission	TET2	NM_001127208.2(TET2):c.2872C>T			+	Exon 3	SNV	12	1932	C->T	238	chr4	chr4:106157971	106157971	C	T
8	Remission	IDH1	NM_005896.3(IDH1):c.394C>A p.R132S	rs121913499	COSM28748	-	Exon 4	SNV	1	1555	C->A	17	chr2	chr2:209113113	209113113	G	T
8	Remission	U2AF1	NM_006758.2(U2AF1):c.101C>T p.S34F			-	Exon 2	SNV	2	1072	C->T	18	chr21	chr21:44524456	44524456	G	A
8	Remission	TET2	NM_001127208.2(TET2):c.2872C>T			+	Exon 3	SNV	16	3444	C->T	563	chr4	chr4:106157971	106157971	C	T
8	Remission	IDH1	NM_005896.3(IDH1):c.394C>A p.R132S	rs121913499	COSM28748	-	Exon 4	SNV	2	2666	C->A	40	chr2	chr2:209113113	209113113	G	T
8	Remission	U2AF1	NM_006758.2(U2AF1):c.101C>T p.S34F			-	Exon 2	SNV	5	818	C->T	38	chr21	chr21:44524456	44524456	G	A
8	Remission	TET2	NM_001127208.2(TET2):c.2872C>T			+	Exon 3	SNV	18	3242	C->T	595	chr4	chr4:106157971	106157971	C	T
8	Remission	IDH1	NM_005896.3(IDH1):c.394C>A p.R132S	rs121913499	COSM28748	-	Exon 4	SNV	2	1787	C->A	27	chr2	chr2:209113113	209113113	G	T
9	Diagnosis	TP53	NM_000546.5(TP53):c.715A>G p.N239D		COSM10777	-	Exon 7	SNV	3	2096	A->G	62	chr17	chr17:7577566	7577566	T	C
9	Diagnosis	FLT3	NM_004119.3(FLT3):c.2503G>C p.D835H	rs121913488	COSM785	-	Exon 20	SNV	5	2069	G->C	112	chr13	chr13:28592642	28592642	C	G
9	Diagnosis	ASXL1	NM_015338.6(ASXL1):c.1534C>T p.Q512*			+	Exon 12	SNV	33	2864	C->T	942	chr20	chr20:31021535	31021535	C	T
9	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	31	1756	C->T	550	chr2	chr2:209113113	209113113	G	A
9	Diagnosis	EZH2	NM_004456.5(EZH2):c.308_327dupCAGTTGCTTCAGTACCCA			-	Exon 4	Indel	5	1522	->CAGTTGCTTCAGT	83	chr7	chr7:148529781	148529781	C	CTATGGGTACTGAAGCAA
9	Diagnosis	STAG2	NM_006603.5(STAG2):c.3097C>T p.R1033*			+	Exon 29	SNV	28	1200	C->T	333	chrX	chrX:123220440	123220440	C	T
9	Relapse	FLT3	NM_004119.3(FLT3):c.2503G>C p.D835H	rs121913488	COSM785	-	Exon 20	SNV	3	1309	G->C	36	chr13	chr13:28592642	28592642	C	G
9	Relapse	RUNX1	NM_001754.4(RUNX1):c.602G>A p.R201Q	rs74315450	COSM24805	-	Exon 6	SNV	3	1301	G->A	38	chr21	chr21:36231782	36231782	C	T
9	Relapse	TP53	NM_000546.5(TP53):c.715A>G p.N239D		COSM10777	-	Exon 7	SNV	2	3379	A->G	53	chr17	chr17:7577566	7577566	T	C
9	Relapse	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	24	1222	C->T	293	chr2	chr2:209113113	209113113	G	A
9	Relapse	NRAS	NM_002524.5(NRAS):c.37G>C p.G13R	rs121434595	COSM569	-	Exon 2	SNV	12	1830	G->C	224	chr1	chr1:115258745	115258745	C	G

9	Relapse	PTPN11	NM_002834.4(PTPN11):c.178G>C p.G60R		COSM13010	+	Exon 3	SNV	2	1644	G->C	30	chr12	chr12:112888162	112888162	G	C
9	Relapse	ASXL1	NM_015338.6(ASXL1):c.1534C>T p.Q512*			+	Exon 12	SNV	41	2883	C->T	1174	chr20	chr20:31021535	31021535	C	T
9	Relapse	STAG2	NM_006603.5(STAG2):c.3097C>T p.R1033*			+	Exon 29	SNV	4	842	C->T	31	chrX	chrX:123220440	123220440	C	T
9	Relapse	EZH2	NM_004456.5(EZH2):c.308_327dupCAGTTGCTTCAGTACCCA			-	Exon 4	Indel	12	1081	->CAGTTGCTTCAGT	134	chr7	chr7:148529781	148529781	C	CTATGGGTACTGAAGCAA
9	Relapse	CEBPA	NM_004364.4(CEBPA):c.174_184del			-	Exon 1	Indel	13	424	CGAGACGTCCA->	55	chr19	chr19:33793137	33793137	TGGACGTCTC	
9	Relapse	CEBPA	NM_004364.4(CEBPA):c.765del p.L256fs*62			-	Exon 1	Indel	22	408	G->	90	chr19	chr19:33792556	33792556	C	
9	Relapse	STAG2	NM_006603.5(STAG2):c.1002G>A p.W334*			+	Exon 10	SNV	4	1620	G->A	65	chrX	chrX:123184144	123184144	G	A
9	Relapse	RUNX1	NM_001754.4(RUNX1):c.911dupC			-	Exon 8	Indel	12	2266	->C	270	chr21	chr21:36171654	36171654	G	GG
10	Diagnosis	NPM1	NM_002520.6(NPM1):c.860_863dupTCTG			+	Exon 11	Indel	27	2113	G->GTCTG	580	chr5	chr5:170837547	170837547	G	GTCTG
10	Diagnosis	SRSF2	NM_003016.4(SRSF2):c.284C>A p.P95H			-	Exon 1	SNV	28	565	C->A	158	chr17	chr17:74732959	74732959	G	T
10	Diagnosis	PTPN11	NM_002834.4(PTPN11):c.1508G>A		COSM13021	+	Exon 13	SNV	7	2390	G->A	178	chr12	chr12:112926888	112926888	G	A
10	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>A p.R132S	rs121913499	COSM28748	-	Exon 4	SNV	18	1579	C->A	290	chr2	chr2:209113113	209113113	G	T
10	Diagnosis	DNMT3A	NM_022552.4(DNMT3A):c.2312G>A		COSM133732	-	Exon 19	SNV	22	1242	G->A	277	chr2	chr2:25463181	25463181	C	T
10	Diagnosis	RAD21	NM_006265.3(RAD21):c.1577_1581del			-	Exon 12	Indel	27	871	AGAAG->	237	chr8	chr8:117862896	117862896	CTTCT	
10	Remission	GNAS	NM_000516.6(GNAS):c.602G>A p.R201H	rs121913495	COSM27895	+	Exon 8	SNV	1	2365	G->A	24	chr20	chr20:57484421	57484421	G	A
10	Remission	GNAS	NM_000516.6(GNAS):c.602G>A p.R201H	rs121913495	COSM27895	+	Exon 8	SNV	1	2352	G->A	24	chr20	chr20:57484421	57484421	G	A
11	Diagnosis	NPM1	NM_002520.6(NPM1):c.863_864insCCTG		COSM17573	+	Exon 11	Indel	51	3890	C->CCCTG	1976	chr5	chr5:170837548	170837548	C	CCCTG
11	Diagnosis	NRAS	NM_002524.5(NRAS):c.34G>T p.G12C	rs121913250	COSM562	-	Exon 2	SNV	28	6063	G->T	1722	chr1	chr1:115258748	115258748	C	A
11	Diagnosis	IDH1	NM_005896.3(IDH1):c.395G>A p.R132H	rs121913500	COSM28746	-	Exon 4	SNV	29	3551	G->A	1045	chr2	chr2:209113112	209113112	C	T
11	Diagnosis	DNMT3A	NM_022552.4(DNMT3A):c.2271T>A			-	Exon 19	SNV	40	3601	T->A	1458	chr2	chr2:25463222	25463222	A	T
11	Diagnosis	CEBPA	NM_004364.4(CEBPA):c.504dupT p.E169*			-	Exon 1	Indel	48	629	->T	305	chr19	chr19:33792817	33792817	T	TA
11	Diagnosis	WT1	NM_024426.6(WT1):c.1155dupG p.S386fs*4			-	Exon 7	Indel	2	4225	->G	70	chr11	chr11:32417912	32417912	C	CC

11	Remission	NRAS	NM_002524.5(NRAS):c.34G>T p.G12C	rs121913250	COSM562	-	Exon 2	SNV	38	4856	G->T	1825	chr1	chr1:115258748	115258748	C	A
11	Remission	NPM1	NM_002520.6(NPM1):c.863_864insCCTG		COSM17573	+	Exon 11	Indel	43	2812	C->CCCTG	1208	chr5	chr5:170837548	170837548	C	CCCTG
11	Remission	DNMT3A	NM_022552.4(DNMT3A):c.2271T>A			-	Exon 19	SNV	40	2978	T->A	1182	chr2	chr2:25463222	25463222	A	T
11	Remission	IDH1	NM_005896.3(IDH1):c.395G>A p.R132H	rs121913500	COSM28746	-	Exon 4	SNV	36	2553	G->A	915	chr2	chr2:209113112	209113112	C	T
11	Remission	CEBPA	NM_004364.4(CEBPA):c.504dupT p.E169*			-	Exon 1	Indel	41	509	->T	208	chr19	chr19:33792817	33792817	T	TA
11	Relapse	NRAS	NM_002524.5(NRAS):c.34G>T p.G12C	rs121913250	COSM562	-	Exon 2	SNV	45	3050	G->T	1372	chr1	chr1:115258748	115258748	C	A
11	Relapse	DNMT3A	NM_022552.4(DNMT3A):c.2271T>A			-	Exon 19	SNV	39	2468	T->A	974	chr2	chr2:25463222	25463222	A	T
11	Relapse	NPM1	NM_002520.6(NPM1):c.863_864insCCTG		COSM17573	+	Exon 11	Indel	57	869	C->CCCTG	496	chr5	chr5:170837548	170837548	C	CCCTG
11	Relapse	IDH1	NM_005896.3(IDH1):c.395G>A p.R132H	rs121913500	COSM28746	-	Exon 4	SNV	39	1391	G->A	548	chr2	chr2:209113112	209113112	C	T
11	Relapse	CEBPA	NM_004364.4(CEBPA):c.504dupT p.E169*			-	Exon 1	Indel	44	439	->T	195	chr19	chr19:33792817	33792817	T	TA
12	Diagnosis	DNMT3A	NM_022552.4(DNMT3A):c.2645G>A	rs147001633	COSM52944	-	Exon 23	SNV	43	1791	G->A	765	chr2	chr2:25457242	25457242	C	T
12	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>G p.R132G		COSM28749	-	Exon 4	SNV	43	2922	C->G	1269	chr2	chr2:209113113	209113113	G	C
13	Diagnosis	CALR	NM_004343.3(CALR):c.1099_1150del p.L367fs*46			+	Exon 9	Indel	31	299	CTTAAGGAGGAGGAAGAAGACAAGAAACGCAAAGAGGAGGAGGCAGAGG->	94	chr19	chr19:13054572	13054572	GGAGGAGGAAGAAGACAAGAAACGCAAAGAGGAGGAGGCAGA	
13	Diagnosis	SETBP1	NM_015559.3(SETBP1):c.2608G>A			+	Exon 4	SNV	29	5212	G->A	1504	chr18	chr18:42531913	42531913	G	A
13	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	21	2667	C->T	561	chr2	chr2:209113113	209113113	G	A
13	Diagnosis	EZH2	NM_004456.5(EZH2):c.1988A>G p.Y663C			-	Exon 17	SNV	2	1870	A->G	38	chr7	chr7:148507466	148507466	T	C
13	Diagnosis	ASXL1	NM_015338.6(ASXL1):c.1934dupG			+	Exon 13	Indel	25	718	T->TG	183	chr20	chr20:31022449	31022449	T	TG
13	Diagnosis	EZH2	NM_004456.5(EZH2):c.1672+2T>G p.?			-	Splice? (Intron	SNV	28	2973	T->G	821	chr7	chr7:148512004	148512004	A	C

13	Remission	CALR	NM_004343.3(CALR):c.1099_1150del p.L367fs*46			+	Exon 9	Indel	18	490	CTTAAGGAGGAGGAAGAAGACAAGAAACGCAAAGAGGAGGAGGCAGAGG->	89	chr19	chr19:13054572	13054572	GGAGGAGGAAGAAGACAAGAAACGCAAAGAGGAGGAGGCAGA	
13	Remission	ASXL1	NM_015338.6(ASXL1):c.1934dupG			+	Exon 13	Indel	29	1065	T->TG	316	chr20	chr20:31022449	31022449	T	TG
13	Remission	EZH2	NM_004456.5(EZH2):c.1988A>G p.Y663C			-	Exon 17	SNV	19	2410	A->G	464	chr7	chr7:148507466	148507466	T	C
13	Remission	SETBP1	NM_015559.3(SETBP1):c.2608G>A			+	Exon 4	SNV	2	5781	G->A	138	chr18	chr18:42531913	42531913	G	A
13	Remission	EZH2	NM_004456.5(EZH2):c.1672+2T>G p.?			-	Splice?(Intron	SNV	4	3394	T->G	127	chr7	chr7:148512004	148512004	A	C
14	Diagnosis	IDH1	NM_005896.3(IDH1):c.395G>A p.R132H	rs121913500	COSM28746	-	Exon 4	SNV	22	1011	G->A	218	chr2	chr2:209113112	209113112	C	T
14	Diagnosis	DNMT3A	NM_022552.4(DNMT3A):c.1627G>T		COSM87002	-	Exon 14	SNV	34	422	G->T	145	chr2	chr2:25467449	25467449	C	A
14	Diagnosis	NPM1	NM_002520.6(NPM1):c.860_863dupTCTG			+	Exon 11	Indel	38	2108	G->GTCTG	809	chr5	chr5:170837547	170837547	G	GTCTG
14	Remission	NPM1	NM_002520.6(NPM1):c.860_863dupTCTG			+	Exon 11	Indel	5	2345	G->GTCTG	119	chr5	chr5:170837547	170837547	G	GTCTG
14	Remission	DNMT3A	NM_022552.4(DNMT3A):c.1627G>T		COSM87002	-	Exon 14	SNV	10	2321	G->T	236	chr2	chr2:25467449	25467449	C	A
14	Remission	IDH1	NM_005896.3(IDH1):c.395G>A p.R132H	rs121913500	COSM28746	-	Exon 4	SNV	4	2431	G->A	91	chr2	chr2:209113112	209113112	C	T
14	Relapse	NPM1	NM_002520.6(NPM1):c.860_863dupTCTG			+	Exon 11	Indel	49	1617	G->GTCTG	790	chr5	chr5:170837547	170837547	G	GTCTG
14	Relapse	FBXW7	NM_033632.3(FBXW7):c.2065C>T		COSM27083	-	Exon 12	SNV	1	5212	C->T	69	chr4	chr4:153244092	153244092	G	A
14	Relapse	DNMT3A	NM_022552.4(DNMT3A):c.1627G>T		COSM87002	-	Exon 14	SNV	39	1519	G->T	596	chr2	chr2:25467449	25467449	C	A
14	Relapse	CEBPA	NM_004364.4(CEBPA):c.68dupC p.H24fs*84			-	Exon 1	Indel	1	2037	->C	26	chr19	chr19:33793253	33793253	G	GG
15	Diagnosis	TP53	NM_000546.5(TP53):c.587G>C p.R196P		COSM43814	-	Exon 6	SNV	69	2915	G->C	1998	chr17	chr17:7578262	7578262	C	G
15	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	23	1658	C->T	389	chr2	chr2:209113113	209113113	G	A
15	Diagnosis	SF3B1	NM_012433.3(SF3B1):c.2098A>G p.K700E		COSM84677	-	Exon 15	SNV	36	2391	A->G	868	chr2	chr2:198266834	198266834	T	C
15	Diagnosis	ASXL1	NM_015338.6(ASXL1):c.1934dupG			+	Exon 13	Indel	5	776	T->TG	42	chr20	chr20:31022449	31022449	T	TG

15	Diagnosis	ASXL1	NM_015338.6(ASXL1):c.1900_1922delp.E635fs*14		COSM36165	+	Exon 13	Indel	4	796	AGAGAGGCGGCCACCACTGCCAT->	28	chr20	chr20:31022415	31022415	AGAGAGGCGGCCACCACTGC	
15	Relapse	SF3B1	NM_012433.3(SF3B1):c.2098A>G p.K700E		COSM84677	-	Exon 15	SNV	37	3690	A->G	1369	chr2	chr2:198266834	198266834	T	C
15	Relapse	ASXL1	NM_015338.6(ASXL1):c.1934dupG			+	Exon 13	Indel	4	1111	T->TG	42	chr20	chr20:31022449	31022449	T	TG
15	Relapse	ASXL1	NM_015338.6(ASXL1):c.1900_1922delp.E635fs*14		COSM36165	+	Exon 13	Indel	2	1048	AGAGAGGCGGCCACCACTGCCAT->	25	chr20	chr20:31022415	31022415	AGAGAGGCGGCCACCACTGC	
15	Relapse	NF1	NM_001042492.3(NF1):c.2033dupC			+	Exon 18	Indel	18	1291	G->GC	227	chr17	chr17:29553484	29553484	G	GC
15	Relapse	TP53	NM_000546.5(TP53):c.587G>C p.R196P		COSM43814	-	Exon 6	SNV	70	3823	G->C	2683	chr17	chr17:7578262	7578262	C	G
15	Relapse	BRINP3	NM_199051.3(BRINP3):c.107C>T p.S36L			-	Exon 2	SNV	5	3724	C->T	193	chr1	chr1:190423914	190423914	G	A
15	Relapse	NF1	NM_001042492.3(NF1):c.6669C>A			+	Exon 44	SNV	42	1867	C->A	775	chr17	chr17:29664863	29664863	C	A
16	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	42	1991	C->T	839	chr2	chr2:209113113	209113113	G	A
16	Diagnosis	NRAS	NM_002524.5(NRAS):c.35G>C p.G12A	rs121913237	COSM565	-	Exon 2	SNV	32	3323	G->C	1075	chr1	chr1:115258747	115258747	C	G
16	Diagnosis	NRAS	NM_002524.5(NRAS):c.37G>C p.G13R	rs121434595	COSM569	-	Exon 2	SNV	1	3334	G->C	34	chr1	chr1:115258745	115258745	C	G
16	Diagnosis	NPM1	NM_002520.6(NPM1):c.860_863dupTCTG			+	Exon 11	Indel	43	1459	G->GTCTG	625	chr5	chr5:170837547	170837547	G	GTCTG
16	Diagnosis	GATA2	NM_032638.5(GATA2):c.837_838insAA			-	Exon 3	Indel	1	4549	->AA	61	chr3	chr3:128204604	128204604	G	GTT
16	Relapse	NRAS	NM_002524.5(NRAS):c.35G>C p.G12A	rs121913237	COSM565	-	Exon 2	SNV	3	3550	G->C	120	chr1	chr1:115258747	115258747	C	G
16	Relapse	NRAS	NM_002524.5(NRAS):c.37G>C p.G13R	rs121434595	COSM569	-	Exon 2	SNV	5	3529	G->C	159	chr1	chr1:115258745	115258745	C	G
16	Relapse	NPM1	NM_002520.6(NPM1):c.860_863dupTCTG			+	Exon 11	Indel	43	1552	G->GTCTG	675	chr5	chr5:170837547	170837547	G	GTCTG
16	Relapse	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	44	1664	C->T	724	chr2	chr2:209113113	209113113	G	A
17	Diagnosis	BCOR	NM_017745.6(BCOR):c.2190dupA			-	Exon 4	Indel	67	1180	->A	791	chrX	chrX:39932409	39932409	A	AT
17	Diagnosis	DNMT3A	NM_022552.4(DNMT3A):c.2645G>A	rs147001633	COSM52944	-	Exon 23	SNV	31	2372	G->A	745	chr2	chr2:25457242	25457242	C	T
17	Diagnosis	WT1	NM_024426.6(WT1):c.1354+1G>C p.?			-	Splice?(Intron	SNV	28	2663	G->C	753	chr11	chr11:32414211	32414211	C	G

17	Diagnosis	BCORL1	NM_021946.4(BCOR L1):c.2305A>T			+	Exon 3	SNV	64	1296	A->T	835	chrX	chrX:129149053	129149053	A	T
17	Diagnosis	NRAS	NM_002524.5(NRAS) :c.35G>A p.G12D	rs121913237	COSM564	-	Exon 2	SNV	32	2811	G->A	892	chr1	chr1:115258747	115258747	C	T
17	Diagnosis	IDH1	NM_005896.3(IDH1): c.395G>T p.R132L		COSM28750	-	Exon 4	SNV	28	1682	G->T	476	chr2	chr2:209113112	209113112	C	A
17	Remission	IDH1	NM_005896.3(IDH1): c.395G>T p.R132L		COSM28750	-	Exon 4	SNV	33	1562	G->T	517	chr2	chr2:209113112	209113112	C	A
17	Remission	WT1	NM_024426.6(WT1):c .1354+1G>C p.?			-	Splice? (Intron	SNV	25	1857	G->C	456	chr11	chr11:32414211	32414211	C	G
17	Remission	NRAS	NM_002524.5(NRAS) :c.35G>A p.G12D	rs121913237	COSM564	-	Exon 2	SNV	30	3005	G->A	907	chr1	chr1:115258747	115258747	C	T
17	Remission	BCORL1	NM_021946.4(BCOR L1):c.2305A>T			+	Exon 3	SNV	61	1294	A->T	786	chrX	chrX:129149053	129149053	A	T
17	Remission	BCOR	NM_017745.6(BCOR) :c.2190dupA			-	Exon 4	Indel	60	1098	->A	662	chrX	chrX:39932409	39932409	A	AT
17	Remission	DNMT3A	NM_022552.4(DNMT 3A):c.2645G>A	rs147001633	COSM52944	-	Exon 23	SNV	32	2066	G->A	652	chr2	chr2:25457242	25457242	C	T
18	Diagnosis	RUNX1	NM_001754.4(RUNX 1):c.611G>A p.R204Q		COSM24731	-	Exon 6	SNV	29	1299	G->A	379	chr21	chr21:36231773	36231773	C	T
18	Diagnosis	STAT3	NM_139276.2(STAT3):c.1940A>T p.N647I			-	Exon 21	SNV	3	2127	A->T	55	chr17	chr17:40474461	40474461	T	A
18	Diagnosis	SRSF2	NM_003016.4(SRSF2):c.284_307del p.P95_R102del			-	Exon 1	Indel	24	1811	CCCCGG ACTCACA CCACAG CCGCC->	431	chr17	chr17:74732936	74732936	GGCGG CTGTG GTGTG AGTCC	
18	Diagnosis	IDH1	NM_005896.3(IDH1): c.395G>A p.R132H	rs121913500	COSM28746	-	Exon 4	SNV	17	1846	G->A	317	chr2	chr2:209113112	209113112	C	T
18	Diagnosis	ASXL1	NM_015338.6(ASXL1) :c.1749G>A p.W583*		COSM133567	+	Exon 13	SNV	3	1670	G->A	57	chr20	chr20:31022264	31022264	G	A
19	Diagnosis	IDH1	NM_005896.3(IDH1): c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	6	1428	C->T	90	chr2	chr2:209113113	209113113	G	A
20	Diagnosis	SRSF2	NM_003016.4(SRSF2):c.284C>A p.P95H			-	Exon 1	SNV	45	1287	C->A	573	chr17	chr17:74732959	74732959	G	T
20	Diagnosis	IDH1	NM_005896.3(IDH1): c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	42	1643	C->T	695	chr2	chr2:209113113	209113113	G	A
20	Diagnosis	ASXL1	NM_015338.6(ASXL1) :c.1934dupG			+	Exon 13	Indel	36	1180	T->TG	424	chr20	chr20:31022449	31022449	T	TG
20	Diagnosis	BRAF	NM_004333.6(BRAF): c.1406G>C p.G469A	rs121913355	COSM460	-	Exon 11	SNV	2	1319	G->C	28	chr7	chr7:140481402	140481402	C	G
20	Diagnosis	TET2	NM_001127208.2(TE T2):c.4317del			+	Exon 10	Indel	47	668	A->	313	chr4	chr4:106193855	106193855	A	
20	Diagnosis	TET2	NM_001127208.2(TE T2):c.4627A>T			+	Exon 11	SNV	46	1866	A->T	857	chr4	chr4:106196294	106196294	A	T

20	Remission	SRSF2	NM_003016.4(SRSF2):c.284C>A p.P95H			-	Exon 1	SNV	4	1569	C->A	63	chr17	chr17:74732959	74732959	G	T
20	Remission	ASXL1	NM_015338.6(ASXL1):c.1934dupG			+	Exon 13	Indel	19	1051	T->TG	199	chr20	chr20:31022449	31022449	T	TG
20	Remission	BRAF	NM_004333.6(BRAF):c.1406G>C p.G469A	rs121913355	COSM460	-	Exon 11	SNV	25	623	G->C	157	chr7	chr7:140481402	140481402	C	G
20	Remission	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	3	1483	C->T	39	chr2	chr2:209113113	209113113	G	A
20	Remission	TET2	NM_001127208.2(TET2):c.4627A>T			+	Exon 11	SNV	39	1087	A->T	429	chr4	chr4:106196294	106196294	A	T
20	Remission	TET2	NM_001127208.2(TET2):c.4317del			+	Exon 10	Indel	41	329	A->	136	chr4	chr4:106193855	106193855	A	
20	Remission	ASXL1	NM_015338.6(ASXL1):c.1934dupG			+	Exon 13	Indel	24	566	T->TG	136	chr20	chr20:31022449	31022449	T	TG
20	Remission	BRAF	NM_004333.6(BRAF):c.1406G>C p.G469A	rs121913355	COSM460	-	Exon 11	SNV	30	305	G->C	93	chr7	chr7:140481402	140481402	C	G
20	Remission	TET2	NM_001127208.2(TET2):c.4317del			+	Exon 10	Indel	38	288	A->	108	chr4	chr4:106193855	106193855	A	
20	Remission	TET2	NM_001127208.2(TET2):c.4627A>T			+	Exon 11	SNV	40	945	A->T	378	chr4	chr4:106196294	106196294	A	T
20	Remission	TET2	NM_001127208.2(TET2):c.4627A>T			+	Exon 11	SNV	32	1942	A->T	629	chr4	chr4:106196294	106196294	A	T
20	Remission	RUNX1	NM_001754.4(RUNX1):c.1240dupT			-	Exon 9	Indel	10	2664	->T	262	chr21	chr21:36164635	36164635	G	GA
20	Remission	TET2	NM_001127208.2(TET2):c.4317del			+	Exon 10	Indel	31	410	A->	127	chr4	chr4:106193855	106193855	A	
20	Remission	BRAF	NM_004333.6(BRAF):c.1406G>C p.G469A	rs121913355	COSM460	-	Exon 11	SNV	9	602	G->C	56	chr7	chr7:140481402	140481402	C	G
20	Remission	ASXL1	NM_015338.6(ASXL1):c.1934dupG			+	Exon 13	Indel	18	1271	T->TG	232	chr20	chr20:31022449	31022449	T	TG
20	Remission	SRSF2	NM_003016.4(SRSF2):c.284C>A p.P95H			-	Exon 1	SNV	21	1897	C->A	396	chr17	chr17:74732959	74732959	G	T
20	Relapse	SRSF2	NM_003016.4(SRSF2):c.284C>A p.P95H			-	Exon 1	SNV	42	1899	C->A	799	chr17	chr17:74732959	74732959	G	T
20	Relapse	ASXL1	NM_015338.6(ASXL1):c.1934dupG			+	Exon 13	Indel	30	1410	T->TG	429	chr20	chr20:31022449	31022449	T	TG
20	Relapse	TET2	NM_001127208.2(TET2):c.4317del			+	Exon 10	Indel	43	652	A->	278	chr4	chr4:106193855	106193855	A	
20	Relapse	RUNX1	NM_001754.4(RUNX1):c.1240dupT			-	Exon 9	Indel	16	2911	->T	457	chr21	chr21:36164635	36164635	G	GA
20	Relapse	TET2	NM_001127208.2(TET2):c.4627A>T			+	Exon 11	SNV	45	1660	A->T	743	chr4	chr4:106196294	106196294	A	T
20	Relapse	ASXL1	NM_015338.6(ASXL1):c.1934dupG				Exon 13	Indel	8	531	T->TG	40	chr20	chr20:31022449	31022449	T	TG

20	Relapse	SRSF2	NM_003016.4(SRSF2):c.284C>A p.P95H				Exon 1	SNV	48	625	C->A	301	chr17	chr17:74732959	74732959	G	T
20	Relapse	TET2	NM_001127208.2(TET2):c.4317del				Exon 10	Indel	46	427	A->	196	chr4	chr4:106193855	106193855	A	
20	Relapse	TET2	NM_001127208.2(TET2):c.4627A>T				Exon 11	SNV	45	761	A->T	344	chr4	chr4:106196294	106196294	A	T
20	Relapse	RUNX1	NM_001754.4(RUNX1):c.1240dupT				Exon 9	Indel	69	1024	->T	708	chr21	chr21:36164635	36164635	G	GA
21	Diagnosis	DNMT3A	NM_022552.4(DNMT3A):c.2645G>A	rs147001633	COSM52944	-	Exon 23	SNV	40	3545	G->A	1419	chr2	chr2:25457242	25457242	C	T
21	Diagnosis	PHF6	NM_032458.3(PHF6):c.903C>G p.Y301*			+	Exon 9	SNV	13	2031	C->G	263	chrX	chrX:133551267	133551267	C	G
21	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	40	2576	C->T	1031	chr2	chr2:209113113	209113113	G	A
21	Diagnosis	BCOR	NM_017745.6(BCOR):c.3071C>A p.S1024*			-	Exon 6	SNV	11	2829	C->A	307	chrX	chrX:39930393	39930393	G	T
21	Diagnosis	PHF6	NM_032458.3(PHF6):c.947_948insAG			+	Exon 9	Indel	24	3173	A->AAG	779	chrX	chrX:133551312	133551312	A	AAG
22	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	5	1558	C->T	84	chr2	chr2:209113113	209113113	G	A
22	Diagnosis	ASXL1	NM_015338.6(ASXL1):c.2926C>T p.Q976*			+	Exon 13	SNV	5	4478	C->T	242	chr20	chr20:31023441	31023441	C	T
22	Diagnosis	CSF3R	NM_156039.3(CSF3R):c.2326C>T p.Q776*			-	Exon 17	SNV	4	1810	C->T	70	chr1	chr1:36932224	36932224	G	A
22	Diagnosis	RUNX1	NM_001754.4(RUNX1):c.602G>A p.R201Q	rs74315450	COSM24805	-	Exon 6	SNV	4	1358	G->A	57	chr21	chr21:36231782	36231782	C	T
22	Diagnosis	U2AF1	NM_006758.2(U2AF1):c.470A>G p.Q157R			-	Exon 6	SNV	4	3417	A->G	148	chr21	chr21:44514777	44514777	T	C
22	Remission	CSF3R	NM_156039.3(CSF3R):c.2326C>T p.Q776*			-	Exon 17	SNV	1	2324	C->T	33	chr1	chr1:36932224	36932224	G	A
22	Remission	ASXL1	NM_015338.6(ASXL1):c.2926C>T p.Q976*			+	Exon 13	SNV	2	5404	C->T	103	chr20	chr20:31023441	31023441	C	T
22	Remission	U2AF1	NM_006758.2(U2AF1):c.470A>G p.Q157R			-	Exon 6	SNV	2	3727	A->G	74	chr21	chr21:44514777	44514777	T	C
22	Remission	ASXL1	NM_015338.6(ASXL1):c.2487del p.A830fs*8			+	Exon 13	Indel	1	2544	A->	26	chr20	chr20:31023002	31023002	A	
22	Remission	RUNX1	NM_001754.4(RUNX1):c.602G>A p.R201Q	rs74315450	COSM24805	-	Exon 6	SNV	1	1316	G->A	17	chr21	chr21:36231782	36231782	C	T
23	Diagnosis	ZRSR2	NM_005089.3(ZRSR2):c.397G>T p.E133*			+	Exon 5	SNV	69	77	G->T	53	chrX	chrX:15822318	15822318	G	T
23	Diagnosis	ETNK1	NM_018638.5(ETNK1):c.464A>T p.N155I			+	Exon 3	SNV	5	5269	A->T	828	chr12	chr12:22811995	22811995	A	T
23	Diagnosis	ASXL1	NM_015338.6(ASXL1):c.1934dupG			+	Exon 13	Indel	9	1272	T->TG	122	chr20	chr20:31022449	31022449	T	TG

23	Diagnosis	ETNK1	NM_018638.5(ETNK1):c.464A>G p.N155S			+	Exon 3	SNV	11	5269	A->G	828	chr12	chr12:22811995	22811995	A	G
23	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	8	1948	C->T	158	chr2	chr2:209113113	209113113	G	A
23	Diagnosis	ASXL1	NM_015338.6(ASXL1):c.2077C>T p.R693*		COSM51388	+	Exon 13	SNV	3	2653	C->T	68	chr20	chr20:31022592	31022592	C	T
24	Diagnosis	FLT3	NM_004119.3(FLT3):c.2504A>T p.D835V	rs121909646	COSM784	-	Exon 20	SNV	1	2369	A->T	33	chr13	chr13:28592641	28592641	T	A
24	Diagnosis	KIT	NM_000222.2(KIT):c.2447A>T p.D816V	rs121913507	COSM1314	+	Exon 17	SNV	36	2516	A->T	918	chr4	chr4:55599321	55599321	A	T
24	Diagnosis	NRAS	NM_002524.5(NRAS):c.35G>A p.G12D	rs121913237	COSM564	-	Exon 2	SNV	1	4033	G->A	51	chr1	chr1:115258747	115258747	C	T
24	Diagnosis	NRAS	NM_002524.5(NRAS):c.38G>A p.G13D	rs121434596	COSM573	-	Exon 2	SNV	2	4040	G->A	62	chr1	chr1:115258744	115258744	C	T
24	Diagnosis	BCOR	NM_017745.6(BCOR):c.4537C>T p.R1513*			-	Exon 12	SNV	4	903	C->T	32	chrX	chrX:39914723	39914723	G	A
24	Diagnosis	DNMT3A	NM_022552.4(DNMT3A):c.2120G>A			-	Exon 18	SNV	95	3009	G->A	2845	chr2	chr2:25463562	25463562	C	T
24	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	46	2194	C->T	1013	chr2	chr2:209113113	209113113	G	A
24	Diagnosis	BRINP3	NM_199051.3(BRINP3):c.1399T>C			-	Exon 8	SNV	39	1185	T->C	457	chr1	chr1:190068050	190068050	A	G
24	Diagnosis	BCOR	NM_017745.6(BCOR):c.1201G>T p.E401*			-	Exon 4	SNV	4	755	G->T	27	chrX	chrX:39933398	39933398	C	A
24	Remission	DNMT3A	NM_022552.4(DNMT3A):c.2120G>A			-	Exon 18	SNV	29	4222	G->A	1237	chr2	chr2:25463562	25463562	C	T
24	Remission	NF1	NM_001042492.3(NF1):c.5503C>T			+	Exon 38	SNV	4	5685	C->T	228	chr17	chr17:29654751	29654751	C	T
25	Diagnosis	JAK2	NM_004972.3(JAK2):c.1849G>T p.V617F	rs77375493	COSM12600	+	Exon 14	SNV	57	2174	G->T	1235	chr9	chr9:5073770	5073770	G	T
25	Diagnosis	IDH2	NM_002168.3(IDH2):c.419G>A p.R140Q	rs121913502	COSM41590	-	Exon 4	SNV	18	3960	G->A	713	chr15	chr15:90631934	90631934	C	T
25	Diagnosis	IDH1	NM_005896.3(IDH1):c.395G>A p.R132H	rs121913500	COSM28746	-	Exon 4	SNV	29	1299	G->A	374	chr2	chr2:209113112	209113112	C	T
25	Diagnosis	SRSF2	NM_003016.4(SRSF2):c.278_279insGCG			-	Exon 1	Indel	48	1696	->GCG	810	chr17	chr17:74732965	74732965	C	CCGC
25	Remission	JAK2	NM_004972.3(JAK2):c.1849G>T p.V617F	rs77375493	COSM12600	+	Exon 14	SNV	5	3942	G->T	208	chr9	chr9:5073770	5073770	G	T
25	Remission	IDH1	NM_005896.3(IDH1):c.395G>A p.R132H	rs121913500	COSM28746	-	Exon 4	SNV	6	1658	G->A	94	chr2	chr2:209113112	209113112	C	T
25	Remission	SRSF2	NM_003016.4(SRSF2):c.278_279insGCG			-	Exon 1	Indel	6	2323	->GCG	134	chr17	chr17:74732965	74732965	C	CCGC
26	Diagnosis	DNMT3A	NM_022552.4(DNMT3A):c.866G>A			-	Exon 8	SNV	18	1575	G->A	284	chr2	chr2:25470608	25470608	C	T

26	Diagnosis	U2AF1	NM_006758.2(U2AF1):c.470A>C p.Q157P			-	Exon 6	SNV	21	5828	A->C	1236	chr21	chr21:44514777	44514777	T	G
26	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	23	2818	C->T	640	chr2	chr2:209113113	209113113	G	A
26	Diagnosis	ASXL1	NM_015338.6(ASXL1):c.1934dupG			+	Exon 13	Indel	13	1805	T->TG	243	chr20	chr20:31022449	31022449	T	TG
27	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	39	2173	C->T	854	chr2	chr2:209113113	209113113	G	A
27	Diagnosis	DNMT3A	NM_022552.4(DNMT3A):c.2645G>A	rs147001633	COSM52944	-	Exon 23	SNV	38	2810	G->A	1061	chr2	chr2:25457242	25457242	C	T
28	Diagnosis	BCOR	NM_017745.6(BCOR):c.2742dupT p.G915*			-	Exon 4	Indel	46	1657	->T	768	chrX	chrX:39931857	39931857	A	AA
28	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	45	2135	C->T	970	chr2	chr2:209113113	209113113	G	A
28	Diagnosis	U2AF1	NM_006758.2(U2AF1):c.101C>T p.S34F			-	Exon 2	SNV	51	860	C->T	435	chr21	chr21:44524456	44524456	G	A
28	Remission	U2AF1	NM_006758.2(U2AF1):c.101C>T p.S34F			-	Exon 2	SNV	47	657	C->T	310	chr21	chr21:44524456	44524456	G	A
28	Remission	IDH1	NM_005896.3(IDH1):c.394C>T p.R132C	rs121913499	COSM28747	-	Exon 4	SNV	39	1714	C->T	668	chr2	chr2:209113113	209113113	G	A
28	Remission	BCOR	NM_017745.6(BCOR):c.2742dupT p.G915*			-	Exon 4	Indel	41	1658	->T	679	chrX	chrX:39931857	39931857	A	AA
28	Remission	DNMT3A	NM_022552.4(DNMT3A):c.1122+2T>G p.?			-	Splice?(Intron	SNV	37	1570	T->G	588	chr2	chr2:25469918	25469918	A	C
29	Diagnosis	PTPN11	NM_002834.4(PTPN11):c.215C>A p.A72D		COSM13035	+	Exon 3	SNV	1	3736	C->A	53	chr12	chr12:112888199	112888199	C	A
29	Diagnosis	NPM1	NM_002520.6(NPM1):c.863_864insTATG		COSM20815	+	Exon 11	Indel	44	2202	C->CTATG	976	chr5	chr5:170837548	170837548	C	CTATG
29	Diagnosis	IDH1	NM_005896.3(IDH1):c.395G>A p.R132H	rs121913500	COSM28746	-	Exon 4	SNV	40	3108	G->A	1246	chr2	chr2:209113112	209113112	C	T
29	Diagnosis	NRAS	NM_002524.5(NRAS):c.35G>A p.G12D	rs121913237	COSM564	-	Exon 2	SNV	36	5700	G->A	2072	chr1	chr1:115258747	115258747	C	T
29	Diagnosis	NF1	NM_001042492.3(NF1):c.1700T>G			+	Exon 15	SNV	12	548	T->G	68	chr17	chr17:29548926	29548926	T	G
29	Remission	IDH1	NM_005896.3(IDH1):c.395G>A p.R132H	rs121913500	COSM28746	-	Exon 4	SNV	14	1380	G->A	199	chr2	chr2:209113112	209113112	C	T
29	Remission	NPM1	NM_002520.6(NPM1):c.863_864insTATG		COSM20815	+	Exon 11	Indel	14	1035	C->CTATG	146	chr5	chr5:170837548	170837548	C	CTATG
29	Remission	NF1	NM_001042492.3(NF1):c.1700T>G			+	Exon 15	SNV	6	287	T->G	16	chr17	chr17:29548926	29548926	T	G
29	Remission	DNMT3A	NM_022552.4(DNMT3A):c.2723A>G			-	Exon 23	SNV	1	1943	A->G	28	chr2	chr2:25457164	25457164	T	C
29	Remission	NF1	NM_001042492.3(NF1):c.1700T>G			+	Exon 15	SNV	8	303	T->G	24	chr17	chr17:29548926	29548926	T	G

29	Remission	NRAS	NM_002524.5(NRAS):c.35G>A p.G12D	rs121913237	COSM564	-	Exon 2	SNV	15	2877	G->A	425	chr1	chr1:115258747	115258747	C	T
31	Diagnosis	DNMT3A	NM_022552.4(DNMT3A):c.1792C>T		COSM133736	-	Exon 15	SNV	16	4044	C->T	657	chr2	chr2:25467083	25467083	G	A
31	Diagnosis	DNMT3A	NM_022552.4(DNMT3A):c.2644C>T		COSM53042	-	Exon 23	SNV	15	4029	C->T	610	chr2	chr2:25457243	25457243	G	A
31	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>G p.R132G		COSM28749	-	Exon 4	SNV	19	1636	C->G	317	chr2	chr2:209113113	209113113	G	C
31	Remission	DNMT3A	NM_022552.4(DNMT3A):c.2644C>T		COSM53042	-	Exon 23	SNV	3	4444	C->T	125	chr2	chr2:25457243	25457243	G	A
31	Remission	IDH1	NM_005896.3(IDH1):c.394C>G p.R132G		COSM28749	-	Exon 4	SNV	2	3048	C->G	57	chr2	chr2:209113113	209113113	G	C
32	Diagnosis	STAT5A	NM_003152.3(STAT5A):c.1423G>A			+	Exon 13	SNV	23	2866	G->A	666	chr17	chr17:40457670	40457670	G	A
32	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>G p.R132G		COSM28749	-	Exon 4	SNV	18	2248	C->G	396	chr2	chr2:209113113	209113113	G	C
32	Remission	STAT5A	NM_003152.3(STAT5A):c.1423G>A			+	Exon 13	SNV	9	2813	G->A	251	chr17	chr17:40457670	40457670	G	A
33	Diagnosis	TP53	NM_000546.5(TP53):c.524G>A p.R175H	rs28934578	COSM10648	-	Exon 5	SNV	2	7553	G->A	129	chr17	chr17:7578406	7578406	C	T
33	Diagnosis	DNMT3A	NM_022552.4(DNMT3A):c.2645G>A	rs147001633	COSM52944	-	Exon 23	SNV	26	5897	G->A	1557	chr2	chr2:25457242	25457242	C	T
33	Diagnosis	IDH1	NM_005896.3(IDH1):c.394C>G p.R132G		COSM28749	-	Exon 4	SNV	30	4615	C->G	1381	chr2	chr2:209113113	209113113	G	C
33	Diagnosis	STAT5B	NM_012448.4(STAT5B):c.1924A>C			-	Exon 16	SNV	3	6025	A->C	153	chr17	chr17:40359729	40359729	T	G
33	Diagnosis	PHF6	NM_032458.3(PHF6):c.889T>C p.C297R			+	Exon 9	SNV	23	2419	T->C	558	chrX	chrX:133551253	133551253	T	C
33	Diagnosis	CUX1	NM_181552.4(CUX1):c.530+2T>C p.?			+	Splice?(Intron	SNV	10	3958	T->C	379	chr7	chr7:101747741	101747741	T	C

Table S7: CyTOF antibodies utilized.

Target	Label	Source	Cat #
CD34	148Nd	eBioscience	14-0349-82
CD123	145Nd	BD	554527
c-kit	139La	BioLegend	313202
CD38	168Er	BioLegend	303502
CD33	169Tm	DVS-Fluidigm	3169010B
CD64	146Nd	DVS-Fluidigm	3146006B
CD11b	144Nd	DVS-Fluidigm	3144001B
CD11c	150Nd	BioLegend	337221
CD13	154Sm	BioLegend	301702
CD14	160Gd	BioLegend	301802
CD15	163Dy	BioLegend	323035
HLA-DR	174Yb	BioLegend	307602
CD56	162Dy	BD	559043
CD19	143Nd	BioLegend	302202
CD71	175Lu	DVS-Fluidigm	3175011B
CD44	166Er	DVS-Fluidigm	3166001B
p-STAT3	152Sm	BD	612357
p-STAT5	147Sm	DVS-Fluidigm	3147012A
p-AKT	159Tb	BD	560397
p-ERK1/2	167Er	CST	4370BF
Bax	173Yb	BioLegend	633602
Bcl-2	158Gd	BioLegend	658702
Bcl-xL	141Pr	CST	2764BF
Mcl-1	176Yb	CST	94296BF
Ki67	172Yb	DVS-Fluidigm	3172024B

Figure S1: Molecular, cytogenetic, and IDH1 variants across the P1b study population. (A), Oncoprint of molecular mutations identified at diagnosis in 31 patients enrolled demonstrated a diverse molecular landscape. (B-C), Neither median mutation burden nor *IDH1* VAF was significantly different between included disease types. (D), IDH1 variants differed across disease types, with R132C mutations most frequent at diagnosis in ND and R/R-AML. IDH1 R132L and R132S variants were not identified in patients with MDS or MPN. (E), Clonal hierarchy of baseline mutations assessed using bulk myeloid NGS panel on baseline samples.

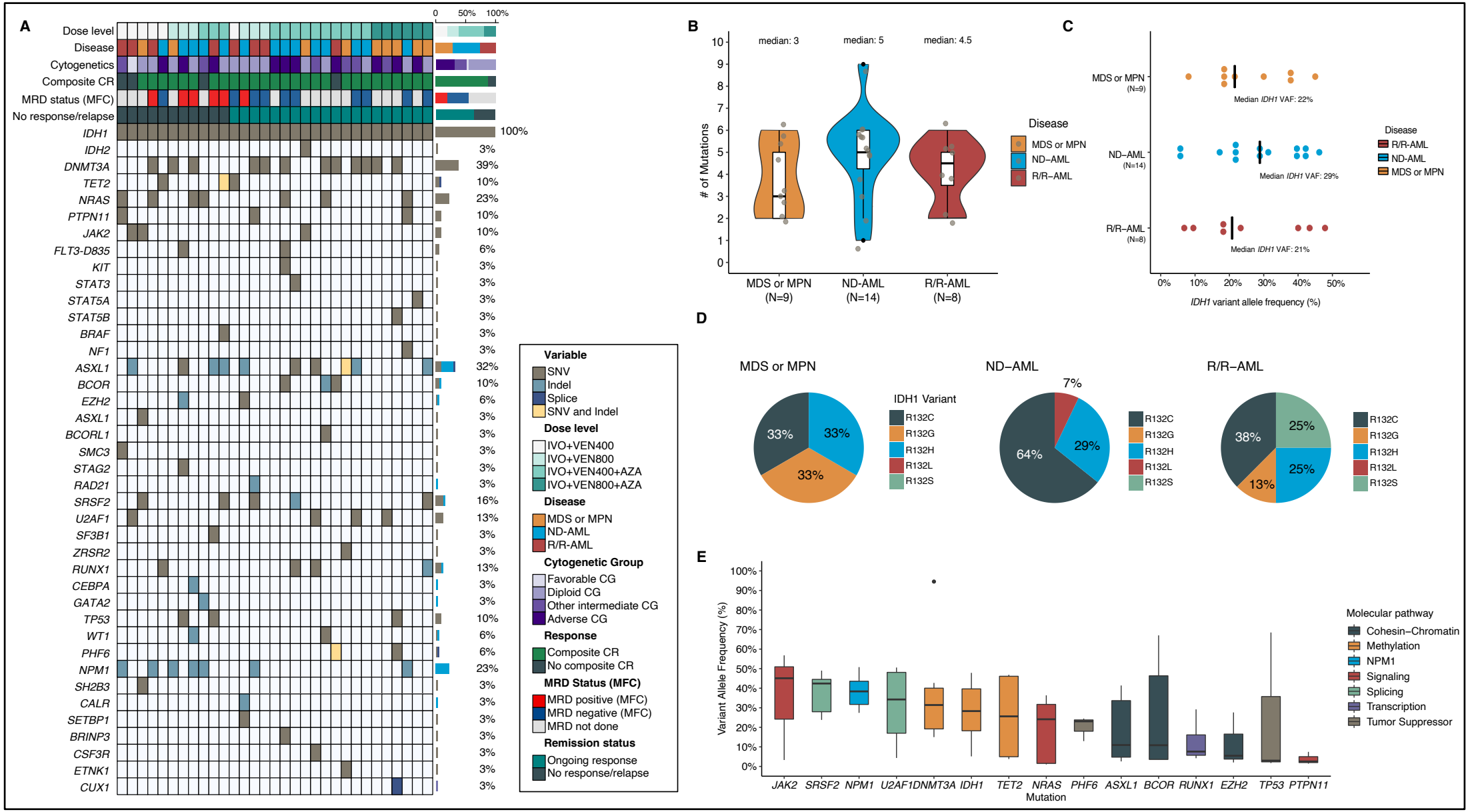

Figure S2: Pharmacokinetics of IVO+VEN or IVO+VEN+AZA (continued). (A), AUC 24 and (B), Cmax of IVO+VEN or IVO+VEN+AZA within each respective dose level demonstrated a decrease in the presence of IVO when assessed on C2D14 compared to sampling on C1D14 in the absence of co-occurring IVO administration.

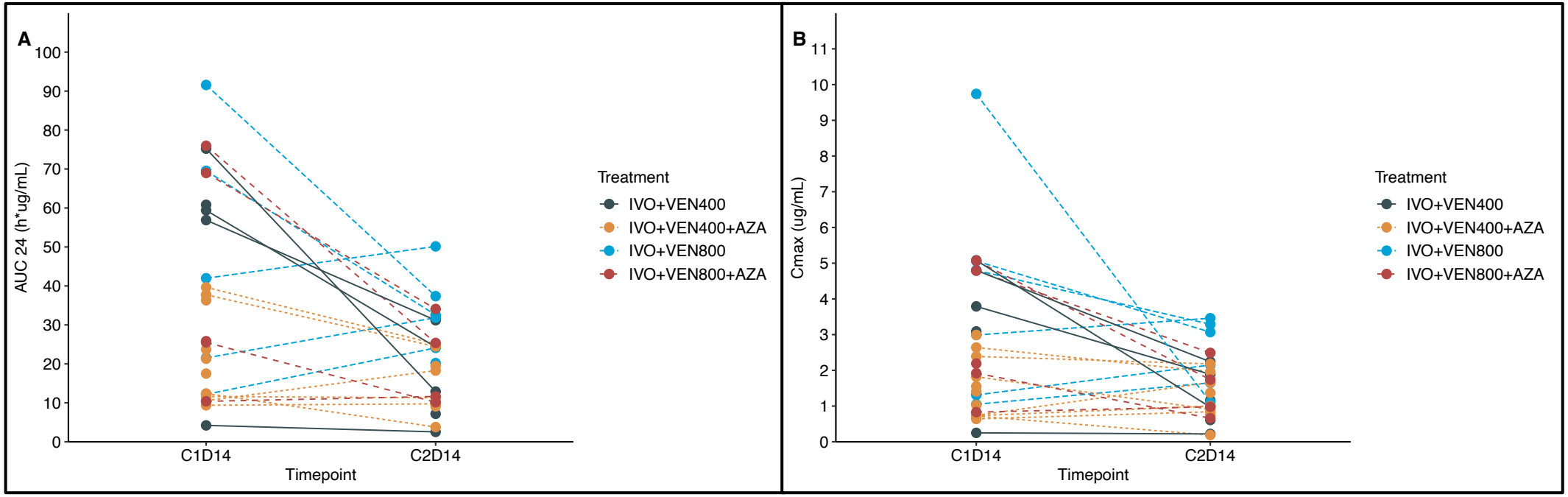

Figure S3: CONSORT diagram of study participants

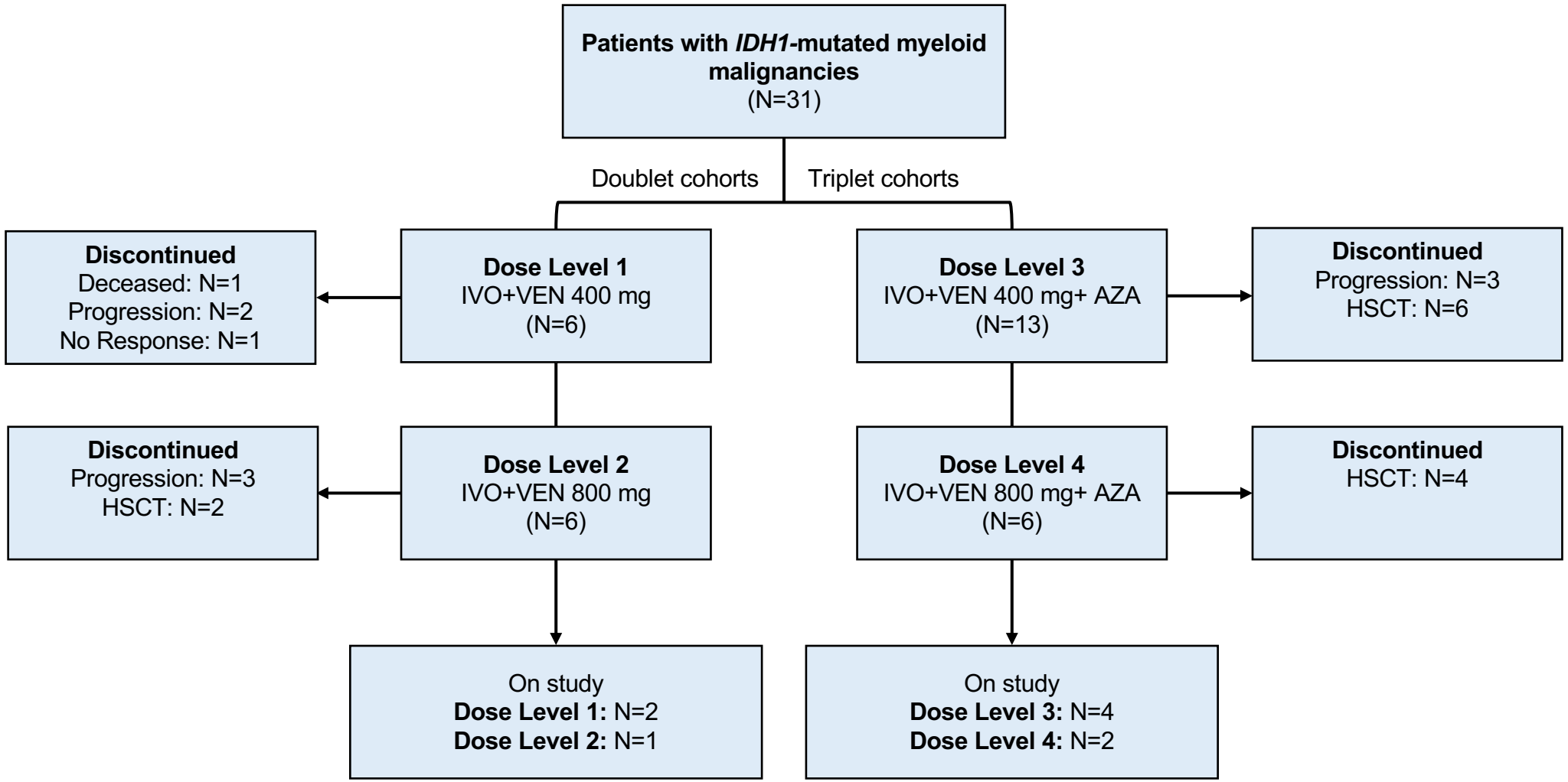

Figure S4: Bone marrow response and recovery following IVO+VEN or IVO+VEN+AZA. (A), Bone marrow blast reduction following one cycle of therapy with IVO+AZA, or IVO+VEN+AZA among all patients with an adequate bone marrow samples (N=28). Three patients had inadequate/hypocellular EOC1 bone marrow aspirations and were excluded. One patient enrolled with MRD+ AML only. (B) Cycle lengths during the first four cycles of treatment. Patients treated with IVO+VEN had significantly shorter cycle lengths for cycle 1 compared to patients treated with IVO+VEN+AZA.

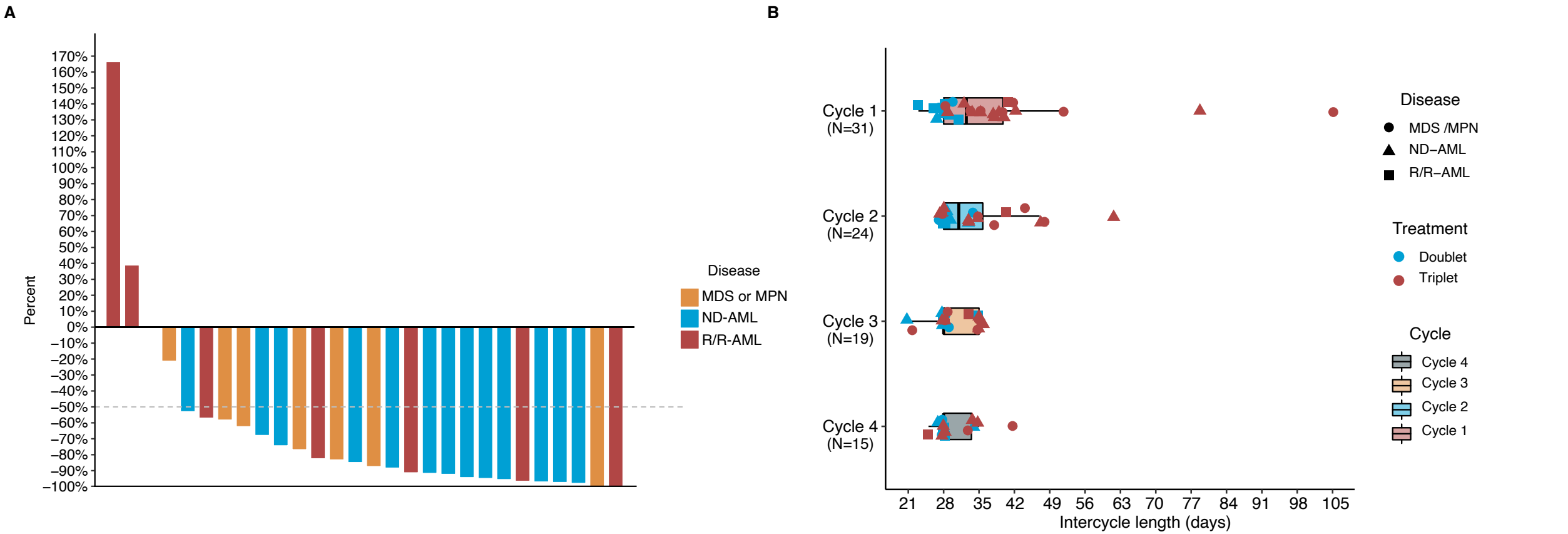

Figure S5: Adverse events in patients treated with IVO+VEN or IVO+VEN+AZA. (A), Common adverse events occurring in four or more patients on study during the entire phase 1b study period demonstrated by grade, (B), by receipt of IVO+VEN vs. IVO+VEN+AZA, (C), and by dose level.

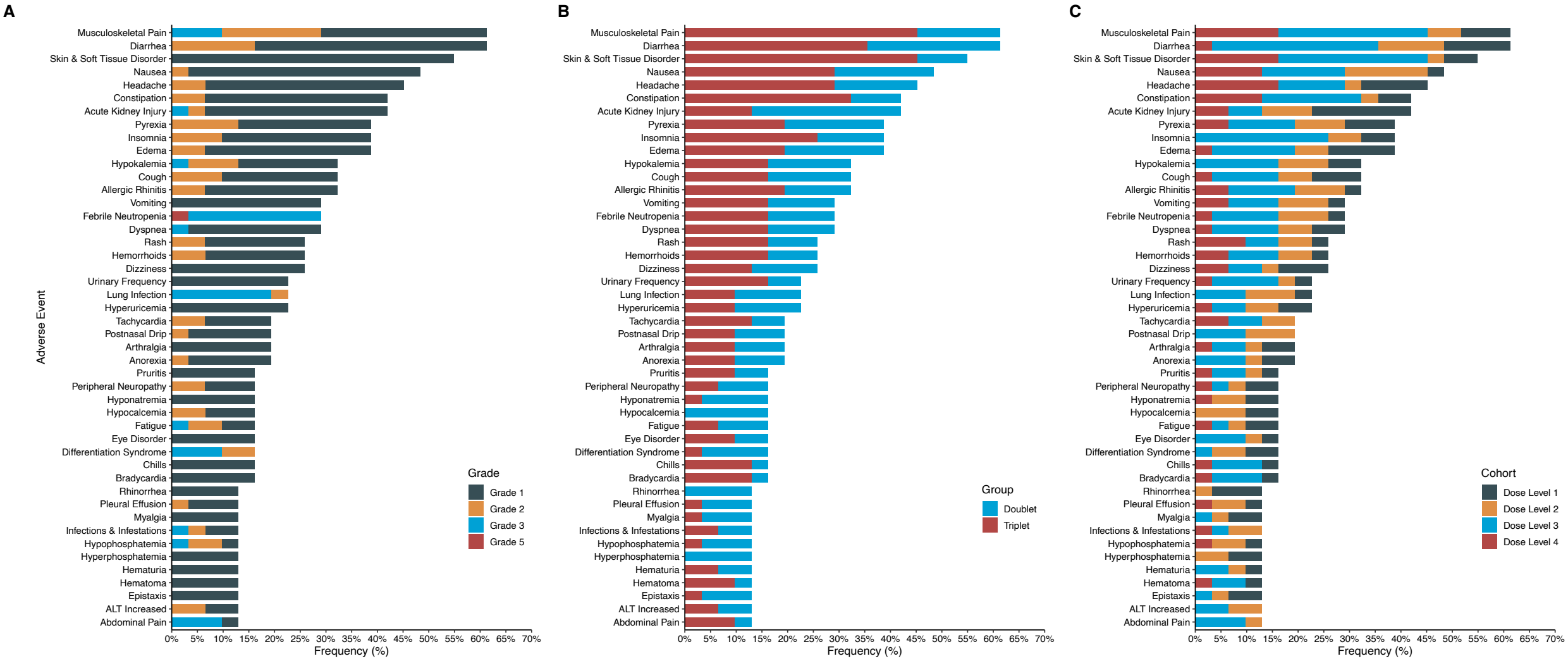

Figure S6: Morphologic and MRD response to IVO+VEN in ND-AML. Morphologic response, MRD-MFC, and *IDH1* ddPCR status by treatment cycle in patients with ND-AML treated with the doublet combination of IVO+VEN 400 or VEN 800

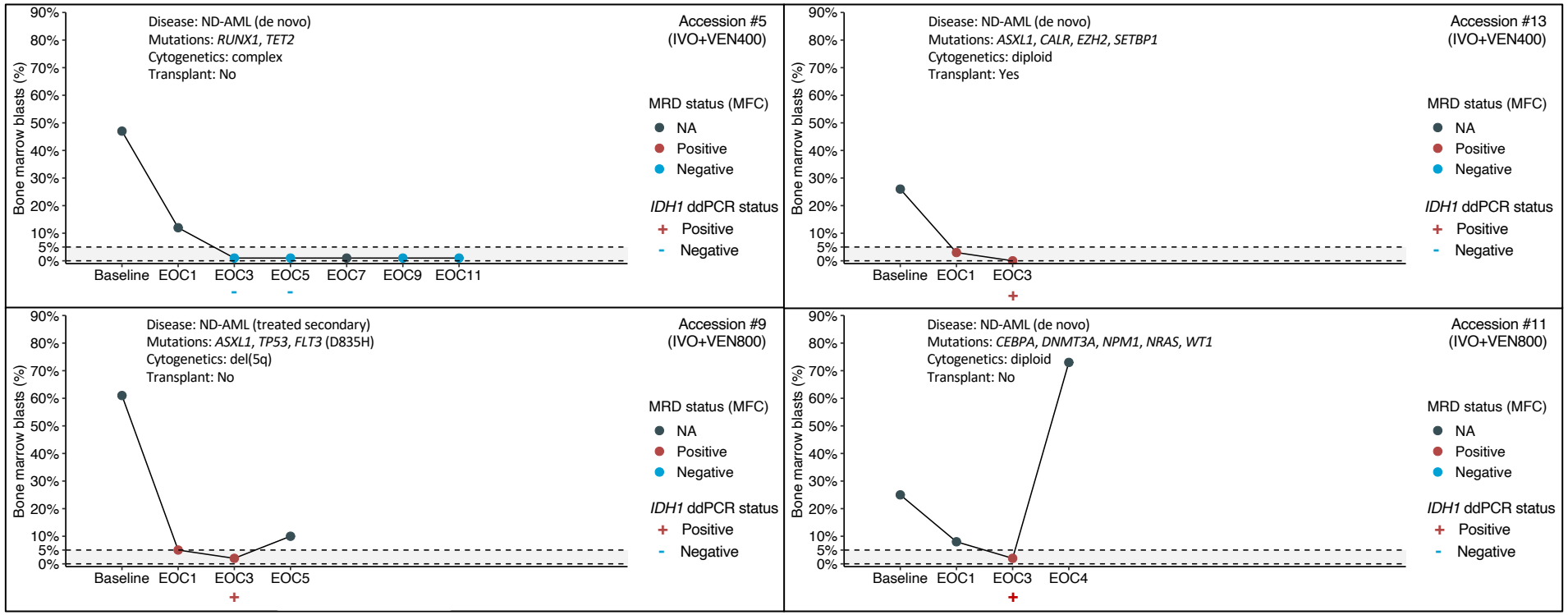

Figure S7: Morphologic and MRD response to IVO+VEN+AZA in ND-AML. Morphologic response, MRD-MFC, and *IDH1* ddPCR status by treatment cycle in patients with ND-AML treated with the triplet combination of IVO+VEN 400 or VEN 800 +AZA

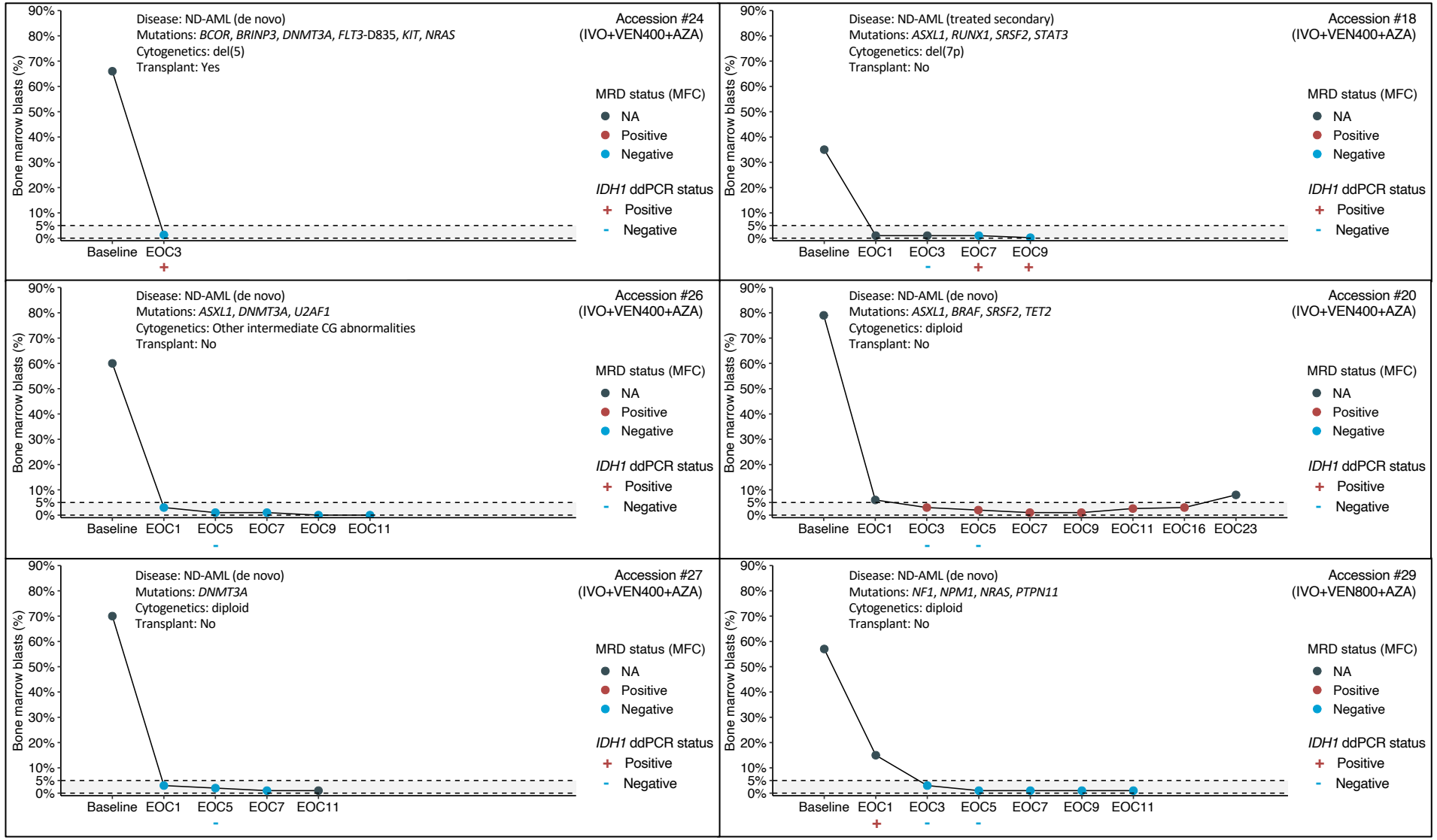

Figure S8: Morphologic and MRD response to IVO+VEN or IVO+VEN+AZA in R/R-AML. Morphologic response, MRD-MFC, and *IDH1* ddPCR status by treatment cycle in patients with R/R-AML treated with IVO+VEN with or without AZA

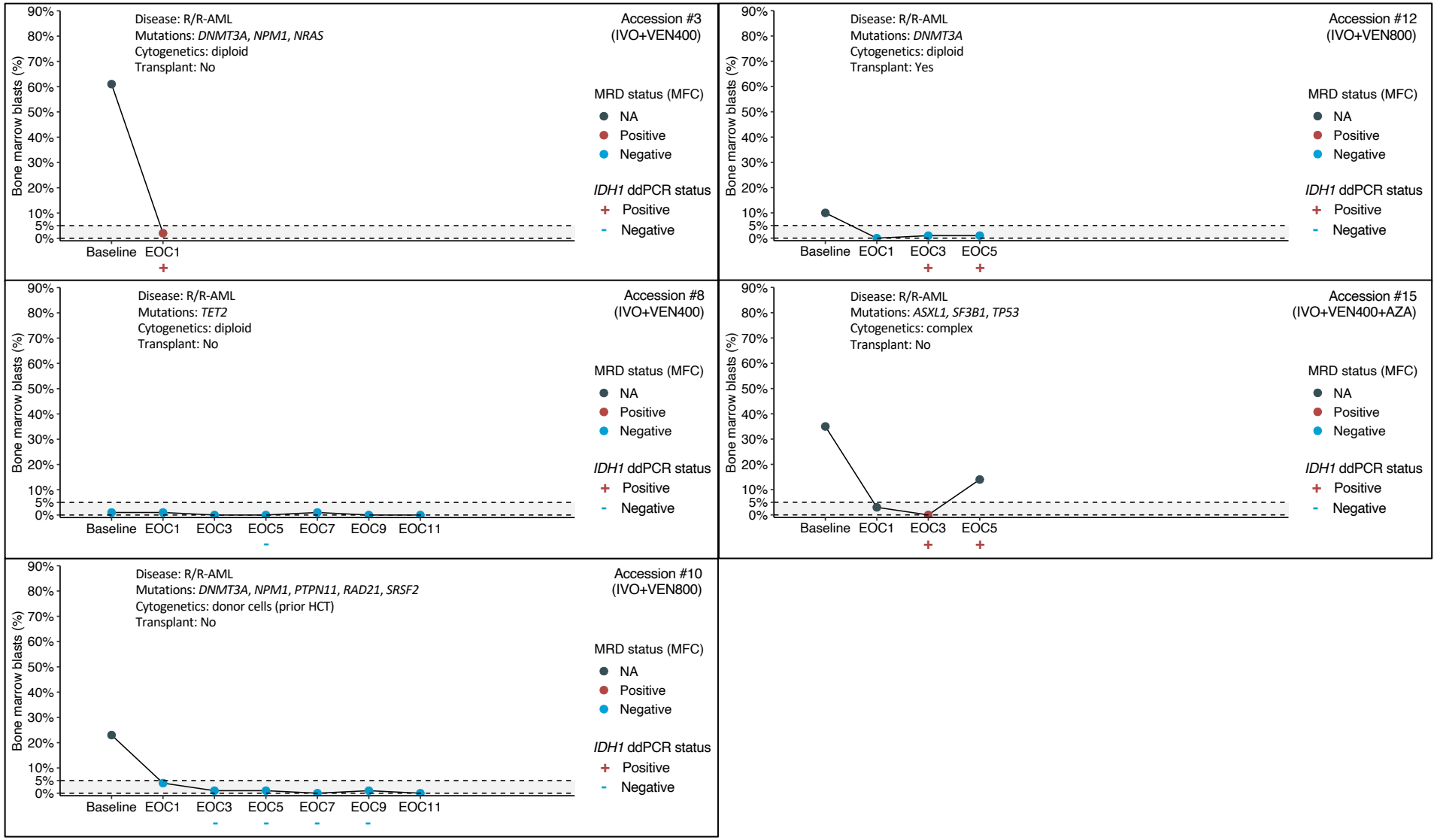

Figure S9: Response and outcome of patients treated with IVO+VEN or IVO+VEN+AZA. (A), Swimmer's plot of patients on study with IVO+VEN +/- AZA by dose level.

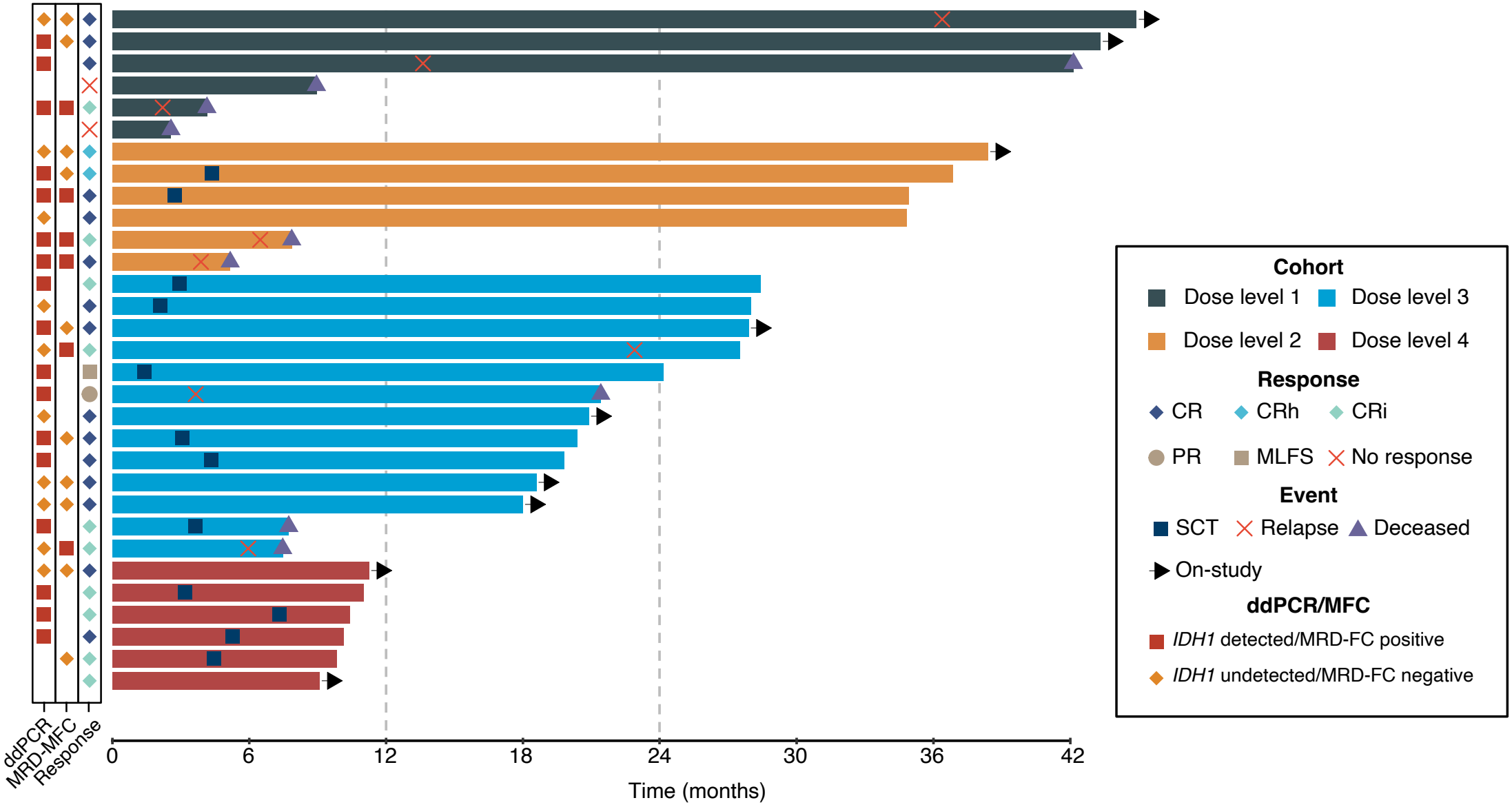

Figure S10: Landmark overall survival analyses based on *IDH1* mutation detection in CRc using ddPCR as though performed on patients at baseline. (A), Overall survival from treatment start. (B), Including patients surviving at least 3-months (correlating with end of cycle 3). (C), Including patients surviving at least 5-months (correlating with end of cycle 5). (D), Including patients surviving at least 7-months (correlating with end of cycle 7).

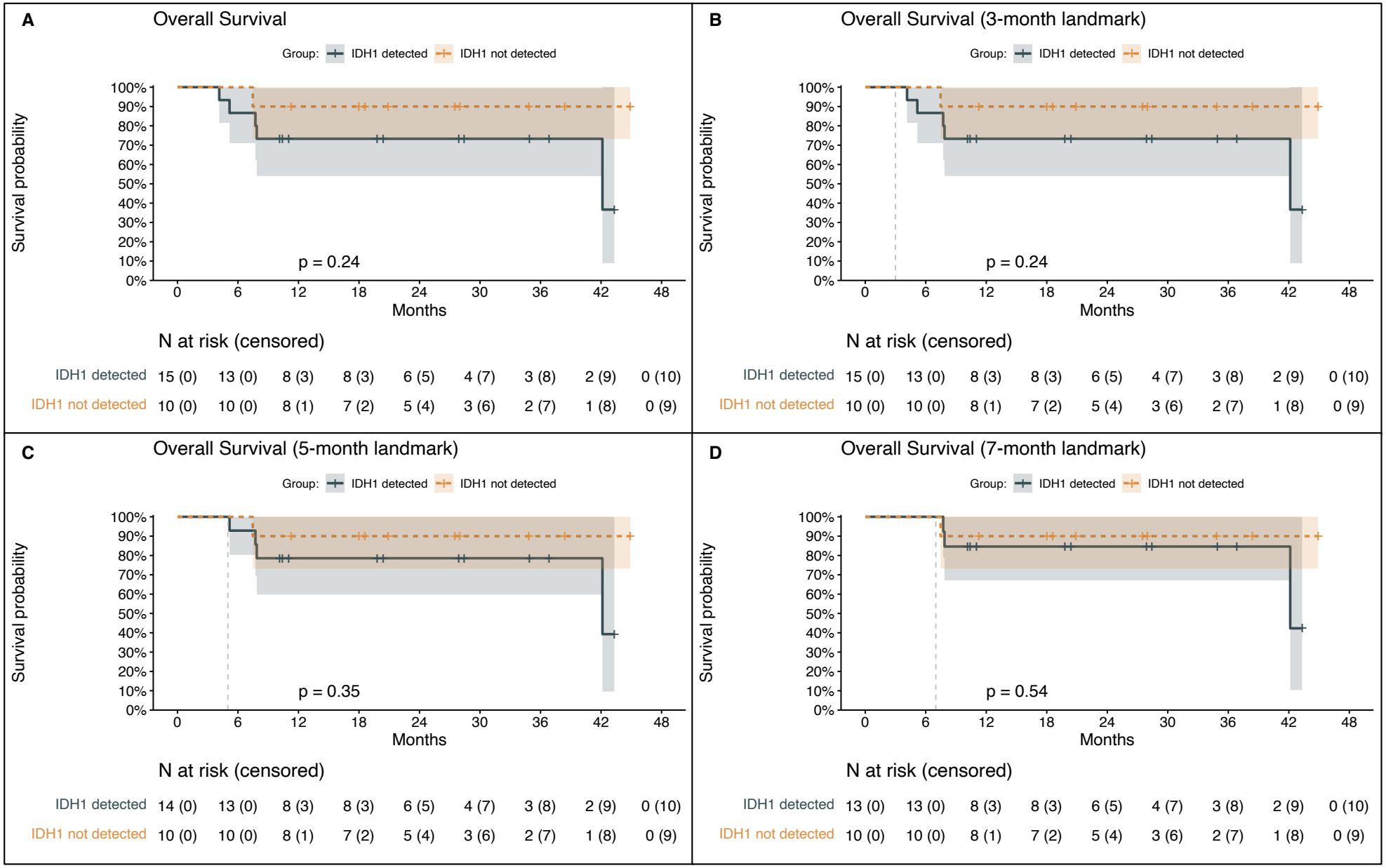

Figure S11: Influence of biological pathways on survival following IVO+VEN or IVO+VEN+AZA treatment. (A), Overall survival by methylation mutations. (B), Overall survival by signaling mutations. (C), Overall survival in all patients with signaling mutations based upon receipt of IVO+VEN or IVO+VEN+AZA. (D), Overall survival in patients with AML and signaling mutations based upon receipt of IVO+VEN or IVO+VEN+AZA.

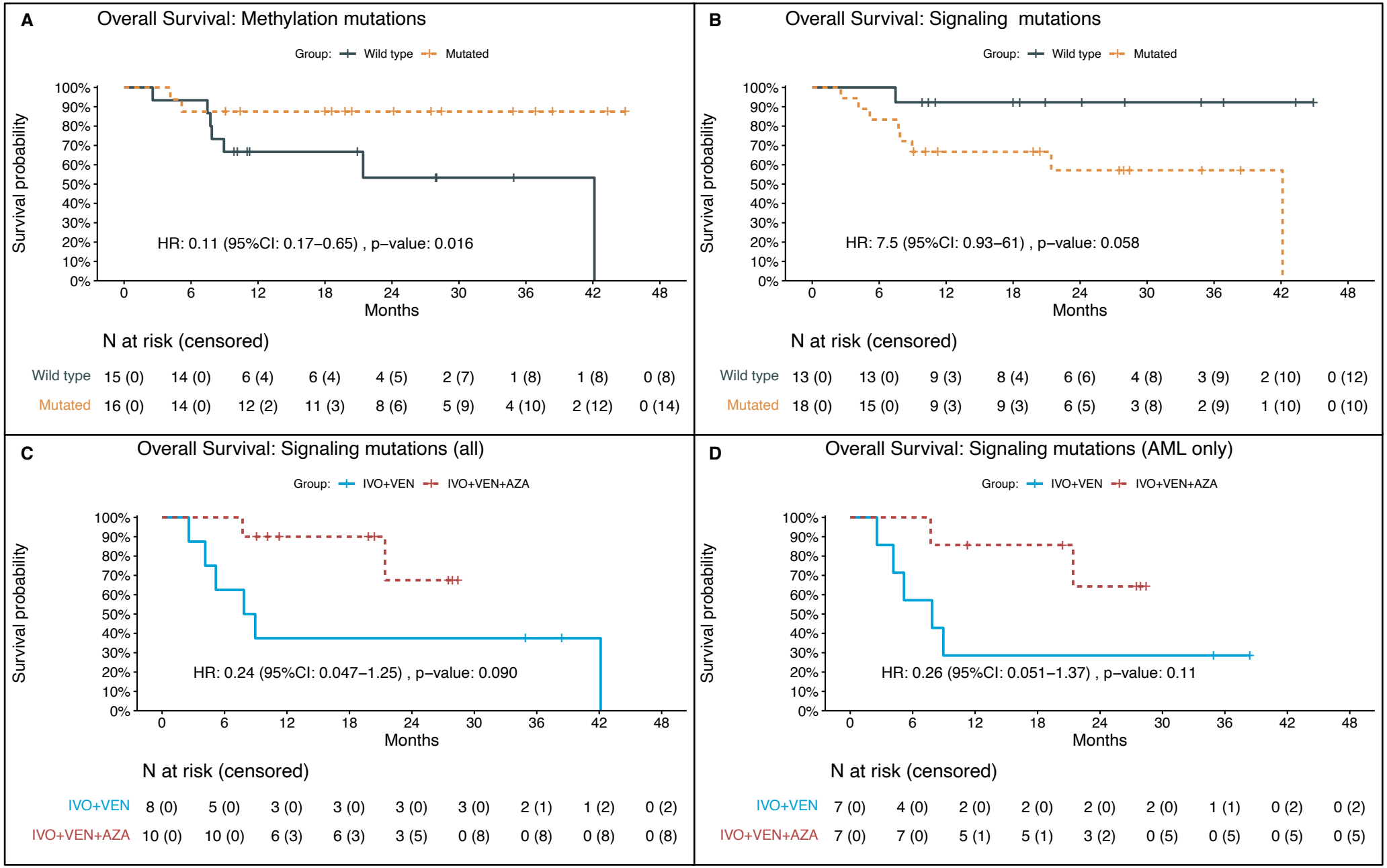

Figure S12: Persistent mutations in a long-term responder with ND-AML identifies mutations within a CD16+ monocytic population. (A and B), DAb-seq analysis at diagnosis and in remission in a patient with ND-AML (accession #18) and co-occurring *RUNX1* p. L204Q and *IDH1* p.R132H mutations treated with IVO+VEN+AZA demonstrated treatment eliminated the majority of *IDH1* and *RUNX1* co-mutated cells. (C and D), The predominant population of CD34+ myeloblasts was eliminated with therapy, however residual cells containing *IDH1* and *RUNX1* in remission were clustered with a monocytic cell population with increased CD16 expression.

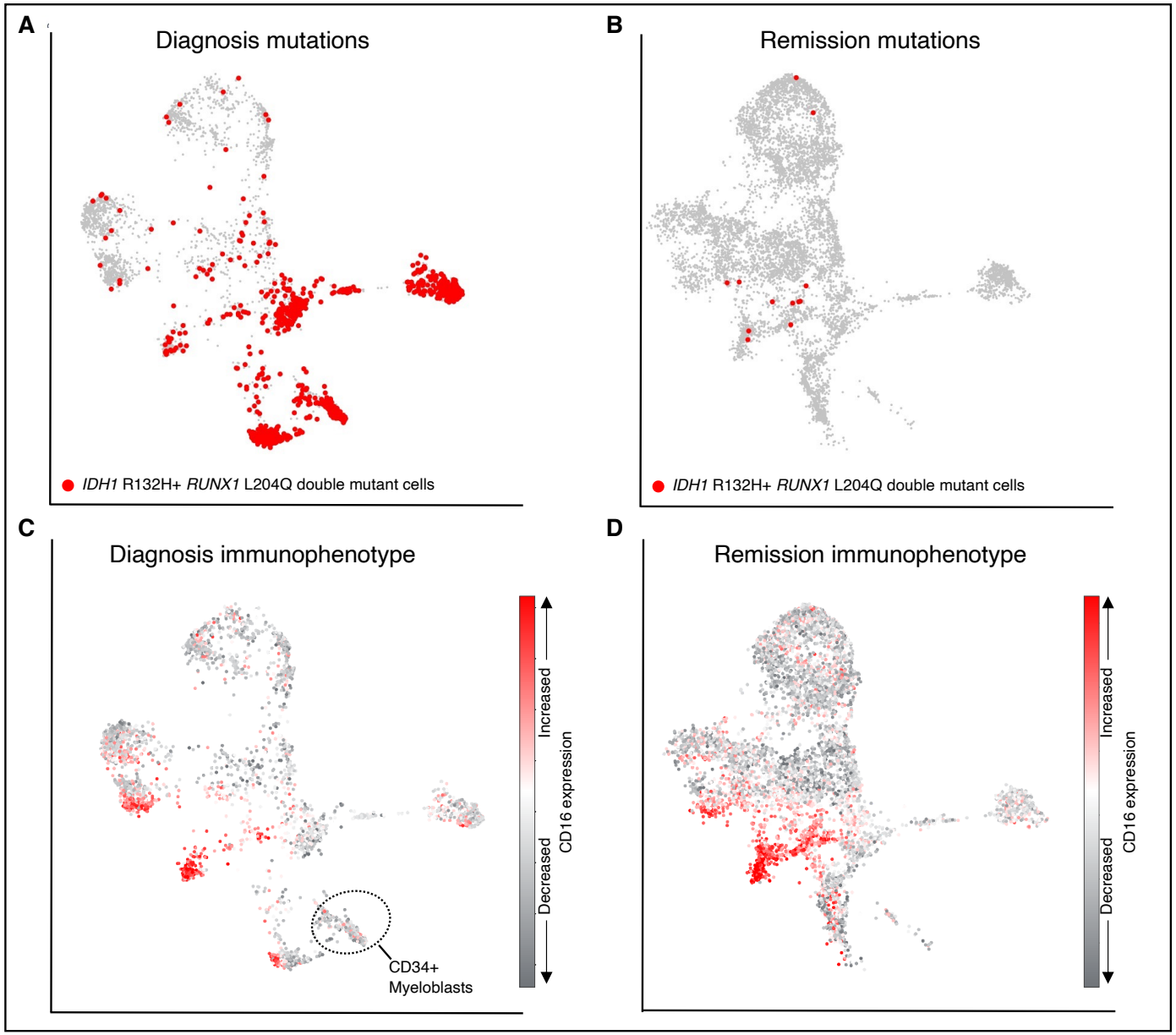

Figure S13: Immunophenotypic shift occurring under treatment selection with targeted therapy. Multiparameter flow cytometry in a patient with ND-AML (accession #20) demonstrating an alternative CD34+ population expanding at relapse compared to baseline, consistent with a phenotypic shift at disease.

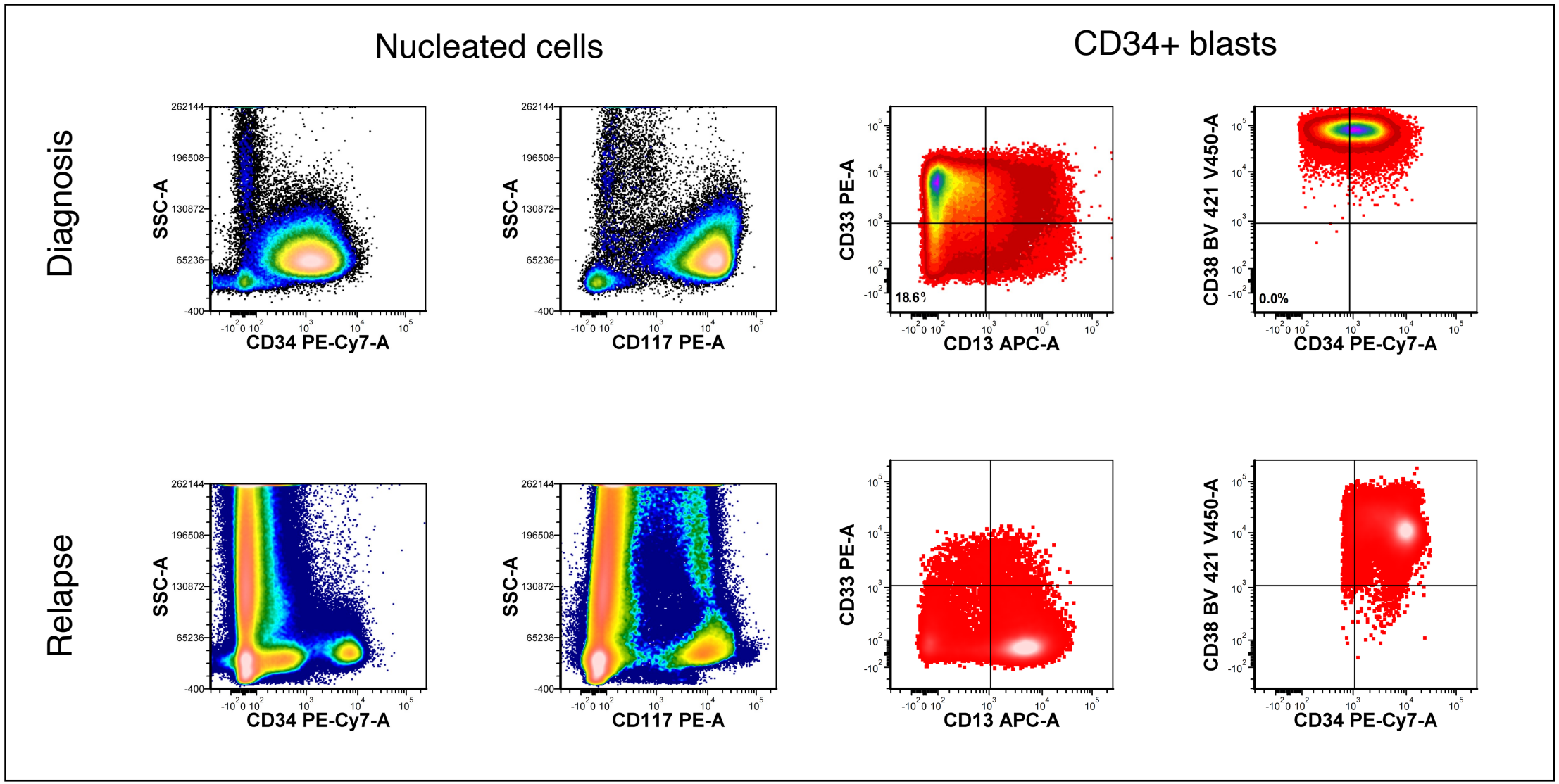

Figure S14: Increased alternative antiapoptotic protein expression levels correlate with resistance to IVO+VEN+AZA. CyTOF analysis in a patient with ND-AML (accession #11) treated with IVO+VEN+AZA who initially attained CRc followed by disease progression. Increased alternative anti-apoptotic protein levels (BCL-xL and MCL1) were observed, in addition to increased CD44 levels.

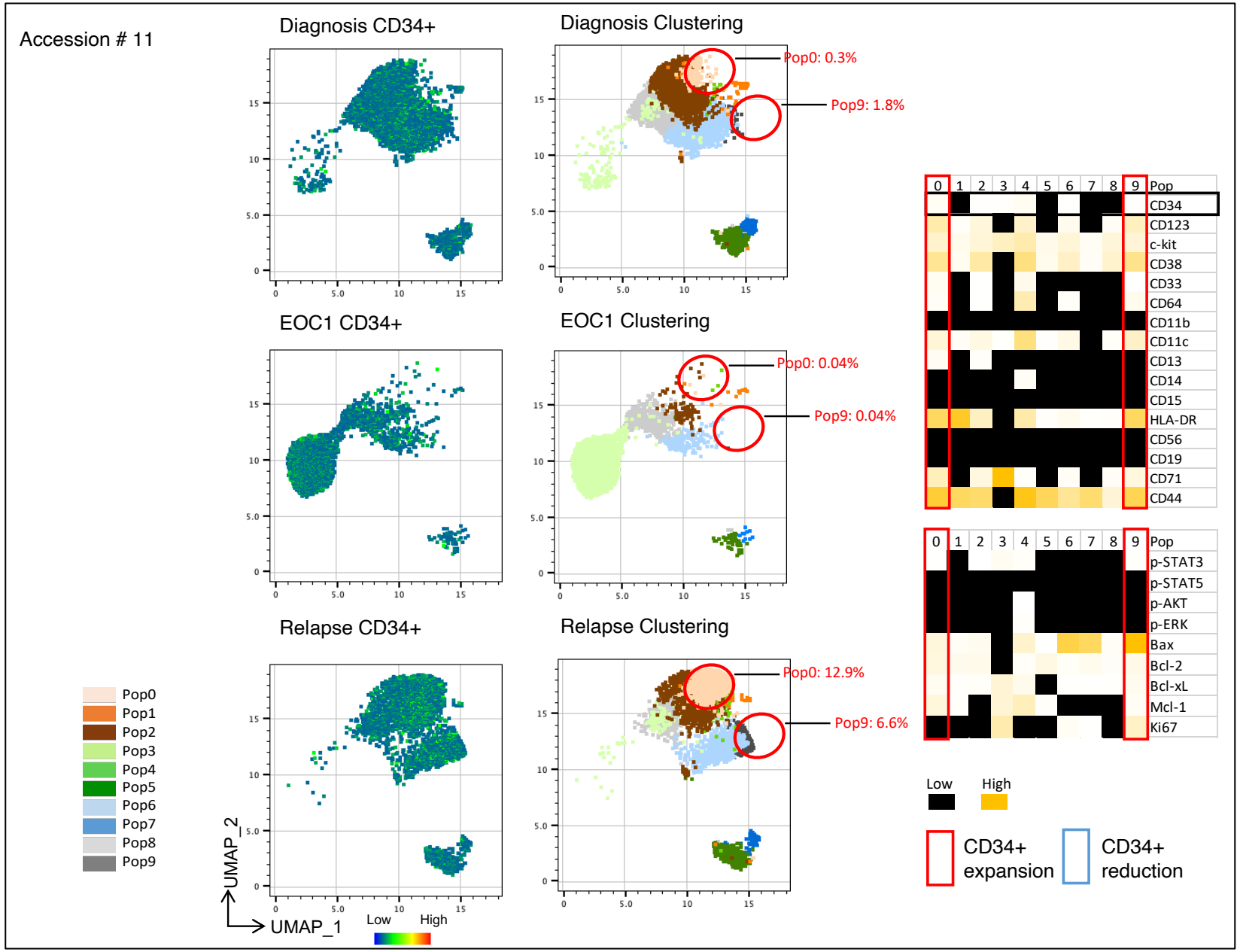

Figure S15: Increased BCL2 levels relative to alternative anti-apoptotic proteins is associated with ongoing response to IVO+VEN+AZA. CyTOF analysis in a patient with ND-AML (accession #26) treated with IVO+VEN+AZA with a durable response to treatment following 18 cycles of therapy. The patient had multiple CD34+ cell populations at diagnosis, with higher BCL2 levels relative to BCL-xL or MCL-1. Following 3 cycles of therapy, marked reduction in these blast populations were observed.

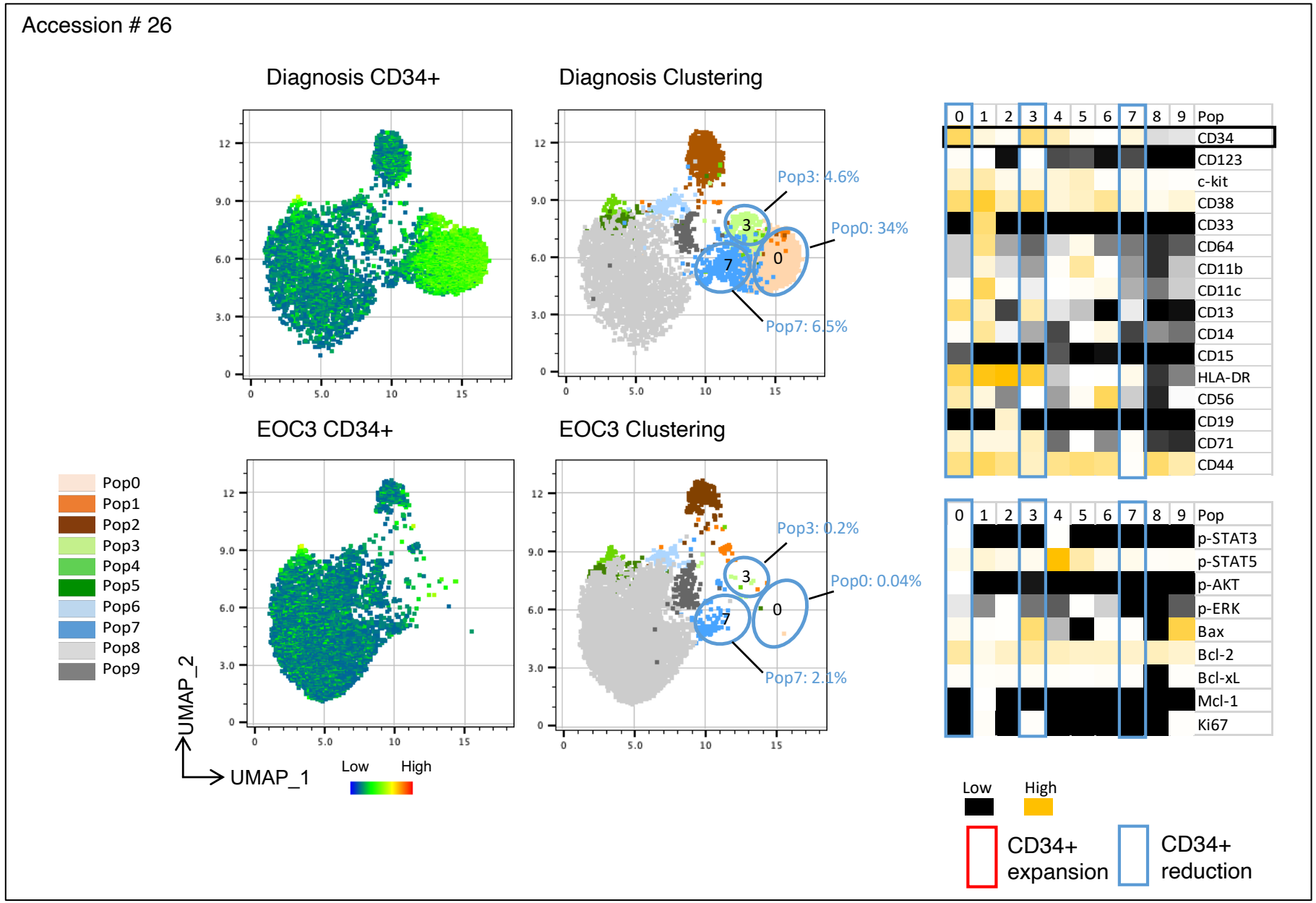

Figure S16: Increased alternative anti-apoptotic protein expression is observed in maturing myeloid populations with monocytic differentiation. CyTOF analysis in a patient with R/R-AML (accession #10) treated with IVO+VEN with a durable response to treatment following 41 cycles of therapy. Following cycle 3 of treatment, an expanding CD34+ cell populations with increased BCL-xL and MCL-1 levels was observed with an associated maturing CD14+ monocytic immunophenotype.