

Supplementary Table 1. List of TCGA samples included in this study.

Sample ID	Cluster	Tumor Subtype	Patient Histological Type	AFP Expression	AFP Expression Category
TCGA-2G-AAGS-01A	1	non-inflamed	non-seminoma	13.34704	4th Quartile
TCGA-2G-AAGW-01A	1	non-inflamed	non-seminoma	-0.70581	1st Quartile
TCGA-2G-AAL5-01A	1	non-inflamed	non-seminoma	8.25689	3rd Quartile
TCGA-YU-A94D-01A	1	non-inflamed	non-seminoma	6.02487	2nd Quartile
TCGA-YU-A94I-01A	1	non-inflamed	non-seminoma	14.20363	4th Quartile
TCGA-YU-AA4L-01A	1	non-inflamed	non-seminoma	13.04494	4th Quartile
TCGA-2G-AAFJ-01A	2	non-inflamed	non-seminoma	9.19197	3rd Quartile
TCGA-2G-AAFZ-01A	2	non-inflamed	non-seminoma	14.88616	4th Quartile
TCGA-2G-AAGM-01A	2	non-inflamed	non-seminoma	13.65320	4th Quartile
TCGA-2G-AAGV-01A	2	non-inflamed	non-seminoma	NA	No Expression
TCGA-2G-AAGX-01A	2	non-inflamed	non-seminoma	13.72864	4th Quartile
* TCGA-SN-A84W-01A	2	non-inflamed	non-seminoma	8.43422	3rd Quartile
* TCGA-XE-AAOJ-01A	2	non-inflamed	non-seminoma	14.34784	4th Quartile
TCGA-2G-AAG7-01A	3	non-inflamed	non-seminoma	6.97181	2nd Quartile
TCGA-2G-AAGA-01A	3	non-inflamed	non-seminoma	2.90599	2nd Quartile
TCGA-2G-AAGO-01A	3	non-inflamed	non-seminoma	9.91323	3rd Quartile
TCGA-2G-AAHP-01A	3	non-inflamed	seminoma	NA	No Expression
TCGA-S6-A8JX-01A	3	non-inflamed	seminoma	NA	No Expression
TCGA-SO-A8JP-01A	3	non-inflamed	seminoma	NA	No Expression
TCGA-VF-A8A8-01A	3	non-inflamed	non-seminoma	10.05150	3rd Quartile
TCGA-XY-A8S3-01B	3	non-inflamed	non-seminoma	12.43377	4th Quartile
TCGA-YU-A90Q-01A	3	non-inflamed	seminoma	NA	No Expression
TCGA-2G-AAFV-01A	4	non-inflamed	non-seminoma	11.69046	3rd Quartile
TCGA-2G-AAG5-01A	4	non-inflamed	non-seminoma	8.64070	3rd Quartile
TCGA-2G-AAG6-01A	4	non-inflamed	non-seminoma	2.94443	2nd Quartile
TCGA-2G-AAGT-01A	4	non-inflamed	non-seminoma	13.05745	4th Quartile
TCGA-2G-AAGY-01A	4	non-inflamed	non-seminoma	7.96961	3rd Quartile
TCGA-XE-AANI-01A	4	non-inflamed	non-seminoma	2.01171	1st Quartile
TCGA-XE-AAOC-01A	4	non-inflamed	non-seminoma	9.19925	3rd Quartile
TCGA-2G-AAFI-01A	5	non-inflamed	non-seminoma	14.62807	4th Quartile
TCGA-2G-AAFN-01A	5	non-inflamed	non-seminoma	10.59891	3rd Quartile
TCGA-2G-AAGE-01A	5	non-inflamed	non-seminoma	11.01494	3rd Quartile
TCGA-2G-AAGF-01A	5	non-inflamed	non-seminoma	12.03453	4th Quartile
TCGA-2G-AAGN-01A	5	non-inflamed	non-seminoma	0.77678	1st Quartile
TCGA-2G-AAKD-01A	5	non-inflamed	non-seminoma	9.74414	3rd Quartile
TCGA-2G-AAKL-01A	5	non-inflamed	non-seminoma	4.96423	2nd Quartile
TCGA-2G-AAKM-01A	5	non-inflamed	non-seminoma	NA	No Expression
TCGA-2G-AAL7-01A	5	non-inflamed	non-seminoma	9.24416	3rd Quartile
TCGA-2G-AALP-01A	5	non-inflamed	non-seminoma	10.46964	3rd Quartile
TCGA-SN-A84Y-01A	5	non-inflamed	non-seminoma	8.52212	3rd Quartile
TCGA-W4-A7U4-01A	5	non-inflamed	non-seminoma	2.77558	2nd Quartile
TCGA-XE-A8H1-01A	5	non-inflamed	non-seminoma	4.84115	2nd Quartile
TCGA-XY-A8S2-01A	5	non-inflamed	non-seminoma	3.54710	2nd Quartile
TCGA-2G-AAH8-01A	6	intermediate	seminoma	4.11452	2nd Quartile
TCGA-2G-AAHG-01A	6	intermediate	seminoma	NA	No Expression
TCGA-4K-AA1G-01A	6	intermediate	seminoma	NA	No Expression
TCGA-S6-A8JW-01A	6	intermediate	seminoma	2.19513	2nd Quartile
TCGA-S6-A8JY-01A	6	intermediate	seminoma	NA	No Expression
TCGA-SB-A76C-01A	6	intermediate	seminoma	NA	No Expression
TCGA-SN-A6IS-01A	6	intermediate	seminoma	0.25459	1st Quartile
TCGA-W4-A7U2-01A	6	intermediate	seminoma	NA	No Expression
TCGA-WZ-A7V3-01A	6	intermediate	seminoma	-0.30508	1st Quartile
TCGA-XE-A8H5-01A	6	intermediate	seminoma	NA	No Expression
TCGA-XE-AAO3-01A	6	intermediate	seminoma	NA	No Expression
TCGA-XE-AAOL-01A	6	intermediate	seminoma	NA	No Expression
TCGA-YU-A90W-01A	6	intermediate	seminoma	NA	No Expression
TCGA-2G-AAG0-01A	7	intermediate	non-seminoma	7.09598	3rd Quartile
TCGA-2G-AAG3-01A	7	intermediate	non-seminoma	NA	No Expression

TCGA-2G-AAGC-01A	7	intermediate	non-seminoma	13.88286	4th Quartile
TCGA-2G-AAGG-01A	7	intermediate	non-seminoma	10.78652	3rd Quartile
TCGA-2G-AAGI-01A	7	intermediate	non-seminoma	15.36868	4th Quartile
TCGA-2G-AAGJ-01A	7	intermediate	non-seminoma	5.11491	2nd Quartile
TCGA-2G-AAGK-01A	7	intermediate	non-seminoma	14.78805	4th Quartile
TCGA-2G-AAH2-01A	7	intermediate	non-seminoma	13.14323	4th Quartile
TCGA-2G-AAH4-01A	7	intermediate	non-seminoma	15.16408	4th Quartile
TCGA-2G-AAKG-01A	7	intermediate	non-seminoma	14.55185	4th Quartile
TCGA-2G-AAKH-01A	7	intermediate	non-seminoma	-1.08620	1st Quartile
TCGA-W4-A7U3-01A	7	intermediate	non-seminoma	13.16601	4th Quartile
TCGA-YU-A90P-01A	7	intermediate	non-seminoma	2.23925	2nd Quartile
TCGA-YU-A90Y-01A	7	intermediate	non-seminoma	13.18654	4th Quartile
TCGA-YU-AA61-01A	7	intermediate	non-seminoma	15.37183	4th Quartile
TCGA-2G-AAEW-01A	8	inflamed	seminoma	2.21627	2nd Quartile
TCGA-2G-AAF6-01A	8	inflamed	seminoma	NA	No Expression
TCGA-2G-AAFE-01A	8	inflamed	seminoma	-1.31833	1st Quartile
TCGA-2G-AAH0-01A	8	inflamed	seminoma	NA	No Expression
TCGA-2G-AAH3-01A	8	inflamed	seminoma	NA	No Expression
TCGA-2G-AAHL-01A	8	inflamed	seminoma	NA	No Expression
TCGA-2G-AAHT-01A	8	inflamed	seminoma	NA	No Expression
TCGA-XE-AANJ-01A	8	inflamed	seminoma	NA	No Expression
TCGA-XE-AANR-01A	8	inflamed	seminoma	NA	No Expression
TCGA-XE-AAO6-01A	8	inflamed	seminoma	-0.85100	1st Quartile
TCGA-YU-A912-01A	8	inflamed	seminoma	0.69055	1st Quartile
TCGA-2G-AAFL-01A	9	inflamed	non-seminoma	-0.57411	1st Quartile
TCGA-2G-AAFM-01A	9	inflamed	non-seminoma	-0.76024	1st Quartile
TCGA-2G-AAFO-01A	9	inflamed	non-seminoma	9.85760	3rd Quartile
TCGA-2G-AAFY-01A	9	inflamed	non-seminoma	1.12088	1st Quartile
TCGA-2G-AAG8-01A	9	inflamed	non-seminoma	5.99375	2nd Quartile
TCGA-2G-AAGZ-01A	9	inflamed	non-seminoma	-0.52201	1st Quartile
TCGA-4K-AAAL-01A	9	inflamed	seminoma	NA	No Expression
TCGA-SN-A84X-01A	9	inflamed	non-seminoma	4.97232	2nd Quartile
TCGA-VF-A8AD-01A	9	inflamed	non-seminoma	7.20324	3rd Quartile
* TCGA-X3-A8G4-01A	9	inflamed	non-seminoma	14.91673	4th Quartile
TCGA-2G-AAEX-01A	10	inflamed	seminoma	-0.03209	1st Quartile
TCGA-2G-AAF1-01A	10	inflamed	seminoma	2.84310	2nd Quartile
TCGA-2G-AAF4-01A	10	inflamed	seminoma	NA	No Expression
TCGA-2G-AAF8-01A	10	inflamed	seminoma	NA	No Expression
TCGA-VF-A8A9-01A	10	inflamed	seminoma	2.35845	2nd Quartile
TCGA-VF-A8AA-01A	10	inflamed	seminoma	NA	No Expression
TCGA-VF-A8AC-01A	10	inflamed	seminoma	NA	No Expression
TCGA-VF-A8AE-01A	10	inflamed	seminoma	NA	No Expression
TCGA-XE-AANV-01A	10	inflamed	seminoma	2.81875	2nd Quartile
TCGA-XE-AAO4-01A	10	inflamed	seminoma	-0.99913	1st Quartile
TCGA-XE-AAOF-01A	10	inflamed	seminoma	NA	No Expression
TCGA-XY-A9T9-01A	10	inflamed	seminoma	NA	No Expression
TCGA-ZM-AA06-01A	10	inflamed	seminoma	NA	No Expression
TCGA-ZM-AA0B-01A	10	inflamed	seminoma	-0.73169	1st Quartile
TCGA-ZM-AA0N-01A	10	inflamed	seminoma	1.73535	1st Quartile
TCGA-2G-AAFG-01A	11	inflamed	seminoma	NA	No Expression
TCGA-2G-AAFH-01A	11	inflamed	seminoma	NA	No Expression
TCGA-2G-AAG9-01A	11	inflamed	seminoma	-1.03475	1st Quartile
TCGA-2G-AAGP-01A	11	inflamed	non-seminoma	10.44350	3rd Quartile
TCGA-2X-A9D5-01A	11	inflamed	seminoma	7.66627	3rd Quartile
TCGA-2X-A9D6-01A	11	inflamed	seminoma	NA	No Expression
TCGA-SB-A6J6-01A	11	inflamed	seminoma	2.08325	2nd Quartile
TCGA-WZ-A7V4-01A	11	inflamed	seminoma	-0.92385	1st Quartile
TCGA-WZ-A7V5-01A	11	inflamed	seminoma	NA	No Expression
TCGA-WZ-A8D5-01A	11	inflamed	seminoma	NA	No Expression
TCGA-XE-A9SE-01A	11	inflamed	seminoma	NA	No Expression

TCGA-XE-AAOD-01A	11	inflamed	seminoma	-1.05289	1st Quartile
TCGA-2G-AAHA-01A	12	inflamed	seminoma	NA	No Expression
TCGA-2G-AAHC-01A	12	inflamed	seminoma	NA	No Expression
TCGA-2G-AAHN-01A	12	inflamed	seminoma	NA	No Expression
TCGA-4K-AA1H-01A	12	inflamed	seminoma	0.03942	1st Quartile
TCGA-4K-AA1I-01A	12	inflamed	seminoma	5.02425	2nd Quartile
TCGA-VF-A8AB-01A	12	inflamed	seminoma	NA	No Expression
TCGA-XE-A8H4-01A	12	inflamed	seminoma	1.84362	1st Quartile
TCGA-XE-AAOB-01A	12	inflamed	non-seminoma	12.12724	4th Quartile
TCGA-XY-A89B-01A	12	inflamed	seminoma	NA	No Expression
TCGA-YU-A90S-01A	12	inflamed	seminoma	NA	No Expression
TCGA-ZM-AA05-01A	12	inflamed	seminoma	NA	No Expression
TCGA-ZM-AA0D-01A	12	inflamed	seminoma	NA	No Expression
TCGA-ZM-AA0E-01A	12	inflamed	seminoma	3.01450	2nd Quartile
TCGA-ZM-AA0F-01A	12	inflamed	seminoma	NA	No Expression
TCGA-ZM-AA0H-01A	12	inflamed	seminoma	NA	No Expression

* 3 seminoma samples are recategorized as non-seminoma in this study based on high AFP expression and Principle Component Analysis (PCA).