

Table S12 Comparison of genes identified from causal inference and CTS-TWAS analysis

a. Comparison of genes identified from causal inference and CTS-TWAS analysis with adjusting for multiple testing correction(FDR<=0.05)

Tissue	Disorder	Celltype	No. of causal genes	No. of TWAS genes	No. of novel genes from causal inference	No. of novel genes from TWAS	No. of common genes
Frontal cortex	Depression	Astros	3	0	3	0	0
Frontal cortex	Depression	Ex	2	0	2	0	0
Frontal cortex	Depression	Inhib	4	0	4	0	0
Frontal cortex	Depression	Micro_Macro	3	0	3	0	0
Frontal cortex	Depression	Oligos	4	0	4	0	0
Frontal cortex	Depression	OPCs	2	0	2	0	0
Frontal cortex	Anxiety	Astros	0	0	0	0	0
Frontal cortex	Anxiety	Ex	2	0	2	0	0
Frontal cortex	Anxiety	Inhib	3	0	3	0	0
Frontal cortex	Anxiety	Micro_Macro	0	0	0	0	0
Frontal cortex	Anxiety	Oligos	2	0	2	0	0
Frontal cortex	Anxiety	OPCs	2	0	2	0	0
Frontal cortex	Bipolar	Astros	1	0	1	0	0
Frontal cortex	Bipolar	Ex	2	0	2	0	0
Frontal cortex	Bipolar	Inhib	1	0	1	0	0
Frontal cortex	Bipolar	Micro_Macro	1	0	1	0	0
Frontal cortex	Bipolar	Oligos	1	0	1	0	0
Frontal cortex	Bipolar	OPCs	1	0	1	0	0
Frontal cortex	Psychosis	Astros	1	0	1	0	0
Frontal cortex	Psychosis	Ex	2	0	2	0	0
Frontal cortex	Psychosis	Inhib	0	0	0	0	0
Frontal cortex	Psychosis	Micro_Macro	2	0	2	0	0
Frontal cortex	Psychosis	Oligos	1	0	1	0	0
Frontal cortex	Psychosis	OPCs	1	0	1	0	0
Pancreas	Prediabetes	acinar_cell	1	0	1	0	0
Pancreas	Prediabetes	alpha_cell	6	0	6	0	0
Pancreas	Prediabetes	beta_cell	3	0	3	0	0
Pancreas	Prediabetes	delta_cell	3	0	3	0	0
Pancreas	Prediabetes	duct_epithelial_cell	4	0	4	0	0
Pancreas	Prediabetes	endothelial_cell	5	0	5	0	0
Pancreas	Prediabetes	epsilon_cell	6	0	6	0	0
Pancreas	Prediabetes	leukocyte	5	0	5	0	0
Pancreas	Prediabetes	mesenchymal_cell	4	0	4	0	0
Pancreas	Prediabetes	PP_cell	6	0	6	0	0
Pancreas	T2DM	acinar_cell	36	19	21	4	15
Pancreas	T2DM	alpha_cell	36	56	7	27	29
Pancreas	T2DM	beta_cell	21	54	8	41	13
Pancreas	T2DM	delta_cell	23	37	6	20	17
Pancreas	T2DM	duct_epithelial_cell	38	37	14	13	24
Pancreas	T2DM	endothelial_cell	35	30	13	8	22
Pancreas	T2DM	epsilon_cell	30	89	5	64	25
Pancreas	T2DM	leukocyte	32	42	10	20	22
Pancreas	T2DM	mesenchymal_cell	24	36	9	21	15
Pancreas	T2DM	PP_cell	28	105	3	80	25
Pancreas	T2DM_admission	acinar_cell	25	3	22	0	3
Pancreas	T2DM_admission	alpha_cell	29	16	18	5	11
Pancreas	T2DM_admission	beta_cell	15	26	7	18	8
Pancreas	T2DM_admission	delta_cell	24	10	18	4	6
Pancreas	T2DM_admission	duct_epithelial_cell	24	4	20	0	4
Pancreas	T2DM_admission	endothelial_cell	27	4	23	0	4
Pancreas	T2DM_admission	epsilon_cell	23	35	11	23	12
Pancreas	T2DM_admission	leukocyte	15	12	7	4	8
Pancreas	T2DM_admission	mesenchymal_cell	16	10	8	2	8
Pancreas	T2DM_admission	PP_cell	19	78	5	64	14
Pancreas	T2DM_insulin	acinar_cell	9	0	9	0	0
Pancreas	T2DM_insulin	alpha_cell	8	0	8	0	0
Pancreas	T2DM_insulin	beta_cell	7	1	6	0	1
Pancreas	T2DM_insulin	delta_cell	7	0	7	0	0
Pancreas	T2DM_insulin	duct_epithelial_cell	10	0	10	0	0
Pancreas	T2DM_insulin	endothelial_cell	11	0	11	0	0
Pancreas	T2DM_insulin	epsilon_cell	10	0	10	0	0
Pancreas	T2DM_insulin	leukocyte	8	0	8	0	0
Pancreas	T2DM_insulin	mesenchymal_cell	9	0	9	0	0
Pancreas	T2DM_insulin	PP_cell	6	0	6	0	0
SAT	Obesity	adipocyte	33	64	3	34	30
SAT	Obesity	ASPC	36	52	8	24	28
SAT	Obesity	b_cell	35	54	5	24	30
SAT	Obesity	dendritic_cell	29	24	11	6	18
SAT	Obesity	endothelial	29	40	8	19	21
SAT	Obesity	LEC	37	39	16	18	21
SAT	Obesity	macrophage	28	51	6	29	22
SAT	Obesity	mast_cell	34	44	9	19	25
SAT	Obesity	monocyte	25	60	7	42	18
SAT	Obesity	neutrophil	33	46	7	20	26
SAT	Obesity	nk_cell	30	47	7	24	23
SAT	Obesity	pericyte	38	53	10	25	28
SAT	CAD	adipocyte	7	0	7	0	0
SAT	CAD	ASPC	6	0	6	0	0
SAT	CAD	b_cell	5	0	5	0	0
SAT	CAD	dendritic_cell	7	0	7	0	0
SAT	CAD	endothelial	7	0	7	0	0
SAT	CAD	LEC	4	0	4	0	0
SAT	CAD	macrophage	5	0	5	0	0
SAT	CAD	mast_cell	7	0	7	0	0
SAT	CAD	monocyte	6	0	6	0	0
SAT	CAD	neutrophil	5	0	5	0	0
SAT	CAD	nk_cell	5	0	5	0	0
SAT	CAD	pericyte	7	0	7	0	0

SAT	T2DM	adipocyte	12	0	12	0	0
SAT	T2DM	ASPC	6	0	6	0	0
SAT	T2DM	b_cell	7	0	7	0	0
SAT	T2DM	dendritic_cell	3	0	3	0	0
SAT	T2DM	endothelial	5	0	5	0	0
SAT	T2DM	LEC	4	0	4	0	0
SAT	T2DM	macrophage	4	0	4	0	0
SAT	T2DM	mast_cell	2	0	2	0	0
SAT	T2DM	monocyte	4	0	4	0	0
SAT	T2DM	neutrophil	10	0	10	0	0
SAT	T2DM	nk_cell	5	0	5	0	0
SAT	T2DM	pericyte	8	0	8	0	0
SAT	HTN	adipocyte	9	0	9	0	0
SAT	HTN	ASPC	6	0	6	0	0
SAT	HTN	b_cell	5	0	5	0	0
SAT	HTN	dendritic_cell	4	0	4	0	0
SAT	HTN	endothelial	5	4	4	3	1
SAT	HTN	LEC	5	1	4	0	1
SAT	HTN	macrophage	7	0	7	0	0
SAT	HTN	mast_cell	8	0	8	0	0
SAT	HTN	monocyte	5	0	5	0	0
SAT	HTN	neutrophil	5	0	5	0	0
SAT	HTN	nk_cell	7	1	6	0	1
SAT	HTN	pericyte	5	1	4	0	1
SAT	Stroke	adipocyte	4	0	4	0	0
SAT	Stroke	ASPC	5	0	5	0	0
SAT	Stroke	b_cell	6	0	6	0	0
SAT	Stroke	dendritic_cell	3	0	3	0	0
SAT	Stroke	endothelial	3	0	3	0	0
SAT	Stroke	LEC	1	0	1	0	0
SAT	Stroke	macrophage	5	0	5	0	0
SAT	Stroke	mast_cell	3	0	3	0	0
SAT	Stroke	monocyte	1	0	1	0	0
SAT	Stroke	neutrophil	1	0	1	0	0
SAT	Stroke	nk_cell	4	0	4	0	0
SAT	Stroke	pericyte	4	0	4	0	0
SAT	Heart_Failure	adipocyte	2	0	2	0	0
SAT	Heart_Failure	ASPC	3	0	3	0	0
SAT	Heart_Failure	b_cell	7	0	7	0	0
SAT	Heart_Failure	dendritic_cell	5	0	5	0	0
SAT	Heart_Failure	endothelial	5	0	5	0	0
SAT	Heart_Failure	LEC	5	0	5	0	0
SAT	Heart_Failure	macrophage	5	0	5	0	0
SAT	Heart_Failure	mast_cell	7	0	7	0	0
SAT	Heart_Failure	monocyte	3	0	3	0	0
SAT	Heart_Failure	neutrophil	4	0	4	0	0
SAT	Heart_Failure	nk_cell	5	1	4	0	1
SAT	Heart_Failure	pericyte	5	0	5	0	0
VAT	Obesity	adipocyte	25	6	20	1	5
VAT	Obesity	ASPC	24	3	21	0	3
VAT	Obesity	b_cell	17	7	11	1	6
VAT	Obesity	dendritic_cell	28	11	18	1	10
VAT	Obesity	endometrium	17	0	17	0	0
VAT	Obesity	endothelial	22	10	14	2	8
VAT	Obesity	LEC	28	0	28	0	0
VAT	Obesity	macrophage	19	5	14	0	5
VAT	Obesity	mast_cell	24	13	15	4	9
VAT	Obesity	mesothelium	17	0	17	0	0
VAT	Obesity	monocyte	23	17	11	5	12
VAT	Obesity	neutrophil	25	9	17	1	8
VAT	Obesity	nk_cell	27	20	12	5	15
VAT	Obesity	pericyte	18	9	9	0	9
VAT	Obesity	SMC	20	21	7	8	13
VAT	Obesity	t_cell	23	4	19	0	4
VAT	CAD	adipocyte	6	0	6	0	0
VAT	CAD	ASPC	3	0	3	0	0
VAT	CAD	b_cell	5	0	5	0	0
VAT	CAD	dendritic_cell	5	0	5	0	0
VAT	CAD	endometrium	5	0	5	0	0
VAT	CAD	endothelial	5	0	5	0	0
VAT	CAD	LEC	4	0	4	0	0
VAT	CAD	macrophage	1	0	1	0	0
VAT	CAD	mast_cell	4	0	4	0	0
VAT	CAD	mesothelium	5	0	5	0	0
VAT	CAD	monocyte	8	0	8	0	0
VAT	CAD	neutrophil	5	0	5	0	0
VAT	CAD	nk_cell	5	0	5	0	0
VAT	CAD	pericyte	7	0	7	0	0
VAT	CAD	SMC	4	0	4	0	0
VAT	CAD	t_cell	8	0	8	0	0
VAT	T2DM	adipocyte	5	0	5	0	0
VAT	T2DM	ASPC	4	0	4	0	0
VAT	T2DM	b_cell	8	0	8	0	0
VAT	T2DM	dendritic_cell	5	0	5	0	0
VAT	T2DM	endometrium	5	0	5	0	0
VAT	T2DM	endothelial	8	0	8	0	0
VAT	T2DM	LEC	5	0	5	0	0
VAT	T2DM	macrophage	5	0	5	0	0
VAT	T2DM	mast_cell	7	0	7	0	0
VAT	T2DM	mesothelium	5	0	5	0	0
VAT	T2DM	monocyte	5	0	5	0	0

VAT	T2DM	neutrophil	7	0	7	0	0
VAT	T2DM	nk_cell	7	0	7	0	0
VAT	T2DM	pericyte	5	0	5	0	0
VAT	T2DM	SMC	5	0	5	0	0
VAT	T2DM	t_cell	5	0	5	0	0
VAT	HTN	adipocyte	3	0	3	0	0
VAT	HTN	ASPC	9	0	9	0	0
VAT	HTN	b_cell	3	0	3	0	0
VAT	HTN	dendritic_cell	2	0	2	0	0
VAT	HTN	endometrium	7	0	7	0	0
VAT	HTN	endothelial	5	0	5	0	0
VAT	HTN	LEC	4	0	4	0	0
VAT	HTN	macrophage	6	0	6	0	0
VAT	HTN	mast_cell	4	0	4	0	0
VAT	HTN	mesothelium	2	0	2	0	0
VAT	HTN	monocyte	4	0	4	0	0
VAT	HTN	neutrophil	4	0	4	0	0
VAT	HTN	nk_cell	4	0	4	0	0
VAT	HTN	pericyte	3	1	2	0	1
VAT	HTN	SMC	7	0	7	0	0
VAT	HTN	t_cell	6	0	6	0	0
VAT	Stroke	adipocyte	4	0	4	0	0
VAT	Stroke	ASPC	5	0	5	0	0
VAT	Stroke	b_cell	6	0	6	0	0
VAT	Stroke	dendritic_cell	3	0	3	0	0
VAT	Stroke	endometrium	5	0	5	0	0
VAT	Stroke	endothelial	2	0	2	0	0
VAT	Stroke	LEC	4	0	4	0	0
VAT	Stroke	macrophage	3	0	3	0	0
VAT	Stroke	mast_cell	4	0	4	0	0
VAT	Stroke	mesothelium	4	0	4	0	0
VAT	Stroke	monocyte	5	0	5	0	0
VAT	Stroke	neutrophil	5	0	5	0	0
VAT	Stroke	nk_cell	6	0	6	0	0
VAT	Stroke	pericyte	5	0	5	0	0
VAT	Stroke	SMC	7	0	7	0	0
VAT	Stroke	t_cell	6	0	6	0	0
VAT	Heart_Failure	adipocyte	1	0	1	0	0
VAT	Heart_Failure	ASPC	6	0	6	0	0
VAT	Heart_Failure	b_cell	5	0	5	0	0
VAT	Heart_Failure	dendritic_cell	8	0	8	0	0
VAT	Heart_Failure	endometrium	9	0	9	0	0
VAT	Heart_Failure	endothelial	4	0	4	0	0
VAT	Heart_Failure	LEC	3	0	3	0	0
VAT	Heart_Failure	macrophage	4	0	4	0	0
VAT	Heart_Failure	mast_cell	3	0	3	0	0
VAT	Heart_Failure	mesothelium	4	0	4	0	0
VAT	Heart_Failure	monocyte	6	0	6	0	0
VAT	Heart_Failure	neutrophil	8	0	8	0	0
VAT	Heart_Failure	nk_cell	2	0	2	0	0
VAT	Heart_Failure	pericyte	3	0	3	0	0
VAT	Heart_Failure	SMC	5	0	5	0	0
VAT	Heart_Failure	t_cell	3	0	3	0	0

b. Comparison of genes identified from causal inference and CTS-TWAS analysis with adjusting for multiple testing correction(FDR<=0.1)

Tissue	Disorder	Celltype	No. of causal genes	No. of TWAS genes	No. of novel genes from causal inference	No. of novel genes from TWAS	No. of common genes
Frontal cortex	Depression	Astros	3	0	3	0	0
Frontal cortex	Depression	Ex	2	0	2	0	0
Frontal cortex	Depression	Inhib	4	0	4	0	0
Frontal cortex	Depression	Micro_Macro	3	0	3	0	0
Frontal cortex	Depression	Oligos	4	0	4	0	0
Frontal cortex	Depression	OPCs	2	0	2	0	0
Frontal cortex	Anxiety	Astros	0	0	0	0	0
Frontal cortex	Anxiety	Ex	2	0	2	0	0
Frontal cortex	Anxiety	Inhib	3	0	3	0	0
Frontal cortex	Anxiety	Micro_Macro	0	0	0	0	0
Frontal cortex	Anxiety	Oligos	2	0	2	0	0
Frontal cortex	Anxiety	OPCs	2	0	2	0	0
Frontal cortex	Bipolar	Astros	1	0	1	0	0
Frontal cortex	Bipolar	Ex	2	0	2	0	0
Frontal cortex	Bipolar	Inhib	1	0	1	0	0
Frontal cortex	Bipolar	Micro_Macro	1	0	1	0	0
Frontal cortex	Bipolar	Oligos	1	0	1	0	0
Frontal cortex	Bipolar	OPCs	1	0	1	0	0
Frontal cortex	Psychosis	Astros	1	0	1	0	0
Frontal cortex	Psychosis	Ex	2	0	2	0	0
Frontal cortex	Psychosis	Inhib	0	0	0	0	0
Frontal cortex	Psychosis	Micro_Macro	2	0	2	0	0
Frontal cortex	Psychosis	Oligos	1	0	1	0	0
Frontal cortex	Psychosis	OPCs	1	0	1	0	0
Pancreas	Prediabetes	acinar_cell	1	0	1	0	0
Pancreas	Prediabetes	alpha_cell	6	0	6	0	0
Pancreas	Prediabetes	beta_cell	3	0	3	0	0
Pancreas	Prediabetes	delta_cell	3	0	3	0	0
Pancreas	Prediabetes	duct_epithelial_cell	4	0	4	0	0
Pancreas	Prediabetes	endothelial_cell	5	0	5	0	0
Pancreas	Prediabetes	epsilon_cell	6	0	6	0	0
Pancreas	Prediabetes	leukocyte	5	0	5	0	0
Pancreas	Prediabetes	mesenchymal_cell	4	0	4	0	0
Pancreas	Prediabetes	PP_cell	6	0	6	0	0
Pancreas	T2DM	acinar_cell	36	60	8	32	28
Pancreas	T2DM	alpha_cell	36	101	1	66	35
Pancreas	T2DM	beta_cell	21	111	1	91	20
Pancreas	T2DM	delta_cell	23	87	2	66	21
Pancreas	T2DM	duct_epithelial_cell	38	62	7	31	31
Pancreas	T2DM	endothelial_cell	35	52	7	24	28
Pancreas	T2DM	epsilon_cell	30	165	2	137	28
Pancreas	T2DM	leukocyte	32	82	5	55	27
Pancreas	T2DM	mesenchymal_cell	24	78	4	58	20
Pancreas	T2DM	PP_cell	28	203	1	176	27
Pancreas	T2DM_admission	acinar_cell	25	17	15	7	10
Pancreas	T2DM_admission	alpha_cell	29	67	10	48	19
Pancreas	T2DM_admission	beta_cell	15	81	4	70	11
Pancreas	T2DM_admission	delta_cell	24	58	7	41	17
Pancreas	T2DM_admission	duct_epithelial_cell	24	18	12	6	12
Pancreas	T2DM_admission	endothelial_cell	27	27	9	9	18
Pancreas	T2DM_admission	epsilon_cell	23	92	4	73	19
Pancreas	T2DM_admission	leukocyte	15	29	5	19	10
Pancreas	T2DM_admission	mesenchymal_cell	16	14	7	5	9
Pancreas	T2DM_admission	PP_cell	19	163	2	146	17
Pancreas	T2DM_insulin	acinar_cell	9	0	9	0	0
Pancreas	T2DM_insulin	alpha_cell	8	0	8	0	0
Pancreas	T2DM_insulin	beta_cell	7	1	6	0	1
Pancreas	T2DM_insulin	delta_cell	7	0	7	0	0
Pancreas	T2DM_insulin	duct_epithelial_cell	10	0	10	0	0
Pancreas	T2DM_insulin	endothelial_cell	11	0	11	0	0
Pancreas	T2DM_insulin	epsilon_cell	10	0	10	0	0
Pancreas	T2DM_insulin	leukocyte	8	0	8	0	0
Pancreas	T2DM_insulin	mesenchymal_cell	9	0	9	0	0
Pancreas	T2DM_insulin	PP_cell	6	0	6	0	0
SAT	Obesity	adipocyte	33	85	1	53	32
SAT	Obesity	ASPC	36	85	3	52	33
SAT	Obesity	b_cell	35	88	1	54	34
SAT	Obesity	dendritic_cell	29	53	4	28	25
SAT	Obesity	endothelial	29	77	4	52	25
SAT	Obesity	LEC	37	64	8	35	29
SAT	Obesity	macrophage	28	67	5	44	23
SAT	Obesity	mast_cell	34	99	2	67	32
SAT	Obesity	monocyte	25	84	5	64	20
SAT	Obesity	neutrophil	33	76	2	45	31
SAT	Obesity	nk_cell	30	78	4	52	26
SAT	Obesity	pericyte	38	73	7	42	31
SAT	CAD	adipocyte	7	0	7	0	0
SAT	CAD	ASPC	6	0	6	0	0
SAT	CAD	b_cell	5	0	5	0	0
SAT	CAD	dendritic_cell	7	0	7	0	0
SAT	CAD	endothelial	7	0	7	0	0
SAT	CAD	LEC	4	0	4	0	0
SAT	CAD	macrophage	5	0	5	0	0
SAT	CAD	mast_cell	7	0	7	0	0
SAT	CAD	monocyte	6	0	6	0	0
SAT	CAD	neutrophil	5	0	5	0	0
SAT	CAD	nk_cell	5	0	5	0	0
SAT	CAD	pericyte	7	0	7	0	0
SAT	T2DM	adipocyte	12	1	11	0	1

SAT	T2DM	ASPC	6	0	6	0	0
SAT	T2DM	b_cell	7	0	7	0	0
SAT	T2DM	dendritic_cell	3	0	3	0	0
SAT	T2DM	endothelial	5	0	5	0	0
SAT	T2DM	LEC	4	0	4	0	0
SAT	T2DM	macrophage	4	0	4	0	0
SAT	T2DM	mast_cell	2	0	2	0	0
SAT	T2DM	monocyte	4	0	4	0	0
SAT	T2DM	neutrophil	10	0	10	0	0
SAT	T2DM	nk_cell	5	0	5	0	0
SAT	T2DM	pericyte	8	0	8	0	0
SAT	HTN	adipocyte	9	0	9	0	0
SAT	HTN	ASPC	6	2	5	1	1
SAT	HTN	b_cell	5	0	5	0	0
SAT	HTN	dendritic_cell	4	0	4	0	0
SAT	HTN	endothelial	5	24	3	22	2
SAT	HTN	LEC	5	1	4	0	1
SAT	HTN	macrophage	7	0	7	0	0
SAT	HTN	mast_cell	8	1	7	0	1
SAT	HTN	monocyte	5	0	5	0	0
SAT	HTN	neutrophil	5	0	5	0	0
SAT	HTN	nk_cell	7	1	6	0	1
SAT	HTN	pericyte	5	1	4	0	1
SAT	Stroke	adipocyte	4	0	4	0	0
SAT	Stroke	ASPC	5	0	5	0	0
SAT	Stroke	b_cell	6	0	6	0	0
SAT	Stroke	dendritic_cell	3	0	3	0	0
SAT	Stroke	endothelial	3	0	3	0	0
SAT	Stroke	LEC	1	0	1	0	0
SAT	Stroke	macrophage	5	0	5	0	0
SAT	Stroke	mast_cell	3	0	3	0	0
SAT	Stroke	monocyte	1	0	1	0	0
SAT	Stroke	neutrophil	1	0	1	0	0
SAT	Stroke	nk_cell	4	0	4	0	0
SAT	Stroke	pericyte	4	0	4	0	0
SAT	Heart_Failure	adipocyte	2	0	2	0	0
SAT	Heart_Failure	ASPC	3	0	3	0	0
SAT	Heart_Failure	b_cell	7	0	7	0	0
SAT	Heart_Failure	dendritic_cell	5	0	5	0	0
SAT	Heart_Failure	endothelial	5	0	5	0	0
SAT	Heart_Failure	LEC	5	0	5	0	0
SAT	Heart_Failure	macrophage	5	0	5	0	0
SAT	Heart_Failure	mast_cell	7	0	7	0	0
SAT	Heart_Failure	monocyte	3	0	3	0	0
SAT	Heart_Failure	neutrophil	4	0	4	0	0
SAT	Heart_Failure	nk_cell	5	1	4	0	1
SAT	Heart_Failure	pericyte	5	0	5	0	0
VAT	Obesity	adipocyte	25	15	14	4	11
VAT	Obesity	ASPC	24	12	13	1	11
VAT	Obesity	b_cell	17	10	9	2	8
VAT	Obesity	dendritic_cell	28	29	7	8	21
VAT	Obesity	endometrium	17	3	14	0	3
VAT	Obesity	endothelial	22	10	14	2	8
VAT	Obesity	LEC	28	2	26	0	2
VAT	Obesity	macrophage	19	5	14	0	5
VAT	Obesity	mast_cell	24	26	10	12	14
VAT	Obesity	mesothelium	17	8	10	1	7
VAT	Obesity	monocyte	23	37	4	18	19
VAT	Obesity	neutrophil	25	17	14	6	11
VAT	Obesity	nk_cell	27	37	9	19	18
VAT	Obesity	pericyte	18	19	6	7	12
VAT	Obesity	SMC	20	33	3	16	17
VAT	Obesity	t_cell	23	5	18	0	5
VAT	CAD	adipocyte	6	0	6	0	0
VAT	CAD	ASPC	3	0	3	0	0
VAT	CAD	b_cell	5	0	5	0	0
VAT	CAD	dendritic_cell	5	0	5	0	0
VAT	CAD	endometrium	5	0	5	0	0
VAT	CAD	endothelial	5	0	5	0	0
VAT	CAD	LEC	4	0	4	0	0
VAT	CAD	macrophage	1	0	1	0	0
VAT	CAD	mast_cell	4	0	4	0	0
VAT	CAD	mesothelium	5	0	5	0	0
VAT	CAD	monocyte	8	0	8	0	0
VAT	CAD	neutrophil	5	0	5	0	0
VAT	CAD	nk_cell	5	0	5	0	0
VAT	CAD	pericyte	7	0	7	0	0
VAT	CAD	SMC	4	0	4	0	0
VAT	CAD	t_cell	8	0	8	0	0
VAT	T2DM	adipocyte	5	0	5	0	0
VAT	T2DM	ASPC	4	0	4	0	0
VAT	T2DM	b_cell	8	1	7	0	1
VAT	T2DM	dendritic_cell	5	0	5	0	0
VAT	T2DM	endometrium	5	0	5	0	0
VAT	T2DM	endothelial	8	0	8	0	0
VAT	T2DM	LEC	5	0	5	0	0
VAT	T2DM	macrophage	5	0	5	0	0
VAT	T2DM	mast_cell	7	0	7	0	0
VAT	T2DM	mesothelium	5	0	5	0	0
VAT	T2DM	monocyte	5	0	5	0	0
VAT	T2DM	neutrophil	7	0	7	0	0

VAT	T2DM	nk_cell	7	0	7	0	0
VAT	T2DM	pericyte	5	0	5	0	0
VAT	T2DM	SMC	5	0	5	0	0
VAT	T2DM	t_cell	5	0	5	0	0
VAT	HTN	adipocyte	3	0	3	0	0
VAT	HTN	ASPC	9	0	9	0	0
VAT	HTN	b_cell	3	0	3	0	0
VAT	HTN	dendritic_cell	2	0	2	0	0
VAT	HTN	endometrium	7	0	7	0	0
VAT	HTN	endothelial	5	0	5	0	0
VAT	HTN	LEC	4	0	4	0	0
VAT	HTN	macrophage	6	0	6	0	0
VAT	HTN	mast_cell	4	0	4	0	0
VAT	HTN	mesothelium	2	0	2	0	0
VAT	HTN	monocyte	4	0	4	0	0
VAT	HTN	neutrophil	4	0	4	0	0
VAT	HTN	nk_cell	4	0	4	0	0
VAT	HTN	pericyte	3	1	2	0	1
VAT	HTN	SMC	7	0	7	0	0
VAT	HTN	t_cell	6	0	6	0	0
VAT	Stroke	adipocyte	4	0	4	0	0
VAT	Stroke	ASPC	5	1	5	1	0
VAT	Stroke	b_cell	6	0	6	0	0
VAT	Stroke	dendritic_cell	3	0	3	0	0
VAT	Stroke	endometrium	5	0	5	0	0
VAT	Stroke	endothelial	2	0	2	0	0
VAT	Stroke	LEC	4	0	4	0	0
VAT	Stroke	macrophage	3	0	3	0	0
VAT	Stroke	mast_cell	4	0	4	0	0
VAT	Stroke	mesothelium	4	0	4	0	0
VAT	Stroke	monocyte	5	0	5	0	0
VAT	Stroke	neutrophil	5	0	5	0	0
VAT	Stroke	nk_cell	6	0	6	0	0
VAT	Stroke	pericyte	5	0	5	0	0
VAT	Stroke	SMC	7	0	7	0	0
VAT	Stroke	t_cell	6	0	6	0	0
VAT	Heart_Failure	adipocyte	1	0	1	0	0
VAT	Heart_Failure	ASPC	6	0	6	0	0
VAT	Heart_Failure	b_cell	5	0	5	0	0
VAT	Heart_Failure	dendritic_cell	8	0	8	0	0
VAT	Heart_Failure	endometrium	9	0	9	0	0
VAT	Heart_Failure	endothelial	4	0	4	0	0
VAT	Heart_Failure	LEC	3	0	3	0	0
VAT	Heart_Failure	macrophage	4	0	4	0	0
VAT	Heart_Failure	mast_cell	3	0	3	0	0
VAT	Heart_Failure	mesothelium	4	0	4	0	0
VAT	Heart_Failure	monocyte	6	0	6	0	0
VAT	Heart_Failure	neutrophil	8	0	8	0	0
VAT	Heart_Failure	nk_cell	2	0	2	0	0
VAT	Heart_Failure	pericyte	3	0	3	0	0
VAT	Heart_Failure	SMC	5	0	5	0	0
VAT	Heart_Failure	t_cell	3	0	3	0	0