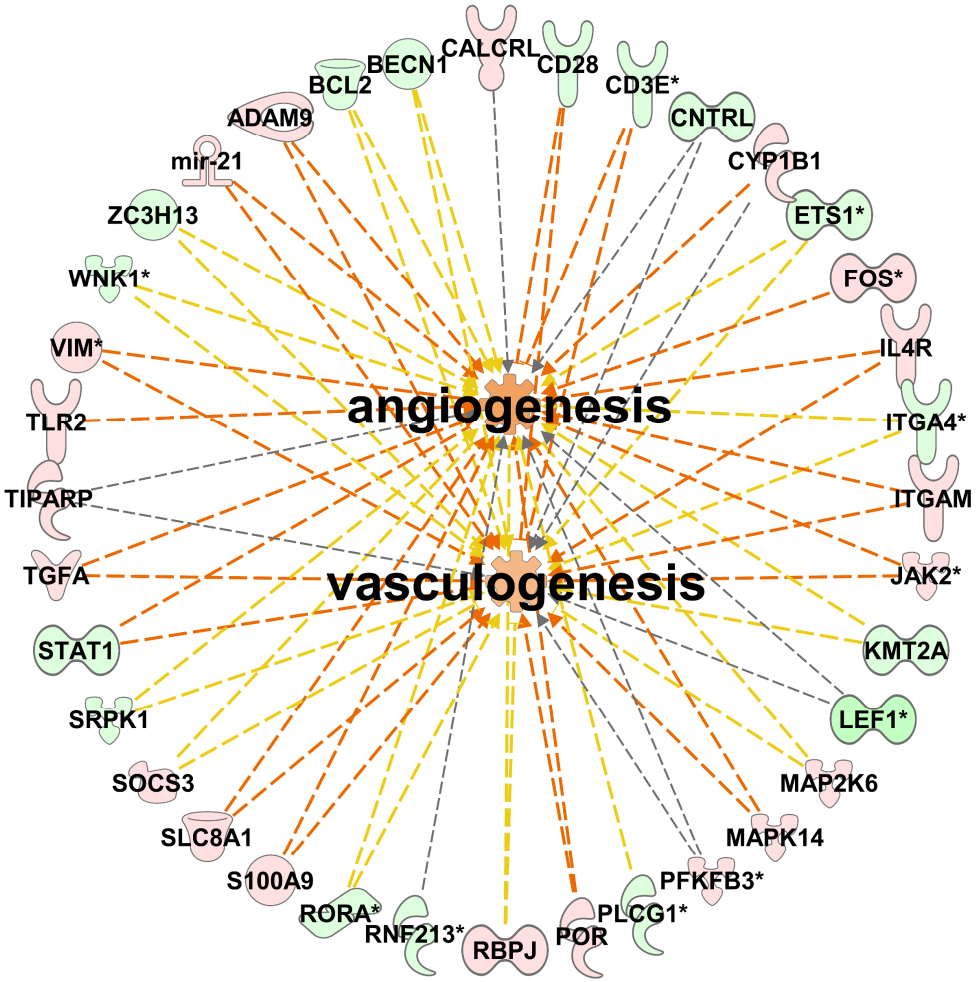
Figure S1.

A. Intracerebral Hemorrhage



B. Ischemic Stroke

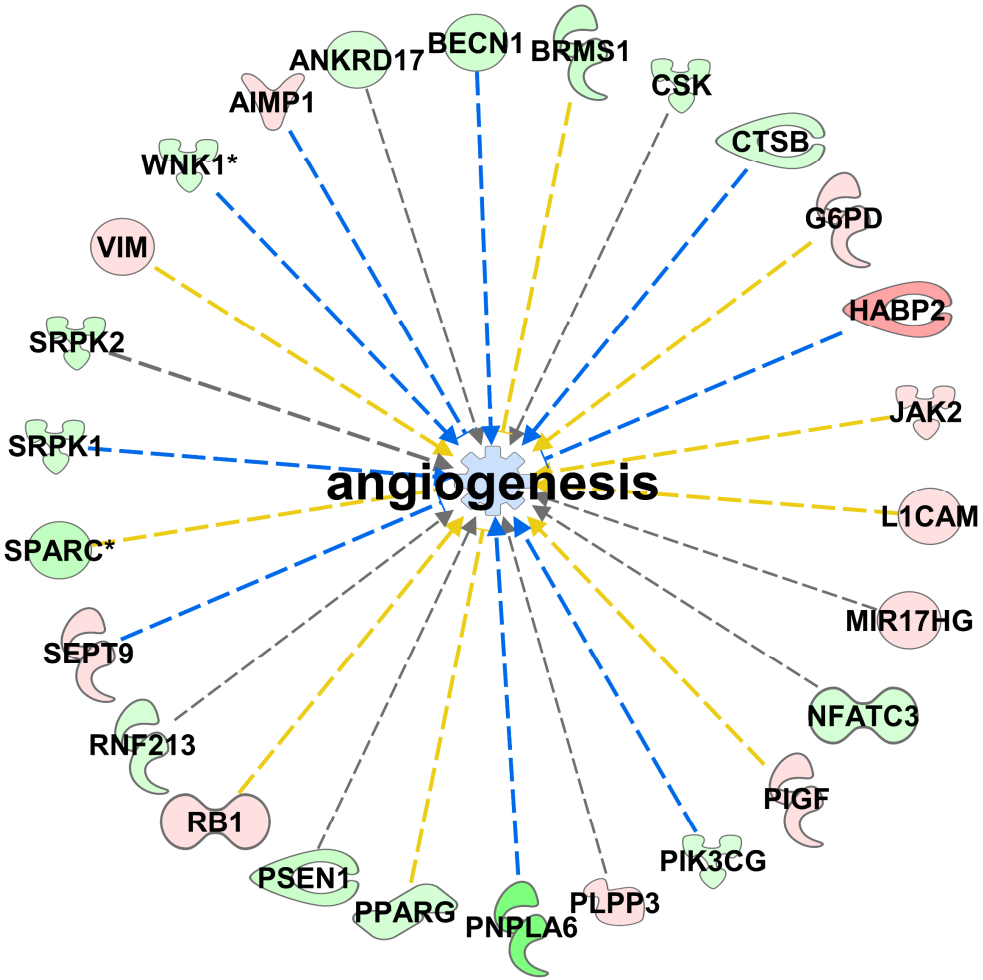


Figure S2.

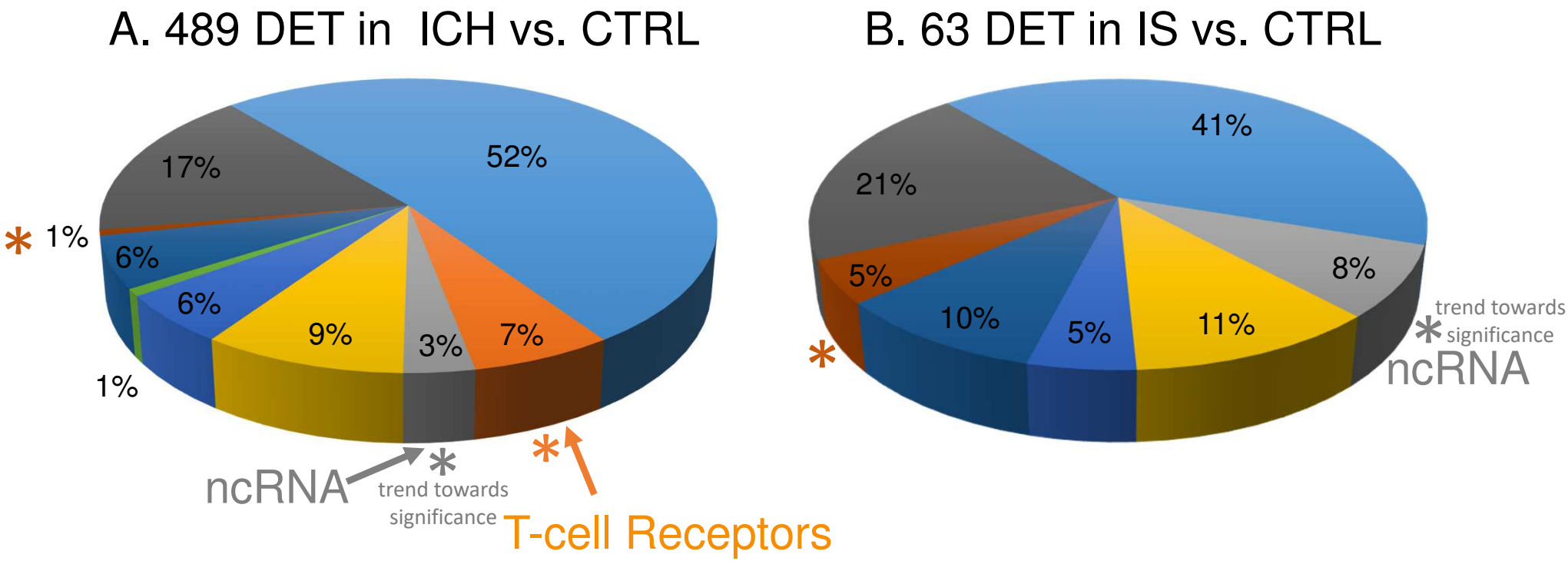
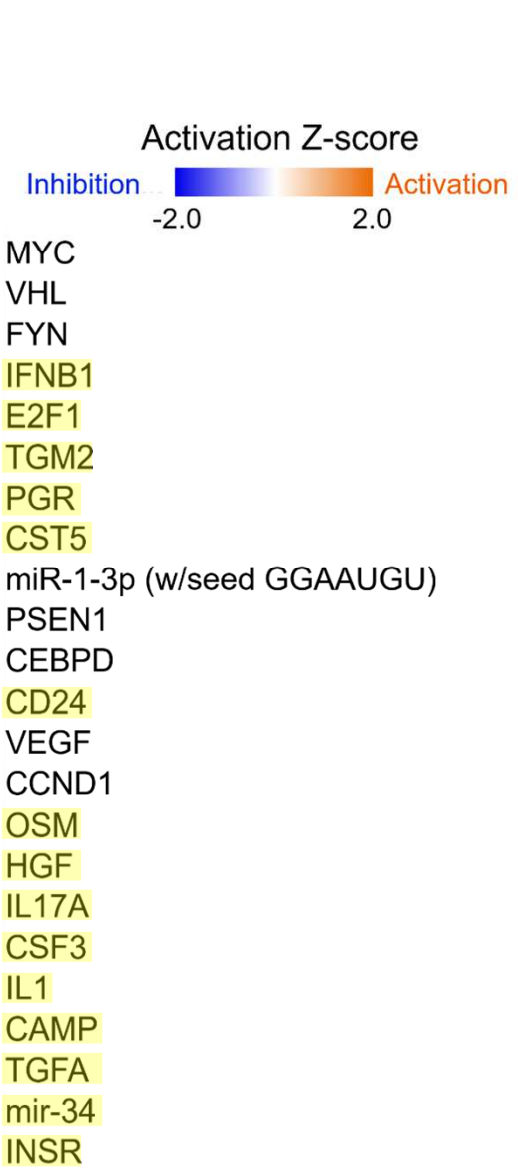

A. 489 DET in ICH vs. CTRL
52%
17%
1%
6%
6%
9%
3%
7%
1%
ncRNA
trend towards significance
T-cell Receptors
B. 63 DET in IS vs. CTRL
41%
21%
5%
8%
10%
5%
11%
trend towards significance
ncRNA
Biotypes of DET
protein coding
T-cell receptor gene
ncRNA
retained intron
tagged for decay
antisense
pseudogene
not annotated
processed transcript

Figure S3. Predicted Upstream Regulators of the Observed Transcriptome Changes Following ICH and IS

* Significant Z-score and significant p-value. Genes highlighted in yellow have p-value ≤ 0.01 in ICHvsCTRL and/or ISvsCTRL.



	Z-score		p-value		Molecule Type
	ICHvsCtrl	ISvsCtrl	ICHvsCtrl	ISvsCtrl	
MYC	-2.38	1.96	1.07E-02	2.09E-02	Transcription Regulator
VHL	-2.22	N/A	2.72E-02	N/A	Transcription Regulator
FYN	-2.00	N/A	3.54E-02	N/A	Kinase
IFNB1	-2.51	N/A	6.78E-05	N/A	Cytokine
E2F1	-2.42	N/A	1.43E-04	N/A	Transcription Regulator
TGM2	1.26	-2.24	9.06E-04	ns	Enzyme
PGR	1.46	-2.00	3.66E-03	ns	Ligand-Dependant Nuclear Receptor
CST5	1.51	-2.24	1.32E-03	ns	Other (Cynstein Protease Inhibitor Activity)
miR-1-3p (w/seed GGAAUGU)	N/A	-2.43	N/A	3.60E-02	Mature miRNA
PSEN1	N/A	-2.00	N/A	1.46E-02	Peptidase
CEBPD	N/A	-2.19	N/A	1.00E-02	Transcription Regulator
CD24	N/A	-2.24	N/A	2.84E-03	Other (Granulocyte and B cell Signal Transducer)
VEGF	0.40	2.14	3.41E-02	ns	Growth Factor
CCND1	N/A	2.00	N/A	ns	Transcription Regulator
OSM	3.44	2.14	2.18E-07	ns	Cytokine
HGF	2.01	2.21	6.61E-03	ns	Growth Factor
IL17A	2.76	N/A	6.66E-03	N/A	Cytokine
CSF3	2.76	N/A	3.05E-06	N/A	Cytokine
IL1	2.35	N/A	1.70E-04	N/A	Cytokine
CAMP	2.41	N/A	1.33E-04	N/A	Other (Antibacterial Peptide)
TGFA	2.16	N/A	4.61E-03	N/A	Growth Factor
mir-34	2.15	N/A	2.91E-04	N/A	miRNA
INSR	2.14	N/A	3.33E-03	N/A	Kinase

Figure S4.

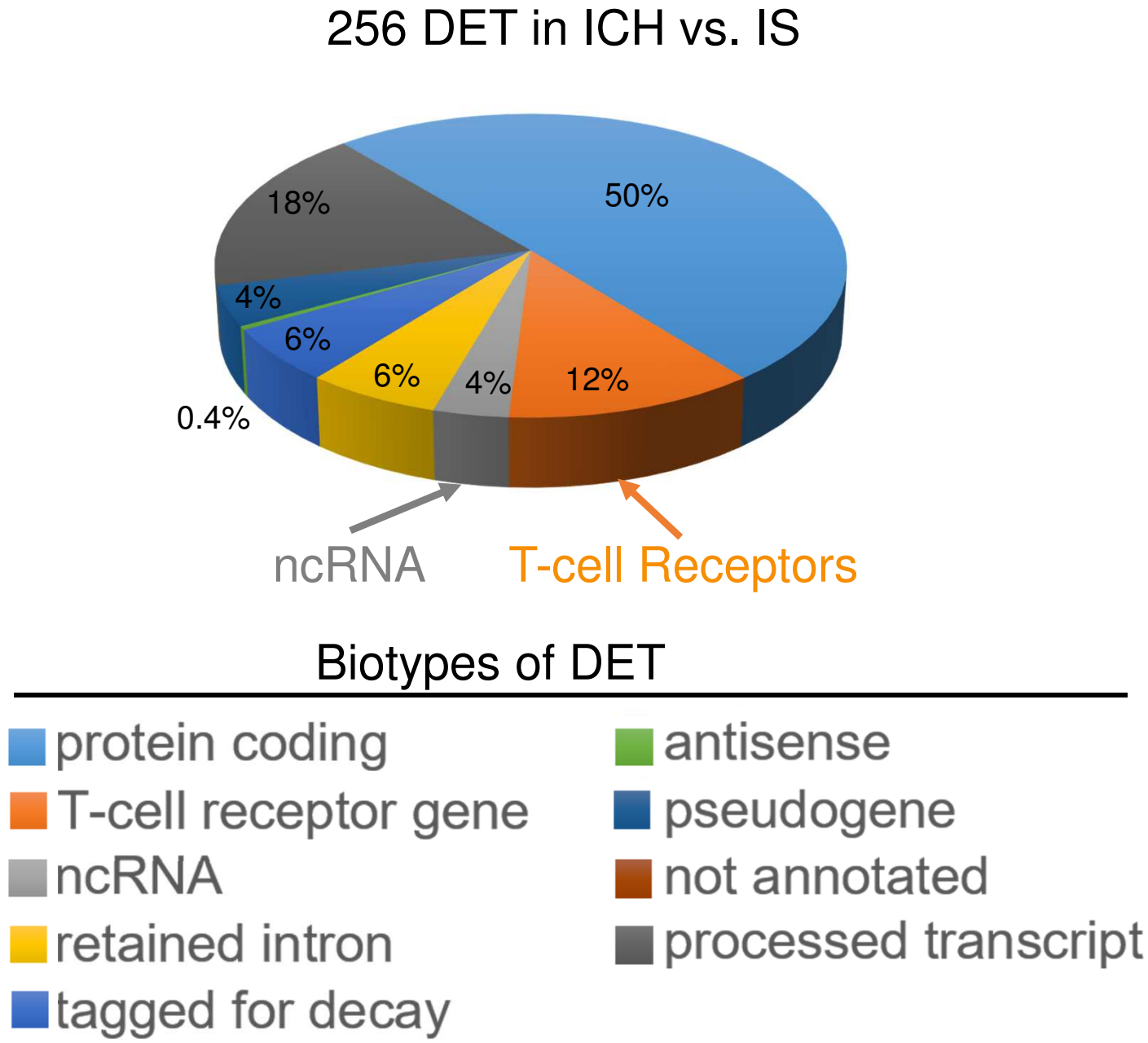
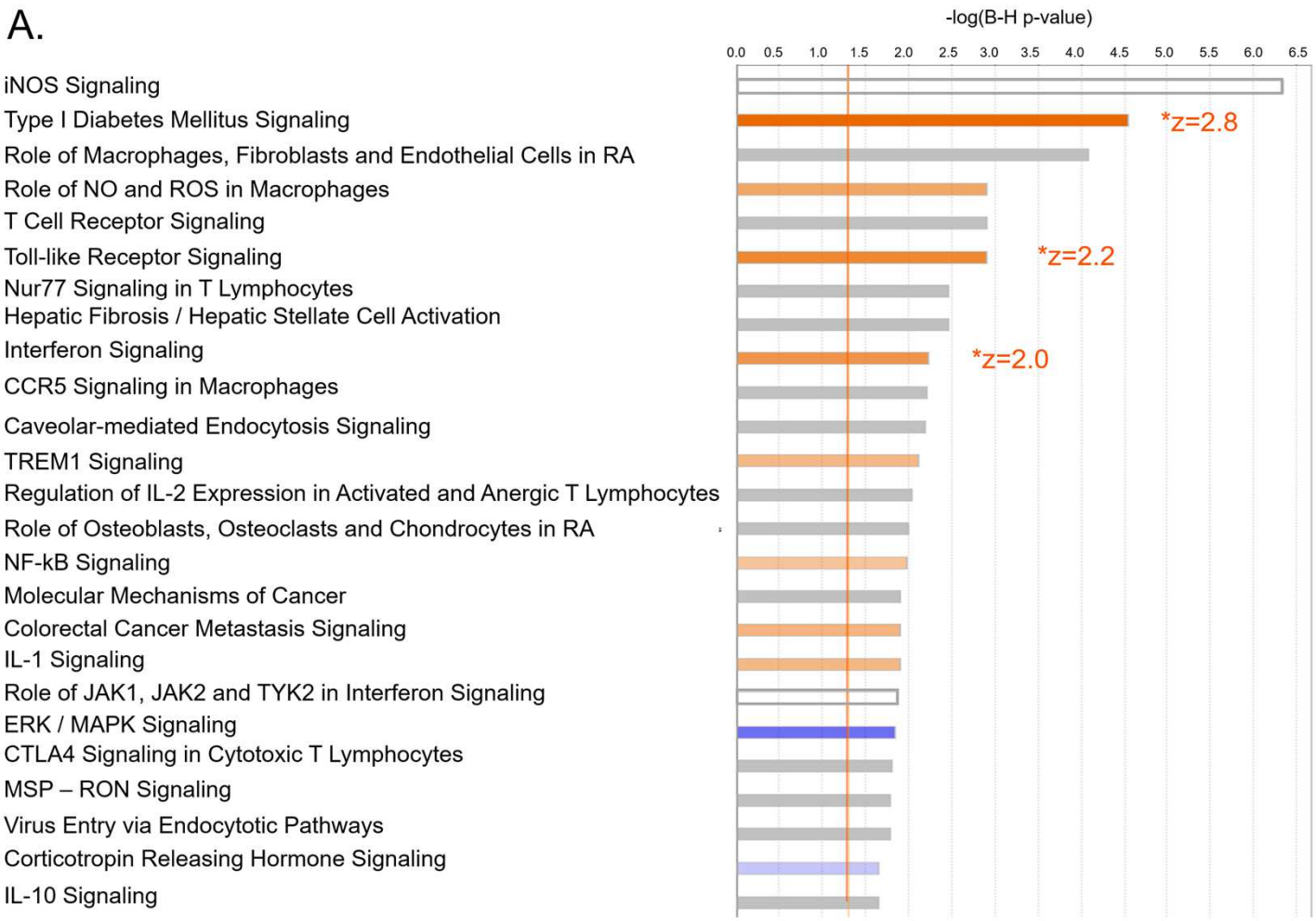

256 DET in ICH vs. IS
50%
12%
4%
6%
0.4%
4%
6%
18%
ncRNA
T-cell Receptors
Biotypes of DET
protein coding
T-cell receptor gene
ncRNA
retained intron
tagged for decay
antisense
pseudogene
not annotated
processed transcript

Figure S5. Transcriptional Changes in Canonical Pathways (A, top 25 pathways) and in Transcripts from Cell-specific Genes (B) in ICH compared to IS

A.



B.

Neutrophil-specific* CD66+	Monocyte-specific CD14+	Th-specific CD4+
p=6.4e-12	p=8.5e-03	p=1.4e-04
ACSL1	CYP1B1	AQP3
BCL2A1	EXT1	DPP4
CD55	GAS7	FHIT
FAM126B	TBC1D8	INPP4B
FLOT2		
FNDC3B		
GLA		
IL1R2		
IL1RAP		
KLHL2		
MAPK14		
NFIL3		
NUMB		
PPP1R3D		
RBPJ		
SIPA1L2		
SLA		
STX3		
TBC1D14		
TGF-alpha		

Figure S6. Transcriptome Architecture During Day 1 following IS and ICH

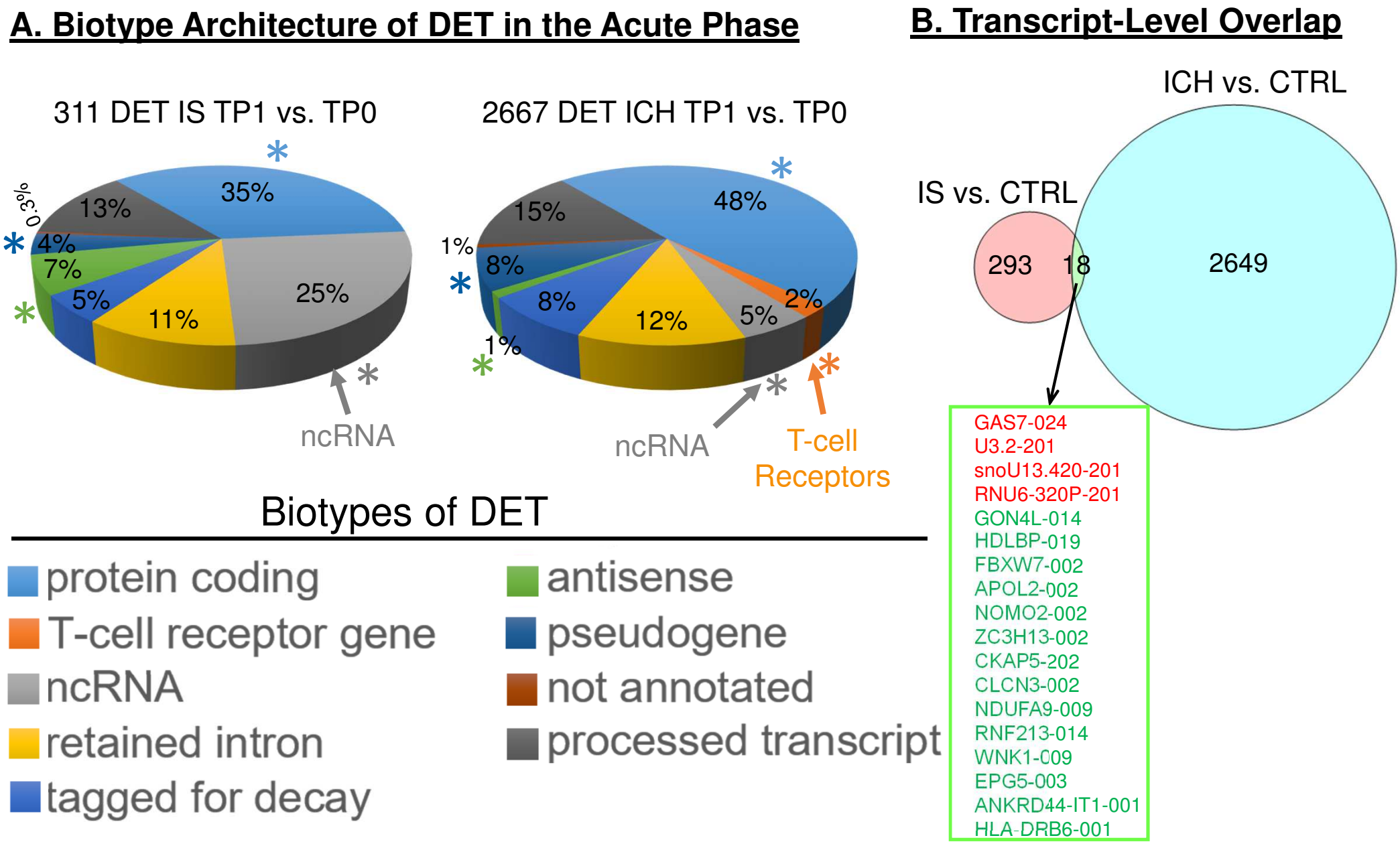
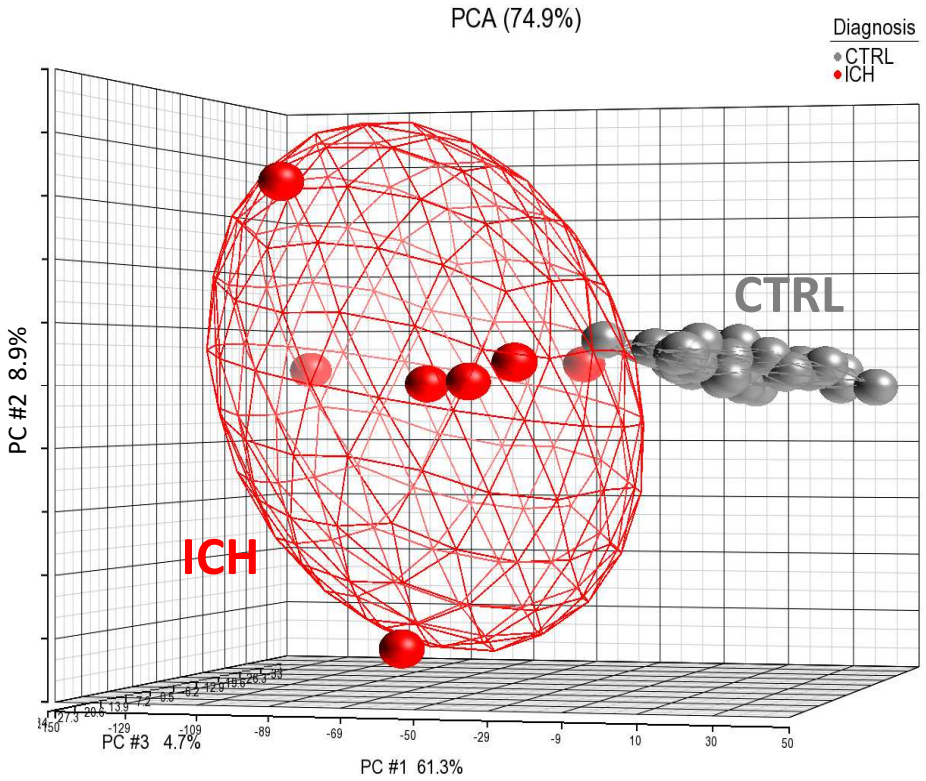


Figure S7. Principal Components Analysis on the differentially expressed transcripts (DET) between controls subjects (CTRL, TP0)and: A. Intracerebral Hemorrhage (ICH) patients within 24 hours post-onset (ICH_TP1), 2667 DET. B. Ischemic Stroke (IS) patients within 24 hours post-onset (IS_TP1), 311 DET.

A.



B.

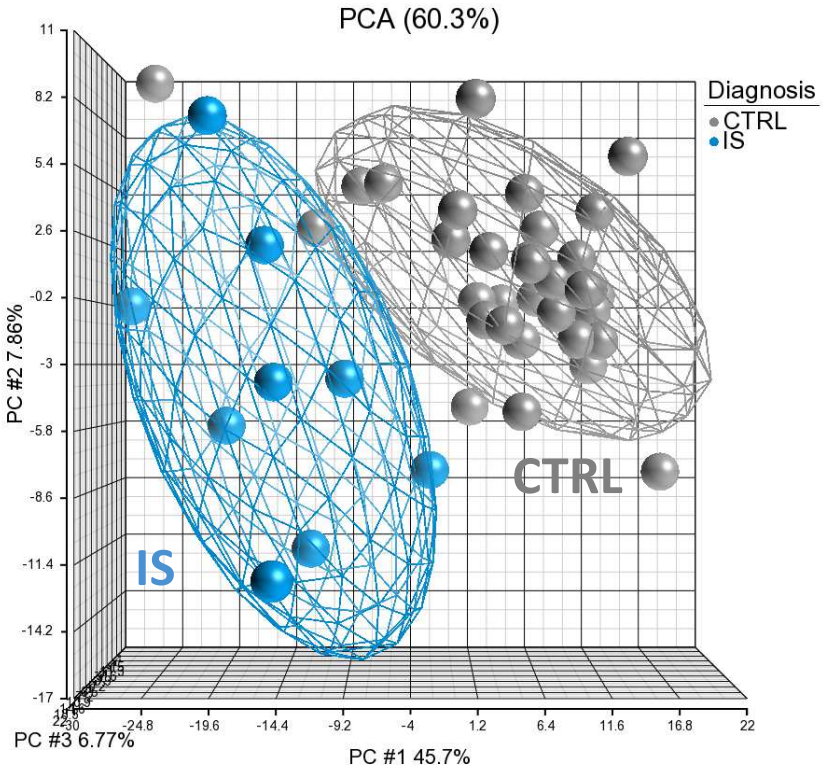


Figure S8.

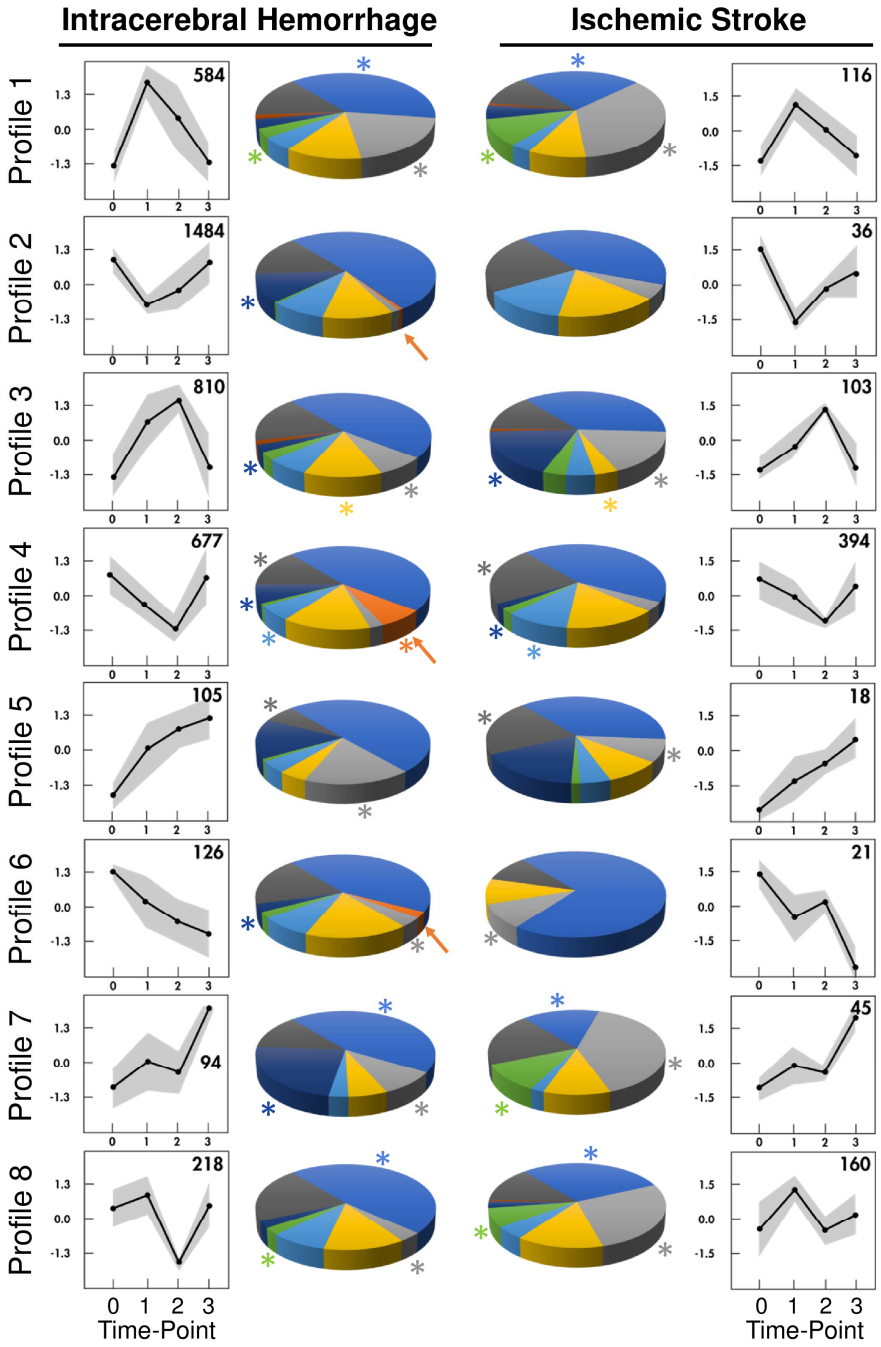

Intracerebral Hemorrhage
Ischemic Stroke
Profile 1
Profile 2
Profile 3
Profile 4
Profile 5
Profile 6
Profile 7
Profile 8
584
1484
810
677
105
126
94
218
116
36
103
394
18
21
45
160
Time-Point
Time-Point

Figure S9. Temporal profiles 9 and 10. A. Profile 9 in ICH only (there was no similar profile in IS). B. Profile 10 – in IS (there was no similar profile in ICH).

Figure S9A. Profile 9 - ICH

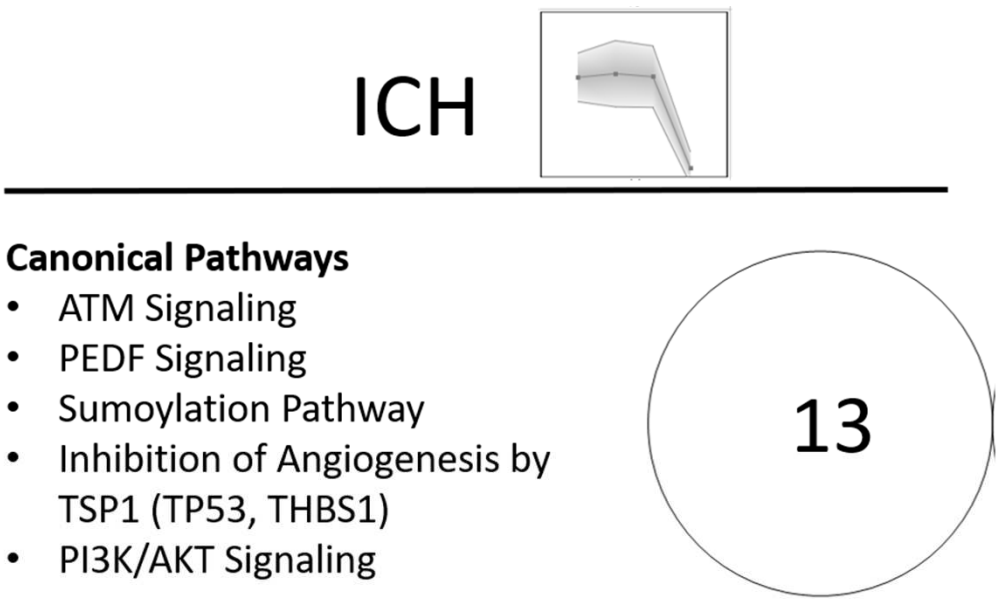
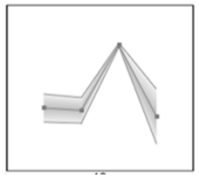
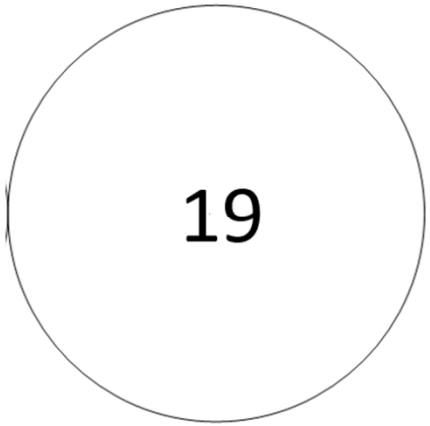


Figure S9B. Profile 10 - IS

IS 

Canonical Pathways

- Protein Ubiquitination Pathway
- EIF2 Signaling
- Heme Degradation (BLVRA)
- Cardiac β-adrenergic Signaling
- Regulation of eIF4 and p70S6K Signaling



Biofunctions

- Anergy of Helper T Lymphocytes
- Conversion of Natural T-regulatory Cells
- Elimination of CD4+ T Lymphocytes
- Fusion of Exocytic Vesicle
- Inhibition of Erythroblasts

Figure S10. Principal Components Analysis of 55 DET from T-cell receptor genes can distinguish patients with Intracerebral Hemorrhage (ICH) within 24 hours post-onset from: A. Ischemic Stroke (IS) patients within 24 hours post-onset. B. Control (CTRL) subjects.

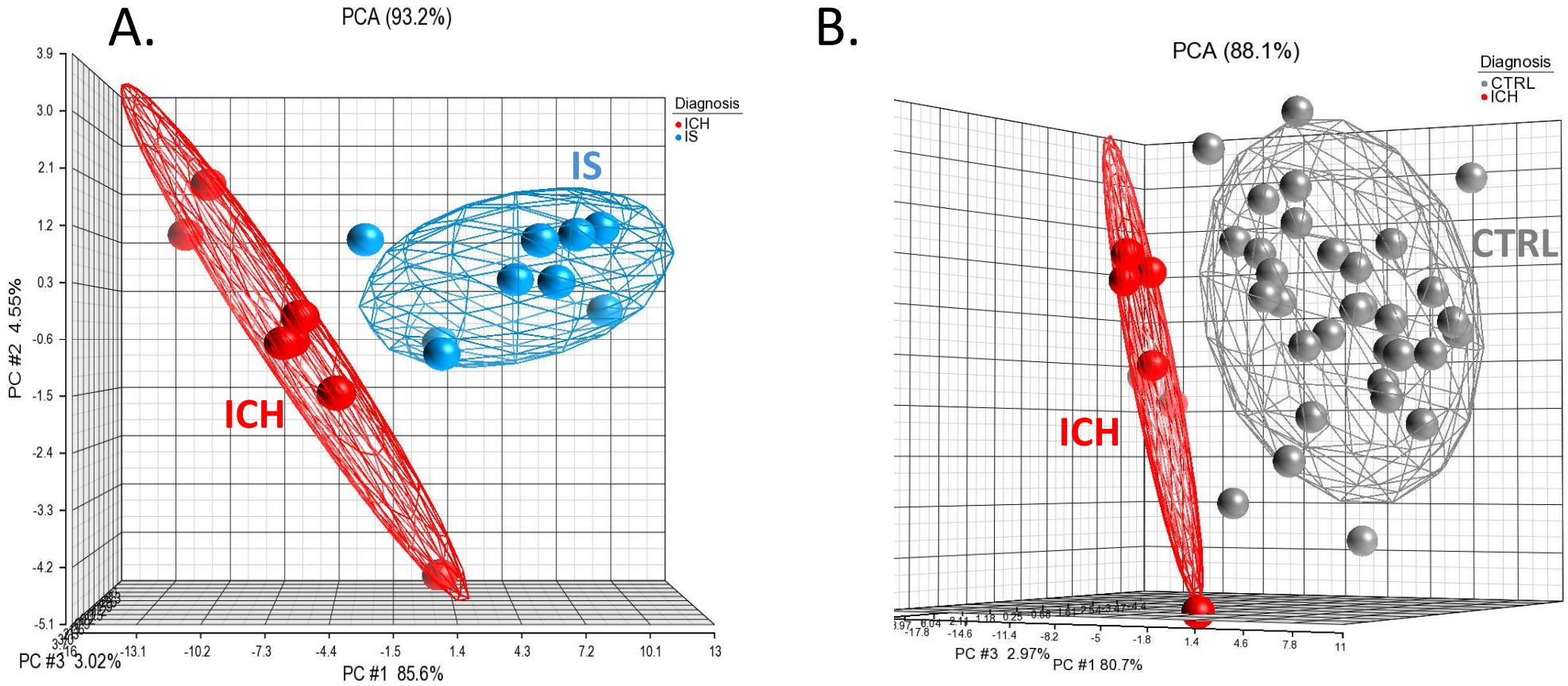


Figure S11. Principal Components Analysis of 107 DET involved in T-cell receptor function can distinguish patients with Intracerebral Hemorrhage (ICH) within 24 hours post-onset from: A. Ischemic Stroke (IS) patients within 24 hours post-onset. B. Control (CTRL) subjects.

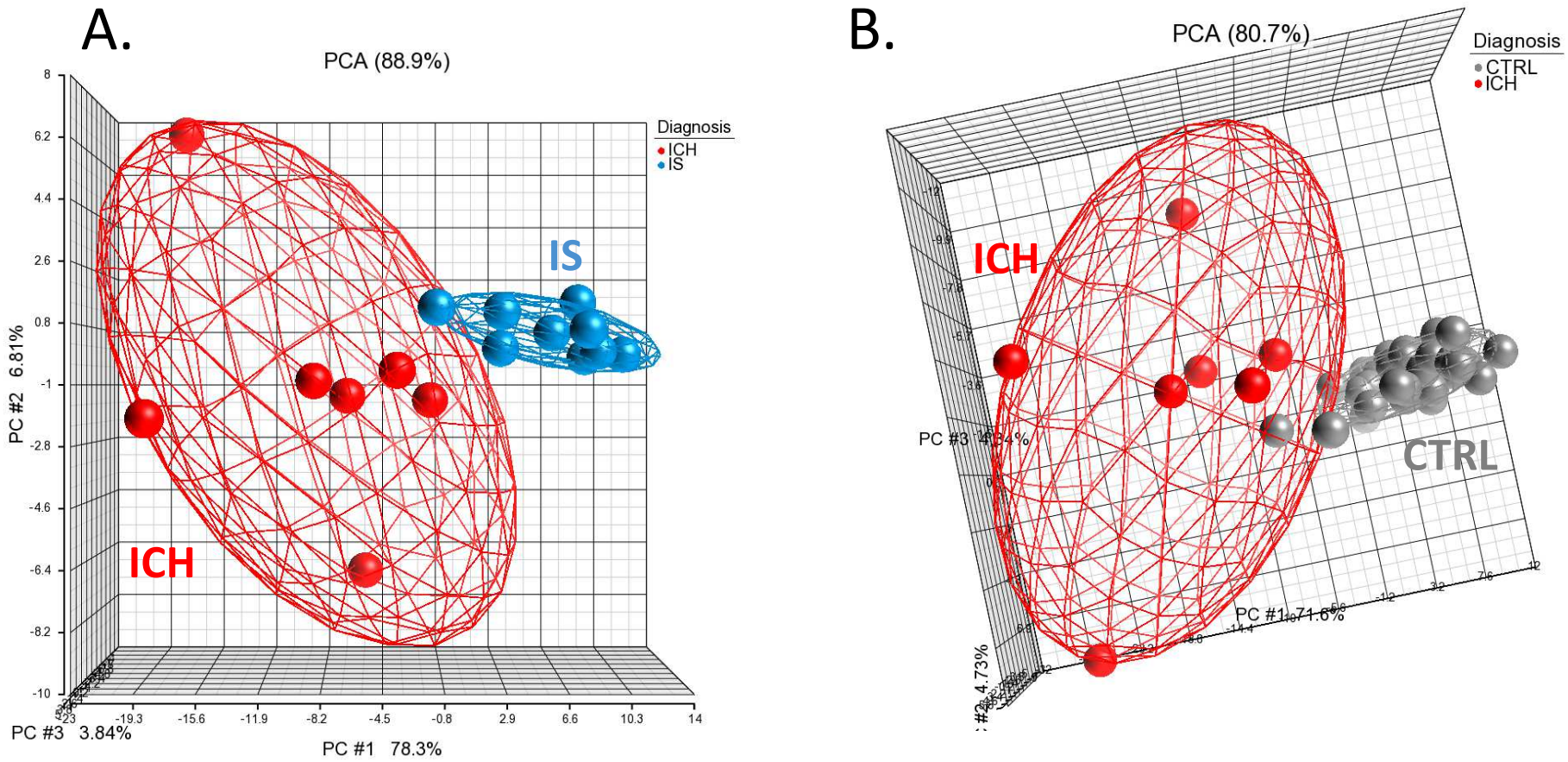


Figure S12. Time-Dependent Behavior of the 55 DET from T Cell Receptor Genes, Which Were Differentially Expressed in the Acute Phase (ICH TP1 vs. TP0 (CTRL)).

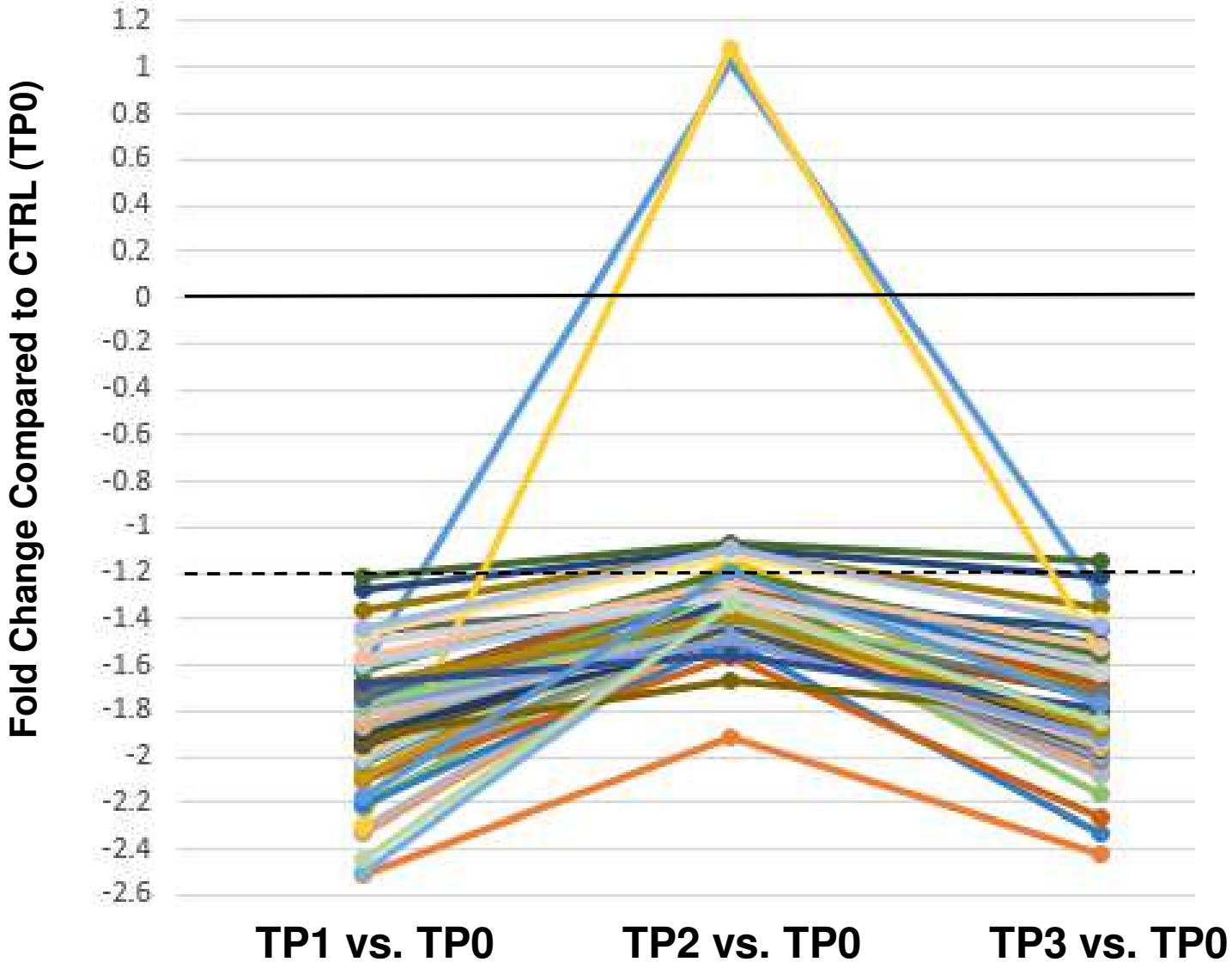
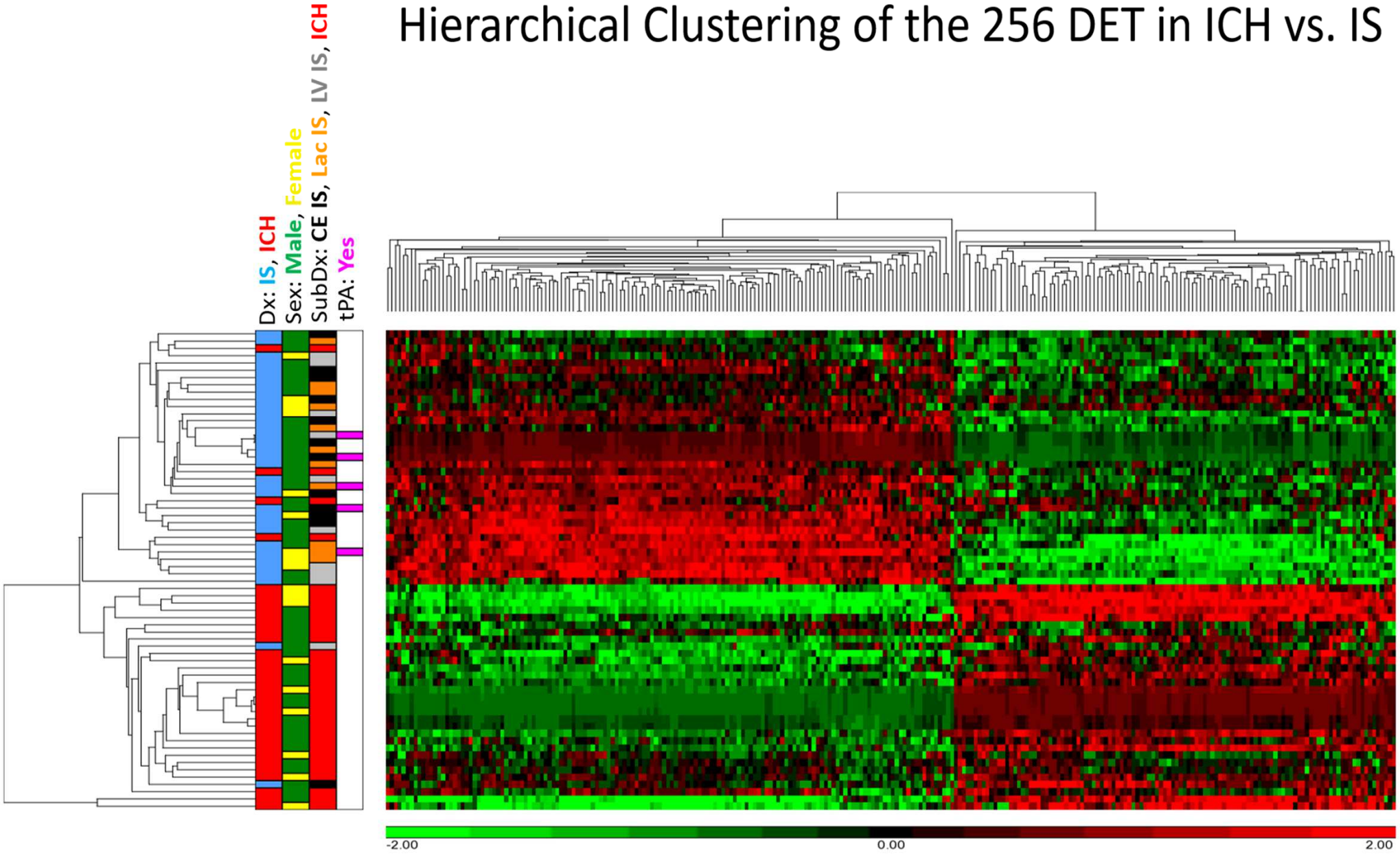


Figure S13.


Hierarchical Clustering of the 256 DET in ICH vs. IS
Dx: IS, ICH
Sex: Male, Female
SubDx: CE IS, Lac IS, LV IS, ICH
tPA: Yes
-2.00
0.00
2.00