Reproducible Results on Clustering MIRC TFS
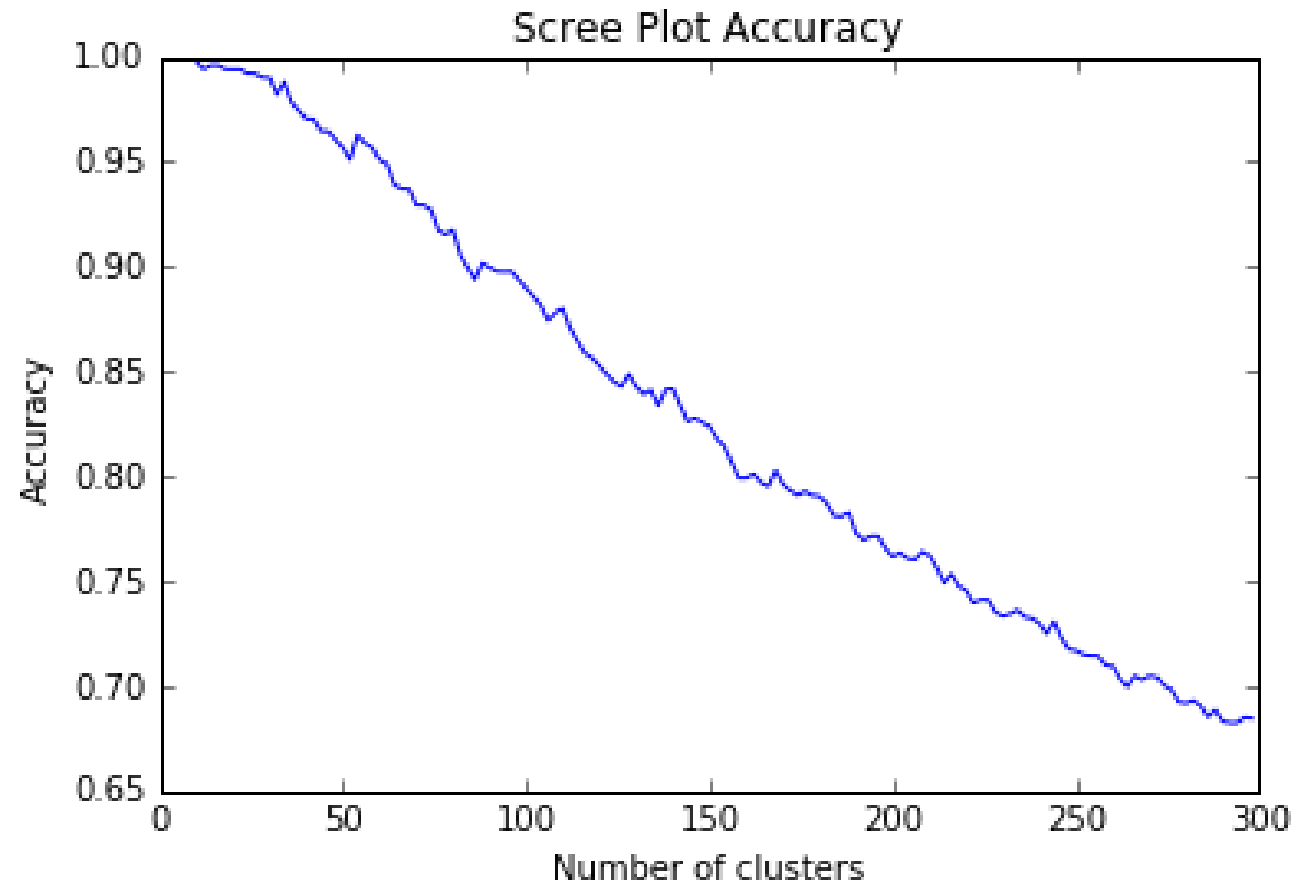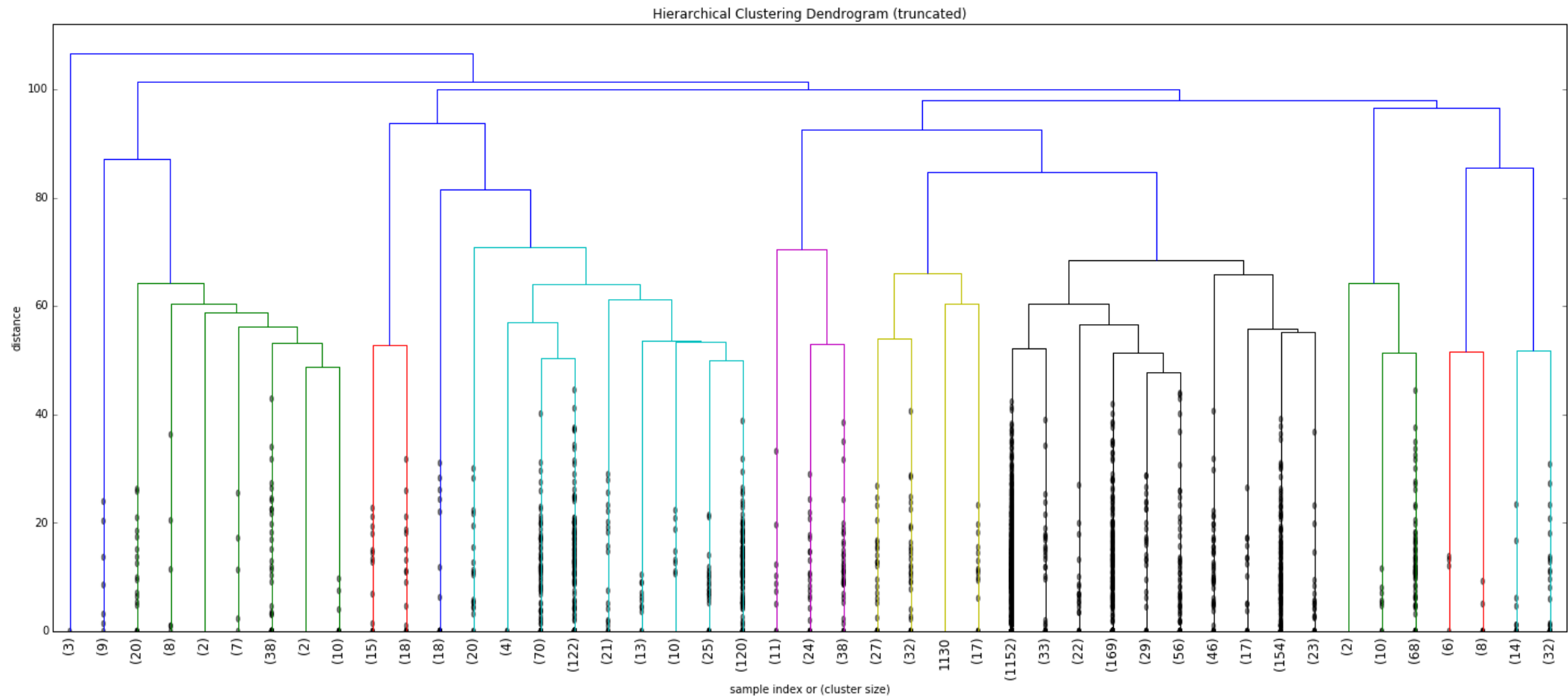
❖ **Source Code Author:** Sungmin Script for MIRC Data on Jupiter Python

❖ **Modified to Reproduce the results:** Pradeep for MIRC Data on raw python

# Scree Plot Results to validate Accuracy

Hierarchical Clustering Dendrogram (truncated)

Dendrogram to visualize the Cluster results

Cluster1	Cluster13	Cluster25	Cluster37
0.0	138.665789474	111.407407407	100.429462694
Cluster2	Cluster14	Cluster26	Cluster38
185.13888889	0.0	159.108870968	105.162055336
Cluster3	Cluster15	Cluster27	Cluster39
108.476315789	114.566666667	99.2205882353	0.0
Cluster4	Cluster16	Cluster28	Cluster40
262.5	145.181343991	nan	39.5888888889
Cluster5	Cluster17	Cluster29	Cluster41
0.0	174.061904762	77.0232874192	159.370280948
Cluster6	Cluster18	Cluster30	Cluster42
161.571428571	54.8974358974	151.151515152	101.3
Cluster7	Cluster19	Cluster31	Cluster43
162.15504787	202.566666667	75.79004329	53.9464285714
Cluster8	Cluster20	Cluster32	Cluster44
4.0	78.6733333333	135.801070724	70.5714285714
Cluster9	Cluster21	Cluster33	Cluster45
55.1555555556	102.908963585	162.352216749	82.5463709677
Cluster10	Cluster22	Cluster34	
110.60952381	199.890909091	161.930844156	
Cluster11	Cluster23	Cluster35	
143.947712418	125.219202899	130.953140097	
Cluster12	Cluster24	Cluster36	
143.307189542	143.63086771	115.169117647	

Dendrogram to visualize the Cluster results
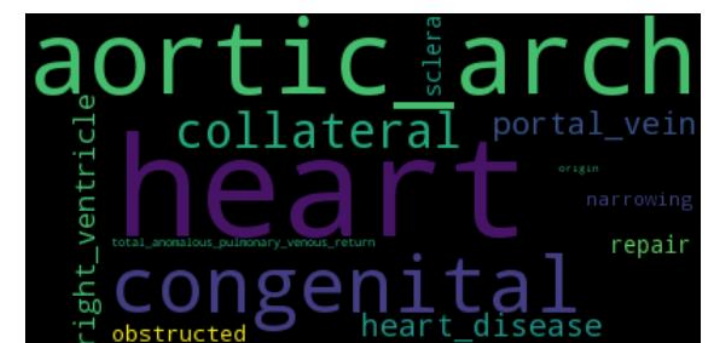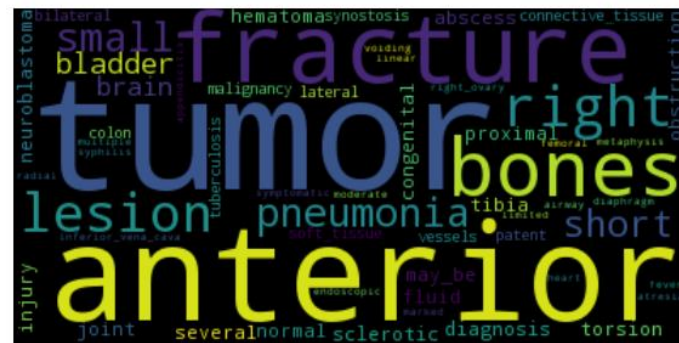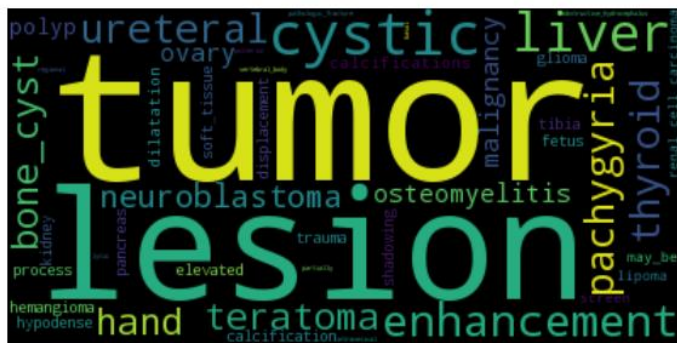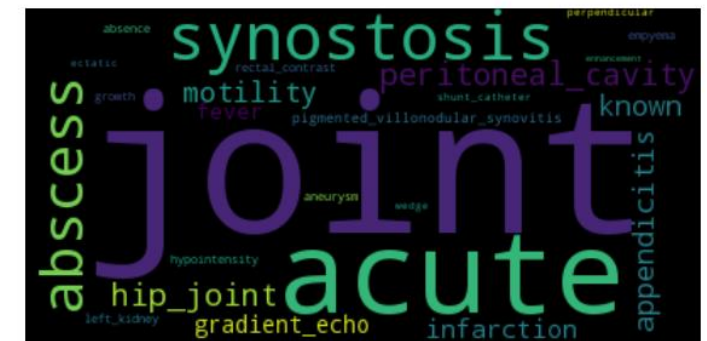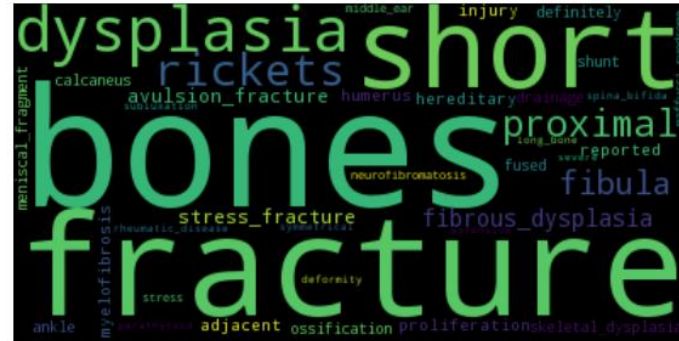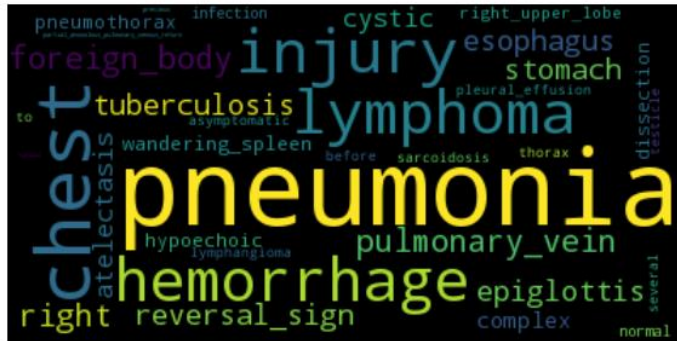
Dendrogram to visualize the Cluster results

===========CLUSTER 5=============

['portal vein => vein => segment of venous tree organ => region of vascular tree => organ segment => organ region => cardinal organ part => anatomical structure => material anatomical entity => anatomical entity => ']

['shunt => flow disorder => mechanical disorder => pathophysiologic finding => clinical finding => ']

['liver => lobular organ => parenchymatous organ => solid organ => organ => anatomical structure => material anatomical entity => anatomical entity => ']

['thrombosis => mechanical disorder => pathophysiologic finding => clinical finding => ']

['congenital => disease origin descriptor => Radlex descriptor => ']

['blood => portion of body fluid suspension => portion of body fluid => portion of body substance => material anatomical entity => anatomical entity => ']

===========CLUSTER 6=============

['right => laterality => location descriptor => Radlex descriptor => ']

['congenital => disease origin descriptor => Radlex descriptor => ']

['heart => organ with cavitated organ parts => cavitated organ => organ => anatomical structure => material anatomical entity => anatomical entity => ']

['increased => status descriptor => Radlex descriptor => ']

['obstruction => flow disorder => mechanical disorder => pathophysiologic finding => clinical finding => ']

['heart disease => cardiovascular disorder => body-system-specific disorder => pathophysiologic finding => clinical finding => ']

Work Completed: Reproduces the TF results

Work in Progress: Results validation

Work Planned for next two days:
 1. Understanding the Results obtained
 2. Understanding the Python code written for MIRC

Work Planned for Next Week:
 1. Work towards the comments received from meeting

Thank You!