

## **SUPPLEMENTAL MATERIAL**

**Supplemental Table 1: Protein names and respective Olink® panel sorted in alphabetical order**

<b>Protein full name</b>	<b>Entry name</b>	<b>Olink® Panel</b>	<b>Uniprot ID</b>	<b>Biomarker excluded from the analysis ?</b>
Eukaryotic translation initiation factor 4E-binding protein 1	4E-BP1	INF	Q13541	
Angiotensin-converting enzyme 2	ACE2	CVD II	Q9BYF1	
Adenosine Deaminase	ADA	INF	P00813	
A disintegrin and metalloproteinase with thrombospondin motifs 13	ADAM-TS13	CVD II	Q76LX8	
ADM	ADM	CVD II	P35318	
Agouti-related protein	AGRP	CVD II	O00253	
CD166 antigen	ALCAM	CVD III	Q13740	
Protein AMBP	AMBP	CVD II	P02760	
Angiopoietin-1	ANG-1	CVD II	Q15389	
Aminopeptidase N	AP-N	CVD III	P15144	
Artemin	ARTN	INF	Q5T4W7	Excluded
Axin-1	AXIN1	INF	O15169	
Tyrosine-protein kinase receptor UFO	AXL	CVD III	P30530	
Azurocidin	AZU1	CVD III	P20160	
Brain-derived neurotrophic factor	BDNF	INF	P23560	Excluded
Beta-nerve growth factor	Beta-NGF	INF	P01138	
Bleomycin hydrolase	BLM hydrolase	CVD III	Q13867	
Bone morphogenetic protein 6	BMP-6	CVD II	P22004	
Natriuretic peptides B	BNP	CVD II	P16860	
Brother of CDO	BOC	CVD II	Q9BWW1	
Carbonic anhydrase 5A, mitochondrial	CA5A	CVD II	P35218	
Caspase-3	CASP-3	CVD III	P42574	
Caspase 8	CASP-8	INF	Q14790	
Eotaxin-1	CCL11	INF	P51671	
C-C motif chemokine 15	CCL15	CVD III	Q16663	
C-C motif chemokine 16	CCL16	CVD III	O15467	
C-C motif chemokine 17	CCL17	CVD II	Q92583	
C-C motif chemokine 19	CCL19	INF	Q99731	
C-C motif chemokine 20	CCL20	INF	P78556	
C-C motif chemokine 22	CCL22	CVD III	O00626	Excluded
C-C motif chemokine 23	CCL23	INF	P55773	
C-C motif chemokine 24	CCL24	CVD III	O00175	
C-C motif chemokine 25	CCL25	INF	O15444	
C-C motif chemokine 28	CCL28	INF	Q9NRJ3	
C-C motif chemokine 3	CCL3	CVD II	P10147	
C-C motif chemokine 3	CCL3	INF	P10147	Excluded
C-C motif chemokine 4	CCL4	INF	P13236	
Scavenger receptor cysteine-rich type 1 protein M130	CD163	CVD III	Q86VB7	
Natural killer cell receptor 2B4	CD244	INF	Q9BZW8	
T-cell surface glycoprotein CD4	CD4	CVD II	P01730	
CD40L receptor	CD40	INF	P25942	
CD40 ligand	CD40-L	CVD II	P29965	
T-cell surface glycoprotein CD5	CD5	INF	P06127	
T cell surface glycoprotein CD6 isoform	CD6	INF	Q8WWJ7	
SLAM family member 5	CD84	CVD II	Q9UIB8	
T-cell surface glycoprotein CD8 alpha chain	CD8A	INF	P01732	Excluded
Complement component C1q receptor	CD93	CVD III	Q9NPY3	
CUB domain-containing protein 1	CDCP1	INF	Q9H5V8	
Cadherin-5	CDH5	CVD III	P33151	
Carcinoembryonic antigen-related cell adhesion molecule 8	CEACAM8	CVD II	P31997	

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Chitinase-3-like protein 1	CHI3L1	CVD III	P36222	
Chitotriosidase-1	CHIT1	CVD III	Q13231	
Contactin-1	CNTN1	CVD III	Q12860	
Collagen alpha-1 (I) chain	COL1A1	CVD III	P02452	
Carboxypeptidase A1	CPA1	CVD III	P15085	
Carboxypeptidase B	CPB1	CVD III	P15086	
Macrophage colony-stimulating factor 1	CSF-1	INF	P09603	
Cystatin D	CST5	INF	P28325	
Cystatin-B	CSTB	CVD III	P04080	
Chymotrypsin C	CTRC	CVD II	Q99895	
Cathepsin D	CTSD	CVD III	P07339	
Cathepsin L1	CTSL1	CVD II	P07711	
Cathepsin Z	CTSZ	CVD III	Q9UBR2	
Fractalkine	CX3CL1	INF	P78423	
C-X-C motif chemokine 1	CXCL1	CVD II	P09341	
C-X-C motif chemokine 1	CXCL1	INF	P09341	Excluded
C-X-C motif chemokine 10	CXCL10	INF	P02778	
C-X-C motif chemokine 11	CXCL11	INF	O14625	
C-X-C motif chemokine 16	CXCL16	CVD III	Q9H2A7	
C-X-C motif chemokine 5	CXCL5	INF	P42830	
C-X-C motif chemokine 6	CXCL6	INF	P80162	
C-X-C motif chemokine 9	CXCL9	INF	Q07325	
Decorin	DCN	CVD II	P07585	
2,4-dienoyl-CoA reductase, mitochondrial	DECR1	CVD II	Q16698	
Dickkopf-related protein 1	Dkk-1	CVD II	O94907	
Protein delta homolog 1	DLK-1	CVD III	P80370	
Delta and Notch-like epidermal growth factor- related receptor	DNER	INF	Q8NFT8	
Epidermal growth factor receptor	EGFR	CVD III	P00533	
Protein S100-A12	EN-RAGE	INF	P80511	
Epithelial cell adhesion molecule	Ep-CAM	CVD III	P16422	
Ephrin type-B receptor 4	EPHB4	CVD III	P54760	
Fatty acid-binding protein, intestinal	FABP2	CVD II	P12104	
Fatty acid-binding protein, adipocyte	FABP4	CVD III	P15090	
Tumor necrosis factor receptor superfamily member 6	FAS	CVD III	P25445	
Fibroblast growth factor 19	FGF-19	INF	O95750	
Fibroblast growth factor 21	FGF-21	CVD II	Q9NSA1	
Fibroblast growth factor 21	FGF-21	INF	Q9NSA1	Excluded
Fibroblast growth factor 23	FGF-23	CVD II	Q9GZV9	
Fibroblast growth factor 23	FGF-23	INF	Q9GZV9	Excluded
Fibroblast growth factor 5	FGF-5	INF	Q8NF90	
Fms-related tyrosine kinase 3 ligand	Flt3L	INF	P49771	
Follistatin	FS	CVD II	P19883	
Galectin-3	Gal-3	CVD III	P17931	
Galectin-4	Gal-4	CVD III	P56470	
Galectin-9	Gal-9	CVD II	O00182	
Growth/differentiation factor 15	GDF-15	CVD III	Q99988	
Growth/differentiation factor 2	GDF-2	CVD II	Q9UK05	
Glial cell line-derived neurotrophic factor	GDNF	INF	P39905	
Growth hormone	GH	CVD II	P01241	
Gastric intrinsic factor	GIF	CVD II	P27352	
Lactoylglutathione lyase	GLO1	CVD II	Q04760	
Platelet glycoprotein VI	GP6	CVD III	Q9HCN6	Excluded
Granulins	GRN	CVD III	P28799	

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Gastrotropin	GT	CVD II	P51161	
Hydroxyacid oxidase 1	HAOX1	CVD II	Q9UJM8	
Proheparin-binding EGF-like growth factor	HB-EGF	CVD II	Q99075	
Hepatocyte growth factor	HGF	INF	P14210	
Heme oxygenase 1	HO-1	CVD II	P09601	
Osteoclast-associated immunoglobulin-like receptor	hOSCAR	CVD II	Q8IYS5	
Heat shock 27 kDa protein	HSP 27	CVD II	P04792	
Intercellular adhesion molecule 2	ICAM-2	CVD III	P13598	
Alpha-L-iduronidase	IDUA	CVD II	P35475	
Interferon gamma	IFN-gamma	INF	P01579	Excluded
Insulin-like growth factor-binding protein 1	IGFBP-1	CVD III	P08833	
Insulin-like growth factor-binding protein 2	IGFBP-2	CVD III	P18065	
Insulin-like growth factor-binding protein 7	IGFBP-7	CVD III	Q16270	
Low affinity immunoglobulin gamma Fc region receptor II-b	IgG Fc receptor II-b	CVD II	P31994	
Interleukin-1 alpha	IL-1 alpha	INF	P01583	Excluded
Interleukin-10	IL10	INF	P22301	
Interleukin-10 receptor subunit alpha	IL-10RA	INF	Q13651	
Interleukin-10 receptor subunit beta	IL-10RB	INF	Q08334	
Interleukin-12 subunit beta	IL-12B	INF	P29460	
Interleukin-13	IL13	INF	P35225	Excluded
Interleukin-15 receptor subunit alpha	IL-15RA	INF	Q13261	
Pro-interleukin-16	IL16	CVD II	Q14005	
Interleukin-17A	IL-17A	INF	Q16552	
Interleukin-17C	IL-17C	INF	Q9P0M4	
Interleukin-17D	IL-17D	CVD II	Q8TAD2	
Interleukin-17 receptor A	IL-17RA	CVD III	Q96F46	
Interleukin-18	IL18	CVD II	Q14116	
Interleukin-18	IL18	INF	Q14116	Excluded
Interleukin-18-binding protein	IL-18BP	CVD III	Q95998	
Interleukin-18 receptor 1	IL-18R1	INF	Q13478	
Interleukin-1 receptor antagonist protein	IL-1ra	CVD II	P18510	
Interleukin-1 receptor-like 2	IL1RL2	CVD II	Q9HB29	
Interleukin-1 receptor type 1	IL-1RT1	CVD III	P14778	
Interleukin-1 receptor type 2	IL-1RT2	CVD III	P27930	
Interleukin-2	IL2	INF	P60568	Excluded
Interleukin-20	IL-20	INF	Q9NYY1	Excluded
Interleukin-20 receptor subunit alpha	IL-20RA	INF	Q9UHF4	Excluded
Interleukin-22 receptor subunit alpha-1	IL-22 RA1	INF	Q8N6P7	Excluded
Interleukin-24	IL-24	INF	Q13007	Excluded
Interleukin-27	IL-27	CVD II	Q8NEV9,Q14213	
Interleukin-2 receptor subunit alpha	IL2-RA	CVD III	P01589	
Interleukin-2 receptor subunit beta	IL-2RB	INF	P14784	Excluded
Interleukin-33	IL33	INF	Q95760	Excluded
Interleukin-4	IL4	INF	P05112	Excluded
Interleukin-4 receptor subunit alpha	IL-4RA	CVD II	P24394	
Interleukin-5	IL5	INF	P05113	Excluded
Interleukin-6	IL6	CVD II	P05231	
Interleukin-6	IL6	INF	P05231	Excluded
Interleukin-6 receptor subunit alpha	IL-6RA	CVD III	P08887	
Interleukin-7	IL7	INF	P13232	
Interleukin-8	IL8	INF	P10145	
Melusin	ITGB1BP2	CVD II	Q9UKP3	
Integrin beta-2	ITGB2	CVD III	P05107	

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Junctional adhesion molecule A	JAM-A	CVD III	Q9Y624	
Kidney injury molecule 1	KIM1	CVD II	Q96D42	
Kallikrein-6	KLK6	CVD III	Q92876	
Latency-associated peptide transforming growth factor beta 1	LAP TGF-beta-1	INF	P01137	
Low-density lipoprotein receptor	LDL receptor	CVD III	P01130	
Leptin	LEP	CVD II	P41159	
Leukemia inhibitory factor	LIF	INF	P15018	Excluded
Leukemia inhibitory factor receptor	LIF-R	INF	P42702	
Lectin-like oxidized LDL receptor 1	LOX-1	CVD II	P78380	
Lipoprotein lipase	LPL	CVD II	P06858	
Lymphotoxin-beta receptor	LTBR	CVD III	P36941	
Macrophage receptor MARCO	MARCO	CVD II	Q9UEW3	
Myoglobin	MB	CVD III	P02144	
Monocyte chemotactic protein 1	MCP-1	CVD III	P13500	
Monocyte chemotactic protein 1	MCP-1	INF	P13500	Excluded
Monocyte chemotactic protein 2	MCP-2	INF	P80075	
Monocyte chemotactic protein 3	MCP-3	INF	P80098	
Monocyte chemotactic protein 4	MCP-4	INF	Q99616	
Matrix extracellular phosphoglycoprotein	MEPE	CVD III	Q9NQ76	
Tyrosine-protein kinase Mer	MERTK	CVD II	Q12866	
Matrix metalloproteinase-1	MMP-1	INF	P03956	
Matrix metalloproteinase-10	MMP-10	INF	P09238	
Matrix metalloproteinase-12	MMP12	CVD II	P39900	
Matrix metalloproteinase-2	MMP-2	CVD III	P08253	
Matrix metalloproteinase-3	MMP-3	CVD III	P08254	
Matrix metalloproteinase-7	MMP7	CVD II	P09237	
Matrix metalloproteinase-9	MMP-9	CVD III	P14780	
Myeloperoxidase	MPO	CVD III	P05164	
NF-kappa-B essential modulator	NEMO	CVD II	Q9Y6K9	
Neurogenic locus notch homolog protein 3	Notch 3	CVD III	Q9UM47	
Neurturin	NRTN	INF	Q99748	Excluded
Neurotrophin-3	NT-3	INF	P20783	
N-terminal prohormone brain natriuretic peptide	NT-proBNP	CVD III		
Osteoprotegerin	OPG	CVD III	O00300	
Osteoprotegerin	OPG	INF	O00300	Excluded
Osteopontin	OPN	CVD III	P10451	
Oncostatin-M	OSM	INF	P13725	
Plasminogen activator inhibitor 1	PAI	CVD III	P05121	
Pappalysin-1	PAPPA	CVD II	Q13219	
Proteinase-activated receptor 1	PAR-1	CVD II	P25116	
Poly [ADP-ribose] polymerase 1	PARP-1	CVD II	P09874	
Proprotein convertase subtilisin/kexin type 9	PCSK9	CVD III	Q8NBP7	
Platelet-derived growth factor subunit A	PDGF subunit A	CVD III	P04085	
Platelet-derived growth factor subunit B	PDGF subunit B	CVD II	P01127	
Programmed cell death 1 ligand 1	PD-L1	INF	Q9NZQ7	
Programmed cell death 1 ligand 2	PD-L2	CVD II	Q9BQ51	
Platelet endothelial cell adhesion molecule	PECAM-1	CVD III	P16284	
Placenta growth factor	PGF	CVD II	P49763	
Peptidoglycan recognition protein 1	PGLYRP1	CVD III	O75594	
Elafin	PI3	CVD III	P19957	
Polymeric immunoglobulin receptor	PIgR	CVD II	P01833	
Perlecan	PLC	CVD III	P98160	
Paraoxonase	PON3	CVD III	Q15166	

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Prolargin	PRELP	CVD II	P51888	
Serine protease 27	PRSS27	CVD II	Q9BQR3	
Prostasin	PRSS8	CVD II	Q16651	
Myeloblastin	PRTN3	CVD III	P24158	
P-selectin glycoprotein ligand 1	PSGL-1	CVD II	Q14242	
Pulmonary surfactant-associated protein D	PSP-D	CVD III	P35247	
Pentraxin-related protein PTX3	PTX3	CVD II	P26022	
Receptor for advanced glycosylation end products	RAGE	CVD II	Q15109	
Retinoic acid receptor responder protein 2	RARRES2	CVD III	Q99969	
Renin	REN	CVD II	P00797	
Resistin	RETN	CVD III	Q9HD89	
Stem cell factor	SCF	CVD II	P21583	
Stem cell factor	SCF	INF	P21583	Excluded
Secretoglobin family 3A member 2	SCGB3A2	CVD III	Q96PL1	
E-selectin	SELE	CVD III	P16581	
P-selectin	SELP	CVD III	P16109	
Serpin A12	SERPINA12	CVD II	Q8IW75	
Tyrosine-protein phosphatase non-receptor type substrate 1	SHPS-1	CVD III	P78324	
SIR2-like protein 2	SIRT2	INF	Q8IXJ6	
Signaling lymphocytic activation molecule	SLAMF1	INF	Q13291	
SLAM family member 7	SLAMF7	CVD II	Q9NQ25	
Superoxide dismutase [Mn], mitochondrial	SOD2	CVD II	P04179	
Sortilin	SORT1	CVD II	Q99523	
Spondin-1	SPON1	CVD III	Q9HCB6	
Spondin-2	SPON2	CVD II	Q9BUD6	
Proto-oncogene tyrosine-protein kinase Src	SRC	CVD II	P12931	
Sulfotransferase 1A1	ST1A1	INF	P50225	
ST2 protein	ST2	CVD III	Q01638	
STAM-binding protein	STAMPB	INF	Q95630	
Serine/threonine-protein kinase 4	STK4	CVD II	Q13043	
Tissue factor	TF	CVD II	P13726	
Trefoil factor 3	TFF3	CVD III	Q07654	
Tissue factor pathway inhibitor	TFPI	CVD III	P10646	
Transforming growth factor alpha	TGF-alpha	INF	P01135	
Protein-glutamine gamma-glutamyltransferase 2	TGM2	CVD II	P21980	
Thrombospondin-2	THBS2	CVD II	P35442	
Thrombopoietin	THPO	CVD II	P40225	
Angiopoietin-1 receptor	TIE2	CVD II	Q02763	
Metalloproteinase inhibitor 4	TIMP4	CVD III	Q99727	
Trem-like transcript 2 protein	TLT-2	CVD III	Q5T2D2	
Thrombomodulin TM	TM	CVD II	P07204	
Tumor necrosis factor	TNF	INF	P01375	Excluded
TNF-beta	TNFB	INF	P01374	
Tumor necrosis factor receptor 1	TNF-R1	CVD III	P19438	
Tumor necrosis factor receptor 2	TNF-R2	CVD III	P20333	
Tumor necrosis factor receptor superfamily member 10A	TNFRSF10A	CVD II	O00220	
Tumor necrosis factor receptor superfamily member 10C	TNFRSF10C	CVD III	O14798	
Tumor necrosis factor receptor superfamily member 11A	TNFRSF11A	CVD II	Q9Y6Q6	
Tumor necrosis factor receptor superfamily member 13B	TNFRSF13B	CVD II	O14836	
Tumor necrosis factor receptor superfamily member 14	TNFRSF14	CVD III	Q92956	
Tumor necrosis factor receptor superfamily member 9	TNFRSF9	INF	Q07011	
Tumor necrosis factor ligand superfamily member 13B	TNFSF13B	CVD III	Q9Y275	
Tumor necrosis factor ligand superfamily member 14	TNFSF14	INF	O43557	

<b>Protein full name</b>	<b>Entry name</b>	<b>Olink® Panel</b>	<b>Uniprot ID</b>	<b>Biomarker excluded from the analysis ?</b>
Tissue-type plasminogen activator	t-PA	CVD III	P00750	
Transferrin receptor protein 1	TR	CVD III	P02786	
TNF-related apoptosis-inducing ligand	TRAIL	INF	P50591	
TNF-related apoptosis-inducing ligand receptor 2	TRAIL-R2	CVD II	O14763	
TNF-related activation-induced cytokine	TRANCE	INF	O14788	
Tartrate-resistant acid phosphatase type 5	TR-AP	CVD III	P13686	
Thymic stromal lymphopoietin	TSLP	INF	Q969D9	Excluded
Tumor necrosis factor	TWEAK	INF	O43508	
Urokinase-type plasminogen activator	uPA	CVD III	P00749	
Urokinase-type plasminogen activator	uPA	INF	P00749	Excluded
Urokinase plasminogen activator surface receptor	U-PAR	CVD III	Q03405	
Vascular endothelial growth factor A	VEGFA	INF	P15692	
Vascular endothelial growth factor D	VEGFD	CVD II	O43915	
V-set and immunoglobulin domain-containing protein 2	VSIG2	CVD II	Q96IQ7	
von Willebrand factor	vWF	CVD III	P04275	
Lymphotactin	XCL1	CVD II	P47992	

**Supplemental Table 2: Association between each biomarker with incident heart failure in logistic regression model adjusted for the matching and clinical variables and correction for multiple comparisons in each cohort**

Biomarker	ARIC			FRAMINGHAM			HOMAGE		
	OR (CI 95%)	Original p-value	BH adjusted p-value	OR (CI 95%)	Original p-value	BH adjusted p-value	OR (CI 95%)	Original p-value	BH adjusted p-value
4E-BP1	0.66 (0.50 - 0.87)	0.003	0.020	1.86 (1.31 - 2.63)	0.0004	0.013	1.14 (1.04 - 1.26)	0.007	0.021
ACE2	1.41 (1.03 - 1.93)	0.034	0.10	1.89 (1.28 - 2.80)	0.001	0.028	1.47 (1.22 - 1.76)	<0.0001	0.0003
ADA	0.61 (0.37 - 1.02)	0.059	0.15	1.11 (0.61 - 2.00)	0.73	0.87	1.02 (0.83 - 1.24)	0.85	0.87
ADAM-TS13	0.93 (0.28 - 3.08)	0.91	0.94	0.86 (0.18 - 4.13)	0.85	0.92	1.31 (0.87 - 1.99)	0.20	0.27
ADM	3.59 (2.01 - 6.43)	<0.0001	0.0008	1.59 (0.85 - 2.98)	0.14	0.36	1.67 (1.31 - 2.14)	<0.0001	0.0004
AGRP	1.78 (1.12 - 2.82)	0.014	0.052	1.22 (0.68 - 2.19)	0.50	0.73	1.56 (1.24 - 1.97)	0.0001	0.001
ALCAM	0.91 (0.41 - 2.00)	0.80	0.86	1.13 (0.48 - 2.69)	0.77	0.89	1.23 (0.96 - 1.58)	0.10	0.17
AMBP	2.20 (0.73 - 6.58)	0.15	0.31	1.63 (0.42 - 6.29)	0.47	0.71	1.62 (1.05 - 2.50)	0.030	0.059
ANG-1	0.69 (0.56 - 0.85)	0.0005	0.006	1.03 (0.84 - 1.26)	0.80	0.90	1.09 (0.98 - 1.20)	0.10	0.16
AP-N	1.27 (0.68 - 2.35)	0.45	0.59	0.93 (0.43 - 2.00)	0.85	0.92	1.15 (0.88 - 1.50)	0.30	0.37
AXIN1	0.67 (0.53 - 0.84)	0.0005	0.006	1.03 (0.77 - 1.37)	0.85	0.92	1.06 (0.96 - 1.16)	0.23	0.30
AXL	0.88 (0.47 - 1.67)	0.69	0.79	1.01 (0.55 - 1.86)	0.96	0.97	1.16 (0.92 - 1.46)	0.19	0.27
AZU1	1.25 (0.83 - 1.89)	0.29	0.44	1.19 (0.76 - 1.87)	0.43	0.68	1.08 (0.95 - 1.24)	0.23	0.30
Beta-NGF	0.69 (0.36 - 1.32)	0.26	0.43	1.01 (0.44 - 2.32)	0.98	0.98	1.25 (0.95 - 1.64)	0.11	0.17
BLM hydrolase	0.55 (0.31 - 0.98)	0.042	0.12	0.78 (0.41 - 1.50)	0.46	0.71	1.15 (0.91 - 1.44)	0.23	0.30
BMP-6	0.91 (0.62 - 1.32)	0.61	0.73	1.63 (0.87 - 3.04)	0.12	0.33	1.12 (0.98 - 1.29)	0.095	0.15
BNP	1.65 (1.40 - 1.93)	<0.0001	<0.0001	1.88 (1.42 - 2.48)	<0.0001	0.0009	1.66 (1.50 - 1.85)	<0.0001	<0.0001
BOC	2.80 (1.19 - 6.60)	0.018	0.062	0.81 (0.34 - 1.93)	0.64	0.82	1.29 (0.99 - 1.68)	0.060	0.10
CA5A	1.02 (0.82 - 1.27)	0.88	0.92	1.36 (0.97 - 1.90)	0.072	0.25	0.98 (0.86 - 1.11)	0.70	0.75
CASP-3	0.66 (0.53 - 0.81)	<0.0001	0.002	1.11 (0.84 - 1.46)	0.46	0.71	1.08 (0.99 - 1.18)	0.070	0.12
CASP-8	0.64 (0.45 - 0.91)	0.012	0.049	1.49 (0.83 - 2.68)	0.18	0.40	1.22 (1.10 - 1.36)	0.0002	0.001
CCL11	0.90 (0.56 - 1.45)	0.66	0.76	1.50 (0.88 - 2.58)	0.13	0.35	1.40 (1.13 - 1.75)	0.002	0.008
CCL15	0.97 (0.67 - 1.39)	0.85	0.90	1.40 (0.85 - 2.31)	0.19	0.41	1.30 (1.08 - 1.57)	0.006	0.017
CCL16	0.75 (0.55 - 1.02)	0.070	0.17	1.30 (0.85 - 1.98)	0.22	0.44	1.47 (1.24 - 1.73)	<0.0001	0.0001
CCL17	0.72 (0.60 - 0.88)	0.0009	0.009	1.18 (0.88 - 1.57)	0.26	0.50	1.16 (1.05 - 1.29)	0.004	0.015
CCL19	1.44 (1.13 - 1.82)	0.002	0.018	1.25 (0.96 - 1.62)	0.099	0.30	1.12 (1.00 - 1.26)	0.052	0.095
CCL20	1.05 (0.88 - 1.25)	0.59	0.71	1.03 (0.84 - 1.26)	0.75	0.89	1.12 (1.02 - 1.23)	0.021	0.047
CCL23	1.33 (0.89 - 1.99)	0.15	0.31	1.20 (0.73 - 1.98)	0.47	0.71	1.29 (1.04 - 1.60)	0.022	0.049
CCL24	1.01 (0.82 - 1.26)	0.90	0.94	1.09 (0.87 - 1.36)	0.47	0.71	1.00 (0.89 - 1.12)	0.97	0.97



Biomarker	ARIC			FRAMINGHAM			HOMAGE		
	OR (CI 95%)	Original p-value	BH adjusted p-value	OR (CI 95%)	Original p-value	BH adjusted p-value	OR (CI 95%)	Original p-value	BH adjusted p-value
CCL25	1.26 (0.86 - 1.86)	0.23	0.40	1.42 (0.94 - 2.14)	0.093	0.29	1.16 (0.95 - 1.41)	0.14	0.21
CCL28	0.89 (0.53 - 1.52)	0.67	0.77	1.39 (0.75 - 2.60)	0.29	0.52	1.12 (0.92 - 1.36)	0.27	0.33
CCL3	0.85 (0.64 - 1.12)	0.24	0.40	1.40 (0.95 - 2.05)	0.087	0.28	1.05 (0.94 - 1.18)	0.39	0.47
CCL4	0.81 (0.60 - 1.10)	0.17	0.33	1.37 (0.99 - 1.90)	0.055	0.22	1.07 (0.93 - 1.24)	0.33	0.40
CD163	1.17 (0.76 - 1.79)	0.46	0.60	1.22 (0.76 - 1.94)	0.40	0.66	1.19 (1.00 - 1.43)	0.054	0.098
CD244	0.65 (0.38 - 1.11)	0.11	0.24	1.32 (0.66 - 2.63)	0.43	0.68	1.04 (0.82 - 1.32)	0.72	0.77
CD4	1.93 (1.01 - 3.67)	0.045	0.12	1.38 (0.71 - 2.66)	0.34	0.58	1.65 (1.28 - 2.13)	0.0001	0.0009
CD40	1.49 (0.86 - 2.58)	0.15	0.31	2.62 (1.33 - 5.16)	0.005	0.064	1.45 (1.16 - 1.81)	0.001	0.004
CD40-L	0.65 (0.52 - 0.82)	0.0002	0.004	1.06 (0.78 - 1.45)	0.70	0.86	1.10 (1.01 - 1.19)	0.029	0.059
CD5	1.40 (0.92 - 2.14)	0.11	0.24	0.96 (0.53 - 1.72)	0.87	0.92	1.09 (0.88 - 1.36)	0.41	0.48
CD6	1.25 (0.89 - 1.76)	0.20	0.37	0.82 (0.50 - 1.35)	0.43	0.68	0.99 (0.83 - 1.19)	0.94	0.94
CD84	0.52 (0.33 - 0.82)	0.004	0.024	0.70 (0.37 - 1.33)	0.27	0.51	1.23 (0.97 - 1.56)	0.085	0.13
CD93	2.39 (1.29 - 4.43)	0.005	0.027	1.22 (0.57 - 2.65)	0.60	0.81	1.42 (1.06 - 1.89)	0.018	0.043
CDCP1	0.78 (0.57 - 1.07)	0.12	0.26	1.42 (0.96 - 2.09)	0.079	0.27	1.11 (0.94 - 1.31)	0.21	0.28
CDH5	0.85 (0.48 - 1.50)	0.58	0.69	1.23 (0.64 - 2.37)	0.52	0.75	1.04 (0.84 - 1.29)	0.74	0.78
CEACAM8	1.82 (1.26 - 2.64)	0.001	0.013	1.98 (1.17 - 3.33)	0.010	0.095	1.41 (1.20 - 1.66)	<0.0001	0.0003
CHI3L1	1.12 (0.92 - 1.38)	0.26	0.43	0.99 (0.77 - 1.26)	0.91	0.94	1.17 (1.03 - 1.32)	0.012	0.031
CHIT1	0.94 (0.83 - 1.05)	0.26	0.43	0.98 (0.82 - 1.18)	0.85	0.92	1.06 (0.98 - 1.15)	0.12	0.18
CNTN1	0.55 (0.29 - 1.06)	0.072	0.17	0.75 (0.40 - 1.39)	0.35	0.59	0.85 (0.67 - 1.07)	0.16	0.23
COL1A1	0.99 (0.60 - 1.63)	0.96	0.96	0.84 (0.47 - 1.48)	0.53	0.75	1.09 (0.86 - 1.38)	0.46	0.54
CPA1	1.03 (0.82 - 1.31)	0.78	0.84	1.18 (0.91 - 1.54)	0.21	0.44	1.03 (0.90 - 1.18)	0.65	0.70
CPB1	1.09 (0.85 - 1.39)	0.51	0.65	1.20 (0.90 - 1.60)	0.20	0.43	1.12 (0.97 - 1.29)	0.12	0.19
CSF-1	2.54 (0.94 - 6.87)	0.065	0.16	2.62 (0.95 - 7.20)	0.062	0.23	1.42 (1.02 - 1.98)	0.038	0.071
CST5	0.59 (0.42 - 0.85)	0.004	0.023	0.96 (0.59 - 1.58)	0.87	0.92	1.05 (0.86 - 1.28)	0.61	0.67
CSTB	0.86 (0.58 - 1.27)	0.44	0.58	2.18 (1.22 - 3.91)	0.008	0.090	1.44 (1.22 - 1.69)	<0.0001	0.0002
CTRC	1.15 (0.91 - 1.44)	0.24	0.40	0.95 (0.73 - 1.23)	0.67	0.84	0.97 (0.85 - 1.11)	0.63	0.69
CTSD	1.19 (0.78 - 1.82)	0.40	0.56	1.38 (0.82 - 2.33)	0.22	0.45	1.02 (0.83 - 1.26)	0.82	0.84
CTSL1	1.77 (1.00 - 3.14)	0.049	0.13	1.50 (0.77 - 2.94)	0.23	0.46	1.33 (1.03 - 1.71)	0.026	0.054
CTSZ	1.33 (0.79 - 2.26)	0.28	0.43	1.84 (0.99 - 3.41)	0.052	0.22	1.31 (1.04 - 1.66)	0.021	0.047
CX3CL1	0.73 (0.44 - 1.23)	0.24	0.40	0.63 (0.35 - 1.12)	0.11	0.31	1.16 (0.93 - 1.45)	0.17	0.24
CXCL1	0.68 (0.55 - 0.82)	<0.0001	0.002	1.05 (0.85 - 1.29)	0.64	0.82	1.04 (0.93 - 1.16)	0.52	0.59
CXCL10	1.11 (0.89 - 1.39)	0.34	0.48	1.36 (1.02 - 1.82)	0.037	0.20	1.18 (1.04 - 1.34)	0.012	0.031
CXCL11	0.81 (0.64 - 1.02)	0.075	0.18	1.19 (0.88 - 1.60)	0.25	0.49	1.24 (1.11 - 1.38)	<0.0001	0.0007
CXCL16	0.80 (0.45 - 1.43)	0.45	0.59	3.42 (1.39 - 8.41)	0.007	0.083	1.40 (1.07 - 1.82)	0.012	0.031

Biomarker	ARIC			FRAMINGHAM			HOMAGE		
	OR (CI 95%)	Original p-value	BH adjusted p-value	OR (CI 95%)	Original p-value	BH adjusted p-value	OR (CI 95%)	Original p-value	BH adjusted p-value
CXCL5	0.74 (0.64 - 0.85)	<0.0001	0.0008	1.05 (0.88 - 1.24)	0.61	0.81	1.02 (0.95 - 1.09)	0.64	0.69
CXCL6	0.79 (0.61 - 1.03)	0.081	0.19	1.01 (0.75 - 1.36)	0.95	0.97	1.10 (0.97 - 1.25)	0.13	0.19
CXCL9	1.30 (1.02 - 1.66)	0.036	0.11	1.37 (1.00 - 1.88)	0.053	0.22	1.30 (1.12 - 1.50)	0.0004	0.002
DCN	1.26 (0.70 - 2.27)	0.43	0.58	0.92 (0.44 - 1.94)	0.82	0.92	1.22 (0.95 - 1.57)	0.11	0.17
DECR1	0.72 (0.55 - 0.93)	0.011	0.048	1.08 (0.87 - 1.33)	0.51	0.73	1.10 (1.01 - 1.19)	0.021	0.047
Dkk-1	0.50 (0.33 - 0.77)	0.001	0.013	0.84 (0.58 - 1.21)	0.34	0.58	1.21 (1.03 - 1.43)	0.022	0.049
DLK-1	0.93 (0.66 - 1.32)	0.69	0.78	0.82 (0.55 - 1.22)	0.32	0.57	0.92 (0.77 - 1.09)	0.32	0.40
DNER	0.27 (0.13 - 0.58)	0.0007	0.008	0.43 (0.16 - 1.12)	0.083	0.28	0.73 (0.55 - 0.96)	0.025	0.053
EGFR	0.31 (0.13 - 0.77)	0.011	0.048	0.67 (0.24 - 1.91)	0.45	0.70	0.87 (0.65 - 1.17)	0.34	0.42
EN-RAGE	1.21 (0.92 - 1.60)	0.17	0.33	1.56 (1.08 - 2.26)	0.017	0.13	1.30 (1.14 - 1.49)	0.0001	0.0009
Ep-CAM	0.85 (0.70 - 1.04)	0.11	0.24	1.05 (0.83 - 1.32)	0.69	0.86	0.98 (0.88 - 1.09)	0.72	0.77
EPHB4	1.30 (0.71 - 2.38)	0.39	0.55	1.68 (0.74 - 3.78)	0.21	0.43	1.39 (1.08 - 1.80)	0.011	0.030
FABP2	1.13 (0.85 - 1.51)	0.40	0.55	1.20 (0.87 - 1.63)	0.26	0.49	1.19 (1.02 - 1.39)	0.029	0.059
FABP4	1.09 (0.76 - 1.55)	0.64	0.74	1.54 (1.01 - 2.36)	0.046	0.21	1.44 (1.22 - 1.70)	<0.0001	0.0001
FAS	1.29 (0.83 - 2.00)	0.25	0.42	1.63 (0.80 - 3.32)	0.18	0.40	1.45 (1.13 - 1.85)	0.003	0.010
FGF-19	0.86 (0.69 - 1.05)	0.14	0.29	1.08 (0.83 - 1.40)	0.57	0.79	1.05 (0.93 - 1.19)	0.41	0.48
FGF-21	1.24 (1.04 - 1.47)	0.014	0.052	1.06 (0.89 - 1.26)	0.53	0.75	1.07 (0.98 - 1.16)	0.13	0.19
FGF-23	1.58 (1.13 - 2.21)	0.007	0.033	1.67 (1.02 - 2.72)	0.041	0.20	1.53 (1.30 - 1.80)	<0.0001	<0.0001
FGF-5	1.56 (0.51 - 4.79)	0.43	0.58	0.81 (0.43 - 1.50)	0.49	0.73	1.06 (0.77 - 1.45)	0.72	0.77
Flt3L	0.90 (0.60 - 1.37)	0.63	0.74	1.05 (0.64 - 1.72)	0.84	0.92	1.09 (0.87 - 1.36)	0.47	0.55
FS	1.52 (0.94 - 2.47)	0.089	0.20	1.25 (0.78 - 2.01)	0.35	0.59	1.31 (1.04 - 1.65)	0.020	0.046
Gal-3	0.62 (0.35 - 1.10)	0.10	0.22	1.66 (0.83 - 3.32)	0.14	0.36	1.28 (1.05 - 1.57)	0.015	0.037
Gal-4	1.47 (1.00 - 2.15)	0.048	0.13	2.46 (1.51 - 4.00)	0.0002	0.010	1.45 (1.19 - 1.77)	0.0002	0.001
Gal-9	2.71 (1.36 - 5.38)	0.004	0.024	4.40 (1.73 - 11.20)	0.001	0.035	2.30 (1.69 - 3.14)	<0.0001	<0.0001
GDF-15	1.62 (1.10 - 2.39)	0.014	0.052	3.53 (2.05 - 6.09)	<0.0001	0.0006	2.00 (1.61 - 2.48)	<0.0001	<0.0001
GDF-2	0.93 (0.57 - 1.53)	0.78	0.84	0.52 (0.28 - 0.97)	0.039	0.20	1.06 (0.90 - 1.24)	0.49	0.56
GDNF	0.82 (0.54 - 1.24)	0.34	0.49	1.58 (0.84 - 2.99)	0.15	0.36	1.05 (0.83 - 1.33)	0.68	0.73
GH	1.05 (0.93 - 1.19)	0.41	0.56	1.12 (0.98 - 1.28)	0.085	0.28	1.04 (0.97 - 1.12)	0.22	0.29
GIF	1.10 (0.93 - 1.30)	0.27	0.43	1.04 (0.82 - 1.31)	0.74	0.88	1.01 (0.91 - 1.11)	0.91	0.91
GLO1	0.68 (0.49 - 0.94)	0.020	0.068	1.54 (0.98 - 2.40)	0.059	0.22	1.07 (0.92 - 1.24)	0.40	0.48
GRN	1.23 (0.72 - 2.10)	0.44	0.58	0.99 (0.47 - 2.11)	0.98	0.98	1.49 (1.10 - 2.02)	0.009	0.025
GT	0.95 (0.70 - 1.29)	0.74	0.82	0.97 (0.69 - 1.37)	0.87	0.92	1.19 (1.02 - 1.39)	0.023	0.049
HAOX1	1.05 (0.91 - 1.22)	0.50	0.64	1.12 (0.95 - 1.33)	0.18	0.40	0.95 (0.86 - 1.04)	0.23	0.30
HB-EGF	0.51 (0.35 - 0.73)	0.0002	0.004	0.95 (0.54 - 1.66)	0.84	0.92	1.29 (1.04 - 1.59)	0.021	0.047

Biomarker	ARIC			FRAMINGHAM			HOMAGE		
	OR (CI 95%)	Original p-value	BH adjusted p-value	OR (CI 95%)	Original p-value	BH adjusted p-value	OR (CI 95%)	Original p-value	BH adjusted p-value
HGF	2.12 (1.25 - 3.61)	0.005	0.027	3.84 (2.00 - 7.40)	<0.0001	0.003	1.61 (1.28 - 2.03)	<0.0001	0.0004
HO-1	0.70 (0.40 - 1.21)	0.20	0.37	0.83 (0.49 - 1.42)	0.49	0.73	1.22 (0.96 - 1.57)	0.10	0.17
hOSCAR	1.53 (0.66 - 3.58)	0.32	0.46	1.26 (0.50 - 3.14)	0.62	0.82	1.63 (1.13 - 2.35)	0.009	0.025
HSP 27	0.27 (0.13 - 0.55)	0.0002	0.004	1.06 (0.68 - 1.65)	0.78	0.89	1.44 (1.15 - 1.81)	0.001	0.006
ICAM-2	0.92 (0.55 - 1.53)	0.75	0.82	1.08 (0.60 - 1.94)	0.80	0.90	1.37 (1.09 - 1.73)	0.007	0.021
IDUA	1.24 (0.84 - 1.82)	0.27	0.43	1.07 (0.70 - 1.63)	0.75	0.89	1.10 (0.91 - 1.32)	0.33	0.40
IGFBP-1	1.18 (0.94 - 1.49)	0.15	0.30	1.14 (0.90 - 1.44)	0.29	0.52	1.34 (1.19 - 1.52)	<0.0001	<0.0001
IGFBP-2	1.53 (1.10 - 2.11)	0.010	0.046	1.34 (0.94 - 1.93)	0.10	0.30	1.51 (1.26 - 1.82)	<0.0001	0.0001
IGFBP-7	1.38 (0.86 - 2.21)	0.17	0.33	3.25 (1.54 - 6.86)	0.001	0.035	1.45 (1.17 - 1.79)	0.0006	0.003
IgG Fc receptor II-b	1.07 (0.82 - 1.38)	0.62	0.73	1.05 (0.80 - 1.39)	0.71	0.86	1.19 (0.98 - 1.45)	0.071	0.12
IL10	1.38 (0.95 - 2.00)	0.093	0.21	1.43 (0.94 - 2.16)	0.092	0.29	1.11 (0.95 - 1.30)	0.17	0.24
IL-10RA	0.72 (0.52 - 1.01)	0.055	0.14	0.93 (0.70 - 1.24)	0.63	0.82	1.09 (0.78 - 1.51)	0.62	0.69
IL-10RB	1.92 (1.00 - 3.67)	0.048	0.13	1.60 (0.72 - 3.52)	0.24	0.47	1.19 (0.91 - 1.55)	0.20	0.27
IL-12B	1.20 (0.90 - 1.60)	0.21	0.38	1.26 (0.88 - 1.81)	0.20	0.42	1.20 (1.02 - 1.41)	0.024	0.052
IL-15RA	1.72 (0.33 - 8.95)	0.52	0.65	2.45 (0.88 - 6.83)	0.086	0.28	1.59 (1.17 - 2.16)	0.003	0.010
IL16	1.46 (0.97 - 2.20)	0.071	0.17	0.92 (0.59 - 1.45)	0.72	0.87	1.36 (1.13 - 1.63)	0.001	0.005
IL-17A	1.10 (0.79 - 1.54)	0.56	0.68	0.98 (0.69 - 1.41)	0.93	0.96	1.09 (0.88 - 1.35)	0.41	0.48
IL-17C	1.36 (1.01 - 1.84)	0.042	0.12	0.94 (0.65 - 1.37)	0.76	0.89	1.19 (0.98 - 1.44)	0.083	0.13
IL-17D	1.13 (0.57 - 2.25)	0.71	0.79	0.55 (0.24 - 1.22)	0.14	0.35	1.31 (1.00 - 1.72)	0.052	0.095
IL-17RA	0.89 (0.62 - 1.28)	0.54	0.66	1.34 (0.86 - 2.09)	0.20	0.42	1.06 (0.89 - 1.25)	0.51	0.58
IL18	1.25 (0.87 - 1.81)	0.23	0.40	1.30 (0.88 - 1.92)	0.18	0.40	1.20 (1.05 - 1.37)	0.006	0.018
IL-18BP	1.26 (0.74 - 2.16)	0.39	0.54	1.67 (0.85 - 3.26)	0.13	0.35	1.36 (1.09 - 1.69)	0.005	0.017
IL-18R1	0.89 (0.54 - 1.46)	0.64	0.74	1.58 (0.91 - 2.74)	0.10	0.30	1.10 (0.86 - 1.40)	0.45	0.52
IL-1ra	1.31 (0.93 - 1.83)	0.11	0.24	1.09 (0.76 - 1.54)	0.64	0.82	1.23 (1.08 - 1.41)	0.001	0.006
IL1RL2	0.60 (0.37 - 0.98)	0.043	0.12	0.82 (0.49 - 1.38)	0.45	0.70	1.06 (0.86 - 1.33)	0.57	0.63
IL-1RT1	1.44 (0.82 - 2.53)	0.19	0.37	2.13 (0.99 - 4.57)	0.053	0.22	1.23 (0.95 - 1.58)	0.11	0.17
IL-1RT2	0.86 (0.51 - 1.46)	0.57	0.69	1.75 (0.90 - 3.40)	0.096	0.30	1.03 (0.83 - 1.27)	0.81	0.84
IL-27	2.14 (1.29 - 3.53)	0.003	0.020	1.45 (0.87 - 2.43)	0.15	0.36	1.63 (1.25 - 2.13)	0.0003	0.001
IL2-RA	1.74 (1.14 - 2.65)	0.010	0.046	1.63 (1.00 - 2.65)	0.049	0.22	1.47 (1.20 - 1.80)	0.0002	0.001
IL-4RA	2.31 (1.32 - 4.04)	0.003	0.020	1.58 (0.74 - 3.35)	0.23	0.46	1.40 (1.13 - 1.73)	0.001	0.007
IL6	1.42 (1.13 - 1.79)	0.003	0.020	1.40 (1.08 - 1.82)	0.011	0.095	1.24 (1.10 - 1.40)	0.0005	0.002
IL-6RA	1.32 (0.79 - 2.19)	0.29	0.44	1.27 (0.71 - 2.27)	0.41	0.67	1.42 (1.12 - 1.80)	0.003	0.011
IL7	0.65 (0.46 - 0.94)	0.020	0.067	0.96 (0.64 - 1.44)	0.84	0.92	1.08 (0.94 - 1.25)	0.28	0.35
IL8	0.96 (0.74 - 1.24)	0.74	0.82	1.78 (1.15 - 2.76)	0.009	0.095	1.15 (1.01 - 1.31)	0.029	0.059

Biomarker	ARIC			FRAMINGHAM			HOMAGE		
	OR (CI 95%)	Original p-value	BH adjusted p-value	OR (CI 95%)	Original p-value	BH adjusted p-value	OR (CI 95%)	Original p-value	BH adjusted p-value
ITGB1BP2	0.71 (0.59 - 0.86)	0.0002	0.004	1.14 (0.82 - 1.60)	0.43	0.68	1.05 (0.98 - 1.13)	0.15	0.22
ITGB2	1.02 (0.59 - 1.76)	0.93	0.95	1.55 (0.82 - 2.95)	0.17	0.40	1.19 (0.97 - 1.47)	0.096	0.15
JAM-A	0.52 (0.34 - 0.78)	0.001	0.014	1.92 (1.16 - 3.20)	0.011	0.095	1.21 (1.05 - 1.38)	0.007	0.020
KIM1	1.11 (0.88 - 1.40)	0.39	0.54	1.56 (1.13 - 2.15)	0.006	0.081	1.28 (1.12 - 1.48)	0.0004	0.002
KLK6	1.00 (0.60 - 1.67)	0.99	0.99	0.56 (0.27 - 1.14)	0.10	0.30	0.92 (0.75 - 1.14)	0.45	0.53
LAP TGF-beta-1	0.83 (0.46 - 1.48)	0.52	0.65	2.11 (1.04 - 4.28)	0.037	0.20	1.33 (1.09 - 1.63)	0.005	0.016
LDL receptor	0.76 (0.50 - 1.13)	0.17	0.33	0.88 (0.55 - 1.42)	0.60	0.81	0.88 (0.74 - 1.04)	0.13	0.19
LEP	0.76 (0.59 - 0.99)	0.039	0.11	0.92 (0.67 - 1.27)	0.62	0.82	1.02 (0.89 - 1.17)	0.75	0.78
LIF-R	2.04 (0.91 - 4.57)	0.082	0.19	1.80 (0.71 - 4.56)	0.21	0.44	1.21 (0.91 - 1.60)	0.19	0.26
LOX-1	2.19 (1.34 - 3.59)	0.001	0.014	1.61 (0.98 - 2.63)	0.057	0.22	1.39 (1.18 - 1.65)	0.0001	0.0009
LPL	0.76 (0.45 - 1.28)	0.29	0.44	0.57 (0.32 - 1.02)	0.060	0.22	1.02 (0.81 - 1.27)	0.89	0.90
LTBR	1.66 (0.93 - 2.94)	0.084	0.19	1.66 (0.79 - 3.48)	0.18	0.40	1.45 (1.14 - 1.85)	0.002	0.008
MARCO	1.04 (0.44 - 2.46)	0.92	0.94	1.05 (0.38 - 2.86)	0.93	0.96	1.02 (0.84 - 1.25)	0.82	0.84
MB	0.65 (0.46 - 0.91)	0.012	0.049	1.62 (1.02 - 2.57)	0.041	0.20	0.94 (0.79 - 1.12)	0.48	0.55
MCP-1	1.03 (0.59 - 1.79)	0.91	0.94	1.47 (0.77 - 2.82)	0.24	0.47	1.20 (1.03 - 1.40)	0.019	0.043
MCP-2	0.69 (0.50 - 0.96)	0.029	0.093	1.47 (1.00 - 2.15)	0.047	0.21	1.20 (1.02 - 1.41)	0.030	0.059
MCP-3	0.94 (0.70 - 1.26)	0.67	0.77	1.51 (1.08 - 2.13)	0.017	0.13	1.36 (1.13 - 1.64)	0.0009	0.004
MCP-4	0.65 (0.48 - 0.88)	0.006	0.028	1.21 (0.82 - 1.78)	0.32	0.57	1.02 (0.87 - 1.20)	0.76	0.79
MEPE	0.62 (0.39 - 0.99)	0.044	0.12	0.76 (0.40 - 1.44)	0.39	0.65	0.88 (0.72 - 1.08)	0.23	0.30
MERTK	1.10 (0.68 - 1.78)	0.70	0.79	1.04 (0.60 - 1.83)	0.88	0.92	1.44 (1.11 - 1.86)	0.006	0.017
MMP-1	0.97 (0.80 - 1.19)	0.78	0.84	1.13 (0.88 - 1.46)	0.33	0.58	1.09 (0.99 - 1.19)	0.076	0.13
MMP-10	1.21 (0.85 - 1.72)	0.29	0.44	1.11 (0.74 - 1.66)	0.61	0.81	1.04 (0.88 - 1.23)	0.63	0.69
MMP12	1.79 (1.31 - 2.45)	0.0002	0.004	1.47 (1.03 - 2.11)	0.035	0.20	1.36 (1.14 - 1.61)	0.0005	0.002
MMP-2	2.09 (1.17 - 3.75)	0.013	0.051	1.27 (0.59 - 2.71)	0.53	0.75	1.56 (1.23 - 1.97)	0.0002	0.001
MMP-3	0.83 (0.59 - 1.16)	0.27	0.43	0.87 (0.57 - 1.35)	0.54	0.75	1.26 (1.07 - 1.49)	0.005	0.016
MMP7	1.52 (0.81 - 2.87)	0.19	0.35	1.83 (1.07 - 3.13)	0.026	0.17	1.10 (0.98 - 1.22)	0.094	0.15
MMP-9	1.10 (0.82 - 1.48)	0.53	0.66	1.97 (1.36 - 2.84)	0.0003	0.010	1.16 (1.04 - 1.31)	0.010	0.026
MPO	1.60 (0.93 - 2.76)	0.090	0.20	2.13 (1.19 - 3.84)	0.011	0.095	1.28 (1.05 - 1.55)	0.013	0.032
NEMO	0.70 (0.56 - 0.89)	0.003	0.020	1.02 (0.78 - 1.35)	0.86	0.92	1.11 (1.01 - 1.22)	0.034	0.066
Notch 3	1.03 (0.63 - 1.67)	0.91	0.94	1.63 (0.83 - 3.22)	0.15	0.36	1.22 (0.97 - 1.54)	0.083	0.13
NT-3	0.80 (0.51 - 1.25)	0.32	0.46	0.78 (0.41 - 1.49)	0.45	0.70	1.13 (0.93 - 1.37)	0.21	0.28
NT-proBNP	1.95 (1.61 - 2.36)	<0.0001	<0.0001	1.79 (1.41 - 2.26)	<0.0001	0.0003	1.90 (1.65 - 2.18)	<0.0001	<0.0001
OPG	1.30 (0.77 - 2.18)	0.32	0.46	2.17 (1.12 - 4.20)	0.021	0.15	1.72 (1.32 - 2.25)	<0.0001	0.0005
OPN	1.21 (0.85 - 1.72)	0.29	0.44	1.23 (0.79 - 1.91)	0.35	0.59	1.57 (1.28 - 1.92)	<0.0001	0.0001

Biomarker	ARIC			FRAMINGHAM			HOMAGE		
	OR (CI 95%)	Original p-value	BH adjusted p-value	OR (CI 95%)	Original p-value	BH adjusted p-value	OR (CI 95%)	Original p-value	BH adjusted p-value
OSM	1.16 (0.91 - 1.49)	0.24	0.40	1.86 (1.36 - 2.55)	0.0001	0.005	1.17 (1.03 - 1.32)	0.015	0.036
PAI	0.70 (0.55 - 0.90)	0.004	0.024	1.14 (0.88 - 1.46)	0.31	0.56	1.04 (0.92 - 1.18)	0.53	0.60
PAPPA	0.99 (0.70 - 1.39)	0.94	0.95	1.07 (0.74 - 1.55)	0.72	0.87	1.27 (1.06 - 1.54)	0.011	0.029
PAR-1	0.52 (0.29 - 0.94)	0.031	0.099	1.20 (0.62 - 2.34)	0.58	0.80	1.54 (1.21 - 1.97)	0.0005	0.002
PARP-1	0.85 (0.59 - 1.21)	0.35	0.50	1.15 (0.73 - 1.81)	0.55	0.76	1.15 (1.03 - 1.28)	0.011	0.029
PCSK9	0.53 (0.29 - 0.96)	0.035	0.11	0.93 (0.47 - 1.82)	0.83	0.92	1.18 (0.94 - 1.48)	0.15	0.21
PDGF subunit A	0.57 (0.43 - 0.76)	0.0001	0.002	1.28 (0.92 - 1.79)	0.13	0.35	1.09 (0.97 - 1.22)	0.14	0.21
PDGF subunit B	0.68 (0.57 - 0.82)	<0.0001	0.002	1.05 (0.87 - 1.27)	0.58	0.80	1.12 (1.01 - 1.24)	0.032	0.062
PD-L1	1.43 (0.85 - 2.38)	0.17	0.33	1.61 (0.96 - 2.69)	0.071	0.25	1.24 (1.00 - 1.55)	0.054	0.098
PD-L2	1.41 (0.80 - 2.47)	0.23	0.40	1.10 (0.56 - 2.16)	0.78	0.89	1.66 (1.24 - 2.22)	0.0007	0.003
PECAM-1	0.49 (0.28 - 0.87)	0.014	0.052	1.82 (0.89 - 3.73)	0.10	0.30	1.25 (1.02 - 1.54)	0.030	0.059
PGF	2.99 (1.56 - 5.73)	0.0009	0.009	1.73 (0.83 - 3.58)	0.14	0.35	1.61 (1.24 - 2.09)	0.0003	0.002
PGLYRP1	1.15 (0.77 - 1.71)	0.48	0.62	1.10 (0.67 - 1.81)	0.70	0.86	1.35 (1.12 - 1.63)	0.001	0.005
PI3	1.32 (0.94 - 1.84)	0.10	0.23	0.92 (0.65 - 1.32)	0.65	0.82	1.09 (0.94 - 1.26)	0.25	0.32
PIgR	9.84 (2.80 - 34.55)	0.0003	0.005	0.24 (0.04 - 1.41)	0.11	0.31	1.65 (1.09 - 2.49)	0.018	0.043
PLC	1.78 (0.91 - 3.46)	0.090	0.20	5.48 (1.83 - 16.42)	0.002	0.039	1.61 (1.21 - 2.13)	0.001	0.004
PON3	0.83 (0.60 - 1.14)	0.24	0.40	0.71 (0.47 - 1.06)	0.094	0.29	0.78 (0.66 - 0.92)	0.003	0.010
PRELP	4.39 (1.43 - 13.50)	0.009	0.043	5.03 (1.32 - 19.19)	0.018	0.13	1.66 (1.10 - 2.51)	0.016	0.038
PRSS27	0.92 (0.62 - 1.39)	0.70	0.79	0.50 (0.30 - 0.84)	0.009	0.095	1.04 (0.83 - 1.29)	0.75	0.78
PRSS8	1.69 (0.93 - 3.05)	0.083	0.19	0.85 (0.42 - 1.71)	0.64	0.82	1.21 (0.99 - 1.48)	0.068	0.12
PRTN3	1.43 (0.94 - 2.17)	0.095	0.21	1.88 (1.15 - 3.06)	0.011	0.095	1.28 (1.09 - 1.52)	0.003	0.010
PSGL-1	1.35 (0.83 - 2.18)	0.22	0.39	1.14 (0.49 - 2.64)	0.76	0.89	1.27 (1.00 - 1.60)	0.047	0.089
PSP-D	1.32 (1.04 - 1.68)	0.021	0.068	1.27 (0.94 - 1.71)	0.11	0.31	1.32 (1.14 - 1.53)	0.0002	0.001
PTX3	1.66 (1.15 - 2.39)	0.006	0.028	1.85 (1.03 - 3.31)	0.037	0.20	1.28 (1.07 - 1.53)	0.008	0.022
RAGE	2.01 (1.25 - 3.21)	0.003	0.021	0.76 (0.45 - 1.27)	0.29	0.52	1.18 (0.93 - 1.50)	0.17	0.24
RARRES2	0.69 (0.34 - 1.40)	0.30	0.45	2.33 (0.97 - 5.60)	0.058	0.22	1.92 (1.37 - 2.67)	0.0001	0.0009
REN	0.87 (0.69 - 1.10)	0.24	0.40	1.34 (1.00 - 1.80)	0.051	0.22	1.29 (1.13 - 1.47)	0.0001	0.0009
RETN	1.03 (0.70 - 1.50)	0.89	0.93	1.51 (0.88 - 2.57)	0.13	0.34	1.38 (1.14 - 1.68)	0.0009	0.004
SCF	0.52 (0.31 - 0.89)	0.016	0.060	0.58 (0.34 - 0.98)	0.042	0.20	1.02 (0.80 - 1.31)	0.84	0.86
SCGB3A2	0.92 (0.70 - 1.21)	0.56	0.68	1.27 (0.96 - 1.68)	0.097	0.30	1.08 (0.96 - 1.21)	0.20	0.28
SELE	0.95 (0.67 - 1.35)	0.77	0.84	1.31 (0.87 - 1.98)	0.19	0.41	1.21 (0.98 - 1.49)	0.082	0.13
SELP	0.52 (0.34 - 0.78)	0.001	0.014	1.81 (1.08 - 3.03)	0.023	0.16	1.20 (1.02 - 1.41)	0.027	0.057
SERPINA12	0.93 (0.81 - 1.06)	0.27	0.43	1.24 (0.99 - 1.57)	0.064	0.23	1.02 (0.94 - 1.11)	0.62	0.69
SHPS-1	1.27 (0.80 - 2.01)	0.30	0.45	1.21 (0.69 - 2.10)	0.50	0.73	1.14 (0.92 - 1.40)	0.22	0.29

Biomarker	ARIC			FRAMINGHAM			HOMAGE		
	OR (CI 95%)	Original p-value	BH adjusted p-value	OR (CI 95%)	Original p-value	BH adjusted p-value	OR (CI 95%)	Original p-value	BH adjusted p-value
SIRT2	0.71 (0.58 - 0.86)	0.0004	0.006	1.12 (0.81 - 1.56)	0.48	0.71	1.08 (1.00 - 1.17)	0.046	0.087
SLAMF1	1.35 (0.99 - 1.84)	0.055	0.14	0.97 (0.62 - 1.52)	0.90	0.94	1.31 (1.10 - 1.55)	0.001	0.007
SLAMF7	1.01 (0.77 - 1.33)	0.94	0.95	0.95 (0.68 - 1.33)	0.76	0.89	1.58 (1.30 - 1.92)	<0.0001	<0.0001
SOD2	1.18 (0.50 - 2.78)	0.71	0.79	1.08 (0.10 - 11.22)	0.94	0.96	1.89 (1.23 - 2.90)	0.003	0.011
SORT1	1.57 (0.70 - 3.52)	0.27	0.43	0.75 (0.31 - 1.82)	0.52	0.74	1.92 (1.35 - 2.72)	0.0002	0.001
SPON1	3.19 (1.52 - 6.67)	0.002	0.016	2.88 (1.13 - 7.35)	0.026	0.17	1.83 (1.38 - 2.43)	<0.0001	0.0003
SPON2	8.35 (2.23 - 31.25)	0.001	0.013	0.80 (0.20 - 3.22)	0.75	0.89	2.09 (1.39 - 3.13)	0.0003	0.001
SRC	0.56 (0.42 - 0.76)	0.0001	0.002	0.98 (0.77 - 1.26)	0.90	0.94	1.11 (0.99 - 1.24)	0.083	0.13
ST1A1	0.71 (0.58 - 0.88)	0.001	0.012	1.20 (0.86 - 1.69)	0.28	0.52	1.07 (0.98 - 1.17)	0.13	0.19
ST2	1.24 (0.84 - 1.84)	0.27	0.43	2.08 (1.25 - 3.44)	0.004	0.064	1.36 (1.13 - 1.65)	0.001	0.005
STAMPB	0.65 (0.49 - 0.87)	0.003	0.020	1.21 (0.78 - 1.86)	0.39	0.64	1.07 (0.97 - 1.18)	0.17	0.24
STK4	0.69 (0.56 - 0.85)	0.0005	0.006	1.04 (0.81 - 1.32)	0.77	0.89	1.08 (0.99 - 1.18)	0.065	0.11
TF	0.80 (0.44 - 1.47)	0.47	0.61	0.44 (0.21 - 0.94)	0.033	0.20	1.26 (0.97 - 1.64)	0.084	0.13
TFF3	2.29 (1.41 - 3.71)	0.0007	0.008	1.31 (0.93 - 1.86)	0.12	0.33	1.45 (1.23 - 1.71)	<0.0001	0.0001
TFPI	0.68 (0.36 - 1.27)	0.22	0.39	1.15 (0.55 - 2.41)	0.70	0.86	1.05 (0.81 - 1.37)	0.70	0.75
TGF-alpha	3.28 (1.53 - 7.03)	0.002	0.016	4.84 (2.09 - 11.19)	0.0002	0.009	1.41 (1.15 - 1.73)	0.0008	0.003
TGM2	0.78 (0.57 - 1.09)	0.14	0.29	1.58 (1.11 - 2.24)	0.010	0.095	1.34 (1.17 - 1.54)	<0.0001	0.0003
THBS2	6.18 (2.52 - 15.17)	<0.0001	0.002	6.09 (2.01 - 18.46)	0.001	0.028	1.62 (1.15 - 2.29)	0.005	0.017
THPO	0.47 (0.25 - 0.88)	0.017	0.062	0.67 (0.32 - 1.41)	0.29	0.52	1.16 (0.92 - 1.45)	0.20	0.27
TIE2	1.27 (0.55 - 2.98)	0.57	0.69	1.26 (0.53 - 3.02)	0.59	0.81	1.16 (0.89 - 1.52)	0.26	0.33
TIMP4	0.98 (0.64 - 1.51)	0.94	0.95	1.27 (0.76 - 2.13)	0.35	0.59	1.34 (1.10 - 1.63)	0.003	0.010
TLT-2	1.13 (0.77 - 1.66)	0.53	0.66	0.89 (0.54 - 1.47)	0.64	0.82	1.20 (0.99 - 1.47)	0.069	0.12
TM	1.52 (0.80 - 2.89)	0.20	0.37	0.64 (0.34 - 1.23)	0.18	0.40	1.34 (1.02 - 1.77)	0.035	0.067
TNFB	1.08 (0.70 - 1.67)	0.71	0.79	1.35 (0.85 - 2.14)	0.20	0.43	0.94 (0.76 - 1.15)	0.53	0.60
TNF-R1	1.71 (1.02 - 2.86)	0.040	0.11	1.92 (0.97 - 3.79)	0.059	0.22	1.57 (1.24 - 1.99)	0.0002	0.001
TNF-R2	1.58 (0.99 - 2.52)	0.054	0.14	1.84 (1.06 - 3.23)	0.031	0.19	1.51 (1.22 - 1.87)	0.0001	0.0009
TNFRSF10A	1.90 (1.12 - 3.22)	0.018	0.062	1.96 (1.02 - 3.76)	0.043	0.20	1.94 (1.48 - 2.54)	<0.0001	<0.0001
TNFRSF10C	1.09 (0.77 - 1.54)	0.63	0.74	1.45 (0.92 - 2.31)	0.11	0.31	1.13 (0.93 - 1.38)	0.21	0.28
TNFRSF11A	1.81 (1.12 - 2.93)	0.016	0.058	1.34 (0.79 - 2.29)	0.27	0.51	1.57 (1.27 - 1.93)	<0.0001	0.0003
TNFRSF13B	1.14 (0.83 - 1.56)	0.42	0.57	1.01 (0.69 - 1.49)	0.93	0.96	1.75 (1.41 - 2.18)	<0.0001	<0.0001
TNFRSF14	1.33 (0.77 - 2.27)	0.30	0.45	2.03 (1.02 - 4.02)	0.043	0.20	1.49 (1.19 - 1.87)	0.0005	0.002
TNFRSF9	1.41 (1.02 - 1.95)	0.038	0.11	1.38 (0.89 - 2.14)	0.15	0.36	1.27 (1.07 - 1.51)	0.005	0.017
TNFSF13B	1.39 (0.89 - 2.15)	0.14	0.29	2.06 (1.08 - 3.93)	0.029	0.18	1.20 (0.94 - 1.53)	0.13	0.20
TNFSF14	0.69 (0.44 - 1.08)	0.10	0.22	2.31 (1.33 - 4.01)	0.002	0.043	1.21 (1.04 - 1.40)	0.013	0.032

Biomarker	ARIC			FRAMINGHAM			HOMAGE		
	OR (CI 95%)	Original p-value	BH adjusted p-value	OR (CI 95%)	Original p-value	BH adjusted p-value	OR (CI 95%)	Original p-value	BH adjusted p-value
t-PA	0.97 (0.70 - 1.34)	0.84	0.89	1.64 (0.96 - 2.81)	0.070	0.25	1.05 (0.91 - 1.23)	0.49	0.56
TR	1.20 (0.88 - 1.64)	0.23	0.40	1.41 (0.93 - 2.13)	0.10	0.30	1.23 (1.05 - 1.43)	0.008	0.022
TRAIL	0.42 (0.20 - 0.86)	0.018	0.062	1.51 (0.71 - 3.21)	0.28	0.52	0.79 (0.60 - 1.04)	0.086	0.14
TRAIL-R2	4.52 (2.44 - 8.40)	<0.0001	0.0001	1.62 (0.84 - 3.13)	0.15	0.36	2.43 (1.85 - 3.19)	<0.0001	<0.0001
TRANCE	1.03 (0.72 - 1.49)	0.85	0.90	1.09 (0.75 - 1.59)	0.65	0.82	0.84 (0.70 - 1.00)	0.051	0.094
TR-AP	0.45 (0.26 - 0.77)	0.003	0.021	0.91 (0.47 - 1.77)	0.78	0.89	0.90 (0.72 - 1.12)	0.34	0.42
TWEAK	0.35 (0.17 - 0.71)	0.003	0.021	0.32 (0.14 - 0.71)	0.005	0.064	0.60 (0.48 - 0.77)	<0.0001	0.0003
uPA	1.15 (0.70 - 1.88)	0.58	0.70	1.09 (0.58 - 2.07)	0.78	0.89	1.18 (0.93 - 1.49)	0.17	0.24
U-PAR	2.29 (1.28 - 4.08)	0.005	0.025	3.83 (1.78 - 8.24)	0.0005	0.014	1.82 (1.44 - 2.31)	<0.0001	<0.0001
VEGFA	1.68 (0.85 - 3.30)	0.13	0.27	3.04 (1.39 - 6.63)	0.005	0.064	1.62 (1.28 - 2.06)	<0.0001	0.0006
VEGFD	2.02 (1.23 - 3.29)	0.005	0.025	1.01 (0.58 - 1.75)	0.96	0.97	1.80 (1.38 - 2.34)	<0.0001	0.0001
VSIG2	1.18 (0.84 - 1.64)	0.33	0.48	1.03 (0.64 - 1.66)	0.90	0.94	1.31 (1.08 - 1.60)	0.005	0.017
vWF	0.90 (0.67 - 1.20)	0.47	0.60	1.43 (0.93 - 2.19)	0.099	0.30	1.16 (1.05 - 1.28)	0.004	0.013
XCL1	1.15 (0.82 - 1.62)	0.41	0.56	1.53 (1.02 - 2.30)	0.040	0.20	1.20 (1.02 - 1.43)	0.032	0.062

Protein names are available in Supplemental Table 1.

**Supplemental Table 3: Odds ratios (OR) and 95% confidence intervals (CI) for the biomarkers associated (p<0.05) with incident heart failure on mono-biomarker analysis after adjusting for matching and clinical variables including black race and correction for multiple comparisons in ARIC cohort**

Biomarker	ARIC			
	With black race among clinical variables		Without black race among clinical variables	
	OR (CI 95%)	BH adjusted p-value	OR (CI 95%)	BH adjusted p-value
NT-proBNP	1.89 (1.56 - 2.29)	<0.0001	1.95 (1.61 - 2.36)	<0.0001
BNP	1.62 (1.38 - 1.91)	<0.0001	1.65 (1.40 - 1.93)	<0.0001
TRAIL-R2	3.87 (2.06 - 7.26)	0.002	4.52 (2.44 - 8.40)	0.0001
PDGF subunit B	0.70 (0.58 - 0.84)	0.009	0.68 (0.57 - 0.82)	0.002
MMP12	1.82 (1.32 - 2.50)	0.009	1.79 (1.31 - 2.45)	0.004
CASP-3	0.67 (0.55 - 0.83)	0.009	0.66 (0.53 - 0.81)	0.002
HB-EGF	0.51 (0.35 - 0.73)	0.010	0.51 (0.35 - 0.73)	0.004
PDGF subunit A	0.59 (0.44 - 0.79)	0.010	0.57 (0.43 - 0.76)	0.002
SPON1	4.01 (1.87 - 8.63)	0.010	3.19 (1.52 - 6.67)	0.016
HSP 27	0.27 (0.13 - 0.56)	0.010	0.27 (0.13 - 0.55)	0.004
JAM-A	0.47 (0.30 - 0.72)	0.011	0.52 (0.34 - 0.78)	0.014
ADM	2.95 (1.60 - 5.44)	0.011	3.59 (2.01 - 6.43)	0.0008
THBS2	4.83 (1.93 - 12.10)	0.013	6.18 (2.52 - 15.17)	0.002
CXCL5	0.78 (0.67 - 0.90)	0.013	0.74 (0.64 - 0.85)	0.0008
SRC	0.60 (0.45 - 0.81)	0.013	0.56 (0.42 - 0.76)	0.002
AXIN1	0.68 (0.54 - 0.85)	0.013	0.67 (0.53 - 0.84)	0.006
PAI	0.65 (0.50 - 0.84)	0.015	0.70 (0.55 - 0.90)	0.024
CD84	0.46 (0.29 - 0.74)	0.016	0.52 (0.33 - 0.82)	0.024
MEPE	0.44 (0.26 - 0.73)	0.018	0.62 (0.39 - 0.99)	0.12
CCL19	1.47 (1.16 - 1.87)	0.018	1.44 (1.13 - 1.82)	0.018
IL6 (CVD II panel)	1.45 (1.15 - 1.83)	0.019	1.42 (1.13 - 1.79)	0.020
BOC	4.15 (1.69 - 10.19)	0.019	2.80 (1.19 - 6.60)	0.062
CD40-L	0.69 (0.54 - 0.87)	0.019	0.65 (0.52 - 0.82)	0.004
ITGB1BP2	0.74 (0.62 - 0.90)	0.019	0.71 (0.59 - 0.86)	0.004
LOX-1	2.19 (1.33 - 3.62)	0.020	2.19 (1.34 - 3.59)	0.014



Biomarker	ARIC			
	With black race among clinical variables		Without black race among clinical variables	
	OR (CI 95%)	BH adjusted p-value	OR (CI 95%)	BH adjusted p-value
STK4	0.72 (0.58 - 0.89)	0.022	0.69 (0.56 - 0.85)	0.006
CXCL1 (CVD II panel)	0.73 (0.59 - 0.89)	0.022	0.68 (0.55 - 0.82)	0.002
SIRT2	0.74 (0.61 - 0.90)	0.022	0.71 (0.58 - 0.86)	0.006
SPON2	7.75 (2.01 - 29.83)	0.023	8.35 (2.23 - 31.25)	0.013
TWEAK	0.34 (0.16 - 0.69)	0.023	0.35 (0.17 - 0.71)	0.021
ANG-1	0.72 (0.58 - 0.90)	0.023	0.69 (0.56 - 0.85)	0.006
4E-BP1	0.65 (0.49 - 0.87)	0.023	0.66 (0.50 - 0.87)	0.020
TFF3	2.09 (1.28 - 3.42)	0.024	2.29 (1.41 - 3.71)	0.008
VEGFD	2.07 (1.26 - 3.40)	0.028	2.02 (1.23 - 3.29)	0.025
PIgR	6.69 (1.83 - 24.42)	0.028	9.84 (2.80 - 34.55)	0.005
NEMO	0.71 (0.56 - 0.90)	0.031	0.70 (0.56 - 0.89)	0.020
Dkk-1	0.54 (0.35 - 0.83)	0.033	0.50 (0.33 - 0.77)	0.013
SELP	0.55 (0.36 - 0.84)	0.037	0.52 (0.34 - 0.78)	0.014
CCL17	0.76 (0.62 - 0.93)	0.040	0.72 (0.60 - 0.88)	0.009
IL-4RA	2.21 (1.25 - 3.93)	0.041	2.31 (1.32 - 4.04)	0.020
ST1A1	0.75 (0.60 - 0.92)	0.041	0.71 (0.58 - 0.88)	0.012
MMP-2	2.27 (1.25 - 4.11)	0.041	2.09 (1.17 - 3.75)	0.051
PRELP	4.70 (1.51 - 14.64)	0.042	4.39 (1.43 - 13.50)	0.043
U-PAR	2.23 (1.24 - 4.02)	0.042	2.29 (1.28 - 4.08)	0.025

Protein names are available in Supplemental Table 1.

**Supplemental Table 4: C-index improvement for each biomarker on top of clinical model in each cohort**

Biomarker	ARIC			FRAMINGHAM			HOMAGE		
	C-index (CI 95%) clinical + biomarker	Δ c-index (CI 95%)	p-value	C-index (CI 95%) clinical + biomarker	Δ c-index (CI 95%)	p-value	C-index (CI 95%) clinical + biomarker	Δ c-index (CI 95%)	p-value
4E-BP1	71.2 (66.5 to 76.0)	1.5 (-0.7 to 3.6)	0.17	72.0 (66.9 to 77.1)	2.8 (-0.0 to 5.6)	0.050	68.7 (65.9 to 71.5)	0.4 (-0.2 to 1.1)	0.21
ACE2	70.4 (65.6 to 75.2)	0.9 (-0.9 to 2.6)	0.31	71.3 (66.2 to 76.5)	2.1 (-0.3 to 4.6)	0.092	69.3 (66.5 to 72.1)	1.0 (0.0 to 2.0)	0.049
ADA	70.5 (65.7 to 75.3)	0.7 (-0.8 to 2.3)	0.32	69.1 (63.9 to 74.4)	-0.1 (-0.4 to 0.3)	0.74	68.3 (65.4 to 71.1)	0.0 (-0.0 to 0.1)	0.73
ADAM-TS13	69.5 (64.7 to 74.4)	0.0 (-0.1 to 0.2)	0.67	69.2 (64.0 to 74.5)	0.0 (-0.2 to 0.2)	0.83	68.4 (65.6 to 71.3)	0.1 (-0.2 to 0.5)	0.39
ADM	72.9 (68.2 to 77.5)	3.4 (0.6 to 6.2)	0.018	69.5 (64.2 to 74.7)	0.3 (-1.1 to 1.6)	0.71	69.3 (66.5 to 72.1)	1.0 (-0.0 to 2.1)	0.056
AGRP	70.6 (65.9 to 75.4)	1.1 (-0.6 to 2.9)	0.20	69.5 (64.2 to 74.7)	0.3 (-0.4 to 0.9)	0.38	69.3 (66.5 to 72.1)	1.0 (0.1 to 2.0)	0.032
ALCAM	69.4 (64.6 to 74.3)	0.0 (-0.2 to 0.3)	0.68	69.0 (63.7 to 74.3)	-0.0 (-0.3 to 0.3)	0.92	68.5 (65.7 to 71.3)	0.2 (-0.2 to 0.6)	0.26
AMBP	69.9 (65.1 to 74.7)	0.4 (-0.7 to 1.5)	0.48	69.1 (63.8 to 74.4)	-0.1 (-0.7 to 0.5)	0.77	68.5 (65.7 to 71.4)	0.2 (-0.3 to 0.8)	0.41
ANG-1	71.9 (67.2 to 76.6)	2.4 (0.0 to 4.9)	0.049	69.2 (64.0 to 74.5)	0.0 (-0.2 to 0.3)	0.93	68.5 (65.6 to 71.3)	0.2 (-0.2 to 0.6)	0.34
AP-N	69.5 (64.6 to 74.3)	0.1 (-0.6 to 0.8)	0.77	69.1 (63.8 to 74.3)	0.0 (-0.2 to 0.2)	0.80	68.4 (65.6 to 71.3)	0.1 (-0.1 to 0.4)	0.27
AXIN1	71.7 (67.0 to 76.4)	1.9 (-0.6 to 4.4)	0.13	69.2 (63.9 to 74.4)	-0.0 (-0.2 to 0.2)	0.71	68.4 (65.5 to 71.2)	0.1 (-0.2 to 0.4)	0.57
AXL	70.3 (65.2 to 75.3)	-0.0 (-0.4 to 0.3)	0.82	69.0 (63.8 to 74.3)	0.0 (-0.1 to 0.1)	0.75	68.4 (65.6 to 71.3)	0.2 (-0.2 to 0.5)	0.32
AZU1	69.6 (64.8 to 74.5)	0.3 (-0.6 to 1.1)	0.54	69.3 (64.0 to 74.5)	0.2 (-0.5 to 0.9)	0.52	68.4 (65.5 to 71.2)	0.1 (-0.2 to 0.4)	0.51
Beta-NGF	70.3 (65.5 to 75.1)	0.5 (-0.3 to 1.4)	0.21	69.2 (64.0 to 74.5)	0.0 (-0.0 to 0.1)	0.35	68.5 (65.6 to 71.3)	0.2 (-0.2 to 0.6)	0.35
BLM hydrolase	70.5 (65.7 to 75.3)	1.1 (-0.5 to 2.7)	0.18	69.3 (64.0 to 74.5)	0.2 (-0.4 to 0.8)	0.47	68.5 (65.6 to 71.3)	0.2 (-0.1 to 0.5)	0.24
BMP-6	69.5 (64.7 to 74.3)	0.0 (-0.4 to 0.4)	0.97	69.5 (64.3 to 74.8)	0.3 (-1.0 to 1.6)	0.62	68.5 (65.6 to 71.3)	0.2 (-0.3 to 0.6)	0.40
BNP	75.4 (71.0 to 79.8)	5.9 (2.4 to 9.5)	0.001	74.2 (69.3 to 79.0)	4.9 (1.7 to 8.2)	0.002	73.9 (71.2 to 76.5)	5.6 (3.7 to 7.5)	<0.0001
BOC	70.3 (65.5 to 75.1)	0.8 (-1.0 to 2.6)	0.39	69.2 (64.0 to 74.5)	0.0 (-0.4 to 0.5)	0.83	68.5 (65.7 to 71.4)	0.3 (-0.2 to 0.8)	0.28
CA5A	69.5 (64.6 to 74.3)	-0.0 (-0.2 to 0.1)	0.80	69.8 (64.6 to 75.1)	0.6 (-0.8 to 2.1)	0.39	68.3 (65.4 to 71.1)	0.0 (-0.1 to 0.1)	0.82
CASP-3	71.8 (67.1 to 76.5)	2.4 (-0.3 to 5.1)	0.087	69.1 (63.8 to 74.3)	0.0 (-0.6 to 0.7)	0.91	68.5 (65.7 to 71.3)	0.2 (-0.2 to 0.7)	0.29
CASP-8	70.7 (66.0 to 75.5)	1.0 (-0.9 to 2.8)	0.29	69.4 (64.1 to 74.6)	0.2 (-1.0 to 1.3)	0.77	69.1 (66.3 to 72.0)	0.9 (-0.0 to 1.7)	0.054
CCL11	69.9 (65.0 to 74.7)	0.1 (-0.3 to 0.5)	0.58	69.3 (64.0 to 74.5)	0.1 (-1.3 to 1.4)	0.93	68.9 (66.1 to 71.8)	0.7 (-0.1 to 1.4)	0.082
CCL15	69.4 (64.6 to 74.3)	0.0 (-0.2 to 0.2)	0.88	69.5 (64.3 to 74.8)	0.5 (-0.7 to 1.7)	0.44	68.9 (66.1 to 71.7)	0.6 (-0.1 to 1.3)	0.081
CCL16	70.0 (65.2 to 74.8)	0.7 (-0.7 to 2.0)	0.34	69.3 (64.0 to 74.5)	0.2 (-0.9 to 1.3)	0.69	69.8 (67.0 to 72.6)	1.5 (0.4 to 2.6)	0.006
CCL17	71.5 (66.8 to 76.2)	2.0 (-0.4 to 4.4)	0.10	69.4 (64.2 to 74.7)	0.2 (-0.7 to 1.2)	0.66	68.7 (65.9 to 71.5)	0.4 (-0.3 to 1.1)	0.21
CCL19	71.1 (66.3 to 75.9)	1.3 (-0.9 to 3.6)	0.24	70.2 (65.0 to 75.4)	1.0 (-0.4 to 2.4)	0.14	68.5 (65.7 to 71.3)	0.2 (-0.3 to 0.7)	0.39
CCL20	69.7 (64.9 to 74.5)	-0.1 (-0.5 to 0.4)	0.78	69.3 (64.0 to 74.5)	0.1 (-0.3 to 0.4)	0.73	68.6 (65.8 to 71.4)	0.3 (-0.3 to 0.9)	0.27
CCL23	69.8 (65.0 to 74.7)	0.1 (-1.1 to 1.2)	0.90	69.3 (64.1 to 74.6)	0.1 (-0.6 to 0.8)	0.74	68.7 (65.9 to 71.6)	0.5 (-0.1 to 1.1)	0.10
CCL24	69.3 (64.5 to 74.2)	-0.0 (-0.2 to 0.1)	0.52	69.1 (63.9 to 74.4)	0.1 (-0.5 to 0.7)	0.78	68.3 (65.4 to 71.1)	0.0 (-0.0 to 0.0)	0.48
CCL25	70.2 (65.4 to 75.0)	0.4 (-0.5 to 1.4)	0.37	69.9 (64.7 to 75.1)	0.7 (-0.8 to 2.2)	0.35	68.4 (65.6 to 71.3)	0.2 (-0.2 to 0.5)	0.39
CCL28	69.9 (65.1 to 74.7)	0.1 (-0.2 to 0.5)	0.46	69.6 (64.4 to 74.9)	0.4 (-0.6 to 1.4)	0.41	68.4 (65.5 to 71.2)	0.1 (-0.2 to 0.4)	0.52

Biomarker	ARIC			FRAMINGHAM			HOMAGE		
	C-index (CI 95%) clinical + biomarker	$\Delta$ c-index (CI 95%)	p-value	C-index (CI 95%) clinical + biomarker	$\Delta$ c-index (CI 95%)	p-value	C-index (CI 95%) clinical + biomarker	$\Delta$ c-index (CI 95%)	p-value
CCL3	69.9 (65.1 to 74.7)	0.4 (-0.5 to 1.3)	0.34	69.5 (64.3 to 74.8)	0.3 (-1.2 to 1.9)	0.67	68.3 (65.5 to 71.2)	0.0 (-0.2 to 0.3)	0.73
CCL4	70.1 (65.3 to 75.0)	0.4 (-0.8 to 1.6)	0.55	69.7 (64.4 to 74.9)	0.5 (-1.1 to 2.1)	0.56	68.4 (65.6 to 71.2)	0.1 (-0.1 to 0.4)	0.33
CD163	69.3 (64.5 to 74.2)	-0.1 (-0.7 to 0.6)	0.84	69.1 (63.9 to 74.4)	0.1 (-0.7 to 0.8)	0.81	68.6 (65.8 to 71.4)	0.3 (-0.2 to 0.8)	0.17
CD244	70.2 (65.4 to 75.0)	0.5 (-0.9 to 1.8)	0.50	69.3 (64.0 to 74.5)	0.0 (-0.7 to 0.8)	0.89	68.3 (65.4 to 71.1)	-0.0 (-0.1 to 0.1)	0.69
CD4	69.7 (64.9 to 74.6)	0.2 (-1.3 to 1.8)	0.76	69.4 (64.1 to 74.6)	0.2 (-0.6 to 1.0)	0.67	69.2 (66.3 to 72.0)	0.9 (-0.1 to 1.8)	0.064
CD40	69.9 (65.0 to 74.7)	0.1 (-1.0 to 1.3)	0.85	70.7 (65.5 to 75.9)	1.5 (-0.7 to 3.7)	0.18	69.1 (66.3 to 71.9)	0.8 (-0.0 to 1.6)	0.054
CD40-L	71.8 (67.1 to 76.5)	2.3 (-0.2 to 4.8)	0.070	69.2 (64.0 to 74.5)	0.0 (-0.3 to 0.4)	0.88	68.6 (65.8 to 71.4)	0.3 (-0.2 to 0.9)	0.24
CD5	70.1 (65.3 to 75.0)	0.4 (-0.9 to 1.6)	0.55	69.2 (64.0 to 74.5)	0.0 (-0.1 to 0.2)	0.75	68.3 (65.5 to 71.2)	0.0 (-0.2 to 0.3)	0.65
CD6	70.1 (65.3 to 74.9)	0.4 (-0.7 to 1.4)	0.51	69.3 (64.1 to 74.6)	0.1 (-0.6 to 0.8)	0.69	68.3 (65.4 to 71.1)	-0.0 (-0.0 to 0.0)	0.87
CD84	70.6 (65.9 to 75.4)	1.1 (-1.1 to 3.3)	0.31	69.6 (64.3 to 74.8)	0.4 (-0.6 to 1.4)	0.46	68.5 (65.6 to 71.3)	0.2 (-0.3 to 0.6)	0.44
CD93	70.5 (65.8 to 75.3)	1.1 (-0.9 to 3.2)	0.28	69.2 (63.9 to 74.5)	0.1 (-0.4 to 0.6)	0.59	68.7 (65.9 to 71.5)	0.4 (-0.2 to 1.0)	0.17
CDCP1	70.4 (65.6 to 75.2)	0.7 (-0.5 to 1.8)	0.25	69.4 (64.1 to 74.7)	0.2 (-1.3 to 1.7)	0.79	68.4 (65.6 to 71.3)	0.2 (-0.2 to 0.5)	0.33
CDH5	69.5 (64.7 to 74.4)	0.1 (-0.3 to 0.6)	0.55	69.0 (63.7 to 74.3)	-0.0 (-0.6 to 0.6)	0.95	68.3 (65.5 to 71.2)	0.0 (-0.1 to 0.1)	0.43
CEACAM8	71.4 (66.6 to 76.2)	1.9 (-0.4 to 4.2)	0.11	70.7 (65.5 to 75.9)	1.5 (-0.7 to 3.6)	0.17	69.5 (66.7 to 72.3)	1.2 (0.2 to 2.3)	0.021
CHI3L1	69.5 (64.7 to 74.4)	0.1 (-0.8 to 1.1)	0.78	69.0 (63.7 to 74.3)	-0.0 (-0.2 to 0.1)	0.62	68.7 (65.9 to 71.6)	0.5 (-0.2 to 1.1)	0.15
CHIT1	69.5 (64.6 to 74.3)	0.1 (-0.8 to 1.0)	0.84	69.1 (63.8 to 74.4)	0.1 (-0.1 to 0.2)	0.55	68.5 (65.6 to 71.3)	0.2 (-0.2 to 0.6)	0.36
CNTN1	70.2 (65.4 to 75.0)	0.8 (-0.7 to 2.4)	0.29	69.2 (64.0 to 74.5)	0.2 (-0.6 to 1.0)	0.64	68.3 (65.5 to 71.2)	0.1 (-0.3 to 0.4)	0.71
COL1A1	69.4 (64.5 to 74.2)	0.0 (-0.1 to 0.1)	0.95	69.0 (63.7 to 74.2)	-0.1 (-0.6 to 0.5)	0.76	68.3 (65.4 to 71.1)	0.0 (-0.2 to 0.2)	1.00
CPA1	69.4 (64.5 to 74.2)	0.0 (-0.2 to 0.3)	0.97	69.3 (64.1 to 74.6)	0.3 (-0.9 to 1.4)	0.63	68.3 (65.4 to 71.1)	0.0 (-0.1 to 0.1)	0.89
CPB1	69.5 (64.6 to 74.4)	0.1 (-0.4 to 0.7)	0.69	69.2 (63.9 to 74.5)	0.2 (-1.0 to 1.3)	0.76	68.4 (65.6 to 71.3)	0.2 (-0.2 to 0.5)	0.43
CSF-1	70.1 (65.3 to 75.0)	0.4 (-1.1 to 1.8)	0.60	69.8 (64.6 to 75.0)	0.6 (-1.1 to 2.2)	0.49	68.6 (65.8 to 71.5)	0.4 (-0.2 to 0.9)	0.19
CST5	70.7 (66.0 to 75.5)	1.0 (-1.1 to 3.1)	0.35	69.2 (64.0 to 74.5)	0.0 (-0.2 to 0.2)	1.00	68.3 (65.5 to 71.2)	0.0 (-0.1 to 0.2)	0.56
CSTB	69.7 (64.9 to 74.5)	0.3 (-0.3 to 0.9)	0.30	70.0 (64.8 to 75.2)	1.0 (-1.3 to 3.3)	0.39	69.6 (66.9 to 72.4)	1.4 (0.3 to 2.4)	0.010
CTRC	69.8 (65.0 to 74.6)	0.3 (-0.7 to 1.3)	0.53	69.3 (64.0 to 74.5)	0.1 (-0.3 to 0.5)	0.72	68.3 (65.5 to 71.2)	0.0 (-0.1 to 0.2)	0.53
CTSD	69.6 (64.8 to 74.5)	0.2 (-0.5 to 0.9)	0.60	69.3 (64.0 to 74.6)	0.2 (-0.9 to 1.3)	0.66	68.3 (65.4 to 71.1)	0.0 (-0.1 to 0.1)	0.87
CTSL1	70.2 (65.4 to 75.0)	0.7 (-0.8 to 2.2)	0.35	69.1 (63.8 to 74.3)	-0.1 (-1.2 to 0.9)	0.78	68.7 (65.8 to 71.5)	0.4 (-0.2 to 1.0)	0.18
CTSZ	69.8 (65.0 to 74.6)	0.4 (-0.5 to 1.4)	0.39	69.7 (64.5 to 75.0)	0.7 (-0.9 to 2.3)	0.40	68.7 (65.9 to 71.5)	0.4 (-0.2 to 1.0)	0.15
CX3CL1	70.0 (65.2 to 74.8)	0.2 (-0.7 to 1.2)	0.66	70.1 (64.9 to 75.3)	0.9 (-0.5 to 2.3)	0.20	68.4 (65.6 to 71.3)	0.1 (-0.2 to 0.5)	0.41
CXCL1	71.9 (67.2 to 76.6)	2.4 (-0.3 to 5.1)	0.083	69.3 (64.0 to 74.6)	0.1 (-0.4 to 0.6)	0.68	68.3 (65.4 to 71.1)	0.0 (-0.2 to 0.2)	0.90
CXCL10	70.0 (65.2 to 74.9)	0.3 (-0.5 to 1.1)	0.49	70.3 (65.1 to 75.5)	1.1 (-0.7 to 2.9)	0.22	68.8 (66.0 to 71.6)	0.5 (-0.1 to 1.2)	0.085
CXCL11	70.7 (65.9 to 75.4)	0.9 (-0.5 to 2.3)	0.22	69.3 (64.1 to 74.6)	0.1 (-0.8 to 1.1)	0.77	69.4 (66.6 to 72.2)	1.1 (0.1 to 2.1)	0.027
CXCL16	69.7 (64.9 to 74.6)	0.3 (-0.3 to 0.9)	0.29	70.4 (65.3 to 75.6)	1.4 (-0.9 to 3.7)	0.23	68.9 (66.0 to 71.7)	0.6 (-0.0 to 1.2)	0.059
CXCL5	72.8 (68.1 to 77.4)	3.0 (0.1 to 5.9)	0.041	69.2 (63.9 to 74.4)	-0.0 (-0.5 to 0.4)	0.91	68.3 (65.4 to 71.1)	0.0 (-0.1 to 0.1)	0.87

Biomarker	ARIC			FRAMINGHAM			HOMAGE		
	C-index (CI 95%) clinical + biomarker	$\Delta$ c-index (CI 95%)	p-value	C-index (CI 95%) clinical + biomarker	$\Delta$ c-index (CI 95%)	p-value	C-index (CI 95%) clinical + biomarker	$\Delta$ c-index (CI 95%)	p-value
CXCL6	70.5 (65.7 to 75.3)	0.8 (-0.6 to 2.2)	0.27	69.2 (64.0 to 74.5)	0.0 (-0.1 to 0.1)	0.61	68.4 (65.5 to 71.2)	0.1 (-0.3 to 0.5)	0.67
CXCL9	70.3 (65.5 to 75.1)	0.6 (-1.0 to 2.1)	0.46	69.9 (64.7 to 75.1)	0.7 (-0.9 to 2.3)	0.40	69.3 (66.6 to 72.1)	1.1 (0.2 to 2.0)	0.019
DCN	69.5 (64.7 to 74.4)	0.0 (-0.6 to 0.7)	0.91	69.3 (64.0 to 74.5)	0.1 (-0.2 to 0.3)	0.52	68.4 (65.6 to 71.3)	0.2 (-0.3 to 0.6)	0.44
DECR1	71.1 (66.3 to 75.9)	1.6 (-0.4 to 3.7)	0.11	69.2 (64.0 to 74.5)	0.0 (-0.6 to 0.6)	0.90	68.6 (65.8 to 71.5)	0.3 (-0.2 to 0.9)	0.22
Dkk-1	71.6 (66.9 to 76.4)	2.1 (-0.2 to 4.5)	0.078	69.5 (64.3 to 74.8)	0.3 (-0.5 to 1.2)	0.45	68.7 (65.9 to 71.5)	0.4 (-0.2 to 1.0)	0.15
DLK-1	69.4 (64.6 to 74.3)	0.0 (-0.3 to 0.4)	0.83	69.2 (64.0 to 74.5)	0.2 (-0.8 to 1.1)	0.71	68.4 (65.6 to 71.2)	0.1 (-0.2 to 0.4)	0.39
DNER	72.2 (67.5 to 76.9)	2.4 (0.0 to 4.9)	0.048	70.2 (65.0 to 75.4)	1.0 (-0.5 to 2.5)	0.20	68.5 (65.7 to 71.3)	0.2 (-0.4 to 0.8)	0.48
EGFR	70.5 (65.7 to 75.3)	1.1 (-0.9 to 3.1)	0.26	69.1 (63.9 to 74.4)	0.1 (-0.6 to 0.8)	0.76	68.3 (65.4 to 71.1)	-0.0 (-0.3 to 0.2)	0.94
EN-RAGE	69.8 (65.0 to 74.7)	0.1 (-1.0 to 1.1)	0.91	70.9 (65.7 to 76.1)	1.7 (-0.3 to 3.7)	0.10	69.5 (66.7 to 72.3)	1.2 (0.3 to 2.1)	0.012
Ep-CAM	69.6 (64.8 to 74.4)	0.2 (-1.1 to 1.5)	0.76	69.1 (63.8 to 74.4)	0.1 (-0.3 to 0.5)	0.70	68.3 (65.4 to 71.1)	-0.0 (-0.1 to 0.1)	0.88
EPHB4	69.7 (64.9 to 74.6)	0.3 (-0.4 to 1.1)	0.38	69.3 (64.1 to 74.6)	0.3 (-0.8 to 1.4)	0.60	68.9 (66.0 to 71.7)	0.6 (-0.0 to 1.2)	0.061
FABP2	69.8 (64.9 to 74.6)	0.3 (-0.4 to 1.0)	0.42	69.5 (64.2 to 74.7)	0.3 (-0.8 to 1.3)	0.62	68.6 (65.8 to 71.4)	0.3 (-0.2 to 0.9)	0.26
FABP4	69.4 (64.6 to 74.3)	0.0 (-0.3 to 0.4)	0.82	69.6 (64.4 to 74.9)	0.6 (-1.1 to 2.3)	0.49	69.7 (66.9 to 72.5)	1.4 (0.3 to 2.5)	0.009
FAS	69.7 (64.8 to 74.5)	0.3 (-0.6 to 1.2)	0.56	69.5 (64.3 to 74.8)	0.5 (-0.7 to 1.7)	0.41	68.8 (66.0 to 71.6)	0.5 (-0.2 to 1.2)	0.16
FGF-19	70.1 (65.3 to 75.0)	0.4 (-0.8 to 1.6)	0.52	69.4 (64.1 to 74.7)	0.2 (-0.3 to 0.7)	0.45	68.3 (65.5 to 71.2)	0.1 (-0.2 to 0.3)	0.62
FGF-21	71.5 (66.7 to 76.2)	2.0 (0.0 to 3.9)	0.048	69.4 (64.2 to 74.7)	0.2 (-0.4 to 0.8)	0.46	68.4 (65.6 to 71.2)	0.1 (-0.3 to 0.5)	0.54
FGF-23	70.8 (66.1 to 75.6)	1.3 (-0.6 to 3.3)	0.17	69.8 (64.6 to 75.0)	0.6 (-1.2 to 2.4)	0.51	70.2 (67.4 to 72.9)	1.9 (0.7 to 3.1)	0.002
FGF-5	69.9 (65.0 to 74.7)	0.1 (-0.5 to 0.7)	0.71	69.3 (64.1 to 74.6)	0.1 (-0.5 to 0.8)	0.67	68.3 (65.4 to 71.1)	0.0 (-0.1 to 0.1)	0.83
Flt3L	70.0 (65.1 to 74.8)	0.2 (-0.2 to 0.6)	0.38	69.2 (63.9 to 74.4)	-0.0 (-0.2 to 0.2)	0.90	68.3 (65.5 to 71.2)	0.1 (-0.1 to 0.2)	0.58
FS	70.1 (65.3 to 74.9)	0.7 (-0.7 to 2.0)	0.34	69.0 (63.8 to 74.3)	-0.2 (-1.0 to 0.7)	0.68	68.7 (65.9 to 71.5)	0.4 (-0.2 to 1.0)	0.16
Gal-3	70.4 (65.5 to 75.2)	1.0 (-0.4 to 2.3)	0.15	69.2 (64.0 to 74.5)	0.2 (-1.2 to 1.6)	0.76	68.8 (66.0 to 71.7)	0.6 (-0.0 to 1.2)	0.066
Gal-4	70.4 (65.6 to 75.2)	1.0 (-0.6 to 2.6)	0.21	71.7 (66.6 to 76.8)	2.7 (-0.3 to 5.6)	0.075	69.4 (66.6 to 72.2)	1.1 (0.2 to 2.0)	0.016
Gal-9	70.4 (65.6 to 75.1)	0.9 (-1.2 to 3.0)	0.41	70.8 (65.7 to 76.0)	1.6 (-0.8 to 4.1)	0.19	70.0 (67.2 to 72.8)	1.7 (0.4 to 3.0)	0.009
GDF-15	70.2 (65.4 to 75.0)	0.8 (-1.1 to 2.7)	0.41	74.2 (69.3 to 79.2)	5.2 (1.8 to 8.6)	0.002	71.3 (68.5 to 74.0)	3.0 (1.5 to 4.5)	<0.0001
GDF-2	69.6 (64.7 to 74.4)	0.1 (-0.2 to 0.3)	0.53	69.8 (64.6 to 75.0)	0.6 (-1.2 to 2.4)	0.50	68.3 (65.5 to 71.1)	0.0 (-0.2 to 0.2)	0.80
GDNF	70.2 (65.4 to 75.1)	0.5 (-0.2 to 1.2)	0.19	69.4 (64.2 to 74.7)	0.2 (-1.0 to 1.5)	0.71	68.3 (65.5 to 71.1)	0.0 (-0.1 to 0.1)	0.79
GH	69.4 (64.6 to 74.3)	-0.1 (-0.8 to 0.7)	0.87	69.7 (64.5 to 74.9)	0.5 (-1.0 to 2.0)	0.49	68.5 (65.6 to 71.3)	0.2 (-0.1 to 0.5)	0.27
GIF	70.2 (65.3 to 75.0)	0.7 (-0.2 to 1.6)	0.14	69.3 (64.0 to 74.5)	0.1 (-0.3 to 0.4)	0.66	68.3 (65.4 to 71.1)	-0.0 (-0.0 to 0.0)	0.76
GLO1	70.9 (66.1 to 75.7)	1.4 (-0.4 to 3.2)	0.12	70.0 (64.7 to 75.2)	0.8 (-0.9 to 2.4)	0.36	68.3 (65.5 to 71.2)	0.0 (-0.2 to 0.3)	0.71
GRN	69.4 (64.5 to 74.2)	-0.0 (-0.7 to 0.6)	0.95	69.0 (63.8 to 74.3)	-0.0 (-0.0 to 0.0)	0.50	68.8 (66.0 to 71.6)	0.5 (-0.1 to 1.1)	0.12
GT	69.5 (64.6 to 74.3)	-0.0 (-0.3 to 0.3)	0.90	69.2 (64.0 to 74.5)	0.0 (-0.1 to 0.2)	0.91	68.6 (65.7 to 71.4)	0.3 (-0.3 to 0.9)	0.33
HAOX1	69.6 (64.8 to 74.5)	0.2 (-0.4 to 0.7)	0.59	69.7 (64.5 to 74.9)	0.5 (-0.7 to 1.7)	0.40	68.4 (65.6 to 71.3)	0.2 (-0.2 to 0.5)	0.32
HB-EGF	72.2 (67.5 to 76.9)	2.7 (0.1 to 5.2)	0.038	69.2 (64.0 to 74.5)	0.0 (-0.2 to 0.2)	0.89	68.7 (65.9 to 71.6)	0.5 (-0.1 to 1.0)	0.10

Biomarker	ARIC			FRAMINGHAM			HOMAGE		
	C-index (CI 95%) clinical + biomarker	$\Delta$ c-index (CI 95%)	p-value	C-index (CI 95%) clinical + biomarker	$\Delta$ c-index (CI 95%)	p-value	C-index (CI 95%) clinical + biomarker	$\Delta$ c-index (CI 95%)	p-value
HGF	71.0 (66.2 to 75.7)	1.2 (-0.9 to 3.3)	0.27	73.2 (68.2 to 78.1)	4.0 (1.0 to 6.9)	0.009	69.5 (66.7 to 72.3)	1.2 (0.2 to 2.2)	0.014
HO-1	69.5 (64.7 to 74.3)	0.0 (-1.0 to 1.1)	0.94	69.6 (64.3 to 74.8)	0.4 (-0.3 to 1.0)	0.26	68.4 (65.6 to 71.3)	0.1 (-0.3 to 0.6)	0.49
hOSCAR	69.6 (64.8 to 74.5)	0.2 (-0.7 to 1.0)	0.70	69.3 (64.0 to 74.5)	0.1 (-0.4 to 0.5)	0.73	68.8 (65.9 to 71.6)	0.5 (-0.2 to 1.1)	0.15
HSP 27	71.8 (67.1 to 76.4)	2.3 (-0.2 to 4.7)	0.066	69.2 (63.9 to 74.4)	-0.0 (-0.3 to 0.2)	0.76	68.8 (66.0 to 71.6)	0.5 (-0.3 to 1.3)	0.19
ICAM-2	69.3 (64.5 to 74.2)	-0.1 (-0.4 to 0.2)	0.62	69.0 (63.7 to 74.3)	-0.0 (-0.3 to 0.2)	0.91	68.9 (66.1 to 71.7)	0.6 (-0.1 to 1.3)	0.070
IDUA	69.5 (64.7 to 74.3)	0.0 (-0.9 to 0.9)	0.96	69.2 (63.9 to 74.5)	-0.0 (-0.3 to 0.3)	0.97	68.3 (65.5 to 71.2)	0.0 (-0.2 to 0.3)	0.70
IGFBP-1	69.8 (65.0 to 74.6)	0.4 (-0.9 to 1.7)	0.53	69.0 (63.8 to 74.3)	0.0 (-0.9 to 0.9)	0.99	70.2 (67.4 to 72.9)	1.9 (0.7 to 3.0)	0.001
IGFBP-2	70.7 (65.9 to 75.5)	1.3 (-0.7 to 3.3)	0.19	69.2 (64.0 to 74.5)	0.2 (-1.1 to 1.5)	0.77	69.7 (67.0 to 72.5)	1.5 (0.4 to 2.5)	0.006
IGFBP-7	69.3 (64.5 to 74.1)	-0.1 (-1.2 to 1.0)	0.86	71.2 (66.0 to 76.4)	2.2 (-0.3 to 4.6)	0.079	69.1 (66.3 to 71.9)	0.8 (0.0 to 1.6)	0.043
IgG Fc receptor II-b	69.4 (64.5 to 74.2)	-0.1 (-0.6 to 0.3)	0.63	69.2 (63.9 to 74.4)	-0.0 (-0.4 to 0.3)	0.79	68.6 (65.7 to 71.4)	0.3 (-0.2 to 0.7)	0.22
IL10	70.0 (65.2 to 74.8)	0.2 (-1.2 to 1.6)	0.75	69.5 (64.2 to 74.7)	0.3 (-1.2 to 1.8)	0.72	68.5 (65.6 to 71.3)	0.2 (-0.2 to 0.5)	0.32
IL-10RA	70.4 (65.6 to 75.2)	0.6 (-0.9 to 2.2)	0.43	69.4 (64.2 to 74.7)	0.2 (-0.1 to 0.6)	0.22	68.3 (65.5 to 71.1)	0.0 (-0.1 to 0.2)	0.73
IL-10RB	70.2 (65.4 to 75.0)	0.5 (-1.1 to 2.1)	0.54	69.5 (64.3 to 74.8)	0.3 (-0.7 to 1.3)	0.54	68.4 (65.6 to 71.2)	0.1 (-0.2 to 0.5)	0.42
IL-12B	70.2 (65.4 to 75.0)	0.4 (-0.6 to 1.4)	0.40	69.7 (64.5 to 75.0)	0.5 (-0.6 to 1.7)	0.35	68.7 (65.8 to 71.5)	0.4 (-0.2 to 1.0)	0.19
IL-15RA	70.0 (65.1 to 74.8)	0.2 (-0.3 to 0.7)	0.44	69.4 (64.1 to 74.6)	0.2 (-1.3 to 1.6)	0.83	69.0 (66.2 to 71.8)	0.7 (-0.0 to 1.4)	0.062
IL16	70.1 (65.3 to 74.9)	0.6 (-0.8 to 2.0)	0.40	69.2 (64.0 to 74.5)	0.0 (-0.3 to 0.4)	0.87	68.8 (66.0 to 71.7)	0.6 (-0.2 to 1.4)	0.16
IL-17A	69.7 (64.9 to 74.6)	-0.0 (-0.6 to 0.5)	0.88	69.2 (64.0 to 74.5)	0.0 (-0.1 to 0.1)	0.91	68.3 (65.5 to 71.2)	0.1 (-0.2 to 0.3)	0.57
IL-17C	70.1 (65.3 to 74.9)	0.3 (-1.2 to 1.9)	0.68	69.2 (64.0 to 74.5)	0.0 (-0.3 to 0.3)	0.95	68.5 (65.7 to 71.3)	0.2 (-0.2 to 0.7)	0.31
IL-17D	69.6 (64.7 to 74.4)	0.1 (-0.2 to 0.4)	0.58	69.9 (64.7 to 75.1)	0.7 (-0.6 to 2.0)	0.32	68.5 (65.6 to 71.3)	0.2 (-0.3 to 0.7)	0.47
IL-17RA	69.3 (64.5 to 74.2)	-0.1 (-0.6 to 0.4)	0.73	69.4 (64.1 to 74.6)	0.3 (-0.8 to 1.5)	0.58	68.3 (65.5 to 71.1)	0.0 (-0.1 to 0.2)	0.69
IL18	69.5 (64.7 to 74.4)	0.0 (-0.9 to 1.0)	0.96	69.3 (64.1 to 74.6)	0.1 (-1.1 to 1.3)	0.86	68.7 (65.9 to 71.5)	0.4 (-0.2 to 1.1)	0.20
IL-18BP	69.6 (64.8 to 74.4)	0.2 (-0.5 to 0.9)	0.57	69.4 (64.1 to 74.6)	0.3 (-0.9 to 1.6)	0.60	68.9 (66.1 to 71.7)	0.6 (-0.1 to 1.3)	0.079
IL-18R1	70.0 (65.1 to 74.8)	0.2 (-0.2 to 0.6)	0.27	69.7 (64.5 to 75.0)	0.5 (-0.8 to 1.9)	0.43	68.3 (65.5 to 71.2)	0.1 (-0.1 to 0.3)	0.55
IL-1ra	70.1 (65.3 to 74.9)	0.6 (-0.6 to 1.8)	0.32	69.2 (64.0 to 74.5)	0.0 (-0.4 to 0.4)	0.94	68.8 (66.0 to 71.7)	0.6 (-0.3 to 1.4)	0.17
IL1RL2	70.2 (65.4 to 75.0)	0.7 (-0.9 to 2.3)	0.38	69.4 (64.2 to 74.7)	0.2 (-0.4 to 0.9)	0.52	68.3 (65.4 to 71.1)	-0.0 (-0.2 to 0.1)	0.87
IL-1RT1	69.6 (64.8 to 74.5)	0.2 (-0.7 to 1.2)	0.62	69.9 (64.7 to 75.2)	0.9 (-0.7 to 2.5)	0.26	68.5 (65.7 to 71.4)	0.3 (-0.1 to 0.7)	0.18
IL-1RT2	69.7 (64.8 to 74.5)	0.3 (-0.2 to 0.7)	0.28	70.0 (64.7 to 75.2)	0.9 (-0.5 to 2.3)	0.21	68.3 (65.5 to 71.1)	0.0 (-0.0 to 0.1)	0.49
IL-27	70.4 (65.6 to 75.2)	0.9 (-1.4 to 3.2)	0.43	69.4 (64.1 to 74.6)	0.2 (-1.0 to 1.4)	0.76	69.2 (66.4 to 72.0)	0.9 (0.1 to 1.8)	0.037
IL2-RA	70.5 (65.7 to 75.3)	1.1 (-0.8 to 3.0)	0.26	70.1 (64.8 to 75.3)	1.0 (-0.7 to 2.7)	0.23	69.4 (66.6 to 72.2)	1.1 (0.2 to 2.0)	0.018
IL-4RA	70.8 (66.0 to 75.5)	1.3 (-0.8 to 3.3)	0.22	69.4 (64.2 to 74.7)	0.2 (-0.8 to 1.3)	0.67	68.9 (66.0 to 71.7)	0.6 (-0.2 to 1.4)	0.14
IL6	71.0 (66.2 to 75.7)	1.5 (-0.6 to 3.5)	0.16	70.7 (65.6 to 75.9)	1.5 (-0.5 to 3.6)	0.14	69.4 (66.6 to 72.2)	1.1 (0.3 to 2.0)	0.009
IL-6RA	69.9 (65.1 to 74.8)	0.5 (-0.4 to 1.4)	0.24	69.2 (63.9 to 74.4)	0.1 (-0.6 to 0.9)	0.72	69.0 (66.2 to 71.9)	0.8 (0.0 to 1.5)	0.041
IL7	71.0 (66.2 to 75.8)	1.3 (-0.6 to 3.1)	0.17	69.3 (64.0 to 74.5)	0.1 (-0.1 to 0.3)	0.47	68.4 (65.5 to 71.2)	0.1 (-0.2 to 0.4)	0.50

Biomarker	ARIC			FRAMINGHAM			HOMAGE		
	C-index (CI 95%) clinical + biomarker	Δ c-index (CI 95%)	p-value	C-index (CI 95%) clinical + biomarker	Δ c-index (CI 95%)	p-value	C-index (CI 95%) clinical + biomarker	Δ c-index (CI 95%)	p-value
IL8	69.8 (65.0 to 74.7)	0.1 (-0.3 to 0.4)	0.74	70.1 (64.9 to 75.3)	0.9 (-1.2 to 3.0)	0.38	68.6 (65.7 to 71.4)	0.3 (-0.2 to 0.8)	0.26
ITGB1BP2	71.5 (66.8 to 76.2)	2.0 (-0.6 to 4.6)	0.13	69.4 (64.1 to 74.6)	0.2 (-0.5 to 0.9)	0.62	68.4 (65.6 to 71.2)	0.1 (-0.2 to 0.5)	0.52
ITGB2	69.4 (64.5 to 74.2)	-0.0 (-0.1 to 0.1)	0.50	69.3 (64.0 to 74.6)	0.2 (-0.9 to 1.4)	0.67	68.6 (65.8 to 71.5)	0.4 (-0.1 to 0.8)	0.096
JAM-A	71.0 (66.2 to 75.7)	1.6 (-0.6 to 3.8)	0.15	70.7 (65.5 to 75.9)	1.7 (-0.3 to 3.7)	0.10	68.9 (66.1 to 71.8)	0.7 (0.0 to 1.3)	0.049
KIM1	69.5 (64.7 to 74.3)	0.0 (-0.7 to 0.7)	0.94	70.9 (65.8 to 76.1)	1.7 (-0.4 to 3.9)	0.11	69.1 (66.3 to 71.9)	0.8 (-0.0 to 1.7)	0.057
KLK6	69.4 (64.5 to 74.2)	-0.0 (-0.0 to 0.0)	0.10	69.6 (64.3 to 74.8)	0.5 (-0.8 to 1.9)	0.41	68.3 (65.5 to 71.1)	0.0 (-0.2 to 0.2)	0.79
LAP TGF-beta-1	70.0 (65.2 to 74.9)	0.3 (-0.3 to 0.9)	0.34	70.1 (64.8 to 75.3)	0.8 (-0.9 to 2.6)	0.33	69.0 (66.2 to 71.8)	0.7 (0.1 to 1.4)	0.035
LDL receptor	69.6 (64.8 to 74.4)	0.2 (-0.9 to 1.4)	0.71	69.0 (63.8 to 74.3)	-0.0 (-0.5 to 0.4)	0.95	68.4 (65.5 to 71.2)	0.1 (-0.3 to 0.5)	0.59
LEP	70.1 (65.3 to 74.9)	0.6 (-1.1 to 2.3)	0.46	69.2 (63.9 to 74.4)	-0.0 (-0.5 to 0.4)	0.87	68.3 (65.5 to 71.2)	0.0 (-0.1 to 0.1)	0.47
LIF-R	70.1 (65.3 to 74.9)	0.3 (-1.0 to 1.6)	0.64	69.2 (63.9 to 74.5)	0.0 (-1.1 to 1.1)	0.97	68.5 (65.6 to 71.3)	0.2 (-0.1 to 0.5)	0.24
LOX-1	71.1 (66.3 to 75.9)	1.6 (-0.8 to 4.0)	0.18	69.8 (64.6 to 75.0)	0.6 (-1.0 to 2.2)	0.47	69.2 (66.4 to 72.0)	0.9 (0.0 to 1.9)	0.045
LPL	69.7 (64.9 to 74.5)	0.2 (-0.7 to 1.1)	0.63	70.2 (65.1 to 75.4)	1.0 (-0.5 to 2.6)	0.19	68.3 (65.4 to 71.1)	-0.0 (-0.0 to 0.0)	0.90
LTBR	70.1 (65.3 to 74.9)	0.7 (-0.6 to 2.0)	0.29	69.2 (63.9 to 74.5)	0.1 (-1.0 to 1.3)	0.80	69.0 (66.2 to 71.9)	0.8 (0.0 to 1.5)	0.042
MARCO	69.4 (64.6 to 74.3)	-0.1 (-0.2 to 0.1)	0.27	69.2 (63.9 to 74.4)	-0.0 (-0.1 to 0.1)	0.58	68.3 (65.4 to 71.1)	0.0 (-0.1 to 0.1)	0.88
MB	70.1 (65.3 to 74.9)	0.7 (-1.3 to 2.7)	0.48	69.9 (64.7 to 75.1)	0.9 (-0.9 to 2.6)	0.33	68.3 (65.4 to 71.1)	0.0 (-0.2 to 0.2)	0.86
MCP-1	69.4 (64.5 to 74.2)	0.0 (-0.1 to 0.1)	0.89	69.0 (63.8 to 74.3)	0.0 (-1.0 to 1.0)	0.98	68.8 (66.0 to 71.7)	0.6 (-0.0 to 1.2)	0.062
MCP-2	70.7 (65.9 to 75.5)	1.0 (-0.7 to 2.6)	0.25	70.1 (64.9 to 75.2)	0.8 (-0.7 to 2.4)	0.27	68.7 (65.9 to 71.5)	0.5 (-0.1 to 1.0)	0.10
MCP-3	69.8 (65.0 to 74.7)	0.1 (-0.3 to 0.5)	0.66	70.2 (65.0 to 75.4)	1.0 (-1.1 to 3.0)	0.34	69.1 (66.3 to 72.0)	0.9 (0.1 to 1.7)	0.035
MCP-4	71.0 (66.2 to 75.7)	1.2 (-0.9 to 3.3)	0.25	69.4 (64.1 to 74.6)	0.2 (-0.7 to 1.0)	0.70	68.3 (65.5 to 71.1)	0.0 (-0.1 to 0.1)	0.65
MEPE	69.7 (64.9 to 74.5)	0.3 (-1.3 to 1.9)	0.71	69.1 (63.8 to 74.4)	0.1 (-0.7 to 0.8)	0.86	68.4 (65.5 to 71.2)	0.1 (-0.2 to 0.4)	0.60
MERTK	69.6 (64.7 to 74.4)	0.1 (-0.3 to 0.4)	0.68	69.2 (63.9 to 74.4)	-0.0 (-0.2 to 0.1)	0.73	68.8 (66.0 to 71.7)	0.6 (-0.2 to 1.3)	0.13
MMP-1	69.7 (64.9 to 74.6)	-0.0 (-0.3 to 0.2)	0.90	69.4 (64.2 to 74.6)	0.2 (-0.6 to 1.1)	0.62	68.5 (65.7 to 71.4)	0.3 (-0.2 to 0.7)	0.25
MMP-10	69.9 (65.1 to 74.7)	0.2 (-0.7 to 1.0)	0.74	69.3 (64.0 to 74.5)	0.1 (-0.5 to 0.6)	0.83	68.3 (65.5 to 71.2)	0.0 (-0.1 to 0.2)	0.59
MMP12	71.7 (66.9 to 76.4)	2.2 (-0.3 to 4.7)	0.088	70.6 (65.4 to 75.8)	1.4 (-0.5 to 3.3)	0.15	69.0 (66.2 to 71.8)	0.8 (-0.1 to 1.6)	0.091
MMP-2	70.3 (65.5 to 75.0)	0.9 (-1.1 to 2.8)	0.38	69.0 (63.7 to 74.3)	-0.0 (-0.6 to 0.6)	0.99	69.4 (66.6 to 72.3)	1.2 (0.3 to 2.0)	0.011
MMP-3	69.8 (65.0 to 74.6)	0.4 (-0.5 to 1.3)	0.39	69.2 (63.9 to 74.5)	0.2 (-0.4 to 0.7)	0.53	69.1 (66.3 to 72.0)	0.9 (0.1 to 1.6)	0.021
MMP7	69.6 (64.8 to 74.5)	0.2 (-0.9 to 1.2)	0.76	70.2 (65.0 to 75.4)	1.0 (-1.0 to 2.9)	0.33	68.4 (65.6 to 71.3)	0.2 (-0.2 to 0.6)	0.42
MMP-9	69.5 (64.6 to 74.3)	0.1 (-0.5 to 0.6)	0.79	72.5 (67.4 to 77.6)	3.5 (0.6 to 6.3)	0.016	68.8 (66.0 to 71.7)	0.6 (-0.1 to 1.2)	0.085
MPO	69.8 (65.0 to 74.6)	0.4 (-1.0 to 1.8)	0.55	70.3 (65.1 to 75.5)	1.2 (-0.9 to 3.3)	0.24	68.7 (65.9 to 71.5)	0.4 (-0.2 to 1.0)	0.19
NEMO	71.1 (66.3 to 75.8)	1.6 (-0.6 to 3.8)	0.15	69.2 (63.9 to 74.4)	-0.0 (-0.2 to 0.2)	0.83	68.6 (65.8 to 71.4)	0.3 (-0.2 to 0.9)	0.25
Notch 3	69.4 (64.5 to 74.2)	0.0 (-0.1 to 0.1)	1.00	69.2 (63.9 to 74.5)	0.2 (-1.0 to 1.4)	0.76	68.6 (65.7 to 71.4)	0.3 (-0.1 to 0.7)	0.18
NT-3	70.0 (65.2 to 74.8)	0.2 (-0.4 to 0.9)	0.47	69.5 (64.3 to 74.7)	0.3 (-0.3 to 1.0)	0.32	68.4 (65.6 to 71.3)	0.1 (-0.2 to 0.5)	0.37
NT-proBNP	77.0 (72.7 to 81.2)	7.6 (3.6 to 11.5)	0.0001	73.9 (69.0 to 78.8)	4.9 (1.3 to 8.4)	0.007	73.9 (71.3 to 76.6)	5.7 (3.7 to 7.6)	<0.0001

Biomarker	ARIC			FRAMINGHAM			HOMAGE		
	C-index (CI 95%) clinical + biomarker	Δ c-index (CI 95%)	p-value	C-index (CI 95%) clinical + biomarker	Δ c-index (CI 95%)	p-value	C-index (CI 95%) clinical + biomarker	Δ c-index (CI 95%)	p-value
OPG	69.3 (64.4 to 74.1)	-0.1 (-1.0 to 0.8)	0.81	70.4 (65.2 to 75.6)	1.4 (-0.5 to 3.2)	0.14	69.6 (66.9 to 72.4)	1.4 (0.4 to 2.4)	0.006
OPN	69.5 (64.7 to 74.4)	0.1 (-0.7 to 1.0)	0.75	68.9 (63.6 to 74.2)	-0.2 (-1.0 to 0.7)	0.68	69.6 (66.8 to 72.4)	1.3 (0.2 to 2.4)	0.017
OSM	70.2 (65.3 to 75.0)	0.4 (-0.5 to 1.3)	0.41	72.6 (67.6 to 77.7)	3.4 (0.4 to 6.4)	0.024	68.8 (66.0 to 71.6)	0.5 (-0.1 to 1.1)	0.081
PAI	70.7 (66.0 to 75.5)	1.3 (-0.8 to 3.5)	0.21	69.2 (63.9 to 74.4)	0.1 (-0.8 to 1.0)	0.80	68.3 (65.5 to 71.1)	0.0 (-0.1 to 0.2)	0.70
PAPPA	69.5 (64.6 to 74.3)	-0.0 (-0.1 to 0.1)	0.80	69.2 (63.9 to 74.4)	-0.0 (-0.4 to 0.3)	0.90	68.7 (65.8 to 71.5)	0.4 (-0.3 to 1.0)	0.23
PAR-1	70.4 (65.6 to 75.2)	0.9 (-0.8 to 2.7)	0.28	69.3 (64.1 to 74.6)	0.1 (-0.4 to 0.7)	0.67	69.0 (66.2 to 71.8)	0.7 (-0.2 to 1.6)	0.10
PARP-1	69.9 (65.1 to 74.7)	0.5 (-0.3 to 1.3)	0.26	69.3 (64.1 to 74.6)	0.1 (-0.4 to 0.7)	0.67	68.7 (65.8 to 71.5)	0.4 (-0.2 to 1.0)	0.21
PCSK9	70.3 (65.5 to 75.1)	0.9 (-0.8 to 2.5)	0.29	69.0 (63.8 to 74.3)	-0.0 (-0.2 to 0.2)	0.93	68.6 (65.7 to 71.4)	0.3 (-0.1 to 0.7)	0.10
PDGF subunit A	72.1 (67.4 to 76.8)	2.7 (0.1 to 5.3)	0.041	69.6 (64.3 to 74.8)	0.5 (-0.8 to 1.8)	0.43	68.5 (65.7 to 71.4)	0.3 (-0.1 to 0.6)	0.14
PDGF subunit B	72.5 (67.9 to 77.2)	3.0 (0.3 to 5.8)	0.030	69.2 (64.0 to 74.5)	0.0 (-0.5 to 0.5)	0.86	68.6 (65.8 to 71.4)	0.3 (-0.2 to 0.9)	0.23
PD-L1	69.8 (65.0 to 74.7)	0.1 (-1.0 to 1.2)	0.88	69.6 (64.4 to 74.9)	0.4 (-1.1 to 2.0)	0.56	68.5 (65.6 to 71.3)	0.2 (-0.3 to 0.7)	0.43
PD-L2	69.7 (64.9 to 74.5)	0.2 (-0.7 to 1.1)	0.67	69.2 (64.0 to 74.5)	0.0 (-0.3 to 0.3)	0.83	68.9 (66.1 to 71.8)	0.7 (-0.2 to 1.5)	0.12
PECAM-1	70.6 (65.8 to 75.3)	1.2 (-0.7 to 3.0)	0.22	69.8 (64.6 to 75.1)	0.8 (-0.6 to 2.2)	0.24	68.7 (65.9 to 71.5)	0.4 (-0.1 to 1.0)	0.098
PGF	70.6 (65.8 to 75.3)	1.1 (-1.2 to 3.4)	0.36	69.4 (64.2 to 74.7)	0.2 (-1.0 to 1.5)	0.72	69.0 (66.2 to 71.8)	0.8 (-0.1 to 1.7)	0.10
PGLYRP1	69.5 (64.7 to 74.4)	0.1 (-0.5 to 0.7)	0.77	69.1 (63.8 to 74.3)	0.0 (-0.4 to 0.4)	0.92	69.2 (66.4 to 72.0)	0.9 (0.1 to 1.7)	0.031
PI3	69.4 (64.6 to 74.2)	0.0 (-1.3 to 1.3)	0.97	69.1 (63.9 to 74.4)	0.1 (-0.3 to 0.5)	0.66	68.4 (65.6 to 71.3)	0.1 (-0.2 to 0.4)	0.36
PIgR	70.8 (66.0 to 75.5)	1.3 (-1.3 to 3.8)	0.32	69.7 (64.4 to 74.9)	0.5 (-0.9 to 1.8)	0.52	68.7 (65.9 to 71.6)	0.4 (-0.2 to 1.0)	0.14
PLC	69.9 (65.1 to 74.8)	0.6 (-0.8 to 1.9)	0.41	70.9 (65.7 to 76.0)	1.8 (-0.5 to 4.2)	0.12	69.2 (66.3 to 72.0)	0.9 (0.1 to 1.7)	0.033
PON3	69.6 (64.8 to 74.5)	0.2 (-0.8 to 1.2)	0.64	69.7 (64.5 to 74.9)	0.7 (-0.8 to 2.1)	0.36	69.0 (66.2 to 71.8)	0.7 (0.0 to 1.5)	0.049
PRELP	70.6 (65.8 to 75.3)	1.1 (-0.9 to 3.1)	0.29	70.4 (65.1 to 75.6)	1.2 (-0.8 to 3.1)	0.25	68.6 (65.8 to 71.4)	0.3 (-0.3 to 1.0)	0.27
PRSS27	69.5 (64.7 to 74.3)	0.0 (-0.4 to 0.4)	0.96	71.1 (66.0 to 76.3)	1.9 (-0.3 to 4.1)	0.085	68.3 (65.4 to 71.1)	-0.0 (-0.1 to 0.1)	0.74
PRSS8	69.9 (65.1 to 74.7)	0.5 (-1.0 to 1.9)	0.53	69.2 (64.0 to 74.5)	0.0 (-0.4 to 0.4)	0.96	68.4 (65.6 to 71.3)	0.1 (-0.3 to 0.6)	0.55
PRTN3	70.1 (65.2 to 74.9)	0.7 (-0.7 to 2.0)	0.33	70.2 (65.0 to 75.4)	1.2 (-0.9 to 3.2)	0.27	69.0 (66.1 to 71.8)	0.7 (-0.1 to 1.4)	0.068
PSGL-1	69.7 (64.9 to 74.5)	0.2 (-0.8 to 1.2)	0.65	69.1 (63.8 to 74.4)	-0.1 (-0.4 to 0.2)	0.52	68.6 (65.7 to 71.4)	0.3 (-0.2 to 0.8)	0.23
PSP-D	70.8 (66.0 to 75.5)	1.4 (-0.5 to 3.3)	0.15	69.7 (64.5 to 74.9)	0.7 (-0.7 to 2.0)	0.34	69.4 (66.6 to 72.2)	1.1 (0.2 to 2.1)	0.018
PTX3	70.9 (66.1 to 75.7)	1.4 (-0.8 to 3.6)	0.20	69.6 (64.3 to 74.9)	0.4 (-1.6 to 2.3)	0.70	68.9 (66.1 to 71.7)	0.6 (-0.0 to 1.3)	0.064
RAGE	71.1 (66.4 to 75.9)	1.7 (-0.6 to 3.9)	0.14	69.7 (64.5 to 75.0)	0.5 (-0.4 to 1.5)	0.25	68.4 (65.6 to 71.2)	0.1 (-0.2 to 0.5)	0.45
RARRES2	69.7 (64.9 to 74.5)	0.3 (-0.5 to 1.2)	0.46	69.8 (64.5 to 75.0)	0.7 (-0.9 to 2.3)	0.37	69.3 (66.5 to 72.1)	1.0 (0.1 to 2.0)	0.026
REN	69.8 (65.0 to 74.6)	0.3 (-0.7 to 1.3)	0.58	70.1 (64.9 to 75.4)	0.9 (-0.7 to 2.6)	0.27	69.1 (66.3 to 71.9)	0.8 (-0.2 to 1.8)	0.10
RETN	69.4 (64.5 to 74.2)	0.0 (-0.1 to 0.1)	0.97	69.7 (64.5 to 75.0)	0.7 (-0.7 to 2.1)	0.33	69.1 (66.3 to 71.9)	0.8 (0.0 to 1.6)	0.039
SCF	70.3 (65.5 to 75.1)	0.8 (-1.0 to 2.7)	0.38	70.5 (65.3 to 75.7)	1.3 (-0.5 to 3.0)	0.15	68.3 (65.4 to 71.1)	-0.0 (-0.1 to 0.0)	0.63
SCGB3A2	69.6 (64.7 to 74.4)	0.2 (-0.4 to 0.7)	0.54	69.6 (64.4 to 74.9)	0.6 (-0.8 to 2.0)	0.39	68.4 (65.5 to 71.2)	0.1 (-0.2 to 0.4)	0.57
SELE	69.4 (64.6 to 74.3)	0.0 (-0.2 to 0.3)	0.78	69.6 (64.3 to 74.8)	0.5 (-0.6 to 1.6)	0.34	68.5 (65.7 to 71.4)	0.3 (-0.2 to 0.7)	0.23

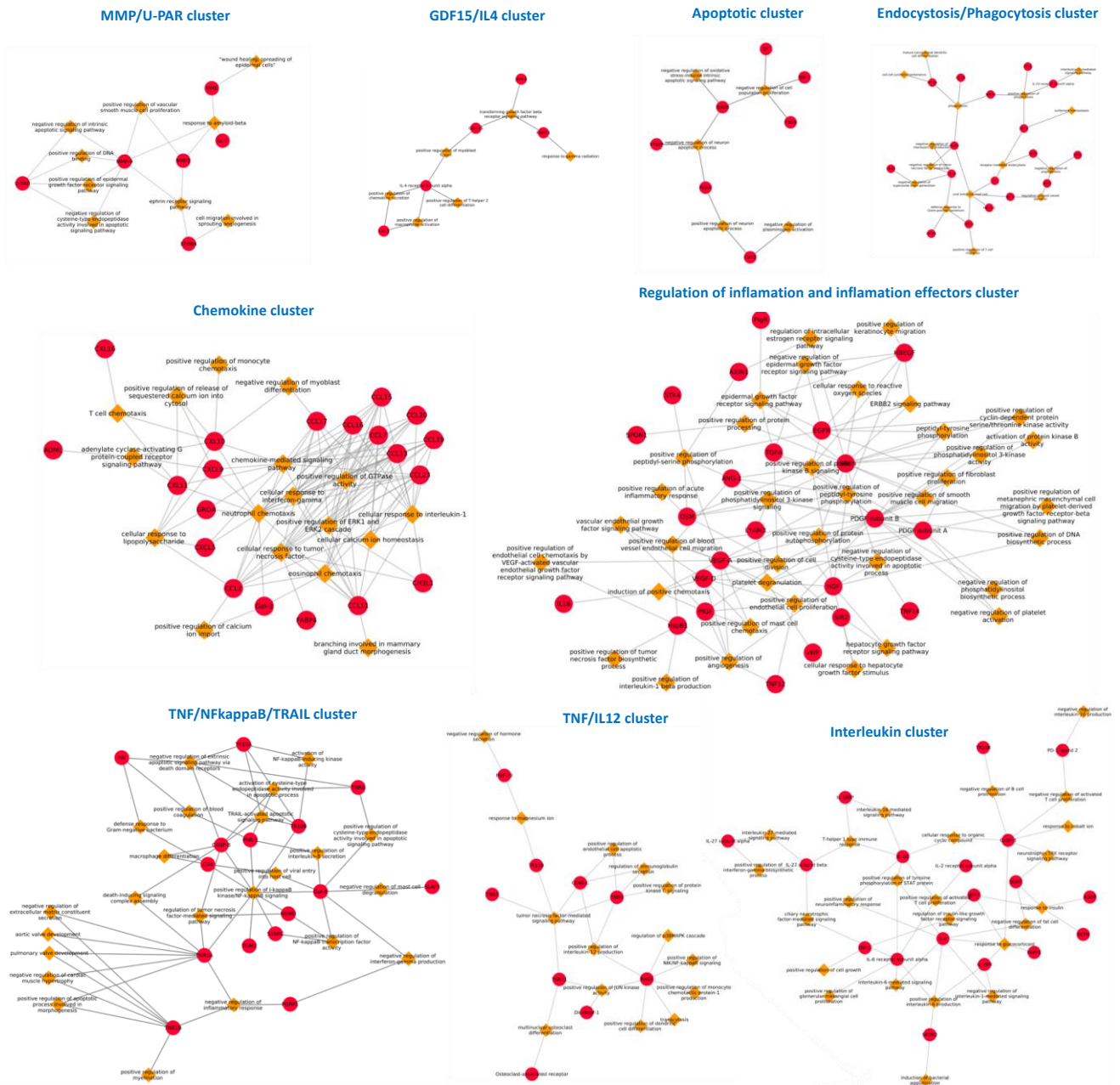
Biomarker	ARIC			FRAMINGHAM			HOMAGE		
	C-index (CI 95%) clinical + biomarker	Δ c-index (CI 95%)	p-value	C-index (CI 95%) clinical + biomarker	Δ c-index (CI 95%)	p-value	C-index (CI 95%) clinical + biomarker	Δ c-index (CI 95%)	p-value
SELP	71.1 (66.3 to 75.8)	1.7 (-0.6 to 4.0)	0.15	70.6 (65.4 to 75.8)	1.6 (-0.4 to 3.5)	0.11	68.8 (66.0 to 71.6)	0.5 (-0.0 to 1.0)	0.071
SERPINA12	69.8 (65.0 to 74.6)	0.3 (-0.6 to 1.2)	0.46	69.9 (64.7 to 75.1)	0.7 (-0.9 to 2.3)	0.41	68.3 (65.5 to 71.1)	0.0 (-0.1 to 0.2)	0.73
SHPS-1	69.5 (64.7 to 74.3)	0.1 (-0.8 to 1.0)	0.80	69.0 (63.7 to 74.3)	-0.0 (-0.6 to 0.6)	0.97	68.5 (65.6 to 71.3)	0.2 (-0.1 to 0.5)	0.21
SIRT2	71.9 (67.2 to 76.6)	2.2 (-0.3 to 4.6)	0.083	69.2 (64.0 to 74.5)	0.0 (-0.6 to 0.6)	0.97	68.5 (65.7 to 71.3)	0.2 (-0.3 to 0.7)	0.38
SLAMF1	70.2 (65.4 to 75.0)	0.5 (-1.0 to 1.9)	0.52	69.3 (64.1 to 74.6)	0.1 (-0.0 to 0.3)	0.076	68.8 (66.0 to 71.6)	0.5 (-0.2 to 1.3)	0.18
SLAMF7	69.5 (64.7 to 74.3)	0.0 (-0.1 to 0.1)	0.86	69.3 (64.0 to 74.5)	0.1 (-0.2 to 0.4)	0.65	69.5 (66.7 to 72.3)	1.2 (0.1 to 2.3)	0.035
SOD2	69.5 (64.7 to 74.4)	0.1 (-0.3 to 0.4)	0.76	69.2 (63.9 to 74.4)	-0.0 (-0.1 to 0.1)	0.57	68.9 (66.1 to 71.7)	0.6 (-0.1 to 1.3)	0.10
SORT1	69.7 (64.8 to 74.5)	0.2 (-0.7 to 1.1)	0.66	69.4 (64.2 to 74.7)	0.2 (-0.4 to 0.8)	0.44	69.3 (66.5 to 72.1)	1.0 (0.1 to 1.9)	0.033
SPON1	70.8 (66.0 to 75.5)	1.4 (-1.0 to 3.8)	0.24	70.0 (64.8 to 75.2)	1.0 (-0.9 to 2.9)	0.30	69.7 (66.9 to 72.5)	1.4 (0.4 to 2.4)	0.004
SPON2	70.6 (65.9 to 75.4)	1.2 (-1.2 to 3.5)	0.34	69.4 (64.1 to 74.6)	0.2 (-0.2 to 0.5)	0.35	69.0 (66.2 to 71.8)	0.7 (-0.2 to 1.6)	0.10
SRC	72.0 (67.3 to 76.7)	2.5 (-0.0 to 5.1)	0.053	69.3 (64.0 to 74.5)	0.1 (-0.1 to 0.2)	0.38	68.4 (65.6 to 71.2)	0.1 (-0.3 to 0.6)	0.53
ST1A1	71.3 (66.5 to 76.0)	1.5 (-0.8 to 3.8)	0.20	69.4 (64.2 to 74.7)	0.2 (-0.7 to 1.1)	0.64	68.4 (65.6 to 71.3)	0.2 (-0.2 to 0.5)	0.43
ST2	69.2 (64.3 to 74.0)	-0.2 (-1.1 to 0.7)	0.64	71.1 (66.0 to 76.2)	2.1 (-0.2 to 4.3)	0.077	69.1 (66.2 to 71.9)	0.8 (-0.0 to 1.6)	0.057
STAMPB	71.3 (66.6 to 76.1)	1.6 (-0.6 to 3.8)	0.16	69.2 (63.9 to 74.4)	-0.0 (-0.8 to 0.7)	0.96	68.4 (65.5 to 71.2)	0.1 (-0.2 to 0.4)	0.57
STK4	71.4 (66.7 to 76.2)	1.9 (-0.5 to 4.4)	0.12	69.2 (63.9 to 74.5)	0.0 (-0.3 to 0.3)	1.00	68.5 (65.6 to 71.3)	0.2 (-0.3 to 0.7)	0.38
TF	69.7 (64.8 to 74.5)	0.2 (-0.4 to 0.8)	0.57	70.5 (65.4 to 75.7)	1.3 (-0.5 to 3.2)	0.15	68.5 (65.7 to 71.4)	0.2 (-0.2 to 0.7)	0.28
TFF3	70.9 (66.2 to 75.7)	1.5 (-0.9 to 3.9)	0.21	69.8 (64.6 to 75.1)	0.8 (-0.6 to 2.2)	0.25	69.9 (67.1 to 72.7)	1.6 (0.5 to 2.7)	0.003
TFPI	69.7 (64.8 to 74.5)	0.3 (-0.8 to 1.3)	0.59	69.0 (63.7 to 74.2)	-0.1 (-0.5 to 0.3)	0.71	68.3 (65.5 to 71.2)	0.0 (-0.1 to 0.2)	0.37
TGF-alpha	71.3 (66.5 to 76.0)	1.5 (-0.7 to 3.7)	0.17	72.3 (67.2 to 77.3)	3.1 (0.2 to 6.0)	0.037	69.1 (66.3 to 71.9)	0.9 (0.1 to 1.6)	0.032
TGM2	69.8 (65.0 to 74.6)	0.3 (-0.9 to 1.5)	0.62	71.1 (65.9 to 76.2)	1.9 (-0.3 to 4.0)	0.094	69.3 (66.5 to 72.1)	1.0 (0.0 to 2.1)	0.049
THBS2	71.5 (66.8 to 76.2)	2.0 (-0.8 to 4.8)	0.16	71.8 (66.7 to 76.9)	2.6 (0.1 to 5.1)	0.042	68.7 (65.8 to 71.5)	0.4 (-0.3 to 1.1)	0.26
THPO	70.7 (66.0 to 75.5)	1.3 (-0.7 to 3.2)	0.19	69.6 (64.3 to 74.8)	0.4 (-0.5 to 1.2)	0.42	68.4 (65.5 to 71.2)	0.1 (-0.2 to 0.4)	0.54
TIE2	69.6 (64.7 to 74.4)	0.1 (-0.4 to 0.6)	0.77	69.2 (64.0 to 74.5)	0.0 (-0.5 to 0.6)	0.86	68.4 (65.5 to 71.2)	0.1 (-0.2 to 0.4)	0.44
TIMP4	69.4 (64.6 to 74.3)	0.0 (-0.1 to 0.1)	0.62	69.2 (64.0 to 74.5)	0.2 (-0.7 to 1.0)	0.65	69.1 (66.3 to 71.9)	0.8 (0.1 to 1.5)	0.028
TLT-2	69.4 (64.5 to 74.2)	-0.0 (-0.5 to 0.5)	0.98	69.2 (64.0 to 74.5)	0.2 (-0.3 to 0.7)	0.46	68.5 (65.7 to 71.3)	0.2 (-0.2 to 0.7)	0.33
TM	69.7 (64.9 to 74.6)	0.2 (-0.8 to 1.3)	0.64	70.0 (64.8 to 75.2)	0.8 (-0.4 to 1.9)	0.18	68.5 (65.7 to 71.3)	0.2 (-0.3 to 0.8)	0.39
TNFB	69.8 (65.0 to 74.6)	0.0 (-0.3 to 0.4)	0.78	69.8 (64.6 to 75.0)	0.6 (-0.5 to 1.7)	0.27	68.3 (65.4 to 71.1)	0.0 (-0.2 to 0.2)	0.88
TNF-R1	70.0 (65.2 to 74.9)	0.7 (-0.9 to 2.2)	0.40	69.4 (64.1 to 74.7)	0.4 (-1.2 to 2.0)	0.65	69.4 (66.6 to 72.2)	1.1 (0.2 to 2.1)	0.013
TNF-R2	69.9 (65.1 to 74.7)	0.5 (-1.0 to 2.0)	0.49	69.9 (64.6 to 75.1)	0.8 (-1.0 to 2.7)	0.37	69.4 (66.6 to 72.2)	1.1 (0.2 to 2.0)	0.020
TNFRSF10A	70.5 (65.7 to 75.2)	1.0 (-0.9 to 2.8)	0.31	70.0 (64.8 to 75.2)	0.8 (-0.9 to 2.5)	0.35	69.8 (67.0 to 72.6)	1.5 (0.3 to 2.7)	0.013
TNFRSF10C	69.5 (64.6 to 74.3)	0.1 (-0.3 to 0.5)	0.73	69.8 (64.5 to 75.0)	0.7 (-0.7 to 2.1)	0.31	68.3 (65.5 to 71.2)	0.1 (-0.3 to 0.4)	0.74
TNFRSF11A	70.6 (65.8 to 75.4)	1.1 (-0.6 to 2.9)	0.21	69.3 (64.0 to 74.6)	0.1 (-0.9 to 1.1)	0.85	69.4 (66.6 to 72.2)	1.2 (0.1 to 2.2)	0.033
TNFRSF13B	69.6 (64.8 to 74.5)	0.2 (-0.6 to 0.9)	0.68	69.2 (64.0 to 74.5)	0.0 (-0.1 to 0.1)	0.70	69.9 (67.2 to 72.7)	1.7 (0.5 to 2.9)	0.007



Biomarker	ARIC			FRAMINGHAM			HOMAGE		
	C-index (CI 95%) clinical + biomarker	$\Delta$ c-index (CI 95%)	p-value	C-index (CI 95%) clinical + biomarker	$\Delta$ c-index (CI 95%)	p-value	C-index (CI 95%) clinical + biomarker	$\Delta$ c-index (CI 95%)	p-value
TNFRSF14	69.5 (64.7 to 74.4)	0.1 (-0.7 to 1.0)	0.73	69.7 (64.4 to 75.0)	0.7 (-1.1 to 2.4)	0.44	69.3 (66.5 to 72.1)	1.0 (0.1 to 1.9)	0.021
TNFRSF9	70.4 (65.6 to 75.2)	0.6 (-1.0 to 2.2)	0.46	69.5 (64.3 to 74.8)	0.3 (-0.9 to 1.6)	0.62	68.8 (65.9 to 71.6)	0.5 (-0.2 to 1.2)	0.16
TNFSF13B	69.3 (64.4 to 74.1)	-0.1 (-1.3 to 1.1)	0.86	70.1 (64.9 to 75.3)	1.1 (-0.8 to 2.9)	0.25	68.5 (65.7 to 71.3)	0.2 (-0.1 to 0.6)	0.20
TNFSF14	70.2 (65.4 to 75.0)	0.5 (-0.8 to 1.7)	0.47	71.1 (66.0 to 76.2)	1.9 (-0.4 to 4.2)	0.11	68.7 (65.9 to 71.5)	0.4 (-0.2 to 1.1)	0.16
t-PA	69.4 (64.6 to 74.3)	0.0 (-0.2 to 0.2)	0.76	69.9 (64.7 to 75.1)	0.9 (-0.6 to 2.4)	0.24	68.3 (65.5 to 71.2)	0.1 (-0.1 to 0.2)	0.54
TR	69.3 (64.5 to 74.2)	-0.1 (-1.1 to 0.9)	0.87	69.5 (64.2 to 74.7)	0.4 (-1.0 to 1.9)	0.56	68.9 (66.1 to 71.8)	0.7 (-0.0 to 1.3)	0.050
TRAIL	71.1 (66.3 to 75.9)	1.3 (-0.5 to 3.2)	0.16	69.6 (64.4 to 74.8)	0.4 (-0.6 to 1.4)	0.41	68.4 (65.6 to 71.3)	0.2 (-0.3 to 0.6)	0.44
TRAIL-R2	72.9 (68.3 to 77.5)	3.4 (0.3 to 6.6)	0.031	69.4 (64.2 to 74.7)	0.2 (-1.1 to 1.5)	0.73	71.0 (68.3 to 73.8)	2.7 (1.2 to 4.3)	0.0004
TRANCE	69.8 (64.9 to 74.6)	-0.0 (-0.2 to 0.2)	0.93	69.3 (64.0 to 74.5)	0.1 (-0.3 to 0.5)	0.76	68.6 (65.7 to 71.4)	0.3 (-0.2 to 0.8)	0.26
TR-AP	71.0 (66.2 to 75.8)	1.6 (-0.5 to 3.7)	0.14	69.1 (63.8 to 74.4)	0.1 (-0.2 to 0.3)	0.61	68.3 (65.5 to 71.1)	0.0 (-0.2 to 0.3)	0.84
TWEAK	70.9 (66.2 to 75.7)	1.2 (-1.1 to 3.4)	0.32	71.5 (66.4 to 76.6)	2.3 (0.0 to 4.6)	0.046	69.1 (66.3 to 71.9)	0.9 (-0.2 to 1.9)	0.097
uPA	69.4 (64.6 to 74.3)	0.1 (-0.4 to 0.5)	0.82	69.1 (63.8 to 74.3)	0.0 (-0.3 to 0.3)	0.92	68.5 (65.6 to 71.3)	0.2 (-0.2 to 0.5)	0.29
U-PAR	70.4 (65.6 to 75.2)	1.0 (-1.2 to 3.1)	0.36	71.6 (66.4 to 76.7)	2.5 (-0.3 to 5.4)	0.077	70.2 (67.4 to 73.0)	2.0 (0.8 to 3.2)	0.001
VEGFA	70.1 (65.3 to 74.9)	0.3 (-0.9 to 1.6)	0.58	70.6 (65.5 to 75.8)	1.4 (-0.8 to 3.7)	0.21	69.4 (66.7 to 72.2)	1.2 (0.2 to 2.1)	0.017
VEGFD	70.5 (65.7 to 75.3)	1.0 (-1.2 to 3.1)	0.36	69.2 (63.9 to 74.4)	-0.0 (-0.1 to 0.1)	0.49	69.9 (67.1 to 72.7)	1.6 (0.5 to 2.7)	0.003
VSIG2	69.8 (65.0 to 74.6)	0.3 (-0.5 to 1.1)	0.44	69.2 (64.0 to 74.5)	0.0 (-0.1 to 0.2)	0.64	68.6 (65.8 to 71.5)	0.4 (-0.3 to 1.1)	0.32
vWF	69.4 (64.6 to 74.3)	0.0 (-0.6 to 0.6)	0.94	69.4 (64.2 to 74.7)	0.4 (-1.0 to 1.9)	0.58	69.0 (66.2 to 71.8)	0.7 (0.0 to 1.5)	0.046
XCL1	69.6 (64.8 to 74.4)	0.1 (-0.6 to 0.8)	0.76	69.8 (64.6 to 75.0)	0.6 (-1.2 to 2.4)	0.51	68.6 (65.8 to 71.4)	0.3 (-0.2 to 0.9)	0.22

Protein names are available in Supplemental Table 1.

**Supplemental Figure 1: GO terms complex network analysis identifying 9 “key” mechanistic clusters related to HF occurrence.**



**Legend :** Overrepresented GO terms are represented by orange diamonds and biomarkers by red ellipses. Protein names are available in Supplemental Table 1.