## **SUPPLEMENTARY TABLES**

		Polycythemia vera	Essential thrombocythemia	Myelofibrosis	Myeloproliferative neoplasm NOS	Chronic myeloid leukemia	Myelodysplastic syndrome	Acute myeloid leukemia
Number of patients		6,649	3,287	1,443	1,638	5,567	3,520	12,832
Male/female ratio		0.97 (3279/3370)	0.73 (1385/1902)	1.24 (800/643)	0.99 (815/823)	1.26 (3109/2458)	1.35 (2021/1499)	1.09 (6689/6143)
Mean age at diagnosis		67	65	69	75	59	74	62
Lower quartile of the age of diagnosis distribution (years)		59	56	63	68	47	68	52
	1958-1967	864	0	2	0	1,114	0	915
	1968-1977	1,175	2	162	0	1,109	0	1,908
Calendar year of	1978-1987	1,294	158	350	0	1,005	0	2,534
diagnosis	1988-1997	1,107	817	210	300	804	594	2,635
	1998-2007	1,121	1,020	293	877	825	1,286	2,650
	2007-2015	1,088	1,290	426	461	710	1,640	2,190
	Total	15,071	11,597	3,871	5,579	13,211	11,145	32,562
Number of	Parents	2,954	3,100	835	1,332	3,142	2,513	7,663
relatives	Siblings	2,260	2,504	680	1,116	2,422	1,965	5,966
	Offspring	9,916	6,009	2,358	3,131	7,656	6,685	18,976
Median follow-up of first- degree relatives (years)		51	47	50	49	50	50	50
Total person-years of first- degree relatives		686,315	495,831	172,440	246,730	588,126	497,299	1,458,088

**Supplementary Table 1: Characteristics of patients and first-degree relatives.** NOS, not otherwise specified.

	Overall SIR (95% CI)	Age group	N	SIR (95% CI)	<i>P</i> value	
Navalaid maliananaiaa	1 00 /1 02 2 17\	≤56	167	2.19 (1.87-2.55)	0.13	
Myeloid malignancies	1.99 (1.82-2.17)	>56	312	1.89 (1.69-2.11)		
Navalan valiforativa na anlasm	4.02 (4.26 5.70)	≤59	80	6.46 (5.12-8.04)	4.4.40-3	
Myeloproliferative neoplasm	4.93 (4.26-5.70)	>59	101	4.15 (3.38-5.04)	$4.1 \times 10^{-3}$	
Polycythemia vera	7.66 (5.96.10.02)	≤59	26	10.90 (7.12-15.97)	0.03	
Polycythenna vera	7.66 (5.86-10.03)	>59	27	5.96 (3.93-8.67)	0.03	
Essential thrombocythemia	6.75 (4.44-10.25)	≤56	10	9.76 (4.68-17.95)	0.17	
Lissential till offibocytherina	0.73 (4.44-10.23)	>56	12	5.37 (2.77-9.38)	0.17	
Chronic myeloid leukemia	0.78 (0.29-2.07)	≤47	2	1.33 (0.16-4.80)	0.39	
Cironic myelola leakenna	0.76 (0.29-2.07)	>47	2	0.55 (0.07-1.99)	0.39	
Muolodusplastis sundrama	6.88 (4.33-10.92)	≤68	13	11.95 (6.36-20.43)	8.8 × 10 <sup>-3</sup>	
Myelodysplastic syndrome	0.88 (4.33-10.92)	>68	5	3.27 (1.06-7.63)	8.8 × 10	
Acute myeloid leukemia	1.53 (1.15-2.04)	≤52	13	1.48 (0.79-2.53)	0.90	
Acute injeroid leukeiilla	1.33 (1.13-2.04)	>52	33	1.55 (1.07-2.18)	0.90	

Supplementary Table 2: Familial relative risks of myeloid malignancies, by the age at diagnosis. Age group defined by the lower quartile of the distribution of the diagnosis. FDR, first-degree relative; N, number; SIR, Standardised incidence ratios; CI, confidence interval. *P* value represents a trend test. The age stratification was based on the first quartile of the age at diagnosis distribution of all incident cases for each myeloid malignancy. Where a first-degree relative appears in both age groups due to being related to two or more incident cases, the first-degree relative is counted in the younger age group. Myeloid malignancies comprise polycythemia vera, essential thrombocythemia, myelofibrosis, myeloproliferative neoplasm NOS, chronic myeloid leukemia, myelodysplastic syndrome, acute myeloid leukemia. Myeloproliferative neoplasms comprise polycythemia vera, essential thrombocythemia, myelofibrosis and myeloproliferative neoplasm NOS.

	Overall SIR (95% CI)	Relationship	N	SIR (95% CI)	P value	
Model and the section	4.00 (4.02.2.47)	Parent-child	393	1.98 (1.79-2.19)	0.75	
Myeloid malignancies	1.99 (1.82-2.17)	Sibling	90	2.06 (1.66-2.53)	0.75	
Navelengeliferative peopless	4.02./4.26.F.70\	Parent-child	149	5.02 (4.25-5.89)	0.76	
Myeloproliferative neoplasm	4.93 (4.26-5.70)	Sibling	34	4.75 (3.29-6.64)	0.76	
Polycythemia vera	7.66 (5.86-10.03)	Parent-child	53	8.84 (6.62-11.56)	1.0 × 10 <sup>-5</sup>	
Polycytheilia vera	7.00 (3.80-10.03)	Sibling	0		1.0 × 10	
Essential thrombocythemia	6.75 (4.44-10.25)	Parent-child	16	6.73 (3.85-10.93)	0.99	
Essential tillollibocytllellila	0.73 (4.44-10.23)	Sibling	6	6.77 (2.48-14.74)	0.99	
Chronic myeloid leukemia	0.78 (0.29-2.07)	Parent-child	4	0.93 (0.25-2.38)	0.82	
Cironic myelola leakenna	0.78 (0.29-2.07)	Sibling	0		0.62	
Myolodycalactic cyndromo	6.88 (4.33-10.92)	Parent-child	10	5.50 (2.64-10.11)	0.21	
Myelodysplastic syndrome	0.00 (4.55-10.92)	Sibling	8	10.00 (4.32-19.70)	0.21	
Acute myeloid leukemia	1.53 (1.15-2.04)	Parent-child	30	1.19 (0.80-1.70)	2.1 × 10 <sup>-3</sup>	
Acute myelolu leukelilla	1.33 (1.13-2.04)	Sibling	16	3.29 (1.88-5.34)	2.1 × 10	

Supplementary Table 3 - Standardised incident ratios of myeloid malignancies in first-degree relatives of individuals with myeloid malignancy, stratified by familial relationship. N, number; SIR, standardised incident ratio; CI, confidence interval. *P* value represents a trend test. Where a first-degree relative appears in both relationship groups due to being related to two or more incident cases, the first-degree relative is counted in both relationship groups. Myeloid malignancies comprise polycythemia vera, essential thrombocythemia, myelofibrosis, myeloproliferative neoplasm NOS, chronic myeloid leukemia, myelodysplastic syndrome, acute myeloid leukemia. Myeloproliferative neoplasms comprise polycythemia vera, essential thrombocythemia, myelofibrosis and myeloproliferative neoplasm NOS.

	Overall SIR (95% CI)	Sex of case	N	SIR (95% CI)	P value	
Musical malignancies	1 00 /1 92 2 17\	Male	246	1.94 (1.71-2.20)	0.42	
Myeloid malignancies	1.99 (1.82-2.17)	Female	240	2.08 (1.83-2.36)		
NAvelengeliferative peopless	4 02 /4 26 F 70\	Male	86	4.73 (3.78-5.84)	0.44	
Myeloproliferative neoplasm	4.93 (4.26-5.70)	Female	99	5.30 (4.31-6.45)		
Dolumento mio voro	7.66 (5.96.10.03)	Male	29	7.98 (5.34-11.46)	0.96	
Polycythemia vera	7.66 (5.86-10.03)	Female	25	7.60 (4.92-11.22)	0.86	
Faccustial throughouthouth	6.75 (4.44.10.25)	Male	9	6.33 (2.89-12.02)	0.80	
Essential thrombocythemia	6.75 (4.44-10.25)	Female	13	7.06 (3.76-12.07)		
Chronic muoloid laukomia	0.78 (0.29-2.07)	Male	1	0.34 (0.01-1.89)	0.20	
Chronic myeloid leukemia	0.78 (0.29-2.07)	Female	3	1.33 (0.27-3.89)	0.20	
Myolodycalactic cyndromo	6.88 (4.33-10.92)	Male	10	6.70 (3.21-12.32)	0.90	
Myelodysplastic syndrome	0.00 (4.33-10.92)	Female	8	7.12 (3.07-14.03)	0.90	
Acute muclaid laukamia	1.53 (1.15-2.04)	Male	24	1.52 (0.97-2.26)	0.97	
Acute myeloid leukemia	1.55 (1.15-2.04)	Female	22	1.54 (0.97-2.33)	0.97	

Supplementary Table 4 - Standardised incident ratios of myeloid malignancies in first-degree relatives of individuals with myeloid malignancy, stratified by the sex of cases. N, number; SIR, standardised incident ratio; CI, confidence interval. *P* value represents a trend test. Where a first-degree relative appears in both groups due to being related to two or more incident cases, the first-degree relative is counted in both groups. Myeloid malignancies comprise polycythemia vera, essential thrombocythemia, myelofibrosis, myeloproliferative neoplasm NOS, chronic myeloid leukemia, myelodysplastic syndrome, acute myeloid leukemia. Myeloproliferative neoplasms comprise polycythemia vera, essential thrombocythemia, myelofibrosis and myeloproliferative neoplasm NOS.

	Overall SIR (95% CI)	Sex of FDR	N	SIR (95% CI)	P value	
NAveleid melignensies	1 00 (1 02 2 17)	Male	243	1.95 (1.71-2.21)	0.52	
Myeloid malignancies	1.99 (1.82-2.17)	Female	236	2.02 (1.77-2.29)		
Myolograliforative popularm	4 02 (4 26 E 70)	Male	84	4.74 (3.78-5.87)	0.53	
Myeloproliferative neoplasm	4.93 (4.26-5.70)	Female	97	5.11 (4.14-6.23)		
Doluguthomia yara	7.66 (5.96.10.03)	Male	28	7.92 (5.26-11.45)	0.70	
Polycythemia vera	7.66 (5.86-10.03)	Female	25	7.40 (4.79-10.92)	0.70	
Essential thrombosythomia	6.75 (4.44.10.25)	Male	9	6.70 (3.06-12.72)	0.98	
Essential thrombocythemia	6.75 (4.44-10.25)	Female	13	6.79 (3.62-11.61)		
Chronic muoloid loukomia	0.78 (0.29-2.07)	Male	1	0.34 (0.01-1.89)	0.19	
Chronic myeloid leukemia	0.78 (0.29-2.07)	Female	3	1.36 (0.28-3.97)		
Myolodysplastic syndrome	6.88 (4.33-10.92)	Male	10	7.00 (3.36-12.87)	0.94	
Myelodysplastic syndrome	0.00 (4.55-10.92)	Female	8	6.74 (2.91-13.28)	0.94	
Acuta myoloid laukamia	1.53 (1.15-2.04)	Male	24	1.55 (0.99-2.31)	0.93	
Acute myeloid leukemia	1.33 (1.13-2.04)	Female	22	1.51 (0.95-2.29)	0.93	

Supplementary Table 5 - Standardised incident ratios of myeloid malignancies in first-degree relatives of individuals with myeloid malignancy, stratified by the sex of first-degree relative. FDR, first-degree relative; N, number; SIR, standardised incident ratio; CI, confidence interval. *P* value represents a trend test. Where a first-degree relative appears in both groups due to being related to two or more incident cases, the first-degree relative is counted in both groups. Myeloid malignancies comprise polycythemia vera, essential thrombocythemia, myelofibrosis, myeloproliferative neoplasm NOS, chronic myeloid leukemia, myelodysplastic syndrome, acute myeloid leukemia. Myeloproliferative neoplasms comprise polycythemia vera, essential thrombocythemia, myelofibrosis and myeloproliferative neoplasm NOS.

	Number of affected FDRs							
	1							
Individual with hematological malignancy	N	SIR (95% CI)	CR (%)	N	SIR (95% CI)	CR (%)	P value	
Myeloid malignancies	470	1.96 (1.79-2.15)	1.4	9	4.55 (2.08-8.64)	4.4	0.02	
Myeloproliferative neoplasm	176	4.83 (4.14-5.60)	1.2	5	17.82 (5.79-24.89)	3.2	0.01	

Supplementary Table 6: Familial relative risks of myeloid and myeloproliferative neoplasm, by number of first-degree relatives affected. FDR, first-degree relative; N, number; SIR, Standardised incidence ratios; CI, confidence interval; CR, cumulative risk. *P* value represents a trend test. Myeloid malignancies comprise polycythemia vera, essential thrombocythemia, myelofibrosis, myeloproliferative neoplasm NOS, chronic myeloid leukemia, myelodysplastic syndrome, acute myeloid leukemia. Myeloproliferative neoplasms comprise polycythemia vera, essential thrombocythemia, myelofibrosis and myeloproliferative neoplasm NOS.