

## Supplementary Materials

# Mutational Landscape of Patients Referred for Elevated Hemoglobin Level

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**Table S1.** Summary of mutations associated with MPN negative erythrocytosis reported between July 2017 and July 2022.

Article	N mut. <sup>1</sup>	N	Method	Gene	Mutation	Inher. <sup>2</sup>
Zmajkovic et al. 2018 <sup>[11]</sup>	18				NGS of 215 genes	
	10		EPO		c.32delG	AD <sup>3</sup>
Tavakoli et al. 2021 <sup>[12]</sup>	1				Not specified	
	1		HBB		c.104T>C, p.(Val34Ala)	
Negro et al. 2020 <sup>[13]</sup>	1				NGS	
	1		VHL		c.598C>T, p.(Arg200Trp)	Het <sup>4</sup>
			TMEM 127		c.268G>A, p.(Val90Met)	Het <sup>4</sup>
Doma et al. 2021 <sup>[14]</sup>	1				NGS of 24 genes	
	1		EPAS1		c.1609G>A, p.(Gly537Arg)	
Wouters et al. 2020 <sup>[15]</sup>	133				NGS of 25 genes	
	19		DNMT3 A			
	8		TET2			
	6		ASXL1			
	13		BCOR			
	8		BCORL1			
Núñez-Martínez et al. 2021 <sup>[16]</sup>	1				Molecular testing of proband's mother, complete sequencing of VHL	
	1		VHL		exon3del + c.416C>G, p.(Ser139Cys)	cHet <sup>5</sup>
Kristan et al. 2021a <sup>[17]</sup>	3				NGS of 39 genes	
	2		EGLN1		c.471G>C, p.(Gln157His)	AD <sup>3</sup>
			VHL		c.2572-13A>G	AD <sup>3</sup>
Lenglet et al. 2018 <sup>[18]</sup>	9				Whole genome sequencing	
	3		VHL		c.598C>T/c.340 + 770T>C, VHL p.(Arg200Trp)/ X1 p.(Ser179Pro?)	Het <sup>4</sup>
	2				c.429C>T, VHL p.(Asp143Asp)	Hom o <sup>6</sup>

	1		c.598C>T/c.340 + 694_711dup, VHL p.(Arg200Trp)/ X1 p.(Trp159X?)	Het <sup>4</sup>
	1		c.430G>A/c.340 + 694_711dup, VHL p.(Gly144Arg)/ X1 p.(Trp159X?)	Het <sup>4</sup>
	1		c.340+816A>C, X1 p.(*194Serext*24)	Hom <sup>6</sup>
	1		c.429C>T/c.340 + 770T>C, VHL p.(Asp143Asp)/ X1 p.(Ser179Pro?)	Het <sup>4</sup>
Kristan et al. 2021 [19]	25	NGS of 39 genes		
	1	EPAS1	c.1609G>A, p.(Gly537Arg)	Het <sup>4</sup>
	1		c.2120A>C, p.(Lys707Thr)	Het <sup>4</sup>
	1	JAK2	c.1767C>A, p.(Asn589Lys)	Het <sup>4</sup>
	1	SH2B3	c.901G>A, p.(Glu301Lys)	Het <sup>4</sup>
Gangat et al. 2021 [20]	1	EPOR		
	1	EPOR	c.1316G>A, p.(Trp439*)	AD <sup>3</sup>
Sinnema et al. 2018 [21]	4	Whole exome sequencing		
	2	EGLN1	c.124T.C, p.(Cys42Arg)	AR <sup>7</sup>
Pasquier et al. 2018 [22]	1	EPOR		
	1	EPOR	c.1300dup, p.(Gln434Profs*11)	
Jalowiec et al. 2021 [23]	8	NGS of 13 genes		
	1	EPO	c.*656G>A	AD <sup>3</sup>
	1	EGLN1	c.1088T>G p.(Leu363Arg)	AD <sup>3</sup>
	1		c.122_124delACT, p.(Tyr41del)	AD <sup>3</sup>
	1	VHL	c.340+648T>C	
	1	EPAS1	c.466G>T, p.(Gly156Trp)	AD <sup>3</sup>
	1	JAK2	c.1711G>A, p.(Gly571Ser)	AD <sup>3</sup>
	1		c.1169C>T, p.(Pro390Leu)	AD <sup>3</sup>
	1	SH2B3	c.107C>A, p.(Ala36Glu)	AD <sup>3</sup>
Nabhani et al. 2020 [24]	1	Not specified		
	1	HBB	c.258T>G, p.(Phe85Leu)	
Loganathan et al. 2022 [25]	42	EPAS1, EPOR, VHL, PHD2 exons		
	1	EPAS1	c.1715A>G, p.(Gln572Arg)	Het <sup>4</sup>
	1		c.1694G>T, p.(Ser565Ile)	Het <sup>4</sup>
	1		c.1634T>C, p.(Ile545Thr)	Het <sup>4</sup>
	1		c.1771C>G, p.(Gln591Glu)	Het <sup>4</sup>
	1		c.1859G>A, p.(Cys620Tyr)	Het <sup>4</sup>
	1		c.1969C>T, p.(Gln657*)	Het <sup>4</sup>
	1	EPOR	c.1183G>C, p.(Val395Leu)	Het <sup>4</sup>
	1		c.1028A>C, p.(Gln343Pro)	Het <sup>4</sup>
Chandrasekhar et al. 2020 [26]	65	EPAS1, EPOR, VHL, EGLN1 exons		

6	EPOR	c.980del, p.(Pro327Hisfs*68)	Het <sup>4</sup>
3		c.1006G>T, p.(Glu336*)	Het <sup>4</sup>
2		c.1253G>C, p.(Gly418Ala)	Het <sup>4</sup>
2		c.1436del, p.(Gly479Alafs*37)	Het <sup>4</sup>
2		c.1169G>C, p.(Gly390Ala)	Het <sup>4</sup>
1		c.1231G>A, p.(Ala411Thr)	Het <sup>4</sup>
1		c.1424G>T, p.(Gly475Val)	Het <sup>4</sup>
1		c.1470G>C, p.(Glu490Asp)	Het <sup>4</sup>
1		c.1084G>C, p.(Glu362Gln)	Het <sup>4</sup>
4		c.319C>G, p.(Arg107Gly)	Hom o <sup>6</sup>
35	VHL	c.239G>A, p.(Ser80Asn)	Hom o <sup>6</sup>
1		c.337C>G, p.(Arg113Gly)	Hom o <sup>6</sup>
1		c.1609G>A/c.1657dup, p.(Gly537Arg)/p.(Ala553Glyfs*58)	Het <sup>4</sup>
Remenyi et al. 2021 [27]	38	VHL	
Ediriwickrema et al. 2021 [28]	7	NGS of 45 genes	
	1	HFE	c.187C>G, p.(His63Asp) (HFE H63D)
	1	EGLN1	c.186G>C, p.(Glu62Asp)
		BMP6	c.427C>G/c.1098T>G, p.(Leu143Val)/p.(Ser366Arg)
		KDM6A	c.660A>T, p.(Lys220Asn)
	1	VHL	c.598C>T/c.376G>A, p.(Arg200Trp)/p.(Asp126Asn)
	1	SH2B3	c.1651C>T, p.(Arg551Trp)
	1	BPGM	c.273delC
		EGLN1	whole gene duplication
Mallik et al. 2022 [29]	1	NGS	
Lazana et al. 2021 [30]	1	Not specified	
	1	BPGM	c.260C>T, p.(Leu87Pro)
			Hom o <sup>6</sup>