

National-level dietary patterns and acute myeloid leukemia: a global ecological analysis

Authors

Diguang Wen,¹ Zhenxiang Peng² and Jianchuan Deng¹

¹Department of Hematology and ²Department of Gastroenterology, The Second Affiliated Hospital of Chongqing Medical University, Chongqing, China

Correspondence:

J. DENG - dengjianchuan66@163.com
300319@hospital.cqmu.edu.cn

<https://doi.org/10.3324/haematol.2025.288955>

Table S1. GLMM analysis identifying the impact of 44 dietary elements on the incidence of AML.

effect	term	estimate	std. error	statistic	p. value	nutrient	effect_size	direction	category	shape	Reasonable	Direction	Shape	Category	EffectSize
fixed	Beans and legumes	-8.7	1.01	-8.649	5.152313	Beans and legumes	8.74	Protective	Protective	Circular	Yes	Protective	Circular	Protective	8.74
		5E-04	1485	2832	3435		9294	Protective	Protective	Circular		Protective	9294		
		8885	947	2476	7e-18		5853	Protective	Protective	Circular		Protective	5853		
		4	8885	947	2476		7e-18	8978	Protective	Protective		Circular	Protective	8978	
fixed	Calcium	2.12	9.64	2.2052	0.02	Calcium	2.12	Risk	Risk	Angular	No	Risk	Angular	Risk	2.12
		7640	8074	485	7436		7640	Risk	Risk	Angular		Risk	7640		
		2834	8765	191	6601		2834	Risk	Risk	Angular		Risk	2834		
		3219	2182	732	8692		3219	Risk	Risk	Angular		Risk	3219		
fixed	Cheese	6.65	1.49	4.430	8.86	Cheese	6.65	Risk	Risk	Angular	Yes	Risk	Angular	Risk	6.65
		8118	8543	614	8780		8118	Risk	Risk	Angular		Risk	8118		
		9406	0539	943	4322		9406	Risk	Risk	Angular		Risk	9406		
		0170	5513	152	2337		0170	Risk	Risk	Angular		Risk	0170		
fixed	Coffee	-0.0	0.00	-1.372	0.16	Coffee	0.00	Protective	Non-significant	Circular	No	Protective	Circular	Non-significant	0.00
		0406	2962	3000	9771		4067	Protective	Non-significant	Circular		Protective	4067		
		7054	1511	937	6259		0542	Protective	Non-significant	Circular		Protective	0542		
		62	1511	937	0251		2034	Protective	Non-significant	Circular		Protective	2034		
fixed	Dietary fiber	7.44	1.76	213	0.67	Dietary fiber	7.44	Risk	Non-significant	Angular	No	Risk	Angular	Non-significant	7.44
		5641	6983	758	3480		5641	Risk	Non-significant	Angular		Risk	5641		
		6938	5761	290	6663		6938	Risk	Non-significant	Angular		Risk	6938		
		2157	8566	778	3670		2157	Risk	Non-significant	Angular		Risk	2157		
fixed	Dietary soy	-8.9	3.30	-2.710	0.00	Dietary soy	8.97	Protective	Protective	Circular	Yes	Protective	Circular	Protective	8.97
		7E-0	9437	710	6710		1554	Protective	Protective	Circular		Protective	1554		

effect	term	estimate	std. error	statistic	p. value	nutrient	effect_size	direction	category	shape	Reasonable	Direction	Shape	Category	EffectSize			
	sium	7440	6850	412	0180	sium	7440	sk	sk	r		sk	r	sk	7440			
		2695	0556	509	6531		2695			i			i		2695			
		8464	6653	383	3309		8464			a			a		8464			
		9e-5	35e-5	064	3e-4		9e-5			n			n		9e-5			
				894						g			g					
										l			l					
										e			e					
										C			C					
fixed	Monounsaturated fatty acids	-0.001408967	6.072801879e-4	-2.102707684	0.03549132995715416	Monounsaturated fatty acids	0.00140896731689854	Pr	Pr	ot	ot	ec	ec	ti	ti	ve	ve	854
			6.70	-2.102	0.035491	Monou	0.00	Pr	Pr	ot	ot	ec	ec	ti	ti	ve	ve	854
			0728	102	5491	nsatu	1408	ot	ot	ec	ec	ti	ec	ti	ve	ve	ve	1689
			4351	707	3299	rated	9673	ec	ec	ti	ti	ve	ec	ti	ve	ve	ve	9673
			0187	684	5715	fatty	1689	ti	ti	ve	ve	ve	ti	ve	ve	ve	ve	1689
			9e-4		416	acids	854	ve	ve	ve	ve	ve	ve	ve	ve	ve	ve	854
										T			T					
										r			r					
										i			i					
										a			a					
fixed	Non-starchy vegetables	3.38861922382e-4	4.63012432508868e-5	7.318636449265268	2.5050322621008293e-13	Non-starchy vegetables	3.38861922382e-4	Ri	Ri	sk	sk	No	Ri	sk	Ri	sk	sk	2238
			3.38	7.3	2.50	Non-s	3.38			sk	sk	No	sk	sk	sk	sk	sk	2238
			8619	186	5032	tarch	8619											8619
			0124	364	2621	y	6650	Ri	Ri				Ri	sk	Ri	sk	sk	6650
			3250	492	0082	veget	2238	sk	sk				sk	sk	sk	sk	sk	2238
			8868	652	93e-13	ables	2e-4											2e-4
										g			g					
										l			l					
										e			e					
										C			C					
										i			i					
										ot			ot					
fixed	Nuts and seeds	-7.90E-04	3.1800924195938787e-4	-2.482895308	0.01303193819460251	Nuts and seeds	7.895836547719558e-4	Pr	Pr	ot	ot	ec	ec	ti	ti	ve	ve	8e-4
			3.18	-2.482	0.013031	Nuts	7.89	Pr	Pr	ot	ot	ec	ec	ti	ti	ve	ve	8e-4
			0092	482	3031	and	5836	ot	ot	ec	ec	ti	ec	ti	ve	ve	ve	5836
			4195	895	9381	seeds	5477	ec	ec	ti	ti	ve	ec	ti	ve	ve	ve	5477
			9387	895	9460		1955	ti	ti	ve	ve	ve	ti	ve	ve	ve	ve	1955
			87e-4	308	251		8e-4	ve	ve	ve	ve	ve	ve	ve	ve	ve	ve	8e-4
										e			e					
										C			C					
										i			i					
										ot			ot					
fixed	Other starchy vegetables	-3.77E-04	3.702894127901426e-5	-10.1917245	2.1589990699262608e-24	Other starchy vegetables	3.773887682234047e-4	Pr	Pr	ot	ot	ec	ec	ti	ti	ve	ve	7e-4
			3.70	-10.191	2.158999	Other	3.77	Pr	Pr	ot	ot	ec	ec	ti	ti	ve	ve	7e-4
			2894	.19	0699	starc	3887	ot	ot	ec	ec	ti	ec	ti	ve	ve	ve	3887
			1279	172	2626	hy	6822	ec	ec	ti	ti	ve	ec	ti	ve	ve	ve	6822
			0142	45	08e-24	veget	3404	ti	ti	ve	ve	ve	ti	ve	ve	ve	ve	3404
			6e-5			ables	7e-4	ve	ve	ve	ve	ve	ve	ve	ve	ve	ve	7e-4
										e			e					
										T			T					
										r			r					
										i			i					
										a			a					
										n			n					
										g			g					
										l			l					
										e			e					
										T			T					
										r			r					
										n-			n-					
										si			si					
										gn			gn					
fixed	Potassium	8.738524436412753e-7	2.574518550221021e-6	394236345928353	0.7342906164250338	Potassium	8.738524436412753e-7	Ri	Ri	sk	sk	No	Ri	sk	Ri	sk	sk	3e-7
			8.73	394	0.73	Potas	8.73			sk	sk	No	sk	sk	sk	sk	sk	3e-7
			8524	236	4290	sium	8524											8524
			4364	345	6164		4364	Ri	Ri				Ri	sk	Ri	sk	sk	4364
			1275	922	2503		1275	sk	sk				sk	sk	sk	sk	sk	1275
			3e-7	835	38		3e-7											3e-7
										ic			ic					
										an			an					
										t			t					
										e			e					
										T			T					
fixed	Potatoes	4.207260	3.893935	10.804	3.272002	Potatoes	4.207260	Ri	Ri	sk	sk	Yes	Ri	sk	Ri	sk	sk	7260
			3.89	10.804	3.27	Potat	4.20	Ri	Ri	sk	sk	Yes	sk	sk	sk	sk	sk	7260

effect	term	estimate	std. error	statistic	p. value	nutrient	effect_size	direction	category	shape	Reasonable	Direction	Shape	Category	EffectSize
		9079	1750	650	4929		9079			i			i		9079
		9057	7412	613	4819		9057			a			a		9057
		9e-4	3e-5	913	64e-27		9e-4			n			n		9e-4
				962						g			g		
			2.15		3.48					C			C		
fixed	Refined grains	-4.29E-04	7444.9642060317e-5	-19.90772615	7904.9950816235e-88	Refined grains	4.294982352235019e-4	Pr	Protective	Protective	No	Protective	Protective	Protective	4.294982352235019e-4
fixed	Saturated fat	-0.002303615	8177.335087025e-4	-2.946486256	0.00321406701665254	Saturated fat	0.00230361520677846	Pr	Protective	Protective	No	Protective	Protective	Protective	0.00230361520677846
fixed	Seafood omega-3 fat	-4.47E-05	0418.6110431395e-6	-6.259993355	3.849938763664903e-10	Seafood omega-3 fat	4.4698973058832794e-5	Pr	Protective	Protective	No	Protective	Protective	Protective	4.4698973058832794e-5
fixed	Selenium	-1.02E-04	5.675806827165205e-5	-1.803443922	0.0713185249795012	Selenium	1.0235999324092866e-4	Pr	Protective	Protective	No	Protective	Protective	Protective	1.0235999324092866e-4
fixed	Sugar-sweetened beverages	-1.20E-05	1.6027508961964616e-5	-0.7499396	0.4532910829576625	Sugar-sweetened beverages	1.2019663660512713e-5	Pr	Protective	Protective	Yes	Protective	Protective	Protective	1.2019663660512713e-5
fixed	Tea	-0.033307199	0.0068392553	-4.870003	1.1159615659	Tea	0.0333071987	Pr	Protective	Protective	Yes	Protective	Protective	Protective	0.0333071987

effect	term	estimate	std. error	statistic	p. value	nutrient	effect_size	direction	category	shape	Reasonable	Direction	Shape	Category	EffectSize
fixed	Total .Milk		2837	704	6952		8314	ti	ti	c		ti	c	ti	8314
			484		05e-6		636	ve	ve	e		ve	e	ve	636
			5.19	-3.	7.26		2.05	Pr	Pr	C		Pr	C	Pr	2.05
		-2.06E-04	2354	967	7486	Total Milk	9858	ot	ot	i	Yes	ot	i	ot	9858
fixed	Total .carbohydrates		2354	354	9536		0591	ec	ec	r		ec	r	ec	0591
			5181	445	8467		5442	ti	ti	c		ti	c	ti	5442
			3e-5		3e-5		5e-4	ve	ve	e		ve	e	ve	5e-4
		0.00289760555621369	4173	644	7405	Total carbohydra	0.00289760555621369	Ri	Ri	a	Yes	Ri	a	Ri	0.00289760555621369
fixed	Total .omega.6.fat		0.00181627846152744	0.04350032297784165	0.5015199196879	0.6160052627803335	Total omega-6 fat	0.02181627846152744	Ri	n-si	No	Ri	n-si	0.02181627846152744	
			0.02181627846152744	0.04350032297784165	0.5015199196879		0.02181627846152744	Ri	gn	a		Ri	a	gn	0.02181627846152744
			0.02181627846152744	0.04350032297784165	0.5015199196879		0.02181627846152744	Ri	if	n	No	Ri	n	if	0.02181627846152744
			0.02181627846152744	0.04350032297784165	0.5015199196879		0.02181627846152744	Ri	ic	g		Ri	g	ic	0.02181627846152744
fixed	Total .processed.meats		0.00193528536634252	2.05713591309698e-4	9.407668953817414	5.072615729467947e-21	Total processed meats	0.00193528536634252	Ri	n-si	Yes	Ri	n-si	0.00193528536634252	
			0.00193528536634252	2.05713591309698e-4	9.407668953817414		0.00193528536634252	Ri	gn	a		Ri	a	gn	0.00193528536634252
			0.00193528536634252	2.05713591309698e-4	9.407668953817414		0.00193528536634252	Ri	if	n	Yes	Ri	n	if	0.00193528536634252
			0.00193528536634252	2.05713591309698e-4	9.407668953817414		0.00193528536634252	Ri	ic	g		Ri	g	ic	0.00193528536634252
fixed	Total .protein		1.0158748155124245e-4		3.0660831893498774e-8		5.625529445231658e-4	Pr	Pr	C		Pr	C	Pr	5.625529445231658e-4
			1.0158748155124245e-4		3.0660831893498774e-8		5.625529445231658e-4	Pr	ot	i	Yes	Pr	ot	i	5.625529445231658e-4
			1.0158748155124245e-4		3.0660831893498774e-8		5.625529445231658e-4	Pr	ec	r		Pr	ec	r	5.625529445231658e-4
			1.0158748155124245e-4		3.0660831893498774e-8		5.625529445231658e-4	Pr	ti	c		Pr	ti	c	5.625529445231658e-4
fixed	Total .seafoods		1.79560816772026	8.2233788720406049	2.10.02899602211170	Total seafo	1.79560816772026	Ri	Ri	r	No	Ri	r	Ri	5608
			1.79560816772026	8.2233788720406049	2.10.02899602211170		1.79560816772026	Ri	sk	i		Ri	sk	i	1677
			1.79560816772026	8.2233788720406049	2.10.02899602211170		1.79560816772026	Ri	sk	a		Ri	sk	a	2026

effect	term	estimate	std. error	statistic	p. value	nutrient	effect_size	direction	category	shape	Reasonable	Direction	Shape	Category	EffectSize
		74e-4	4e-5	65543	778		74e-4			n			n		74e-4
fixed	Unknown	-8.93E-05	7.455367666841103e-5	-1.197261629	0.2312045951286491	Unknown	8.926025641172908e-5	Protective	Non-significant	Circular	No	Protective	Circular	Non-significant	8.926025641172908e-5
fixed	Vitamin A w. supplements	2.7491773340844953e-5	4.063666505236542e-6	6.765263169459986	1.3306709803948304e-11	Vitamin A w/ supplement	2.7491773340844953e-5	Risk	Risk	Triangle	Yes	Risk	Triangle	Risk	2.7491773340844953e-5
fixed	Vitamin B1	-0.0141150444	0.01124390477481784	-1.255350739	0.20935146372134267	Vitamin B1	0.0141150444336	Protective	Non-significant	Circular	No	Protective	Circular	Non-significant	0.0141150444336
fixed	Vitamin B2	0.01891321344384164	0.00679151253983984	2.784830821248496	0.0053555657850244	Vitamin B2	0.01891321344384164	Risk	Risk	Triangle	Yes	Risk	Triangle	Risk	0.01891321344384164
fixed	Vitamin B3	-2.23E-04	2.5600669910773506e-4	-0.87244649	0.3829648480145468	Vitamin B3	2.2335214597072524e-4	Protective	Non-significant	Circular	No	Protective	Circular	Non-significant	2.2335214597072524e-4

effect	term	estimate	std. error	statistic	p. value	nutrient	effect_size	direction	category	shape	Reasonable	Direction	Shape	Category	EffectSize						
fixed	Vitamin B6	0.01	0.00	3.6	2.93	Vitamin B6	0.01	Risk	Risk	triangle	Yes	Risk	triangle	Risk	0.01						
		8489	5106	209	5548		8489								8489	7253	7253	7581	7581	345	
		7253	3581	221	4417		7253														
		7581	6288	496	2413		7581														
		345	366	072	25e-4		345														
fixed	Vitamin C	2.47	5.07	0.4	0.62	Vitamin C	2.47	Risk	n-sufficient	triangle	No	Risk	triangle	n-sufficient	2.47						
		2246	3527	872	6057		2246								4799	8488	62e-5	62e-5	595	06	
		4799	7230	835	4203		4799														
		8488	0188	669	0975		8488														
		62e-5	e-5	595	06		62e-5														
fixed	Vitamin D	0.03	0.00	9.3	7.87	Vitamin D	0.03	Risk	Risk	triangle	No	Risk	triangle	Risk	0.03						
		0057	3210	613	1769		0057								2215	6940	812	812			
		2215	7754	588	1488		2215														
		6940	8691	654	9720		6940														
		812	736	452	1e-2		812														
fixed	Vitamin E	-0.0	1292	-4.296	1.73	Vitamin E	0.00	Protective	Protective	circle	Yes	Protective	circle	Protective	0.00						
		0555	1373	374	2118		0555								5551	5055	6285	407	407		
		1506	8680	069	1879		6285														
			05	069	3e-5		407														
fixed	Whole grains	-3.7	9458	-4.678	2.89	Whole grains	3.78	Protective	Protective	circle	Yes	Protective	circle	Protective	3.78						
		9E-04	1582	038	1932		8957								3965	4490	5e-4	5e-4			
			3118	114	5691		3965														
			5e-5	114	95e-6		4490														
							5e-4														
fixed	Yoghurt..including fermented.m	4.88	2671	-2.023	0.04	Yoghurt (including fermented)	9.87	Protective	Protective	circle	Yes	Protective	circle	Protective	9.87						
		-9.8	1043	023	3055		8468								3196	1344	4e-5	4e-5			
		8E-05	9508	168	7370		3196														
			54e-5	898	6515		1344														
					947		4e-5														

effect	term	estimate	std. error	statistic	p. value	nutrient	effect_size	direction	category	shape	Reasonable	Direction	Shape	Category	EffectSize
	ilk.					milk)									
fixed	Zinc	0.02 1008 3358 9655 8	0.00 1504 8730 1013 516	13. 960 205 117 022 516	2.72 6480 3777 9364 15e- 44	Zinc	0.02 1008 3358 9655 8	Ri sk	Ri sk	T r i a n g l e T r i a n g l e T r i a n g l e	Yes	Ri sk	T r i a n g l e T r i a n g l e	Ri sk	0.02 1008 3358 9655 8
fixed	Plant .omega a.3.f at	1.07 4894 7738 8663 57e- 4	2.15 4161 0005 2527 8e-5	4.9 898 534 678 908 84	6.04 2511 1295 9536 5e-7	Plant omega -3 fat	1.07 4894 7738 8663 57e- 4	Ri sk	Ri sk	T r i a n g l e T r i a n g l e	No	Ri sk	T r i a n g l e T r i a n g l e	Ri sk	1.07 4894 7738 8663 57e- 4
fixed	Vitam in.B9 ..Fol ate.	2.37 0933 9541 5276 76e- 4	9.73 0740 1185 3106 8e-5	2.4 365 402 068 827 2	0.01 4828 5208 4767 793	Vitam in B9 (Fola te)	2.37 0933 9541 5276 76e- 4	Ri sk	Ri sk	T r i a n g l e	Yes	Ri sk	T r i a n g l e	Ri sk	2.37 0933 9541 5276 76e- 4

Table S2. EAPC of the incidence rate contributed by PC1 in each country.

location_name	EAPC	EAPC_low	EAPC_high
Afghanistan	-0.251164065	-0.377761765	-0.124405487
Albania	0.104487776010 043	-0.006197303	0.215295374224 2
Algeria	-0.870370436	-1.299232116	-0.439645321
Angola	-0.089337311	-0.111930966	-0.066738546
Antigua and Barbuda	1.002097396	0.311609276281 488	1.697338443850 87
Argentina	0.829508859224 348	0.236353468245 865	1.426174287286 91
Armenia	-0.866653607	-1.307971855	-0.423361929
Australia	-1.19777603	-1.631108208	-0.762534948
Austria	0.018493659893 5703	-0.814130153	0.858107000529 484
Azerbaijan	1.123171671343 79	0.347775587690 524	1.904559308701 41
Bahrain	0.130600539466 83	-0.009677166	0.271075041925 672
Bangladesh	-0.076778322	-0.110897274	-0.042647717
Barbados	0.793439454283 74	0.289124898386 683	1.300290009687 7
Belarus	0.906101610037 102	0.329864708180 905	1.485648084452 02
Belgium	-0.155887531	-0.274537906	-0.03709599
Belize	1.012288657995 25	0.334151861140 453	1.695008834553 96
Benin	0.222138884839 018	0.073040625539 7664	0.371459284794 606
Bhutan	0.039905672419 6045	-0.069535736	0.149466938595 189
Bosnia and Herzegovina	-1.61919894	-2.392500744	-0.839770601
Botswana	0.216735202706 264	0.022446969833 2674	0.411400830039 943
Brazil	0.687635156451 183	0.073973176995 8452	1.305060162526 45
Bulgaria	0.001625298824 05948	-0.11899063	0.122386882839 143
Burkina Faso	-0.116344098	-0.149767687	-0.082909322
Burundi	-0.155871383	-0.240654433	-0.071016278
Cambodia	0.650838481284 888	0.190732463156 551	1.113057444819 58
Cameroon	-0.327097264	-0.690656869	0.037793287954

			7904
Canada	-0.900185538	-1.401858381	-0.395960155
Central African Republic	-0.028694024	-0.065847982	0.008473747197 45719
Chad	-0.360824101	-0.426277512	-0.295327666
Chile	0.298095862729 886	0.077920760499 2838	0.518755358273 97
China	-0.907072115	-1.591556688	-0.217826577
Colombia	-0.734719355	-1.088698312	-0.379473596
Comoros	0.495225339351 268	0.094818854371 459	0.897233559116 661
Congo	1.039451469265 07	0.412893853397 711	1.669918687086 3
Costa Rica	-0.028849183	-0.077385113	0.019710321965 527
Croatia	0.244454284869 411	0.082408620452 8118	0.406762321042 642
Cuba	0.016657830700 4395	-0.041127504	0.074476570289 6055
Cyprus	0.033614251384 3729	-0.032897869	0.100170625186 702
Democratic Republic of the Congo	0.127949743612 676	-0.059501236	0.315752311137 429
Denmark	0.024732167568 1311	-0.103587786	0.153216951905 288
Djibouti	0.941070505911 545	0.297377105376 051	1.588895033360 33
Dominica	-0.181701243	-0.214536362	-0.148855319
Dominican Republic	-0.274413036	-0.425459217	-0.123137732
Ecuador	0.075768482791 938	-0.058352124	0.210069077857 655
Egypt	1.115547555392 54	0.358025367147 463	1.878787670665 21
El Salvador	0.112514275616 16	-0.060364274	0.285691875352 434
Equatorial Guinea	-0.971020913	-1.454749268	-0.484918084
Eritrea	-0.068658087	-0.082615037	-0.054699188
Estonia	0.552985177590 06	0.160003373604 489	0.947508861498 37
Ethiopia	-0.068805785	-0.119055495	-0.018530795
Fiji	-0.494898179	-0.796558402	-0.192320661
Finland	0.081249434783 5591	-0.032943233	0.195572545480 416
France	-0.503973461	-0.982650565	-0.022982299

Gabon	0.016826178771 5451	-0.051203523	0.084902184224 1227
Georgia	-0.404335139	-0.494187083	-0.31440206
Germany	-0.958112464	-1.601937855	-0.310074478
Ghana	-0.67028863	-1.120107343	-0.218423627
Greece	0.425864045268 187	0.141190192098 195	0.711347147884 1
Grenada	-0.400701658	-0.635505608	-0.165342853
Guatemala	-0.036841469	-0.186579254	0.113120948872 591
Guinea	1.022122409468 35	0.163906786181 767	1.887691320777 37
Guinea-Bissau	-0.065659147	-0.109053655	-0.022245787
Guyana	0.580377039352 253	-0.002067546	1.166214111803 89
Haiti	-0.027134339	-0.081091223	0.026851681710 6823
Honduras	-0.055562768	-0.187081571	0.076129331972 23
Hungary	-0.017905468	-0.071405354	0.035623060483 9247
Iceland	-0.27699613	-0.35341054	-0.200523122
India	0.066626175118 5893	-0.116742146	0.250331128303 394
Indonesia	-0.215642144	-0.380324246	-0.050687804
Iraq	0.242402778830 608	0.065777980958 9254	0.419339334826 319
Ireland	0.115493963466 64	-0.043935832	0.275178049459 801
Israel	-0.695320101	-1.009000078	-0.380646142
Italy	0.003481459478 1496	-0.114948707	0.122052044630 472
Jamaica	0.105171584084 918	-0.059932009	0.270547932297 349
Japan	0.678055266968 625	0.055927460059 0909	1.304051340536 17
Jordan	-0.513328173	-0.719404552	-0.306824043
Kazakhstan	-0.67502342	-1.142536878	-0.205299014
Kenya	0.131203320994 899	0.008575856801 80684	0.253981147242 888
Kiribati	-1.116503662	-1.727549907	-0.501658005
Kuwait	-0.0097724	-0.081373031	0.061879539300 7465
Kyrgyzstan	0.116353791510	-0.103880663	0.337073782607

	226		678
Latvia	0.410240140218 932	0.148763433068 821	0.672399532467 094
Lebanon	-26.41086356	-39.10572582	-11.06945481
Lesotho	0.560552876271 259	0.109832413149 88	1.013302599965 53
Liberia	8.395243798006 22	2.955169464058 87	14.12276760061 97
Libya	0.412171252616 5	0.101484088024 617	0.723822703753 396
Lithuania	-0.064151454	-0.079952988	-0.048347421
Luxembourg	-0.302768537	-0.355407069	-0.250102197
Madagascar	-0.425255427	-0.80254942	-0.046526408
Malawi	-0.145913601	-0.221803879	-0.069965601
Malaysia	-0.015586651	-0.151840235	0.120852864998 677
Maldives	0.156688101693 625	-0.036544418	0.350294145509 134
Mali	0.271073399588 873	-0.050636597	0.593818893835 629
Malta	-0.137930583	-0.220237583	-0.05555569
Marshall Islands	0.081329496037 0303	-0.041076119	0.203885003733 34
Mauritania	0.207539598148 831	0.019110943901 2571	0.396323238132 679
Mauritius	-0.023180719	-0.191260963	0.145182576497 804
Mexico	-0.797438785	-1.321147907	-0.27095023
Mongolia	-0.232376055	-0.34960219	-0.115012018
Montenegro	0.081449961685 3315	-0.045145846	0.208206107073 527
Morocco	0.001076156613 33327	-0.086600585	0.088829836762 3941
Mozambique	-0.219326052	-0.266080817	-0.172549368
Myanmar	-0.006849468	-0.119025816	0.105452865419 919
Namibia	-0.641477839	-1.111712208	-0.169007408
Nepal	0.493033239378 748	0.115207203098 81	0.872285158076 336
Netherlands	-0.050497731	-0.187465029	0.086657520190 947
New Zealand	-0.296035415	-0.388907714	-0.203076526
Nicaragua	0.496709009783 536	0.220973080447 684	0.773203565785 94

Niger	-0.217747567	-0.328331574	-0.107040868
Nigeria	0.072958744461 8929	-0.034518646	0.180551688210 162
Norway	-0.714166332	-1.082167157	-0.344796446
Oman	0.392990618350 564	0.121332608083 646	0.665385715036 693
Pakistan	-0.056239308	-0.133865631	0.021447354979 0206
Palestine	0.960470374757 727	0.320232886449 69	1.604793818905 77
Panama	0.095650488326 1378	-0.031147311	0.222609115047 701
Papua New Guinea	3.436291225309 86	1.244148769683 79	5.675898039164 57
Paraguay	-1.0320786	-1.675581105	-0.384364573
Peru	-0.759213692	-1.104458435	-0.412763698
Philippines	-2.807336827	-4.944287526	-0.622345266
Poland	-0.920827181	-1.451778051	-0.387015692
Portugal	0.961243367350 706	0.342619120487 653	1.583681506677 05
Qatar	-0.213223405	-0.282076171	-0.144323098
Romania	-0.663692777	-1.013589597	-0.312559143
Russian Federation	-0.368412693	-0.670004841	-0.065904831
Rwanda	1.300368238412 37	0.436660426419 211	2.171503529389 13
Saint Lucia	-0.617926162	-1.065471252	-0.168356535
Saint Vincent and the Grenadines	0.362900030163 327	-0.009095314	0.736279305508 281
Samoa	0.284488754480 505	-0.088346065	0.658714860817 544
Sao Tome and Principe	-0.912886103	-1.256002627	-0.568577315
Saudi Arabia	0.046825412228 4462	-0.041074211	0.134802330609 785
Senegal	-0.170229092	-0.228952915	-0.111470704
Serbia	-0.187141116	-0.249255838	-0.124987716
Seychelles	0.299831305851 384	-0.033268642	0.634041178489 686
Sierra Leone	0.623370400290 923	0.094927811841 4165	1.154602856073 32
Singapore	-0.185425455	-0.251192433	-0.119615114
Slovakia	-0.781558387	-1.169770315	-0.391821536
Slovenia	0.727015712184 587	0.220592896604 499	1.235997523483 29
Solomon Islands	-0.665136922	-1.029808194	-0.299121962

South Sudan	0.025972194797 4745	-0.107556075	0.159678954921 749
Spain	-0.549316318	-0.809976942	-0.287970707
Sri Lanka	-0.100816665	-0.153470939	-0.048134623
Sudan	-0.019839837	-0.215441577	0.176145330204 891
Suriname	0.930595264024 325	0.401748729313 978	1.462227394212 98
Sweden	0.069451727458 2473	-0.00924969	0.148215089426 418
Switzerland	0.158229677304 589	-0.034618498	0.351449885675 77
Taiwan (Province of China)	-0.079148059	-0.146788088	-0.011462212
Tajikistan	0.103930030999 777	-0.098846026	0.307117675961 988
Thailand	1.499651943918 46	0.512128049867 533	2.496878183947 37
Timor-Leste	0.017577073182 1734	-0.069958287	0.105189111579 307
Togo	-0.957215024	-1.441061979	-0.470992761
Tonga	-0.392948374	-0.465742352	-0.320101158
Trinidad and Tobago	0.857028494919 798	0.313000534542 707	1.404006884653 96
Tunisia	-0.391250835	-0.648769529	-0.133064652
Turkmenistan	-0.268609624	-0.337879861	-0.199291241
Uganda	-0.578053805	-0.867587599	-0.287674376
Ukraine	0.651091533118 286	0.137237984442 74	1.167581917748 17
United Arab Emirates	-0.859401081	-1.347334903	-0.369053949
United Kingdom	-0.183316981	-0.310584735	-0.055886752
Uruguay	-1.473723314	-2.338950774	-0.600830377
Uzbekistan	-0.483148674	-0.93389792	-0.030348526
Vanuatu	-1.121116708	-1.438809919	-0.802399473

Table S3. Predicted number of AML cases attributable to PC1 in each country by 2030.

location_name	attributable_cases_PC1_new_2030	attributable_cases_PC1_new_2030_low	attributable_cases_PC1_new_2030_high
Afghanistan	-0.722341568	-2.151656335	0.609612839626715
Albania	0.009823065123461	-0.102166597	0.130277030892193
Algeria	-4.297874573	-5.123245368	-3.611139614
Angola	-0.314714956	-0.423872095	-0.216597874
Antigua and Barbuda	0.00728397329051285	-0.010479914	0.0249507619951993
Argentina	4.00133738815204	-5.001280824	13.7341724500997
Armenia	-1.188956321	-2.031306086	-0.263204268
Australia	-36.52083208	-50.03288163	-22.66738165
Austria	-9.144850314	-17.99178593	-0.71418187
Azerbaijan	0.716066754612813	-0.938349804	2.29397253027811
Bahrain	0.0217952590661468	-0.002823471	0.0472355072998704
Bangladesh	-2.231179457	-3.153685616	-1.288825392
Barbados	0.057464603718346	0.00411721306450946	0.118985423186427
Belarus	-3.636086755	-7.860464576	0.140447475083368
Belgium	-4.23442723	-7.705508283	-0.696693017
Belize	0.0193169466684985	0.000901486867165531	0.0382955253550896
Benin	0.0322075090309384	-0.014211674	0.0747750729625086
Bhutan	-0.0136928	-0.025590939	-0.00209456
Bosnia and Herzegovina	-4.143531803	-5.833062128	-2.546324588
Botswana	0.0184799525780078	-0.036543531	0.0760262221188266
Brazil	-26.29701886	-48.61419519	-3.932474863
Bulgaria	-0.437826543	-1.250824341	0.312827990803834
Burkina Faso	-0.083084023	-0.104120488	-0.060320771
Burundi	-0.098976089	-0.156633022	-0.041256414
Cambodia	0.805308668171558	-0.971981648	2.58670652392629
Cameroon	-0.962896703	-1.569640999	-0.39776652
Canada	-51.12462237	-73.10438015	-30.48729159

Central African Republic	-0.010280528	-0.034504063	0.0119292111421343
Chad	-0.398967361	-0.49962073	-0.286037218
Chile	-1.64780979	-2.981601968	-0.285693214
China	-558.0540502	-893.9372125	-226.6124676
Colombia	-11.35027085	-14.54325405	-7.910883157
Comoros	-0.004898417	-0.02856682	0.0199814775457761
Congo	0.1066436228933 35	-0.12134527	0.325635676607315
Costa Rica	-0.145462206	-0.248011368	-0.044746037
Croatia	0.6100920883634 82	-0.356392362	1.53930376534672
Cuba	-0.09305572	-0.571389406	0.427219061568565
Cyprus	-0.047453052	-0.129926648	0.0359252411290901
Democratic Republic of the Congo	-4.303737799	-5.827470583	-2.752132582
Denmark	-1.389125374	-2.777733879	0.0390144332083004
Djibouti	0.0068201130119 4472	-0.019298927	0.0325020713704685
Dominica	-0.00597817	-0.007793771	-0.004294674
Dominican Republic	-0.914220916	-1.074423037	-0.737109118
Ecuador	-5.849200297	-6.771349974	-4.974619179
Egypt	4.5044222708158 1	-3.83974822	12.907079022868
El Salvador	0.0874543498607 78	-0.266605839	0.41828749506126
Equatorial Guinea	-0.081221801	-0.105858655	-0.05456051
Eritrea	-0.031919356	-0.042305259	-0.020817734
Estonia	0.3595266824707 78	-0.529473571	1.10178258529108
Ethiopia	-0.365969049	-1.839405643	1.07215344543832
Fiji	-0.128486892	-0.212959347	-0.047558099
Finland	0.3409434895883 77	-0.686808566	1.41987776908613
France	-87.76512824	-127.2774695	-50.83477336
Gabon	-0.002636882	-0.018186533	0.0119547736105548
Georgia	-0.704956221	-1.023643073	-0.385347745
Germany	-150.6121116	-221.2117043	-79.82239852
Ghana	-1.444258829	-2.413882013	-0.560425304
Greece	-2.847790538	-7.540545376	2.02803879050964
Grenada	-0.022286491	-0.028169041	-0.015502936

Guatemala	-2.142550878	-2.69401795	-1.606463548
Guinea	0.0269811474946 521	-0.095023611	0.141340202849564
Guinea-Bissau	-0.000969752	-0.005738819	0.0040744092073483 1
Guyana	-0.00303792	-0.097542301	0.088646306563515
Haiti	-0.013439864	-0.193689438	0.183855936978239
Honduras	-0.515493576	-0.879314606	-0.109531018
Hungary	-0.209009755	-1.192052264	0.805186364255658
Iceland	-0.063452116	-0.091093908	-0.034511942
India	-19.22059861	-46.03882535	7.95343813638271
Indonesia	-20.31323892	-29.24933691	-11.71297022
Iraq	1.8690554884389 5	0.460343231773784	3.33342371775142
Ireland	0.0216007696555 874	-0.799228772	0.933863093769963
Israel	-6.712688593	-8.921650683	-4.360335824
Italy	-56.03522012	-75.56642718	-37.38275393
Jamaica	-0.224665736	-0.299601774	-0.14266026
Japan	6.1948491529104 1	-36.40777213	48.494219587946
Jordan	-2.416477965	-3.478152965	-1.424503477
Kazakhstan	-3.362444712	-5.589120502	-0.849441079
Kenya	-1.983557369	-2.425980836	-1.500586866
Kiribati	-0.017554739	-0.025047401	-0.010003488
Kuwait	0.0113853379551 986	-0.056174518	0.075257064826525
Kyrgyzstan	-0.332401619	-0.59569137	-0.083545968
Latvia	0.3842771318984 66	-0.520566098	1.36671169207445
Lebanon	-12.66676242	-15.7581474	-9.582674863
Lesotho	-0.007478881	-0.132549565	0.121319683212877
Liberia	-0.005941704	-0.249131833	0.219496262217668
Libya	-0.435541618	-1.099379587	0.220803114315346
Lithuania	-0.508131971	-0.6290896	-0.385479135
Luxembourg	-0.356100583	-0.418274161	-0.293227316
Madagascar	-0.569033005	-1.039889342	-0.11938621
Malawi	-0.098612305	-0.143698118	-0.055722834
Malaysia	-1.482047779	-2.822948666	-0.121282136
Maldives	-0.003096305	-0.013938284	0.0084475152149336 9
Mali	0.0532429375904 064	-0.075148092	0.186441263202901
Malta	-0.043137736	-0.094704088	0.0094976031091558

Marshall Islands	-0.00742945	-0.008819112	-0.0060494
Mauritania	-0.017558416	-0.046130055	0.0113825525697433
Mauritius	-0.013829063	-0.097273297	0.070926630942681
Mexico	-34.21479246	-45.08624103	-23.02831941
Mongolia	-0.103601674	-0.174302216	-0.033051081
Montenegro	0.0211345014776 477	-0.054180775	0.0889139515348969
Morocco	-0.077958581	-0.331636527	0.223060341092906
Mozambique	-1.196304409	-1.483173678	-0.914301787
Myanmar	-0.552165582	-2.937319734	1.64022503065233
Namibia	-0.227044773	-0.344589038	-0.116187404
Nepal	-0.597356806	-1.813597392	0.633293948073798
Netherlands	-3.723734863	-7.628160637	-0.148905254
New Zealand	-2.811392065	-3.749412635	-1.834222017
Nicaragua	-0.247264479	-0.56960417	0.0617984453467232
Niger	-0.478791073	-0.628552004	-0.341702418
Nigeria	-3.006370322	-3.966727681	-2.085584161
Norway	-4.227315519	-6.176741674	-2.332539697
Oman	-0.021712645	-0.130135335	0.0871080858722917
Pakistan	-4.127697765	-6.690769897	-1.640184131
Palestine	0.1324943757237 95	-0.171817097	0.449467560974405
Panama	-0.063360243	-0.201298081	0.0789101581274511
Papua New Guinea	0.5714251925378 28	-0.726736648	1.76867692822266
Paraguay	-2.099509439	-2.937967215	-1.29004399
Peru	-6.925247681	-8.586181085	-5.214056355
Philippines	-63.96112612	-86.41422892	-41.11303178
Poland	-40.47399903	-55.83316804	-24.848076
Portugal	3.5437639940111 3	-2.635805215	9.15623306031029
Qatar	-0.082420044	-0.138245484	-0.027464312
Romania	-10.24739955	-13.73897667	-6.728923421
Russian Federation	-67.89209827	-101.5282591	-32.64703978
Rwanda	0.3835409994550 94	-0.337610366	1.10135460350895
Saint Lucia	-0.045498476	-0.065104387	-0.027437923
Saint Vincent and the Grenadines	0.0003813677743 5696	-0.010943611	0.0118452280521843
Samoa	-0.029982772	-0.05046649	-0.009171884
Sao Tome and Principe	-0.005656305	-0.007507081	-0.003784551

Saudi Arabia	0.4962654015247 19	0.017120845153575 5	0.980891599556285
Senegal	-0.0434698	-0.066735573	-0.021567564
Serbia	-1.45513951	-2.178485356	-0.778223284
Seychelles	-0.011809447	-0.023505465	-0.000535729
Sierra Leone	0.0009746089314 92496	-0.111551346	0.110337483406694
Singapore	-0.334169851	-0.581562892	-0.101434888
Slovakia	-4.226061376	-5.7453138	-2.81031039
Slovenia	0.6472340417659 88	-0.572027588	1.85338267277328
Solomon Islands	-0.080284725	-0.100474933	-0.058784362
South Sudan	-0.056105058	-0.16172895	0.0518210528713922
Spain	-35.69765225	-49.76412144	-22.20570487
Sri Lanka	-3.825546047	-4.241526507	-3.385084293
Sudan	0.3102238199615 32	-1.870676115	2.49873580989015
Suriname	0.0153801248630 014	-0.027396177	0.058365814674546
Sweden	1.7670627781686 5	0.394922475211703	3.19512039287041
Switzerland	-5.363517865	-8.063497675	-2.935249606
Taiwan (Province of China)	-0.107937678	-1.172453185	0.902444479398123
Tajikistan	-0.160754437	-0.457637756	0.114740547783724
Thailand	-2.514195237	-17.53750765	12.2059045754342
Timor-Leste	-0.081397127	-0.121010665	-0.042763156
Togo	-0.507459791	-0.590056724	-0.427903751
Tonga	-0.010416075	-0.011867713	-0.008844056
Trinidad and Tobago	0.1311372343690 31	-0.061419921	0.339282777987011
Tunisia	-1.112320764	-1.803927706	-0.336982361
Turkmenistan	-0.342698024	-0.422812072	-0.25854375
Uganda	-1.097125053	-1.432672738	-0.750540906
Ukraine	11.796387259340 1	-4.423318692	28.832457329906
United Arab Emirates	-1.83743887	-2.325820545	-1.327162872
Uruguay	-3.761625584	-6.365790887	-1.216972813
Uzbekistan	-2.826547717	-4.88824441	-0.924503543
Vanuatu	-0.045653481	-0.055794084	-0.036350259
