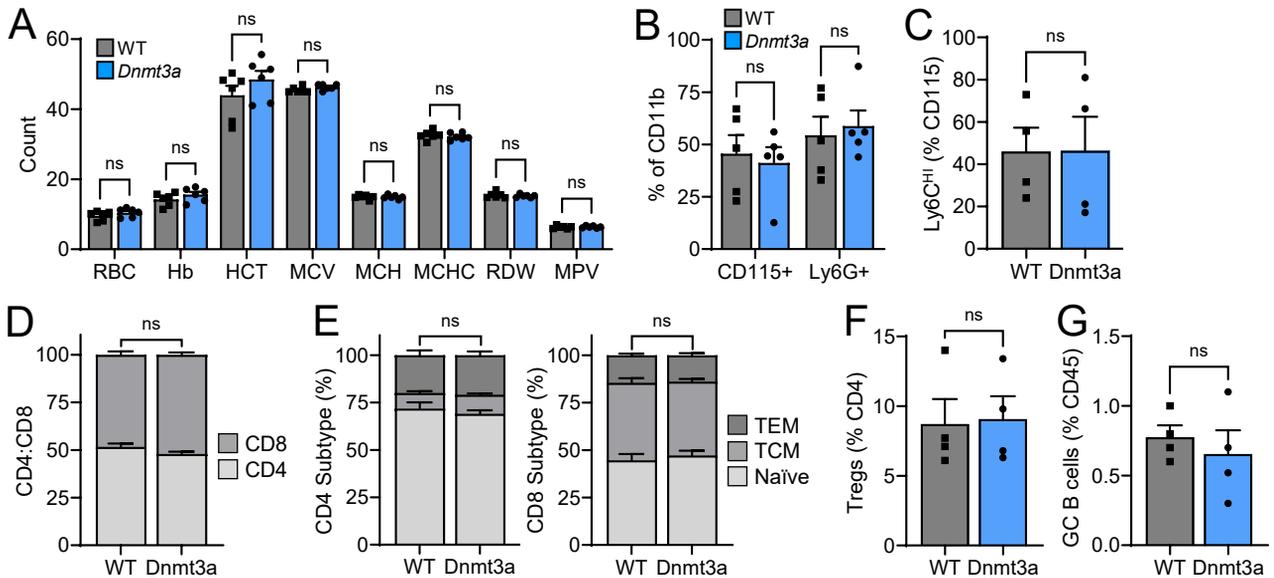
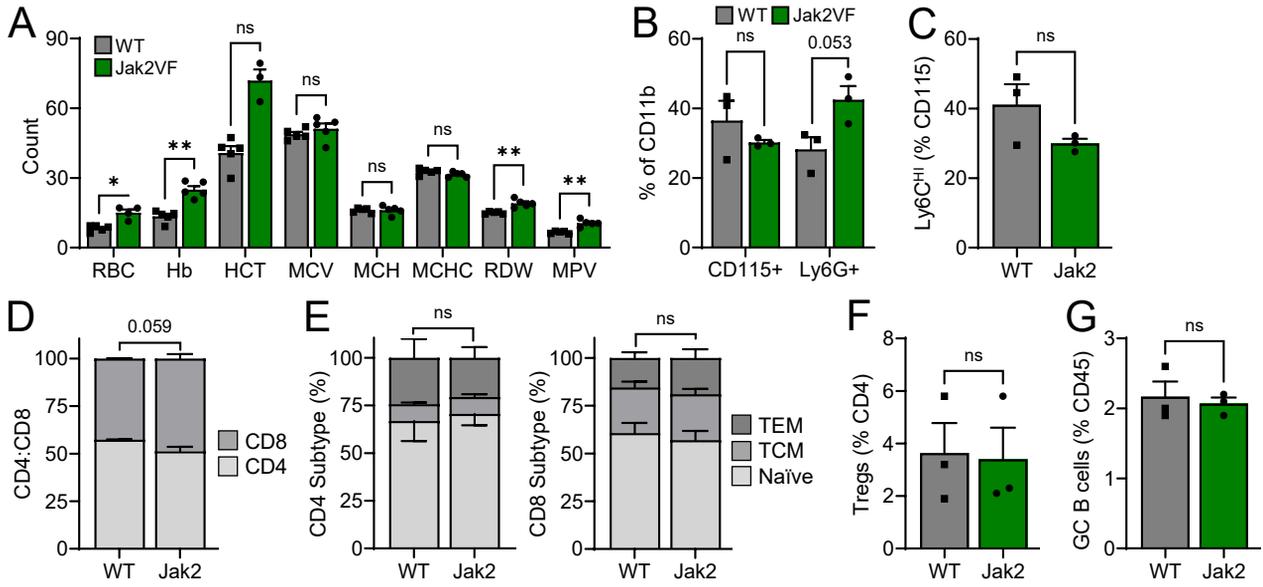


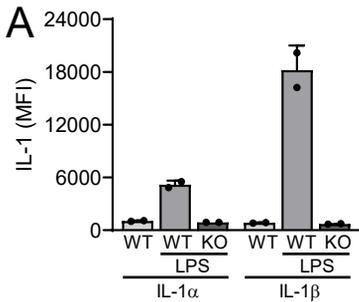
**Figure S1: *Tet2*<sup>-/-</sup> mutant mice show normal blood counts and immune parameters under the steady state.** (A-C) Red blood cell indices by automated counting (A), and CD115<sup>+</sup>, Ly6G<sup>+</sup> (B) or Ly6C<sup>HI</sup> cells in the circulation by flow cytometry (C) in WT (grey) and *Tet2*<sup>-/-</sup> (red) mice. (D-G) Flow cytometry of spleens for CD4/8 T cell ratio (D), CD4/8 T cell subtype (E), Tregs (F) and germinal centre (GC) B cells (G) in WT and *Tet2*<sup>-/-</sup> mice under the steady state. RBC = red blood cell; Hb = haemoglobin; HCT = haematocrit; MCV = mean corpuscular volume; MCH = mean cell haemoglobin; MCHC = MCH concentration; RDW = red cell distribution width; MPV = mean platelet volume; TCM = central memory; TEM = effector memory. Data represent mean ± SEM of n = 6/6 (A), 3/3 (B-G); ns = not significant; by unpaired t-test (A-D,F,G) or ANOVA (E).



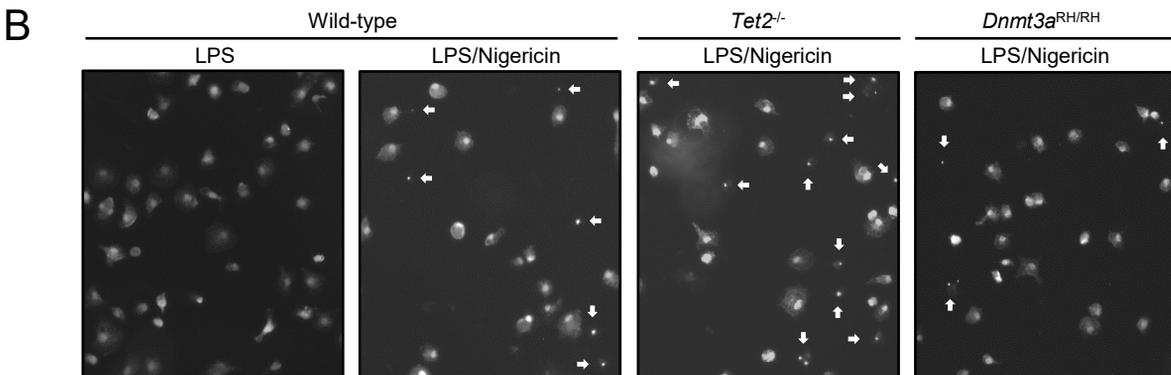
**Figure S2: *Dnmt3a*<sup>RH/RH</sup> mutant mice show normal blood counts and immune parameters under the steady state.** (A-C) Red blood cell indices by automated counting (A), and CD115<sup>+</sup>, Ly6G<sup>+</sup> (B) or Ly6C<sup>HI</sup> cells in the circulation by flow cytometry (C) in wild-type (WT; grey) and *Dnmt3a*<sup>RH/RH</sup> (blue) mice. (D-G) Flow cytometry of spleens for CD4/8 T cell ratio (D), CD4/8 T cell subtype (E), Tregs (F) and germinal centre (GC) B cells (G) in WT and *Dnmt3a*<sup>RH/RH</sup> mice under the steady state. RBC = red blood cell; Hb = haemoglobin; HCT = haematocrit; MCV = mean corpuscular volume; MCH = mean cell haemoglobin; MCHC = MCH concentration; RDW = red cell distribution width; MPV = mean platelet volume; TCM = central memory; TEM = effector memory. Data represent mean ± SEM of n = 6/6 (A), 5/5 (B), 4/4 (C-G); ns = not significant; by unpaired t-test (A-D,F,G) or ANOVA (E).

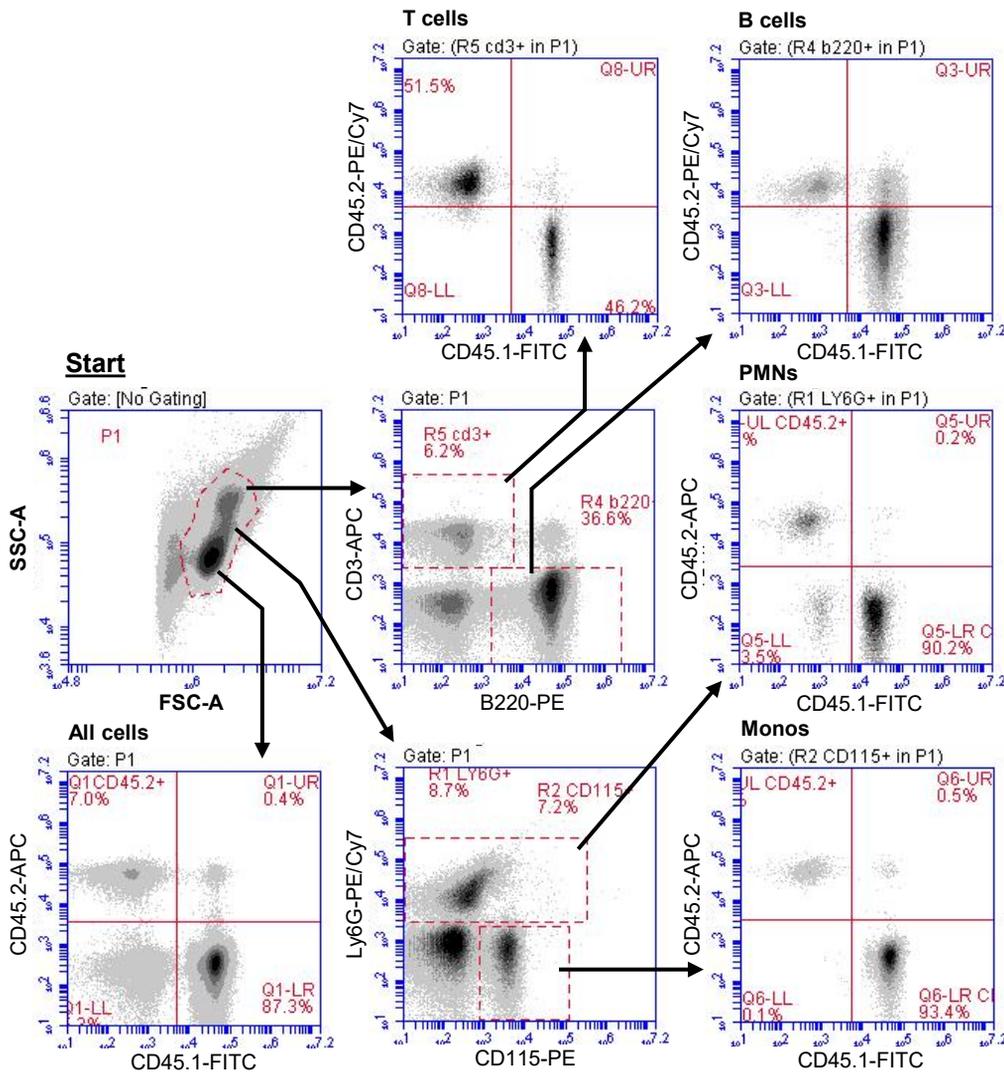


**Figure S3: *Jak2*<sup>VF/VF</sup> mutant mice show altered blood counts and adaptive immune parameters under the steady state. (A-C)** Red blood cell indices by automated counting (A), and CD115<sup>+</sup>, Ly6G<sup>+</sup> (B) or Ly6C<sup>HI</sup> cells in the circulation by flow cytometry (C) in WT (grey) and *Jak2*<sup>VF/VF</sup> (green) mice. (D-G) Flow cytometry of spleens for CD4/8 T cell ratio (D), CD4/8 T cell subtype (E), Tregs (F) and germinal centre (GC) B cells (G) in WT and *Jak2*<sup>VF/VF</sup> mice under the steady state. RBC = red blood cell; Hb = haemoglobin; HCT = haematocrit; MCV = mean corpuscular volume; MCH = mean cell haemoglobin; MCHC = MCH concentration; RDW = red cell distribution width; MPV = mean platelet volume; TCM = central memory; TEM = effector memory. Data represent mean ± SEM of n = 5/3-5 (A), 3/3 (B-G); p = \*≤0.05, \*\*≤0.01, or as stated; ns = not significant; by unpaired t-test (A-D, F, G) or ANOVA (E).

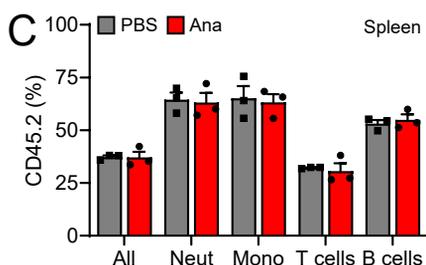
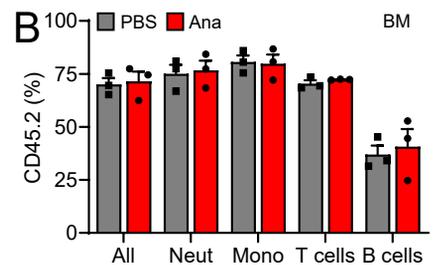
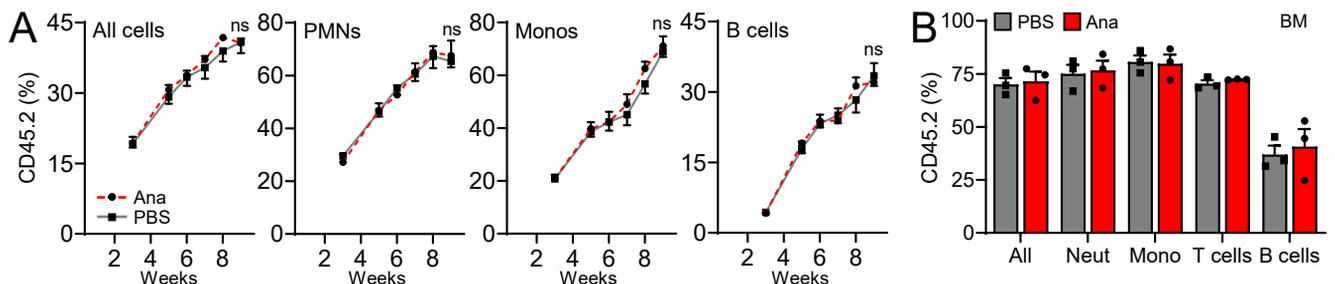


**Figure S4: Specificity of intracellular cytokine staining and example images for 'ASC specks'.** (A) Flow cytometry for intracellular IL-1α/β in ±LPS treated Mφ from WT, or *Il1a* and *Il1b* KO mice. (B) Representative images of bone marrow-derived macrophages from WT or *Tet2*<sup>-/-</sup> and *Dnmt3a*<sup>RH/RH</sup> mutant mice treated with LPS or LPS/nigericin, followed by immunofluorescence staining for ASC specks (arrows). Data represent mean ± SD of n = 2 (A).

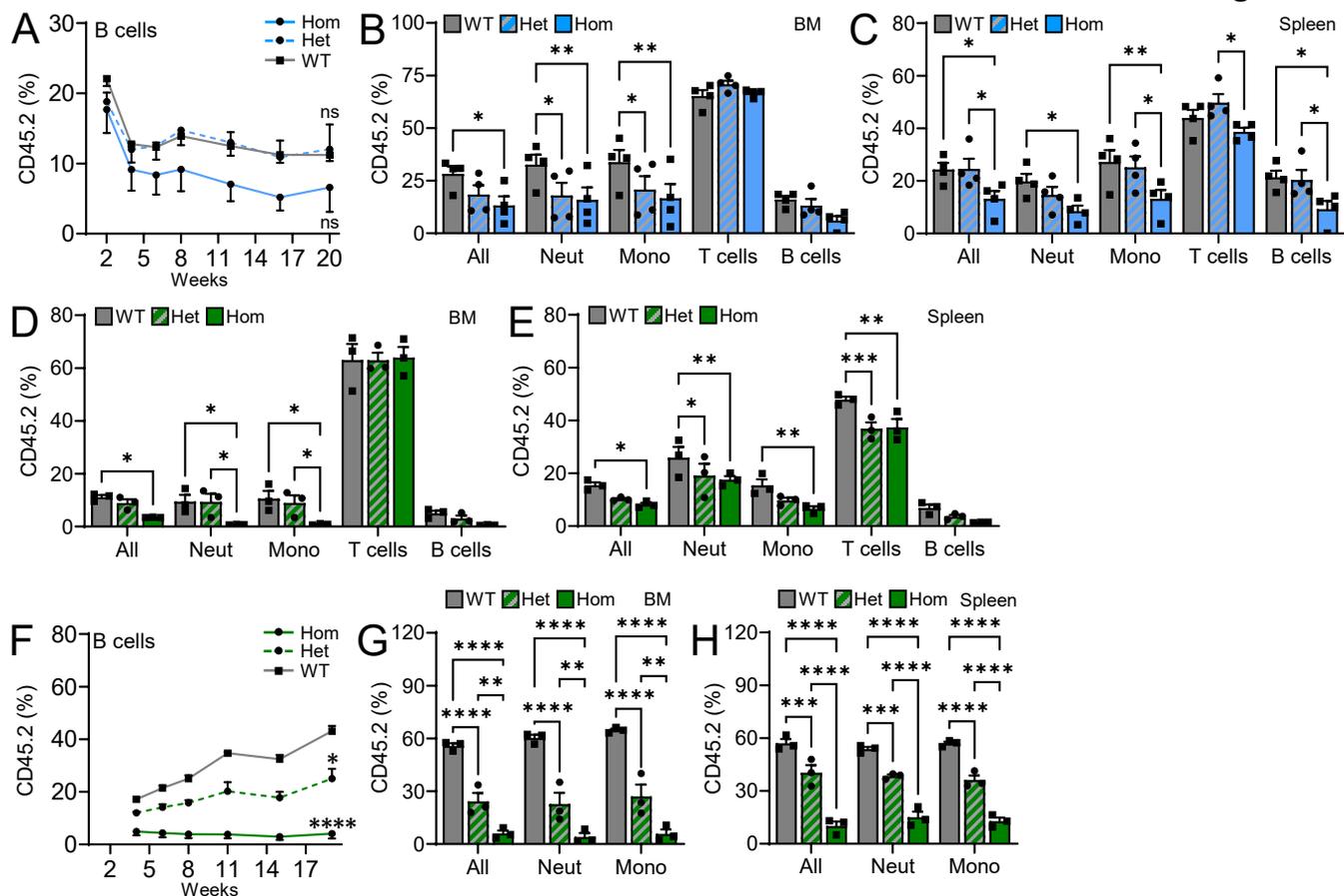




**Figure S5: Example flow plots showing gating for CD45.1+ and CD45.2+ cells in various lineages.** Whole blood from CD45.1 mice transplanted with CD45.2 mutant bone marrow was stained for the lineage markers CD115 (monocytes (monos)), Ly6G (neutrophils (PMNs)), B220 (B cells) and CD3 (T cells), and the level of CD45.1 and CD45.2 enumerated in the gated populations.



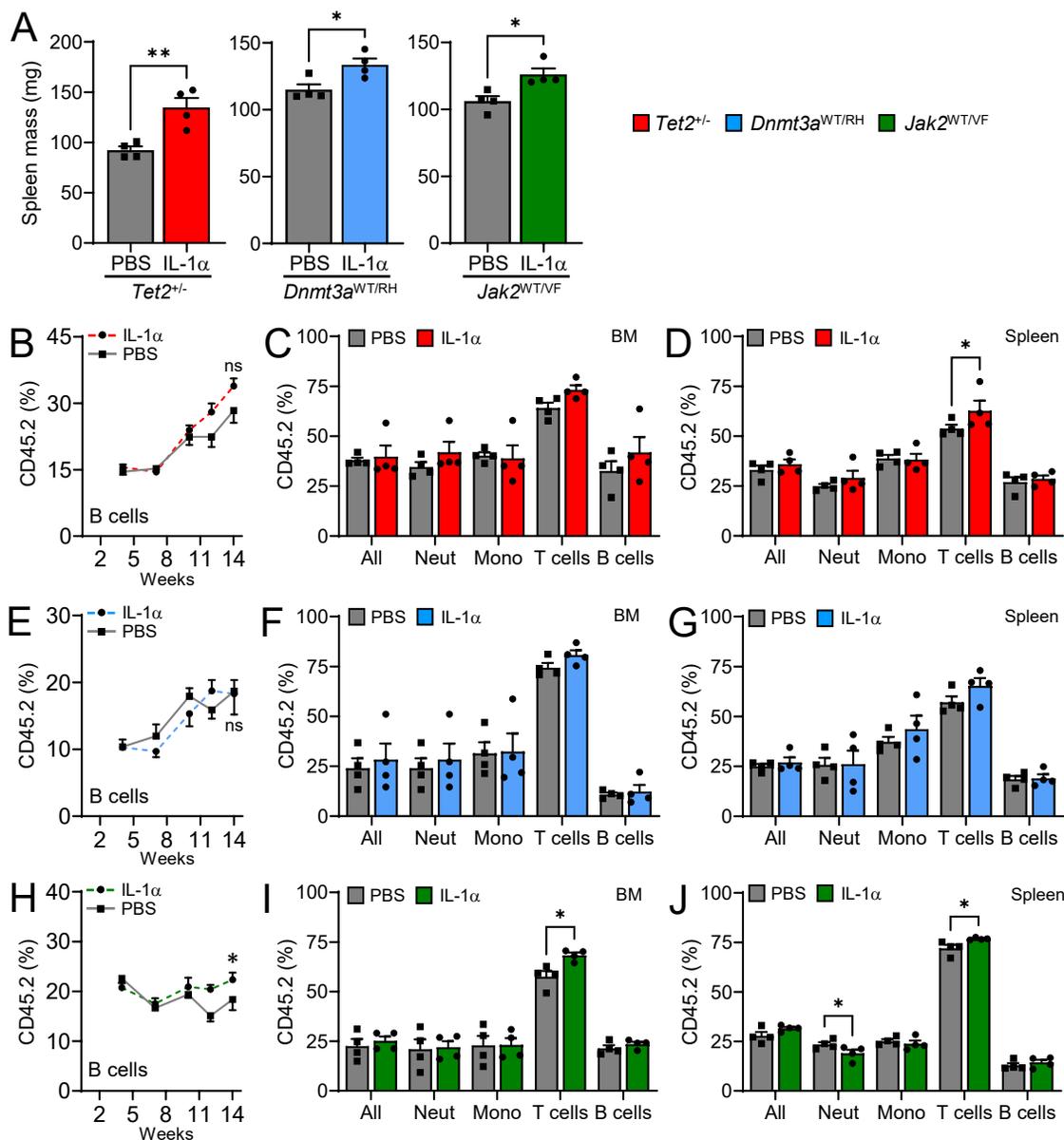
**Figure S6: IL-1 blockade does not alter clonal expansion of *Tet2*<sup>-/-</sup> cells in mice.** (A-C) Male mice were transplanted with 5% *Tet2*<sup>-/-</sup>, followed by treatment with PBS (grey) or Anakinra (Ana; red), and clone size measured via CD45.2 longitudinally in the circulation (A) or at euthanasia in the bone marrow (BM) (B) or spleen (C). Weeks = time post BM transplant. Data represent mean ± SEM of n = 3/3 (A-C); All not significant; by GLMM (A) or unpaired t-test (B,C).



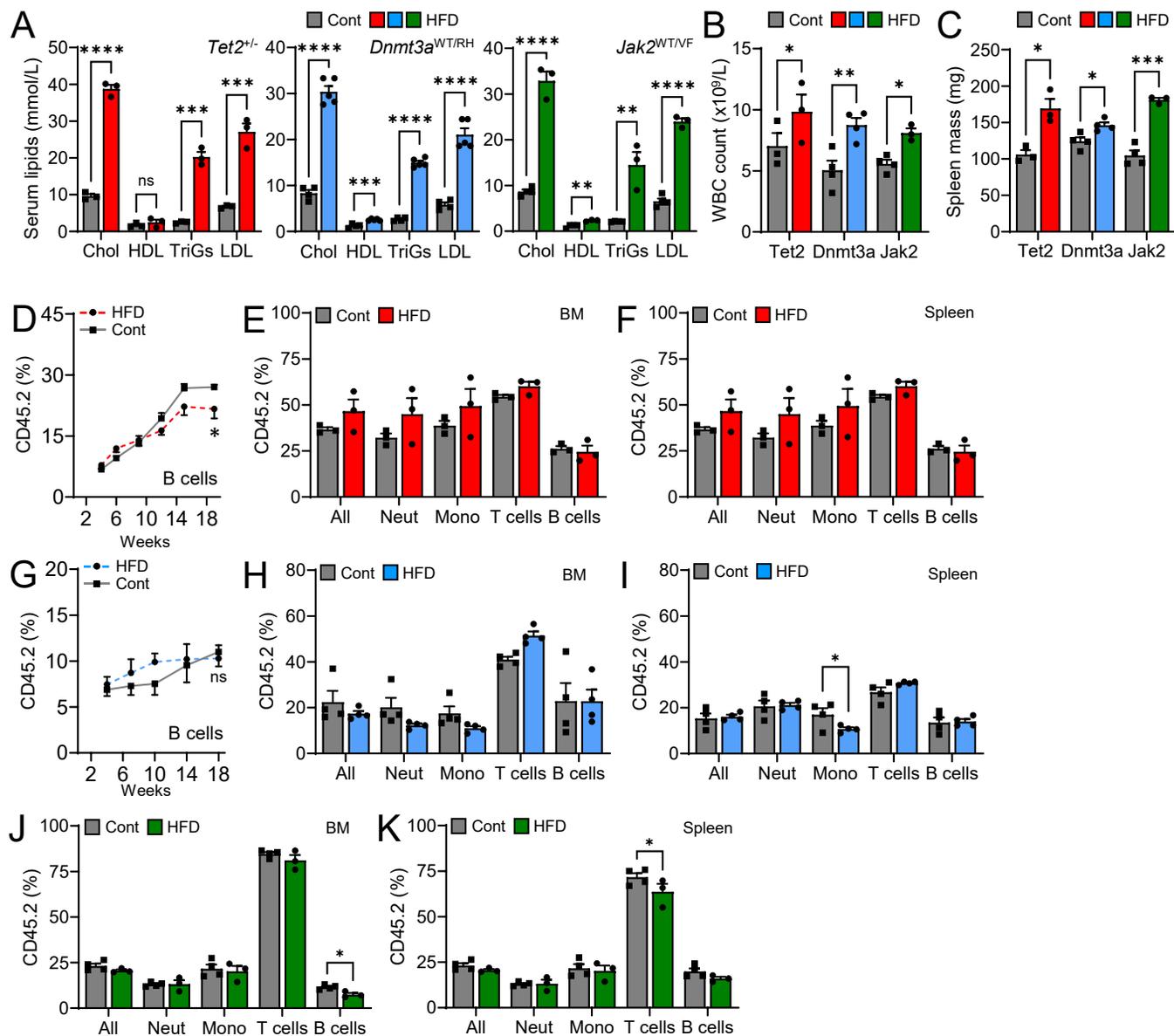
**Figure S7: *Dnmt3a*<sup>RH</sup> or *Jak2*<sup>VF</sup> mutations do not cause clonal expansion of B cells or cells in other tissues. (A-C)** Longitudinal measurement of clone size via CD45.2 in circulation (A) or at euthanasia in the bone marrow (BM) (B) or spleen (C) in male mice transplanted with WT (grey) 10% *Dnmt3a*<sup>RH</sup> heterozygous (Het) or homozygous (Hom) mutant cells (blue). (D,E) Measurement of clone size via CD45.2 at euthanasia in the BM (D) or spleen (E) in male mice transplanted with 5% *Jak2*<sup>VF</sup> Het or Hom mutant cells (green). (F-H) Longitudinal measurement of clone size via CD45.2 in the circulation (F) or at euthanasia in the BM (G) or spleen (H) in male mice transplanted with 30% *Jak2*<sup>VF</sup> Het or Hom mutant cells. Weeks = time post BM transplant. Data represent mean  $\pm$ SEM of n = 4/4 (A-C), 3/3 (D-H); p = \* $\leq$ 0.05, \*\* $\leq$ 0.01, \*\*\* $\leq$ 0.001, \*\*\*\* $\leq$ 0.0001; ns = not significant; by GLMM (A,F) or ANOVA (B-E,G,H).

CHIP mutant	% Transplanted	Mean	SD	n=	Powered effect size	Observed $\Delta$ Het	Observed $\Delta$ Hom
<i>Tet2</i> <sup>-/-</sup>	10	17.12	3.58	3	±45%	+100%	+272%
<i>Dntm3a</i> <sup>RH</sup>	10	21.41	3.36	4	±30%	+0.5%	-42%
<i>Jak2</i> <sup>VF</sup>	5	13.69	1.38	4	±20%	-37%	-61%
<i>Jak2</i> <sup>VF</sup>	30	46.55	1.62	4	±7.5%	-35%	-87%

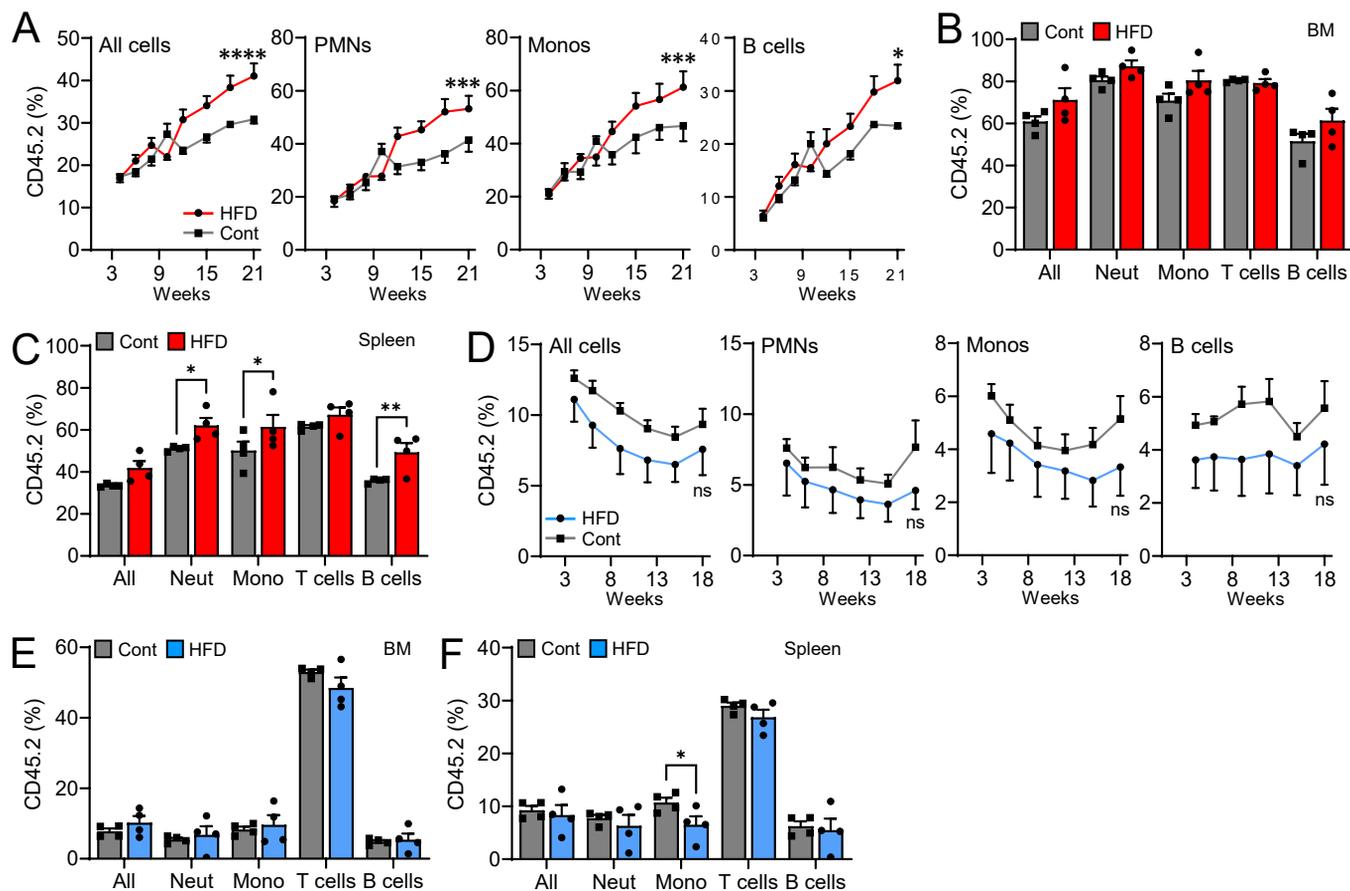
**Figure S8: Clonal expansion experiments are powered to detect smaller effect sizes than the actual differences observed.** Data as indicated for clone size (% of all cells in the circulation) in control transplanted groups, along with the effect size we are correctly powered ( $\alpha=0.05$ ; power=0.80) to detect and the observed difference ( $\Delta$ ) in heterozygous (Het) or homozygous (Hom) CHIP mutant clone size.



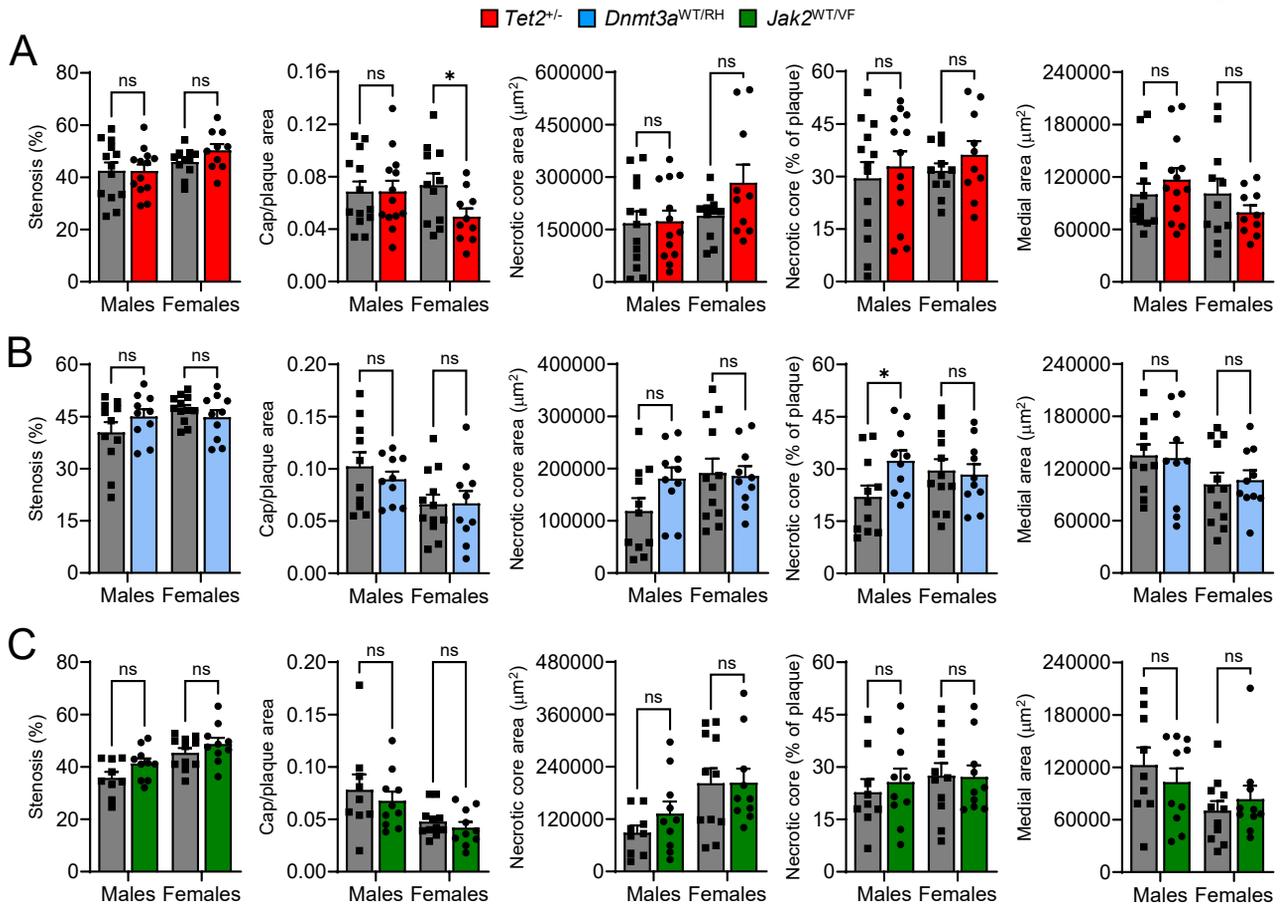
**Figure S9: IL-1 $\alpha$  does not increase clonal expansion of *Tet2*<sup>+/-</sup>, *Dnmt3a*<sup>WT/RH</sup> or *Jak2*<sup>WT/VF</sup> cells.** (A) Spleen weight in mice transplanted with 10% *Tet2*<sup>+/-</sup> (grey/red; male), 10% *Dnmt3a*<sup>WT/RH</sup> (grey/blue; female) or 30% *Jak2*<sup>WT/VF</sup> (grey/green; male) cells, then treated with PBS (grey) or IL-1 $\alpha$  (colour). (B-J) Longitudinal measurement of clone size via CD45.2 in the circulation (B,E,H) or at euthanasia in the bone marrow (BM) (C,F,I) or spleen (D,G,J) in mice transplanted with 10% *Tet2*<sup>+/-</sup> (grey/red; male), 10% *Dnmt3a*<sup>WT/RH</sup> (grey/blue; female) or 30% *Jak2*<sup>WT/VF</sup> (grey/green; male) cells, and treated with PBS or IL-1 $\alpha$ . Weeks = time post BM transplant. Data represent mean  $\pm$ SEM of n = 4/4 (A-J); p = \* $\leq$ 0.05, \*\* $\leq$ 0.01; ns = not significant; by GLMM (B,E,H) or unpaired t-test (A,C,D,F,G,I,J).



**Figure S10: High fat diet does not increase clonal expansion of *Tet2*<sup>+/-</sup>, *Dnmt3a*<sup>WT/RH</sup> or *Jak2*<sup>WT/IF</sup> B cells or cells in other tissues. (A-C)** Serum lipids (A), white blood cell (WBC)(B) count and spleen weight (C) in female mice transplanted with 10% *Tet2*<sup>+/-</sup> (grey/red), 10% *Dnmt3a*<sup>WT/RH</sup> (grey/blue) or 30% *Jak2*<sup>WT/IF</sup> (grey/green) cells, then fed a normal chow (Cont; grey) or high fat diet (HFD; colour). (D-K) Longitudinal measurement of clone size via CD45.2 in the circulation (D,G) or at euthanasia in the bone marrow (BM) (E,H,J) or spleen (F,I,K) in female mice transplanted with 10% *Tet2*<sup>+/-</sup> (grey/red), 10% *Dnmt3a*<sup>WT/RH</sup> (grey/blue) or 30% *Jak2*<sup>WT/IF</sup> (grey/green) cells, then fed a normal chow or HFD. Weeks = time post BM transplant. Data represent mean ±SEM of n = 3/3 (*Tet2*), 4/4 (*Dnmt3a*), 4/3 (*Jak2*); p = \*≤0.05, \*\*≤0.01, \*\*\*≤0.001, \*\*\*\*≤0.0001; ns = not significant; by t-test (A-C,E,F,H-K) or GLMM (D,G).



**Figure S11: High fat diet increases clonal expansion of *Tet2*<sup>-/-</sup>, but not *Dnmt3a*<sup>RH/RH</sup> mutant cells. (A,F) Longitudinal measurement of clone size via CD45.2 in the circulation (A,D) or at euthanasia in the bone marrow (BM) (B,E) or spleen (C,F) in male mice transplanted with 10% *Tet2*<sup>-/-</sup> (grey/red) or 10% *Dnmt3a*<sup>WT/RH</sup> (grey/blue) cells, then fed a normal chow (Cont; grey) or high fat diet (HFD; colour). Weeks = time post BM transplant. Data represent mean ± SEM of n = 4/4 (A-F); p = \*≤0.05, \*\*≤0.01, \*\*\*≤0.001, \*\*\*\*≤0.0001; ns = not significant; by GLMM (A,D) or unpaired t-test (B,C,E,F).**



**Figure S12: CHIP models have minimal effects on atherosclerotic plaque composition in mice.** (A-C) Assessment of atherosclerotic plaque composition in male and female mice transplanted with 10% *Tet2*<sup>+/-</sup> (red) (A), 10% *Dnmt3a*<sup>WT/RH</sup> (blue) (B), or 30% *Jak2*<sup>WT/VF</sup> (green) (C) mutant cells, or equivalent WT cells (grey), followed by high fat feeding for 12 w. Mice were assessed for vessel stenosis, relative fibrous cap size, necrotic core area and percentage, and medial area. Data represent mean ±SEM of n = 13/13 (male) 11/10 (female)(A), 10/10 (male) 12/10 (female)(B), n = 9/10 (male) 11/10 (female)(C); p = \*≤0.05; ns = not significant; by unpaired t-test (A-C).

**Supplemental table 1: Mendelian randomisation estimates of genetically predicted serum cytokine levels and risk of CHIP in IVW analyses**

Exposure							CHIP Overall							DNMT3A CHIP							TET2 CHIP									
Cytokine	GWAS Pubmed ID	IV Type	Cytokine Unit	R2 (%)	IVW model	nsnp	Beta	SE	p	OR	LCI	UCI	Coch Q	Coch Q_p	Beta	SE	p	OR	LCI	UCI	Coch Q	Coch Q_p	Beta	SE	p	OR	LCI	UCI	Coch Q	Coch Q_p
CRP	37205426	cis-pQTL	SD	2.2	Random	5	0.032	0.053	0.545	1.033	0.931	1.146	5.490	0.241	0.062	0.065	0.338	1.064	0.937	1.209	5.419	0.247	-0.089	0.111	0.425	0.915	0.736	1.138	3.643	0.457
IL-1RAP	29875488	cis-pQTL	SD of log	11.3	Random	6	0.030	0.026	0.255	1.030	0.979	1.085	8.921	0.112	0.058	0.033	0.080	1.060	0.993	1.132	9.613	0.087	0.000	0.048	0.992	1.000	0.909	1.099	0.261	0.998
IL-1RA	36936266	cis-pQTL	SD	5.5	Random	23	0.048	0.034	0.150	1.049	0.983	1.121	14.239	0.893	0.017	0.041	0.675	1.017	0.938	1.103	18.205	0.694	0.062	0.082	0.455	1.063	0.905	1.250	20.744	0.537
IL-1R1	37205426	cis-pQTL	SD	1.0	Random	5	0.010	0.061	0.871	1.010	0.896	1.138	2.124	0.713	0.035	0.081	0.660	1.036	0.885	1.213	4.640	0.326	-0.007	0.149	0.960	0.993	0.741	1.330	0.591	0.964
IL-18	36936266	cis-pQTL	SD	4.5	Random	7	-0.062	0.036	0.089	0.940	0.876	1.009	4.749	0.576	-0.104	0.051	0.040	0.901	0.816	0.995	7.775	0.255	-0.130	0.089	0.144	0.878	0.737	1.046	1.869	0.931
IL-6	22421339	cis-pQTL	% increase	1.0	Fixed	1	-0.076	0.065	0.240	0.926	0.816	1.052	NA	NA	-0.042	0.080	0.600	0.959	0.820	1.122	NA	NA	-0.161	0.159	0.312	0.851	0.623	1.163	NA	NA
MCSF	36936266	cis-pQTL	SD	3.1	Random	12	-0.025	0.048	0.607	0.975	0.887	1.072	12.801	0.307	-0.031	0.058	0.597	0.970	0.865	1.087	12.207	0.348	-0.042	0.110	0.703	0.959	0.773	1.190	7.825	0.729
TNFa	36936266	cis-pQTL	SD	0.5	Fixed	2	-0.164	0.099	0.100	0.849	0.699	1.032	0.159	0.690	-0.184	0.122	0.132	0.832	0.655	1.057	0.006	0.938	-0.194	0.244	0.425	0.823	0.510	1.328	0.017	0.895

**Abbreviations:** nsnp, number of Single-nucleotide polymorphism; GWAS, Genome-wide association study; IV, Instrumental variant; IVW, Inverse-variance weighted; SD, Standard deviation; SE, standard error; p, p-value; OR, Odds ratio; LCI, lower 95% confidence interval of odds ratio; UCI, upper 95% confidence interval of odds ratio; CHIP, clonal hematopoiesis of indeterminate potential; Coch Q, Cochran's Q value.

**Supplemental table 2: Mendelian randomisation estimates of genetically predicted cardiovascular disease and risk of CHIP in IVW analyses**

Exposure			CHIP Overall							DNMT3A CHIP						TET2 CHIP						
CVD	IEU GWAS ID	nsnp	Beta	SE	P	OR	LCI	UCI		Beta	SE	P	OR	LCI	UCI		Beta	SE	P	OR	LCI	UCI
Coronary artery disease	ebi-a-GCST003116	38	-0.027	0.022	0.206	0.973	0.932	1.015		-0.038	0.028	0.169	0.963	0.911	1.016		0.043	0.049	0.376	1.044	0.949	1.148
Atrial fibrillation	ebi-a-GCST006414	110	0.018	0.017	0.275	1.019	0.985	1.053		0.034	0.018	0.054	1.035	0.999	1.072		0.014	0.037	0.711	1.014	0.943	1.090
Stroke	ebi-a-GCST006906	7	-0.011	0.068	0.876	0.989	0.867	1.130		-0.023	0.076	0.766	0.978	0.843	1.134		0.099	0.151	0.514	1.104	0.821	1.484
Ischaemic stroke (large artery atherosclerosis)	ebi-a-GCST006907	3	0.008	0.040	0.838	1.008	0.932	1.090		0.002	0.045	0.958	1.002	0.918	1.094		0.017	0.089	0.850	1.017	0.854	1.212
Ischaemic stroke	ebi-a-GCST006908	8	0.044	0.057	0.441	1.045	0.934	1.169		-0.005	0.064	0.936	0.995	0.878	1.128		0.067	0.128	0.597	1.070	0.833	1.374
Cardioembolic Stroke	ebi-a-GCST006910	4	-0.025	0.031	0.416	0.975	0.919	1.036		0.002	0.034	0.956	1.002	0.937	1.071		-0.020	0.068	0.774	0.981	0.858	1.121
Heart failure	ebi-a-GCST009541	9	-0.125	0.069	0.068	0.882	0.771	1.009		-0.050	0.077	0.519	0.951	0.817	1.107		-0.339	0.153	0.027	0.713	0.528	0.962
Myocardial infarction	ieu-a-798	24	-0.022	0.026	0.402	0.978	0.929	1.030		-0.022	0.034	0.513	0.978	0.915	1.045		0.013	0.064	0.840	1.013	0.894	1.148

**Abbreviations:** nsnp, number of Single-nucleotide polymorphism; GWAS, Genome-wide association study; SE, standard error; P, P-value; OR, Odds ratio; LCI, lower 95% confidence interval of odds ratio; UCI, upper 95% confidence interval of odds ratio and CHIP, clonal hematopoiesis of indeterminate potential

Supplemental table %Mendelian randomisation estimates for genetically predicted cardiovascular diseases and risk of CHIP in supplemental analyses

ID-Exposure	ID-Outcome	Outcome	Exposure	Method	NSNP	Beta	SE	p	LCI	UCI	OR	OR-LCI	OR-UCI
ebi-a-GCST003116	RXUOs6	CHIP Overall	Coronary artery disease    id:ebi-a-GCST003116	MR Egger	38	0.000344741	0.050341725	0.994573921	-0.098325041	0.099014523	1.000344801	0.906354254	1.104082334
ebi-a-GCST003116	RXUOs6	CHIP Overall	Coronary artery disease    id:ebi-a-GCST003116	Weighted median	38	-0.046658455	0.03222804	0.160196653	-0.111775151	0.018458242	0.854453317	0.816229648	0.95425305
ebi-a-GCST003116	RXUOs6	CHIP Overall	Coronary artery disease    id:ebi-a-GCST003116	Inverse variance weighted	38	-0.027468321	0.021713446	0.205857942	-0.070026676	0.015090034	0.972905503	0.932368948	1.015204464
ebi-a-GCST003116	RXUOs6	CHIP Overall	Coronary artery disease    id:ebi-a-GCST003116	Simple mode	38	-0.080536025	0.063910095	0.215056011	-0.205799812	0.044727761	0.922621665	0.813996012	1.045743129
ebi-a-GCST003116	RXUOs6	CHIP Overall	Coronary artery disease    id:ebi-a-GCST003116	Weighted mode	38	-0.052809888	0.042101372	0.217891188	-0.135328577	0.029708061	0.964603288	0.873408876	1.03015451
ebi-a-GCST006414	RXUOs6	CHIP Overall	Atrial fibrillation    id:ebi-a-GCST006414	MR Egger	110	0.009477985	0.033064361	0.774927529	-0.055328162	0.074284132	1.009523043	0.946174598	1.077112804
ebi-a-GCST006414	RXUOs6	CHIP Overall	Atrial fibrillation    id:ebi-a-GCST006414	Weighted median	110	-0.021070423	0.025084387	0.400918713	-0.070235823	0.028094976	0.979150007	0.932173966	1.028493362
ebi-a-GCST006414	RXUOs6	CHIP Overall	Atrial fibrillation    id:ebi-a-GCST006414	Inverse variance weighted	110	0.018400717	0.016841538	0.274578515	-0.014608697	0.051410132	1.018571054	0.985497492	1.052754573
ebi-a-GCST006414	RXUOs6	CHIP Overall	Atrial fibrillation    id:ebi-a-GCST006414	Simple mode	110	0.020724902	0.048399319	0.669345724	-0.074137762	0.115587567	1.020941155	0.928543767	1.122532807
ebi-a-GCST006414	RXUOs6	CHIP Overall	Atrial fibrillation    id:ebi-a-GCST006414	Weighted mode	110	-0.011067502	0.025756104	0.668259208	-0.061549465	0.039414462	0.988993518	0.940306432	1.040201518
ebi-a-GCST006906	RXUOs6	CHIP Overall	Stroke    id:ebi-a-GCST006906	MR Egger	7	-0.174457998	0.441821591	0.709227323	-1.040428316	0.69151232	0.839912131	0.353303324	1.99673295
ebi-a-GCST006906	RXUOs6	CHIP Overall	Stroke    id:ebi-a-GCST006906	Weighted median	7	-0.031673463	0.088211777	0.719549001	-0.204568546	0.141221621	0.968822887	0.814998875	1.151679856
ebi-a-GCST006906	RXUOs6	CHIP Overall	Stroke    id:ebi-a-GCST006906	Inverse variance weighted	7	-0.01059699	0.067691559	0.875600949	-0.143272445	0.122078465	0.98945896	0.866517958	1.129842752
ebi-a-GCST006906	RXUOs6	CHIP Overall	Stroke    id:ebi-a-GCST006906	Simple mode	7	-0.114992901	0.135084063	0.427285125	-0.379756855	0.149772673	0.891373194	0.684027707	1.161570149
ebi-a-GCST006906	RXUOs6	CHIP Overall	Stroke    id:ebi-a-GCST006906	Weighted mode	7	-0.113259905	0.135569091	0.435468377	-0.378975324	0.152455514	0.841966126	0.684562505	1.164690657
ebi-a-GCST006907	RXUOs6	CHIP Overall	Ischemic stroke (large artery atherosclerosis)    id:ebi-a-GCST006907	MR Egger	3	-0.300196128	0.355372585	0.553455617	-0.996726394	0.396334138	0.74067294	0.369085707	1.486365886
ebi-a-GCST006907	RXUOs6	CHIP Overall	Ischemic stroke (large artery atherosclerosis)    id:ebi-a-GCST006907	Weighted median	3	-0.012716182	0.047617427	0.789431497	-0.10604634	0.080613975	0.987364327	0.89938297	1.083952383
ebi-a-GCST006907	RXUOs6	CHIP Overall	Ischemic stroke (large artery atherosclerosis)    id:ebi-a-GCST006907	Inverse variance weighted	3	0.00818117	0.04007991	0.837971858	-0.070234493	0.086596833	1.008214727	0.932175206	1.094569555
ebi-a-GCST006907	RXUOs6	CHIP Overall	Ischemic stroke (large artery atherosclerosis)    id:ebi-a-GCST006907	Simple mode	3	-0.02389794	0.06007714	0.72929187	-0.141649134	0.093853255	0.976385355	0.829557529	1.098398549
ebi-a-GCST006907	RXUOs6	CHIP Overall	Ischemic stroke (large artery atherosclerosis)    id:ebi-a-GCST006907	Weighted mode	3	-0.021380662	0.056319617	0.740739134	-0.131767111	0.089005786	0.978846284	0.876545109	1.093086981
ebi-a-GCST006908	RXUOs6	CHIP Overall	Ischemic stroke    id:ebi-a-GCST006908	MR Egger	8	-0.579997273	0.417227274	0.213870102	-1.397763611	0.237769065	0.559899893	0.247149068	1.268416237
ebi-a-GCST006908	RXUOs6	CHIP Overall	Ischemic stroke    id:ebi-a-GCST006908	Weighted median	8	0.027584655	0.074652976	0.711751279	-0.118735179	0.173904488	0.887668634	0.88042942	1.189941907
ebi-a-GCST006908	RXUOs6	CHIP Overall	Ischemic stroke    id:ebi-a-GCST006908	Inverse variance weighted	8	0.044048749	0.057156868	0.44090602	-0.067978711	0.15607621	1.045033298	0.934280363	1.168915282
ebi-a-GCST006908	RXUOs6	CHIP Overall	Ischemic stroke    id:ebi-a-GCST006908	Simple mode	8	-0.052675762	0.121029867	0.676499664	-0.289894301	0.184542777	0.948687563	0.748342663	1.202668426
ebi-a-GCST006908	RXUOs6	CHIP Overall	Ischemic stroke    id:ebi-a-GCST006908	Weighted mode	8	-0.059785965	0.123949777	0.644281224	-0.302727528	0.183155598	0.864150854	0.684003071	1.201001267
ebi-a-GCST006910	RXUOs6	CHIP Overall	Ischemic stroke (cardioembolic)    id:ebi-a-GCST006910	MR Egger	4	0.024378498	0.060438168	0.725717965	-0.094080312	0.142837307	1.024678083	0.910209659	1.153542113
ebi-a-GCST006910	RXUOs6	CHIP Overall	Ischemic stroke (cardioembolic)    id:ebi-a-GCST006910	Weighted median	4	-0.014335425	0.03656044	0.694982785	-0.085993866	0.057323037	0.985766838	0.917599841	1.058997851
ebi-a-GCST006910	RXUOs6	CHIP Overall	Ischemic stroke (cardioembolic)    id:ebi-a-GCST006910	Inverse variance weighted	4	-0.024850011	0.030546578	0.415924515	-0.084721305	0.035021283	0.974562609	0.918768305	1.03564175
ebi-a-GCST006910	RXUOs6	CHIP Overall	Ischemic stroke (cardioembolic)    id:ebi-a-GCST006910	Simple mode	4	0.010517807	0.048318065	0.84164469	-0.084185599	0.105221214	1.010573314	0.919260626	1.110956343
ebi-a-GCST006910	RXUOs6	CHIP Overall	Ischemic stroke (cardioembolic)    id:ebi-a-GCST006910	Weighted mode	4	-0.02627849	0.038921719	0.547952227	-0.10256506	0.05000808	0.974063785	0.90251943	1.05127959
ebi-a-GCST009541	RXUOs6	CHIP Overall	Heart failure    id:ebi-a-GCST009541	MR Egger	9	-0.039595374	0.198592123	0.847633126	-0.428835934	0.349645187	0.961178278	0.651266771	1.418564134
ebi-a-GCST009541	RXUOs6	CHIP Overall	Heart failure    id:ebi-a-GCST009541	Weighted median	9	-0.119163991	0.092670458	0.198481543	-0.300798088	0.062470106	0.86766222	0.740227218	1.064462637
ebi-a-GCST009541	RXUOs6	CHIP Overall	Heart failure    id:ebi-a-GCST009541	Inverse variance weighted	9	-0.125247008	0.06866854	0.068161781	-0.259837347	0.009343331	0.882278946	0.77117701	1.009387116
ebi-a-GCST009541	RXUOs6	CHIP Overall	Heart failure    id:ebi-a-GCST009541	Simple mode	9	-0.237854849	0.149884570	0.151099367	-0.531552248	0.055842729	0.788317108	0.587691912	1.057433968
ebi-a-GCST009541	RXUOs6	CHIP Overall	Heart failure    id:ebi-a-GCST009541	Weighted mode	9	-0.146007926	0.125067662	0.276651288	-0.391140543	0.099124669	0.864150854	0.684285102	1.104203975
ieu-a-798	RXUOs6	CHIP Overall	Myocardial infarction    id:ieu-a-798	MR Egger	24	-0.045596112	0.063845038	0.482632214	-0.170732387	0.079540164	0.95542777	0.843047154	1.082789048
ieu-a-798	RXUOs6	CHIP Overall	Myocardial infarction    id:ieu-a-798	Weighted median	24	-0.044908722	0.036914618	0.223772961	-0.117261374	0.027443929	0.956084717	0.889352709	1.027829982
ieu-a-798	RXUOs6	CHIP Overall	Myocardial infarction    id:ieu-a-798	Inverse variance weighted	24	-0.022114724	0.026363178	0.401554079	-0.073786554	0.029557105	0.971824013	0.828869936	1.029898252
ieu-a-798	RXUOs6	CHIP Overall	Myocardial infarction    id:ieu-a-798	Simple mode	24	-0.049855656	0.065209405	0.452314714	-0.17766609	0.077954778	0.951366739	0.837221933	1.08107377
ieu-a-798	RXUOs6	CHIP Overall	Myocardial infarction    id:ieu-a-798	Weighted mode	24	-0.049855656	0.044548821	0.274639222	-0.137171346	0.037460034	0.951366739	0.871820831	1.038170505
ebi-a-GCST003116	fmbgIS	DNMT3A CHIP	Coronary artery disease    id:ebi-a-GCST003116	MR Egger	38	0.007012997	0.064765768	0.914372908	-0.119927908	0.133953903	1.007037646	0.886984379	1.143340114
ebi-a-GCST003116	fmbgIS	DNMT3A CHIP	Coronary artery disease    id:ebi-a-GCST003116	Weighted median	38	-0.05002374	0.038537192	0.19032148	-0.126035271	0.025030522	0.905751671	0.851538752	1.023464616
ebi-a-GCST003116	fmbgIS	DNMT3A CHIP	Coronary artery disease    id:ebi-a-GCST003116	Inverse variance weighted	38	-0.038210315	0.027784884	0.169063404	-0.092668688	0.016248059	0.962510489	0.91149544	1.016380776
ebi-a-GCST003116	fmbgIS	DNMT3A CHIP	Coronary artery disease    id:ebi-a-GCST003116	Simple mode	38	-0.036199369	0.068402459	0.59981966	-0.170268189	0.09786945	0.964447993	0.843438585	1.102818803
ebi-a-GCST003116	fmbgIS	DNMT3A CHIP	Coronary artery disease    id:ebi-a-GCST003116	Weighted mode	38	-0.044583817	0.046567469	0.335165925	-0.134072456	0.044904822	0.963595435	0.872656998	1.045828306
ebi-a-GCST006414	fmbgIS	DNMT3A CHIP	Atrial fibrillation    id:ebi-a-GCST006414	MR Egger	110	0.043851538	0.034956616	0.212384424	-0.024663429	0.112366506	1.044827227	0.975638228	1.118922878
ebi-a-GCST006414	fmbgIS	DNMT3A CHIP	Atrial fibrillation    id:ebi-a-GCST006414	Weighted median	110	0.007737871	0.026626459	0.771350876	-0.04449989	0.059925732	1.007767886	0.956523435	1.061757689
ebi-a-GCST006414	fmbgIS	DNMT3A CHIP	Atrial fibrillation    id:ebi-a-GCST006414	Inverse variance weighted	110	0.034367661	0.017806093	0.5359361	-0.000532282	0.069267605	0.974565054	0.99946786	1.071272969
ebi-a-GCST006414	fmbgIS	DNMT3A CHIP	Atrial fibrillation    id:ebi-a-GCST006414	Simple mode	110	0.05341308	0.055046724	0.334033963	-0.054478498	0.161304659	1.054865299	0.94697887	1.175042902
ebi-a-GCST006414	fmbgIS	DNMT3A CHIP	Atrial fibrillation    id:ebi-a-GCST006414	Weighted mode	110	0.012342331	0.029485157	0.676336003	-0.045448578	0.070133239	1.012418811	0.955568739	1.072651001
ebi-a-GCST006906	fmbgIS	DNMT3A CHIP	Stroke    id:ebi-a-GCST006906	MR Egger	7	-0.243082803	0.494428687	0.64379221	-1.212163029	0.725997423	0.784206577	0.297552967	2.066791538
ebi-a-GCST006906	fmbgIS	DNMT3A CHIP	Stroke    id:ebi-a-GCST006906	Weighted median	7	-0.073932138	0.094782365	0.43537912	-0.259705573	0.111841298	0.928734718	0.717278638	1.118335364
ebi-a-GCST006906	fmbgIS	DNMT3A CHIP	Stroke    id:ebi-a-GCST006906	Inverse variance weighted	7	-0.022562145	0.075758637	0.765843489	-0.171049074	0.125924783	0.977690476	0.842780214	1.134196854
ebi-a-GCST006906	fmbgIS	DNMT3A CHIP	Stroke    id:ebi-a-GCST006906	Simple mode	7	-0.085900493	0.137121979	0.554088282	-0.354659572	0.182858586	0.917685543	0.701412183	1.206644608
ebi-a-GCST006906	fmbgIS	DNMT3A CHIP	Stroke    id:ebi-a-GCST006906	Weighted mode	7	-0.089619064	0.137362106	0.538301779	-0.358848792	0.179610664	0.914279401	0.827949959	1.196751334
ebi-a-GCST006907	fmbgIS	DNMT3A CHIP	Ischemic stroke (large artery atherosclerosis)    id:ebi-a-GCST006907	MR Egger	3	-0.263851731	0.397742567	0.627119707	-1.043427163	0.515723701	0.768087415		

Supplemental table 4: Characteristics of instrumental variables for circulating cytokines and their associations with CHIP

Cytokine info		SNP info						SNP-cytokine						CHIP Overall											DNMT3A CHIP											TET2 CHIP																									
Cytokine	Gene	SNP	IV Source	IV_type	CHR	Pos: grch37	Pos: grch38	EA	OA	EAF	BETA	SE	Unit	ncases	ncontrols	proxy	r2_1000eur	grch37_proxy	grch38_proxy	EA_proxy	OA_proxy	EA	OA	EAF	BETA	SE	ncases	ncontrols	proxy	r2_1000eur	grch37_proxy	grch38_proxy	EA_proxy	OA_proxy	EA	OA	EAF	BETA	SE	ncases	ncontrols	proxy	r2_1000eur	grch37_proxy	grch38_proxy	EA_proxy	OA_proxy	EA	OA	EAF	BETA	SE									
C-reactive protein	CRP	rs149327578	Yarmolinsky(PMID:37205426)	cis-pQTL	1	159576889	159607099	G	A	0.825	0.094	0.016	sd	25657	342869							G	A	0.831	-0.007	0.013	16219	342869													G	A	0.831	-0.009	0.016	3918	342869										G	A	0.831	-0.048	0.031
C-reactive protein	CRP	rs4656241	Yarmolinsky(PMID:37205426)	cis-pQTL	1	159613986	159644196	T	C	0.796	-0.112	0.015	sd	25657	342869							T	C	0.800	-0.018	0.012	16219	342869													T	C	0.800	-0.019	0.015	3918	342869									T	C	0.801	0.028	0.029	
C-reactive protein	CRP	rs77013776	Yarmolinsky(PMID:37205426)	cis-pQTL	1	159652068	159682278	A	C	0.964	0.245	0.033	sd	25657	342869							A	C	0.961	0.030	0.024	16219	342869													A	C	0.961	0.038	0.030	3918	342869									A	C	0.961	0.043	0.059	
C-reactive protein	CRP	rs3093059	Yarmolinsky(PMID:37205426)	cis-pQTL	1	159685136	159715346	A	G	0.938	-0.246	0.024	sd	25634	342667							A	G	0.943	-0.011	0.020	16205	342667													A	G	0.943	0.026	0.050	3913	342667								A	G	0.943	0.026	0.050		
C-reactive protein	CRP	rs4546916	Yarmolinsky(PMID:37205426)	cis-pQTL	1	159699249	159729459	G	T	0.673	0.179	0.013	sd	25657	342869							G	T	0.672	-0.005	0.010	16219	342869													G	T	0.672	-0.003	0.012	3918	342869								G	T	0.672	-0.013	0.025		
Interleukin 1 receptor accessory protein	IL1Racp	rs6444430	Sun(PMID:29875488)	cis-pQTL	3	190223191	190505402	A	G	0.790	0.154	0.033	sd of log	25657	342869							A	G	0.794	0.017	0.012	16219	342869													A	G	0.794	0.017	0.015	3918	342869								A	G	0.794	0.009	0.030		
Interleukin 1 receptor accessory protein	IL1Racp	rs2885370	Sun(PMID:29875488)	cis-pQTL	3	190276995	190559206	T	G	0.743	-0.209	0.031	sd of log	25657	342869							T	G	0.744	0.022	0.011	16219	342869													T	G	0.744	0.024	0.014	3918	342869							T	G	0.744	0.002	0.028			
Interleukin 1 receptor accessory protein	IL1Racp	rs6801017	Sun(PMID:29875488)	cis-pQTL	3	190295730	190577941	G	A	0.214	-0.202	0.031	sd of log	25657	342869							G	A	0.210	0.000	0.012	16219	342869													G	A	0.210	-0.010	0.014	3918	342869							G	A	0.210	0.000	0.029			
Interleukin 1 receptor accessory protein	IL1Racp	rs67249092	Sun(PMID:29875488)	cis-pQTL	3	190357571	190639782	G	A	0.152	-0.379	0.035	sd of log	25657	342869							G	A	0.154	-0.011	0.013	16219	342869													G	A	0.154	-0.019	0.016	3918	342869							G	A	0.154	-0.002	0.032			
Interleukin 1 receptor accessory protein	IL1Racp	rs3935774	Sun(PMID:29875488)	cis-pQTL	3	190360571	190642782	T	C	0.017	0.741	0.112	sd of log	25657	342869							T	C	0.013	0.064	0.042	16219	342869													T	C	0.013	-0.042	0.104	3918	342869							T	C	0.013	-0.042	0.104			
Interleukin 1 receptor accessory protein	IL1Racp	rs113553332	Sun(PMID:29875488)	cis-pQTL	3	190521288	190803499	T	C	0.048	0.685	0.056	sd of log	25657	342869							T	C	0.048	0.031	0.022	16219	342869													T	C	0.048	0.053	0.027	3918	342869							T	C	0.048	0.004	0.054			
Interleukin 1 receptor antagonist	IL1RA	rs9308676	Karhunen(PMID:36936266)	cis-pQTL	2	113428167	112670590	G	A	0.555	-0.043	0.011	sd	25657	342869							G	A	0.570	-0.008	0.010	16219	342869													G	A	0.570	-0.012	0.012	3918	342869							G	A	0.570	-0.019	0.023			
Interleukin 1 receptor antagonist	IL1RA	rs7594852	Karhunen(PMID:36936266)	cis-pQTL	2	113521754	112764177	C	T	0.522	-0.045	0.010	sd	25612	342263							C	T	0.521	-0.010	0.009	16192	342263														C	T	0.521	-0.012	0.012	3909	342263							C	T	0.521	-0.005	0.023		
Interleukin 1 receptor antagonist	IL1RA	rs3783548	Karhunen(PMID:36936266)	cis-pQTL	2	113533333	112775756	G	A	0.096	-0.086	0.021	sd	25657	342869							G	A	0.091	0.001	0.017	16219	342869														G	A	0.091	0.004	0.021	3918	342869							G	A	0.091	-0.050	0.041		
Interleukin 1 receptor antagonist	IL1RA	rs1143636	Karhunen(PMID:36936266)	cis-pQTL	2	113589374	112831797	A	G	0.975	0.242	0.038	sd	25636	342434							A	G	0.983	0.000	0.036	16205	342434														A	G	0.983	-0.052	0.044	3915	342434							A	G	0.983	0.107	0.088		
Interleukin 1 receptor antagonist	IL1RA	rs148433212	Karhunen(PMID:36936266)	cis-pQTL	2	113616075	112858498	G	T	0.965	-0.199	0.039	sd	25657	342869							G	T	0.967	-0.013	0.027	16219	342869														G	T	0.967	-0.012	0.033	3918	342869							G	T	0.967	-0.041	0.065		
Interleukin 1 receptor antagonist	IL1RA	rs4591347	Karhunen(PMID:36936266)	cis-pQTL	2	113658705	112901128	C	T	0.865	0.101	0.015	sd	25657	342869							C	T	0.851	-0.004	0.013	16219	342869														C	T	0.851	0.009	0.016	3918	342869							C	T	0.851	-0.040	0.032		
Interleukin 1 receptor antagonist	IL1RA	rs7584409	Karhunen(PMID:36936266)	cis-pQTL	2	113742734	112985157	G	A	0.288	0.086	0.012	sd	25657	342869							G	A	0.307	0.006	0.010	16219	342869															G	A	0.308	0.018	0.013	3918	342869							G	A	0.307	-0.027	0.025	
Interleukin 1 receptor antagonist	IL1RA	rs115652897	Karhunen(PMID:36936266)	cis-pQTL	2	113790332	113032755	C	T	0.981	0.251	0.043	sd	25657	342869							C	T	0.979	-0.031	0.033	16219	342869															C	T	0.979	0.026	0.081	3918	342869							C	T	0.979	0.026	0.081	
Interleukin 1 receptor antagonist	IL1RA	rs114189538	Karhunen(PMID:36936266)	cis-pQTL	2	113821082	113063505	G	A	0.934	0.167	0.022	sd	25657	342869							G	A	0.935	0.043	0.019	16219	342869															G	A	0.935	0.048	0.024	3918	342869							G	A	0.935	0.052	0.047	
Interleukin 1 receptor antagonist	IL1RA	rs115853107	Karhunen(PMID:36936266)	cis-pQTL	2	113832153	113074576	A	C	0.988	-0.312	0.057	sd	25657	342869							A	C	0.990	-0.058	0.047	16219	342869															A	C	0.990	-0.034	0.058	3918	342869							A	C	0.990	-0.206	0.116	
Interleukin 1 receptor antagonist	IL1RA	rs6743376	Karhunen(PMID:36936266)	cis-pQTL	2	113832333	113074756	C	A	0.353	0.182	0.011	sd	25657	342869							C	A	0.350	0.017	0.010	16219	342869															C	A	0.350	0.000	0.024	3918	342869							C	A	0.350	0.000	0.024	
Interleukin 1 receptor antagonist	IL1RA	rs139076984	Karhunen(PMID:36936266)	cis-pQTL	2	113839374	113081797	T	G	0.979	0.230	0.040	sd	25657	342869							T	G	0.982	0.013	0.036	16219	342869																T	G	0.982	-0.031	0.044	3918	342869							T	G	0.982	-0.004	0.087
Interleukin 1 receptor antagonist	IL1RA	rs6734238	Karhunen(PMID:36936266)	cis-pQTL	2	113841030	113083453	A	G	0.612	0.204	0.010	sd	25581	341893							A	G	0.597	0.006	0.010	16179	341893																	A	G	0.597	-0.006	0.012</												

Supplemental table 5: Characteristics of instrumental variables for cardiovascular disease and their associations with CHIP

Exposure	Instrumental Variable					CVD				CHIP Overall				DNMT3A CHIP				TET2 CHIP			
	Sample Size	SNP	CHR	Pos	EA OA	EAF	BETA	SE	P	EAF	BETA	SE	P	EAF	BETA	SE	P	EAF	BETA	SE	P
Coronary artery disease	42457	rs10080815	6	160687412	G A	0.028	0.247	0.031	1.33E-15	0.020	0.006	0.037	0.8757813	0.020	0.035	0.042	0.401679	0.020	0.010	0.084	0.905725
Coronary artery disease	42457	rs10840293	11	9751196	A G	0.550	0.055	0.010	1.28E-08	0.557	-0.006	0.010	0.550127	0.556	-0.017	0.012	0.144912	0.557	0.012	0.023	0.100856
Coronary artery disease	42457	rs11065979	12	112059559	T C	0.365	0.069	0.011	1.93E-10	0.437	0.013	0.010	0.20863	0.437	0.001	0.012	0.897915	0.457	0.030	0.023	0.260951
Coronary artery disease	42457	rs11191416	10	104604916	G T	0.127	-0.079	0.014	4.65E-09	0.084	0.024	0.019	0.20221	0.084	0.041	0.020	0.0475317	0.084	-0.018	0.041	0.68653
Coronary artery disease	42457	rs11556924	7	129663496	T C	0.313	-0.073	0.011	5.34E-11	0.389	0.018	0.011	0.0923961	0.389	0.026	0.012	0.0255983	0.389	0.042	0.024	0.072667
Coronary artery disease	42457	rs115654617	2	203893999	A G	0.107	0.138	0.016	3.12E-18	0.127	-0.006	0.015	0.679932	0.127	-0.027	0.017	0.118622	0.127	-0.034	0.034	0.318907
Coronary artery disease	42457	rs1183776	13	111040681	A G	0.263	0.069	0.011	1.83E-10	0.278	0.003	0.012	0.817148	0.278	-0.006	0.013	0.644703	0.278	0.009	0.026	0.734169
Coronary artery disease	42457	rs1199338	3	138087467	C A	0.162	0.074	0.012	3.90E-09	0.161	0.014	0.014	0.307489	0.161	0.014	0.016	0.382102	0.161	0.031	0.031	0.321529
Coronary artery disease	42457	rs12202017	6	134173151	G A	0.300	-0.067	0.010	1.98E-11	0.289	-0.002	0.011	0.827264	0.289	-0.008	0.013	0.547514	0.289	-0.050	0.026	0.0517254
Coronary artery disease	42457	rs1412444	10	91002927	T C	0.369	0.067	0.010	1.5E-12	0.340	-0.011	0.011	0.317465	0.339	-0.030	0.012	0.0127708	0.340	-0.017	0.024	0.472045
Coronary artery disease	42457	rs16986953	2	19942743	A G	0.105	0.085	0.015	1.45E-08	0.068	0.006	0.021	0.774689	0.068	0.000	0.023	0.988717	0.068	0.040	0.046	0.389987
Coronary artery disease	42457	rs17087335	4	57838583	T G	0.215	0.061	0.011	4.59E-08	0.187	-0.008	0.013	0.524096	0.187	0.000	0.015	0.987024	0.187	0.000	0.030	0.98822
Coronary artery disease	42457	rs17678663	2	145286559	G T	0.088	0.099	0.017	3.00E-09	0.086	0.004	0.018	0.849672	0.086	-0.023	0.021	0.263643	0.086	-0.037	0.041	0.364133
Coronary artery disease	42457	rs1870634	10	44480811	G T	0.637	0.076	0.010	5.55E-15	0.665	-0.007	0.011	0.548147	0.665	-0.006	0.012	0.648866	0.665	-0.023	0.024	0.337416
Coronary artery disease	42457	rs2107595	7	19049388	A G	0.200	0.073	0.011	8.05E-11	0.153	-0.004	0.014	0.795423	0.153	-0.005	0.016	0.758084	0.153	-0.001	0.032	0.969183
Coronary artery disease	42457	rs2128739	11	103673277	C A	0.676	-0.068	0.010	7.05E-11	0.716	0.008	0.011	0.487083	0.716	0.000	0.013	0.974116	0.716	-0.009	0.026	0.735414
Coronary artery disease	42457	rs2487928	10	30023892	A G	0.418	0.063	0.010	4.41E-11	0.444	0.014	0.010	0.171899	0.444	0.024	0.012	0.0372184	0.444	0.011	0.023	0.677872
Coronary artery disease	42457	rs2681472	12	90038959	A G	0.201	0.074	0.011	6.17E-11	0.172	-0.012	0.014	0.36039	0.172	-0.014	0.015	0.369685	0.172	0.031	0.031	0.314914
Coronary artery disease	42457	rs28451064	21	35593827	A G	0.121	0.128	0.016	1.33E-15	0.131	-0.019	0.016	0.225103	0.131	0.004	0.017	0.812537	0.131	-0.040	0.035	0.247547
Coronary artery disease	42457	rs2891168	9	220989169	A G	0.489	0.193	0.009	2.29E-98	0.486	-0.011	0.010	0.269688	0.486	-0.009	0.012	0.415424	0.486	0.053	0.023	0.021303
Coronary artery disease	42457	rs3918226	7	150690176	T C	0.065	0.133	0.022	1.69E-09	0.082	0.010	0.019	0.585248	0.082	0.013	0.021	0.526348	0.082	-0.016	0.042	0.710945
Coronary artery disease	42457	rs4420638	19	45422946	G A	0.166	0.092	0.014	7.07E-11	0.189	-0.007	0.013	0.615252	0.189	-0.008	0.015	0.568342	0.189	0.001	0.029	0.965742
Coronary artery disease	42457	rs4468572	15	79124475	C T	0.586	0.077	0.010	4.44E-16	0.570	-0.016	0.011	0.118319	0.570	-0.015	0.012	0.202644	0.570	-0.002	0.023	0.929755
Coronary artery disease	42457	rs4593108	4	142881001	C G	0.205	-0.071	0.012	8.82E-10	0.172	0.005	0.014	0.725885	0.172	0.011	0.015	0.467788	0.172	-0.022	0.031	0.475519
Coronary artery disease	42457	rs515135	2	12826057	C T	0.792	0.067	0.012	3.09E-08	0.819	-0.007	0.013	0.575735	0.819	0.016	0.015	0.275757	0.819	-0.035	0.030	0.246316
Coronary artery disease	42457	rs55730499	6	161005610	T C	0.056	0.317	0.024	5.39E-39	0.080	-0.012	0.019	0.519896	0.080	-0.023	0.021	0.287672	0.080	-0.039	0.042	0.359387
Coronary artery disease	42457	rs56062135	15	67365630	T C	0.206	-0.070	0.012	4.52E-09	0.235	0.003	0.012	0.777564	0.235	0.005	0.014	0.727806	0.235	0.001	0.027	0.969647
Coronary artery disease	42457	rs56225615	5	79139370	T C	0.156	0.077	0.013	3.57E-09	0.148	-0.017	0.015	0.252962	0.148	-0.013	0.016	0.436363	0.148	-0.021	0.033	0.512799
Coronary artery disease	42457	rs56289821	19	11188247	A G	0.100	-0.134	0.017	4.44E-15	0.118	-0.016	0.016	0.302481	0.118	-0.022	0.018	0.208858	0.118	-0.022	0.036	0.546923
Coronary artery disease	42457	rs56336142	6	39134099	T C	0.193	-0.067	0.012	1.85E-08	0.211	-0.004	0.013	0.781824	0.211	-0.005	0.014	0.70591	0.211	-0.007	0.028	0.802365
Coronary artery disease	42457	rs663129	8	17834001	A G	0.257	0.058	0.011	3.20E-08	0.232	-0.010	0.012	0.405705	0.232	-0.007	0.014	0.587358	0.232	-0.005	0.027	0.849433
Coronary artery disease	42457	rs6689306	1	154395946	G A	0.552	-0.056	0.009	2.60E-09	0.577	-0.007	0.011	0.493223	0.577	-0.003	0.012	0.818609	0.577	-0.050	0.024	0.0360342
Coronary artery disease	42457	rs67180937	1	222823743	G G	0.663	0.079	0.011	1.01E-12	0.713	-0.005	0.011	0.683155	0.713	-0.002	0.013	0.869096	0.713	-0.021	0.026	0.40367
Coronary artery disease	42457	rs7212798	17	59013488	C T	0.147	0.080	0.014	1.88E-08	0.148	-0.018	0.015	0.229298	0.147	-0.042	0.016	0.00997497	0.148	0.031	0.033	0.347459
Coronary artery disease	42457	rs7528419	1	109871192	G A	0.214	-0.115	0.011	1.97E-23	0.222	-0.004	0.012	0.757364	0.222	-0.018	0.014	0.206967	0.222	-0.017	0.028	0.529929
Coronary artery disease	42457	rs8042271	15	89574218	A G	0.098	-0.097	0.018	3.68E-08	0.036	-0.019	0.028	0.504143	0.036	0.025	0.031	0.418998	0.036	0.095	0.062	0.128049
Coronary artery disease	42457	rs9349379	6	12903957	G A	0.432	0.132	0.010	1.81E-42	0.406	0.014	0.010	0.178861	0.406	0.004	0.012	0.759284	0.406	0.016	0.023	0.492663
Coronary artery disease	42457	rs9790807	1	56965664	T C	0.085	-0.126	0.017	5.00E-14	0.092	-0.029	0.018	0.107799	0.092	-0.044	0.020	0.0303651	0.092	-0.069	0.040	0.083165
Atrial fibrillation	1030836	rs10141892	4	35184323	C T	0.583	-0.045	0.007	2.95E-11	0.586	0.004	0.010	0.725885	0.586	-0.002	0.012	0.835243	0.586	0.009	0.023	0.715025
Atrial fibrillation	1030836	rs10213171	4	148993757	G G	0.061	0.091	0.013	1.32E-11	0.056	0.018	0.023	0.419477	0.056	0.027	0.025	0.281062	0.056	0.027	0.050	0.597242
Atrial fibrillation	1030836	rs10458662	10	77936670	A G	0.172	0.054	0.009	6.93E-10	0.166	-0.006	0.014	0.650943	0.166	-0.008	0.016	0.60152	0.166	-0.035	0.031	0.260987
Atrial fibrillation	1030836	rs10520002	5	127819132	A G	0.099	0.063	0.011	2.85E-08	0.100	0.006	0.017	0.742865	0.100	0.007	0.019	0.720451	0.100	0.009	0.038	0.817072
Atrial fibrillation	1030836	rs10520260	4	174447349	A G	0.321	-0.046	0.007	3.36E-10	0.319	0.010	0.011	0.354993	0.319	0.008	0.013	0.529688	0.319	0.022	0.025	0.946952
Atrial fibrillation	1030836	rs10753933	1	203026214	G T	0.552	-0.061	0.007	9.84E-20	0.548	-0.001	0.010	0.944099	0.548	0.000	0.012	0.974409	0.548	0.022	0.023	0.348042
Atrial fibrillation	1030836	rs10773657	12	123327900	A G	0.862	-0.058	0.010	2.54E-08	0.894	-0.006	0.017	0.736518	0.894	-0.010	0.019	0.607675	0.894	-0.029	0.037	0.434856
Atrial fibrillation	1030836	rs10804493	3	111554426	A G	0.651	0.056	0.007	1.63E-15	0.668	0.002	0.011	0.869049	0.668	0.005	0.012	0.679996	0.667	-0.030	0.024	0.214584
Atrial fibrillation	1030836	rs10821145	9	97713459	A C	0.143															