Clonal hematopoiesis of indeterminate potential associates with higher risk of thromboembolism in severe COVID-19

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Supplementary Data

Clonal Hematopoiesis of Indeterminate Potential associates with higher risk of thromboembolism in severe COronaVIrus Disease 19

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Authors' Contribution

FC, AR and MB designed the study, GMB, AR and MB interpreted data and wrote the manuscript, JEG performed the statistical analysis, FMA, PA, SM, FE, DP, GC, PRQ, GF, FDC, AAA take care of patients, CT and MDP were responsible of the samples analysis. All authors accepted the final version of the manuscript. AR and MB contributed equally as co-last authors.

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Supplementary Table 1

Supplementary Table 1: Characteristics of mutation according to the presence of thrombosis

Patient ID	Mutated gene	Variant Main Isoform	Effect on transcript	Functional impact	Clinical impact	VAF (%)	Thrombosis (Yes/No)	Type of thrombosis
P1	NF1	NF1:NM_000267:exon52:c.7682_7683del:p.R2562Dfs*12	Exonic	Frameshift deletion	Possibly oncogenic	1.9	Yes	PTE
P2	ASXL1	ASXL1:NM_015338:exon12:c.1888_1910del:p.E635Rfs*15	Exonic	Frameshift deletion	Oncogenic	33.9	Yes	PTE
P3	TP53 GATA2	TP53:NM_000546:exon9:c.A962C:p.K321T GATA2:NM_032638:exon4:c.A890G:p.N297S	Exonic Exonic	Nonsynonimous SNV Nonsynonimous SNV	Possibly oncogenic Possibly oncogenic	11 3	No	\
P4	DNMT3A	DNMT3A:NM_022552:exon11:c.G1319A:p.W440X	Exonic	Stopgain	Possibly oncogenic	2.3	Yes	PTE
P5	TET2 U2AF1	TET2:NM_001127208:exon3:c.G2441T:p.R814L U2AF1:NM_006758:exon7:c.G497A:p.G166D	Exonic Exonic	Nonsynonimous SNV Nonsynonimous SNV	Possibly oncogenic Possibly oncogenic	7.1 7	Yes	PTE
P6	DNMT3A	DNMT3A:NM_022552:exon8:c.C920T:p.P307L	Exonic	Nonsynonimous SNV	Possibly oncogenic	1.7	Yes	DVT, PTE
P7	DDX41	DDX41:NM_016222:exon15:c.G1570T:p.G524W	Exonic	Nonsynonimous SNV	Possibly oncogenic	1.5	Yes	PTE
P8	U2AF1	U2AF1:NM_006758:exon2:c.C101A:p.S34Y	Exonic	Nonsynonimous SNV	Oncogenic	2.1	Yes	PTE, IS
P9	WT1	WT1:NM_000378:exon8:c.G1354T:p.D452Y	Exonic	Nonsynonimous SNV	Possibly oncogenic	1.4	No	\
P10	ASXL1 SRSF2 SF3B1 SRSF2	ASXL1:NM_015338:exon10:c.1085+1G>A:p.? SRSF2:NM_003016:exon1:c.C284A:p.P95H SF3B1:NM_012433:exon14:c.G1998C:p.K666N SRSF2:NM_003016:exon1:c.284_307del:p.P95_R102del	Splicing Exonic Exonic Exonic	\ Nonsynonimous SNV Nonsynonimous SNV Nonframeshift deletion	Possibly oncogenic Oncogenic Oncogenic Oncogenic	4.7 4.5 5.1 2.1	No	\
P11	TET2	TET2:NM_001127208:exon3:c.C817T:p.Q273X	Exonic	Stopgain	Possibly oncogenic	13.5	Yes	PTE
P12	TP53	TP53:NM_000546:exon9:c.A962C:p.K321T	Exonic	Nonsynonimous SNV	Possibly oncogenic	11.8	Yes	PAD
P13	PPM1D	PPM1D:NM_003620:exon6:c.C1654T:p.R552X	Exonic	Stopgain	Possibly oncogenic	2.4	Yes	PTE
P14	DNMT3A	DNMT3A:NM_022552:exon23:c.C2644T:p.R882C	Exonic	Nonsynonimous SNV	Oncogenic	5	Yes	DVT, PTE
P15	DNMT3A	DNMT3A:NM_022552:exon15:c.1794dupA:p.E599Rfs*13	Exonic	Frameshift deletion	Possibly oncogenic	28.9	No	\
P16	TP53	TP53:NM_000546:exon9:c.A962C:p.K321T	Exonic	Nonsynonimous SNV	Possibly oncogenic	10	Yes	PTE
P17	DDX41	DDX41:NM_016222:exon11:c.A1141T:p.K381X	Exonic	Stopgain	Possibly oncogenic	49.1	Yes	MI
P18	TET2 EP300	TET2:NM_001127208:exon11:c.A5158T:p.K1720X EP300:NM_001429:exon26:c.G4214A:p.R1405H	Exonic Exonic	Stopgain Nonsynonimous SNV	Possibly oncogenic Possibly oncogenic	43.1 8.8	No	\
P19	ASXL1	ASXL1:NM_015338:exon12:c.1888_1910del:p.E635Rfs*15	Exonic	Frameshift deletion	Oncogenic	17.8	No	\
P20	DNMT3A	DNMT3A:NM_022552:exon8:c.G977T:p.R326L	Exonic	Nonsynonimous SNV	Possibly oncogenic	10	Yes	PTE
P21	TET2 MPL SF3B1	TET2:NM_001127208:exon11:c.T5618C:p.I1873T MPL:NM_005373:exon10:c.G1544T:p.W515L SF3B1:NM_012433:exon14:c.G1998C:p.K666N	Exonic Exonic Exonic	Nonsynonimous SNV Nonsynonimous SNV Nonsynonimous SNV	Oncogenic Oncogenic Oncogenic	38 51.2 52.6	No	\
P22	IDH1 SRSF2 EP300 CUX1	IDH1:NM_005896:exon4:c.C394A:p.R132S SRSF2:NM_003016:exon1:c.C284A:p.P95H EP300:NM_001429:exon24:c.3875-1G>T:p.? CUX1:NM_181500:exon21:c.1816-1G>T:p.?	Exonic Exonic Splicing Splicing	Nonsynonimous SNV Nonsynonimous SNV \ \	Oncogenic Oncogenic Possibly oncogenic Possibly oncogenic	1.4 1.2 1.7 1.6	No	\
P23	TP53	TP53:NM_000546:exon9:c.A962C:p.K321T	Exonic	Nonsynonimous SNV	Possibly oncogenic	10.4	No	\
P24	WT1	WT1:NM_000378:exon3:c.C833A:p.P278H	Exonic	Nonsynonimous SNV	Possibly oncogenic	1.1	No	\
P25	TP53	TP53:NM_000546:exon7:c.G747T:p.R249S	Exonic	Nonsynonimous SNV	Possibly oncogenic	3.1	Yes	PTE
P26	DNMT3A	DNMT3A:NM_022552:exon9:c.T1118C:p.L373P	Exonic	Nonsynonimous SNV	Possibly oncogenic	2.6	Yes	PTE
P27	DNMT3A DNMT3A	DNMT3A:NM_022552:exon18:c.2120dupG:p.S708Qfs*5 DNMT3A:NM_022552:exon23:c.T2648A:p.L883X	Exonic Exonic	Frameshift insertion Stopgain	Possibly oncogenic Possibly oncogenic	5.6 13.4	Yes	MI
P28	PTPN11	PTPN11:NM_002834:exon8:c.A931G:p.M311V	Exonic	Nonsynonimous SNV	Possibly oncogenic	47	No	\
P29	ASXL1	ASXL1:NM_015338:exon12:c.1888_1910del:p.E635Rfs*15	Exonic	Frameshift deletion	Oncogenic	2.1	No	\
P30	ASXL1	ASXL1:NM_015338:exon11:c.C1210T:p.R404X	Exonic	Stopgain	Possibly oncogenic	3.2	Yes	PTE
P31	DNMT3A TET2	DNMT3A:NM_022552:exon8:c.G880T:p.E294X TET2:NM_001127208:exon9:c.G4048T:p.E1350X	Exonic Exonic	Stopgain Stopgain	Possibly oncogenic Possibly oncogenic	5.1 8.3	Yes	MI
P32	DNMT3A CREBBP NF1	DNMT3A:NM_022552:exon16:c.G1904A:p.R635Q CREBBP:NM_004380:exon6:c.C1433A:p.P478H NF1:NM_000267:exon3:c.G252T:p.L84F	Exonic Exonic Exonic	Nonsynonimous SNV Nonsynonimous SNV Nonsynonimous SNV	Possibly oncogenic Possibly oncogenic Possibly oncogenic	3.2 5.3 7.7	No	\
P33	ZRSR2	ZRSR2:NM_005089:exon9:c.786delG:p.E263Nfs*4	Exonic	Frameshift deletion	Possibly oncogenic	5.3	No	\
P34	JAK2 NF1	JAK2:NM_001322194:exon22:c.2887-1G>T:p.? NF1:NM_000267:exon38:c.C5639A:p.P1880H	Splicing Exonic	\ Nonsynonimous SNV	Possibly oncogenic Possibly oncogenic	1.1 2	Yes	PTE

P35	DNMT3A	DNMT3A:NM_022552:exon9:c.T1118C:p.L373P	Exonic	Nonsynonimous SNV	Possibly oncogenic	2.6	No	\
P36	DNMT3A	DNMT3A:NM_022552:exon15:c.G1676A:p.C559Y	Exonic	Nonsynonimous SNV	Possibly oncogenic	1.1	Yes	PTE
P37	DNMT3A JAK2 ZRSR2	DNMT3A:NM_022552:exon23:c.2598-1G>T:p.? JAK2:NM_001322194:exon18:c.G2330T:p.W777L ZRSR2:NM_005089:exon7:c.G496T:p.E166X	Splicing Exonic Exonic	\ Nonsynonimous SNV Stopgain	Possibly oncogenic Possibly oncogenic Possibly oncogenic	2.1 1.7 1.1	No	\
P38	TP53	TP53:NM_000546:exon4:c.G322A:p.G108S	Exonic	Nonsynonimous SNV	Possibly oncogenic	44.7	Yes	PTE
P39	DNMT3A DNMT3A	DNMT3A:NM_022552:exon18:c.2115delT:p.I705Mfs*74 DNMT3A:NM_022552:exon19:c.C2206A:p.R736S	Exonic Exonic	Frameshift deletion Nonsynonimous SNV	Possibly oncogenic Possibly oncogenic	6.1 11.1	Yes	PTE
P40	DNMT3A	DNMT3A:NM_022552:exon19:c.C2185T:p.R729W	Exonic	Nonsynonimous SNV	Oncogenic	7.4	No	\
P41	TET2 SRSF2 ASXL1 RUNX1	TET2:NM_001127208:exon3:c.G1692A:p.W564X SRSF2:NM_003016:exon1:c.C284A:p.P95H ASXL1:NM_015338:exon12:c.G2035T:p.G679X RUNX1:NM_001754:exon5:c.374delC:p.P125Qfs*8	Exonic Exonic Exonic Exonic	Stopgain Nonsynonimous SNV Stopgain Frameshift deletion	Possibly oncogenic Oncogenic Possibly oncogenic Possibly oncogenic	27.6 25.3 28.5 20.6	No	\
P42	PPM1D	PPM1D:NM_003620:exon6:c.T1349A:p.L450X	Exonic	Stopgain	Possibly oncogenic	9.4	No	\
P43	IDH1	IDH1:NM_005896:exon4:c.C394A:p.R132S	Exonic	Nonsynonimous SNV	Oncogenic	1.8	Yes	PTE
P44	NRAS PHF6	NM_002524:exon4:c.291-1G>T:p.? PHF6:NM_032335:exon5:c.375-1G>T:p.?	Splicing Splicing	\ \	Possibly oncogenic Possibly oncogenic	1.2 1.5	No	\

Abbreviations: VAF: Variant Allele Frequency; PTE: Pulmonary Thromboembolism; DVT: Deep Vein Thrombosis; IS: Ischemic Stroke; PAD: Peripheral Arterial Disease; MI: Myocardial Infarction; SNV: Single Nucleotide Variant