

Supplementary Table S1. BCCH SAID registry ethnic groups and corresponding groups from Statistics Canada Census 2016.

Ethnic group	SAID registry	BC Census (2016)	GVA Census (2016)
First Nations	First Nations	First Nations (North American Indian)	First Nations (North American Indian)
Black	African Black, Barbadian, Cuban, Ethiopian, Ghanaian, Haitian, Jamaican, Puerto Rican, Somalian, other Caribbean, other West Indian	Akan, Amhara, Angolan, Antiguan, Ashanti, Bahamian, Bantu, Barbadian, Beninese, Bermudan, Black n.o.s., Burkinabe, Burundian, Cameroonian, Carib, Caribbean origins n.i.e., Central and West African origins, Chadian, Congolese, Cuban, Djiboutian, Dominican, Edo, Eritrean, Ethiopian, Ewe, Gabonese, Gambian, Ghanaian, Grenadian, Guadeloupean, Guinean, Haitian, Harari, Ibo, Ivorian, Jamaican, Kenyan, Kittitian/Nevisian, Liberian, Malagasy, Malian, Malinké, Martinican, Montserratian, Mauritian, Nigerian, Oromo, Other African origins n.i.e., Peulh, Puerto Rican, Rwandan, Senegalese, Seychellois, Sierra Leonean, Somali, South African, Southern and East African origins n.i.e., St. Lucian, Tanzanian, Tigrinan, Togolese, Trinidadian/Tobagonian, Ugandan, Vincentian/Grenadinian, West Indian n.o.s., Wolof, Yoruba, Zambian, Zimbabwean, Zulu	Akan, Amhara, Angolan, Antiguan, Ashanti, Bahamian, Bantu, Barbadian, Beninese, Bermudan, Black n.o.s., Burkinabe, Burundian, Cameroonian, Carib, Caribbean origins n.i.e., Central and West African origins, Chadian, Congolese, Cuban, Djiboutian, Dominican, Edo, Eritrean, Ethiopian, Ewe, Gabonese, Gambian, Ghanaian, Grenadian, Guadeloupean, Guinean, Haitian, Harari, Ibo, Ivorian, Jamaican, Kenyan, Kittitian/Nevisian, Liberian, Malagasy, Malian, Malinké, Martinican, Montserratian, Mauritian, Nigerian, Oromo, Other African origins n.i.e., Peulh, Puerto Rican, Rwandan, Senegalese, Seychellois, Sierra Leonean, Somali, South African, Southern and East African origins n.i.e., St. Lucian, Tanzanian, Tigrinan, Togolese, Trinidadian/Tobagonian, Ugandan, Vincentian/Grenadinian, West Indian n.o.s., Wolof, Yoruba, Zambian, Zimbabwean, Zulu
Latin American	Latin American	Aboriginal from Central and South America, Arawak, Argentinian, Belizean, Bolivian, Brazilian, Chilean, Colombian, Costa Rican, Ecuadorian, Guatemalan, Guyanese, Hispanic, Honduran, Maya, Mexican, Nicaraguan, Panamanian, Paraguayan, Peruvian, Salvadorean, Uruguayan, Venezuelan, Latin, Central and South America origins n.i.e.	Aboriginal from Central and South America, Arawak, Argentinian, Belizean, Bolivian, Brazilian, Chilean, Colombian, Costa Rican, Ecuadorian, Guatemalan, Guyanese, Hispanic, Honduran, Maya, Mexican, Nicaraguan, Panamanian, Paraguayan, Peruvian, Salvadorean, Uruguayan, Venezuelan, Latin, Central and South America origins n.i.e.
Chinese	Chinese, Mongolian, Tibetan	Chinese, Hmong, Mongolian, Taiwanese, Tibetan	Chinese, Hmong, Mongolian, Taiwanese, Tibetan
Filipino	Filipino	Filipino	Filipino
Korean	Korean	Korean	Korean
Japanese Pacific Islander	Japanese Fijian, Polynesian and other Pacific Islanders	Japanese Fijian, Hawaiian, Maori, Pacific Islands origins n.i.e., Polynesian n.o.s., Samoan	Japanese Fijian, Hawaiian, Maori, Pacific Islands origins n.i.e., Polynesian n.o.s., Samoan
South Asian	Bangladeshi, Bengali, East Indian, Gujarati, Pakistani, Punjabi, Sinhalese, Sri-Lankan	Bangladeshi, Bengali, Bhutanese, East Indian, Goan, Gujarati, Kashmiri, Nepali, Pakistani, Punjabi, Sinhalese, South Asian origins n.i.e., Sri-Lankan, Tamil	Bangladeshi, Bengali, Bhutanese, East Indian, Goan, Gujarati, Kashmiri, Nepali, Pakistani, Punjabi, Sinhalese, South Asian origins n.i.e., Sri-Lankan, Tamil
Southeast Asian	Burmese, Cambodian, Indonesian, Laotian, Malay, Thai, Vietnamese	Burmese, Cambodian (Khmer), East and Southeast Asian origins n.i.e., Indonesian, Karen, Laotian, Malaysian, Singaporean, Thai, Vietnamese	Burmese, Cambodian (Khmer), East and Southeast Asian origins n.i.e., Indonesian, Karen, Laotian, Malaysian, Singaporean, Thai, Vietnamese
West Asian	Afghan, Armenian, Iranian, Kurdish, Turk, and West Asian	Afghan, Armenian, Assyrian, Azerbaijani, Georgian, Hazara, Iranian, Israeli, Kazakh, Kurd, Kyrgyz, Pashtun, Tajik, Tatar, Turk, Turkmen, Uighur, Uzbek, West Central Asian and Middle Eastern origins n.i.e.	Afghan, Armenian, Assyrian, Azerbaijani, Georgian, Hazara, Iranian, Israeli, Kazakh, Kurd, Kyrgyz, Pashtun, Tajik, Tatar, Turk, Turkmen, Uighur, Uzbek, West Central Asian and Middle Eastern origins n.i.e.
Arabic	Egyptian, Iraqi, Lebanese, Maghrebian, Moroccan, Palestinian, Syrian, and other Arab	Algerian, Arab n.o.s, Berber, Coptic, Dinka, Egyptian, Iraqi, Jordanian, Kuwaiti, Lebanese, Libyan, Maure, Moroccan, Palestinian, North African origins, Saudi Arabian, Sudanese, Syrian, Tunisian, Yemeni	Algerian, Arab n.o.s, Berber, Coptic, Dinka, Egyptian, Iraqi, Jordanian, Kuwaiti, Lebanese, Libyan, Maure, Moroccan, Palestinian, North African origins, Saudi Arabian, Sudanese, Syrian, Tunisian, Yemeni
Jewish	Ashkenazi Jew	Jewish	Jewish
British	English, Welsh, and other British	Channel Islander, Cornish, English, Welsh, British Isles origins n.i.e.	Channel Islander, Cornish, English, Welsh, British Isles origins n.i.e.
Irish	Irish	Irish, Manx	Irish, Manx
Scottish	Scottish	Scottish	Scottish
French	Acadian, Franco-Manitoban, Franco-Ontarian, French, French-Canadian, and Quebecois	Acadian, Alsatian, Breton, Corsican, French, Québécois	Acadian, Alsatian, Breton, Corsican, French, Québécois
Eastern European	Baltic origins, Byelorussian, Czech, Hungarian, Polish, Romanian, Russian, Slovak, Ukrainian	Bulgarian, Byelorussian, Czech, Czechoslovakian n.o.s., Eastern European origins n.i.e., Estonian, Hungarian, Latvian, Lithuanian, Moldovan, Polish, Romanian, Roma (Gypsy), Russian, Slavic, Slovak, Ukrainian	Bulgarian, Byelorussian, Czech, Czechoslovakian n.o.s., Eastern European origins n.i.e., Estonian, Hungarian, Latvian, Lithuanian, Moldovan, Polish, Romanian, Roma (Gypsy), Russian, Slavic, Slovak, Ukrainian

Ethnic group	SAID registry	BC Census (2016)	GVA Census (2016)
Northern European	Finnish and other Scandinavian origins	Danish, Finnish, Icelandic, Northern European origins n.i.e., Norwegian, Swedish	Danish, Finnish, Icelandic, Northern European origins n.i.e., Norwegian, Swedish
Southern European	Balkan origins, Cypriot, Greek, Italian, Maltese, Portuguese, Spanish	Albanian, Basque, Bosnian, Catalan, Croatian, Cypriot, Greek, Italian, Kosovar, Macedonian, Maltese, Montenegrin, Portuguese, Serbian, Sicilian, Slovenian, Southern European origins n.i.e., Spanish, Yugoslavian n.o.s.	Albanian, Basque, Bosnian, Catalan, Croatian, Cypriot, Southern European origins n.i.e., Spanish, Greek, Italian, Kosovar, Macedonian, Maltese, Montenegrin, Portuguese, Serbian, Sicilian, Slovenian, Yugoslavian n.o.s.
Western European	Austrian, Belgian, Dutch, Flemish, German, Luxembourg and Swiss	Austrian, Bavarian, Belgian, Dutch, Flemish, Frisian, German, Luxembourg, Swiss, Western European origins n.i.e.	Austrian, Bavarian, Belgian, Dutch, Flemish, Frisian, German, Luxembourg, Swiss, Western European origins n.i.e.
Other	American, Amish, Hutterite, Mennonite, Australian, Canadian.		

o.s. - not otherwise specified n.i.e. - not included elsewhere

Supplementary Table S2. Comparative analysis of ethnic composition between SAIDs in the BCCH SAID registry.

Ethnicity	All SAID (n = 149)	UC SAID (n = 47)		CRMO (n = 39)		PFAPA (n = 35)		FMF (n = 11)		Behcet's (n = 8)		TRAPS (n = 6)	
	Combined responses / (%) of total responses	Combined responses / (%) of total responses	95% CI	Combined responses / (%) of total responses	95% CI	Combined responses / (%) of total responses	95% CI	Combined responses / (%) of total responses	95% CI	Combined responses / (%) of total responses	95% CI	Combined responses / (%) of total responses	95% CI
First Nations	17 / 4.0	5 / 3.5	1.5 - 8.0	3 / 3.0	0.8 - 8.4	6 / 5.2	2.4 - 10.9	-	-	3 / 13.6	4.8 - 33.3	-	-
Black	6 / 1.4	2 / 1.4	0.3 - 5.0	1 / 1.0	0.1 - 5.4	-	-	-	-	1 / 4.5	0.2 - 21.8	2 / 10.0*	1.8 - 30.1
Latin American	7 / 1.6	2 / 1.4	0.3 - 5.0	1 / 1.0	0.1 - 5.4	1 / 0.9	0.1 - 4.8	1 / 5.0	0.3 - 23.6	1 / 4.5	0.2 - 21.8	1 / 5.0	0.3 - 23.6
Chinese	7 / 1.6	2 / 1.4	0.3 - 5.0	1 / 1.0	0.1 - 5.4	2 / 1.7	0.3 - 6.1	1 / 5.0	0.3 - 23.6	1 / 4.5	0.2 - 21.8	-	-
Filipino	3 / 0.7	2 / 1.4	0.3 - 5.0	-	-	-	-	-	-	1 / 4.5	0.2 - 21.8	-	-
Korean	2 / 0.5	2 / 1.4	0.3 - 5.0	-	-	-	-	-	-	-	-	-	-
Japanese	3 / 0.7	1 / 0.7	0.0 - 3.9	1 / 1.0	0.1 - 5.4	-	-	-	-	1 / 4.5	0.2 - 21.8	-	-
Pacific Islander	1 / 0.2	-	-	1 / 1.0	0.1 - 5.4	-	-	-	-	-	-	-	-
South Asian	19 / 4.4	5 / 3.5	1.5 - 8.0	8 / 7.9	4.1 - 14.9	3 / 2.6	0.7 - 7.4	1 / 5.0	0.3 - 23.6	-	-	2 / 10.0**	0.0 - 14.9
Southeast Asian	2 / 0.5	2 / 1.4	0.3 - 5.0	-	-	-	-	-	-	-	-	-	-
West Asian	11 / 2.6	5 / 3.5	1.5 - 8.0	-	-	2 / 1.7	0.3 - 6.1	4 / 20.0**	8.1 - 41.6	-	-	-	-
Arabic	7 / 1.6	-	-	2 / 2.0	0.4 - 7.0	2 / 1.7	0.3 - 6.1	2 / 10.0**	1.8 - 30.1	-	-	-	-
Jewish	8 / 1.9	4 / 2.8	1.1 - 7.1	2 / 2.0	0.4 - 7.0	-	-	2 / 10.0	1.8 - 30.1	-	-	-	-
British	59 / 13.7	18 / 12.8	8.2 - 19.3	15 / 14.9	9.2 - 23.1	19 / 16.4	10.8 - 24.4	1 / 5.0	0.3 - 23.6	3 / 13.6	4.8 - 33.3	2 / 10.0	1.8 - 30.1
Irish	34 / 7.9	13 / 9.2	5.5 - 15.1	6 / 5.9	2.8 - 12.4	9 / 7.8	4.2 - 14.2	2 / 10.0	1.8 - 30.1	1 / 4.5	0.2 - 21.8	3 / 15.0	5.2 - 36.0
Scottish	37 / 8.6	12 / 8.5	4.9 - 14.3	7 / 6.9	4.0 - 13.7	13 / 11.2	6.7 - 18.4	1 / 5.0	0.3 - 23.6	-	-	3 / 15.0	5.2 - 36.0
French	26 / 6.0	6 / 4.3	2.0 - 9.0	7 / 6.9	3.4 - 13.6	8 / 6.9	3.6 - 13.1	1 / 5.0	0.3 - 23.6	2 / 9.1	1.6 - 27.8	2 / 10.0	1.8 - 30.1
Eastern European	49 / 11.4	16 / 11.3	7.1 - 17.6	15 / 14.9	9.2 - 23.1	14 / 12.1	7.4 - 19.4	2 / 10.0	1.8 - 30.1	-	-	1 / 5.0	0.3 - 23.6
Northern European	27 / 6.3	6 / 4.3	2.0 - 9.0	6 / 5.9	2.8 - 12.4	10 / 8.6	4.8 - 15.3	1 / 5.0	0.3 - 23.6	2 / 9.1	1.6 - 27.8	2 / 10.0	1.8 - 30.1
Southern European	20 / 4.7	6 / 4.3	2.0 - 9.0	4 / 4.0	1.6 - 9.7	7 / 6.0	3.0 - 12.0	-	-	-	-	1 / 5.0	0.3 - 23.6
Western European	51 / 11.9	19 / 13.5	8.8 - 20.1	15 / 14.9	9.2 - 23.1	12 / 10.3	6.1 - 17.4	-	-	3 / 13.6	4.8 - 33.3	-	-
Other	15 / 3.5	4 / 2.8	1.1 - 7.1	4 / 4.0	0.4 - 7.0	6 / 5.2	2.4 - 10.9	-	-	-	-	1 / 5.0	0.3 - 23.6
Unknown	19 / 4.4	9 / 6.4	3.4 - 11.7	2 / 2.0	3.4 - 11.7	2 / 1.7	0.3 - 6.1	1 / 5.0	0.3 - 23.6	3 / 13.6	4.8 - 33.3	-	-
Total responses	430	141	-	101	-	116	-	20	-	22	-	20	-

Combined responses = sum of multiple and single responses (see methods).

Statistically significant differences between the distribution of ethnic origin with particular SAIDs in the BCCH SAID registry and all SAID in the BCCH SAID registry were analyzed by a binomial test; two-tailed p-value is reported with values in bold indicative of ethnicities over-represented in disease groups relative to all patients in the BCCH SAID registry; * $p < 0.05$, ** $p < 0.01$.

n: number of patients per SAID group; data not shown for patients with HIDS (n = 2) and CAPS (n = 1); UC: unclassifiable SAID.

Supplementary Table S3. Comparative analysis of ethnic composition in the BCCH SAID registry and in British Columbia (2016 Census).

Ethnicity	BCCH SAID registry		BC Census % of total responses	95% CI	p-value	
	Multiple responses	^a Combined responses				^b % of total responses
First Nations	17	17	4.3	2.9	3.0 – 7.0	0.13
Black	6	6	1.5	1.0	0.7 – 3.0	0.32
Latin American	5	7	1.8	1.0	0.9 – 4.0	0.12
Chinese	3	7	1.8	7.5	0.9 – 4.0	<u><0.0001</u>
Filipino	2	3	0.8	2.1	0.2 – 2.0	0.08
Korean	1	2	0.5	0.8	0.1 – 2.0	0.78
Japanese	2	3	0.8	0.7	0.2 – 2.0	0.75
Pacific Islander	1	1	0.3	0.3	0.0 – 1.0	>0.99
South Asian	5	19	4.8	5.1	3.0 – 7.0	0.91
Southeast Asian	2	2	0.5	0.9	0.1 – 2.0	0.60
West Asian	5	11	2.8	1.0	2.0 – 5.0	0.003
Arabic	6	7	1.8	0.5	0.9 – 4.0	0.005
Jewish	8	8	2.0	0.2	1.0 – 4.0	<0.0001
British	56	59	14.9	19.2	12.0 – 19.0	<u>0.03</u>
Irish	34	34	8.6	9.0	6.0 – 12.0	0.86
Scottish	37	37	9.3	11.4	7.0 – 13.0	0.21
French	25	26	6.6	5.2	5.0 – 9.0	0.26
Eastern European	49	49	12.4	8.9	9.0 – 16.0	0.02
Northern European	26	27	6.8	5.1	5.0 – 10.0	0.14
Southern European	20	20	5.1	4.8	3.0 – 8.0	0.72
Western European	50	51	12.9	12.3	10.0 – 17.0	0.70
Total responses	360	396	100	100	-	-
Other	11	15	3.5	N/A	N/A	N/A
Unknown	19	19	4.4	N/A	N/A	N/A

^a Combined responses = sum of multiple and single responses (see methods). A similar number of combined responses and multiple responses suggest a substantial number of individuals in the cohort are of mixed ethnicity.

^b Combined responses are expressed as a percent of the total (combined) responses.

^c Statistically significant differences between the distribution of ethnic origin in the BCCH SAID registry and the BC census registry were analysed by a binomial test; two-tailed *p*-value is reported with over-represented ethnicities in bold and under-represented ethnicities underlined.

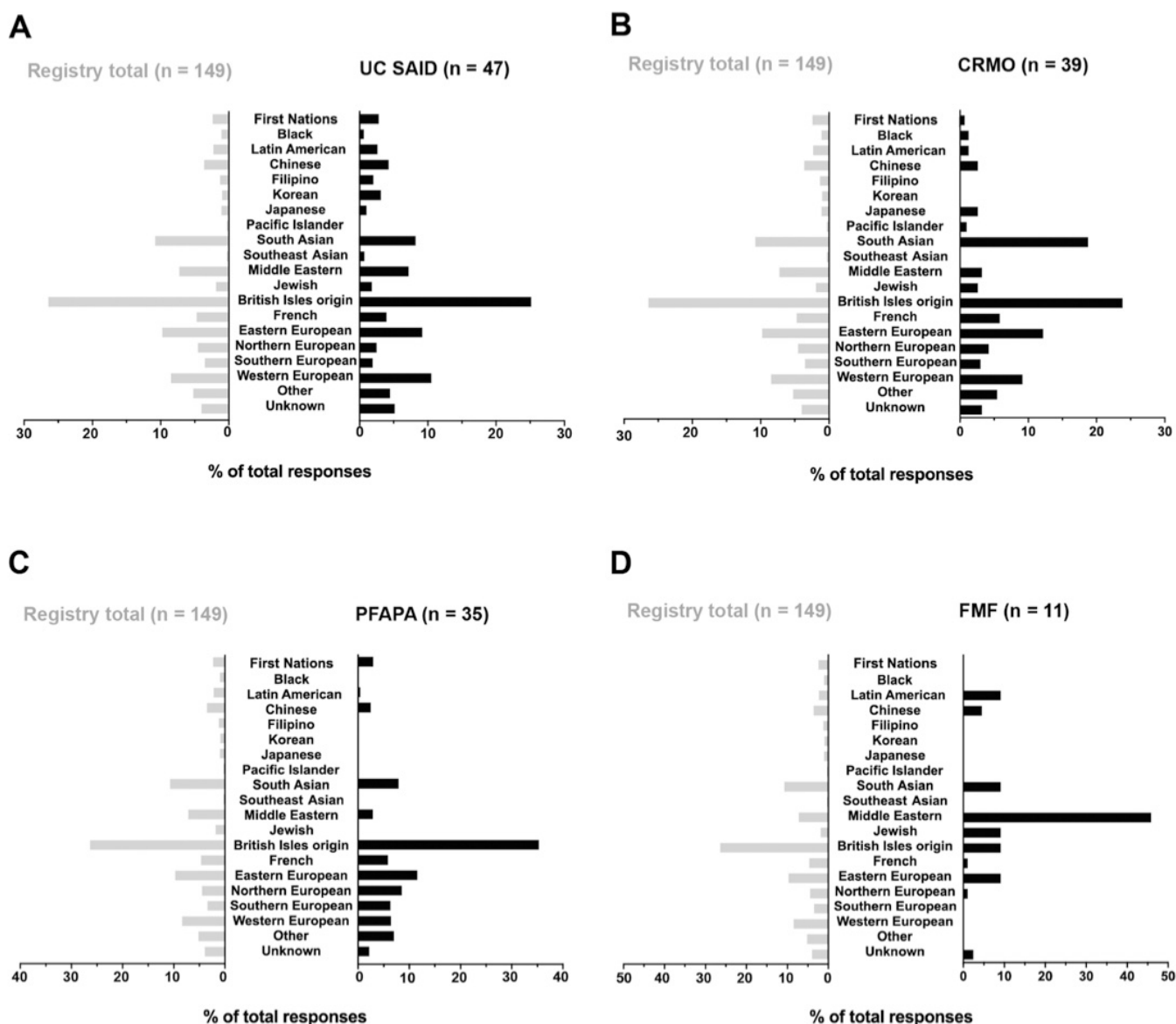
Supplementary Table S4. Comparative analysis of ethnic composition of GVA residents in the BCCH SAID registry and in the Greater Vancouver Area population (GVA; 2016 Census).

Ethnicity	GVA – BCCH SAID registry		GVA Census % of total	95% CI	^c p-value	
	Multiple responses	^a Combined responses ^b % of total				
First Nations	4	4	1.8	1.4	0.7 – 5.0	0.56
Black	4	4	1.8	1.4	0.7 – 5.0	0.56
Latin American	2	4	1.8	1.4	0.7 – 5.0	0.56
Chinese	2	6	2.7	14.0	1.0 – 6.0	<u>< 0.0001</u>
Filipino	2	3	1.4	3.6	0.4 – 4.0	0.10
Korean	1	2	0.9	1.5	0.2 – 3.0	0.78
Japanese	2	3	1.4	1.0	0.4 – 4.0	0.49
Pacific Islander	1	1	0.5	0.4	0.0 – 3.0	0.61
South Asian	3	15	6.8	8.1	4.0 – 11.0	0.54
Southeast Asian	1	1	0.5	1.5	0.0 – 3.0	0.27
West Asian	5	11	5.0	1.9	3.0 – 9.0	0.003
Arabic	5	6	2.7	0.8	1.0 – 6.0	0.009
Jewish	8	8	3.6	0.3	2.0 – 7.0	< 0.0001
British	30	31	14.0	15.3	10.0 – 19.0	0.71
Irish	18	18	8.1	7.4	5.0 – 13.0	0.61
Scottish	18	18	8.1	9.1	5.0 – 13.0	0.73
French	9	9	4.1	4.0	2.0 – 8.0	0.86
Eastern European	29	29	13.1	8.2	9.0 – 18.0	0.01
Northern European	12	13	5.9	3.8	3.0 – 10.0	0.11
Southern European	11	11	5.0	5.7	3.0 – 9.0	0.77
Western European	23	24	10.9	9.2	7.0 – 16.0	0.35
Total responses	190	221	100	100	-	-
Other	8	8	3.4	N/A	N/A	N/A
Unknown	4	8	3.4	N/A	N/A	N/A

^a Combined responses = sum of multiple and single responses (see methods). A similar number of combined responses and multiple responses suggest a substantial number of individuals in the cohort are of mixed ethnicity.

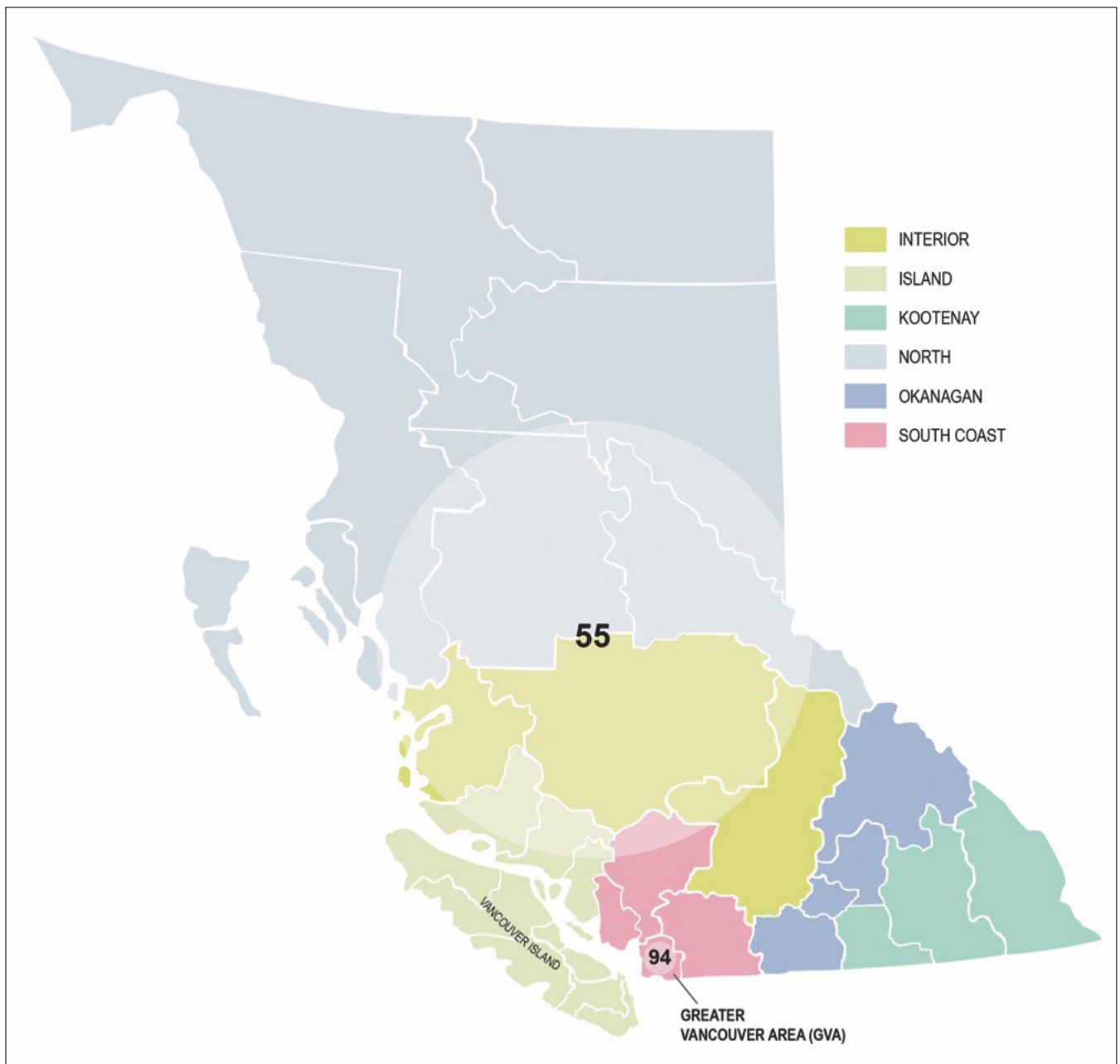
^b Combined responses are expressed as a percent of the total (combined) responses.

^c Statistically significant differences between the distribution of ethnic origin in BCCH SAID registry patients that reside in the GVA and the GVA census registry were analyzed by a binomial test; two-tailed p-value is reported with over-represented ethnicities in bold and under-represented ethnicities underlined.



Supplementary Fig. S1. Percent ethnic representation in individual SAIDs.

Bar graphs show the percentage (x-axis) of different ethnicities (y-axis) in the BCCH SAID registry participants with a diagnosis of **A.** unclassified autoinflammatory disease (UC SAID; black bars, n = 47), **B.** CRMO (black bars, n = 39), **C.** PFAPA (black bars, n = 35) and **D.** FMF (black bars, n = 11) compared to representation across the entire SAID registry (**A – D**, grey bars, n = 149). British Isles includes British, Irish, Scottish; Middle Eastern includes Arabic and West Asian.



Supplementary Fig. S2. The province of British Columbia is divided into six regions across 944,000 square kilometers. Half (~2.463 million; 48.6%) of the 5.071 million resident of BC live in the southwest corner of the province in the Greater Vancouver Area (GVA). SAID patients (n = 149) came from all regions of BC and ~ 60% from the GVA (n = 94). BC Children’s Hospital, which is the only tertiary pediatric health care centre in the province is situated in the GVA.