

Chronic myelomonocytic leukemia: molecular pathogenesis and therapeutic innovations

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Received: June 12, 2024.

Accepted: October 4, 2024.

Early view: October 17, 2024.

<https://doi.org/10.3324/haematol.2024.286061>

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Supplementary Table 1. Demographics of the Mayo Clinic CMML Cohort

Variable	Format	CMML Cohort	dCMML	pCMML
n		750	391	355
Demographics				
Age	Median (range)	71 (18 - 95)	71 (27 - 95)	70 (18 - 91)
Male	Number (%)	501 (66.8%)	280 (71.6%)	221 (62.3%)
Female	Number (%)	249 (33.2%)	111 (28.4%)	134 (37.7%)
Laboratory Parameters				
Hemoglobin (g/dL)	Median (range)	10.8 (4.2 - 16.9)	10.9 (6.4 - 16.8)	10.8 (4.2 - 16.9)
Mean Corpuscular Volume (MCV, fL)	Median (range)	92.0 (59.0 - 124.9)	92.0 (70.3 - 124.9)	92.1 (59.0 - 124.3)
Platelet Count (x10 ⁹ /L)	Median (range)	99 (6 - 1277)	98 (6 - 742)	104 (7 - 1277)
White Blood Cell Count (WBC, x10 ⁹ /L)	Median (range)	12.3 (1.3 - 264.8)	7.1 (1.3 - 12.9)	25.1 (13.0 - 264.8)
Absolute Neutrophil Count (ANC, x10 ⁹ /L)	Median (range)	5.9 (0.0 - 151.0)	3.1 (0.0 - 14.1)	14.0 (1.4 - 151.0)
Absolute Monocyte Count (AMC, x10 ⁹ /L)	Median (range)	2.5 (0.0 - 87.4)	1.5 (0.0 - 9.2)	5.3 (0.1 - 87.4)
Absolute Lymphocyte Count (ALC, x10 ⁹ /L)	Median (range)	1.8 (0.0 - 22.0)	1.5 (0.3 - 6.2)	2.6 (0.0 - 22.0)
Immature Myeloid Cells (IMC) Present	Number (%)	431 (58.5%)	159 (41.1%)	272 (77.7%)
Peripheral Blood Blasts (%)	Median (range)	0 (0 - 19)	0 (0 - 17)	0 (0 - 19)
Bone Marrow Blasts (%)	Median (range)	3 (0 - 19)	3 (0 - 19)	3 (0 - 19)
FAB Subtype				
Dysplastic	Number (%)	391 (52.4%)	391 (100%)	0 (0%)
Proliferative	Number (%)	355 (47.6%)	0 (0%)	355 (100%)
WHO Category				
CMML-1	Number (%)	632 (84.8%)	346 (88.5%)	285 (80.7%)
CMML-2	Number (%)	113 (15.2%)	45 (11.5%)	68 (19.3%)
Karyotype				
Normal	Number (%)	500 (72.5%)	277 (75.7%)	223 (69.0%)
Abnormal	Number (%)	190 (27.5%)	89 (24.3%)	100 (31.0%)
Spanish Cytogenetic Risk Category				
Low	Number (%)	523 (75.8%)	292 (79.8%)	231 (71.5%)
Intermediate	Number (%)	118 (17.1%)	52 (14.2%)	65 (20.1%)
High	Number (%)	49 (7.1%)	22 (6.0%)	27 (8.4%)
GFM Risk Category				
Low	Number (%)	247 (43.8%)	207 (68.8%)	40 (15.2%)
Intermediate	Number (%)	202 (35.8%)	72 (23.9%)	130 (49.4%)
High	Number (%)	115 (20.4%)	22 (7.3%)	93 (35.4%)
Mayo Molecular Risk Category				
Low	Number (%)	51 (9.2%)	40 (13.4%)	11 (4.3%)
Intermediate-1	Number (%)	158 (28.5%)	114 (38.3%)	44 (17.2%)
Intermediate-2	Number (%)	165 (29.8%)	83 (27.9%)	82 (32.0%)
High	Number (%)	180 (32.5%)	61 (20.5%)	119 (46.5%)
CPSS-Molecular Risk Category				
Low	Number (%)	70 (13.0%)	70 (24.1%)	0 (0%)
Intermediate-1	Number (%)	151 (28.1%)	117 (40.3%)	34 (13.8%)
Intermediate-2	Number (%)	117 (21.8%)	47 (16.2%)	70 (28.3%)
High	Number (%)	199 (37.1%)	56 (19.3%)	143 (57.9%)
Mutation Statistics				
Number of Mutated Genes	Median (range)	3 (0 - 8)	2 (0 - 8)	3 (0 - 7)
Mutation Profile				
ASXL1	Number (%)	257 (45.3%)	113 (37.5%)	142 (54.0%)
BCOR	Number (%)	10 (1.8%)	4 (1.3%)	6 (2.3%)
BRAF	Number (%)	2 (0.4%)	2 (0.7%)	0 (0%)
CALR	Number (%)	2 (0.4%)	1 (0.3%)	1 (0.4%)
CBL	Number (%)	82 (14.5%)	37 (12.3%)	45 (17.1%)
CEBPA	Number (%)	17 (3.0%)	5 (1.7%)	12 (4.6%)
CSF3R	Number (%)	4 (0.7%)	0 (0%)	4 (1.5%)
CUX1	Number (%)	2 (0.4%)	1 (0.3%)	1 (0.4%)
DNMT3A	Number (%)	27 (4.8%)	14 (4.7%)	13 (4.9%)
ETNK1	Number (%)	5 (0.9%)	1 (0.3%)	4 (1.5%)
ETV6	Number (%)	5 (0.9%)	2 (0.7%)	3 (1.1%)
EZH2	Number (%)	25 (4.4%)	10 (3.3%)	15 (5.7%)
FLT3	Number (%)	8 (1.4%)	2 (0.7%)	6 (2.3%)
GATA2	Number (%)	1 (0.2%)	0 (0%)	1 (0.4%)
IDH1	Number (%)	9 (1.6%)	6 (2.0%)	2 (0.8%)
IDH2	Number (%)	36 (6.3%)	15 (5.0%)	21 (8.0%)
JAK2	Number (%)	41 (7.2%)	10 (3.3%)	31 (11.8%)
KIT	Number (%)	23 (4.0%)	12 (4.0%)	10 (3.8%)

<i>KRAS</i>	Number (%)	53 (9.4%)	27 (9.0%)	26 (9.9%)
<i>MPL</i>	Number (%)	10 (1.8%)	4 (1.3%)	6 (2.3%)
<i>NPM1</i>	Number (%)	9 (1.6%)	6 (2.0%)	3 (1.1%)
<i>NRAS</i>	Number (%)	87 (15.3%)	33 (11.0%)	54 (20.5%)
<i>PHF6</i>	Number (%)	18 (3.2%)	14 (4.7%)	4 (1.5%)
<i>PTPN11</i>	Number (%)	18 (3.2%)	8 (2.7%)	10 (3.8%)
<i>RAD21</i>	Number (%)	4 (0.7%)	2 (0.7%)	2 (0.8%)
<i>RUNX1</i>	Number (%)	69 (12.2%)	43 (14.3%)	26 (9.9%)
<i>SETBP1</i>	Number (%)	36 (6.3%)	9 (3.0%)	27 (10.3%)
<i>SF3B1</i>	Number (%)	26 (4.6%)	20 (6.6%)	6 (2.3%)
<i>SH2B3</i>	Number (%)	7 (1.2%)	3 (1.0%)	4 (1.5%)
<i>SRSF2</i>	Number (%)	254 (44.8%)	144 (47.8%)	109 (41.4%)
<i>STAG2</i>	Number (%)	8 (1.4%)	4 (1.3%)	4 (1.5%)
<i>SUZ12</i>	Number (%)	0 (0%)	0 (0%)	0 (0%)
<i>TET2</i>	Number (%)	260 (45.9%)	156 (51.8%)	103 (39.2%)
<i>TP53</i>	Number (%)	21 (3.7%)	10 (3.3%)	11 (4.2%)
<i>U2AF1</i>	Number (%)	44 (7.8%)	23 (7.6%)	20 (7.6%)
<i>WT1</i>	Number (%)	3 (0.5%)	2 (0.7%)	1 (0.4%)
<i>ZRSR2</i>	Number (%)	26 (4.6%)	23 (7.6%)	3 (1.1%)
Mutation Groups				
RAS Pathway (<i>BRAF, CBL, KRAS, NRAS, PTPN11</i>)	Number (%)	215 (37.9%)	93 (30.9%)	122 (46.4%)
Outcomes				
Transformation to acute leukemia	Number (%)	158 (21.1%)	73 (18.7%)	84 (23.7%)
Death	Number (%)	529 (70.5%)	255 (65.2%)	270 (76.1%)