

# Differential expression analysis

21267455 Ella Zhang

2024-11-27

```
library(DESeq2)

##      S4Vectors

##      stats4

##      BiocGenerics

##
##      'BiocGenerics'

## The following objects are masked from 'package:stats':
##
##      IQR, mad, sd, var, xtabs

## The following objects are masked from 'package:base':
##
##      anyDuplicated, aperm, append, as.data.frame, basename, cbind,
##      colnames, dirname, do.call, duplicated, eval, evalq, Filter, Find,
##      get, grep, grepl, intersect, is.unsorted, lapply, Map, mapply,
##      match, mget, order, paste, pmax, pmax.int, pmin, pmin.int,
##      Position, rank, rbind, Reduce, rownames, sapply, setdiff, table,
##      tapply, union, unique, unsplit, which.max, which.min

##
##      'S4Vectors'

## The following object is masked from 'package:utils':
##
##      findMatches

## The following objects are masked from 'package:base':
##
##      expand.grid, I, unname

##      IRanges

##
##      'IRanges'
```

```

## The following object is masked from 'package:grDevices':
##
##     windows

##     GenomicRanges

##     GenomeInfoDb

##     SummarizedExperiment

##     MatrixGenerics

##     matrixStats

##
##     'MatrixGenerics'

## The following objects are masked from 'package:matrixStats':
##
##     colAlls, colAnyNAs, colAnys, colAvgsPerRowSet, colCollapse,
##     colCounts, colCummaxs, colCummins, colCumprods, colCumsums,
##     colDiffs, colIQRDiffs, colIQRs, colLogSumExps, colMadDiffs,
##     colMads, colMaxs, colMeans2, colMedians, colMins, colOrderStats,
##     colProds, colQuantiles, colRanges, colRanks, colSdDiffs, colSds,
##     colSums2, colTabulates, colVarDiffs, colVars, colWeightedMads,
##     colWeightedMeans, colWeightedMedians, colWeightedSds,
##     colWeightedVars, rowAlls, rowAnyNAs, rowAnys, rowAvgsPerColSet,
##     rowCollapse, rowCounts, rowCummaxs, rowCummins, rowCumprods,
##     rowCumsums, rowDiffs, rowIQRDiffs, rowIQRs, rowLogSumExps,
##     rowMadDiffs, rowMads, rowMaxs, rowMeans2, rowMedians, rowMins,
##     rowOrderStats, rowProds, rowQuantiles, rowRanges, rowRanks,
##     rowSdDiffs, rowSds, rowSums2, rowTabulates, rowVarDiffs, rowVars,
##     rowWeightedMads, rowWeightedMeans, rowWeightedMedians,
##     rowWeightedSds, rowWeightedVars

##     Biobase

## Welcome to Bioconductor
##
##     Vignettes contain introductory material; view with
##     'browseVignettes()'. To cite Bioconductor, see
##     'citation("Biobase")', and for packages 'citation("pkgname")'.

##
##     'Biobase'

## The following object is masked from 'package:MatrixGenerics':
##
##     rowMedians

## The following objects are masked from 'package:matrixStats':
##
##     anyMissing, rowMedians

```

```

library(pheatmap)

## Warning:  'pheatmap' R 4.4.2

library(ggplot2)

## Warning:  'ggplot2' R 4.4.2

library(clusterProfiler)

## 

## clusterProfiler v4.12.6 Learn more at https://yulab-smu.top/contribution-knowledge-mining/
## 
## Please cite:
## 
## T Wu, E Hu, S Xu, M Chen, P Guo, Z Dai, T Feng, L Zhou, W Tang, L Zhan,
## X Fu, S Liu, X Bo, and G Yu. clusterProfiler 4.0: A universal
## enrichment tool for interpreting omics data. The Innovation. 2021,
## 2(3):100141

## 
##     'clusterProfiler'

## The following object is masked from 'package:IRanges':
## 
##     slice

## The following object is masked from 'package:S4Vectors':
## 
##     rename

## The following object is masked from 'package:stats':
## 
##     filter

library(org.Hs.eg.db)

## 
##     AnnotationDbi

## 
##     'AnnotationDbi'

## The following object is masked from 'package:clusterProfiler':
## 
##     select

##

```

```

library(AnnotationDbi)
library(dplyr)

## 
##     'dplyr'

## The following object is masked from 'package:AnnotationDbi':
## 
##     select

## The following object is masked from 'package:Biobase':
## 
##     combine

## The following object is masked from 'package:matrixStats':
## 
##     count

## The following objects are masked from 'package:GenomicRanges':
## 
##     intersect, setdiff, union

## The following object is masked from 'package:GenomeInfoDb':
## 
##     intersect

## The following objects are masked from 'package:IRanges':
## 
##     collapse, desc, intersect, setdiff, slice, union

## The following objects are masked from 'package:S4Vectors':
## 
##     first, intersect, rename, setdiff, setequal, union

## The following objects are masked from 'package:BiocGenerics':
## 
##     combine, intersect, setdiff, union

## The following objects are masked from 'package:stats':
## 
##     filter, lag

## The following objects are masked from 'package:base':
## 
##     intersect, setdiff, setequal, union

library(tidyr)

## 
##     'tidyr'

```

```

## The following object is masked from 'package:S4Vectors':
##
##      expand

library(survival)
library(survminer)

## Warning:  'survminer' R 4.4.2

##      ggpubr

##
##      'survminer'

## The following object is masked from 'package:survival':
##
##      myeloma

library(readr)
library(KEGGREST)

setwd("C:\\\\Users\\\\COLORFUL\\\\Documents\\\\bmeg310-1")
clinical.patients <- read.table("data_clinical_patient.txt", sep = "\\t", header = TRUE)
data.mutations <- read.table("data_mutations.txt", sep = "\\t", header = TRUE)
data.RNAseq <- read.csv("RNAseq_BRCA.csv", header = TRUE, stringsAsFactors = FALSE)

# Preprocess data
colnames(data.RNAseq) <- substring(colnames(data.RNAseq), 1, 12)
colnames(data.RNAseq) <- gsub("\\.", "-", colnames(data.RNAseq))
data.mutations$Tumor_Sample_Barcode <- substring(data.mutations$Tumor_Sample_Barcode, 1, 12)
data.RNAseq$X <- gsub("\\.*", "", data.RNAseq$X)

#Preprocess
common_genes <- intersect(data.RNAseq$X, data.mutations$Gene)
data.RNAseq.filtered <- data.RNAseq

data.RNAseq.filtered$X <- make.unique(data.RNAseq.filtered$X)
data.RNAseq.filtered <- data.RNAseq.filtered[data.RNAseq.filtered$X %in% common_genes, ]

rownames(data.RNAseq.filtered) <- data.RNAseq.filtered[, 1]
data.RNAseq.filtered <- data.RNAseq.filtered[,-1]
data.RNAseq.filtered <- as.matrix(data.RNAseq.filtered)
storage.mode(data.RNAseq.filtered) <- "numeric"

#Filter data for low count
data.RNAseq.filtered <- data.RNAseq.filtered[rowSums(data.RNAseq.filtered)>1,]

common_ids <- Reduce(intersect, list(clinical.patients$PATIENT_ID, colnames(data.RNAseq.filtered)))

filtered.clinical <- clinical.patients %>% filter(PATIENT_ID %in% common_ids)
data.RNAseq.filtered <- data.RNAseq.filtered[, colnames(data.RNAseq.filtered) %in% common_ids]

```

```

#Sort coldata and countdata
filtered.clinical <- filtered.clinical[order(filtered.clinical$PATIENT_ID), ]
data.RNAseq.filtered <- data.RNAseq.filtered[,order(colnames(data.RNAseq.filtered))]

#Condition for DESeq2 coldata
colData <- cbind(filtered.clinical$PATIENT_ID,filtered.clinical$SUBTYPE)
rownames(colData) <- colData[,1]
colData <- colData[,-1]
colData <- as.data.frame(colData)
#Write BRCA to empty condition name
colnames(colData) <- "condition"
colData$condition <- ifelse(
  is.na(colData$condition) | colData$condition == "",
  "BRCA",
  colData$condition
)
colData$condition <- as.factor(colData$condition)

#Run DESeq2
dds = DESeqDataSetFromMatrix(countData=data.RNAseq.filtered,
                               colData=colData,
                               design=~condition)

## converting counts to integer mode

dds = DESeq(dds)

## estimating size factors

## estimating dispersions

## gene-wise dispersion estimates

## mean-dispersion relationship

## final dispersion estimates

## fitting model and testing

## -- replacing outliers and refitting for 1893 genes
## -- DESeq argument 'minReplicatesForReplace' = 7
## -- original counts are preserved in counts(dds)

## estimating dispersions

## fitting model and testing

```

```

res <- results(dds)
res

## log2 fold change (MLE): condition BRCA Normal vs BRCA
## Wald test p-value: condition BRCA Normal vs BRCA
## DataFrame with 16196 rows and 6 columns
##           baseMean log2FoldChange      lfcSE      stat     pvalue
##           <numeric>      <numeric> <numeric> <numeric> <numeric>
## ENSG00000000003 3118.5217      0.0155499  0.179737  0.0865151 9.31057e-01
## ENSG00000000005  85.8889      0.4422268  0.493932  0.8953191 3.70617e-01
## ENSG00000000419 2358.4296     -0.2193895  0.104379 -2.1018613 3.55654e-02
## ENSG00000000457 1568.9932     -0.3171946  0.105374 -3.0101814 2.61092e-03
## ENSG00000000460  704.3047     -0.5507411  0.136074 -4.0473709 5.17961e-05
## ...
##           ...
##           ...      ...      ...      ...      ...
## ENSG00000272755 3.94457      -0.5322689  0.367373 -1.448850 1.47380e-01
## ENSG00000273032 115.02742     -0.2031495  0.270525 -0.750947 4.52685e-01
## ENSG00000273045 287.20166     -0.6690466  0.138995 -4.813462 1.48338e-06
## ENSG00000273079 38.00377      0.0725066  0.432665  0.167581 8.66913e-01
## ENSG00000273274 22.86689      0.5731612  0.392259  1.461179 1.43966e-01
##           padj
##           <numeric>
## ENSG00000000003 0.960742627
## ENSG00000000005 0.526884678
## ENSG00000000419 0.094737685
## ENSG00000000457 0.013115155
## ENSG00000000460 0.000633892
## ...
##           ...
## ENSG00000272755 2.73582e-01
## ENSG00000273032 6.06015e-01
## ENSG00000273045 4.08703e-05
## ENSG00000273079 9.21315e-01
## ENSG00000273274 2.69010e-01

```

```

#Normalize the data by using DEseq2
data.RNAseq.normalized.DESeq <- counts(dds, normalized = TRUE)
head(data.RNAseq.normalized.DESeq)

```

```

##           TCGA-3C-AAAU TCGA-3C-AALI TCGA-3C-AALJ TCGA-3C-AALK
## ENSG00000000003   580.113445   613.28132   3202.4677  3293.752148
## ENSG00000000005    1.782223    2.93436   127.8038   4.437524
## ENSG00000000419  1668.160322  2667.33361   3148.3969 1537.602047
## ENSG00000000457   847.446830  3575.51815   933.9507 1458.835997
## ENSG00000000460   302.086725   718.91830   587.4058  510.315254
## ENSG00000000938   220.995598   569.26592   911.8308  426.002299
##           TCGA-4H-AAAK TCGA-5L-AATO TCGA-5T-A9QA TCGA-A1-A0SB
## ENSG00000000003  2942.64433  4374.061277  2508.251997  4820.7798
## ENSG00000000005   17.16161   7.599134   1.598631   701.9650
## ENSG00000000419  1646.37060  1395.200921  3532.974451 1387.6594
## ENSG00000000457  1153.26030  1031.962337  1851.214667 1157.5450
## ENSG00000000460   418.74332   367.798064  740.166141  391.6593
## ENSG00000000938   407.30225   556.256577  155.067204  129.0035
##           TCGA-A1-A0SD TCGA-A1-AOSE TCGA-A1-A0SF TCGA-A1-A0SG
## ENSG00000000003  2108.56057  4384.42657  10140.51460 3001.398022

```

|                     |              |              |              |              |
|---------------------|--------------|--------------|--------------|--------------|
| ## ENSG000000000005 | 42.56279     | 20.67719     | 10.14164     | 4.021974     |
| ## ENSG00000000419  | 2362.23479   | 1346.60223   | 1830.00286   | 1755.591607  |
| ## ENSG00000000457  | 1217.29577   | 1524.08147   | 1423.21035   | 1004.487981  |
| ## ENSG00000000460  | 319.22092    | 1126.90704   | 510.46262    | 400.186403   |
| ## ENSG00000000938  | 350.71738    | 178.34079    | 650.19190    | 368.010612   |
|                     | TCGA-A1-A0SH | TCGA-A1-A0SI | TCGA-A1-A0SJ | TCGA-A1-A0SK |
| ## ENSG000000000003 | 3787.710357  | 2283.894471  | 7076.4116    | 5446.95311   |
| ## ENSG000000000005 | 3.078605     | 4.573887     | 144.3143     | 0.00000      |
| ## ENSG00000000419  | 1557.774132  | 2265.598922  | 6419.9819    | 3044.76401   |
| ## ENSG00000000457  | 965.655770   | 2223.671620  | 1223.6650    | 818.36566    |
| ## ENSG00000000460  | 328.384534   | 1530.727670  | 576.2550     | 1053.03778   |
| ## ENSG00000000938  | 289.388870   | 310.262033   | 543.1830     | 98.98896     |
|                     | TCGA-A1-A0SM | TCGA-A1-A0SN | TCGA-A1-A0SO | TCGA-A1-A0SP |
| ## ENSG000000000003 | 3092.1892167 | 722.9128451  | 3971.338868  | 4157.219960  |
| ## ENSG000000000005 | 0.8639813    | 0.8636952    | 3.881293     | 5.874545     |
| ## ENSG00000000419  | 1985.4291199 | 4720.0940244 | 3545.172911  | 2445.769067  |
| ## ENSG00000000457  | 1145.6392572 | 1615.9736358 | 896.578654   | 774.460902   |
| ## ENSG00000000460  | 660.9457253  | 728.9587112  | 1185.346844  | 897.826355   |
| ## ENSG00000000938  | 596.1471248  | 351.5239283  | 146.712871   | 899.784537   |
|                     | TCGA-A1-A0SQ | TCGA-A2-A04N | TCGA-A2-A04P | TCGA-A2-A04Q |
| ## ENSG000000000003 | 874.972213   | 3452.553061  | 5411.292088  | 2876.897002  |
| ## ENSG000000000005 | 6.713342     | 4.995013     | 6.982312     | 5.163132     |
| ## ENSG00000000419  | 4441.994485  | 1681.321412  | 1214.922353  | 1937.207027  |
| ## ENSG00000000457  | 1970.365816  | 1088.912858  | 906.304146   | 1663.561045  |
| ## ENSG00000000460  | 829.097711   | 406.594067   | 358.890856   | 690.827026   |
| ## ENSG00000000938  | 238.323634   | 248.751653   | 527.862815   | 1761.660548  |
|                     | TCGA-A2-A04R | TCGA-A2-A04T | TCGA-A2-A04U | TCGA-A2-A04V |
| ## ENSG000000000003 | 1556.32856   | 3921.8205    | 7657.51901   | 3816.78578   |
| ## ENSG000000000005 | 7.99655      | 658.8732     | 32.28977     | 75.13787     |
| ## ENSG00000000419  | 1824.21298   | 3041.1667    | 5920.32937   | 1589.87368   |
| ## ENSG00000000457  | 1715.25999   | 2191.9317    | 792.71386    | 1356.83740   |
| ## ENSG00000000460  | 1012.56315   | 1533.0585    | 389.09173    | 332.13115    |
| ## ENSG00000000938  | 153.93359    | 776.2322     | 224.41390    | 444.29347    |
|                     | TCGA-A2-A04W | TCGA-A2-A04X | TCGA-A2-A04Y | TCGA-A2-A0CK |
| ## ENSG000000000003 | 4376.296644  | 1298.044507  | 2089.85915   | 6038.1385    |
| ## ENSG000000000005 | 1.610116     | 2.793496     | 60.48336     | 180.0433     |
| ## ENSG00000000419  | 3081.762979  | 3012.319929  | 1952.97576   | 1629.6492    |
| ## ENSG00000000457  | 1090.048870  | 784.972396   | 1116.55460   | 1503.1045    |
| ## ENSG00000000460  | 468.543901   | 285.867764   | 319.92513    | 476.3432     |
| ## ENSG00000000938  | 360.666096   | 811.976191   | 603.24190    | 448.5651     |
|                     | TCGA-A2-A0CL | TCGA-A2-A0CM | TCGA-A2-A0CO | TCGA-A2-A0CP |
| ## ENSG000000000003 | 1440.6207    | 2376.9066    | 1891.4990    | 2183.22887   |
| ## ENSG000000000005 | 22.3352      | 0.0000       | 134.8062     | 24.76921     |
| ## ENSG00000000419  | 3413.5637    | 3487.4978    | 1349.1148    | 1526.84483   |
| ## ENSG00000000457  | 939.0092     | 889.6801     | 1387.0291    | 762.53780    |
| ## ENSG00000000460  | 604.9118     | 863.1225     | 278.0377     | 199.92290    |
| ## ENSG00000000938  | 1037.6564    | 970.5601     | 853.0703     | 472.38421    |
|                     | TCGA-A2-A0CQ | TCGA-A2-A0CR | TCGA-A2-A0CS | TCGA-A2-A0CT |
| ## ENSG000000000003 | 2871.256090  | 1382.1933    | 2792.15232   | 6009.18901   |
| ## ENSG000000000005 | 6.483481     | 116.3171     | 12.22246     | 2.45223      |
| ## ENSG00000000419  | 1453.226066  | 1656.8995    | 2543.62904   | 3299.47513   |
| ## ENSG00000000457  | 2226.612787  | 676.8664     | 1531.88124   | 2881.36996   |
| ## ENSG00000000460  | 379.746773   | 165.8137     | 607.04868    | 969.85687    |
| ## ENSG00000000938  | 666.872382   | 1112.4367    | 422.35378    | 145.90767    |

|    | TCGA-A2-AOCU     | TCGA-A2-AOCV | TCGA-A2-AOCW | TCGA-A2-AOCX |             |
|----|------------------|--------------|--------------|--------------|-------------|
| ## | ENSG000000000003 | 1412.60055   | 3165.213378  | 597.4017     | 3588.161413 |
| ## | ENSG000000000005 | 72.16224     | 5.246624     | 0.0000       | 1.112263    |
| ## | ENSG00000000419  | 1654.78888   | 2727.495023  | 8523.0932    | 2114.412537 |
| ## | ENSG00000000457  | 1006.31725   | 2734.990200  | 1249.0391    | 1607.220472 |
| ## | ENSG00000000460  | 444.83572    | 541.901320   | 934.9580     | 824.187107  |
| ## | ENSG00000000938  | 225.38343    | 394.995844   | 288.1775     | 381.506313  |
| ## | TCGA-A2-AOCZ     | TCGA-A2-AOD0 | TCGA-A2-AOD1 | TCGA-A2-AOD2 |             |
| ## | ENSG000000000003 | 4340.70698   | 2586.8455    | 5223.62536   | 4253.555915 |
| ## | ENSG000000000005 | 85.28154     | 0.0000       | 10.64417     | 3.131452    |
| ## | ENSG00000000419  | 1266.86351   | 5546.1163    | 1612.59143   | 3553.154438 |
| ## | ENSG00000000457  | 960.34434    | 413.9456     | 1138.92596   | 401.869700  |
| ## | ENSG00000000460  | 150.78766    | 363.6179     | 634.65851    | 773.468695  |
| ## | ENSG00000000938  | 573.48748    | 538.5068     | 240.82430    | 728.584547  |
| ## | TCGA-A2-AOD3     | TCGA-A2-AOD4 | TCGA-A2-AOEM | TCGA-A2-AOEN |             |
| ## | ENSG000000000003 | 6547.09586   | 1155.35536   | 6526.66217   | 3674.7983   |
| ## | ENSG000000000005 | 7.82106      | 33.54257     | 12.62035     | 187.4635    |
| ## | ENSG00000000419  | 1794.49867   | 2020.00841   | 1459.10654   | 1670.0516   |
| ## | ENSG00000000457  | 3742.81151   | 1510.16127   | 2049.35056   | 1503.1320   |
| ## | ENSG00000000460  | 891.60079    | 851.23601    | 968.85451    | 486.2067    |
| ## | ENSG00000000938  | 176.40834    | 131.93413    | 401.90958    | 1195.8288   |
| ## | TCGA-A2-AOE0     | TCGA-A2-AOEP | TCGA-A2-AOEQ | TCGA-A2-AOER |             |
| ## | ENSG000000000003 | 3989.14073   | 2411.4798    | 2525.073780  | 2648.474876 |
| ## | ENSG000000000005 | 19.88888     | 224.7990     | 6.460743     | 8.368009    |
| ## | ENSG00000000419  | 1915.01485   | 1723.7549    | 2064.207435  | 1782.385935 |
| ## | ENSG00000000457  | 1858.18948   | 2630.0590    | 878.661068   | 1201.646105 |
| ## | ENSG00000000460  | 341.89929    | 490.4705     | 528.704148   | 625.927080  |
| ## | ENSG00000000938  | 511.42830    | 3663.4234    | 1180.162415  | 288.696313  |
| ## | TCGA-A2-AOES     | TCGA-A2-AOET | TCGA-A2-AOEU | TCGA-A2-AOEV |             |
| ## | ENSG000000000003 | 4957.37465   | 1060.38141   | 3827.4999    | 2179.95905  |
| ## | ENSG000000000005 | 53.62884     | 11.83957     | 0.0000       | 44.69372    |
| ## | ENSG00000000419  | 1783.86456   | 3053.86888   | 2648.9132    | 2010.30534  |
| ## | ENSG00000000457  | 1187.36132   | 2222.13914   | 1332.9128    | 1582.52258  |
| ## | ENSG00000000460  | 314.24618    | 443.24387    | 528.5142     | 594.70013   |
| ## | ENSG00000000938  | 740.45433    | 295.98923    | 247.3446     | 749.75998   |
| ## | TCGA-A2-AOEW     | TCGA-A2-AOEX | TCGA-A2-AOEH | TCGA-A2-AOST |             |
| ## | ENSG000000000003 | 2635.8341    | 3133.025527  | 1851.08840   | 3815.74687  |
| ## | ENSG000000000005 | 674.7167     | 1.200393     | 15.15733     | 26.23682    |
| ## | ENSG00000000419  | 1403.5883    | 1687.752449  | 2011.18765   | 2044.19085  |
| ## | ENSG00000000457  | 1362.7502    | 1056.345772  | 1707.09380   | 1089.39858  |
| ## | ENSG00000000460  | 375.5331     | 291.695480   | 657.44900    | 657.06134   |
| ## | ENSG00000000938  | 845.1715     | 212.469547   | 291.77852    | 2112.63474  |
| ## | TCGA-A2-AOSU     | TCGA-A2-AOSV | TCGA-A2-AOSW | TCGA-A2-AOSX |             |
| ## | ENSG000000000003 | 10578.850270 | 979.885488   | 401.72809    | 1726.87942  |
| ## | ENSG000000000005 | 8.294349     | 3.074151     | 69.66383     | 23.16351    |
| ## | ENSG00000000419  | 1508.386693  | 2427.810397  | 3169.70428   | 2695.75303  |
| ## | ENSG00000000457  | 1606.733979  | 1224.280457  | 1612.71767   | 1869.05543  |
| ## | ENSG00000000460  | 342.438142   | 768.537638   | 1248.14363   | 1304.34510  |
| ## | ENSG00000000938  | 364.951376   | 966.051810   | 704.76575    | 971.26983   |
| ## | TCGA-A2-AOSY     | TCGA-A2-AOT0 | TCGA-A2-AOT1 | TCGA-A2-AOT2 |             |
| ## | ENSG000000000003 | 1867.67720   | 5180.3137428 | 1550.08504   | 3437.559903 |
| ## | ENSG000000000005 | 66.73586     | 0.9374437    | 24.83447     | 1.289891    |
| ## | ENSG00000000419  | 1675.81160   | 2991.3827639 | 2416.18729   | 4116.042645 |
| ## | ENSG00000000457  | 1515.46016   | 1184.9288040 | 2071.60898   | 1424.039825 |

|                     |              |              |              |             |
|---------------------|--------------|--------------|--------------|-------------|
| ## ENSG00000000460  | 541.30198    | 1194.3032407 | 449.09006    | 1056.420848 |
| ## ENSG00000000938  | 472.71234    | 545.5922183  | 1429.01698   | 361.169521  |
| ## TCGA-A2-A0T3     | TCGA-A2-A0T4 | TCGA-A2-A0T5 | TCGA-A2-A0T6 |             |
| ## ENSG00000000003  | 1368.311091  | 2185.0561    | 4979.252637  | 2836.05513  |
| ## ENSG00000000005  | 9.407139     | 316.3420     | 1.000855     | 60.29226    |
| ## ENSG000000000419 | 4789.944012  | 1785.8019    | 1691.444614  | 1340.34331  |
| ## ENSG000000000457 | 1236.611148  | 1380.1697    | 2147.834404  | 1862.87622  |
| ## ENSG000000000460 | 949.265819   | 670.9513     | 958.818900   | 540.31140   |
| ## ENSG000000000938 | 171.038886   | 808.7131     | 355.303454   | 517.12207   |
| ## TCGA-A2-A0T7     | TCGA-A2-A0YC | TCGA-A2-A0YD | TCGA-A2-A0YE |             |
| ## ENSG00000000003  | 1907.869209  | 596.33040    | 1497.1291    | 9456.302335 |
| ## ENSG00000000005  | 8.102919     | 86.38077     | 105.8660     | 6.355652    |
| ## ENSG000000000419 | 3679.462046  | 1507.11711   | 1858.9076    | 3017.118834 |
| ## ENSG000000000457 | 1815.790579  | 1917.04691   | 2405.7431    | 963.335264  |
| ## ENSG000000000460 | 500.171117   | 578.90270    | 891.9422     | 965.151165  |
| ## ENSG000000000938 | 471.442585   | 598.60358    | 551.8371     | 200.657015  |
| ## TCGA-A2-A0YF     | TCGA-A2-A0YG | TCGA-A2-A0YH | TCGA-A2-A0YI |             |
| ## ENSG00000000003  | 1638.02065   | 979.909902   | 2154.9265830 | 5395.52268  |
| ## ENSG00000000005  | 33.66286     | 2.714432     | 0.9497252    | 40.02837    |
| ## ENSG000000000419 | 1874.37693   | 3061.879140  | 2186.2675162 | 1759.73794  |
| ## ENSG000000000457 | 2183.78879   | 2449.322350  | 1360.0065522 | 1507.48366  |
| ## ENSG000000000460 | 817.21975    | 1405.170894  | 1073.1895279 | 484.87200   |
| ## ENSG000000000938 | 465.55025    | 208.106443   | 963.9711246  | 762.04961   |
| ## TCGA-A2-A0YJ     | TCGA-A2-A0YK | TCGA-A2-A0YL | TCGA-A2-A0YM |             |
| ## ENSG00000000003  | 3544.4290    | 2577.97308   | 4280.99611   | 4536.276799 |
| ## ENSG00000000005  | 0.0000       | 48.00364     | 15.30942     | 7.465074    |
| ## ENSG000000000419 | 2949.5336    | 1542.33907   | 1422.96991   | 1785.811656 |
| ## ENSG000000000457 | 899.2024     | 2074.82385   | 1825.84927   | 817.010906  |
| ## ENSG000000000460 | 1303.2823    | 551.15287    | 806.56448    | 1204.365316 |
| ## ENSG000000000938 | 483.8981     | 858.73172    | 394.82178    | 753.972501  |
| ## TCGA-A2-A0YT     | TCGA-A2-A1FV | TCGA-A2-A1FW | TCGA-A2-A1FX |             |
| ## ENSG00000000003  | 1196.658542  | 1658.6827    | 1013.94037   | 1009.819299 |
| ## ENSG00000000005  | 1.525377     | 56.1237      | 40.46241     | 4.766511    |
| ## ENSG000000000419 | 3159.056521  | 1451.6318    | 2095.31809   | 1978.782793 |
| ## ENSG000000000457 | 2246.118168  | 3650.3155    | 1241.64059   | 695.229605  |
| ## ENSG000000000460 | 594.134483   | 1003.4007    | 488.72243    | 437.838037  |
| ## ENSG000000000938 | 281.432124   | 152.4441     | 189.61796    | 430.347806  |
| ## TCGA-A2-A1FZ     | TCGA-A2-A1G0 | TCGA-A2-A1G1 | TCGA-A2-A1G4 |             |
| ## ENSG00000000003  | 4412.5017    | 1732.92034   | 3654.3227597 | 1351.19553  |
| ## ENSG00000000005  | 308.5666     | 55.01334     | 0.7137349    | 10.02477    |
| ## ENSG000000000419 | 1423.6622    | 1622.08463   | 3889.8552813 | 1601.09868  |
| ## ENSG000000000457 | 1972.6979    | 1948.11960   | 1239.0438107 | 1330.42994  |
| ## ENSG000000000460 | 658.6300     | 401.27380    | 1301.8524831 | 850.67318   |
| ## ENSG000000000938 | 971.4526     | 438.48871    | 678.0481683  | 281.40956   |
| ## TCGA-A2-A1G6     | TCGA-A2-A259 | TCGA-A2-A25A | TCGA-A2-A25B |             |
| ## ENSG00000000003  | 5084.96849   | 2718.50198   | 1897.07296   | 1384.179159 |
| ## ENSG00000000005  | 74.53804     | 11.55498     | 10.32495     | 1.841888    |
| ## ENSG000000000419 | 2253.34219   | 1536.04220   | 1644.38350   | 2773.883984 |
| ## ENSG000000000457 | 1235.20175   | 1131.61785   | 1622.64677   | 2961.756604 |
| ## ENSG000000000460 | 291.59935    | 497.63454    | 526.57224    | 1679.802253 |
| ## ENSG000000000938 | 463.61021    | 645.53830    | 578.19697    | 376.666185  |
| ## TCGA-A2-A25C     | TCGA-A2-A25D | TCGA-A2-A25E | TCGA-A2-A25F |             |
| ## ENSG00000000003  | 1861.84890   | 4578.098827  | 723.30318    | 1656.7027   |
| ## ENSG00000000005  | 19.73691     | 9.209408     | 16.99034     | 244.3125    |

|                    |              |              |              |             |
|--------------------|--------------|--------------|--------------|-------------|
| ## ENSG00000000419 | 2128.29725   | 1826.532500  | 5006.48780   | 1645.4776   |
| ## ENSG00000000457 | 2059.21805   | 1393.690345  | 2040.45931   | 723.6932    |
| ## ENSG00000000460 | 1319.63201   | 443.074831   | 849.51716    | 581.7278    |
| ## ENSG00000000938 | 265.90009    | 949.592247   | 235.43761    | 2726.3952   |
| ## TCGA-A2-A3KC    | TCGA-A2-A3KD | TCGA-A2-A3XS | TCGA-A2-A3XT |             |
| ## ENSG00000000003 | 2837.87205   | 3008.68326   | 7808.17987   | 1078.41258  |
| ## ENSG00000000005 | 39.05736     | 17.04406     | 11.96918     | 19.28732    |
| ## ENSG00000000419 | 1770.00840   | 1231.23078   | 3292.37936   | 3531.25612  |
| ## ENSG00000000457 | 1894.28181   | 1668.69511   | 1059.27240   | 1234.38827  |
| ## ENSG00000000460 | 798.01282    | 598.97714    | 572.81074    | 1263.73854  |
| ## ENSG00000000938 | 749.19112    | 167.19416    | 601.87875    | 2843.62135  |
| ## TCGA-A2-A3XU    | TCGA-A2-A3XV | TCGA-A2-A3XW | TCGA-A2-A3XX |             |
| ## ENSG00000000003 | 3921.476748  | 754.56186    | 983.76094    | 6446.8076   |
| ## ENSG00000000005 | 2.735596     | 11.58319     | 14.10021     | 354.2098    |
| ## ENSG00000000419 | 1497.738765  | 2672.40660   | 1500.04562   | 3058.1375   |
| ## ENSG00000000457 | 763.231261   | 878.66743    | 847.09735    | 1367.5907   |
| ## ENSG00000000460 | 659.278616   | 150.58142    | 194.14907    | 1341.0724   |
| ## ENSG00000000938 | 82.067878    | 198.56891    | 941.46030    | 556.8860    |
| ## TCGA-A2-A3XY    | TCGA-A2-A3XZ | TCGA-A2-A3Y0 | TCGA-A2-A4RW |             |
| ## ENSG00000000003 | 2115.0230    | 2501.798811  | 1971.190799  | 3055.655383 |
| ## ENSG00000000005 | 147.5753     | 8.131524     | 8.435909     | 9.148669    |
| ## ENSG00000000419 | 3913.4298    | 1756.409133  | 1676.871297  | 1636.086939 |
| ## ENSG00000000457 | 1040.4062    | 2901.146978  | 916.702140   | 1228.971177 |
| ## ENSG00000000460 | 489.6818     | 437.295278   | 846.402896   | 408.640540  |
| ## ENSG00000000938 | 759.3422     | 870.073043   | 776.103653   | 532.147569  |
| ## TCGA-A2-A4RX    | TCGA-A2-A4RY | TCGA-A2-A4S0 | TCGA-A2-A4S1 |             |
| ## ENSG00000000003 | 2775.14706   | 2424.2161    | 1390.97732   | 2890.91376  |
| ## ENSG00000000005 | 14.04743     | 65.7131      | 26.98016     | 14.68711    |
| ## ENSG00000000419 | 2208.56754   | 1354.8847    | 1402.96850   | 2340.14695  |
| ## ENSG00000000457 | 741.39193    | 1354.8847    | 1344.51148   | 563.00607   |
| ## ENSG00000000460 | 541.60632    | 357.2403     | 305.77519    | 359.83431   |
| ## ENSG00000000938 | 430.78773    | 586.6388     | 331.25645    | 560.55821   |
| ## TCGA-A2-A4S2    | TCGA-A2-A4S3 | TCGA-A7-A0CD | TCGA-A7-A0CE |             |
| ## ENSG00000000003 | 2187.36724   | 2486.40509   | 4481.61202   | 7629.02341  |
| ## ENSG00000000005 | 59.33184     | 11.70762     | 28.16164     | 48.86339    |
| ## ENSG00000000419 | 1843.24256   | 2300.54667   | 1587.22129   | 2170.80147  |
| ## ENSG00000000457 | 1756.22252   | 1021.48955   | 1243.80575   | 1169.10191  |
| ## ENSG00000000460 | 535.30506    | 917.58446    | 596.87030    | 1669.49925  |
| ## ENSG00000000938 | 490.47656    | 566.35596    | 143.15500    | 256.98525   |
| ## TCGA-A7-A0CG    | TCGA-A7-A0CH | TCGA-A7-A0CJ | TCGA-A7-A0D9 |             |
| ## ENSG00000000003 | 3048.31830   | 5073.0039    | 2164.4106    | 5207.7329   |
| ## ENSG00000000005 | 99.94486     | 2140.1577    | 0.0000       | 5214.9518   |
| ## ENSG00000000419 | 1674.07644   | 1622.8348    | 3832.3778    | 1798.9563   |
| ## ENSG00000000457 | 1922.93915   | 902.0248     | 937.8420     | 967.3360    |
| ## ENSG00000000460 | 570.68516    | 224.7469     | 789.3244     | 291.6446    |
| ## ENSG00000000938 | 410.77338    | 1544.8821    | 337.5400     | 1399.0278   |
| ## TCGA-A7-A0DA    | TCGA-A7-A0DB | TCGA-A7-A0DC | TCGA-A7-A13D |             |
| ## ENSG00000000003 | 2450.794189  | 3550.65319   | 4758.9621    | 3264.9158   |
| ## ENSG00000000005 | 6.332802     | 75.88936     | 829.2773     | 0.0000      |
| ## ENSG00000000419 | 1768.660997  | 1824.57395   | 1824.4100    | 3047.4711   |
| ## ENSG00000000457 | 1477.352127  | 2814.36495   | 1071.4020    | 639.3523    |
| ## ENSG00000000460 | 702.940969   | 1094.74437   | 230.0185     | 1171.6050   |
| ## ENSG00000000938 | 291.308870   | 1367.62313   | 550.8338     | 249.8991    |
| ## TCGA-A7-A13E    | TCGA-A7-A13F | TCGA-A7-A13G | TCGA-A7-A13H |             |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000003 | 2535.825834  | 3854.6180    | 4984.5893    | 4894.24741   |
| ## ENSG00000000005 | 7.089914     | 2539.4436    | 938.8260     | 14.61454     |
| ## ENSG00000000419 | 3026.211538  | 1526.4996    | 2052.7979    | 1286.07961   |
| ## ENSG00000000457 | 1609.410431  | 1171.1427    | 1142.2564    | 1849.55136   |
| ## ENSG00000000460 | 1087.120115  | 284.5216     | 259.9993     | 565.09559    |
| ## ENSG00000000938 | 237.512112   | 564.3208     | 597.2369     | 2336.70273   |
|                    | TCGA-A7-A26E | TCGA-A7-A26F | TCGA-A7-A26G | TCGA-A7-A26H |
| ## ENSG00000000003 | 1917.25389   | 1303.74710   | 6441.03621   | 1649.96316   |
| ## ENSG00000000005 | 55.49215     | 27.90896     | 48.39395     | 20.90164     |
| ## ENSG00000000419 | 929.49357    | 812.01782    | 2918.88456   | 1551.78877   |
| ## ENSG00000000457 | 3584.79310   | 2259.29671   | 1502.86425   | 2532.26592   |
| ## ENSG00000000460 | 1487.18971   | 1000.73554   | 1014.94714   | 880.40261    |
| ## ENSG00000000938 | 155.37803    | 466.47832    | 448.80419    | 539.64246    |
|                    | TCGA-A7-A26I | TCGA-A7-A26J | TCGA-A7-A2KD | TCGA-A7-A3IY |
| ## ENSG00000000003 | 2739.295319  | 711.404961   | 3297.390041  | 2566.722533  |
| ## ENSG00000000005 | 5.956429     | 2.728303     | 2.032081     | 5.589958     |
| ## ENSG00000000419 | 1514.918334  | 2646.453738  | 5429.042970  | 2283.497977  |
| ## ENSG00000000457 | 2389.189684  | 2275.404554  | 1538.285288  | 629.801972   |
| ## ENSG00000000460 | 5413.731750  | 891.472947   | 804.026701   | 296.267791   |
| ## ENSG00000000938 | 310.396111   | 351.951064   | 534.437293   | 851.536985   |
|                    | TCGA-A7-A3IZ | TCGA-A7-A3J0 | TCGA-A7-A3J1 | TCGA-A7-A3RF |
| ## ENSG00000000003 | 3610.4290312 | 215.194954   | 3091.4878    | 281.7984     |
| ## ENSG00000000005 | 0.9078273    | 6.434401     | 125.1001     | 0.0000       |
| ## ENSG00000000419 | 1397.1461602 | 1393.405199  | 1303.4415    | 1410.0056    |
| ## ENSG00000000457 | 2262.3055433 | 1462.753739  | 2202.5192    | 757.2065     |
| ## ENSG00000000460 | 884.2237557  | 363.186168   | 638.7685     | 156.1041     |
| ## ENSG00000000938 | 217.8785435  | 296.697361   | 588.2230     | 140.8992     |
|                    | TCGA-A7-A425 | TCGA-A7-A426 | TCGA-A7-A4SA | TCGA-A7-A4SB |
| ## ENSG00000000003 | 1279.7222    | 2196.59418   | 3510.75289   | 3910.40779   |
| ## ENSG00000000005 | 399.4225     | 25.25627     | 88.79062     | 49.05255     |
| ## ENSG00000000419 | 1806.7244    | 1570.09830   | 2870.89669   | 1627.93143   |
| ## ENSG00000000457 | 1729.1952    | 1688.66247   | 1527.76240   | 1623.33275   |
| ## ENSG00000000460 | 603.5500     | 430.75976    | 742.74058    | 623.88709    |
| ## ENSG00000000938 | 1108.9617    | 510.73796    | 593.34684    | 331.10470    |
|                    | TCGA-A7-A4SC | TCGA-A7-A4SD | TCGA-A7-A4SE | TCGA-A7-A4SF |
| ## ENSG00000000003 | 1998.34319   | 2633.276502  | 2851.90514   | 5039.5173    |
| ## ENSG00000000005 | 13.06107     | 2.657191     | 43.71313     | 0.0000       |
| ## ENSG00000000419 | 1635.53579   | 3247.087675  | 2871.50069   | 2338.9069    |
| ## ENSG00000000457 | 2133.30755   | 1011.061261  | 559.22664    | 1493.8511    |
| ## ENSG00000000460 | 490.51561    | 1122.663292  | 1112.42389   | 1138.6357    |
| ## ENSG00000000938 | 444.07626    | 702.827079   | 387.38881    | 296.8238     |
|                    | TCGA-A7-A56D | TCGA-A7-A5ZV | TCGA-A7-A5ZW | TCGA-A7-A5ZX |
| ## ENSG00000000003 | 1343.900838  | 7029.363913  | 6646.79990   | 5280.18892   |
| ## ENSG00000000005 | 2.404116     | 1.892667     | 10.16503     | 13.32863     |
| ## ENSG00000000419 | 2103.601491  | 5600.400597  | 2327.79178   | 2023.90154   |
| ## ENSG00000000457 | 507.268474   | 1090.175986  | 1951.68568   | 1769.63225   |
| ## ENSG00000000460 | 91.356408    | 596.189993   | 483.40363    | 422.41511    |
| ## ENSG00000000938 | 281.281571   | 302.826663   | 417.89566    | 383.45450    |
|                    | TCGA-A7-A6VV | TCGA-A7-A6WV | TCGA-A7-A6VX | TCGA-A7-A6VY |
| ## ENSG00000000003 | 2197.67177   | 6095.459315  | 1803.222608  | 2623.329737  |
| ## ENSG00000000005 | 4.99698      | 3.923274     | 1.063848     | 2.707255     |
| ## ENSG00000000419 | 2454.51653   | 2074.103942  | 1938.331323  | 2574.599154  |
| ## ENSG00000000457 | 477.71128    | 652.571165   | 2117.057811  | 1008.903559  |
| ## ENSG00000000460 | 290.82423    | 1165.212240  | 559.584125   | 1299.482223  |

|                     |              |              |              |              |
|---------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000938  | 847.48779    | 476.023855   | 305.324418   | 692.154767   |
| ##                  | TCGA-A8-A06N | TCGA-A8-A06O | TCGA-A8-A06P | TCGA-A8-A06Q |
| ## ENSG00000000003  | 1951.184818  | 1920.68679   | 3257.40742   | 628.813551   |
| ## ENSG00000000005  | 1.192291     | 31.76818     | 46.82468     | 2.748912     |
| ## ENSG000000000419 | 1995.299598  | 1795.33128   | 1827.04598   | 2924.842048  |
| ## ENSG000000000457 | 2127.643939  | 1538.61007   | 968.29903    | 2342.072767  |
| ## ENSG000000000460 | 641.452754   | 1161.68495   | 327.77276    | 914.013140   |
| ## ENSG00000000938  | 74.518210    | 517.73542    | 392.26713    | 96.899137    |
| ##                  | TCGA-A8-A06R | TCGA-A8-A06T | TCGA-A8-A06U | TCGA-A8-A06X |
| ## ENSG00000000003  | 1239.224541  | 4229.105158  | 2520.5651    | 4777.491580  |
| ## ENSG00000000005  | 8.665906     | 2.089479     | 0.0000       | 2.847983     |
| ## ENSG000000000419 | 2171.290863  | 2085.996368  | 4531.1038    | 1781.413403  |
| ## ENSG000000000457 | 629.722494   | 1691.781362  | 1102.4172    | 1508.007029  |
| ## ENSG000000000460 | 386.114251   | 419.288753   | 655.7482     | 818.795129   |
| ## ENSG00000000938  | 535.360408   | 210.340869   | 345.2974     | 215.022721   |
| ##                  | TCGA-A8-A06Y | TCGA-A8-A06Z | TCGA-A8-A075 | TCGA-A8-A076 |
| ## ENSG00000000003  | 8779.95887   | 3925.329023  | 1002.2315    | 1366.75156   |
| ## ENSG00000000005  | 0.00000      | 1.393938     | 11.4323      | 23.81636     |
| ## ENSG000000000419 | 2769.36349   | 2750.239404  | 2096.8741    | 3309.70529   |
| ## ENSG000000000457 | 1676.73621   | 1636.483051  | 820.2674     | 1655.62092   |
| ## ENSG000000000460 | 605.86985    | 657.241702   | 520.1696     | 671.46760    |
| ## ENSG00000000938  | 93.91555     | 257.878505   | 582.0945     | 469.41270    |
| ##                  | TCGA-A8-A079 | TCGA-A8-A07B | TCGA-A8-A07C | TCGA-A8-A07E |
| ## ENSG00000000003  | 1832.479821  | 3198.4060    | 3264.927048  | 1782.44882   |
| ## ENSG00000000005  | 2.797679     | 0.0000       | 2.611419     | 39.36241     |
| ## ENSG000000000419 | 2432.115711  | 2081.6905    | 4297.090547  | 1418.53219   |
| ## ENSG000000000457 | 800.136227   | 896.2175     | 1192.765790  | 1132.59769   |
| ## ENSG000000000460 | 630.410361   | 576.1398     | 1923.963209  | 922.41726    |
| ## ENSG00000000938  | 505.447360   | 154.1115     | 346.013064   | 403.27905    |
| ##                  | TCGA-A8-A07F | TCGA-A8-A07G | TCGA-A8-A07I | TCGA-A8-A07J |
| ## ENSG00000000003  | 2596.388221  | 2657.209722  | 1300.83689   | 2306.2006    |
| ## ENSG00000000005  | 3.561575     | 9.514748     | 33.77285     | 107.3813     |
| ## ENSG000000000419 | 1678.926485  | 2070.755233  | 1660.69239   | 1403.4486    |
| ## ENSG000000000457 | 1947.469245  | 1819.046890  | 1134.30182   | 896.5090     |
| ## ENSG000000000460 | 1282.167023  | 583.859558   | 543.85929    | 372.0887     |
| ## ENSG00000000938  | 236.488584   | 273.332771   | 585.78420    | 2298.7089    |
| ##                  | TCGA-A8-A07L | TCGA-A8-A07O | TCGA-A8-A07P | TCGA-A8-A07R |
| ## ENSG00000000003  | 1813.4546    | 3120.6884543 | 1268.73639   | 4333.71616   |
| ## ENSG00000000005  | 0.0000       | 0.8388947    | 17.73079     | 40.14282     |
| ## ENSG000000000419 | 3436.0683    | 2372.3943411 | 2702.96013   | 4095.42156   |
| ## ENSG000000000457 | 1713.8449    | 1688.6951233 | 1591.83074   | 853.24841    |
| ## ENSG000000000460 | 1576.9980    | 2079.6200748 | 643.23359    | 2814.26779   |
| ## ENSG00000000938  | 118.2283     | 453.8420575  | 338.85506    | 197.29768    |
| ##                  | TCGA-A8-A07S | TCGA-A8-A07U | TCGA-A8-A07W | TCGA-A8-A07Z |
| ## ENSG00000000003  | 1669.816629  | 3449.19892   | 789.55881    | 3416.661742  |
| ## ENSG00000000005  | 6.493731     | 38.10668     | 19.06728     | 2.916485     |
| ## ENSG000000000419 | 1467.583282  | 1931.46429   | 3769.25495   | 2477.553692  |
| ## ENSG000000000457 | 2654.080765  | 1270.58559   | 1230.70638   | 1592.400607  |
| ## ENSG000000000460 | 722.659530   | 976.61977    | 1037.43347   | 968.272897   |
| ## ENSG00000000938  | 323.758891   | 1033.23541   | 588.48565    | 358.727609   |
| ##                  | TCGA-A8-A081 | TCGA-A8-A082 | TCGA-A8-A083 | TCGA-A8-A085 |
| ## ENSG00000000003  | 7801.212747  | 922.964344   | 600.799714   | 10046.250853 |
| ## ENSG00000000005  | 5.278669     | 8.477284     | 9.467147     | 1.259639     |
| ## ENSG00000000419  | 3106.496626  | 1942.357799  | 2553.216724  | 1430.320086  |

|                     |              |              |              |              |
|---------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000457  | 1597.457165  | 1218.609639  | 1936.395684  | 813.096975   |
| ## ENSG00000000460  | 1409.404587  | 487.443856   | 495.204613   | 412.531773   |
| ## ENSG00000000938  | 438.789349   | 452.475057   | 173.321614   | 90.694008    |
| ## TCGA-A8-A086     | TCGA-A8-A08A | TCGA-A8-A08B | TCGA-A8-A08C |              |
| ## ENSG000000000003 | 3491.159773  | 4750.640537  | 1764.8401    | 3869.3031    |
| ## ENSG000000000005 | 7.370499     | 9.003109     | 0.0000       | 52.0993      |
| ## ENSG00000000419  | 1696.033753  | 1199.414193  | 3191.1190    | 1186.1893    |
| ## ENSG00000000457  | 901.657732   | 2089.721643  | 1812.8630    | 2649.6214    |
| ## ENSG00000000460  | 587.183100   | 500.172724   | 1433.4824    | 644.7288     |
| ## ENSG00000000938  | 255.510638   | 671.231796   | 321.7532     | 246.5413     |
| ## TCGA-A8-A08G     | TCGA-A8-A08H | TCGA-A8-A08I | TCGA-A8-A08J |              |
| ## ENSG000000000003 | 1022.009445  | 2101.07382   | 3232.086227  | 2108.572741  |
| ## ENSG000000000005 | 7.780003     | 56.06113     | 3.739604     | 6.256892     |
| ## ENSG00000000419  | 2942.962838  | 1641.61626   | 2186.065594  | 4425.410616  |
| ## ENSG00000000457  | 2315.611711  | 641.04689    | 1081.279756  | 2059.411444  |
| ## ENSG00000000460  | 787.902091   | 522.83102    | 774.632236   | 407.591848   |
| ## ENSG00000000938  | 364.952854   | 3581.81901   | 2903.001084  | 338.766032   |
| ## TCGA-A8-A08L     | TCGA-A8-A08O | TCGA-A8-A08P | TCGA-A8-A08R |              |
| ## ENSG000000000003 | 3212.34305   | 1938.8298    | 978.491286   | 3622.1440    |
| ## ENSG000000000005 | 13.24196     | 10.7653      | 4.358536     | 12.9826      |
| ## ENSG00000000419  | 2997.35598   | 1892.5390    | 3956.460870  | 2901.6100    |
| ## ENSG00000000457  | 1658.36042   | 1609.4117    | 1173.535763  | 1312.8649    |
| ## ENSG00000000460  | 774.26503    | 626.5402     | 889.141303   | 1300.6938    |
| ## ENSG00000000938  | 512.54164    | 129.1835     | 943.623000   | 955.0322     |
| ## TCGA-A8-A08T     | TCGA-A8-A08X | TCGA-A8-A08Z | TCGA-A8-A090 |              |
| ## ENSG000000000003 | 2958.352805  | 2378.8156    | 1142.5611    | 1270.056084  |
| ## ENSG000000000005 | 5.133059     | 0.0000       | 0.0000       | 8.161003     |
| ## ENSG00000000419  | 1407.313581  | 2812.0233    | 1495.3372    | 2211.631799  |
| ## ENSG00000000457  | 2055.789991  | 1253.7001    | 2102.4792    | 1500.604417  |
| ## ENSG00000000460  | 578.324608   | 895.5001     | 804.7967     | 698.785877   |
| ## ENSG00000000938  | 187.356641   | 619.9616     | 1252.6472    | 596.773340   |
| ## TCGA-A8-A091     | TCGA-A8-A092 | TCGA-A8-A093 | TCGA-A8-A094 |              |
| ## ENSG000000000003 | 7326.831188  | 3057.665570  | 4691.86960   | 4637.1014    |
| ## ENSG000000000005 | 9.986311     | 6.291493     | 64.59949     | 0.0000       |
| ## ENSG00000000419  | 1607.171847  | 3021.489486  | 1637.11029   | 4339.9835    |
| ## ENSG00000000457  | 1760.711371  | 1403.002926  | 2188.41824   | 1877.1674    |
| ## ENSG00000000460  | 756.463021   | 1734.092743  | 1157.48122   | 987.5309     |
| ## ENSG00000000938  | 288.978860   | 257.951211   | 169.90550    | 843.2655     |
| ## TCGA-A8-A095     | TCGA-A8-A096 | TCGA-A8-A097 | TCGA-A8-A099 |              |
| ## ENSG000000000003 | 3000.32054   | 1845.616159  | 2257.549766  | 2791.1878495 |
| ## ENSG000000000005 | 21.35459     | 4.460704     | 7.905047     | 0.7979382    |
| ## ENSG00000000419  | 2077.62410   | 1517.196849  | 2552.671533  | 2164.8063567 |
| ## ENSG00000000457  | 1490.37275   | 1344.344580  | 1629.098504  | 2578.1383481 |
| ## ENSG00000000460  | 1506.38869   | 478.410473   | 761.519559   | 722.1340777  |
| ## ENSG00000000938  | 292.73590    | 872.067575   | 460.469007   | 223.4226981  |
| ## TCGA-A8-A09A     | TCGA-A8-A09B | TCGA-A8-A09C | TCGA-A8-A09D |              |
| ## ENSG000000000003 | 1040.78688   | 2176.36165   | 1526.07343   | 1387.6506    |
| ## ENSG000000000005 | 14.03308     | 52.71155     | 69.16544     | 391.6258     |
| ## ENSG00000000419  | 2052.33818   | 1120.34380   | 2073.18982   | 1300.2800    |
| ## ENSG00000000457  | 1571.70514   | 1910.12365   | 1865.69349   | 1073.1164    |
| ## ENSG00000000460  | 387.07917    | 831.77040    | 614.50836    | 417.3231     |
| ## ENSG00000000938  | 271.30624    | 393.10309    | 195.96876    | 1011.4431    |
| ## TCGA-A8-A09G     | TCGA-A8-A09I | TCGA-A8-A09M | TCGA-A8-A09N |              |
| ## ENSG000000000003 | 1902.92456   | 756.098594   | 503.4508     | 873.121845   |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000005 | 26.41839     | 7.071426     | 0.0000       | 5.068922     |
| ## ENSG00000000419 | 2198.33019   | 3306.163492  | 3488.4706    | 2353.247120  |
| ## ENSG00000000457 | 2497.73859   | 2533.746223  | 1458.2714    | 1245.687625  |
| ## ENSG00000000460 | 763.73161    | 960.625983   | 609.5420     | 575.322667   |
| ## ENSG00000000938 | 341.83794    | 483.576727   | 488.0194     | 193.886273   |
|                    | TCGA-A8-A09Q | TCGA-A8-A09R | TCGA-A8-A09T | TCGA-A8-A09V |
| ## ENSG00000000003 | 1153.92176   | 567.374867   | 864.9624     | 3253.958005  |
| ## ENSG00000000005 | 11.19476     | 5.225821     | 0.0000       | 1.321673     |
| ## ENSG00000000419 | 1513.01533   | 1739.451894  | 2650.0506    | 1265.501539  |
| ## ENSG00000000457 | 974.80555    | 2521.085427  | 1098.8553    | 2793.355095  |
| ## ENSG00000000460 | 514.95912    | 729.375322   | 686.2329     | 994.558651   |
| ## ENSG00000000938 | 986.00031    | 489.734095   | 330.9805     | 138.114789   |
|                    | TCGA-A8-A09W | TCGA-A8-A09X | TCGA-A8-A09Z | TCGA-A8-A0A1 |
| ## ENSG00000000003 | 1953.14379   | 1581.6074    | 2042.9842    | 3505.8682    |
| ## ENSG00000000005 | 17.39441     | 25.3498      | 0.0000       | 214.2402     |
| ## ENSG00000000419 | 2314.69903   | 1131.9239    | 1785.9915    | 1449.4272    |
| ## ENSG00000000457 | 2520.94704   | 1365.5829    | 3038.5611    | 2249.5216    |
| ## ENSG00000000460 | 1471.07013   | 760.4941     | 501.0278     | 703.5541     |
| ## ENSG00000000938 | 372.73736    | 700.9772     | 433.0004     | 2105.3724    |
|                    | TCGA-A8-A0A2 | TCGA-A8-A0A4 | TCGA-A8-A0A6 | TCGA-A8-A0A7 |
| ## ENSG00000000003 | 3154.818587  | 3021.440471  | 3312.30367   | 1386.67471   |
| ## ENSG00000000005 | 3.628731     | 2.121053     | 22.96459     | 19.60329     |
| ## ENSG00000000419 | 1625.671414  | 1445.497845  | 2187.03901   | 3661.68792   |
| ## ENSG00000000457 | 2564.061207  | 1290.660952  | 3369.03971   | 1501.19919   |
| ## ENSG00000000460 | 624.867450   | 511.173853   | 721.35814    | 781.03628    |
| ## ENSG00000000938 | 388.999945   | 284.221146   | 715.95471    | 1028.65676   |
|                    | TCGA-A8-A0A9 | TCGA-A8-A0AB | TCGA-A8-A0AD | TCGA-AC-A23C |
| ## ENSG00000000003 | 1202.765288  | 10794.11147  | 2025.59011   | 515.08923    |
| ## ENSG00000000005 | 5.197134     | 15.64836     | 10.83847     | 79.62392     |
| ## ENSG00000000419 | 1882.104941  | 1165.80316   | 1725.72570   | 4190.47282   |
| ## ENSG00000000457 | 1919.227327  | 2452.22913   | 739.42469    | 2197.05637   |
| ## ENSG00000000460 | 849.360179   | 1744.14063   | 405.84059    | 749.02852    |
| ## ENSG00000000938 | 661.520908   | 108.88654    | 882.73339    | 324.13276    |
|                    | TCGA-AC-A23E | TCGA-AC-A23G | TCGA-AC-A23H | TCGA-AC-A2B8 |
| ## ENSG00000000003 | 1122.721047  | 2776.37284   | 491.9177     | 1831.9974    |
| ## ENSG00000000005 | 1.611947     | 14.33231     | 0.0000       | 114.3436     |
| ## ENSG00000000419 | 1624.842520  | 1269.43301   | 3220.4857    | 1264.0282    |
| ## ENSG00000000457 | 1413.677471  | 1584.74379   | 3324.6850    | 1545.8259    |
| ## ENSG00000000460 | 533.554439   | 661.33365    | 697.8931     | 643.5734     |
| ## ENSG00000000938 | 274.030981   | 964.35959    | 191.4359     | 812.9020     |
|                    | TCGA-AC-A2BK | TCGA-AC-A2BM | TCGA-AC-A2FB | TCGA-AC-A2FE |
| ## ENSG00000000003 | 7888.31456   | 886.232639   | 4248.6772    | 3158.9779    |
| ## ENSG00000000005 | 0.00000      | 8.256826     | 961.9348     | 190.4870     |
| ## ENSG00000000419 | 3188.38232   | 3505.481277  | 1524.5160    | 1545.1522    |
| ## ENSG00000000457 | 3257.63476   | 1960.537422  | 1027.7013    | 1293.3497    |
| ## ENSG00000000460 | 1798.71670   | 886.232639   | 232.9562     | 481.5316     |
| ## ENSG00000000938 | 71.09917     | 347.704110   | 692.5296     | 959.7930     |
|                    | TCGA-AC-A2FF | TCGA-AC-A2FG | TCGA-AC-A2FK | TCGA-AC-A2FM |
| ## ENSG00000000003 | 3147.51762   | 4268.43243   | 2992.75897   | 413.13561    |
| ## ENSG00000000005 | 68.98298     | 89.88916     | 60.64247     | 67.33928     |
| ## ENSG00000000419 | 1440.52697   | 1690.30706   | 1314.98404   | 2159.40705   |
| ## ENSG00000000457 | 1025.95278   | 2785.26126   | 1555.42610   | 1294.00625   |
| ## ENSG00000000460 | 319.89167    | 567.99528    | 275.55086    | 495.94473    |
| ## ENSG00000000938 | 967.79066    | 375.18954    | 442.58362    | 170.16819    |

|    |                  |              |              |              |              |
|----|------------------|--------------|--------------|--------------|--------------|
| ## |                  | TCGA-AC-A2FO | TCGA-AC-A2QH | TCGA-AC-A2QI | TCGA-AC-A2QJ |
| ## | ENSG000000000003 | 4536.42598   | 4287.5511    | 2453.609660  | 2545.74845   |
| ## | ENSG000000000005 | 36.24562     | 17272.9902   | 3.358809     | 49.71356     |
| ## | ENSG00000000419  | 1739.78995   | 2210.1463    | 1493.830111  | 1795.90229   |
| ## | ENSG00000000457  | 1536.62369   | 1237.8147    | 2161.393314  | 271.35317    |
| ## | ENSG00000000460  | 406.33252    | 832.9530     | 492.065455   | 215.42542    |
| ## | ENSG00000000938  | 644.79057    | 96.2376      | 524.813839   | 553.06333    |
| ## |                  | TCGA-AC-A3BB | TCGA-AC-A3EH | TCGA-AC-A3HN | TCGA-AC-A3OD |
| ## | ENSG000000000003 | 2148.9601    | 3111.051339  | 1236.3761    | 4203.78091   |
| ## | ENSG000000000005 | 100.3294     | 1.003241     | 222.4690     | 78.09221     |
| ## | ENSG00000000419  | 1509.7185    | 1719.555626  | 1480.5014    | 1268.17357   |
| ## | ENSG00000000457  | 1720.8880    | 2500.077374  | 1588.1265    | 2308.66984   |
| ## | ENSG00000000460  | 417.5614     | 934.017671   | 536.8130     | 1322.06820   |
| ## | ENSG00000000938  | 864.7438     | 206.667712   | 740.2507     | 741.32609    |
| ## |                  | TCGA-AC-A3QP | TCGA-AC-A3QQ | TCGA-AC-A3TM | TCGA-AC-A3TN |
| ## | ENSG000000000003 | 5011.06059   | 1493.0272    | 1560.686225  | 2242.31751   |
| ## | ENSG000000000005 | 35.66591     | 149.3027     | 6.767937     | 43.12149     |
| ## | ENSG00000000419  | 2028.76098   | 1000.3282    | 1513.310667  | 2131.74958   |
| ## | ENSG00000000457  | 1011.23350   | 3813.1916    | 775.605557   | 1622.03145   |
| ## | ENSG00000000460  | 304.20925    | 1776.7024    | 380.358048   | 357.13440    |
| ## | ENSG00000000938  | 650.37839    | 456.8663     | 257.181598   | 297.42772    |
| ## |                  | TCGA-AC-A3W5 | TCGA-AC-A3W6 | TCGA-AC-A3W7 | TCGA-AC-A3YI |
| ## | ENSG000000000003 | 3248.8256    | 1100.86480   | 2826.35525   | 2389.328044  |
| ## | ENSG000000000005 | 28.2871      | 14.16955     | 32.32759     | 3.792584     |
| ## | ENSG00000000419  | 1673.1295    | 1367.90626   | 1465.51754   | 2040.410298  |
| ## | ENSG00000000457  | 1937.1424    | 1178.25232   | 2563.88598   | 1340.046416  |
| ## | ENSG00000000460  | 422.2111     | 429.44627    | 584.20578    | 347.653551   |
| ## | ENSG00000000938  | 1294.9205    | 632.17978    | 324.81534    | 1733.210978  |
| ## |                  | TCGA-AC-A3YJ | TCGA-AC-A4ZE | TCGA-AC-A5EH | TCGA-AC-A5XS |
| ## | ENSG000000000003 | 256.629709   | 2064.2617    | 2937.1416    | 3576.10311   |
| ## | ENSG000000000005 | 5.671375     | 266.7207     | 0.0000       | 26.13019     |
| ## | ENSG00000000419  | 1984.981172  | 1467.3982    | 3293.1241    | 3391.94748   |
| ## | ENSG00000000457  | 1308.669730  | 2208.4820    | 1048.4886    | 1244.29475   |
| ## | ENSG00000000460  | 372.892892   | 737.6087     | 344.5361     | 782.66140    |
| ## | ENSG00000000938  | 589.822977   | 186.7914     | 431.5286     | 608.46013    |
| ## |                  | TCGA-AC-A5XU | TCGA-AC-A62V | TCGA-AC-A62X | TCGA-AC-A62Y |
| ## | ENSG000000000003 | 710.362914   | 1098.65730   | 4466.569492  | 3239.8424    |
| ## | ENSG000000000005 | 3.233822     | 22.45021     | 8.912767     | 154.3825     |
| ## | ENSG00000000419  | 1696.678644  | 3093.91997   | 3082.544110  | 4113.5815    |
| ## | ENSG00000000457  | 1257.956784  | 520.56431    | 1068.258781  | 1283.2360    |
| ## | ENSG00000000460  | 368.655716   | 524.77373    | 947.299801   | 456.5780     |
| ## | ENSG00000000938  | 223.133723   | 318.51240    | 124.778737   | 1001.8438    |
| ## |                  | TCGA-AC-A6IV | TCGA-AC-A6IW | TCGA-AC-A6IX | TCGA-AC-A6NO |
| ## | ENSG000000000003 | 1844.2668    | 1458.545558  | 3652.3705    | 4446.902815  |
| ## | ENSG000000000005 | 267.6029     | 9.800856     | 375.7658     | 6.960715     |
| ## | ENSG00000000419  | 1326.6086    | 3108.653299  | 1645.5635    | 2159.810580  |
| ## | ENSG00000000457  | 970.3897     | 1349.845156  | 1690.9459    | 2621.206579  |
| ## | ENSG00000000460  | 413.2491     | 1573.482868  | 501.0210     | 893.954747   |
| ## | ENSG00000000938  | 1159.9052    | 779.613539   | 444.7469     | 247.602594   |
| ## |                  | TCGA-AC-A7VB | TCGA-AC-A7VC | TCGA-AC-A80P | TCGA-AC-A80Q |
| ## | ENSG000000000003 | 3067.72484   | 6195.43468   | 1054.2109    | 914.91931    |
| ## | ENSG000000000005 | 13.95125     | 94.39028     | 118.0287     | 72.92835     |
| ## | ENSG00000000419  | 1637.72173   | 2184.70591   | 2003.8054    | 3256.58235   |
| ## | ENSG00000000457  | 1418.37708   | 691.62332    | 1410.9794    | 856.57663    |

|                     |              |              |              |             |
|---------------------|--------------|--------------|--------------|-------------|
| ## ENSG00000000460  | 721.58965    | 774.00029    | 307.1429     | 1013.04109  |
| ## ENSG00000000938  | 131.76180    | 437.62766    | 438.5839     | 745.19515   |
| ## TCGA-AC-A80R     | TCGA-AC-A80S | TCGA-AN-A03X | TCGA-AN-A03Y |             |
| ## ENSG00000000003  | 1095.8793    | 2250.60440   | 2014.51045   | 4695.64467  |
| ## ENSG00000000005  | 0.0000       | 86.80903     | 48.90502     | 15.97837    |
| ## ENSG000000000419 | 1549.7428    | 1421.09592   | 2654.03758   | 2872.11274  |
| ## ENSG000000000457 | 1012.5752    | 1522.90898   | 1794.43788   | 1539.91580  |
| ## ENSG00000000460  | 308.7995     | 353.66641    | 647.05098    | 1248.31047  |
| ## ENSG00000000938  | 265.7112     | 811.28930    | 282.14432    | 388.47422   |
| ## TCGA-AN-A041     | TCGA-AN-A046 | TCGA-AN-A049 | TCGA-AN-A04A |             |
| ## ENSG00000000003  | 2108.366840  | 663.45852    | 1515.2414    | 1362.046163 |
| ## ENSG00000000005  | 3.463436     | 98.32694     | 73.7758      | 8.650964    |
| ## ENSG000000000419 | 1528.241262  | 2221.79148   | 1735.4338    | 1905.134435 |
| ## ENSG000000000457 | 1815.706474  | 1469.93804   | 1453.9508    | 1179.414708 |
| ## ENSG00000000460  | 645.065009   | 339.67487    | 814.9388     | 272.985963  |
| ## ENSG00000000938  | 303.916534   | 640.61489    | 522.1057     | 206.661909  |
| ## TCGA-AN-A04C     | TCGA-AN-A04D | TCGA-AN-A0AJ | TCGA-AN-A0AK |             |
| ## ENSG00000000003  | 5940.70968   | 4878.8056882 | 4127.394880  | 155.19730   |
| ## ENSG00000000005  | 19.10196     | 0.8044197    | 7.977184     | 3.60924     |
| ## ENSG000000000419 | 3305.64451   | 3911.8931676 | 3719.760790  | 1945.38016  |
| ## ENSG000000000457 | 1313.00844   | 3090.5806190 | 1168.657422  | 1819.05678  |
| ## ENSG00000000460  | 858.58285    | 1901.6482517 | 955.666615   | 865.01443   |
| ## ENSG00000000938  | 299.59917    | 127.0983180  | 847.974634   | 270.69297   |
| ## TCGA-AN-AOAL     | TCGA-AN-AOAM | TCGA-AN-AOAR | TCGA-AN-AOAS |             |
| ## ENSG00000000003  | 3565.60280   | 2334.1111791 | 8523.589825  | 3153.7042   |
| ## ENSG00000000005  | 12.53888     | 0.9332712    | 4.963656     | 0.0000      |
| ## ENSG000000000419 | 2264.97850   | 6947.2705387 | 1276.652285  | 2007.1328   |
| ## ENSG000000000457 | 1021.34914   | 2116.6589981 | 817.017753   | 1022.5494   |
| ## ENSG00000000460  | 955.23502    | 1098.4601591 | 851.763344   | 437.8739    |
| ## ENSG00000000938  | 476.47761    | 377.0415499  | 182.662535   | 925.1034    |
| ## TCGA-AN-AOAT     | TCGA-AN-AOFD | TCGA-AN-AOFF | TCGA-AN-AOFJ |             |
| ## ENSG00000000003  | 3941.3975479 | 3041.1565    | 1603.86077   | 3896.74303  |
| ## ENSG00000000005  | 0.7586906    | 0.0000       | 17.08254     | 11.85965    |
| ## ENSG000000000419 | 3015.0363533 | 1666.4402    | 1505.16165   | 2402.42679  |
| ## ENSG000000000457 | 625.1610355  | 1013.2886    | 1619.04525   | 1141.91513  |
| ## ENSG00000000460  | 1151.6922960 | 322.7034     | 553.28451    | 1170.71714  |
| ## ENSG00000000938  | 493.1488751  | 194.9128     | 391.94941    | 313.43368   |
| ## TCGA-AN-AOFK     | TCGA-AN-AOFL | TCGA-AN-AOFN | TCGA-AN-AOFS |             |
| ## ENSG00000000003  | 4964.515616  | 20967.000230 | 2149.1315    | 2292.98495  |
| ## ENSG00000000005  | 2.175988     | 4.628136     | 126.6782     | 37.66444    |
| ## ENSG000000000419 | 1714.678197  | 2875.615365  | 2042.6866    | 1628.01282  |
| ## ENSG000000000457 | 1709.238228  | 1160.119504  | 1289.6548    | 2909.25307  |
| ## ENSG00000000460  | 888.890918   | 464.356344   | 359.8014     | 651.33501   |
| ## ENSG00000000938  | 207.806812   | 228.321392   | 1037.1781    | 203.25808   |
| ## TCGA-AN-AOFT     | TCGA-AN-AOFV | TCGA-AN-AOFW | TCGA-AN-AOFX |             |
| ## ENSG00000000003  | 3192.69481   | 1125.9608    | 844.99101    | 4579.4490   |
| ## ENSG00000000005  | 24.50265     | 0.0000       | 85.00408     | 33.5941     |
| ## ENSG000000000419 | 5348.92768   | 2294.8652    | 1795.18508   | 1582.2000   |
| ## ENSG000000000457 | 1394.20057   | 2721.1592    | 2441.55271   | 1683.8017   |
| ## ENSG00000000460  | 218.07355    | 399.0614     | 1145.45096   | 782.4966    |
| ## ENSG00000000938  | 438.59737    | 261.8513     | 287.83558    | 293.3338    |
| ## TCGA-AN-AOFY     | TCGA-AN-AOFZ | TCGA-AN-AOG0 | TCGA-AN-AOXL |             |
| ## ENSG00000000003  | 1596.22991   | 2432.28292   | 5046.1322406 | 2977.9545   |
| ## ENSG00000000005  | 38.27055     | 14.67757     | 0.8584778    | 248.4731    |

|                    |              |              |              |             |
|--------------------|--------------|--------------|--------------|-------------|
| ## ENSG00000000419 | 5785.81156   | 2917.34164   | 1431.0824167 | 2051.9968   |
| ## ENSG00000000457 | 1064.61716   | 1479.63878   | 2600.3291182 | 1955.2133   |
| ## ENSG00000000460 | 759.14858    | 705.92119    | 1744.4267970 | 837.5497    |
| ## ENSG00000000938 | 356.26404    | 229.94859    | 459.2855986  | 369.4525    |
| ## TCGA-AN-AOXN    | TCGA-AN-AOXD | TCGA-AN-AOXP | TCGA-AN-AOXR |             |
| ## ENSG00000000003 | 2626.185784  | 1632.583820  | 727.4808     | 608.4178    |
| ## ENSG00000000005 | 2.700448     | 3.775633     | 0.0000       | 0.0000      |
| ## ENSG00000000419 | 2971.843141  | 1790.405291  | 3021.9135    | 1574.3835   |
| ## ENSG00000000457 | 942.456389   | 1572.173688  | 2629.4927    | 2572.0011   |
| ## ENSG00000000460 | 479.329539   | 486.301564   | 623.6851     | 729.1635    |
| ## ENSG00000000938 | 671.061354   | 94.390831    | 119.2741     | 148.8806    |
| ## TCGA-AN-AOXS    | TCGA-AN-AOXT | TCGA-AN-AOXU | TCGA-AN-AOVX |             |
| ## ENSG00000000003 | 853.0895     | 48055.08081  | 3901.9327373 | 6227.00218  |
| ## ENSG00000000005 | 212.8380     | 21.21117     | 0.8659416    | 26.13459    |
| ## ENSG00000000419 | 1581.0824    | 1788.80855   | 3243.8171402 | 1954.86750  |
| ## ENSG00000000457 | 1103.2828    | 1698.07188   | 962.0610899  | 1108.10671  |
| ## ENSG00000000460 | 418.7262     | 734.14211    | 1215.7819714 | 457.35536   |
| ## ENSG00000000938 | 620.2708     | 309.91874    | 339.4490974  | 379.82274   |
| ## TCGA-AN-AOXW    | TCGA-AO-A03L | TCGA-AO-A03M | TCGA-AO-A03N |             |
| ## ENSG00000000003 | 1350.4883267 | 866.37272    | 1374.116272  | 2051.0574   |
| ## ENSG00000000005 | 0.9966704    | 2.72159      | 3.635228     | 0.0000      |
| ## ENSG00000000419 | 2177.7247186 | 2931.15211   | 4378.268883  | 3236.4764   |
| ## ENSG00000000457 | 1001.6537035 | 1599.38755   | 1254.153740  | 1075.3550   |
| ## ENSG00000000460 | 557.1387266  | 815.56971    | 529.289231   | 569.6555    |
| ## ENSG00000000938 | 585.0454965  | 293.93169    | 466.036259   | 159.1466    |
| ## TCGA-AO-A03O    | TCGA-AO-A03P | TCGA-AO-A03R | TCGA-AO-A03T |             |
| ## ENSG00000000003 | 4080.09925   | 711.4041     | 2083.70347   | 1303.00611  |
| ## ENSG00000000005 | 28.35114     | 0.0000       | 62.62497     | 33.95456    |
| ## ENSG00000000419 | 2837.57960   | 5032.6912    | 1848.38541   | 2975.26802  |
| ## ENSG00000000457 | 1312.78118   | 1436.2478    | 1700.36276   | 915.35826   |
| ## ENSG00000000460 | 824.64846    | 716.7799     | 893.82908    | 200.89779   |
| ## ENSG00000000938 | 446.22233    | 160.3795     | 726.82917    | 533.36949   |
| ## TCGA-AO-A03U    | TCGA-AO-A03V | TCGA-AO-A0J2 | TCGA-AO-A0J3 |             |
| ## ENSG00000000003 | 6404.800089  | 1374.54186   | 2597.637659  | 687.37170   |
| ## ENSG00000000005 | 1.803153     | 36.62732     | 1.673736     | 10.48889    |
| ## ENSG00000000419 | 1746.353853  | 2908.81953   | 8661.581757  | 1750.24555  |
| ## ENSG00000000457 | 967.391680   | 1474.24956   | 1256.975439  | 883.86351   |
| ## ENSG00000000460 | 265.965094   | 528.04384    | 1140.650815  | 288.79401   |
| ## ENSG00000000938 | 2198.945301  | 273.68746    | 478.688383   | 140.55108   |
| ## TCGA-AO-A0J4    | TCGA-AO-A0J5 | TCGA-AO-A0J6 | TCGA-AO-A0J7 |             |
| ## ENSG00000000003 | 2201.894305  | 1609.49992   | 2699.189500  | 5367.358226 |
| ## ENSG00000000005 | 1.339759     | 30.24267     | 1.445736     | 1.015776    |
| ## ENSG00000000419 | 2041.793076  | 941.21077    | 2329.081031  | 2275.337325 |
| ## ENSG00000000457 | 838.019402   | 2177.47194   | 992.497907   | 1559.215533 |
| ## ENSG00000000460 | 515.807306   | 426.34783    | 1575.852467  | 650.096379  |
| ## ENSG00000000938 | 679.927812   | 337.09508    | 509.622013   | 236.675713  |
| ## TCGA-AO-A0J8    | TCGA-AO-A0J9 | TCGA-AO-AOJA | TCGA-AO-AOJB |             |
| ## ENSG00000000003 | 2578.18946   | 2783.107     | 1396.47143   | 3221.68133  |
| ## ENSG00000000005 | 22.03581     | 1078.684     | 19.48565     | 34.72471    |
| ## ENSG00000000419 | 1427.65321   | 1519.360     | 1615.45299   | 1203.78991  |
| ## ENSG00000000457 | 2459.99740   | 1121.627     | 1806.59792   | 864.25942   |
| ## ENSG00000000460 | 771.25326    | 302.645      | 820.25298    | 235.35636   |
| ## ENSG00000000938 | 687.78429    | 2730.962     | 295.06838    | 497.72083   |
| ## TCGA-AO-AOJC    | TCGA-AO-AOJD | TCGA-AO-AOJE | TCGA-AO-AOJF |             |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000003 | 1826.54096   | 4429.49707   | 2329.182872  | 2033.5984    |
| ## ENSG00000000005 | 22.92729     | 13.24544     | 4.231032     | 271.9583     |
| ## ENSG00000000419 | 2005.59220   | 3516.66526   | 1964.256400  | 1707.8573    |
| ## ENSG00000000457 | 1521.93550   | 1614.84032   | 1803.477201  | 1500.8443    |
| ## ENSG00000000460 | 538.24548    | 1811.31440   | 591.286660   | 510.4291     |
| ## ENSG00000000938 | 3214.18804   | 462.48674    | 759.470164   | 546.9609     |
|                    | TCGA-AO-A0JG | TCGA-AO-A0JI | TCGA-AO-A0JJ | TCGA-AO-A0JL |
| ## ENSG00000000003 | 1670.9092    | 3603.350620  | 3440.7621    | 8855.884540  |
| ## ENSG00000000005 | 30.9858      | 7.420846     | 166.9628     | 8.357762     |
| ## ENSG00000000419 | 1457.1072    | 2416.015317  | 1717.0608    | 1905.569720  |
| ## ENSG00000000457 | 1939.7110    | 1299.708108  | 1515.9465    | 1310.497071  |
| ## ENSG00000000460 | 336.1959     | 886.260994   | 543.5778     | 431.260516   |
| ## ENSG00000000938 | 505.0685     | 184.461020   | 641.2890     | 294.193220   |
|                    | TCGA-AO-A0JM | TCGA-AO-A124 | TCGA-AO-A125 | TCGA-AO-A126 |
| ## ENSG00000000003 | 1736.536693  | 2450.29268   | 2522.111478  | 2559.72334   |
| ## ENSG00000000005 | 6.308943     | 28.09048     | 8.386073     | 2.17294      |
| ## ENSG00000000419 | 2099.300943  | 2296.99891   | 1381.605539  | 1491.72332   |
| ## ENSG00000000457 | 1003.122013  | 1205.48300   | 3055.675378  | 1304.85048   |
| ## ENSG00000000460 | 684.520367   | 1557.81792   | 555.577341   | 262.92574    |
| ## ENSG00000000938 | 405.349619   | 184.59460    | 220.134418   | 398.73449    |
|                    | TCGA-AO-A128 | TCGA-AO-A129 | TCGA-AO-A12A | TCGA-AO-A12B |
| ## ENSG00000000003 | 1256.940058  | 3238.78557   | 3082.4171    | 720.45266    |
| ## ENSG00000000005 | 5.109512     | 31.57307     | 41.0319      | 17.97921     |
| ## ENSG00000000419 | 2227.747420  | 4210.42124   | 2000.5147    | 3192.59413   |
| ## ENSG00000000457 | 1736.504296  | 1007.28268   | 2060.8064    | 1714.44617   |
| ## ENSG00000000460 | 1231.392496  | 941.08109    | 607.1047     | 423.79568    |
| ## ENSG00000000938 | 1156.939600  | 823.95520    | 388.5470     | 357.01576    |
|                    | TCGA-AO-A12D | TCGA-AO-A12E | TCGA-AO-A12F | TCGA-AO-A12G |
| ## ENSG00000000003 | 3587.090225  | 1922.76031   | 7412.96147   | 5632.046850  |
| ## ENSG00000000005 | 2.535046     | 68.79798     | 83.31183     | 6.684922     |
| ## ENSG00000000419 | 1739.041622  | 1955.00936   | 3250.95313   | 2060.070154  |
| ## ENSG00000000457 | 1854.386219  | 1264.87959   | 1906.31807   | 1887.376333  |
| ## ENSG00000000460 | 602.073448   | 447.18689    | 1042.74165   | 437.862396   |
| ## ENSG00000000938 | 711.080430   | 606.28223    | 406.70508    | 285.223342   |
|                    | TCGA-AO-A12H | TCGA-AO-A1K0 | TCGA-AO-A1KP | TCGA-AO-A1KQ |
| ## ENSG00000000003 | 3446.787269  | 5777.8275    | 5658.271638  | 1084.706632  |
| ## ENSG00000000005 | 2.613182     | 183.9337     | 3.398872     | 3.944388     |
| ## ENSG00000000419 | 1569.651417  | 1722.2132    | 2512.615893  | 3452.654079  |
| ## ENSG00000000457 | 898.934663   | 1723.8629    | 3155.002642  | 1391.054081  |
| ## ENSG00000000460 | 229.088969   | 371.1666     | 1154.766655  | 778.359183   |
| ## ENSG00000000938 | 273.513066   | 289.5100     | 90.919818    | 581.139795   |
|                    | TCGA-AO-A1KR | TCGA-AO-A1KS | TCGA-AO-A1KT | TCGA-AQ-A04H |
| ## ENSG00000000003 | 4601.57711   | 4587.68135   | 2561.914672  | 872.7849425  |
| ## ENSG00000000005 | 14.20866     | 26.29272     | 3.167746     | 0.8044101    |
| ## ENSG00000000419 | 1822.76852   | 2007.80775   | 3459.178760  | 3519.2941232 |
| ## ENSG00000000457 | 933.71216    | 1783.12450   | 1589.416614  | 1027.2316789 |
| ## ENSG00000000460 | 868.75827    | 954.50543    | 767.386497   | 412.6623738  |
| ## ENSG00000000938 | 257.78575    | 223.08975    | 519.510363   | 164.9040675  |
|                    | TCGA-AQ-A04J | TCGA-AQ-A04L | TCGA-AQ-A0Y5 | TCGA-AQ-A1H2 |
| ## ENSG00000000003 | 4716.50538   | 3887.236305  | 826.015978   | 903.1529     |
| ## ENSG00000000005 | 20.85582     | 4.641476     | 8.457501     | 1.4156       |
| ## ENSG00000000419 | 2070.90582   | 5105.623803  | 2464.891820  | 2817.0442    |
| ## ENSG00000000457 | 1202.68570   | 1919.250402  | 1622.900561  | 1405.6909    |
| ## ENSG00000000460 | 793.29365    | 395.685845   | 395.623125   | 302.2306     |

|                     |              |              |              |              |
|---------------------|--------------|--------------|--------------|--------------|
| ## ENSG000000000938 | 655.79972    | 259.922666   | 204.859480   | 332.6660     |
| ##                  | TCGA-AQ-A1H3 | TCGA-AQ-A54N | TCGA-AQ-A540 | TCGA-AQ-A7U7 |
| ## ENSG000000000003 | 2620.79405   | 4857.367906  | 4520.791882  | 917.099799   |
| ## ENSG000000000005 | 83.28795     | 4.262719     | 1.711125     | 4.776561     |
| ## ENSG000000000419 | 1560.95493   | 3094.733743  | 4693.615493  | 1881.009900  |
| ## ENSG000000000457 | 3353.03392   | 1146.671318  | 1045.497290  | 1424.370626  |
| ## ENSG000000000460 | 809.28121    | 464.636333   | 220.735107   | 519.689886   |
| ## ENSG000000000938 | 503.89208    | 294.127587   | 602.315951   | 867.423560   |
| ##                  | TCGA-AR-AOTP | TCGA-AR-AOTQ | TCGA-AR-AOTR | TCGA-AR-AOTS |
| ## ENSG000000000003 | 4583.1475    | 439.34476    | 230.393159   | 5373.6846    |
| ## ENSG000000000005 | 0.0000       | 54.46423     | 2.925627     | 96.3145      |
| ## ENSG000000000419 | 1893.7004    | 7280.05152   | 1619.334772  | 1638.1767    |
| ## ENSG000000000457 | 2535.3999    | 1311.49856   | 2232.253714  | 1388.2572    |
| ## ENSG000000000460 | 820.2765     | 507.60658    | 618.038791   | 1530.2381    |
| ## ENSG000000000938 | 116.7618     | 689.88019    | 145.549964   | 917.4786     |
| ##                  | TCGA-AR-AOTT | TCGA-AR-AOTU | TCGA-AR-AOTV | TCGA-AR-AOTW |
| ## ENSG000000000003 | 322.06972    | 8040.328247  | 148.056676   | 1266.703615  |
| ## ENSG000000000005 | 50.28996     | 8.990639     | 0.961407     | 4.037302     |
| ## ENSG000000000419 | 1187.69895   | 2356.446420  | 2188.162301  | 2782.710650  |
| ## ENSG000000000457 | 959.78915    | 1621.911233  | 872.957543   | 2199.320459  |
| ## ENSG000000000460 | 292.10974    | 2111.901046  | 547.040575   | 190.762536   |
| ## ENSG000000000938 | 1186.62895   | 944.017070   | 931.603370   | 580.362214   |
| ##                  | TCGA-AR-AOTX | TCGA-AR-AOTY | TCGA-AR-AOTZ | TCGA-AR-AOU0 |
| ## ENSG000000000003 | 2554.07092   | 2579.58673   | 1891.015138  | 1728.8801    |
| ## ENSG000000000005 | 17.17782     | 11.37924     | 2.544252     | 0.0000       |
| ## ENSG000000000419 | 8155.84911   | 2745.02341   | 2254.843143  | 2254.0682    |
| ## ENSG000000000457 | 2763.82116   | 1133.54761   | 1065.405434  | 966.6506     |
| ## ENSG000000000460 | 479.17083    | 752.78066    | 755.642780   | 653.4949     |
| ## ENSG000000000938 | 870.64435    | 198.69908    | 146.930540   | 694.8141     |
| ##                  | TCGA-AR-AOU2 | TCGA-AR-AOU3 | TCGA-AR-AOU4 | TCGA-AR-A1AH |
| ## ENSG000000000003 | 552.85234    | 700.63963    | 3139.95199   | 8630.42517   |
| ## ENSG000000000005 | 4.14432      | 13.64882     | 67.51533     | 8.44189      |
| ## ENSG000000000419 | 2599.31773   | 2585.69387   | 2725.07519   | 3926.41667   |
| ## ENSG000000000457 | 1790.34639   | 2010.92673   | 1331.71538   | 1926.62681   |
| ## ENSG000000000460 | 1519.30784   | 1468.00684   | 1089.05159   | 4064.30086   |
| ## ENSG000000000938 | 348.95177    | 244.16230    | 2291.60722   | 197.91541    |
| ##                  | TCGA-AR-A1AI | TCGA-AR-A1AJ | TCGA-AR-A1AK | TCGA-AR-A1AL |
| ## ENSG000000000003 | 4129.128765  | 1409.90715   | 1504.980525  | 2864.0771    |
| ## ENSG000000000005 | 3.763161     | 29.47895     | 7.869179     | 28.4354      |
| ## ENSG000000000419 | 2856.239446  | 2037.09728   | 2328.293400  | 1686.3775    |
| ## ENSG000000000457 | 1343.448593  | 1581.69829   | 1775.483561  | 4536.2369    |
| ## ENSG000000000460 | 1789.383211  | 1270.64451   | 679.700355   | 958.9050     |
| ## ENSG000000000938 | 1226.790592  | 2257.68117   | 698.389655   | 433.6399     |
| ##                  | TCGA-AR-A1AM | TCGA-AR-A1AN | TCGA-AR-A1AO | TCGA-AR-A1AP |
| ## ENSG000000000003 | 4602.074006  | 1214.56316   | 1650.86078   | 1356.38290   |
| ## ENSG000000000005 | 7.883263     | 36.49304     | 23.45211     | 26.17581     |
| ## ENSG000000000419 | 1699.281228  | 1340.88521   | 2499.32449   | 2586.64600   |
| ## ENSG000000000457 | 1965.560348  | 1119.11983   | 949.81031    | 1627.65949   |
| ## ENSG000000000460 | 353.870936   | 444.46649    | 418.78762    | 722.21441    |
| ## ENSG000000000938 | 603.507611   | 410.78061    | 6479.48199   | 540.17354    |
| ##                  | TCGA-AR-A1AQ | TCGA-AR-A1AR | TCGA-AR-A1AS | TCGA-AR-A1AT |
| ## ENSG000000000003 | 3987.937747  | 2035.41418   | 1081.579977  | 2017.1977    |
| ## ENSG000000000005 | 4.162774     | 81.79702     | 2.566026     | 4.3164       |
| ## ENSG000000000419 | 2161.867436  | 1576.33634   | 1379.238998  | 1740.9481    |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000457 | 925.523479   | 1155.93771   | 2308.140426  | 1624.4053    |
| ## ENSG00000000460 | 1667.884889  | 2053.16857   | 1037.957534  | 789.9012     |
| ## ENSG00000000938 | 842.267993   | 857.91756    | 347.696529   | 715.0836     |
| ## TCGA-AR-A1AU    | TCGA-AR-A1AV | TCGA-AR-A1AW | TCGA-AR-A1AX |              |
| ## ENSG00000000003 | 1480.13822   | 2658.43204   | 2147.69995   | 1135.8801931 |
| ## ENSG00000000005 | 90.52244     | 11.77687     | 12.28337     | 0.9234798    |
| ## ENSG00000000419 | 1443.54404   | 1906.28263   | 1962.50453   | 1555.1400367 |
| ## ENSG00000000457 | 1427.17296   | 2186.57213   | 1378.57203   | 1484.9555695 |
| ## ENSG00000000460 | 473.79831    | 961.77769    | 685.97895    | 663.9819990  |
| ## ENSG00000000938 | 306.23549    | 333.67797    | 1544.86996   | 801.5804940  |
| ## TCGA-AR-A1AY    | TCGA-AR-A24H | TCGA-AR-A24K | TCGA-AR-A24L |              |
| ## ENSG00000000003 | 3240.45688   | 1756.58197   | 2063.637639  | 1430.407532  |
| ## ENSG00000000005 | 10.80807     | 10.06468     | 1.531457     | 7.052659     |
| ## ENSG00000000419 | 4515.80952   | 3296.47740   | 1664.693220  | 2953.781936  |
| ## ENSG00000000457 | 1864.88391   | 2047.27350   | 2536.091970  | 1272.684424  |
| ## ENSG00000000460 | 2931.93551   | 1219.60191   | 1049.813433  | 603.322944   |
| ## ENSG00000000938 | 329.15496    | 300.16416    | 94.950303    | 209.015175   |
| ## TCGA-AR-A24M    | TCGA-AR-A24N | TCGA-AR-A24O | TCGA-AR-A24P |              |
| ## ENSG00000000003 | 920.014348   | 1948.175045  | 1551.16552   | 2545.603980  |
| ## ENSG00000000005 | 3.309404     | 2.320177     | 48.47392     | 1.447188     |
| ## ENSG00000000419 | 1705.005007  | 1854.594584  | 1825.29391   | 1695.380934  |
| ## ENSG00000000457 | 2730.258406  | 2266.812647  | 1007.92329   | 2295.240427  |
| ## ENSG00000000460 | 784.328779   | 887.080896   | 479.72468    | 858.906175   |
| ## ENSG00000000938 | 237.615216   | 183.293960   | 335.97443    | 282.925286   |
| ## TCGA-AR-A24Q    | TCGA-AR-A24R | TCGA-AR-A24S | TCGA-AR-A24T |              |
| ## ENSG00000000003 | 2922.4789    | 3038.55158   | 2508.35965   | 2993.850647  |
| ## ENSG00000000005 | 303.9378     | 15.97327     | 85.14208     | 4.853581     |
| ## ENSG00000000419 | 3005.0876    | 5862.19008   | 1950.12376   | 1631.612201  |
| ## ENSG00000000457 | 1103.5280    | 2061.27788   | 1092.03969   | 1405.111747  |
| ## ENSG00000000460 | 918.0480     | 712.26263    | 812.92175    | 508.008162   |
| ## ENSG00000000938 | 308.6138     | 413.12685    | 1459.26118   | 220.837943   |
| ## TCGA-AR-A24U    | TCGA-AR-A24V | TCGA-AR-A24W | TCGA-AR-A24X |              |
| ## ENSG00000000003 | 3201.60674   | 1845.0603984 | 5093.3247    | 4344.312301  |
| ## ENSG00000000005 | 45.64945     | 0.8018515    | 125.9065     | 6.620409     |
| ## ENSG00000000419 | 2624.84348   | 2633.2804642 | 2137.6928    | 2078.808385  |
| ## ENSG00000000457 | 1427.42324   | 1413.6642687 | 1909.4306    | 3042.739917  |
| ## ENSG00000000460 | 1147.38141   | 675.1589984  | 484.6041     | 840.791927   |
| ## ENSG00000000938 | 1331.73497   | 380.8794825  | 185.6894     | 307.186972   |
| ## TCGA-AR-A24Z    | TCGA-AR-A250 | TCGA-AR-A251 | TCGA-AR-A252 |              |
| ## ENSG00000000003 | 3068.20154   | 1500.758632  | 1464.5357    | 1886.9399    |
| ## ENSG00000000005 | 12.79433     | 2.836973     | 24.3215      | 208.6871     |
| ## ENSG00000000419 | 2394.97622   | 2250.428705  | 7047.9886    | 1207.6124    |
| ## ENSG00000000457 | 812.13516    | 1429.834311  | 1968.1338    | 1257.2303    |
| ## ENSG00000000460 | 369.81698    | 738.322181   | 1774.0387    | 437.8051     |
| ## ENSG00000000938 | 183.38536    | 426.255169   | 400.5894     | 914.2829     |
| ## TCGA-AR-A254    | TCGA-AR-A255 | TCGA-AR-A256 | TCGA-AR-A2LE |              |
| ## ENSG00000000003 | 1495.147215  | 1536.7254    | 5285.176713  | 9084.909215  |
| ## ENSG00000000005 | 8.629998     | 110.2096     | 9.142466     | 9.124012     |
| ## ENSG00000000419 | 7938.160153  | 3300.8552    | 4206.365678  | 1322.981758  |
| ## ENSG00000000457 | 1516.722211  | 1254.9924    | 1045.565703  | 2305.768207  |
| ## ENSG00000000460 | 727.077361   | 485.0775     | 1720.445950  | 513.551540   |
| ## ENSG00000000938 | 1082.345627  | 427.6443     | 388.970389   | 212.459139   |
| ## TCGA-AR-A2LH    | TCGA-AR-A2LJ | TCGA-AR-A2LK | TCGA-AR-A2LM |              |
| ## ENSG00000000003 | 5528.18080   | 2475.9960    | 3208.715499  | 4655.66053   |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000005 | 14.23688     | 112.0093     | 5.454349     | 16.01635     |
| ## ENSG00000000419 | 1551.82000   | 1569.3098    | 2184.856304  | 1288.58782   |
| ## ENSG00000000457 | 1837.98131   | 826.5110     | 1429.039394  | 2135.99812   |
| ## ENSG00000000460 | 780.18107    | 437.4260     | 999.704222   | 620.99741    |
| ## ENSG00000000938 | 814.34958    | 2461.8474    | 480.761890   | 398.22460    |
| ##                 | TCGA-AR-A2LN | TCGA-AR-A2LO | TCGA-AR-A2LQ | TCGA-AR-A5QM |
| ## ENSG00000000003 | 2153.1567    | 2103.61251   | 3844.09223   | 1454.6115    |
| ## ENSG00000000005 | 235.8155     | 12.47694     | 62.00149     | 50.6753      |
| ## ENSG00000000419 | 1207.2148    | 2378.10524   | 1370.23287   | 1576.6930    |
| ## ENSG00000000457 | 2734.6564    | 1275.14353   | 1707.52097   | 1481.1009    |
| ## ENSG00000000460 | 501.1080     | 566.45319    | 430.29032    | 466.4431     |
| ## ENSG00000000938 | 517.1864     | 597.64555    | 705.57693    | 824.6254     |
| ##                 | TCGA-AR-A5QN | TCGA-AR-A5QP | TCGA-AR-A5QQ | TCGA-B6-A0I1 |
| ## ENSG00000000003 | 4451.96787   | 4112.76993   | 2513.160272  | 9230.319037  |
| ## ENSG00000000005 | 63.79566     | 51.92891     | 7.301453     | 1.806501     |
| ## ENSG00000000419 | 1959.09197   | 2238.13616   | 3427.302242  | 2814.529222  |
| ## ENSG00000000457 | 1906.60188   | 1407.27355   | 446.848950   | 651.243764   |
| ## ENSG00000000460 | 729.20860    | 492.28610    | 699.479239   | 486.852134   |
| ## ENSG00000000938 | 546.70456    | 246.14305    | 1309.880746  | 133.681106   |
| ##                 | TCGA-B6-A0I2 | TCGA-B6-A0I5 | TCGA-B6-A0I6 | TCGA-B6-A0I8 |
| ## ENSG00000000003 | 4709.920329  | 5906.098720  | 2983.4055    | 5931.089809  |
| ## ENSG00000000005 | 3.791189     | 4.887806     | 0.0000       | 1.767573     |
| ## ENSG00000000419 | 2444.053103  | 1831.297920  | 2450.1859    | 3306.244521  |
| ## ENSG00000000457 | 1268.784548  | 1916.019888  | 664.4370     | 2834.302640  |
| ## ENSG00000000460 | 721.589618   | 307.931768   | 417.5098     | 600.974679   |
| ## ENSG00000000938 | 1036.258296  | 563.726940   | 288.6782     | 173.222113   |
| ##                 | TCGA-B6-A0I9 | TCGA-B6-A0IA | TCGA-B6-A0IB | TCGA-B6-A0IC |
| ## ENSG00000000003 | 2556.509965  | 3610.2315    | 1653.691846  | 702.9439081  |
| ## ENSG00000000005 | 4.331599     | 0.0000       | 6.521602     | 0.6390399    |
| ## ENSG00000000419 | 3941.755453  | 1783.5750    | 1694.684771  | 1405.8878163 |
| ## ENSG00000000457 | 2855.390324  | 2992.3194    | 1666.735049  | 1517.7198016 |
| ## ENSG00000000460 | 1080.300890  | 770.5438     | 848.739871   | 497.8120949  |
| ## ENSG00000000938 | 464.347456   | 113.2429     | 113.662200   | 181.4873363  |
| ##                 | TCGA-B6-A0IE | TCGA-B6-A0IG | TCGA-B6-A0IH | TCGA-B6-A0IJ |
| ## ENSG00000000003 | 17102.59367  | 3182.12087   | 8592.16739   | 1242.1354654 |
| ## ENSG00000000005 | 70.90869     | 10.47324     | 17.72625     | 0.7926838    |
| ## ENSG00000000419 | 3105.41216   | 2042.28273   | 1748.56811   | 4112.4433915 |
| ## ENSG00000000457 | 1185.04937   | 1182.60389   | 2701.98721   | 1089.1474981 |
| ## ENSG00000000460 | 427.39486    | 535.88102    | 795.14900    | 1014.6352238 |
| ## ENSG00000000938 | 176.78605    | 218.19260    | 548.24764    | 1322.1965260 |
| ##                 | TCGA-B6-A0IK | TCGA-B6-A0IM | TCGA-B6-A0IN | TCGA-B6-A0IO |
| ## ENSG00000000003 | 754.26024    | 2478.41588   | 3458.3223    | 5042.306874  |
| ## ENSG00000000005 | 38.04383     | 77.31501     | 173.6938     | 5.065948     |
| ## ENSG00000000419 | 3131.17246   | 1418.40536   | 1256.0398    | 2182.579248  |
| ## ENSG00000000457 | 1404.31348   | 1205.96971   | 803.6581     | 1534.137909  |
| ## ENSG00000000460 | 547.50031    | 489.18004    | 246.2823     | 442.426122   |
| ## ENSG00000000938 | 249.76600    | 314.31805    | 938.4653     | 298.046605   |
| ##                 | TCGA-B6-A0IP | TCGA-B6-A0IQ | TCGA-B6-AORE | TCGA-B6-AORG |
| ## ENSG00000000003 | 7319.124743  | 6993.668689  | 5657.122236  | 2353.88578   |
| ## ENSG00000000005 | 9.264715     | 7.674387     | 3.217931     | 1.47302      |
| ## ENSG00000000419 | 1421.064726  | 2400.548190  | 3352.011185  | 1938.49417   |
| ## ENSG00000000457 | 1929.198703  | 1097.437312  | 1001.849103  | 1475.96593   |
| ## ENSG00000000460 | 760.419289   | 1356.831586  | 1577.858705  | 693.79237    |
| ## ENSG00000000938 | 271.527413   | 305.440595   | 397.950768   | 162.03219    |

|                     | TCGA-B6-A0RH | TCGA-B6-A0RI | TCGA-B6-A0RL | TCGA-B6-A0RM |  |
|---------------------|--------------|--------------|--------------|--------------|--|
| ## ENSG000000000003 | 1866.2086    | 1922.8949229 | 1552.47334   | 5352.85837   |  |
| ## ENSG000000000005 | 0.0000       | 0.8467173    | 0.00000      | 2.91868      |  |
| ## ENSG00000000419  | 2771.8407    | 1515.6239154 | 2964.75946   | 1408.74935   |  |
| ## ENSG00000000457  | 1726.0061    | 1991.4790218 | 1357.81337   | 1662.67447   |  |
| ## ENSG00000000460  | 812.7954     | 789.9872140  | 936.45064    | 773.45009    |  |
| ## ENSG00000000938  | 368.5051     | 398.8038347  | 94.52624     | 179.01235    |  |
| ## TCGA-B6-A0RN     | TCGA-B6-A0R0 | TCGA-B6-A0RP | TCGA-B6-A0RQ |              |  |
| ## ENSG000000000003 | 2803.015112  | 6742.67233   | 664.439514   | 5557.9246    |  |
| ## ENSG000000000005 | 2.274252     | 3.56708      | 8.391314     | 51.3340      |  |
| ## ENSG00000000419  | 1577.193493  | 2655.69081   | 1731.662110  | 1716.0224    |  |
| ## ENSG00000000457  | 2374.318683  | 1706.84762   | 2026.883800  | 1156.2373    |  |
| ## ENSG00000000460  | 527.626374   | 551.11381    | 495.087537   | 324.3005     |  |
| ## ENSG00000000938  | 170.568871   | 214.91655    | 464.573667   | 377.2642     |  |
| ## TCGA-B6-A0RS     | TCGA-B6-A0RT | TCGA-B6-A0RU | TCGA-B6-A0RV |              |  |
| ## ENSG000000000003 | 3021.93693   | 1211.05981   | 7846.98011   | 1223.58365   |  |
| ## ENSG000000000005 | 12.24873     | 63.22802     | 67.90563     | 21.57996     |  |
| ## ENSG00000000419  | 2399.87638   | 3205.98497   | 3286.63229   | 1415.64528   |  |
| ## ENSG00000000457  | 1248.49566   | 658.21992    | 969.11029    | 1040.15400   |  |
| ## ENSG00000000460  | 1066.51451   | 327.48873    | 747.93197    | 503.89203    |  |
| ## ENSG00000000938  | 668.43075    | 1507.74514   | 214.38776    | 312.90940    |  |
| ## TCGA-B6-A0WS     | TCGA-B6-A0WT | TCGA-B6-A0WV | TCGA-B6-A0WW |              |  |
| ## ENSG000000000003 | 2332.28669   | 3042.750451  | 765.53061    | 2009.5913    |  |
| ## ENSG000000000005 | 34.17929     | 4.786708     | 12.99512     | 0.0000       |  |
| ## ENSG00000000419  | 1742.24424   | 1686.516637  | 3522.85847   | 1997.2720    |  |
| ## ENSG00000000457  | 1421.13883   | 1747.148266  | 1444.82090   | 2305.2553    |  |
| ## ENSG00000000460  | 461.42039    | 762.682074   | 610.77057    | 609.8070     |  |
| ## ENSG00000000938  | 508.19205    | 170.725904   | 95.69133     | 200.1892     |  |
| ## TCGA-B6-A0WX     | TCGA-B6-A0WY | TCGA-B6-A0WZ | TCGA-B6-A0X0 |              |  |
| ## ENSG000000000003 | 4589.025720  | 2907.199096  | 2053.197791  | 4184.917036  |  |
| ## ENSG000000000005 | 1.961541     | 8.660111     | 4.139512     | 7.060172     |  |
| ## ENSG00000000419  | 2520.580487  | 2804.143781  | 1448.829086  | 1387.323826  |  |
| ## ENSG00000000457  | 1316.194169  | 955.210188   | 1486.084691  | 2229.249353  |  |
| ## ENSG00000000460  | 1099.443862  | 291.845724   | 359.102638   | 972.538712   |  |
| ## ENSG00000000938  | 244.211884   | 348.136442   | 205.940706   | 169.444131   |  |
| ## TCGA-B6-A0X1     | TCGA-B6-A0X4 | TCGA-B6-A0X5 | TCGA-B6-A0X7 |              |  |
| ## ENSG000000000003 | 1545.114850  | 949.11069    | 180.91186    | 7090.09490   |  |
| ## ENSG000000000005 | 1.467346     | 0.00000      | 0.00000      | 36.25322     |  |
| ## ENSG00000000419  | 2126.183683  | 1855.42734   | 1685.20632   | 1424.23382   |  |
| ## ENSG00000000457  | 906.819542   | 1661.32580   | 1141.23164   | 2153.61417   |  |
| ## ENSG00000000460  | 876.005286   | 285.80306    | 851.27702    | 541.20885    |  |
| ## ENSG00000000938  | 347.760892   | 76.41793     | 61.95611     | 286.57311    |  |
| ## TCGA-B6-A1KC     | TCGA-B6-A1KF | TCGA-B6-A1KI | TCGA-B6-A1KN |              |  |
| ## ENSG000000000003 | 1703.02064   | 10210.666151 | 3974.84128   | 2103.121867  |  |
| ## ENSG000000000005 | 10.81547     | 1.389584     | 73.87895     | 7.310121     |  |
| ## ENSG00000000419  | 1792.87224   | 3369.742163  | 2374.13075   | 4123.639365  |  |
| ## ENSG00000000457  | 1543.28446   | 2704.131237  | 1623.02812   | 2296.840079  |  |
| ## ENSG00000000460  | 623.13750    | 1631.372082  | 547.16595    | 6854.700643  |  |
| ## ENSG00000000938  | 129.78565    | 143.127193   | 192.39309    | 286.556751   |  |
| ## TCGA-B6-A2IU     | TCGA-B6-A3ZX | TCGA-B6-A400 | TCGA-B6-A401 |              |  |
| ## ENSG000000000003 | 1130.87759   | 2263.857059  | 2203.42886   | 3001.35988   |  |
| ## ENSG000000000005 | 47.86783     | 3.282141     | 16.66395     | 30.19119     |  |
| ## ENSG00000000419  | 1198.69035   | 1789.587621  | 2823.02488   | 2086.74429   |  |
| ## ENSG00000000457  | 4078.73838   | 1246.393212  | 611.26404    | 1478.48053   |  |

|                     |              |              |              |             |
|---------------------|--------------|--------------|--------------|-------------|
| ## ENSG00000000460  | 1090.98772   | 616.222056   | 577.93614    | 673.08603   |
| ## ENSG00000000938  | 237.34468    | 1022.387059  | 877.12981    | 717.48485   |
| ## TCGA-B6-A402     | TCGA-B6-A408 | TCGA-B6-A409 | TCGA-B6-A40B |             |
| ## ENSG00000000003  | 2663.261215  | 1660.937341  | 8724.01472   | 3452.8139   |
| ## ENSG00000000005  | 1.080869     | 3.498552     | 66.46318     | 36.5802     |
| ## ENSG000000000419 | 3826.276259  | 1895.340293  | 11213.01262  | 1887.0030   |
| ## ENSG000000000457 | 1497.003564  | 1325.951031  | 1156.84461   | 1497.1116   |
| ## ENSG00000000460  | 998.722956   | 364.723997   | 1011.39621   | 518.3682    |
| ## ENSG00000000938  | 452.884111   | 651.605223   | 296.67622    | 543.3498    |
| ## TCGA-B6-A40C     | TCGA-BH-A0AU | TCGA-BH-A0AV | TCGA-BH-A0AW |             |
| ## ENSG00000000003  | 831.26358    | 1523.97117   | 3456.56022   | 6579.86108  |
| ## ENSG00000000005  | 55.90157     | 55.09657     | 23.43431     | 29.94428    |
| ## ENSG000000000419 | 1499.90442   | 2353.72554   | 1574.60514   | 3293.87058  |
| ## ENSG000000000457 | 2039.31825   | 1538.29628   | 846.33900    | 1380.58882  |
| ## ENSG00000000460  | 731.80235    | 598.34877    | 726.46350    | 824.25565   |
| ## ENSG00000000938  | 555.38571    | 290.90990    | 451.56106    | 962.94494   |
| ## TCGA-BH-A0AY     | TCGA-BH-A0AZ | TCGA-BH-A0BO | TCGA-BH-A0B1 |             |
| ## ENSG00000000003  | 4907.0397    | 4384.7883    | 6036.33291   | 4396.261948 |
| ## ENSG00000000005  | 722.5021     | 154.1302     | 79.95143     | 6.994053    |
| ## ENSG000000000419 | 1886.4719    | 1463.5167    | 1730.84040   | 2286.056213 |
| ## ENSG000000000457 | 1210.4400    | 1729.2833    | 2155.44732   | 1588.649204 |
| ## ENSG00000000460  | 312.0147     | 397.5695     | 985.34734    | 846.280425  |
| ## ENSG00000000938  | 404.9553     | 441.5038     | 636.37016    | 189.838584  |
| ## TCGA-BH-A0B2     | TCGA-BH-A0B3 | TCGA-BH-A0B4 | TCGA-BH-A0B5 |             |
| ## ENSG00000000003  | 2877.04993   | 2603.68077   | 1862.376258  | 5069.1403   |
| ## ENSG00000000005  | 32.01312     | 11.54858     | 7.260726     | 1327.3804   |
| ## ENSG000000000419 | 1407.54453   | 1937.01251   | 3539.603999  | 2428.9080   |
| ## ENSG000000000457 | 1373.46605   | 996.32784    | 943.894400   | 1114.7354   |
| ## ENSG00000000460  | 478.13141    | 1075.06819   | 265.016505   | 235.0982    |
| ## ENSG00000000938  | 501.88308    | 843.04664    | 622.607268   | 766.0504    |
| ## TCGA-BH-A0B7     | TCGA-BH-A0B8 | TCGA-BH-A0B9 | TCGA-BH-A0BA |             |
| ## ENSG00000000003  | 3448.21583   | 4661.5407    | 5062.503376  | 5997.19265  |
| ## ENSG00000000005  | 81.40971     | 973.7738     | 7.601356     | 99.50499    |
| ## ENSG000000000419 | 2027.75677   | 1855.2531    | 3945.103982  | 2854.26927  |
| ## ENSG000000000457 | 1910.78880   | 1001.8634    | 1631.952752  | 3177.88459  |
| ## ENSG00000000460  | 271.36570    | 246.1186     | 1389.878786  | 1739.99266  |
| ## ENSG00000000938  | 888.02085    | 631.3478     | 575.948929   | 321.82245   |
| ## TCGA-BH-A0BC     | TCGA-BH-A0BD | TCGA-BH-A0BF | TCGA-BH-A0BG |             |
| ## ENSG00000000003  | 932.37797    | 1761.08114   | 1380.41831   | 3373.26256  |
| ## ENSG00000000005  | 72.21516     | 86.73601     | 27.10499     | 44.30025    |
| ## ENSG000000000419 | 1366.47133   | 1517.02982   | 2221.64097   | 1744.62433  |
| ## ENSG000000000457 | 1124.14935   | 1986.42469   | 1506.26290   | 1894.43972  |
| ## ENSG00000000460  | 702.89424    | 1475.36252   | 761.84377    | 691.88934   |
| ## ENSG00000000938  | 950.83296    | 380.95816    | 928.34583    | 531.60298   |
| ## TCGA-BH-A0BJ     | TCGA-BH-A0BL | TCGA-BH-A0BM | TCGA-BH-A0BO |             |
| ## ENSG00000000003  | 4328.18508   | 4695.0998    | 6534.6505    | 3591.65068  |
| ## ENSG00000000005  | 92.35239     | 102.3694     | 288.5387     | 66.60943    |
| ## ENSG000000000419 | 1498.58410   | 1507.0239    | 1639.5001    | 2027.20547  |
| ## ENSG000000000457 | 2006.04618   | 1184.5603    | 2188.2240    | 1517.11745  |
| ## ENSG00000000460  | 757.86083    | 968.1221     | 345.2457     | 318.14768   |
| ## ENSG00000000938  | 346.55947    | 835.0419     | 365.2599     | 2093.81490  |
| ## TCGA-BH-A0BP     | TCGA-BH-A0BQ | TCGA-BH-A0BR | TCGA-BH-A0BS |             |
| ## ENSG00000000003  | 1285.5485    | 4586.101580  | 2473.92685   | 5891.2486   |
| ## ENSG00000000005  | 491.6134     | 8.885334     | 37.50096     | 501.8896    |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000419 | 2520.7101    | 1547.317417  | 1706.86180   | 1975.8043    |
| ## ENSG00000000457 | 3092.6702    | 1887.498768  | 1167.07528   | 1746.4699    |
| ## ENSG00000000460 | 819.8095     | 648.629368   | 519.33145    | 403.9814     |
| ## ENSG00000000938 | 559.7039     | 454.421358   | 796.61126    | 389.8685     |
| ##                 | TCGA-BH-A0BT | TCGA-BH-A0BV | TCGA-BH-A0BW | TCGA-BH-A0BZ |
| ## ENSG00000000003 | 5576.90114   | 3781.4262    | 3013.0589326 | 4656.5866    |
| ## ENSG00000000005 | 10.80585     | 285.5841     | 0.9383553    | 4001.4371    |
| ## ENSG00000000419 | 2625.82247   | 1412.5428    | 2011.8338061 | 1593.4242    |
| ## ENSG00000000457 | 1162.70987   | 1397.8975    | 1601.7725313 | 1191.4446    |
| ## ENSG00000000460 | 417.10596    | 254.0966     | 489.8214771  | 268.6306     |
| ## ENSG00000000938 | 317.69210    | 260.6870     | 535.8008877  | 931.5106     |
| ##                 | TCGA-BH-A0C0 | TCGA-BH-A0C1 | TCGA-BH-A0C3 | TCGA-BH-A0C7 |
| ## ENSG00000000003 | 4257.4219    | 7894.371129  | 1423.1748    | 2626.22779   |
| ## ENSG00000000005 | 153.8384     | 6.960759     | 104.6132     | 16.52131     |
| ## ENSG00000000419 | 1369.8240    | 1680.153274  | 1543.0440    | 1936.95864   |
| ## ENSG00000000457 | 1617.1431    | 2940.920800  | 1236.8326    | 1743.98972   |
| ## ENSG00000000460 | 302.5243     | 1574.871789  | 951.3259     | 1399.68557   |
| ## ENSG00000000938 | 252.4716     | 348.037964   | 528.5144     | 209.49024    |
| ##                 | TCGA-BH-A0DD | TCGA-BH-A0DE | TCGA-BH-A0DG | TCGA-BH-A0DH |
| ## ENSG00000000003 | 4213.5407    | 1003.8708    | 7161.4619    | 5529.5539    |
| ## ENSG00000000005 | 12647.0006   | 247.4889     | 134.7752     | 761.5619     |
| ## ENSG00000000419 | 1437.6810    | 1519.7213    | 1434.2834    | 1819.4087    |
| ## ENSG00000000457 | 958.0288     | 1434.2432    | 1604.2839    | 1077.5991    |
| ## ENSG00000000460 | 237.2748     | 404.5301     | 336.9379     | 154.7266     |
| ## ENSG00000000938 | 1917.3333    | 961.1318     | 444.9112     | 573.9148     |
| ##                 | TCGA-BH-A0DI | TCGA-BH-A0DK | TCGA-BH-A0DL | TCGA-BH-A0D0 |
| ## ENSG00000000003 | 2504.72512   | 3890.91695   | 3659.6607    | 4963.8662    |
| ## ENSG00000000005 | 51.27268     | 63.90878     | 768.5065     | 656.4400     |
| ## ENSG00000000419 | 1457.45330   | 1808.99443   | 1307.4976    | 1382.9493    |
| ## ENSG00000000457 | 1237.08985   | 1670.65072   | 1156.4617    | 1508.3367    |
| ## ENSG00000000460 | 307.63610    | 357.88917    | 288.7452     | 311.6246     |
| ## ENSG00000000938 | 889.09015    | 339.84434    | 732.2283     | 360.4888     |
| ##                 | TCGA-BH-A0DP | TCGA-BH-A0DQ | TCGA-BH-A0DS | TCGA-BH-A0DT |
| ## ENSG00000000003 | 6819.0206    | 1744.38471   | 2772.8413    | 4733.5536    |
| ## ENSG00000000005 | 201.2617     | 64.80357     | 41.2702      | 112.3639     |
| ## ENSG00000000419 | 1749.9538    | 1850.62008   | 1507.6518    | 1754.1258    |
| ## ENSG00000000457 | 1682.5822    | 990.11361    | 2213.1142    | 1273.4579    |
| ## ENSG00000000460 | 340.2688     | 380.32261    | 371.4318     | 351.3602     |
| ## ENSG00000000938 | 271.1917     | 388.82144    | 956.9527     | 477.9926     |
| ##                 | TCGA-BH-A0DV | TCGA-BH-A0DX | TCGA-BH-A0DZ | TCGA-BH-A0E0 |
| ## ENSG00000000003 | 3247.90318   | 988.62396    | 1445.16736   | 4547.3904    |
| ## ENSG00000000005 | 86.78878     | 84.24122     | 14.82223     | 308.4211     |
| ## ENSG00000000419 | 1341.88805   | 1670.30002   | 1959.00464   | 1920.9537    |
| ## ENSG00000000457 | 1432.01486   | 1978.21620   | 1531.63036   | 1217.8992    |
| ## ENSG00000000460 | 462.31715    | 554.83009    | 454.54837    | 214.9234     |
| ## ENSG00000000938 | 740.20815    | 2919.39396   | 447.13725    | 223.4232     |
| ##                 | TCGA-BH-A0E1 | TCGA-BH-A0E2 | TCGA-BH-A0E6 | TCGA-BH-A0E7 |
| ## ENSG00000000003 | 5442.3546    | 3084.626414  | 9995.07804   | 1481.801839  |
| ## ENSG00000000005 | 266.7198     | 7.214295     | 27.05394     | 1.582276     |
| ## ENSG00000000419 | 1936.8940    | 1973.624986  | 1847.78408   | 1656.643380  |
| ## ENSG00000000457 | 1574.9171    | 1136.766767  | 879.25304    | 1517.403058  |
| ## ENSG00000000460 | 278.1507     | 319.490207   | 1912.71354   | 377.372919   |
| ## ENSG00000000938 | 256.5591     | 250.439097   | 561.36925    | 144.778290   |
| ##                 | TCGA-BH-A0E9 | TCGA-BH-A0EA | TCGA-BH-A0EB | TCGA-BH-A0EE |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000003 | 6145.42717   | 4778.05585   | 831.214258   | 8052.0054    |
| ## ENSG00000000005 | 29.95682     | 67.73953     | 6.023292     | 0.0000       |
| ## ENSG00000000419 | 1621.94770   | 1316.08222   | 1888.732192  | 3732.9330    |
| ## ENSG00000000457 | 2526.64359   | 2786.99764   | 1372.450044  | 2408.6215    |
| ## ENSG00000000460 | 1042.49726   | 776.58528    | 428.514183   | 1134.0314    |
| ## ENSG00000000938 | 453.63181    | 758.44076    | 777.865103   | 324.1456     |
|                    | TCGA-BH-A0EI | TCGA-BH-A0GY | TCGA-BH-A0GZ | TCGA-BH-A0HO |
| ## ENSG00000000003 | 4929.654185  | 4252.0918    | 2582.41828   | 3083.43488   |
| ## ENSG00000000005 | 5.706719     | 18.4820      | 21.11646     | 66.41911     |
| ## ENSG00000000419 | 2270.323083  | 9646.3711    | 2069.41263   | 1691.52141   |
| ## ENSG00000000457 | 1089.983349  | 1168.0623    | 970.11480    | 2502.98964   |
| ## ENSG00000000460 | 579.231989   | 657.9591     | 403.69694    | 1583.22938   |
| ## ENSG00000000938 | 201.637408   | 415.2289     | 309.29396    | 151.60883    |
|                    | TCGA-BH-A0H3 | TCGA-BH-A0H5 | TCGA-BH-A0H6 | TCGA-BH-A0H7 |
| ## ENSG00000000003 | 5633.95588   | 1815.72265   | 6183.95367   | 1030.083405  |
| ## ENSG00000000005 | 12.39253     | 62.67974     | 32.40597     | 4.648391     |
| ## ENSG00000000419 | 1582.37172   | 1728.16999   | 1688.46296   | 2876.424237  |
| ## ENSG00000000457 | 1881.34160   | 1587.88676   | 1038.10859   | 1443.790188  |
| ## ENSG00000000460 | 573.92924    | 480.54468    | 335.23421    | 498.307496   |
| ## ENSG00000000938 | 556.88951    | 1730.15983   | 281.59673    | 147.818828   |
|                    | TCGA-BH-A0H9 | TCGA-BH-A0HA | TCGA-BH-A0HB | TCGA-BH-A0HF |
| ## ENSG00000000003 | 2836.2167    | 1310.98836   | 2400.83747   | 6022.50101   |
| ## ENSG00000000005 | 57.1992      | 19.40408     | 13.64888     | 32.18039     |
| ## ENSG00000000419 | 2055.9334    | 1871.28125   | 2747.51895   | 1929.63173   |
| ## ENSG00000000457 | 1353.3546    | 1124.22406   | 861.24414    | 1201.40135   |
| ## ENSG00000000460 | 1045.7740    | 132.19032    | 420.38541    | 412.38578    |
| ## ENSG00000000938 | 173.7560     | 380.80513    | 847.59526    | 1371.83825   |
|                    | TCGA-BH-A0HI | TCGA-BH-A0HK | TCGA-BH-A0HL | TCGA-BH-A0HN |
| ## ENSG00000000003 | 1437.289942  | 14984.4031   | 242.336665   | 959.1062     |
| ## ENSG00000000005 | 3.962205     | 125.3051     | 7.494948     | 0.0000       |
| ## ENSG00000000419 | 1935.537248  | 1815.4324    | 8103.704759  | 2183.1507    |
| ## ENSG00000000457 | 1848.368733  | 2215.2154    | 1037.633967  | 2089.9043    |
| ## ENSG00000000460 | 413.059894   | 726.4713     | 402.228897   | 442.5506     |
| ## ENSG00000000938 | 424.946509   | 228.2343     | 56.628499    | 599.4414     |
|                    | TCGA-BH-A0HO | TCGA-BH-A0HP | TCGA-BH-A0HQ | TCGA-BH-A0HU |
| ## ENSG00000000003 | 233.145630   | 5772.13798   | 6393.091262  | 1959.14145   |
| ## ENSG00000000005 | 7.185995     | 46.43582     | 1.190742     | 29.47462     |
| ## ENSG00000000419 | 1627.228743  | 1617.79072   | 1314.578646  | 2361.65429   |
| ## ENSG00000000457 | 1677.530711  | 1980.15594   | 1987.347610  | 1555.70752   |
| ## ENSG00000000460 | 356.904440   | 723.07202    | 757.311612   | 679.75853    |
| ## ENSG00000000938 | 510.205676   | 334.17205    | 485.822543   | 256.06080    |
|                    | TCGA-BH-A0HW | TCGA-BH-A0HX | TCGA-BH-A0HY | TCGA-BH-A0RX |
| ## ENSG00000000003 | 1573.8702793 | 1786.20370   | 1445.41476   | 8473.763912  |
| ## ENSG00000000005 | 0.7849727    | 23.19745     | 28.44475     | 6.680672     |
| ## ENSG00000000419 | 1819.5667369 | 3387.83638   | 2249.24236   | 2556.024971  |
| ## ENSG00000000457 | 1013.3997659 | 1631.89023   | 2512.61968   | 855.125970   |
| ## ENSG00000000460 | 341.4631279  | 497.23231    | 1132.52250   | 888.529329   |
| ## ENSG00000000938 | 117.7459062  | 453.86317    | 180.15009    | 1258.638538  |
|                    | TCGA-BH-A0W3 | TCGA-BH-A0W4 | TCGA-BH-A0W5 | TCGA-BH-A0W7 |
| ## ENSG00000000003 | 1001.796122  | 3611.23209   | 2425.43559   | 2785.75979   |
| ## ENSG00000000005 | 9.702626     | 80.61149     | 15.10652     | 35.00216     |
| ## ENSG00000000419 | 1798.624273  | 1458.33521   | 1822.85332   | 2213.37160   |
| ## ENSG00000000457 | 1933.248207  | 1052.83497   | 1249.64484   | 1424.79362   |
| ## ENSG00000000460 | 782.274212   | 390.84361    | 399.48351    | 464.29330    |

|                     |              |              |              |              |
|---------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000938  | 304.419887   | 328.14578    | 840.92957    | 570.32924    |
| ##                  | TCGA-BH-AOWA | TCGA-BH-A18F | TCGA-BH-A18G | TCGA-BH-A18H |
| ## ENSG00000000003  | 5581.30831   | 2274.0397    | 4177.1570    | 589.495812   |
| ## ENSG00000000005  | 43.42023     | 600.8297     | 0.0000       | 4.151379     |
| ## ENSG000000000419 | 2511.13645   | 1777.0571    | 1457.1935    | 1991.278105  |
| ## ENSG000000000457 | 1042.08544   | 1806.7277    | 1789.0879    | 1451.598841  |
| ## ENSG000000000460 | 875.64124    | 949.4592     | 644.1502     | 451.116513   |
| ## ENSG000000000938 | 384.44992    | 483.2069     | 302.4364     | 1404.549880  |
| ##                  | TCGA-BH-A18I | TCGA-BH-A18J | TCGA-BH-A18K | TCGA-BH-A18L |
| ## ENSG00000000003  | 774.14343    | 3976.6322    | 3250.7979    | 4006.7415    |
| ## ENSG00000000005  | 18.35107     | 335.2086     | 182.5650     | 1841.3820    |
| ## ENSG000000000419 | 1563.91925   | 1577.2445    | 1342.9937    | 1647.4363    |
| ## ENSG000000000457 | 1378.36951   | 1167.9372    | 1354.4040    | 1206.6507    |
| ## ENSG000000000460 | 488.68229    | 290.5141     | 278.4116     | 249.0439     |
| ## ENSG000000000938 | 607.62443    | 897.4180     | 297.8091     | 571.9194     |
| ##                  | TCGA-BH-A18M | TCGA-BH-A18N | TCGA-BH-A18P | TCGA-BH-A18Q |
| ## ENSG00000000003  | 3925.7239    | 3861.7975    | 5109.0694    | 5646.0839    |
| ## ENSG00000000005  | 598.2582     | 592.4815     | 790.5805     | 141.3186     |
| ## ENSG000000000419 | 1464.1291    | 1449.1998    | 1631.4291    | 1590.7588    |
| ## ENSG000000000457 | 960.9730     | 1318.7226    | 1264.7003    | 1655.1290    |
| ## ENSG000000000460 | 278.6711     | 314.2942     | 249.0557     | 420.2563     |
| ## ENSG000000000938 | 894.6227     | 664.6953     | 374.7260     | 423.2158     |
| ##                  | TCGA-BH-A18R | TCGA-BH-A18S | TCGA-BH-A18T | TCGA-BH-A18U |
| ## ENSG00000000003  | 6154.5467    | 4896.449266  | 4836.10802   | 1940.36970   |
| ## ENSG00000000005  | 456.6784     | 4.491331     | 10.45268     | 13.18698     |
| ## ENSG000000000419 | 1448.6372    | 2180.092161  | 3582.65711   | 5071.33516   |
| ## ENSG000000000457 | 1494.2265    | 3040.631217  | 1570.51563   | 1965.80173   |
| ## ENSG000000000460 | 300.2601     | 650.344757   | 2792.60849   | 1301.74316   |
| ## ENSG000000000938 | 393.0106     | 308.105320   | 303.99887    | 477.55701    |
| ##                  | TCGA-BH-A18V | TCGA-BH-A1EN | TCGA-BH-A1EO | TCGA-BH-A1ES |
| ## ENSG00000000003  | 889.40162    | 3900.3891    | 4437.1298    | 2279.355685  |
| ## ENSG00000000005  | 13.03433     | 527.6077     | 2406.1123    | 2.187481     |
| ## ENSG000000000419 | 2153.73203   | 1854.0527    | 2637.3633    | 2325.292796  |
| ## ENSG000000000457 | 1241.32864   | 1025.5131    | 689.6237     | 1817.797096  |
| ## ENSG000000000460 | 677.01865    | 234.4923     | 254.6515     | 667.181846   |
| ## ENSG000000000938 | 1307.26704   | 994.2475     | 3110.8774    | 131.248888   |
| ##                  | TCGA-BH-A1ET | TCGA-BH-A1EU | TCGA-BH-A1EV | TCGA-BH-A1EW |
| ## ENSG00000000003  | 4851.5158    | 4386.0213    | 3974.4028    | 2512.02672   |
| ## ENSG00000000005  | 847.0901     | 260.0145     | 184.3974     | 25.21365     |
| ## ENSG000000000419 | 1592.5052    | 1708.3950    | 1991.8403    | 2273.89779   |
| ## ENSG000000000457 | 1424.6515    | 1813.4465    | 1221.7780    | 2078.72545   |
| ## ENSG000000000460 | 354.9596     | 581.8240     | 404.7466     | 882.47779    |
| ## ENSG000000000938 | 608.2443     | 1073.8075    | 389.0902     | 533.22203    |
| ##                  | TCGA-BH-A1EX | TCGA-BH-A1EY | TCGA-BH-A1F0 | TCGA-BH-A1F2 |
| ## ENSG00000000003  | 5094.584012  | 2147.7959    | 5459.8763    | 1558.11420   |
| ## ENSG00000000005  | 7.261552     | 28.1259      | 674.0107     | 62.50315     |
| ## ENSG000000000419 | 2261.973517  | 1913.8396    | 2060.2131    | 4509.89979   |
| ## ENSG000000000457 | 3058.323743  | 1743.8057    | 1120.4941    | 1808.12679   |
| ## ENSG000000000460 | 760.647595   | 352.8522     | 275.0587     | 1398.87999   |
| ## ENSG000000000938 | 482.893223   | 2867.5632    | 436.3537     | 345.99957    |
| ##                  | TCGA-BH-A1F5 | TCGA-BH-A1F6 | TCGA-BH-A1F8 | TCGA-BH-A1FB |
| ## ENSG00000000003  | 7346.2644    | 5119.84724   | 5627.3705    | 1715.361247  |
| ## ENSG00000000005  | 8.3270       | 5.17941      | 195.1259     | 8.260167     |
| ## ENSG000000000419 | 2238.1125    | 3354.96313   | 2186.6013    | 1479.258154  |

|                    |              |              |              |             |
|--------------------|--------------|--------------|--------------|-------------|
| ## ENSG00000000457 | 1695.9323    | 731.59173    | 1236.2937    | 1226.634728 |
| ## ENSG00000000460 | 566.2360     | 534.77413    | 320.2447     | 348.303688  |
| ## ENSG00000000938 | 202.6237     | 708.28438    | 512.3916     | 760.623667  |
| ## TCGA-BH-A1FC    | TCGA-BH-A1FD | TCGA-BH-A1FE | TCGA-BH-A1FG |             |
| ## ENSG00000000003 | 4649.6013    | 1683.284966  | 5665.3969    | 7850.0294   |
| ## ENSG00000000005 | 1650.4484    | 1.544298     | 371.6550     | 433.4506    |
| ## ENSG00000000419 | 2071.0613    | 3515.594701  | 1951.9697    | 2869.7041   |
| ## ENSG00000000457 | 1150.5896    | 1053.211327  | 1795.8121    | 1057.4887   |
| ## ENSG00000000460 | 277.3607     | 671.769688   | 524.6895     | 491.1714    |
| ## ENSG00000000938 | 1289.2700    | 563.668819   | 213.9359     | 493.3495    |
| ## TCGA-BH-A1FH    | TCGA-BH-A1FJ | TCGA-BH-A1FL | TCGA-BH-A1FM |             |
| ## ENSG00000000003 | 4151.4023    | 2040.783509  | 4720.6763    | 4296.6976   |
| ## ENSG00000000005 | 471.3443     | 4.300914     | 55.1847      | 367.4031    |
| ## ENSG00000000419 | 2483.1460    | 2081.642188  | 1621.4763    | 1786.8478   |
| ## ENSG00000000457 | 850.6183     | 3908.813655  | 2766.0479    | 1250.4984   |
| ## ENSG00000000460 | 265.2170     | 1592.054855  | 818.9137     | 301.7427    |
| ## ENSG00000000938 | 1319.2142    | 187.806561   | 239.1337     | 551.8423    |
| ## TCGA-BH-A1FN    | TCGA-BH-A1FR | TCGA-BH-A1FU | TCGA-BH-A201 |             |
| ## ENSG00000000003 | 2786.2681    | 3303.1561    | 3129.4002    | 2718.70630  |
| ## ENSG00000000005 | 0.0000       | 128.1136     | 152.5000     | 22.94267    |
| ## ENSG00000000419 | 2454.2128    | 1675.1461    | 1306.9626    | 1940.18506  |
| ## ENSG00000000457 | 2052.2512    | 1179.6123    | 1376.2807    | 1426.26927  |
| ## ENSG00000000460 | 1230.8514    | 252.6014     | 369.2768     | 680.63252   |
| ## ENSG00000000938 | 242.1756     | 2314.5056    | 562.1073     | 543.74126   |
| ## TCGA-BH-A202    | TCGA-BH-A203 | TCGA-BH-A204 | TCGA-BH-A208 |             |
| ## ENSG00000000003 | 3446.089982  | 4130.0986    | 4667.4997    | 4847.0798   |
| ## ENSG00000000005 | 1.382306     | 688.0550     | 942.1736     | 252.2132    |
| ## ENSG00000000419 | 2687.203741  | 1593.6697    | 1947.2310    | 1654.6717   |
| ## ENSG00000000457 | 1864.040249  | 1320.3934    | 1026.7415    | 1533.9151   |
| ## ENSG00000000460 | 1611.078169  | 323.6865     | 219.0093     | 238.4562    |
| ## ENSG00000000938 | 447.176137   | 424.5069     | 809.9007     | 250.6847    |
| ## TCGA-BH-A209    | TCGA-BH-A280 | TCGA-BH-A28Q | TCGA-BH-A2L8 |             |
| ## ENSG00000000003 | 1546.24894   | 4194.0300    | 3961.69078   | 2488.42162  |
| ## ENSG00000000005 | 20.42501     | 123.5422     | 5.01718      | 45.02233    |
| ## ENSG00000000419 | 2343.58083   | 1401.0604    | 1890.22257   | 1617.98993  |
| ## ENSG00000000457 | 1400.24794   | 1322.3595    | 3295.03298   | 1598.29266  |
| ## ENSG00000000460 | 1430.50722   | 272.7080     | 605.19734    | 475.54835   |
| ## ENSG00000000938 | 1326.86920   | 471.2907     | 290.99644    | 925.77163   |
| ## TCGA-BH-A42T    | TCGA-BH-A42U | TCGA-BH-A42V | TCGA-BH-A5IZ |             |
| ## ENSG00000000003 | 2273.07095   | 2870.5178    | 2292.95851   | 4045.600335 |
| ## ENSG00000000005 | 34.42743     | 154.0922     | 86.17328     | 2.480442    |
| ## ENSG00000000419 | 1989.04466   | 1798.0360    | 1492.67103   | 3566.875096 |
| ## ENSG00000000457 | 1087.04604   | 989.7123     | 1052.06332   | 1064.109469 |
| ## ENSG00000000460 | 778.05988    | 315.2286     | 247.27984    | 1720.186286 |
| ## ENSG00000000938 | 640.35016    | 714.1073     | 578.48496    | 478.725239  |
| ## TCGA-BH-A5J0    | TCGA-BH-A6R8 | TCGA-BH-A6R9 | TCGA-BH-A8FY |             |
| ## ENSG00000000003 | 875.78195    | 1941.929733  | 2221.921213  | 3730.69738  |
| ## ENSG00000000005 | 14.18793     | 3.913209     | 1.122749     | 3.11021     |
| ## ENSG00000000419 | 2088.20467   | 3387.860284  | 2037.790299  | 2044.96334  |
| ## ENSG00000000457 | 1185.33668   | 1595.610778  | 650.071947   | 2141.37986  |
| ## ENSG00000000460 | 228.29662    | 403.060479   | 264.968876   | 732.45455   |
| ## ENSG00000000938 | 1065.38422   | 457.845398   | 1146.327215  | 600.27061   |
| ## TCGA-BH-A8FZ    | TCGA-BH-A8G0 | TCGA-BH-AB28 | TCGA-C8-A12K |             |
| ## ENSG00000000003 | 2011.67759   | 2829.46531   | 2801.37430   | 2276.95450  |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000005 | 51.09022     | 18.87096     | 48.19118     | 1.69922      |
| ## ENSG00000000419 | 1937.17101   | 1513.21550   | 1687.73896   | 1785.03038   |
| ## ENSG00000000457 | 964.32799    | 1736.12878   | 2025.07723   | 932.87166    |
| ## ENSG00000000460 | 313.99200    | 336.13906    | 974.29996    | 797.78369    |
| ## ENSG00000000938 | 2051.05964   | 2523.99156   | 409.62504    | 1901.42693   |
| ##                 | TCGA-C8-A12L | TCGA-C8-A12M | TCGA-C8-A12N | TCGA-C8-A12O |
| ## ENSG00000000003 | 1538.5761    | 3642.8237    | 1035.316310  | 3856.07194   |
| ## ENSG00000000005 | 0.0000       | 0.0000       | 2.050131     | 3.60549      |
| ## ENSG00000000419 | 3684.0834    | 1783.0892    | 1734.411086  | 2351.68109   |
| ## ENSG00000000457 | 1347.8885    | 2201.0233    | 1119.371694  | 905.87945    |
| ## ENSG00000000460 | 1184.4421    | 657.9932     | 324.945812   | 446.17943    |
| ## ENSG00000000938 | 365.0304     | 148.9523     | 401.825736   | 563.35787    |
| ##                 | TCGA-C8-A12P | TCGA-C8-A12Q | TCGA-C8-A12T | TCGA-C8-A12U |
| ## ENSG00000000003 | 4212.7937    | 2142.42930   | 657.632161   | 99.692773    |
| ## ENSG00000000005 | 0.0000       | 29.43323     | 1.220097     | 1.201118     |
| ## ENSG00000000419 | 3473.3022    | 2501.82453   | 6276.177805  | 2598.017692  |
| ## ENSG00000000457 | 1550.4048    | 1819.43833   | 1195.694838  | 751.899711   |
| ## ENSG00000000460 | 699.9347     | 684.70987    | 516.100935   | 589.748815   |
| ## ENSG00000000938 | 514.2377     | 638.23635    | 303.804097   | 461.229216   |
| ##                 | TCGA-C8-A12V | TCGA-C8-A12W | TCGA-C8-A12X | TCGA-C8-A12Y |
| ## ENSG00000000003 | 2983.449745  | 1641.149463  | 353.215932   | 2958.307454  |
| ## ENSG00000000005 | 2.158011     | 2.359669     | 4.155482     | 5.532501     |
| ## ENSG00000000419 | 1503.054428  | 3110.043124  | 2117.217849  | 2233.549790  |
| ## ENSG00000000457 | 980.815847   | 1181.014100  | 1032.637165  | 1023.512731  |
| ## ENSG00000000460 | 755.303733   | 681.944205   | 380.226562   | 495.554040   |
| ## ENSG00000000938 | 1381.126826  | 513.227905   | 191.152151   | 267.140775   |
| ##                 | TCGA-C8-A12Z | TCGA-C8-A130 | TCGA-C8-A131 | TCGA-C8-A132 |
| ## ENSG00000000003 | 2329.3550    | 4000.39308   | 6338.163107  | 1667.21392   |
| ## ENSG00000000005 | 0.0000       | 24.51822     | 1.356047     | 7.53543      |
| ## ENSG00000000419 | 2323.8774    | 2637.17995   | 2444.952521  | 1864.07703   |
| ## ENSG00000000457 | 2660.7506    | 893.44401    | 1293.668721  | 1374.27407   |
| ## ENSG00000000460 | 640.8807     | 700.24042    | 692.939955   | 445.53231    |
| ## ENSG00000000938 | 242.3844     | 351.10094    | 809.559986   | 519.00275    |
| ##                 | TCGA-C8-A133 | TCGA-C8-A134 | TCGA-C8-A135 | TCGA-C8-A137 |
| ## ENSG00000000003 | 2193.47037   | 2107.99889   | 7800.54563   | 1132.3079    |
| ## ENSG00000000005 | 9.71176      | 13.39475     | 22.36537     | 0.0000       |
| ## ENSG00000000419 | 1853.55877   | 4734.48626   | 3271.55729   | 2336.0500    |
| ## ENSG00000000457 | 862.95925    | 660.24959    | 1770.59215   | 2732.7378    |
| ## ENSG00000000460 | 155.38816    | 1056.51096   | 596.40999    | 755.3786     |
| ## ENSG00000000938 | 62.43274     | 693.17835    | 354.11843    | 161.1069     |
| ##                 | TCGA-C8-A138 | TCGA-C8-A1HE | TCGA-C8-A1HF | TCGA-C8-A1HG |
| ## ENSG00000000003 | 2801.88628   | 1778.616415  | 2581.838800  | 581.18465    |
| ## ENSG00000000005 | 2.53794      | 4.201456     | 1.568553     | 10.19622     |
| ## ENSG00000000419 | 2971.92830   | 1970.482910  | 2853.982805  | 3219.96690   |
| ## ENSG00000000457 | 1282.92891   | 2941.019269  | 1182.689219  | 964.56260    |
| ## ENSG00000000460 | 376.88416    | 703.743897   | 703.496174   | 593.42012    |
| ## ENSG00000000938 | 683.97496    | 401.239057   | 614.088633   | 528.16430    |
| ##                 | TCGA-C8-A1HI | TCGA-C8-A1HJ | TCGA-C8-A1HK | TCGA-C8-A1HL |
| ## ENSG00000000003 | 2868.209676  | 5860.58712   | 6973.486072  | 1555.862186  |
| ## ENSG00000000005 | 5.525085     | 49.37389     | 4.245223     | 8.564379     |
| ## ENSG00000000419 | 1982.814828  | 4778.08796   | 2728.263220  | 1855.615452  |
| ## ENSG00000000457 | 2379.930302  | 2105.37703   | 2845.714385  | 1600.111478  |
| ## ENSG00000000460 | 476.538569   | 4814.41968   | 1033.004227  | 606.643513   |
| ## ENSG00000000938 | 325.980007   | 296.24332    | 147.167726   | 455.339484   |

|                     |              |              |              |              |
|---------------------|--------------|--------------|--------------|--------------|
| ##                  | TCGA-C8-A1HM | TCGA-C8-A1HN | TCGA-C8-A1HO | TCGA-C8-A26V |
| ## ENSG000000000003 | 2928.620132  | 2439.707197  | 423.765941   | 1718.2114    |
| ## ENSG000000000005 | 8.897717     | 1.388959     | 4.122237     | 0.0000       |
| ## ENSG00000000419  | 6328.819287  | 5209.986732  | 1694.239316  | 2030.0765    |
| ## ENSG00000000457  | 1962.582241  | 1934.820452  | 2546.717881  | 1306.5258    |
| ## ENSG00000000460  | 2190.109587  | 630.587570   | 464.163861   | 433.5398     |
| ## ENSG00000000938  | 694.021958   | 393.769992   | 199.516260   | 193.7344     |
| ##                  | TCGA-C8-A26W | TCGA-C8-A26X | TCGA-C8-A26Y | TCGA-C8-A26Z |
| ## ENSG000000000003 | 2880.374344  | 1494.215932  | 1767.7382    | 1809.079166  |
| ## ENSG000000000005 | 8.829254     | 1.254589     | 0.0000       | 2.319332     |
| ## ENSG00000000419  | 2191.013354  | 1752.661341  | 3826.7921    | 2160.844560  |
| ## ENSG00000000457  | 1230.662182  | 876.957965   | 885.0598     | 2337.113812  |
| ## ENSG00000000460  | 887.000447   | 521.909175   | 445.3081     | 687.295461   |
| ## ENSG00000000938  | 401.391473   | 1415.176802  | 502.4599     | 122.151499   |
| ##                  | TCGA-C8-A273 | TCGA-C8-A274 | TCGA-C8-A275 | TCGA-C8-A278 |
| ## ENSG000000000003 | 1248.499516  | 6528.325     | 2308.531582  | 3124.386852  |
| ## ENSG000000000005 | 3.281208     | 0.000        | 8.088758     | 2.575044     |
| ## ENSG00000000419  | 5894.689567  | 2129.009     | 2423.391948  | 3440.258929  |
| ## ENSG00000000457  | 1528.222469  | 3487.826     | 3265.431674  | 2419.683114  |
| ## ENSG00000000460  | 564.367718   | 1471.564     | 1157.501294  | 822.297419   |
| ## ENSG00000000938  | 296.949294   | 180.834      | 1501.273517  | 840.322727   |
| ##                  | TCGA-C8-A27A | TCGA-C8-A27B | TCGA-C8-A3M7 | TCGA-C8-A3M8 |
| ## ENSG000000000003 | 1287.9101    | 2449.704     | 3802.50440   | 2739.53680   |
| ## ENSG000000000005 | 0.0000       | 0.000        | 25.73748     | 41.38273     |
| ## ENSG00000000419  | 3353.9059    | 2327.402     | 2605.29668   | 1896.70851   |
| ## ENSG00000000457  | 1083.8532    | 1692.456     | 2983.05640   | 1673.24176   |
| ## ENSG00000000460  | 882.3392     | 2863.480     | 598.60386    | 929.04231    |
| ## ENSG00000000938  | 133.4951     | 907.379      | 1085.12516   | 370.37544    |
| ##                  | TCGA-C8-A8HP | TCGA-C8-A8HQ | TCGA-C8-A8HR | TCGA-D8-A13Y |
| ## ENSG000000000003 | 1242.51398   | 1284.435662  | 1268.45298   | 1475.889692  |
| ## ENSG000000000005 | 9.90051      | 2.577463     | 28.23611     | 2.860251     |
| ## ENSG00000000419  | 3932.15248   | 1544.759411  | 2054.72007   | 3256.872859  |
| ## ENSG00000000457  | 1141.85880   | 1255.224416  | 1568.19016   | 1054.479327  |
| ## ENSG00000000460  | 547.82821    | 733.717763   | 509.33600    | 1109.777520  |
| ## ENSG00000000938  | 1184.76101   | 531.816505   | 647.25854    | 141.105733   |
| ##                  | TCGA-D8-A13Z | TCGA-D8-A140 | TCGA-D8-A141 | TCGA-D8-A142 |
| ## ENSG000000000003 | 7819.148915  | 2673.20639   | 2163.17135   | 4120.23228   |
| ## ENSG000000000005 | 1.419599     | 12.34262     | 18.25828     | 36.71215     |
| ## ENSG00000000419  | 2492.105287  | 1709.45326   | 1296.33781   | 2298.74508   |
| ## ENSG00000000457  | 2007.312376  | 1858.59328   | 1540.65097   | 946.04374    |
| ## ENSG00000000460  | 2311.816269  | 588.33169    | 424.28763    | 997.58194    |
| ## ENSG00000000938  | 644.497750   | 295.19440    | 863.35577    | 712.35681    |
| ##                  | TCGA-D8-A143 | TCGA-D8-A145 | TCGA-D8-A147 | TCGA-D8-A1J8 |
| ## ENSG000000000003 | 6600.234523  | 4835.04901   | 1978.129450  | 763.1800     |
| ## ENSG000000000005 | 1.074607     | 20.61645     | 1.615459     | 0.0000       |
| ## ENSG00000000419  | 2803.648953  | 1634.59017   | 2805.244418  | 2832.3554    |
| ## ENSG00000000457  | 1694.654810  | 1816.21130   | 1318.214480  | 2607.7665    |
| ## ENSG00000000460  | 2295.359971  | 539.95471    | 1732.579694  | 1696.0339    |
| ## ENSG00000000938  | 359.993254   | 366.18747    | 323.091784   | 610.4032     |
| ##                  | TCGA-D8-A1J9 | TCGA-D8-A1JA | TCGA-D8-A1JB | TCGA-D8-A1JC |
| ## ENSG000000000003 | 1519.9496    | 2928.0273    | 3412.82480   | 1957.313596  |
| ## ENSG000000000005 | 0.0000       | 0.0000       | 6.57155      | 1.897848     |
| ## ENSG00000000419  | 1986.2901    | 1945.8079    | 3132.43868   | 3144.733641  |
| ## ENSG00000000457  | 2675.7793    | 5886.6093    | 1730.50808   | 1897.215085  |

|                     |              |              |              |             |
|---------------------|--------------|--------------|--------------|-------------|
| ## ENSG00000000460  | 740.9337     | 1240.0706    | 376.76885    | 811.013584  |
| ## ENSG00000000938  | 412.8918     | 224.3157     | 437.00805    | 198.641393  |
| ## TCGA-D8-A1JD     | TCGA-D8-A1JE | TCGA-D8-A1JF | TCGA-D8-A1JK |             |
| ## ENSG00000000003  | 1196.9665421 | 2058.667923  | 4371.89191   | 2327.221425 |
| ## ENSG00000000005  | 0.6380419    | 3.806708     | 15.86439     | 2.065581    |
| ## ENSG000000000419 | 2035.3535551 | 2810.873510  | 4456.22366   | 2480.074430 |
| ## ENSG00000000457  | 1463.0300006 | 1474.718848  | 1834.42447   | 1668.301040 |
| ## ENSG00000000460  | 805.2088359  | 867.168182   | 975.24250    | 880.626096  |
| ## ENSG00000000938  | 481.7216094  | 337.274367   | 322.29761    | 519.149395  |
| ## TCGA-D8-A1JH     | TCGA-D8-A1JI | TCGA-D8-A1JJ | TCGA-D8-A1JK |             |
| ## ENSG00000000003  | 2838.000544  | 179.074311   | 930.4578     | 6274.855845 |
| ## ENSG00000000005  | 3.039846     | 9.948573     | 0.0000       | 1.327169    |
| ## ENSG000000000419 | 1513.235509  | 3152.592197  | 2442.1626    | 2423.410908 |
| ## ENSG000000000457 | 1177.028503  | 1496.707516  | 1184.8497    | 922.382575  |
| ## ENSG00000000460  | 331.343251   | 426.683236   | 854.9111     | 605.189142  |
| ## ENSG00000000938  | 569.667204   | 225.500985   | 365.3993     | 854.696947  |
| ## TCGA-D8-A1JL     | TCGA-D8-A1JM | TCGA-D8-A1JN | TCGA-D8-A1JP |             |
| ## ENSG00000000003  | 2385.1564446 | 4387.2360    | 2468.480996  | 1969.289091 |
| ## ENSG00000000005  | 0.6139399    | 175.4540     | 1.444401     | 1.204458    |
| ## ENSG000000000419 | 1991.6209798 | 3230.8347    | 2841.136407  | 2199.340599 |
| ## ENSG000000000457 | 850.3067377  | 1378.8203    | 2605.699074  | 2958.149240 |
| ## ENSG00000000460  | 715.8539033  | 1487.8144    | 342.322994   | 1068.354388 |
| ## ENSG00000000938  | 608.4144238  | 151.5285     | 125.662871   | 346.883950  |
| ## TCGA-D8-A1JS     | TCGA-D8-A1JT | TCGA-D8-A1JU | TCGA-D8-A1X5 |             |
| ## ENSG00000000003  | 218.717875   | 2211.3998    | 1902.32410   | 423.9058    |
| ## ENSG00000000005  | 6.161067     | 0.0000       | 69.65581     | 0.0000      |
| ## ENSG000000000419 | 3219.157455  | 3572.7163    | 1795.03814   | 2533.7732   |
| ## ENSG000000000457 | 1906.850205  | 1894.5198    | 1866.29523   | 1457.7046   |
| ## ENSG00000000460  | 411.764638   | 616.0147     | 400.32073    | 551.9230    |
| ## ENSG00000000938  | 264.925877   | 272.0943     | 624.50034    | 355.0664    |
| ## TCGA-D8-A1X6     | TCGA-D8-A1X7 | TCGA-D8-A1X8 | TCGA-D8-A1X9 |             |
| ## ENSG00000000003  | 958.948388   | 1489.00683   | 1618.81884   | 1222.289907 |
| ## ENSG00000000005  | 6.603317     | 16.05192     | 14.95061     | 3.268155    |
| ## ENSG000000000419 | 2388.933398  | 1816.92466   | 2028.29943   | 2908.004170 |
| ## ENSG000000000457 | 1915.695670  | 2290.83853   | 1647.05888   | 1269.351337 |
| ## ENSG00000000460  | 664.733925   | 818.64800    | 591.37969    | 436.625486  |
| ## ENSG00000000938  | 401.334941   | 192.62306    | 429.41474    | 329.430007  |
| ## TCGA-D8-A1XA     | TCGA-D8-A1XB | TCGA-D8-A1XC | TCGA-D8-A1XD |             |
| ## ENSG00000000003  | 1047.68656   | 1135.486955  | 515.8866     | 3169.4778   |
| ## ENSG00000000005  | 27.25511     | 2.310248     | 1.2833       | 0.0000      |
| ## ENSG000000000419 | 2591.41618   | 1400.010366  | 1470.6617    | 3117.8321   |
| ## ENSG000000000457 | 883.06567    | 2030.708105  | 1586.1587    | 1212.5526   |
| ## ENSG00000000460  | 406.64629    | 700.005183   | 338.7912     | 449.0936    |
| ## ENSG00000000938  | 328.15157    | 183.664726   | 156.5626     | 121.2553    |
| ## TCGA-D8-A1XF     | TCGA-D8-A1XG | TCGA-D8-A1XJ | TCGA-D8-A1XK |             |
| ## ENSG00000000003  | 369.39557    | 1601.061435  | 3141.132373  | 6802.792514 |
| ## ENSG00000000005  | 10.77812     | 1.040326     | 2.611083     | 1.494462    |
| ## ENSG000000000419 | 2000.81101   | 1594.819480  | 4786.114414  | 2811.083638 |
| ## ENSG000000000457 | 1262.01988   | 2266.869960  | 910.397468   | 576.115227  |
| ## ENSG00000000460  | 879.88653    | 884.276946   | 869.490507   | 2440.456980 |
| ## ENSG00000000938  | 136.19624    | 211.186141   | 161.016761   | 731.539309  |
| ## TCGA-D8-A1XL     | TCGA-D8-A1XM | TCGA-D8-A1XO | TCGA-D8-A1XQ |             |
| ## ENSG00000000003  | 2839.8023    | 2103.8519    | 3153.504947  | 895.751090  |
| ## ENSG00000000005  | 0.0000       | 160.3117     | 5.051381     | 0.789904    |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000419 | 3317.8057    | 1352.1112    | 1894.267846  | 3593.273113  |
| ## ENSG00000000457 | 1333.1080    | 1875.8388    | 2168.485667  | 1048.992459  |
| ## ENSG00000000460 | 752.4920     | 534.5853     | 1138.725585  | 641.402015   |
| ## ENSG00000000938 | 492.5402     | 554.3848     | 432.253882   | 823.079926   |
|                    | TCGA-D8-A1XR | TCGA-D8-A1XS | TCGA-D8-A1XT | TCGA-D8-A1XU |
| ## ENSG00000000003 | 2534.41028   | 4612.0037009 | 2256.806283  | 4056.131077  |
| ## ENSG00000000005 | 71.29051     | 0.7265286    | 2.706003     | 4.341978     |
| ## ENSG00000000419 | 2173.37945   | 4157.9233113 | 2666.765698  | 3546.672330  |
| ## ENSG00000000457 | 2651.48369   | 2429.5117164 | 1192.670707  | 1382.919980  |
| ## ENSG00000000460 | 1334.24438   | 1129.0254806 | 649.440657   | 430.579481   |
| ## ENSG00000000938 | 344.67980    | 327.6644091  | 484.374490   | 296.701827   |
|                    | TCGA-D8-A1XV | TCGA-D8-A1XW | TCGA-D8-A1XY | TCGA-D8-A1XZ |
| ## ENSG00000000003 | 976.2223     | 8453.499739  | 1679.091591  | 1596.194904  |
| ## ENSG00000000005 | 0.0000       | 2.379927     | 4.233716     | 4.399251     |
| ## ENSG00000000419 | 2300.6876    | 2435.458352  | 2532.608648  | 3686.572336  |
| ## ENSG00000000457 | 2292.1243    | 1763.525706  | 2023.716038  | 1150.404136  |
| ## ENSG00000000460 | 662.2327     | 618.780949   | 492.804491   | 389.333713   |
| ## ENSG00000000938 | 182.6849     | 375.235114   | 221.846695   | 330.677033   |
|                    | TCGA-D8-A1Y0 | TCGA-D8-A1Y1 | TCGA-D8-A1Y2 | TCGA-D8-A1Y3 |
| ## ENSG00000000003 | 738.702913   | 1771.13508   | 617.684700   | 2109.8443589 |
| ## ENSG00000000005 | 6.963421     | 0.69212      | 6.959828     | 0.9952096    |
| ## ENSG00000000419 | 2925.797400  | 2190.55980   | 2059.238993  | 3629.5294230 |
| ## ENSG00000000457 | 1851.689707  | 1924.09360   | 791.680390   | 899.6694813  |
| ## ENSG00000000460 | 1020.721465  | 987.65524    | 352.341272   | 892.7030141  |
| ## ENSG00000000938 | 599.434493   | 366.13148    | 2247.154338  | 653.8527093  |
|                    | TCGA-D8-A27E | TCGA-D8-A27F | TCGA-D8-A27G | TCGA-D8-A27H |
| ## ENSG00000000003 | 1745.658479  | 2666.386081  | 1975.06568   | 2695.924597  |
| ## ENSG00000000005 | 1.591302     | 5.069175     | 35.48505     | 3.576683     |
| ## ENSG00000000419 | 1866.597444  | 2843.083041  | 1566.18112   | 2517.090461  |
| ## ENSG00000000457 | 1321.576451  | 2182.641947  | 1618.60222   | 1178.516955  |
| ## ENSG00000000460 | 211.643188   | 1677.896945  | 566.95434    | 659.897961   |
| ## ENSG00000000938 | 338.151711   | 354.118086   | 492.75832    | 250.367790   |
|                    | TCGA-D8-A27I | TCGA-D8-A27K | TCGA-D8-A27L | TCGA-D8-A27M |
| ## ENSG00000000003 | 3409.0610    | 5072.457504  | 3446.513470  | 1886.07873   |
| ## ENSG00000000005 | 92.6225      | 3.756819     | 8.140384     | 29.46998     |
| ## ENSG00000000419 | 1697.6184    | 1325.405871  | 1504.718726  | 1092.65619   |
| ## ENSG00000000457 | 1355.4681    | 3006.958218  | 1236.086045  | 1286.10016   |
| ## ENSG00000000460 | 630.3860     | 825.748896   | 433.318917   | 494.94454    |
| ## ENSG00000000938 | 810.1013     | 330.600104   | 428.935634   | 794.17818    |
|                    | TCGA-D8-A27N | TCGA-D8-A27P | TCGA-D8-A27R | TCGA-D8-A27T |
| ## ENSG00000000003 | 1556.64615   | 4299.194703  | 2553.033825  | 2498.39727   |
| ## ENSG00000000005 | 41.38669     | 2.002886     | 9.193751     | 34.76895     |
| ## ENSG00000000419 | 1817.63566   | 1515.183225  | 3215.691081  | 1601.02728   |
| ## ENSG00000000457 | 1938.41721   | 2081.999950  | 1084.862573  | 1673.87650   |
| ## ENSG00000000460 | 531.26990    | 573.826826   | 531.823113   | 763.26119    |
| ## ENSG00000000938 | 733.98020    | 258.372288   | 255.303383   | 729.32008    |
|                    | TCGA-D8-A27V | TCGA-D8-A27W | TCGA-D8-A3Z5 | TCGA-D8-A3Z6 |
| ## ENSG00000000003 | 7330.318802  | 1496.589326  | 7153.8824    | 1207.2337    |
| ## ENSG00000000005 | 8.139372     | 7.239438     | 145.1828     | 0.0000       |
| ## ENSG00000000419 | 1660.431974  | 2219.875021  | 1190.4989    | 1437.6974    |
| ## ENSG00000000457 | 3852.093654  | 1139.882459  | 1930.9312    | 2265.0260    |
| ## ENSG00000000460 | 786.263376   | 650.891312   | 449.1593     | 416.8152     |
| ## ENSG00000000938 | 268.599290   | 310.637714   | 391.9936     | 282.6781     |
|                    | TCGA-D8-A4Z1 | TCGA-D8-A73U | TCGA-D8-A73W | TCGA-D8-A73X |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000003 | 2761.08953   | 1012.152328  | 1677.371181  | 2481.252718  |
| ## ENSG00000000005 | 20.42415     | 8.404586     | 4.376702     | 2.717692     |
| ## ENSG00000000419 | 1286.72133   | 1119.010640  | 2022.036493  | 1983.915098  |
| ## ENSG00000000457 | 1319.91058   | 1755.357892  | 1977.175293  | 2155.129688  |
| ## ENSG00000000460 | 293.59713    | 356.594592   | 312.934219   | 752.800660   |
| ## ENSG00000000938 | 602.51237    | 2062.725621  | 512.074177   | 579.774275   |
|                    | TCGA-E2-A105 | TCGA-E2-A107 | TCGA-E2-A108 | TCGA-E2-A109 |
| ## ENSG00000000003 | 561.591435   | 3038.265216  | 2239.8173    | 3221.18252   |
| ## ENSG00000000005 | 9.545463     | 6.825371     | 413.5047     | 1.63678      |
| ## ENSG00000000419 | 3675.798898  | 1861.376219  | 2285.7623    | 2576.29130   |
| ## ENSG00000000457 | 1105.682854  | 2802.302385  | 1010.7893    | 1723.52906   |
| ## ENSG00000000460 | 558.409614   | 1100.834862  | 460.5983     | 680.90037    |
| ## ENSG00000000938 | 334.091222   | 367.594989   | 1515.0354    | 232.42272    |
|                    | TCGA-E2-A10A | TCGA-E2-A10B | TCGA-E2-A10C | TCGA-E2-A10E |
| ## ENSG00000000003 | 1298.1416    | 2311.828580  | 5982.03935   | 522.90286    |
| ## ENSG00000000005 | 3.2906       | 8.894499     | 15.30586     | 32.73132     |
| ## ENSG00000000419 | 2024.5414    | 2242.155004  | 2603.27128   | 1816.18934   |
| ## ENSG00000000457 | 1478.3019    | 1638.811475  | 1630.07384   | 2449.26105   |
| ## ENSG00000000460 | 987.1799     | 929.475165   | 542.08246    | 638.65999    |
| ## ENSG00000000938 | 272.2971     | 386.910715   | 448.97182    | 255.46399    |
|                    | TCGA-E2-A10F | TCGA-E2-A14N | TCGA-E2-A140 | TCGA-E2-A14P |
| ## ENSG00000000003 | 1222.0161    | 3517.95205   | 2459.04272   | 1177.04703   |
| ## ENSG00000000005 | 39.6817      | 14.35899     | 17.16181     | 23.92835     |
| ## ENSG00000000419 | 1510.6104    | 3173.33634   | 3265.64795   | 5187.89461   |
| ## ENSG00000000457 | 1592.6793    | 1023.40423   | 1472.23844   | 1061.96305   |
| ## ENSG00000000460 | 733.2097     | 1365.40922   | 691.37592    | 527.56319    |
| ## ENSG00000000938 | 836.0214     | 486.90023    | 736.73214    | 385.13252    |
|                    | TCGA-E2-A14Q | TCGA-E2-A14R | TCGA-E2-A14S | TCGA-E2-A14T |
| ## ENSG00000000003 | 1288.830842  | 2436.763644  | 3129.509867  | 1236.80724   |
| ## ENSG00000000005 | 7.004515     | 1.294773     | 7.955033     | 72.58086     |
| ## ENSG00000000419 | 1707.350639  | 4062.999104  | 5562.954372  | 1735.34247   |
| ## ENSG00000000457 | 1868.454495  | 813.117730   | 1273.600736  | 2438.42376   |
| ## ENSG00000000460 | 755.612103   | 589.121922   | 617.310538   | 439.88402    |
| ## ENSG00000000938 | 272.300538   | 1083.725383  | 661.063218   | 1365.83989   |
|                    | TCGA-E2-A14U | TCGA-E2-A14V | TCGA-E2-A14W | TCGA-E2-A14X |
| ## ENSG00000000003 | 5616.10664   | 2836.655748  | 3773.8963    | 5042.59119   |
| ## ENSG00000000005 | 13.78086     | 5.277499     | 0.0000       | 14.08903     |
| ## ENSG00000000419 | 1468.87778   | 4417.266718  | 2750.1971    | 2530.26134   |
| ## ENSG00000000457 | 1338.36490   | 1682.642619  | 2254.2599    | 2382.32654   |
| ## ENSG00000000460 | 296.69386    | 1292.987271  | 917.6164     | 865.83481    |
| ## ENSG00000000938 | 738.49208    | 152.167890   | 194.9272     | 543.06799    |
|                    | TCGA-E2-A14Y | TCGA-E2-A14Z | TCGA-E2-A150 | TCGA-E2-A152 |
| ## ENSG00000000003 | 7005.2483    | 3803.51096   | 4592.81204   | 3910.516634  |
| ## ENSG00000000005 | 0.0000       | 36.61623     | 2.25691      | 2.168894     |
| ## ENSG00000000419 | 4145.7980    | 1897.17845   | 3213.83998   | 1969.356130  |
| ## ENSG00000000457 | 1051.4353    | 1099.63118   | 1231.14446   | 3137.305774  |
| ## ENSG00000000460 | 1033.6143    | 803.26856    | 947.90224    | 484.747902   |
| ## ENSG00000000938 | 223.5718     | 1153.41127   | 511.19014    | 357.867579   |
|                    | TCGA-E2-A153 | TCGA-E2-A154 | TCGA-E2-A155 | TCGA-E2-A156 |
| ## ENSG00000000003 | 3562.082631  | 5827.4304    | 2493.432833  | 1280.156602  |
| ## ENSG00000000005 | 5.954171     | 0.0000       | 9.504827     | 2.015995     |
| ## ENSG00000000419 | 2015.486787  | 1799.1509    | 1824.134630  | 1447.484158  |
| ## ENSG00000000457 | 1780.297044  | 2099.2259    | 1473.248116  | 1391.036307  |
| ## ENSG00000000460 | 488.241999   | 793.7049     | 504.547876   | 550.366539   |

|                     |              |              |              |              |
|---------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000938  | 358.738786   | 179.2656     | 102.176885   | 179.423524   |
| ##                  | TCGA-E2-A158 | TCGA-E2-A159 | TCGA-E2-A15A | TCGA-E2-A15C |
| ## ENSG00000000003  | 3170.6138    | 3626.97385   | 3013.137928  | 4799.301299  |
| ## ENSG00000000005  | 1190.7261    | 5.46231      | 2.493631     | 6.128071     |
| ## ENSG000000000419 | 1527.6911    | 2981.51088   | 3413.781372  | 1861.912379  |
| ## ENSG000000000457 | 853.7611     | 1022.36236   | 1492.022781  | 1616.789520  |
| ## ENSG000000000460 | 260.1440     | 1079.71661   | 890.226406   | 476.968229   |
| ## ENSG000000000938 | 876.4582     | 1290.01555   | 427.242178   | 196.098287   |
| ##                  | TCGA-E2-A15D | TCGA-E2-A15E | TCGA-E2-A15F | TCGA-E2-A15G |
| ## ENSG00000000003  | 3594.5349    | 2341.94924   | 4426.286780  | 1743.80712   |
| ## ENSG00000000005  | 72.0093      | 3.81218      | 7.566302     | 13.79762     |
| ## ENSG000000000419 | 1346.9975    | 2035.70411   | 4178.760608  | 1612.19904   |
| ## ENSG000000000457 | 2994.7398    | 1700.23227   | 1139.268929  | 2417.76788   |
| ## ENSG000000000460 | 574.3801     | 641.71696    | 583.686169   | 651.67229    |
| ## ENSG000000000938 | 298.2032     | 242.70879    | 358.858904   | 327.95886    |
| ##                  | TCGA-E2-A15H | TCGA-E2-A15I | TCGA-E2-A15J | TCGA-E2-A15K |
| ## ENSG00000000003  | 1470.388737  | 5224.1234    | 1165.8680527 | 65.45969     |
| ## ENSG00000000005  | 6.420912     | 1249.9527    | 0.9556296    | 0.00000      |
| ## ENSG000000000419 | 1772.171579  | 2130.9701    | 1571.0549825 | 1686.77296   |
| ## ENSG000000000457 | 1566.702410  | 1090.5727    | 2692.9640758 | 2415.36780   |
| ## ENSG000000000460 | 572.531277   | 203.6523     | 819.9301551  | 821.56658    |
| ## ENSG000000000938 | 215.100536   | 262.6819     | 268.5319039  | 206.81468    |
| ##                  | TCGA-E2-A15L | TCGA-E2-A15M | TCGA-E2-A15O | TCGA-E2-A15P |
| ## ENSG00000000003  | 896.759356   | 1951.1005    | 3067.739733  | 12109.0607   |
| ## ENSG00000000005  | 7.606818     | 160.7811     | 9.590017     | 14.8354      |
| ## ENSG000000000419 | 1753.794217  | 2965.5183    | 2292.013951  | 1778.2254    |
| ## ENSG000000000457 | 2190.763668  | 1358.6728    | 973.919457   | 1269.7756    |
| ## ENSG000000000460 | 640.663141   | 1051.5954    | 505.074204   | 455.1771     |
| ## ENSG000000000938 | 407.387380   | 814.0449     | 443.271875   | 298.7311     |
| ##                  | TCGA-E2-A15R | TCGA-E2-A15S | TCGA-E2-A15T | TCGA-E2-A1AZ |
| ## ENSG00000000003  | 317.742312   | 1051.36972   | 2928.19865   | 5174.956769  |
| ## ENSG00000000005  | 7.595434     | 17.33027     | 18.64015     | 8.981181     |
| ## ENSG000000000419 | 2046.969394  | 3372.90383   | 1507.31059   | 2699.743153  |
| ## ENSG000000000457 | 2467.883014  | 1790.79458   | 1843.68063   | 932.246638   |
| ## ENSG000000000460 | 956.391699   | 959.66371    | 732.04966    | 1516.023434  |
| ## ENSG000000000938 | 137.983713   | 168.24804    | 211.81993    | 555.037015   |
| ##                  | TCGA-E2-A1B0 | TCGA-E2-A1B1 | TCGA-E2-A1B4 | TCGA-E2-A1B5 |
| ## ENSG00000000003  | 6979.39394   | 2075.1471    | 673.352003   | 1192.2177    |
| ## ENSG00000000005  | 40.80633     | 140.1120     | 5.196763     | 284.3411     |
| ## ENSG000000000419 | 2301.27555   | 1888.4863    | 1769.126596  | 1966.8794    |
| ## ENSG000000000457 | 1606.56036   | 1422.9979    | 1655.540205  | 1647.8352    |
| ## ENSG000000000460 | 903.78466    | 373.7871     | 302.154647   | 293.2968     |
| ## ENSG000000000938 | 615.11766    | 743.8504     | 239.051097   | 928.0268     |
| ##                  | TCGA-E2-A1B6 | TCGA-E2-A1BC | TCGA-E2-A1BD | TCGA-E2-A1IE |
| ## ENSG00000000003  | 1736.93092   | 1065.8008    | 4730.392826  | 2175.97901   |
| ## ENSG00000000005  | 13.02846     | 111.4431     | 6.107235     | 22.65296     |
| ## ENSG000000000419 | 2456.45737   | 1695.9606    | 1917.671801  | 2165.62337   |
| ## ENSG000000000457 | 849.21887    | 1906.6893    | 2294.284629  | 1381.83081   |
| ## ENSG000000000460 | 349.99188    | 342.4341     | 918.121000   | 629.75240    |
| ## ENSG000000000938 | 1344.89264   | 370.8014     | 196.788684   | 185.10708    |
| ##                  | TCGA-E2-A1IF | TCGA-E2-A1IG | TCGA-E2-A1IH | TCGA-E2-A1II |
| ## ENSG00000000003  | 2613.08864   | 3989.2724    | 2523.80197   | 4205.075967  |
| ## ENSG00000000005  | 28.45071     | 950.7212     | 37.11473     | 1.433712     |
| ## ENSG000000000419 | 1566.97778   | 1702.0510    | 2581.89460   | 3547.002367  |

|                    |              |              |              |             |
|--------------------|--------------|--------------|--------------|-------------|
| ## ENSG00000000457 | 1753.00167   | 882.8125     | 1635.46886   | 1399.302470 |
| ## ENSG00000000460 | 722.21043    | 238.4027     | 635.79154    | 2005.762454 |
| ## ENSG00000000938 | 467.24826    | 940.6071     | 1264.32151   | 931.912505  |
| ## TCGA-E2-A1IJ    | TCGA-E2-A1IK | TCGA-E2-A1IL | TCGA-E2-A1IN |             |
| ## ENSG00000000003 | 2068.79692   | 1886.688213  | 3216.3952    | 4128.681824 |
| ## ENSG00000000005 | 32.17414     | 7.927261     | 183.2500     | 1.397422    |
| ## ENSG00000000419 | 1541.14109   | 1934.251781  | 1373.1854    | 3243.415304 |
| ## ENSG00000000457 | 1434.96645   | 721.380787   | 2024.0800    | 1915.864878 |
| ## ENSG00000000460 | 434.35083    | 233.061485   | 569.9790     | 700.108172  |
| ## ENSG00000000938 | 699.78745    | 394.777618   | 337.9416     | 264.811374  |
| ## TCGA-E2-A1IO    | TCGA-E2-A1IU | TCGA-E2-A1L6 | TCGA-E2-A1L7 |             |
| ## ENSG00000000003 | 4096.45472   | 956.131481   | 2330.21183   | 2076.36760  |
| ## ENSG00000000005 | 12.78145     | 5.624303     | 28.68192     | 19.66956    |
| ## ENSG00000000419 | 1760.18826   | 1889.765751  | 1765.87577   | 2225.11863  |
| ## ENSG00000000457 | 1392.26509   | 1753.657623  | 1951.92063   | 1349.82334  |
| ## ENSG00000000460 | 361.53244    | 452.193948   | 499.22037    | 878.98332   |
| ## ENSG00000000938 | 389.83422    | 375.703429   | 416.27537    | 767.11272   |
| ## TCGA-E2-A1L8    | TCGA-E2-A1L9 | TCGA-E2-A1LA | TCGA-E2-A1LB |             |
| ## ENSG00000000003 | 2711.3198    | 2008.23959   | 3368.815317  | 5924.5759   |
| ## ENSG00000000005 | 381.8288     | 46.35448     | 7.089755     | 161.1034    |
| ## ENSG00000000419 | 2135.2271    | 1769.65036   | 1922.505269  | 1291.8475   |
| ## ENSG00000000457 | 3324.2555    | 2109.81043   | 1356.506483  | 1384.4820   |
| ## ENSG00000000460 | 853.2535     | 475.13340    | 445.472948   | 251.7240    |
| ## ENSG00000000938 | 391.8770     | 699.40727    | 1149.721959  | 173.1861    |
| ## TCGA-E2-A1LE    | TCGA-E2-A1LG | TCGA-E2-A1LH | TCGA-E2-A1LI |             |
| ## ENSG00000000003 | 2854.2687    | 2198.2657    | 5336.7961    | 3739.4621   |
| ## ENSG00000000005 | 138.3030     | 0.0000       | 130.1949     | 289.4445    |
| ## ENSG00000000419 | 1709.7298    | 2679.1910    | 1542.0331    | 3255.4466   |
| ## ENSG00000000457 | 4558.5536    | 1365.8278    | 1662.6724    | 2909.7212   |
| ## ENSG00000000460 | 1021.4819    | 784.3454     | 318.9178     | 2815.6518   |
| ## ENSG00000000938 | 572.8139     | 351.5127     | 484.9461     | 537.0803    |
| ## TCGA-E2-A1LK    | TCGA-E2-A1LL | TCGA-E2-A1LS | TCGA-E2-A2P5 |             |
| ## ENSG00000000003 | 4029.8614    | 4174.88495   | 9583.397959  | 2074.999355 |
| ## ENSG00000000005 | 0.0000       | 36.00517     | 8.591123     | 6.397737    |
| ## ENSG00000000419 | 3092.3589    | 2916.41860   | 3215.943795  | 951.130229  |
| ## ENSG00000000457 | 1154.3874    | 780.11197    | 4805.301591  | 1128.134285 |
| ## ENSG00000000460 | 650.6547     | 704.67257    | 574.173402   | 491.559457  |
| ## ENSG00000000938 | 529.9688     | 253.75071    | 133.162410   | 253.776900  |
| ## TCGA-E2-A2P6    | TCGA-E2-A3DX | TCGA-E2-A56Z | TCGA-E2-A570 |             |
| ## ENSG00000000003 | 1964.59225   | 3436.9347    | 1088.55849   | 5551.640297 |
| ## ENSG00000000005 | 11.30075     | 24.8933      | 13.14396     | 1.268367    |
| ## ENSG00000000419 | 1617.74610   | 1323.4937    | 2751.86631   | 2762.502300 |
| ## ENSG00000000457 | 2227.11741   | 1579.0649    | 1265.40444   | 2699.083974 |
| ## ENSG00000000460 | 742.37247    | 310.3365     | 298.72626    | 620.231233  |
| ## ENSG00000000938 | 428.55928    | 1184.0912    | 222.25234    | 442.659919  |
| ## TCGA-E2-A573    | TCGA-E2-A574 | TCGA-E2-A576 | TCGA-E2-A9RU |             |
| ## ENSG00000000003 | 2062.3328    | 7345.509310  | 4836.67599   | 1242.231453 |
| ## ENSG00000000005 | 0.0000       | 6.397134     | 37.80841     | 2.116238    |
| ## ENSG00000000419 | 5258.3853    | 6200.422294  | 2236.29750   | 4230.358900 |
| ## ENSG00000000457 | 1589.0106    | 745.266131   | 688.95327    | 702.590873  |
| ## ENSG00000000460 | 1834.6874    | 727.674012   | 386.48598    | 442.293652  |
| ## ENSG00000000938 | 830.5679     | 70.368476    | 264.65888    | 385.155238  |
| ## TCGA-E9-A1N3    | TCGA-E9-A1N4 | TCGA-E9-A1N5 | TCGA-E9-A1N6 |             |
| ## ENSG00000000003 | 1699.68328   | 3161.44315   | 3444.23026   | 3577.4583   |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000005 | 18.57983     | 88.67047     | 65.97494     | 888.0297     |
| ## ENSG00000000419 | 1412.06744   | 1885.27052   | 1189.24061   | 1756.4790    |
| ## ENSG00000000457 | 1502.73703   | 2319.75580   | 1292.43218   | 1021.6373    |
| ## ENSG00000000460 | 266.06323    | 476.77427    | 424.60795    | 286.7956     |
| ## ENSG00000000938 | 194.71667    | 299.43334    | 473.66624    | 959.4407     |
| ##                 | TCGA-E9-A1N8 | TCGA-E9-A1N9 | TCGA-E9-A1NA | TCGA-E9-A1NC |
| ## ENSG00000000003 | 3889.3288    | 4124.3789    | 3620.7869    | 4882.11507   |
| ## ENSG00000000005 | 0.0000       | 452.7799     | 1097.1772    | 13.04332     |
| ## ENSG00000000419 | 2513.7014    | 1516.8602    | 1383.4862    | 3027.35482   |
| ## ENSG00000000457 | 1310.1790    | 1625.0717    | 968.3381     | 661.29638    |
| ## ENSG00000000460 | 944.1530     | 396.7757     | 264.8359     | 504.77653    |
| ## ENSG00000000938 | 105.4446     | 546.7531     | 957.0902     | 897.38049    |
| ##                 | TCGA-E9-A1ND | TCGA-E9-A1NE | TCGA-E9-A1NF | TCGA-E9-A1NG |
| ## ENSG00000000003 | 3145.6476    | 1018.28862   | 3971.6971    | 4260.249     |
| ## ENSG00000000005 | 1135.9644    | 47.46812     | 2821.2478    | 1609.123     |
| ## ENSG00000000419 | 1615.0168    | 2897.50582   | 1344.1276    | 1936.930     |
| ## ENSG00000000457 | 719.2277     | 1440.29968   | 965.8093     | 1132.992     |
| ## ENSG00000000460 | 211.6139     | 698.36653    | 377.0272     | 339.025      |
| ## ENSG00000000938 | 6415.9267    | 674.95759    | 3073.0296    | 1076.903     |
| ##                 | TCGA-E9-A1NH | TCGA-E9-A1NI | TCGA-E9-A1QZ | TCGA-E9-A1R0 |
| ## ENSG00000000003 | 4118.27414   | 593.9489     | 2310.6391    | 2442.9609    |
| ## ENSG00000000005 | 20.64873     | 0.0000       | 628.6521     | 263.9001     |
| ## ENSG00000000419 | 1674.84129   | 2861.9987    | 2607.4603    | 1278.0305    |
| ## ENSG00000000457 | 2301.18605   | 1349.5166    | 1854.7521    | 1103.8564    |
| ## ENSG00000000460 | 651.58209    | 579.1339     | 888.1804     | 356.6421     |
| ## ENSG00000000938 | 598.81312    | 274.7519     | 718.4596     | 421.4862     |
| ##                 | TCGA-E9-A1R2 | TCGA-E9-A1R3 | TCGA-E9-A1R4 | TCGA-E9-A1R5 |
| ## ENSG00000000003 | 2457.27256   | 1831.246560  | 713.5598     | 1322.90916   |
| ## ENSG00000000005 | 39.41546     | 2.534597     | 15.0540      | 29.63038     |
| ## ENSG00000000419 | 2668.98991   | 2550.438547  | 1949.9953    | 2428.81939   |
| ## ENSG00000000457 | 1425.71360   | 1754.574991  | 1289.6263    | 2889.83319   |
| ## ENSG00000000460 | 549.56417    | 420.109505   | 550.9765     | 691.95644    |
| ## ENSG00000000938 | 336.72067    | 575.987240   | 715.5670     | 235.30005    |
| ##                 | TCGA-E9-A1R6 | TCGA-E9-A1R7 | TCGA-E9-A1RA | TCGA-E9-A1RB |
| ## ENSG00000000003 | 1089.8360    | 3392.24190   | 2266.30664   | 4039.6555    |
| ## ENSG00000000005 | 0.0000       | 20.41177     | 16.66402     | 725.6196     |
| ## ENSG00000000419 | 2149.2014    | 6570.64620   | 2008.01434   | 1611.8665    |
| ## ENSG00000000457 | 881.6195     | 3227.97574   | 1739.00945   | 1144.3693    |
| ## ENSG00000000460 | 398.1507     | 1274.27769   | 580.86011    | 302.0751     |
| ## ENSG00000000938 | 193.9969     | 83.59106     | 410.64905    | 902.2297     |
| ##                 | TCGA-E9-A1RC | TCGA-E9-A1RD | TCGA-E9-A1RE | TCGA-E9-A1RF |
| ## ENSG00000000003 | 5466.74903   | 595.166603   | 1270.81191   | 592.22819    |
| ## ENSG00000000005 | 16.69825     | 3.220599     | 39.21271     | 36.02575     |
| ## ENSG00000000419 | 2506.66370   | 1770.685056  | 3301.87024   | 3269.55651   |
| ## ENSG00000000457 | 2662.72809   | 1940.732657  | 1155.57456   | 2230.96049   |
| ## ENSG00000000460 | 834.27009    | 716.261107   | 568.98443    | 760.93414    |
| ## ENSG00000000938 | 177.90055    | 327.856927   | 179.25810    | 794.32386    |
| ##                 | TCGA-E9-A1RG | TCGA-E9-A1RH | TCGA-E9-A1RI | TCGA-E9-A226 |
| ## ENSG00000000003 | 851.244043   | 4153.5786    | 8141.2984    | 2815.9471452 |
| ## ENSG00000000005 | 8.119975     | 895.1177     | 3785.7521    | 0.8758778    |
| ## ENSG00000000419 | 4315.766701  | 1868.1223    | 2136.4604    | 1562.5660053 |
| ## ENSG00000000457 | 1120.556547  | 1208.9901    | 1170.7073    | 2304.4345067 |
| ## ENSG00000000460 | 580.578211   | 249.9355     | 268.2647     | 1579.2076836 |
| ## ENSG00000000938 | 548.098311   | 666.1071     | 402.3971     | 168.1685387  |

|                     |              |              |              |              |
|---------------------|--------------|--------------|--------------|--------------|
| ##                  | TCGA-E9-A227 | TCGA-E9-A228 | TCGA-E9-A229 | TCGA-E9-A22A |
| ## ENSG000000000003 | 4574.84481   | 2339.550687  | 2411.559091  | 1280.52576   |
| ## ENSG000000000005 | 22.96444     | 6.673837     | 3.301696     | 12.25383     |
| ## ENSG00000000419  | 1810.09008   | 1603.945526  | 2163.931857  | 1815.86517   |
| ## ENSG00000000457  | 1529.59583   | 1401.505800  | 1041.355062  | 1257.54982   |
| ## ENSG00000000460  | 524.90152    | 674.799089   | 462.237504   | 477.89956    |
| ## ENSG00000000938  | 852.96497    | 656.260652   | 402.146628   | 520.78799    |
| ##                  | TCGA-E9-A22B | TCGA-E9-A22D | TCGA-E9-A22E | TCGA-E9-A22G |
| ## ENSG000000000003 | 7304.40642   | 437.06255    | 2825.65231   | 5751.725125  |
| ## ENSG000000000005 | 90.13664     | 3.46875      | 8.97349      | 3.399867     |
| ## ENSG00000000419  | 2811.76248   | 2983.81911   | 2911.39899   | 1984.672405  |
| ## ENSG00000000457  | 1304.47752   | 953.21262    | 1312.12365   | 2356.107883  |
| ## ENSG00000000460  | 260.39474    | 436.36880    | 370.90425    | 1731.382308  |
| ## ENSG00000000938  | 494.08234    | 1020.50637   | 396.82767    | 260.089831   |
| ##                  | TCGA-E9-A22H | TCGA-E9-A243 | TCGA-E9-A244 | TCGA-E9-A245 |
| ## ENSG000000000003 | 637.358724   | 6347.140715  | 3548.2202    | 527.8386     |
| ## ENSG000000000005 | 1.272173     | 2.857785     | 11.1755      | 18.6097      |
| ## ENSG00000000419  | 1654.461118  | 2471.984114  | 2814.3626    | 1681.6398    |
| ## ENSG00000000457  | 1828.748833  | 1595.215645  | 993.6879     | 1460.0152    |
| ## ENSG00000000460  | 1022.191087  | 1037.375993  | 696.6060     | 302.8305     |
| ## ENSG00000000938  | 189.553792   | 1271.714371  | 379.9669     | 348.5089     |
| ##                  | TCGA-E9-A247 | TCGA-E9-A248 | TCGA-E9-A249 | TCGA-E9-A24A |
| ## ENSG000000000003 | 2883.73525   | 2144.821044  | 4326.981859  | 979.311432   |
| ## ENSG000000000005 | 15.33902     | 4.161469     | 5.498071     | 4.554937     |
| ## ENSG00000000419  | 3501.89765   | 1995.008165  | 2697.491073  | 2004.931389  |
| ## ENSG00000000457  | 1177.26958   | 1352.477375  | 2207.475497  | 1990.507422  |
| ## ENSG00000000460  | 785.35768    | 1035.373449  | 1081.745465  | 583.791078   |
| ## ENSG00000000938  | 202.47503    | 1002.081698  | 304.455680   | 526.854367   |
| ##                  | TCGA-E9-A295 | TCGA-E9-A2JS | TCGA-E9-A2JT | TCGA-E9-A3HO |
| ## ENSG000000000003 | 4339.78403   | 1194.310288  | 954.0176     | 1850.7065    |
| ## ENSG000000000005 | 23.30433     | 6.338265     | 283.0804     | 23.7415      |
| ## ENSG00000000419  | 1991.22549   | 1911.439740  | 1650.6894    | 1985.2417    |
| ## ENSG00000000457  | 1424.15347   | 1152.658830  | 1444.8128    | 1722.9546    |
| ## ENSG00000000460  | 491.98029    | 491.668299   | 461.3842     | 761.9891     |
| ## ENSG00000000938  | 374.16396    | 271.639944   | 1417.2400    | 367.4280     |
| ##                  | TCGA-E9-A3Q9 | TCGA-E9-A3QA | TCGA-E9-A3X8 | TCGA-E9-A54X |
| ## ENSG000000000003 | 815.51084    | 2116.980612  | 3195.43413   | 1717.127747  |
| ## ENSG000000000005 | 58.76627     | 2.594339     | 55.04097     | 1.406329     |
| ## ENSG00000000419  | 1673.29216   | 2161.084375  | 1802.59179   | 1764.942934  |
| ## ENSG00000000457  | 1309.35369   | 611.399221   | 986.15072    | 831.140457   |
| ## ENSG00000000460  | 273.21160    | 352.830102   | 229.33738    | 234.856948   |
| ## ENSG00000000938  | 644.36698    | 1841.115900  | 379.17113    | 75.941768    |
| ##                  | TCGA-E9-A54Y | TCGA-E9-A5FK | TCGA-E9-A5FL | TCGA-E9-A5U0 |
| ## ENSG000000000003 | 2816.0422    | 5385.1453    | 2184.7230    | 1512.90695   |
| ## ENSG000000000005 | 0.0000       | 183.0265     | 187.1000     | 5.88222      |
| ## ENSG00000000419  | 1130.3523    | 1882.3456    | 1838.8715    | 1690.54999   |
| ## ENSG00000000457  | 800.2107     | 870.4918     | 549.9605     | 992.91871    |
| ## ENSG00000000460  | 365.1235     | 255.9395     | 421.4474     | 569.39888    |
| ## ENSG00000000938  | 225.1959     | 1050.5423    | 387.4293     | 116.46795    |
| ##                  | TCGA-E9-A5UP | TCGA-E9-A6HE | TCGA-EW-A1IW | TCGA-EW-A1IX |
| ## ENSG000000000003 | 4398.012222  | 2613.26840   | 1666.45284   | 1299.2745    |
| ## ENSG000000000005 | 2.454933     | 60.77368     | 32.58238     | 12.9006      |
| ## ENSG00000000419  | 2772.846667  | 1952.78459   | 1840.22552   | 1318.6254    |
| ## ENSG00000000457  | 2242.581169  | 872.61837    | 1868.05630   | 1433.8093    |

|                     |              |              |              |             |
|---------------------|--------------|--------------|--------------|-------------|
| ## ENSG00000000460  | 424.703385   | 728.13753    | 928.59775    | 293.0279    |
| ## ENSG00000000938  | 461.527378   | 452.93595    | 335.32697    | 484.6939    |
| ## TCGA-EW-A1IY     | TCGA-EW-A1IZ | TCGA-EW-A1J1 | TCGA-EW-A1J2 |             |
| ## ENSG00000000003  | 2870.881145  | 1301.6111    | 4121.490413  | 5169.3688   |
| ## ENSG00000000005  | 5.165778     | 14.8821      | 1.524502     | 43.7081     |
| ## ENSG000000000419 | 2203.204333  | 1746.9292    | 2247.115542  | 1468.3559   |
| ## ENSG000000000457 | 2289.731115  | 1602.6873    | 1382.723064  | 2180.6798   |
| ## ENSG000000000460 | 1123.556723  | 357.1703     | 434.482992   | 522.7253    |
| ## ENSG000000000938 | 501.726192   | 950.1646     | 264.501049   | 845.8108    |
| ## TCGA-EW-A1J3     | TCGA-EW-A1J5 | TCGA-EW-A1J6 | TCGA-EW-A10V |             |
| ## ENSG000000000003 | 8337.40988   | 1585.03760   | 2849.8316    | 3430.86096  |
| ## ENSG000000000005 | 24.20996     | 23.44197     | 72.9242      | 12.29699    |
| ## ENSG000000000419 | 2779.97145   | 2338.18592   | 4227.2888    | 1651.89602  |
| ## ENSG000000000457 | 2585.45693   | 2525.72165   | 539.4076     | 1147.71932  |
| ## ENSG000000000460 | 1437.57082   | 1072.92079   | 200.2522     | 557.46367   |
| ## ENSG000000000938 | 335.60016    | 521.73403    | 572.9759     | 1088.96702  |
| ## TCGA-EW-A10W     | TCGA-EW-A10X | TCGA-EW-A10Y | TCGA-EW-A10Z |             |
| ## ENSG000000000003 | 6079.9591    | 1100.874763  | 2477.559970  | 1658.82446  |
| ## ENSG000000000005 | 129.0916     | 2.430187     | 4.235145     | 17.29944    |
| ## ENSG000000000419 | 2446.4115    | 1391.282124  | 3671.870930  | 3619.42811  |
| ## ENSG000000000457 | 1044.1229    | 1821.425243  | 1190.075815  | 1096.59253  |
| ## ENSG000000000460 | 1099.8094    | 340.226196   | 640.918647   | 771.74742   |
| ## ENSG000000000938 | 389.8059     | 40.098087    | 344.458480   | 725.61557   |
| ## TCGA-EW-A1P0     | TCGA-EW-A1P1 | TCGA-EW-A1P3 | TCGA-EW-A1P4 |             |
| ## ENSG000000000003 | 1915.84350   | 2627.4607    | 1960.21949   | 2804.3706   |
| ## ENSG000000000005 | 27.81843     | 341.2990     | 51.58472     | 0.0000      |
| ## ENSG000000000419 | 2148.06695   | 1831.0964    | 1755.31351   | 1911.5420   |
| ## ENSG000000000457 | 4449.74005   | 826.1603     | 1503.12153   | 591.3403    |
| ## ENSG000000000460 | 584.18713    | 488.9244     | 626.18123    | 1071.6060   |
| ## ENSG000000000938 | 283.02234    | 1416.6618    | 510.11560    | 826.1839    |
| ## TCGA-EW-A1P5     | TCGA-EW-A1P6 | TCGA-EW-A1P7 | TCGA-EW-A1P8 |             |
| ## ENSG000000000003 | 841.738392   | 3891.918829  | 1872.1832    | 5229.92643  |
| ## ENSG000000000005 | 1.043046     | 4.368035     | 98.8646      | 16.89638    |
| ## ENSG000000000419 | 1828.460224  | 1757.405921  | 1667.1693    | 1896.37013  |
| ## ENSG000000000457 | 617.483430   | 1132.776973  | 987.6053     | 790.15422   |
| ## ENSG000000000460 | 358.807939   | 387.299068   | 320.5294     | 1038.63039  |
| ## ENSG000000000938 | 427.648997   | 183.457453   | 1408.0400    | 1048.56944  |
| ## TCGA-EW-A1PA     | TCGA-EW-A1PB | TCGA-EW-A1PC | TCGA-EW-A1PD |             |
| ## ENSG000000000003 | 406.60257    | 1898.6285405 | 2914.207390  | 4783.0538   |
| ## ENSG000000000005 | 20.55856     | 0.9371316    | 7.152227     | 126.0267    |
| ## ENSG000000000419 | 5040.27284   | 2825.4516533 | 5216.574273  | 1697.9543   |
| ## ENSG000000000457 | 1160.41632   | 1483.4792594 | 1318.610573  | 1136.7949   |
| ## ENSG000000000460 | 576.78173    | 652.2435657  | 1191.170892  | 577.3385    |
| ## ENSG000000000938 | 520.81677    | 1443.1826023 | 152.147374   | 598.6268    |
| ## TCGA-EW-A1PE     | TCGA-EW-A1PF | TCGA-EW-A1PG | TCGA-EW-A1PH |             |
| ## ENSG000000000003 | 1712.52310   | 781.4918     | 3794.09902   | 5279.08149  |
| ## ENSG000000000005 | 17.62185     | 39.1636      | 10.14853     | 26.02364    |
| ## ENSG000000000419 | 1623.61288   | 2503.8001    | 2223.97703   | 3821.75759  |
| ## ENSG000000000457 | 1549.92152   | 1340.4632    | 1370.05104   | 1036.29857  |
| ## ENSG000000000460 | 564.70009    | 346.2418     | 398.69210    | 1266.79367  |
| ## ENSG000000000938 | 587.92889    | 429.9095     | 482.77989    | 212.83621   |
| ## TCGA-EW-A2FR     | TCGA-EW-A2FS | TCGA-EW-A2FV | TCGA-EW-A2FW |             |
| ## ENSG000000000003 | 2862.78667   | 1849.84820   | 1506.194701  | 1952.766340 |
| ## ENSG000000000005 | 27.61023     | 34.49818     | 7.471204     | 4.085285    |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000419 | 1924.03877   | 1561.74181   | 3468.879959  | 17943.594052 |
| ## ENSG00000000457 | 1104.40930   | 1203.70667   | 1704.181604  | 1680.073551  |
| ## ENSG00000000460 | 386.54325    | 347.77892    | 666.431386   | 1169.412897  |
| ## ENSG00000000938 | 456.75213    | 557.56513    | 461.720399   | 246.138435   |
| ## TCGA-EW-A3E8    | TCGA-EW-A3U0 | TCGA-EW-A423 | TCGA-EW-A424 |              |
| ## ENSG00000000003 | 1881.7746    | 3057.0722    | 3845.737176  | 2949.24027   |
| ## ENSG00000000005 | 255.3943     | 141.2343     | 5.480861     | 12.48972     |
| ## ENSG00000000419 | 1702.6285    | 2132.5383    | 2041.620567  | 2124.08581   |
| ## ENSG00000000457 | 1158.5276    | 1191.9777    | 1883.589087  | 1467.95895   |
| ## ENSG00000000460 | 477.4762     | 1027.7051    | 635.779828   | 549.54788    |
| ## ENSG00000000938 | 715.8442     | 2376.9438    | 575.490361   | 316.40635    |
| ## TCGA-EW-A6S9    | TCGA-EW-A6SA | TCGA-EW-A6SB | TCGA-EW-A6SC |              |
| ## ENSG00000000003 | 1166.90238   | 1849.29498   | 4530.43814   | 1728.79729   |
| ## ENSG00000000005 | 3.94557      | 2.61446      | 39.89065     | 24.77404     |
| ## ENSG00000000419 | 1981.66262   | 1691.55587   | 3818.10510   | 1631.85539   |
| ## ENSG00000000457 | 981.46058    | 1056.24200   | 1466.45629   | 1092.21212   |
| ## ENSG00000000460 | 426.12158    | 502.84788    | 1080.84667   | 541.79753    |
| ## ENSG00000000938 | 221.93832    | 66.23300     | 795.91345    | 350.06799    |
| ## TCGA-EW-A6SD    | TCGA-GI-A2C8 | TCGA-GI-A2C9 | TCGA-GM-A2D9 |              |
| ## ENSG00000000003 | 2774.408197  | 7375.225900  | 3436.713414  | 1244.54167   |
| ## ENSG00000000005 | 1.094441     | 4.316026     | 1.750745     | 15.20051     |
| ## ENSG00000000419 | 2856.491279  | 2307.347710  | 2360.004932  | 1438.34816   |
| ## ENSG00000000457 | 1677.778211  | 2299.578862  | 1112.598765  | 2511.88410   |
| ## ENSG00000000460 | 549.409434   | 476.489314   | 512.093058   | 429.41438    |
| ## ENSG00000000938 | 525.331730   | 406.569686   | 365.905809   | 647.92169    |
| ## TCGA-GM-A2DA    | TCGA-GM-A2DB | TCGA-GM-A2DC | TCGA-GM-A2DD |              |
| ## ENSG00000000003 | 1757.94838   | 11915.290582 | 2151.7941    | 3863.97013   |
| ## ENSG00000000005 | 24.52951     | 6.261319     | 7.8590       | 31.21349     |
| ## ENSG00000000419 | 1384.55469   | 1682.207779  | 2426.8591    | 2543.89955   |
| ## ENSG00000000457 | 1362.75068   | 496.731329   | 2525.8825    | 779.03672    |
| ## ENSG00000000460 | 307.98165    | 279.672261   | 358.3704     | 273.11805    |
| ## ENSG00000000938 | 735.88537    | 870.323379   | 278.2086     | 1559.37401   |
| ## TCGA-GM-A2DF    | TCGA-GM-A2DH | TCGA-GM-A2DI | TCGA-GM-A2DK |              |
| ## ENSG00000000003 | 3924.7906    | 2119.291785  | 891.24006    | 2246.1367    |
| ## ENSG00000000005 | 100.6013     | 4.411253     | 10.43607     | 362.3203     |
| ## ENSG00000000419 | 3162.9037    | 2175.377711  | 1865.96865   | 12556.7008   |
| ## ENSG00000000457 | 842.3679     | 1468.947116  | 1120.83352   | 1074.5099    |
| ## ENSG00000000460 | 498.9823     | 1328.417212  | 434.14036    | 202.9492     |
| ## ENSG00000000938 | 1152.2198    | 780.161531   | 1446.43878   | 1293.6452    |
| ## TCGA-GM-A2DL    | TCGA-GM-A2DM | TCGA-GM-A2DN | TCGA-GM-A2DO |              |
| ## ENSG00000000003 | 1595.7926    | 5385.374461  | 6319.857482  | 700.89924    |
| ## ENSG00000000005 | 151.7394     | 1.056785     | 3.980386     | 15.75054     |
| ## ENSG00000000419 | 1940.9998    | 1539.735202  | 1724.502128  | 1582.92975   |
| ## ENSG00000000457 | 1119.0780    | 863.393040   | 2507.643026  | 1008.03487   |
| ## ENSG00000000460 | 414.7543     | 211.356925   | 747.317425   | 496.14216    |
| ## ENSG00000000938 | 763.7550     | 365.647481   | 1266.757767  | 2236.57736   |
| ## TCGA-GM-A3NW    | TCGA-GM-A3NY | TCGA-GM-A3XG | TCGA-GM-A3XL |              |
| ## ENSG00000000003 | 4274.78340   | 2752.7319    | 3545.68305   | 1671.037672  |
| ## ENSG00000000005 | 19.35213     | 112.9887     | 12.15877     | 4.654701     |
| ## ENSG00000000419 | 1796.69238   | 1386.8447    | 2172.67785   | 4093.344092  |
| ## ENSG00000000457 | 1771.22905   | 1623.7565    | 1063.42433   | 970.039696   |
| ## ENSG00000000460 | 784.27048    | 397.2827     | 238.49886    | 1364.758344  |
| ## ENSG00000000938 | 480.74762    | 440.1091     | 622.90290    | 1147.849276  |
| ## TCGA-GM-A3XN    | TCGA-GM-A4E0 | TCGA-GM-A5PV | TCGA-GM-A5PX |              |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000003 | 2042.9414    | 3273.0318    | 6571.26128   | 3393.26800   |
| ## ENSG00000000005 | 395.7126     | 917.3077     | 91.93711     | 56.00847     |
| ## ENSG00000000419 | 1577.7001    | 1719.4639    | 2194.15771   | 2432.66987   |
| ## ENSG00000000457 | 1257.5249    | 948.5351     | 1445.20658   | 2356.58289   |
| ## ENSG00000000460 | 497.8597     | 271.2889     | 402.50517    | 505.13301    |
| ## ENSG00000000938 | 1075.5486    | 3126.6529    | 406.98991    | 618.20672    |
|                    | TCGA-HN-A2NL | TCGA-HN-A2OB | TCGA-JL-A3YW | TCGA-JL-A3YX |
| ## ENSG00000000003 | 5030.7723091 | 4852.89492   | 2533.83891   | 2858.13594   |
| ## ENSG00000000005 | 0.8986732    | 51.21789     | 23.61893     | 10.91533     |
| ## ENSG00000000419 | 2770.6093299 | 1202.45633   | 4291.08736   | 1779.19802   |
| ## ENSG00000000457 | 1299.4813789 | 1353.78191   | 758.64006    | 1998.34417   |
| ## ENSG00000000460 | 912.1532500  | 344.55670    | 342.94688    | 870.70710    |
| ## ENSG00000000938 | 268.7032727  | 341.06457    | 1521.05915   | 211.58938    |
|                    | TCGA-LD-A66U | TCGA-LD-A74U | TCGA-LD-A7W5 | TCGA-LD-A7W6 |
| ## ENSG00000000003 | 2522.55260   | 1596.73478   | 5252.09349   | 3483.46051   |
| ## ENSG00000000005 | 18.12613     | 36.26715     | 31.58545     | 76.50767     |
| ## ENSG00000000419 | 2332.22827   | 1370.31014   | 1691.03642   | 1544.32157   |
| ## ENSG00000000457 | 1523.60163   | 1636.92270   | 1239.12152   | 1844.68503   |
| ## ENSG00000000460 | 466.24425    | 498.91836    | 439.76666    | 722.57248    |
| ## ENSG00000000938 | 392.73274    | 1227.20193   | 753.19151    | 274.86090    |
|                    | TCGA-LD-A9QF | TCGA-LL-A440 | TCGA-LL-A441 | TCGA-LL-A442 |
| ## ENSG00000000003 | 1630.33301   | 2337.04513   | 3840.51808   | 1534.513439  |
| ## ENSG00000000005 | 10.57799     | 92.92262     | 50.49405     | 6.526758     |
| ## ENSG00000000419 | 1818.09237   | 1329.69809   | 3217.51061   | 1817.339640  |
| ## ENSG00000000457 | 1134.48964   | 1116.71614   | 1918.77392   | 1137.106367  |
| ## ENSG00000000460 | 405.93044    | 335.50824    | 721.02534    | 398.857463   |
| ## ENSG00000000938 | 4602.74875   | 4402.72330   | 1018.04917   | 1568.597623  |
|                    | TCGA-LL-A50Y | TCGA-LL-A5YL | TCGA-LL-A5YM | TCGA-LL-A5YN |
| ## ENSG00000000003 | 720.23127    | 4272.57852   | 1519.9617    | 2680.24368   |
| ## ENSG00000000005 | 12.89005     | 23.89726     | 198.2559     | 11.89897     |
| ## ENSG00000000419 | 2769.74844   | 2560.78006   | 1969.7088    | 2309.88814   |
| ## ENSG00000000457 | 1616.08941   | 2091.63912   | 695.7313     | 1079.83180   |
| ## ENSG00000000460 | 407.64768    | 677.92753    | 271.6840     | 359.94393    |
| ## ENSG00000000938 | 752.45638    | 217.59084    | 312.0694     | 758.55953    |
|                    | TCGA-LL-A5Y0 | TCGA-LL-A5YP | TCGA-LL-A6FP | TCGA-LL-A6FQ |
| ## ENSG00000000003 | 1305.194740  | 2794.842430  | 2281.55600   | 576.350267   |
| ## ENSG00000000005 | 6.042568     | 8.506042     | 10.14526     | 4.737125     |
| ## ENSG00000000419 | 2636.070395  | 3067.035780  | 3811.23559   | 3710.748296  |
| ## ENSG00000000457 | 895.810742   | 874.907196   | 3050.34117   | 1724.313676  |
| ## ENSG00000000460 | 403.341430   | 767.974094   | 638.02406    | 295.280822   |
| ## ENSG00000000938 | 2059.005128  | 596.638101   | 130.76111    | 318.966449   |
|                    | TCGA-LL-A6FR | TCGA-LL-A73Y | TCGA-LL-A73Z | TCGA-LL-A740 |
| ## ENSG00000000003 | 4220.552945  | 6136.9402    | 3430.56098   | 1655.048952  |
| ## ENSG00000000005 | 3.991067     | 13.9973      | 58.86343     | 1.137491     |
| ## ENSG00000000419 | 4102.816479  | 1895.7590    | 2528.77316   | 2347.780781  |
| ## ENSG00000000457 | 1263.172583  | 2191.4519    | 880.59699    | 886.105247   |
| ## ENSG00000000460 | 518.838660   | 635.1274     | 590.98889    | 311.672449   |
| ## ENSG00000000938 | 365.182595   | 1228.2629    | 563.91171    | 834.918166   |
|                    | TCGA-LL-A7SZ | TCGA-LL-A7T0 | TCGA-LL-A8F5 | TCGA-LL-A9Q3 |
| ## ENSG00000000003 | 4923.893289  | 1726.751395  | 2270.6848    | 1123.478031  |
| ## ENSG00000000005 | 6.612211     | 3.936363     | 0.0000       | 4.927535     |
| ## ENSG00000000419 | 2838.842684  | 2234.542269  | 3585.1379    | 1811.690450  |
| ## ENSG00000000457 | 819.914191   | 1003.772658  | 763.2308     | 1131.690589  |
| ## ENSG00000000460 | 390.120462   | 683.615104   | 655.0333     | 229.951644   |

|                     |              |              |              |              |
|---------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000000938  | 1741.215622  | 307.036342   | 416.7065     | 297.294625   |
| ##                  | TCGA-LQ-A4E4 | TCGA-MS-A51U | TCGA-OK-A5Q2 | TCGA-OL-A5D6 |
| ## ENSG00000000003  | 1709.6612    | 2868.81944   | 1054.7413    | 1995.956288  |
| ## ENSG00000000005  | 127.1220     | 60.42385     | 102.5169     | 2.817158     |
| ## ENSG000000000419 | 1932.7733    | 2332.88614   | 1480.5808    | 1602.962777  |
| ## ENSG000000000457 | 1752.4676    | 1356.90956   | 2142.9978    | 1273.355317  |
| ## ENSG000000000460 | 961.1980     | 307.37351    | 936.4526     | 328.198881   |
| ## ENSG000000000938 | 211.4376     | 461.06027    | 554.9714     | 767.675495   |
| ##                  | TCGA-OL-A5D7 | TCGA-OL-A5D8 | TCGA-OL-A5DA | TCGA-OL-A5RU |
| ## ENSG00000000003  | 2881.750003  | 2480.8701    | 7081.3545    | 6439.611126  |
| ## ENSG00000000005  | 7.182827     | 0.0000       | 0.0000       | 9.113195     |
| ## ENSG000000000419 | 2692.123382  | 1327.9160    | 1298.9467    | 1636.957578  |
| ## ENSG000000000457 | 1719.568671  | 1599.3313    | 1593.3599    | 2449.171046  |
| ## ENSG000000000460 | 2162.030785  | 384.6919     | 456.5059     | 448.824833   |
| ## ENSG000000000938 | 995.539757   | 346.5592     | 232.6636     | 625.392979   |
| ##                  | TCGA-OL-A5RV | TCGA-OL-A5RW | TCGA-OL-A5RX | TCGA-OL-A5RY |
| ## ENSG00000000003  | 4142.764748  | 1766.2066    | 4606.33615   | 3089.19772   |
| ## ENSG00000000005  | 9.589733     | 0.0000       | 50.96464     | 68.92454     |
| ## ENSG000000000419 | 1553.536780  | 2241.6676    | 1775.08764   | 2518.50256   |
| ## ENSG000000000457 | 2274.897823  | 1070.5166    | 3047.03498   | 1105.54956   |
| ## ENSG000000000460 | 468.831401   | 1102.6029    | 504.22465    | 489.36421    |
| ## ENSG000000000938 | 517.845593   | 274.1923     | 416.39197    | 1410.19601   |
| ##                  | TCGA-OL-A5RZ | TCGA-OL-A5S0 | TCGA-OL-A66H | TCGA-OL-A66I |
| ## ENSG00000000003  | 3833.03528   | 5021.55255   | 1511.71347   | 2609.14244   |
| ## ENSG00000000005  | 17.50971     | 8.75089      | 1.16107      | 64.25913     |
| ## ENSG000000000419 | 1550.40547   | 3759.96587   | 2338.39549   | 3931.99428   |
| ## ENSG000000000457 | 1220.90451   | 802.16494    | 747.72924    | 1479.06801   |
| ## ENSG000000000460 | 334.27633    | 758.41049    | 249.63010    | 1616.44961   |
| ## ENSG000000000938 | 272.19644    | 570.26635    | 703.60857    | 1413.70096   |
| ##                  | TCGA-OL-A66J | TCGA-OL-A66K | TCGA-OL-A66L | TCGA-OL-A66N |
| ## ENSG00000000003  | 1512.0110    | 4970.200793  | 2477.9756    | 6947.225749  |
| ## ENSG00000000005  | 596.7530     | 3.317153     | 201.5646     | 6.048429     |
| ## ENSG000000000419 | 2194.0144    | 2194.849516  | 2001.5503    | 2208.886334  |
| ## ENSG000000000457 | 1206.5303    | 2303.209845  | 833.0396     | 2674.615381  |
| ## ENSG000000000460 | 326.7933     | 812.702466   | 338.2902     | 685.891868   |
| ## ENSG000000000938 | 806.3269     | 232.200704   | 811.8964     | 499.600250   |
| ##                  | TCGA-OL-A66O | TCGA-OL-A66P | TCGA-OL-A6V0 | TCGA-OL-A6VQ |
| ## ENSG00000000003  | 3160.116454  | 1369.97010   | 4177.791983  | 3834.83499   |
| ## ENSG00000000005  | 6.810596     | 24.18888     | 5.584039     | 22.07099     |
| ## ENSG000000000419 | 2140.797281  | 3494.19341   | 1910.672074  | 1509.10413   |
| ## ENSG000000000457 | 992.076789   | 800.43197    | 850.635302   | 2105.02094   |
| ## ENSG000000000460 | 539.172168   | 237.49080    | 1140.074667  | 612.47005    |
| ## ENSG000000000938 | 86.267547    | 1506.30742   | 437.416403   | 789.03799    |
| ##                  | TCGA-OL-A6VR | TCGA-OL-A97C | TCGA-PE-A5DC | TCGA-PE-A5DD |
| ## ENSG00000000003  | 3248.314301  | 6567.2549    | 2572.29082   | 1739.96111   |
| ## ENSG00000000005  | 7.435104     | 6363.4933    | 5.48931      | 32.29326     |
| ## ENSG000000000419 | 1738.162078  | 2427.1074    | 1656.67386   | 1526.82557   |
| ## ENSG000000000457 | 1476.281194  | 991.7601     | 947.45496    | 1764.50399   |
| ## ENSG000000000460 | 355.232744   | 443.5872     | 589.55193    | 785.37220    |
| ## ENSG000000000938 | 275.098846   | 331.7888     | 338.14152    | 618.73896    |
| ##                  | TCGA-PE-A5DE | TCGA-PL-A8LV | TCGA-PL-A8LX | TCGA-PL-A8LY |
| ## ENSG00000000003  | 540.62411    | 2916.640279  | 1245.0953    | 4488.65476   |
| ## ENSG00000000005  | 13.39384     | 1.225994     | 0.0000       | 85.24623     |
| ## ENSG000000000419 | 2385.32123   | 1793.629562  | 2181.4578    | 1929.79820   |

```

## ENSG00000000457    2166.14929   1393.955442    785.1723    1177.27979
## ENSG00000000460    685.52111    704.946684    210.9039    280.72464
## ENSG00000000938    1343.03691   1640.380283    431.9718    437.98923
##          TCGA-PL-A8LZ TCGA-S3-A6ZF TCGA-S3-A6ZG TCGA-S3-A6ZH
## ENSG000000000003    3788.48519   1330.36123   5823.522546   4265.093722
## ENSG000000000005    72.32563    17.96629    4.797629    9.713464
## ENSG000000000419    2468.25550   4003.06121   1756.731983   2461.921594
## ENSG00000000457    1165.24620   2012.22483   1994.214641   2590.845752
## ENSG00000000460    1148.02581   959.91337   804.402538   1051.703235
## ENSG00000000938    738.18060    452.57948   293.455001   224.292713
##          TCGA-S3-AA0Z TCGA-S3-AA10 TCGA-S3-AA11 TCGA-S3-AA12
## ENSG000000000003    3100.577498  1868.6515    569.199017   2594.1995
## ENSG000000000005    1.763194    0.0000     2.406761    0.0000
## ENSG000000000419    1999.462543  2722.3037   1484.971644   1660.9920
## ENSG00000000457    2553.105611  448.5679    1783.410029   1829.7323
## ENSG00000000460    2077.924698  582.4517    445.250817   441.6595
## ENSG00000000938    557.169456  1353.7139   263.540348   195.1519
##          TCGA-S3-AA14 TCGA-S3-AA15 TCGA-S3-AA17 TCGA-UL-AAZ6
## ENSG000000000003    2990.94692   1800.91110   3948.78810   1083.406261
## ENSG000000000005    10.28322   62.15396    1.14657    1.155017
## ENSG000000000419    1483.72121   1895.69589   2692.14705   1337.510075
## ENSG00000000457    1150.25120   1087.69436   1396.52262   1196.597960
## ENSG00000000460    498.00148   1303.67939   659.27792   464.316969
## ENSG00000000938    251.20428   1494.80282   1283.01216   246.018692
##          TCGA-UU-A93S TCGA-V7-A7HQ TCGA-W8-A86G TCGA-WT-AB41
## ENSG000000000003    805.76552   4626.91707   6022.78083   3885.8064
## ENSG000000000005    82.87874   10.08922    23.28711   45.8352
## ENSG000000000419    3011.26084   1418.54457   1847.03515   2049.8520
## ENSG00000000457    2295.28063   639.65666   1720.79452   875.9616
## ENSG00000000460    1192.53296   98.87437    426.52172   175.7016
## ENSG00000000938    432.81119   223.98072   337.05021   893.7864
##          TCGA-WT-AB44 TCGA-XX-A899 TCGA-XX-A89A TCGA-Z7-A8R5
## ENSG000000000003    1722.38001   2075.80881   2172.6479   4162.2609
## ENSG000000000005    57.73341   19.98853    1239.2589   17.9057
## ENSG000000000419    1484.22971   1587.08926   1475.9440   1875.2149
## ENSG00000000457    1849.87462   1460.16210   1191.9219   1292.4658
## ENSG00000000460    293.47816   396.77231    502.5007   203.4738
## ENSG00000000938    1039.20135   1289.26017   1037.7731   1603.3739
##          TCGA-Z7-A8R6
## ENSG000000000003    2173.201064
## ENSG000000000005    6.028297
## ENSG000000000419    2239.512331
## ENSG000000000457    1329.239486
## ENSG000000000460    1251.876341
## ENSG00000000938    407.914763

```

```

# Calculate variances
gene_variances <- apply(data.RNAseq.normalized.DESeq, 1, var)

#Pick the top 500 most variable genes
top_genes <- order(gene_variances, decreasing = TRUE)[1:500]

data.RNAseq.normalized.DESeq.top500 <- data.RNAseq.normalized.DESeq[top_genes, ]
head(data.RNAseq.normalized.DESeq.top500)

```

|    |                 |              |              |              |              |
|----|-----------------|--------------|--------------|--------------|--------------|
| ## |                 | TCGA-3C-AAAU | TCGA-3C-AALI | TCGA-3C-AALJ | TCGA-3C-AALK |
| ## | ENSG00000211896 | 46793.14     | 372867.70958 | 404683.288   | 319033.5652  |
| ## | ENSG00000153002 | 197986.21    | 71.89183     | 6284.505     | 346.1269     |
| ## | ENSG00000108821 | 151615.46    | 509441.64595 | 515093.463   | 1224913.0314 |
| ## | ENSG00000211592 | 30244.32     | 219544.44402 | 78960.615    | 132563.2622  |
| ## | ENSG00000164692 | 98434.83     | 293215.96355 | 283471.236   | 694671.0765  |
| ## | ENSG00000115414 | 122684.64    | 295183.45220 | 332776.459   | 373770.4231  |
| ## |                 | TCGA-4H-AAA  | TCGA-5L-AAT  | TCGA-5T-A9Q  | TCGA-A1-A0S  |
| ## | ENSG00000211896 | 5.107982e+04 | 22557.2681   | 711.3908     | 363.7667     |
| ## | ENSG00000153002 | 4.004376e+01 | 652.0057     | 3983.7884    | 270.7912     |
| ## | ENSG00000108821 | 1.158667e+06 | 672567.3949  | 22847.6339   | 46988.6569   |
| ## | ENSG00000211592 | 4.403097e+04 | 91788.4144   | 393.2632     | 1661.9371    |
| ## | ENSG00000164692 | 8.749058e+05 | 445297.0679  | 11786.7062   | 62042.5530   |
| ## | ENSG00000115414 | 6.734491e+05 | 295094.1138  | 20806.1821   | 29036.2495   |
| ## |                 | TCGA-A1-A0S  | TCGA-A1-A0S  | TCGA-A1-A0S  | TCGA-A1-A0S  |
| ## | ENSG00000211896 | 66430.30     | 5321.7927    | 51652.5068   | 7251.61894   |
| ## | ENSG00000153002 | 1095574.70   | 218.8336     | 288.4734     | 13.07142     |
| ## | ENSG00000108821 | 292659.18    | 633330.3745  | 282370.3424  | 484706.17340 |
| ## | ENSG00000211592 | 56607.66     | 57018.2226   | 147210.4331  | 12275.06434  |
| ## | ENSG00000164692 | 241904.76    | 494227.1400  | 200012.3259  | 365475.76267 |
| ## | ENSG00000115414 | 346265.31    | 270007.9617  | 72732.4720   | 370739.52101 |
| ## |                 | TCGA-A1-A0S  | TCGA-A1-A0S  | TCGA-A1-A0S  | TCGA-A1-A0S  |
| ## | ENSG00000211896 | 1.451562e+04 | 149096.5341  | 130966.22853 | 27315.83411  |
| ## | ENSG00000153002 | 4.617908e+01 | 337.7054     | 73.15933     | 23.89389     |
| ## | ENSG00000108821 | 3.343300e+06 | 1751172.2744 | 215821.03199 | 73360.20965  |
| ## | ENSG00000211592 | 3.030271e+04 | 120791.7939  | 127877.50166 | 16415.10106  |
| ## | ENSG00000164692 | 2.571259e+06 | 1338438.3917 | 178038.74676 | 58925.74124  |
| ## | ENSG00000115414 | 1.703737e+06 | 1339241.8713 | 209016.21192 | 157453.89514 |
| ## |                 | TCGA-A1-A0S  | TCGA-A1-A0S  | TCGA-A1-A0S  | TCGA-A1-A0S  |
| ## | ENSG00000211896 | 2084.78697   | 4.645816e+03 | 212359.5058  | 391127.2326  |
| ## | ENSG00000153002 | 48.38296     | 9.500647e+00 | 171.5531     | 981.0491     |
| ## | ENSG00000108821 | 911586.71209 | 7.695921e+05 | 43096.3236   | 176106.1428  |
| ## | ENSG00000211592 | 2075.28318   | 7.521921e+03 | 106422.7218  | 182173.5692  |
| ## | ENSG00000164692 | 698895.24167 | 5.874863e+05 | 31891.0310   | 116512.7961  |
| ## | ENSG00000115414 | 616478.33367 | 3.768673e+05 | 51354.9385   | 127627.4360  |
| ## |                 | TCGA-A1-A0S  | TCGA-A2-A04  | TCGA-A2-A04  | TCGA-A2-A04  |
| ## | ENSG00000211896 | 6968.449     | 49422.65770  | 3.488698e+05 | 1.562249e+06 |
| ## | ENSG00000153002 | 949772.268   | 71.92819     | 6.982312e+00 | 2.684829e+01 |
| ## | ENSG00000108821 | 62543.730    | 938287.23842 | 2.856017e+05 | 2.337794e+05 |
| ## | ENSG00000211592 | 23619.774    | 41108.95789  | 2.963768e+05 | 1.345291e+06 |
| ## | ENSG00000164692 | 56930.257    | 602892.08822 | 1.528875e+05 | 1.358110e+05 |
| ## | ENSG00000115414 | 60263.431    | 493300.50161 | 1.204435e+05 | 2.268515e+05 |
| ## |                 | TCGA-A2-A04  | TCGA-A2-A04  | TCGA-A2-A04  | TCGA-A2-A04  |
| ## | ENSG00000211896 | 2799.792     | 1.484230e+05 | 139202.81388 | 2970.6681    |
| ## | ENSG00000153002 | 2953376.829  | 4.620429e+00 | 16.14489     | 825.4276     |
| ## | ENSG00000108821 | 345615.892   | 5.204914e+04 | 300047.84624 | 661972.2191  |
| ## | ENSG00000211592 | 13193.308    | 7.772117e+04 | 93953.54439  | 2207.3109    |
| ## | ENSG00000164692 | 261344.249   | 4.027813e+04 | 174842.64775 | 533072.6661  |
| ## | ENSG00000115414 | 398228.193   | 6.891925e+04 | 151159.71579 | 421851.2017  |
| ## |                 | TCGA-A2-A04  | TCGA-A2-A04  | TCGA-A2-A04  | TCGA-A2-A04  |
| ## | ENSG00000211896 | 2.660073e+04 | 619704.51234 | 57517.28499  | 17464.2018   |
| ## | ENSG00000153002 | 3.381245e+01 | 11.17398     | 13.52917     | 816.8823     |
| ## | ENSG00000108821 | 1.140421e+06 | 188723.00750 | 105837.91639 | 251069.8925  |
| ## | ENSG00000211592 | 5.226599e+04 | 521677.94175 | 85354.75005  | 62237.3741   |

```

## ENSG00000164692 6.099894e+05 126767.92049 71865.36977 163366.1626
## ENSG00000115414 4.758506e+05 77973.92464 80066.43548 52398.7784
## TCGA-A2-A0CL TCGA-A2-A0CM TCGA-A2-A0CO TCGA-A2-A0CP
## ENSG00000211896 5.726765e+05 397513.18507 32816.88 21395.289
## ENSG00000153002 4.653168e+00 48.28657 104248.35 3179.305
## ENSG00000108821 2.859102e+05 314846.57029 390448.15 1416899.616
## ENSG00000211592 3.293763e+05 149049.78962 28707.39 97693.300
## ENSG00000164692 2.251016e+05 235143.54400 214615.63 679288.487
## ENSG00000115414 3.039142e+05 207966.65295 89916.77 496512.954
## TCGA-A2-A0CQ TCGA-A2-A0CR TCGA-A2-A0CS TCGA-A2-A0CT
## ENSG00000211896 1491.20074 809154.7490 154.8178 10030.8458
## ENSG00000153002 98.17843 454.1315 14214.7171 268.5192
## ENSG00000108821 179546.12679 384981.0417 1733213.6172 177025.2398
## ENSG00000211592 2173.81872 876779.5137 188.7691 9295.1769
## ENSG00000164692 97581.02754 222447.7348 953552.6122 168658.2319
## ENSG00000115414 58157.75521 49804.7421 400631.7591 125836.1698
## TCGA-A2-A0CU TCGA-A2-A0CV TCGA-A2-A0CW TCGA-A2-A0CX
## ENSG00000211896 1.954312e+03 6981.75766 8792.6525 72403.89191
## ENSG00000153002 1.977048e+00 60.71094 149.7552 10.01037
## ENSG00000108821 2.069099e+05 405585.03074 142377.5074 554215.22139
## ENSG00000211592 3.698068e+03 72636.51283 10253.7774 56251.60424
## ENSG00000164692 1.291556e+05 303451.24761 100933.3696 427737.53678
## ENSG00000115414 1.251461e+05 111578.45606 108241.4222 666834.10525
## TCGA-A2-A0CZ TCGA-A2-A0D0 TCGA-A2-A0D1 TCGA-A2-A0D2
## ENSG00000211896 18963.40 8179.515 27567.064 225344.51994
## ENSG00000153002 10655.25 0.000 1826.805 33.40216
## ENSG00000108821 1610294.76 68122.363 406104.274 372333.84275
## ENSG00000211592 191916.84 7027.010 21350.870 131682.78441
## ENSG00000164692 1086512.82 34805.403 234021.343 236508.14706
## ENSG00000115414 851300.14 139516.028 197433.347 286395.31218
## TCGA-A2-A0D3 TCGA-A2-A0D4 TCGA-A2-A0EM TCGA-A2-A0EN
## ENSG00000211896 4.042097e+04 9204.083 8982.776 45225.7844
## ENSG00000153002 6.952053e+00 2099200.934 1084.379 703.6301
## ENSG00000108821 1.174671e+05 75955.298 583902.787 781253.7264
## ENSG00000211592 2.580689e+04 7664.851 7781.902 42043.1848
## ENSG00000164692 8.521218e+04 59514.218 516870.288 517606.4235
## ENSG00000115414 1.119750e+05 49187.577 462367.853 467602.4597
## TCGA-A2-A0E0 TCGA-A2-A0EP TCGA-A2-A0EQ TCGA-A2-A0ER
## ENSG00000211896 28530.1223 107227.3291 2022956.6673 9440.788
## ENSG00000153002 17.9947 21.3248 57.0699 3583149.693
## ENSG00000108821 585862.8990 1126791.0385 215389.3318 85598.875
## ENSG00000211592 108706.9261 135089.9613 1048279.2650 15633.951
## ENSG00000164692 580612.2351 597903.9374 133357.2761 92562.733
## ENSG00000115414 444708.6886 308863.1151 88096.5400 124843.164
## TCGA-A2-A0ES TCGA-A2-A0ET TCGA-A2-A0EU TCGA-A2-A0EV
## ENSG00000211896 3409.6652 9834.982 8615.839 184936.2335
## ENSG00000153002 428.0899 67768.214 2346.603 290.9652
## ENSG00000108821 157313.1442 22979.864 314834.854 516192.4133
## ENSG00000211592 21030.9728 6624.239 7862.177 109317.1936
## ENSG00000164692 145974.8785 17797.092 314174.211 410421.5297
## ENSG00000115414 99890.7700 32627.633 210504.036 496703.2145
## TCGA-A2-A0EW TCGA-A2-A0EX TCGA-A2-A0EY TCGA-A2-A0ST
## ENSG00000211896 13615.96085 25802.446 19065.0737 1598842.4283
## ENSG00000153002 85.22737 106.835 171.4672 913.7259

```

```

## ENSG00000108821 570808.56475    681710.343    212758.6436   66960.9391
## ENSG00000211592 32350.00310    60107.275    53511.0436   1470458.8015
## ENSG00000164692 428589.82258    627906.331    153136.3558   49953.7732
## ENSG00000115414 205171.58719    300850.877    509946.4331   65546.4321
##          TCGA-A2-A0SU TCGA-A2-A0SV TCGA-A2-A0SW TCGA-A2-A0SX
## ENSG00000211896 4427.998     4326.0984 2.498701e+06 1.055419e+06
## ENSG00000153002 105325.204    165.2356 4.412043e+01 3.993708e+01
## ENSG00000108821 376975.813    697661.5596 3.866795e+05 4.561406e+05
## ENSG00000211592 12836.098     2935.8138 1.926700e+06 7.124735e+05
## ENSG00000164692 275093.949    530591.4682 2.934786e+05 3.207060e+05
## ENSG00000115414 172992.877    484417.7269 3.186598e+05 3.058222e+05
##          TCGA-A2-A0SY TCGA-A2-A0TO TCGA-A2-A0T1 TCGA-A2-A0T2
## ENSG00000211896 38962.61981   30250.36992 1235704.4068 9.661285e+02
## ENSG00000153002 12.97642     44.05985   23.7997 7.739347e+00
## ENSG00000108821 372545.52538   563095.22914 708128.1006 2.451877e+05
## ENSG00000211592 60211.50313   26178.11460 420959.8431 1.064805e+04
## ENSG00000164692 311764.91367   402618.93379 459944.7922 1.768338e+05
## ENSG00000115414 200885.13545   361180.17363 467411.6905 2.455024e+05
##          TCGA-A2-A0T3 TCGA-A2-A0T4 TCGA-A2-A0T5 TCGA-A2-A0T6
## ENSG00000211896 1500.0110    21833.98   3377.8850 42790.49872
## ENSG00000153002 172.7493    291419.90   247.2111 11.59467
## ENSG00000108821 199150.8377   707089.52   333720.0207 856061.19211
## ENSG00000211592 9031.7084    34756.81   5858.0032 29511.51506
## ENSG00000164692 154850.9109   515451.30   240737.6071 740273.77268
## ENSG00000115414 334889.8635   247244.27   483266.7443 818162.86916
##          TCGA-A2-A0T7 TCGA-A2-A0YC TCGA-A2-A0YD TCGA-A2-A0YE
## ENSG00000211896 4223.831     11828.861   6990.49273 169191.9979
## ENSG00000153002 1919.655     212.921    28.34209 156.1675
## ENSG00000108821 633273.355    306988.921   773040.46217 222022.9018
## ENSG00000211592 17269.531     20598.025   18773.29915 111379.1708
## ENSG00000164692 461706.559     228630.954   702761.25262 160424.8299
## ENSG00000115414 433285.937     278648.451   567346.08897 229947.4920
##          TCGA-A2-A0YF TCGA-A2-A0YG TCGA-A2-A0YH TCGA-A2-A0YI
## ENSG00000211896 15393.956     58144.04   289100.16 13911.75
## ENSG00000153002 2611.379     21898.23   10484.02 1438318.41
## ENSG00000108821 47812.011     151886.03   496707.25 299206.05
## ENSG00000211592 26895.912     24580.09   272322.32 212322.58
## ENSG00000164692 44530.956     127466.10   394173.97 237684.71
## ENSG00000115414 99262.476     258195.85   298357.14 164091.41
##          TCGA-A2-A0YJ TCGA-A2-A0YK TCGA-A2-A0YL TCGA-A2-A0YM
## ENSG00000211896 37114.23742   123424.4614   12558.5555 2.064508e+04
## ENSG00000153002 1.24716     715.6098   174.0439 4.147263e+00
## ENSG00000108821 89282.94442   249186.8777   446113.1528 1.307964e+05
## ENSG00000211592 18149.92094   123538.2478   43570.5973 2.069816e+04
## ENSG00000164692 68656.16352   184486.8651   360380.4244 9.978316e+04
## ENSG00000115414 211086.83561   95123.6508   192441.7736 1.700818e+05
##          TCGA-A2-A0YT TCGA-A2-A1FV TCGA-A2-A1FW TCGA-A2-A1FX
## ENSG00000211896 5997.0211    973.82196   78013.905 10576.887
## ENSG00000153002 707.7751    25.78656   3674.939 6479.731
## ENSG00000108821 60873.2345   98140.62408   112202.260 266688.987
## ENSG00000211592 12231.2384   8819.76289   29267.016 6494.711
## ENSG00000164692 59519.4621   93714.43643   109193.761 186399.841
## ENSG00000115414 132214.3711   90268.89659   145760.672 156188.336
##          TCGA-A2-A1FZ TCGA-A2-A1G0 TCGA-A2-A1G1 TCGA-A2-A1G4

```

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000211896 | 1796.07      | 7912.2133    | 261678.05899 | 178246.10534 |
| ## ENSG00000153002 | 49793.07     | 157.7589     | 2.85494      | 86.64264     |
| ## ENSG00000108821 | 451563.74    | 356023.7101  | 252926.24148 | 45862.59802  |
| ## ENSG00000211592 | 14145.12     | 154706.4227  | 162645.19847 | 159723.19810 |
| ## ENSG00000164692 | 362465.68    | 276563.4068  | 242432.19704 | 38593.20904  |
| ## ENSG00000115414 | 403938.09    | 159157.6494  | 483972.22543 | 88198.62584  |
| ## TCGA-A2-A1G6    | TCGA-A2-A259 | TCGA-A2-A25A | TCGA-A2-A25B |              |
| ## ENSG00000211896 | 21604.563    | 35228.0572   | 14297.8765   | 149587.1274  |
| ## ENSG00000153002 | 1132.814     | 205.6787     | 123.8994     | 326.9352     |
| ## ENSG00000108821 | 31662.284    | 167166.6874  | 320152.6633  | 296170.1348  |
| ## ENSG00000211592 | 120598.448   | 38786.9915   | 71587.1976   | 71105.1821   |
| ## ENSG00000164692 | 40648.622    | 144779.2960  | 318581.0979  | 295167.2265  |
| ## ENSG00000115414 | 12619.044    | 132802.9428  | 121457.7733  | 543201.4489  |
| ## TCGA-A2-A25C    | TCGA-A2-A25D | TCGA-A2-A25E | TCGA-A2-A25F |              |
| ## ENSG00000211896 | 4839.92995   | 69280.3266   | 9086.597     | 199144.38575 |
| ## ENSG00000153002 | 49.89053     | 130.9782     | 37269.531    | 10.56486     |
| ## ENSG00000108821 | 324392.63196 | 120316.8167  | 151017.452   | 312894.29603 |
| ## ENSG00000211592 | 44989.74762  | 56376.9233   | 12529.974    | 379559.24847 |
| ## ENSG00000164692 | 323016.53044 | 89096.9251   | 137704.304   | 279958.33237 |
| ## ENSG00000115414 | 283628.77696 | 85225.9041   | 221947.280   | 354229.32661 |
| ## TCGA-A2-A3KC    | TCGA-A2-A3KD | TCGA-A2-A3XS | TCGA-A2-A3XT |              |
| ## ENSG00000211896 | 18897.547    | 15644.828    | 1.233202e+05 | 9.062355e+04 |
| ## ENSG00000153002 | 5551.471     | 697.995      | 1.709883e+00 | 4.192895e+00 |
| ## ENSG00000108821 | 510239.985   | 160026.725   | 2.269442e+05 | 1.431303e+05 |
| ## ENSG00000211592 | 59116.860    | 51869.147    | 6.152928e+04 | 4.647321e+04 |
| ## ENSG00000164692 | 324482.308   | 99064.975    | 1.400317e+05 | 8.507719e+04 |
| ## ENSG00000115414 | 142372.943   | 72830.912    | 9.703072e+04 | 1.107771e+05 |
| ## TCGA-A2-A3XU    | TCGA-A2-A3XV | TCGA-A2-A3XW | TCGA-A2-A3XX |              |
| ## ENSG00000211896 | 4340.022923  | 4618.38194   | 6097.799     | 9.732795e+05 |
| ## ENSG00000153002 | 1.367798     | 34.74956     | 226.688      | 9.470850e-01 |
| ## ENSG00000108821 | 45172.895383 | 401438.49501 | 258574.025   | 2.020142e+05 |
| ## ENSG00000211592 | 69251.610648 | 6268.15864   | 7953.604     | 3.738173e+05 |
| ## ENSG00000164692 | 23289.495842 | 219524.55081 | 130660.156   | 1.234506e+05 |
| ## ENSG00000115414 | 15751.561292 | 80279.75625  | 65549.716    | 1.299325e+05 |
| ## TCGA-A2-A3XY    | TCGA-A2-A3XZ | TCGA-A2-A3Y0 | TCGA-A2-A4RW |              |
| ## ENSG00000211896 | 116420.84760 | 5.116544e+05 | 359473.77763 | 41859.734    |
| ## ENSG00000153002 | 26.83188     | 7.228021e+00 | 20.62111     | 1079.543     |
| ## ENSG00000108821 | 468961.57544 | 1.704114e+05 | 203918.42272 | 751724.769   |
| ## ENSG00000211592 | 72924.35643  | 2.826951e+05 | 170912.45906 | 29050.073    |
| ## ENSG00000164692 | 275807.58593 | 9.257469e+04 | 106033.75554 | 399501.020   |
| ## ENSG00000115414 | 323075.29794 | 9.561136e+04 | 31031.02357  | 182153.046   |
| ## TCGA-A2-A4RX    | TCGA-A2-A4RY | TCGA-A2-A4S0 | TCGA-A2-A4S1 |              |
| ## ENSG00000211896 | 204363.51507 | 13343.3441   | 178.3689     | 3.395171e+03 |
| ## ENSG00000153002 | 73.35878     | 157.7114     | 586.0691     | 4.161349e+01 |
| ## ENSG00000108821 | 811043.75152 | 357497.1972  | 69601.3273   | 5.579236e+06 |
| ## ENSG00000211592 | 97353.34503  | 100308.0634  | 265.3049     | 3.532251e+03 |
| ## ENSG00000164692 | 544823.17623 | 209713.2097  | 44103.5739   | 5.827850e+06 |
| ## ENSG00000115414 | 811082.77215 | 84315.8839   | 56476.9767   | 8.775086e+05 |
| ## TCGA-A2-A4S2    | TCGA-A2-A4S3 | TCGA-A7-A0CD | TCGA-A7-A0CE |              |
| ## ENSG00000211896 | 107447.329   | 168596.99725 | 18168.95     | 54354.1903   |
| ## ENSG00000153002 | 1165.541     | 19.02488     | 26798.93     | 808.9606     |
| ## ENSG00000108821 | 541061.570   | 285870.72993 | 197178.41    | 93122.7680   |
| ## ENSG00000211592 | 19160.229    | 56846.33272  | 17977.30     | 57746.5765   |
| ## ENSG00000164692 | 298465.535   | 156472.29674 | 176284.04    | 67681.2282   |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000115414 | 201824.512   | 347842.07185 | 154258.51    | 255872.2511  |
| ##                 | TCGA-A7-A0CG | TCGA-A7-A0CH | TCGA-A7-A0CJ | TCGA-A7-A0D9 |
| ## ENSG00000211896 | 20872.48501  | 119841.746   | 4074.36801   | 7218.9256    |
| ## ENSG00000153002 | 46.97409     | 2399.325     | 21.81028     | 418.6977     |
| ## ENSG00000108821 | 542011.98133 | 70452.089    | 82041.96450  | 61176.0631   |
| ## ENSG00000211592 | 137077.37677 | 210631.407   | 6201.38960   | 10011.2060   |
| ## ENSG00000164692 | 480443.94735 | 121782.466   | 73389.51487  | 121778.9434  |
| ## ENSG00000115414 | 209767.27501 | 57499.781    | 162695.34117 | 59055.1427   |
| ##                 | TCGA-A7-A0DA | TCGA-A7-A0DB | TCGA-A7-A0DC | TCGA-A7-A13D |
| ## ENSG00000211896 | 7887.95664   | 2050.627     | 2601.631     | 1.987293e+04 |
| ## ENSG00000153002 | 13.57029     | 14.532       | 37539.022    | 7.572701e+00 |
| ## ENSG00000108821 | 556567.30869 | 281224.973   | 114804.664   | 3.601825e+05 |
| ## ENSG00000211592 | 9252.22302   | 5937.131     | 52616.131    | 3.862077e+03 |
| ## ENSG00000164692 | 400603.07279 | 363839.421   | 151321.920   | 2.834689e+05 |
| ## ENSG00000115414 | 525798.03547 | 528403.074   | 47823.271    | 9.541094e+05 |
| ##                 | TCGA-A7-A13E | TCGA-A7-A13F | TCGA-A7-A13G | TCGA-A7-A13H |
| ## ENSG00000211896 | 40948.98     | 10563.8964   | 2495.5582    | 282149.1410  |
| ## ENSG00000153002 | 0.00         | 174.7269     | 195.8154     | 127.4713     |
| ## ENSG00000108821 | 216768.21    | 56551.3188   | 62999.2469   | 360989.7183  |
| ## ENSG00000211592 | 24830.06     | 164082.7642  | 3870.6173    | 174975.8401  |
| ## ENSG00000164692 | 146105.40    | 90484.9434   | 91103.1053   | 195803.1849  |
| ## ENSG00000115414 | 237098.53    | 30874.7226   | 59057.9184   | 123367.0242  |
| ##                 | TCGA-A7-A26E | TCGA-A7-A26F | TCGA-A7-A26G | TCGA-A7-A26H |
| ## ENSG00000211896 | 355.14978    | 22790.9878   | 392030.12868 | 29572.0269   |
| ## ENSG00000153002 | 13.87304     | 304.3406     | 21.21379     | 19.0015      |
| ## ENSG00000108821 | 235719.56846 | 477344.2081  | 662506.58127 | 579133.9034  |
| ## ENSG00000211592 | 2175.29241   | 54846.4210   | 268894.69957 | 29674.0016   |
| ## ENSG00000164692 | 284039.36088 | 338083.8171  | 630298.74851 | 546032.6654  |
| ## ENSG00000115414 | 317151.52871 | 975301.1761  | 877150.33416 | 590322.6171  |
| ##                 | TCGA-A7-A26I | TCGA-A7-A26J | TCGA-A7-A2KD | TCGA-A7-A3IY |
| ## ENSG00000211896 | 7481.93612   | 6468.124     | 9.680495e+04 | 1420.781     |
| ## ENSG00000153002 | 12.57468     | 4306.626     | 2.709441e+00 | 1014.577     |
| ## ENSG00000108821 | 162898.39416 | 333292.201   | 4.454762e+05 | 152213.634   |
| ## ENSG00000211592 | 8873.75493   | 9499.950     | 4.914385e+04 | 2114.868     |
| ## ENSG00000164692 | 308456.30108 | 344429.133   | 3.252041e+05 | 138968.227   |
| ## ENSG00000115414 | 695955.07118 | 336081.209   | 3.822818e+05 | 258324.086   |
| ##                 | TCGA-A7-A3IZ | TCGA-A7-A3J0 | TCGA-A7-A3J1 | TCGA-A7-A3RF |
| ## ENSG00000211896 | 77.16532     | 17090.483    | 23249.65608  | 9949.105     |
| ## ENSG00000153002 | 193965.46552 | 28713.870    | 32.85456     | 14446.729    |
| ## ENSG00000108821 | 98403.93634  | 48244.421    | 391403.96078 | 192494.655   |
| ## ENSG00000211592 | 541.06505    | 8352.567     | 53334.95620  | 2400.355     |
| ## ENSG00000164692 | 64460.27492  | 27750.140    | 257370.62222 | 118795.254   |
| ## ENSG00000115414 | 85030.73291  | 87963.261    | 106419.08048 | 144304.090   |
| ##                 | TCGA-A7-A425 | TCGA-A7-A426 | TCGA-A7-A4SA | TCGA-A7-A4SB |
| ## ENSG00000211896 | 2660.52673   | 16102.28     | 15665.20     | 5375.8527    |
| ## ENSG00000153002 | 13.73935     | 35762.18     | 213066.48    | 317.3087     |
| ## ENSG00000108821 | 511295.14040 | 407600.46    | 506575.85    | 212560.0181  |
| ## ENSG00000211592 | 27130.30673  | 62669.23     | 31536.17     | 36510.4244   |
| ## ENSG00000164692 | 232983.04248 | 225643.75    | 311343.60    | 121526.1541  |
| ## ENSG00000115414 | 121447.99127 | 53325.11     | 139814.22    | 46391.4470   |
| ##                 | TCGA-A7-A4SC | TCGA-A7-A4SD | TCGA-A7-A4SE | TCGA-A7-A4SF |
| ## ENSG00000211896 | 3823.9901    | 1.246939e+06 | 13309.89557  | 44744.16577  |
| ## ENSG00000153002 | 171.2451     | 5.314382e+00 | 45.22048     | 14.59789     |
| ## ENSG00000108821 | 722311.8131  | 5.416578e+05 | 848462.88311 | 253359.41876 |

```

## ENSG00000211592    21347.5878 5.584951e+05    6709.21236 28094.45716
## ENSG00000164692 383445.3423 3.443720e+05 486920.59748 163862.97727
## ENSG00000115414 159822.4672 2.578100e+05 483598.39931 110741.24259
##          TCGA-A7-A56D TCGA-A7-A5ZV TCGA-A7-A5ZW TCGA-A7-A5ZX
## ENSG00000211896 1141637.7520    490.20066   5681.1221    4794.206
## ENSG00000153002      139.4387    47.31667   114.0742    1837.301
## ENSG00000108821 1493011.3245 27485.30499 745879.3760 522448.549
## ENSG00000211592  943440.0256   690.82332 18707.0428 39134.915
## ENSG00000164692  765525.8259 268107.58600 805370.7763 383021.828
## ENSG00000115414  313556.8280 153826.48142 231837.2181 145147.780
##          TCGA-A7-A6VV TCGA-A7-A6VW TCGA-A7-A6VX TCGA-A7-A6VY
## ENSG00000211896 166915.11952   11627.275   2964.945 1.160454e+06
## ENSG00000153002      31.98067   334.786   1723.434 4.512091e+00
## ENSG00000108821 938822.59259 378707.055 889734.503 5.097968e+05
## ENSG00000211592  56705.72808 43890.969 2491.532 8.831444e+05
## ENSG00000164692  605414.09866 202933.939 627908.708 3.387967e+05
## ENSG00000115414  731630.81556 161835.033 755649.211 3.139305e+05
##          TCGA-A8-A06N TCGA-A8-A06O TCGA-A8-A06P TCGA-A8-A06Q
## ENSG00000211896  1446.8456   157322.88 159922.18302 5254.5447
## ENSG00000153002      555.6078   3475.61  49.47513 34.3614
## ENSG00000108821  6470.5652   295754.86 742519.26209 23026.2588
## ENSG00000211592  2256.4114   123099.11 103525.83231 6741.7059
## ENSG00000164692  5993.6487   203359.26 602729.04077 21704.0323
## ENSG00000115414  17797.3332 146088.11 757999.67781 26278.9086
##          TCGA-A8-A06R TCGA-A8-A06T TCGA-A8-A06U TCGA-A8-A06X
## ENSG00000211896  511628.34325 109444.12 68914.80 6.218144e+04
## ENSG00000153002      30.81211   36882.78 58743.84 1.423992e+00
## ENSG00000108821  458687.36133 277111.56 144965.75 2.102509e+05
## ENSG00000211592  242699.28595 71559.08 105157.30 3.783403e+04
## ENSG00000164692  421551.06598 217478.53 119566.86 1.761463e+05
## ENSG00000115414  652654.40698 105000.49 174322.37 1.432963e+05
##          TCGA-A8-A06Y TCGA-A8-A06Z TCGA-A8-A075 TCGA-A8-A076
## ENSG00000211896  1044.524    817.5446 285678.856 101352.426
## ENSG00000153002  23072.303 1364260.9260 1245.168 2266.395
## ENSG00000108821  91548.194 89530.5380 475763.688 723721.455
## ENSG00000211592      3173.658   720.6659 405881.856 44019.541
## ENSG00000164692  68171.238 58569.7842 330130.492 583651.316
## ENSG00000115414  132274.329 64412.4747 549824.977 587448.873
##          TCGA-A8-A079 TCGA-A8-A07B TCGA-A8-A07C TCGA-A8-A07E
## ENSG00000211896  195040.200 5147.3235 168686.59175 904.5928
## ENSG00000153002      110.042   26.0804 1.30571 68.3272
## ENSG00000108821  156093.709 356213.2801 63831.57613 665189.8467
## ENSG00000211592  161069.847 3414.1621 171309.76249 1352.4330
## ENSG00000164692  103283.785 355826.8159 68590.88790 527161.4663
## ENSG00000115414  172463.862 340171.4603 184690.02240 296935.1780
##          TCGA-A8-A07F TCGA-A8-A07G TCGA-A8-A07I TCGA-A8-A07J
## ENSG00000211896  8919.60859 1.934435e+04 3.023869e+05 5028.1916
## ENSG00000153002      64.10835 5.968342e+01 9.316647e+00 362.0997
## ENSG00000108821  277332.72704 1.015083e+06 5.628163e+05 651853.1604
## ENSG00000211592  13691.40686 3.248422e+04 1.868850e+05 12553.6226
## ENSG00000164692  261029.97335 9.224644e+05 4.509479e+05 661562.4273
## ENSG00000115414  239609.94860 8.610847e+05 6.146262e+05 507045.7374
##          TCGA-A8-A07L TCGA-A8-A07O TCGA-A8-A07P TCGA-A8-A07R
## ENSG00000211896  1.691503e+03    17858.39   3588.514 158159.287

```

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000153002 | 5.585589e+00 | 21988.27     | 8410.304     | 1133.394     |
| ## ENSG00000108821 | 4.223618e+05 | 237133.73    | 505113.703   | 90313.654    |
| ## ENSG00000211592 | 3.315978e+03 | 16835.78     | 7060.794     | 134732.964   |
| ## ENSG00000164692 | 3.031467e+05 | 153736.69    | 389225.273   | 90738.997    |
| ## ENSG00000115414 | 2.841827e+05 | 141999.71    | 212312.396   | 168249.654   |
|                    | TCGA-A8-A07S | TCGA-A8-A07U | TCGA-A8-A07W | TCGA-A8-A07Z |
| ## ENSG00000211896 | 1678.16571   | 2.139546e+06 | 4.190209e+04 | 5592.359     |
| ## ENSG00000153002 | 59.37126     | 7.621336e+00 | 2.773423e+01 | 6411.891     |
| ## ENSG00000108821 | 317678.90302 | 3.028969e+05 | 2.256041e+05 | 253006.500   |
| ## ENSG00000211592 | 1835.87062   | 1.108892e+06 | 1.960203e+04 | 6944.150     |
| ## ENSG00000164692 | 252155.29848 | 2.134159e+05 | 1.761331e+05 | 143085.652   |
| ## ENSG00000115414 | 226325.09058 | 2.351770e+05 | 1.074256e+06 | 104025.174   |
|                    | TCGA-A8-A081 | TCGA-A8-A082 | TCGA-A8-A083 | TCGA-A8-A085 |
| ## ENSG00000211896 | 1.708923e+05 | 121.86096    | 840.39136    | 78.09762     |
| ## ENSG00000153002 | 4.618835e+00 | 0.00000      | 29.12968     | 18517.95296  |
| ## ENSG00000108821 | 3.298904e+04 | 274085.44139 | 48909.46617  | 618941.88797 |
| ## ENSG00000211592 | 1.598645e+05 | 61.46031     | 1480.51614   | 73.68888     |
| ## ENSG00000164692 | 3.124312e+04 | 196616.83714 | 41881.20188  | 412178.44413 |
| ## ENSG00000115414 | 9.898560e+04 | 385063.69140 | 37636.27881  | 351972.10861 |
|                    | TCGA-A8-A086 | TCGA-A8-A08A | TCGA-A8-A08B | TCGA-A8-A08C |
| ## ENSG00000211896 | 4590.183     | 1.301049e+04 | 106027.2711  | 8.317281e+02 |
| ## ENSG00000153002 | 8896.192     | 4.001382e+00 | 103.2491     | 1.860689e+00 |
| ## ENSG00000108821 | 705705.641   | 6.820125e+05 | 101407.4719  | 2.514321e+05 |
| ## ENSG00000211592 | 9494.841     | 9.752368e+03 | 48159.7250   | 6.624053e+02 |
| ## ENSG00000164692 | 627086.164   | 4.584123e+05 | 91992.5903   | 1.971958e+05 |
| ## ENSG00000115414 | 599081.543   | 3.436097e+05 | 450343.9726  | 2.140248e+05 |
|                    | TCGA-A8-A08G | TCGA-A8-A08H | TCGA-A8-A08I | TCGA-A8-A08J |
| ## ENSG00000211896 | 4542.107     | 3747.5650    | 513114.7907  | 228002.1     |
| ## ENSG00000153002 | 273049.804   | 258.3687     | 176.8298     | 386977.2     |
| ## ENSG00000108821 | 341511.706   | 1089746.8001 | 32800.6000   | 515618.0     |
| ## ENSG00000211592 | 5245.844     | 14447.9293   | 328752.3184  | 126562.6     |
| ## ENSG00000164692 | 269273.673   | 764801.8400  | 27101.4437   | 427714.9     |
| ## ENSG00000115414 | 214261.274   | 532185.9122  | 54217.3116   | 506689.4     |
|                    | TCGA-A8-A08L | TCGA-A8-A08O | TCGA-A8-A08P | TCGA-A8-A08R |
| ## ENSG00000211896 | 43042.593    | 2664.411     | 59399.21548  | 9.418678e+05 |
| ## ENSG00000153002 | 6131.805     | 1067.917     | 71.91584     | 2.434237e+00 |
| ## ENSG00000108821 | 266253.698   | 402288.337   | 279662.18052 | 1.952323e+05 |
| ## ENSG00000211592 | 21370.182    | 23050.651    | 40176.98298  | 4.083026e+05 |
| ## ENSG00000164692 | 185075.827   | 384296.298   | 243632.34435 | 1.654542e+05 |
| ## ENSG00000115414 | 189383.357   | 464074.676   | 307880.43091 | 2.012667e+05 |
|                    | TCGA-A8-A08T | TCGA-A8-A08X | TCGA-A8-A08Z | TCGA-A8-A090 |
| ## ENSG00000211896 | 58764.97     | 4.606073e+06 | 4449.3163    | 1.393185e+04 |
| ## ENSG00000153002 | 12706.89     | 9.184616e+00 | 296.0651     | 4.080501e+00 |
| ## ENSG00000108821 | 148324.01    | 7.765639e+05 | 492826.6202  | 3.057153e+05 |
| ## ENSG00000211592 | 41573.50     | 2.393252e+06 | 5493.4670    | 1.166615e+04 |
| ## ENSG00000164692 | 142275.55    | 5.176924e+05 | 483546.8559  | 2.453473e+05 |
| ## ENSG00000115414 | 320023.11    | 5.667413e+05 | 853414.7235  | 3.359028e+05 |
|                    | TCGA-A8-A091 | TCGA-A8-A092 | TCGA-A8-A093 | TCGA-A8-A094 |
| ## ENSG00000211896 | 45864.63     | 4657.278     | 5384.765     | 3.187990e+05 |
| ## ENSG00000153002 | 2621694.24   | 2927.904     | 2955.648     | 1.717445e+00 |
| ## ENSG00000108821 | 173651.33    | 305067.415   | 1096940.883  | 2.326588e+05 |
| ## ENSG00000211592 | 31721.52     | 3593.229     | 13985.347    | 2.115463e+05 |
| ## ENSG00000164692 | 134481.90    | 234546.070   | 756332.565   | 2.027598e+05 |
| ## ENSG00000115414 | 177195.22    | 229603.316   | 387227.024   | 2.954658e+05 |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ##                 | TCGA-A8-A095 | TCGA-A8-A096 | TCGA-A8-A097 | TCGA-A8-A099 |
| ## ENSG00000211896 | 11809.091    | 43520.29814  | 13569.67249  | 2194.330     |
| ## ENSG00000153002 | 217.105      | 63.00744     | 10.54006     | 15444.094    |
| ## ENSG00000108821 | 318793.845   | 559838.38849 | 609936.98300 | 256186.041   |
| ## ENSG00000211592 | 13913.408    | 33323.12946  | 10614.50230  | 2169.594     |
| ## ENSG00000164692 | 251802.702   | 483981.33400 | 480063.64294 | 207437.602   |
| ## ENSG00000115414 | 246986.351   | 615458.34543 | 777067.46988 | 177634.610   |
| ##                 | TCGA-A8-A09A | TCGA-A8-A09B | TCGA-A8-A09C | TCGA-A8-A09D |
| ## ENSG00000211896 | 8389.444     | 4784.243     | 731.5576     | 10181.244    |
| ## ENSG00000153002 | 1907.330     | 609903.909   | 819.3445     | 101570.883   |
| ## ENSG00000108821 | 385881.677   | 457150.303   | 380333.6770  | 492425.796   |
| ## ENSG00000211592 | 14361.690    | 7688.739     | 1630.7083    | 7191.114     |
| ## ENSG00000164692 | 353327.267   | 308176.740   | 268124.2733  | 397695.517   |
| ## ENSG00000115414 | 582041.939   | 227649.572   | 253382.2799  | 567842.036   |
| ##                 | TCGA-A8-A09G | TCGA-A8-A09I | TCGA-A8-A09M | TCGA-A8-A09N |
| ## ENSG00000211896 | 2.967049e+05 | 53026.9894   | 288149.40    | 27586.342    |
| ## ENSG00000153002 | 4.803343e+00 | 196.3681     | 11962.26     | 4735.641     |
| ## ENSG00000108821 | 1.977216e+05 | 336210.9348  | 161701.27    | 474832.552   |
| ## ENSG00000211592 | 2.109612e+05 | 40069.9617   | 140720.29    | 18601.677    |
| ## ENSG00000164692 | 1.418459e+05 | 300980.5480  | 126716.26    | 322577.337   |
| ## ENSG00000115414 | 1.626596e+05 | 381429.4384  | 159304.57    | 200095.703   |
| ##                 | TCGA-A8-A09Q | TCGA-A8-A09R | TCGA-A8-A09T | TCGA-A8-A09V |
| ## ENSG00000211896 | 151458.260   | 10862.243    | 3223.7502    | 20456.188    |
| ## ENSG00000153002 | 2641.103     | 6865.236     | 24.2719      | 137.454      |
| ## ENSG00000108821 | 228998.358   | 682750.546   | 292714.7528  | 431912.041   |
| ## ENSG00000211592 | 185002.076   | 16075.372    | 2883.9435    | 39334.299    |
| ## ENSG00000164692 | 182134.495   | 548758.999   | 336971.2605  | 420299.164   |
| ## ENSG00000115414 | 504777.909   | 848475.519   | 503944.3097  | 342642.307   |
| ##                 | TCGA-A8-A09W | TCGA-A8-A09X | TCGA-A8-A09Z | TCGA-A8-A0A1 |
| ## ENSG00000211896 | 29049.90766  | 3.746734e+05 | 1.163378e+04 | 1360.822     |
| ## ENSG00000153002 | 36.03128     | 9.919489e+00 | 6.478808e+00 | 91399.875    |
| ## ENSG00000108821 | 195567.83992 | 3.971929e+05 | 1.115424e+05 | 584079.495   |
| ## ENSG00000211592 | 25461.68931  | 2.764264e+05 | 6.106277e+03 | 1272.216     |
| ## ENSG00000164692 | 219471.48704 | 2.851875e+05 | 6.938048e+04 | 399733.777   |
| ## ENSG00000115414 | 237959.26027 | 3.328925e+05 | 6.809983e+04 | 391373.121   |
| ##                 | TCGA-A8-A0A2 | TCGA-A8-A0A4 | TCGA-A8-A0A6 | TCGA-A8-A0A7 |
| ## ENSG00000211896 | 292709.39549 | 1490.040     | 270241.83    | 1457542.6655 |
| ## ENSG00000153002 | 77.65484     | 6680.257     | 4298.43      | 531.3523     |
| ## ENSG00000108821 | 460294.34585 | 166563.137   | 102269.40    | 495465.8914  |
| ## ENSG00000211592 | 183584.75035 | 17300.371    | 315622.55    | 1123846.2051 |
| ## ENSG00000164692 | 381958.75610 | 123518.480   | 106690.76    | 397681.5938  |
| ## ENSG00000115414 | 240068.12302 | 63736.592    | 171391.45    | 398044.7705  |
| ##                 | TCGA-A8-A0A9 | TCGA-A8-A0AB | TCGA-A8-A0AD | TCGA-AC-A23C |
| ## ENSG00000211896 | 1148.5666    | 1710.8879    | 1349.9920    | 213451.284   |
| ## ENSG00000153002 | 17.0763      | 451.1945     | 1719.7043    | 8883.351     |
| ## ENSG00000108821 | 433484.0342  | 221559.3256  | 762454.0370  | 367589.093   |
| ## ENSG00000211592 | 631.0806     | 7607.7132    | 773.1444     | 116873.111   |
| ## ENSG00000164692 | 289151.4572  | 183846.1150  | 718899.0324  | 342225.705   |
| ## ENSG00000115414 | 366030.4326  | 251853.2554  | 545635.2083  | 308248.137   |
| ##                 | TCGA-AC-A23E | TCGA-AC-A23G | TCGA-AC-A23H | TCGA-AC-A2B8 |
| ## ENSG00000211896 | 2641.9810    | 3.548270e+03 | 20616.92426  | 9.837301e+03 |
| ## ENSG00000153002 | 659.2863     | 1.433231e+01 | 33.92536     | 9.997257e+00 |
| ## ENSG00000108821 | 859564.2605  | 2.282314e+06 | 512476.44695 | 4.533400e+05 |
| ## ENSG00000211592 | 2747.5636    | 1.671147e+04 | 8102.50616   | 6.902481e+03 |

```

## ENSG00000164692 916381.3605 1.343597e+06 389132.73312 3.926260e+05
## ENSG00000115414 1784247.1478 7.772165e+05 583531.49227 4.557887e+05
## TCGA-AC-A2BK TCGA-AC-A2BM TCGA-AC-A2FB TCGA-AC-A2FE
## ENSG00000211896 96271.05 134458.739 30394.444 15143.3095
## ENSG00000153002 0.00 3155.025 5662.262 776.6638
## ENSG00000108821 60115.73 144323.811 54964.191 615734.1746
## ENSG00000211592 41906.96 70490.357 251951.630 41944.7518
## ENSG00000164692 86218.36 133268.839 126183.019 382474.2318
## ENSG00000115414 131482.68 106223.147 47180.760 201532.8168
## TCGA-AC-A2FF TCGA-AC-A2FG TCGA-AC-A2FK TCGA-AC-A2FM
## ENSG00000211896 37766.15365 16276.4519 22884.55227 3659.9811
## ENSG00000153002 57.48582 358.9053 11.70293 104.6489
## ENSG00000108821 221929.74979 117121.6691 23633.53994 103338.5019
## ENSG00000211592 193792.13254 92267.3160 96556.63926 3318.7347
## ENSG00000164692 169366.74653 113500.6992 36018.43408 71270.4426
## ENSG00000115414 50523.27117 30884.0920 14114.80032 49913.8796
## TCGA-AC-A2FO TCGA-AC-A2QH TCGA-AC-A2QI TCGA-AC-A2QJ
## ENSG00000211896 277196.0391 86.28199 16679.004 30107.7736
## ENSG00000153002 161.1976 16.59269 1109.247 115.9983
## ENSG00000108821 256841.2598 107029.48732 712305.052 3613821.4629
## ENSG00000211592 169402.5076 119.46737 24986.177 12937.9535
## ENSG00000164692 245963.7573 53597.70711 449136.523 1353060.1243
## ENSG00000115414 92237.4821 946566.50273 190530.935 221596.1137
## TCGA-AC-A3BB TCGA-AC-A3EH TCGA-AC-A3HN TCGA-AC-A3OD
## ENSG00000211896 191112.211 1183.8248 175403.9746 15321.473
## ENSG00000153002 132.817 360.1636 382.5941 2485.752
## ENSG00000108821 1007945.419 930011.7280 1033484.4553 49983.417
## ENSG00000211592 163544.559 936.0242 129558.9635 26434.765
## ENSG00000164692 595843.859 503169.6655 663135.9879 106470.486
## ENSG00000115414 261531.025 374969.4700 383402.6044 79558.369
## TCGA-AC-A3QP TCGA-AC-A3QQ TCGA-AC-A3TM TCGA-AC-A3TN
## ENSG00000211896 10862.3681 20108.091 19234.47637 4657.12098
## ENSG00000153002 239.1714 6157.244 82.56883 56.38964
## ENSG00000108821 548560.6038 429146.791 494767.31218 620069.34339
## ENSG00000211592 139872.2647 58159.383 99703.89127 4585.25183
## ENSG00000164692 336505.7788 128875.125 233294.84207 313665.72233
## ENSG00000115414 129672.8629 332601.678 66530.17228 118313.20763
## TCGA-AC-A3W5 TCGA-AC-A3W6 TCGA-AC-A3W7 TCGA-AC-A3YI
## ENSG00000211896 2.073916e+05 4.140778e+04 9584.3615 2.439643e+04
## ENSG00000153002 2.409642e+01 3.596885e+01 364.0703 6.320974e+01
## ENSG00000108821 1.206902e+06 1.684240e+06 951832.0878 1.110853e+06
## ENSG00000211592 1.180693e+05 2.445228e+04 10476.4491 9.011939e+04
## ENSG00000164692 8.008161e+05 9.238327e+05 495962.9999 6.780559e+05
## ENSG00000115414 6.612539e+05 2.460487e+05 244131.0527 2.492246e+05
## TCGA-AC-A3YJ TCGA-AC-A4ZE TCGA-AC-A5EH TCGA-AC-A5XS
## ENSG00000211896 21675.99 4608.09941 2.356810e+03 502248.3766
## ENSG00000153002 456012.56 18.24474 5.723191e+00 899.6251
## ENSG00000108821 73713.69 65385.66391 9.172272e+05 355109.2783
## ENSG00000211592 10643.75 5546.40019 1.396459e+03 384714.7832
## ENSG00000164692 46513.78 51650.85178 6.486070e+05 248052.6467
## ENSG00000115414 38200.96 15201.34150 7.372867e+05 51772.6159
## TCGA-AC-A5XU TCGA-AC-A62V TCGA-AC-A62X TCGA-AC-A62Y
## ENSG00000211896 593215.55 12391.114 1450.23451 5252.289
## ENSG00000153002 2879.18 172.586 25.46505 14672.906

```

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000108821 | 543984.92    | 724067.074   | 39099.03533  | 222978.674   |
| ## ENSG00000211592 | 202166.70    | 5563.443     | 1599.20504   | 2211.721     |
| ## ENSG00000164692 | 298929.12    | 378116.308   | 32155.98988  | 183954.943   |
| ## ENSG00000115414 | 292614.55    | 225422.588   | 13061.02333  | 129465.590   |
| ##                 | TCGA-AC-A6IV | TCGA-AC-A6IW | TCGA-AC-A6IX | TCGA-AC-A6NO |
| ## ENSG00000211896 | 30910.33     | 1.272570e+05 | 207438.125   | 15194.24754  |
| ## ENSG00000153002 | 83575.47     | 1.781974e+00 | 1059.224     | 45.74184     |
| ## ENSG00000108821 | 554201.29    | 4.038398e+04 | 725406.707   | 312682.30086 |
| ## ENSG00000211592 | 33779.39     | 7.852891e+04 | 121236.191   | 21824.82625  |
| ## ENSG00000164692 | 410354.62    | 2.713322e+04 | 464377.488   | 192873.47133 |
| ## ENSG00000115414 | 304819.05    | 2.216597e+04 | 173235.273   | 133823.73299 |
| ##                 | TCGA-AC-A7VB | TCGA-AC-A7VC | TCGA-AC-A8OP | TCGA-AC-A8OQ |
| ## ENSG00000211896 | 22992.434947 | 1.252816e+03 | 13739.6134   | 3.190956e+06 |
| ## ENSG00000153002 | 3.875347     | 1.201331e+01 | 265.5646     | 2.519343e+01 |
| ## ENSG00000108821 | 66196.355689 | 1.604959e+06 | 349010.8597  | 3.545166e+05 |
| ## ENSG00000211592 | 4167.548381  | 7.379604e+02 | 14093.6995   | 2.096136e+06 |
| ## ENSG00000164692 | 40136.195898 | 8.202000e+05 | 193107.0209  | 1.984022e+05 |
| ## ENSG00000115414 | 33664.366071 | 1.322933e+06 | 156827.9499  | 2.911008e+05 |
| ##                 | TCGA-AC-A8OR | TCGA-AC-A8OS | TCGA-AN-A03X | TCGA-AN-A03Y |
| ## ENSG00000211896 | 206.82387    | 12176.842    | 4452.237     | 25634.3052   |
| ## ENSG00000153002 | 252.78473    | 1024.561     | 1433.293     | 233.6837     |
| ## ENSG00000108821 | 33353.22170  | 904006.700   | 2477035.282  | 207337.3790  |
| ## ENSG00000211592 | 68.94129     | 44740.944    | 3953.782     | 17982.6613   |
| ## ENSG00000164692 | 19408.40948  | 536126.120   | 1516499.393  | 147524.3330  |
| ## ENSG00000115414 | 53953.74099  | 122738.319   | 1235859.842  | 128041.7018  |
| ##                 | TCGA-AN-A041 | TCGA-AN-A046 | TCGA-AN-A049 | TCGA-AN-A04A |
| ## ENSG00000211896 | 21080.20     | 2901.141     | 11051.6150   | 17424.96     |
| ## ENSG00000153002 | 4748415.31   | 1364.659     | 468.7601     | 124341.26    |
| ## ENSG00000108821 | 880260.91    | 599189.453   | 633639.9236  | 1076773.91   |
| ## ENSG00000211592 | 23335.77     | 5048.443     | 11841.5835   | 32202.73     |
| ## ENSG00000164692 | 745463.97    | 444256.990   | 436032.0084  | 853733.80    |
| ## ENSG00000115414 | 767996.22    | 372610.423   | 471780.3565  | 1137412.36   |
| ##                 | TCGA-AN-A04C | TCGA-AN-A04D | TCGA-AN-A0AJ | TCGA-AN-A0AK |
| ## ENSG00000211896 | 8.133816e+04 | 11164.541492 | 101958.77886 | 77441.0487   |
| ## ENSG00000153002 | 1.005366e+00 | 7.239778     | 63.81747     | 899.9037     |
| ## ENSG00000108821 | 1.220243e+05 | 34384.921540 | 256210.39045 | 114984.3594  |
| ## ENSG00000211592 | 1.247740e+05 | 11837.840809 | 45258.55209  | 52912.6562   |
| ## ENSG00000164692 | 8.083346e+04 | 21361.366043 | 215871.36759 | 84630.6541   |
| ## ENSG00000115414 | 9.758789e+04 | 49682.571626 | 181773.69330 | 122740.6154  |
| ##                 | TCGA-AN-AOAL | TCGA-AN-AOAM | TCGA-AN-AOAR | TCGA-AN-AOAS |
| ## ENSG00000211896 | 526213.6668  | 179110.602   | 5578.1564    | 3.151173e+03 |
| ## ENSG00000153002 | 711.2967     | 7248.717     | 324.6231     | 3.796594e+01 |
| ## ENSG00000108821 | 662808.8550  | 398382.662   | 98577.2124   | 1.358030e+06 |
| ## ENSG00000211592 | 459477.1639  | 107260.855   | 5629.7785    | 1.313622e+03 |
| ## ENSG00000164692 | 439422.9279  | 249164.735   | 112745.4717  | 9.818296e+05 |
| ## ENSG00000115414 | 389662.9347  | 1265745.282  | 81984.7037   | 8.569343e+05 |
| ##                 | TCGA-AN-AOAT | TCGA-AN-A0FD | TCGA-AN-AOFF | TCGA-AN-AOFJ |
| ## ENSG00000211896 | 1.120237e+05 | 189340.4     | 14602.73     | 9.714750e+03 |
| ## ENSG00000153002 | 9.104287e+00 | 258837.8     | 270353.03    | 1.694236e+00 |
| ## ENSG00000108821 | 1.121770e+05 | 1192008.1    | 374682.75    | 1.544754e+05 |
| ## ENSG00000211592 | 8.799369e+04 | 118788.4     | 52469.02     | 5.885776e+03 |
| ## ENSG00000164692 | 6.938908e+04 | 722270.8     | 244923.77    | 1.212124e+05 |
| ## ENSG00000115414 | 1.444107e+05 | 530594.0     | 234778.64    | 9.287463e+04 |
| ##                 | TCGA-AN-AOFK | TCGA-AN-AOFL | TCGA-AN-AOFN | TCGA-AN-AOFS |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000211896 | 263345.630   | 2337.208840  | 162913.4905  | 2354.0273    |
| ## ENSG00000153002 | 348.158      | 1.542712     | 320.2144     | 281.1845     |
| ## ENSG00000108821 | 399477.588   | 77132.519866 | 1452497.0595 | 553006.7983  |
| ## ENSG00000211592 | 201962.109   | 4799.377361  | 180622.9321  | 18847.1544   |
| ## ENSG00000164692 | 248501.043   | 54470.079031 | 1332670.8839 | 439768.6683  |
| ## ENSG00000115414 | 166207.370   | 93243.062386 | 931260.1014  | 173740.2037  |
| ##                 | TCGA-AN-A0FT | TCGA-AN-A0FV | TCGA-AN-A0FW | TCGA-AN-A0FX |
| ## ENSG00000211896 | 2216.2644    | 1286.2138    | 8438.127     | 54714.1320   |
| ## ENSG00000153002 | 263.4034     | 346.6912     | 624389.443   | 381.8256     |
| ## ENSG00000108821 | 446239.7439  | 617844.5298  | 324952.907   | 326487.0984  |
| ## ENSG00000211592 | 1775.2167    | 1098.7282    | 22984.765    | 35296.7440   |
| ## ENSG00000164692 | 262257.9489  | 526501.3545  | 235808.039   | 223830.0933  |
| ## ENSG00000115414 | 197570.9627  | 644129.1677  | 162266.889   | 299456.1409  |
| ##                 | TCGA-AN-A0FY | TCGA-AN-A0FZ | TCGA-AN-A0GO | TCGA-AN-A0XL |
| ## ENSG00000211896 | 2685.8969    | 496.2416     | 94459.17     | 2513.57975   |
| ## ENSG00000153002 | 155.8655     | 454.3057     | 0.00         | 16.75099     |
| ## ENSG00000108821 | 550210.8479  | 405688.7155  | 257686.69    | 378025.27064 |
| ## ENSG00000211592 | 2148.7175    | 875.0627     | 80239.34     | 5107.19202   |
| ## ENSG00000164692 | 420898.1336  | 357781.8281  | 181694.24    | 329751.69708 |
| ## ENSG00000115414 | 450126.3975  | 433632.7108  | 249100.20    | 197599.38109 |
| ##                 | TCGA-AN-A0XN | TCGA-AN-A0XO | TCGA-AN-A0XP | TCGA-AN-A0XR |
| ## ENSG00000211896 | 3.876493e+03 | 558.0386     | 1560.578     | 2877.96837   |
| ## ENSG00000153002 | 1.080179e+01 | 363.9710     | 8039.619     | 46.89154     |
| ## ENSG00000108821 | 1.038919e+06 | 474100.2271  | 387219.207   | 359871.48151 |
| ## ENSG00000211592 | 3.470076e+03 | 2008.6369    | 3837.712     | 2793.56360   |
| ## ENSG00000164692 | 8.783923e+05 | 371874.2015  | 311197.003   | 226672.54039 |
| ## ENSG00000115414 | 3.329505e+06 | 514086.4487  | 299896.012   | 192394.82339 |
| ##                 | TCGA-AN-A0XS | TCGA-AN-A0XT | TCGA-AN-A0XU | TCGA-AN-A0XV |
| ## ENSG00000211896 | 5.012049e+05 | 27896.222    | 3.075244e+05 | 145474.7     |
| ## ENSG00000153002 | 9.555993e+00 | 2630.185     | 5.195649e+00 | 468342.3     |
| ## ENSG00000108821 | 4.593939e+05 | 89586.549    | 8.449771e+04 | 276395.1     |
| ## ENSG00000211592 | 5.230829e+05 | 51690.439    | 1.589652e+05 | 108915.9     |
| ## ENSG00000164692 | 3.509369e+05 | 72774.341    | 5.310560e+04 | 261833.8     |
| ## ENSG00000115414 | 4.896690e+05 | 70470.572    | 1.818529e+05 | 266161.7     |
| ##                 | TCGA-AN-A0XW | TCGA-A0-A03L | TCGA-A0-A03M | TCGA-A0-A03N |
| ## ENSG00000211896 | 230150.1210  | 75471.497    | 351919.17469 | 2470.4905    |
| ## ENSG00000153002 | 568.1021     | 1892.412     | 10.90568     | 434.3066     |
| ## ENSG00000108821 | 977944.9092  | 445391.783   | 224328.48011 | 849017.3078  |
| ## ENSG00000211592 | 105976.9552  | 57842.853    | 91430.35231  | 13396.5732   |
| ## ENSG00000164692 | 832004.4629  | 354526.975   | 159097.94472 | 456517.1976  |
| ## ENSG00000115414 | 617782.1309  | 370295.866   | 161202.74186 | 312824.1882  |
| ##                 | TCGA-A0-A030 | TCGA-A0-A03P | TCGA-A0-A03R | TCGA-A0-A03T |
| ## ENSG00000211896 | 211651.14235 | 87365.62     | 132383.488   | 11537.48     |
| ## ENSG00000153002 | 12.32658     | 15057.75     | 4685.486     | 48706.40     |
| ## ENSG00000108821 | 105587.05178 | 144513.59    | 85608.331    | 153367.07    |
| ## ENSG00000211592 | 46578.46232  | 46066.55     | 226484.144   | 22459.52     |
| ## ENSG00000164692 | 80117.86427  | 118772.23    | 42300.319    | 78995.28     |
| ## ENSG00000115414 | 77685.82928  | 161726.16    | 50572.508    | 40589.84     |
| ##                 | TCGA-A0-A03U | TCGA-A0-A03V | TCGA-A0-A0J2 | TCGA-A0-A0J3 |
| ## ENSG00000211896 | 7263.1010    | 4513.300     | 2.306408e+04 | 2219.448     |
| ## ENSG00000153002 | 204.6579     | 389.674      | 5.858075e+00 | 8789.687     |
| ## ENSG00000108821 | 414649.4986  | 287361.661   | 2.160709e+05 | 37945.296    |
| ## ENSG00000211592 | 26402.6704   | 31346.880    | 2.761998e+04 | 2645.297     |
| ## ENSG00000164692 | 313287.9474  | 195808.627   | 1.312995e+05 | 24360.090    |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000115414 | 498525.8734  | 170036.221   | 1.491282e+05 | 35202.102    |
| ##                 | TCGA-AO-A0J4 | TCGA-AO-A0J5 | TCGA-AO-A0J6 | TCGA-AO-A0J7 |
| ## ENSG00000211896 | 3.418523e+05 | 1718.669     | 4.655704e+04 | 2956.923     |
| ## ENSG00000153002 | 2.009639e+00 | 261095.999   | 2.168604e+00 | 415630.993   |
| ## ENSG00000108821 | 1.556686e+05 | 1640120.254  | 7.360098e+04 | 297140.771   |
| ## ENSG00000211592 | 1.632296e+05 | 31601.373    | 3.547981e+04 | 6230.767     |
| ## ENSG00000164692 | 1.165175e+05 | 1235683.608  | 5.065715e+04 | 217961.063   |
| ## ENSG00000115414 | 2.971981e+05 | 719234.767   | 1.555656e+05 | 148011.709   |
| ##                 | TCGA-AO-A0J8 | TCGA-AO-A0J9 | TCGA-AO-A0JA | TCGA-AO-A0JB |
| ## ENSG00000211896 | 15594.67407  | 1268.85963   | 11637.571    | 111682.3804  |
| ## ENSG00000153002 | 30.71658     | 65.43676     | 1402.967     | 11.5749      |
| ## ENSG00000108821 | 490579.17209 | 482293.44303 | 773201.640   | 194832.6251  |
| ## ENSG00000211592 | 15861.10702  | 38663.92176  | 67700.564    | 209555.9017  |
| ## ENSG00000164692 | 346748.78664 | 225293.64451 | 612154.617   | 83377.8844   |
| ## ENSG00000115414 | 404367.74855 | 198243.72480 | 633583.262   | 44547.9432   |
| ##                 | TCGA-AO-A0JC | TCGA-AO-A0JD | TCGA-AO-A0JE | TCGA-AO-A0JF |
| ## ENSG00000211896 | 464599.74485 | 20187.160    | 582986.4338  | 4692.29494   |
| ## ENSG00000153002 | 26.20262     | 1176.637     | 116.3534     | 95.38835     |
| ## ENSG00000108821 | 28762.83420  | 67201.862    | 957806.1150  | 751861.11216 |
| ## ENSG00000211592 | 336140.30912 | 21137.520    | 124059.1340  | 5679.66583   |
| ## ENSG00000164692 | 30927.82566  | 56912.359    | 732881.3042  | 707019.45534 |
| ## ENSG00000115414 | 34606.01843  | 86280.819    | 793781.7147  | 316590.88503 |
| ##                 | TCGA-AO-A0JG | TCGA-AO-A0JI | TCGA-AO-A0JJ | TCGA-AO-A0JL |
| ## ENSG00000211896 | 50224.11     | 36968.53     | 138600.957   | 24779.093    |
| ## ENSG00000153002 | 564432.66    | 1517439.96   | 4046.002     | 4297.561     |
| ## ENSG00000108821 | 300714.08    | 36912.35     | 371194.391   | 225059.485   |
| ## ENSG00000211592 | 41101.11     | 24913.90     | 375642.622   | 23107.540    |
| ## ENSG00000164692 | 242224.51    | 34462.41     | 293307.185   | 118477.962   |
| ## ENSG00000115414 | 85973.97     | 21225.74     | 161667.439   | 116941.805   |
| ##                 | TCGA-AO-A0JM | TCGA-AO-A124 | TCGA-AO-A125 | TCGA-AO-A126 |
| ## ENSG00000211896 | 16728.164    | 12843.77132  | 52.41296     | 5482.328     |
| ## ENSG00000153002 | 5543.984     | 12.84136     | 101.68114    | 2749.856     |
| ## ENSG00000108821 | 845344.800   | 55428.94323  | 17323.53046  | 1358441.700  |
| ## ENSG00000211592 | 12198.342    | 19771.68696  | 29.35126     | 8101.807     |
| ## ENSG00000164692 | 623664.299   | 36076.20576  | 11132.51201  | 759487.081   |
| ## ENSG00000115414 | 632458.966   | 47822.84308  | 39980.60340  | 214813.591   |
| ##                 | TCGA-AO-A128 | TCGA-AO-A129 | TCGA-AO-A12A | TCGA-AO-A12B |
| ## ENSG00000211896 | 158006.56240 | 4.421991e+05 | 9222.967     | 40697.22773  |
| ## ENSG00000153002 | 21.16798     | 3.055458e+00 | 1305.484     | 53.93763     |
| ## ENSG00000108821 | 90582.89623  | 1.890371e+05 | 310842.632   | 50650.00510  |
| ## ENSG00000211592 | 97426.72317  | 4.063657e+05 | 26116.388    | 42750.71044  |
| ## ENSG00000164692 | 71082.07707  | 1.059399e+05 | 205950.850   | 44299.49102  |
| ## ENSG00000115414 | 145821.83512 | 1.437033e+05 | 183746.728   | 38049.14683  |
| ##                 | TCGA-AO-A12D | TCGA-AO-A12E | TCGA-AO-A12F | TCGA-AO-A12G |
| ## ENSG00000211896 | 933679.02495 | 2843.6500    | 5761.05803   | 7484.884     |
| ## ENSG00000153002 | 44.36331     | 268.7421     | 17.91652     | 35736.479    |
| ## ENSG00000108821 | 512723.21305 | 123015.0943  | 254065.25714 | 390250.153   |
| ## ENSG00000211592 | 615486.37663 | 23546.8265   | 11067.03638  | 22712.023    |
| ## ENSG00000164692 | 410687.60769 | 87443.6703   | 198170.18391 | 287305.695   |
| ## ENSG00000115414 | 506881.19932 | 125513.3211  | 368427.32051 | 220670.392   |
| ##                 | TCGA-AO-A12H | TCGA-AO-A1K0 | TCGA-AO-A1KP | TCGA-AO-A1KQ |
| ## ENSG00000211896 | 1714.247     | 6652.956     | 1.066396e+03 | 88473.93208  |
| ## ENSG00000153002 | 3888103.214  | 2276.489     | 1.699436e+00 | 10.51837     |
| ## ENSG00000108821 | 69755.414    | 55215.575    | 2.845748e+05 | 322643.02935 |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000211592 | 1543.520     | 103364.962   | 3.160101e+03 | 108092.00196 |
| ## ENSG00000164692 | 61020.417    | 56174.010    | 1.825109e+05 | 179139.62895 |
| ## ENSG00000115414 | 82231.616    | 28633.445    | 1.524334e+05 | 122901.86317 |
| ## TCGA-AO-A1KR    | TCGA-AO-A1KS | TCGA-AO-A1KT | TCGA-AQ-A04H |              |
| ## ENSG00000211896 | 76639.50020  | 1902.6369    | 30430.161    | 6173.043     |
| ## ENSG00000153002 | 28.41733     | 581.6268     | 212.239      | 1068.257     |
| ## ENSG00000108821 | 60748.12517  | 84633.8770   | 403774.383   | 184751.278   |
| ## ENSG00000211592 | 39282.89449  | 2953.5489    | 18030.811    | 5828.755     |
| ## ENSG00000164692 | 34145.44779  | 79935.4476   | 323738.902   | 126963.261   |
| ## ENSG00000115414 | 14295.94512  | 217041.6272  | 411050.696   | 215940.670   |
| ## TCGA-AQ-A04J    | TCGA-AQ-A04L | TCGA-AQ-A0Y5 | TCGA-AQ-A1H2 |              |
| ## ENSG00000211896 | 170296.27838 | 1578.1019    | 127.80224    | 564.8244     |
| ## ENSG00000153002 | 27.80776     | 252.9605     | 9063.62242   | 86366.4701   |
| ## ENSG00000108821 | 135276.26453 | 482503.4964  | 708458.58656 | 135285.3629  |
| ## ENSG00000211592 | 153655.65023 | 2448.3787    | 85.51474     | 288.7824     |
| ## ENSG00000164692 | 143182.16571 | 364017.0527  | 748359.19909 | 107419.9826  |
| ## ENSG00000115414 | 195305.49797 | 443055.5903  | 684072.79063 | 114082.5045  |
| ## TCGA-AQ-A1H3    | TCGA-AQ-A54N | TCGA-AQ-A540 | TCGA-AQ-A7U7 |              |
| ## ENSG00000211896 | 42625.3829   | 42337.321673 | 21544.773    | 164298.43    |
| ## ENSG00000153002 | 190.1741     | 2.131359     | 4120.389     | 52897.55     |
| ## ENSG00000108821 | 323404.3204  | 2832.576546  | 368191.292   | 957625.10    |
| ## ENSG00000211592 | 41619.6810   | 13792.026206 | 41789.091    | 81699.26     |
| ## ENSG00000164692 | 252250.7335  | 1037.971992  | 203279.922   | 602319.62    |
| ## ENSG00000115414 | 341428.5261  | 7709.126686  | 128508.899   | 172797.84    |
| ## TCGA-AR-AOTP    | TCGA-AR-AOTQ | TCGA-AR-AOTR | TCGA-AR-AOTS |              |
| ## ENSG00000211896 | 2.031067e+02 | 124592.3630  | 42656.38     | 1.621380e+05 |
| ## ENSG00000153002 | 3.924768e+00 | 108.2023     | 1051819.37   | 3.321189e+00 |
| ## ENSG00000108821 | 6.010684e+04 | 158572.2304  | 14606.93     | 2.048750e+05 |
| ## ENSG00000211592 | 2.178246e+02 | 128800.6322  | 31344.44     | 1.690859e+05 |
| ## ENSG00000164692 | 4.900269e+04 | 122218.4490  | 14626.67     | 1.458700e+05 |
| ## ENSG00000115414 | 2.040938e+05 | 214630.4426  | 9035.80      | 1.212209e+05 |
| ## TCGA-AR-AOTT    | TCGA-AR-AOTU | TCGA-AR-AOTV | TCGA-AR-AOTW |              |
| ## ENSG00000211896 | 1223360.9519 | 28211.725377 | 126419.25    | 722118.9650  |
| ## ENSG00000153002 | 314.5797     | 5.394383     | 51711.20     | 673.2202     |
| ## ENSG00000108821 | 262458.9987  | 31184.929616 | 53045.63     | 167681.2788  |
| ## ENSG00000211592 | 744139.4042  | 25894.837768 | 84792.25     | 175538.8785  |
| ## ENSG00000164692 | 224538.2321  | 20093.178573 | 38767.78     | 123918.9399  |
| ## ENSG00000115414 | 459816.0448  | 45382.946352 | 66488.02     | 193690.5899  |
| ## TCGA-AR-AOTX    | TCGA-AR-AOTY | TCGA-AR-AOTZ | TCGA-AR-AOU0 |              |
| ## ENSG00000211896 | 171754.71442 | 47953.8784   | 789.35412    | 596884.43935 |
| ## ENSG00000153002 | 91.31369     | 253.8446     | 50.88504     | 5.43673      |
| ## ENSG00000108821 | 444610.85692 | 127424.7571  | 357992.76352 | 106438.12313 |
| ## ENSG00000211592 | 128193.56579 | 33792.8488   | 564.18783    | 534447.94592 |
| ## ENSG00000164692 | 300004.33416 | 100510.2227  | 237578.41513 | 83712.59219  |
| ## ENSG00000115414 | 293800.42810 | 91384.9456   | 306974.15464 | 123577.95779 |
| ## TCGA-AR-AOU2    | TCGA-AR-AOU3 | TCGA-AR-AOU4 | TCGA-AR-A1AH |              |
| ## ENSG00000211896 | 100787.384   | 8300.0015    | 1.238701e+05 | 1.085721e+04 |
| ## ENSG00000153002 | 2815.651     | 345.7702     | 2.935449e+00 | 1.875975e+00 |
| ## ENSG00000108821 | 128814.594   | 101563.9321  | 1.861192e+05 | 1.364087e+05 |
| ## ENSG00000211592 | 36543.788    | 4138.6267    | 7.435199e+04 | 1.094819e+04 |
| ## ENSG00000164692 | 90298.110    | 79034.2734   | 1.323741e+05 | 1.159784e+05 |
| ## ENSG00000115414 | 121800.746   | 144930.7954  | 3.104599e+05 | 1.277755e+05 |
| ## TCGA-AR-A1AI    | TCGA-AR-A1AJ | TCGA-AR-A1AK | TCGA-AR-A1AL |              |
| ## ENSG00000211896 | 1341365.68   | 232635.69596 | 12792.3345   | 4273.209     |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000153002 | 0.00         | 25.41289     | 20.6566      | 191.939      |
| ## ENSG00000108821 | 51803.68     | 224194.55035 | 115991.7016  | 355326.446   |
| ## ENSG00000211592 | 593526.75    | 141317.01632 | 22443.8828   | 29820.841    |
| ## ENSG00000164692 | 41044.80     | 163593.95587 | 101509.4609  | 312903.192   |
| ## ENSG00000115414 | 244451.20    | 209363.58763 | 102231.4581  | 172967.827   |
| ##                 | TCGA-AR-A1AM | TCGA-AR-A1AN | TCGA-AR-A1AO | TCGA-AR-A1AP |
| ## ENSG00000211896 | 29345.89     | 30000.0842   | 103074.52067 | 7129.33892   |
| ## ENSG00000153002 | 14913.38     | 156.2651     | 34.34058     | 52.35162     |
| ## ENSG00000108821 | 393937.18    | 669999.0740  | 935426.63269 | 342838.86706 |
| ## ENSG00000211592 | 123812.78    | 4144.2991    | 81117.48599  | 12216.96462  |
| ## ENSG00000164692 | 268807.02    | 573419.7816  | 649739.77224 | 249842.16161 |
| ## ENSG00000115414 | 106546.68    | 522678.5518  | 261681.11675 | 478805.54497 |
| ##                 | TCGA-AR-A1AQ | TCGA-AR-A1AR | TCGA-AR-A1AS | TCGA-AR-A1AT |
| ## ENSG00000211896 | 2.854091e+06 | 9.374953e+03 | 401.5831     | 267903.1374  |
| ## ENSG00000153002 | 2.497665e+01 | 6.340854e+00 | 0.0000       | 17.2656      |
| ## ENSG00000108821 | 1.991860e+05 | 2.573918e+05 | 376149.9086  | 266209.6697  |
| ## ENSG00000211592 | 1.274895e+06 | 9.478943e+03 | 1975.8401    | 144956.2312  |
| ## ENSG00000164692 | 1.561332e+05 | 2.129050e+05 | 269599.5262  | 210237.4687  |
| ## ENSG00000115414 | 1.135480e+05 | 3.720401e+05 | 490883.3480  | 2161759.7223 |
| ##                 | TCGA-AR-A1AU | TCGA-AR-A1AV | TCGA-AR-A1AW | TCGA-AR-A1AX |
| ## ENSG00000211896 | 10187.627    | 168.0167     | 1.699157e+06 | 193240.0018  |
| ## ENSG00000153002 | 3091.245     | 335004.8339  | 3.779498e+00 | 303.8249     |
| ## ENSG00000108821 | 363771.172   | 374041.2312  | 1.719927e+05 | 327365.2890  |
| ## ENSG00000211592 | 32904.907    | 245.7440     | 1.093443e+06 | 166866.3412  |
| ## ENSG00000164692 | 291025.797   | 294610.1711  | 1.255238e+05 | 256162.2236  |
| ## ENSG00000115414 | 332946.355   | 428025.6165  | 2.351509e+05 | 269393.8426  |
| ##                 | TCGA-AR-A1AY | TCGA-AR-A24H | TCGA-AR-A24K | TCGA-AR-A24L |
| ## ENSG00000211896 | 2918.17978   | 19328.32212  | 2072.061     | 1653.528     |
| ## ENSG00000153002 | 25.54635     | 33.15423     | 74457.118    | 1206.005     |
| ## ENSG00000108821 | 172855.48087 | 95184.00870  | 259950.193   | 468761.410   |
| ## ENSG00000211592 | 4146.36993   | 11675.61615  | 4644.142     | 16473.089    |
| ## ENSG00000164692 | 138192.02480 | 87728.45197  | 224797.140   | 496464.256   |
| ## ENSG00000115414 | 316869.12695 | 153166.01485 | 193445.163   | 662731.981   |
| ##                 | TCGA-AR-A24M | TCGA-AR-A24N | TCGA-AR-A24O | TCGA-AR-A24P |
| ## ENSG00000211896 | 3226.007     | 229523.48115 | 20465.1887   | 3961.678     |
| ## ENSG00000153002 | 1049.081     | 17.01463     | 100.2909     | 3684.541     |
| ## ENSG00000108821 | 381918.474   | 431487.12993 | 644662.2187  | 607219.169   |
| ## ENSG00000211592 | 25239.502    | 149235.31284 | 35505.4768   | 46992.370    |
| ## ENSG00000164692 | 399104.210   | 404112.91170 | 515151.5981  | 528159.280   |
| ## ENSG00000115414 | 430489.275   | 485391.79545 | 382536.1391  | 453429.377   |
| ##                 | TCGA-AR-A24Q | TCGA-AR-A24R | TCGA-AR-A24S | TCGA-AR-A24T |
| ## ENSG00000211896 | 670103.36179 | 21041.8790   | 1.095149e+04 | 3386.9907    |
| ## ENSG00000153002 | 75.59479     | 431.2783     | 8.884391e+00 | 151.2699     |
| ## ENSG00000108821 | 319165.08579 | 221941.3256  | 3.508898e+05 | 785645.9471  |
| ## ENSG00000211592 | 221045.39073 | 18401.2070   | 1.263360e+04 | 32416.2597   |
| ## ENSG00000164692 | 266113.91146 | 215114.9309  | 3.337325e+05 | 699959.2074  |
| ## ENSG00000115414 | 526309.60838 | 262301.4225  | 7.176448e+05 | 466862.7363  |
| ##                 | TCGA-AR-A24U | TCGA-AR-A24V | TCGA-AR-A24W | TCGA-AR-A24X |
| ## ENSG00000211896 | 652622.9983  | 2.445647e+03 | 7928.485     | 2.086091e+04 |
| ## ENSG00000153002 | 120.2687     | 1.924444e+01 | 22882.371    | 1.324082e+00 |
| ## ENSG00000108821 | 241067.7320  | 1.169618e+06 | 268359.246   | 3.933820e+05 |
| ## ENSG00000211592 | 561820.0936  | 1.103829e+04 | 76964.186    | 4.041627e+04 |
| ## ENSG00000164692 | 220852.9257  | 1.186489e+06 | 236278.456   | 3.674459e+05 |
| ## ENSG00000115414 | 574147.2013  | 1.437369e+06 | 150287.953   | 4.224840e+05 |

|    |                 |              |              |              |              |
|----|-----------------|--------------|--------------|--------------|--------------|
| ## | TCGA-AR-A24Z    | TCGA-AR-A250 | TCGA-AR-A251 | TCGA-AR-A252 |              |
| ## | ENSG00000211896 | 1024.155     | 111679.56354 | 5.997014e+04 | 869498.4     |
| ## | ENSG00000153002 | 8932.268     | 12.76638     | 7.153382e+00 | 972273.2     |
| ## | ENSG00000108821 | 105336.915   | 760618.66019 | 9.618151e+04 | 103309.6     |
| ## | ENSG00000211592 | 4208.724     | 68651.19649  | 3.820097e+04 | 506177.8     |
| ## | ENSG00000164692 | 106543.238   | 662798.41821 | 9.346990e+04 | 104542.0     |
| ## | ENSG00000115414 | 214846.609   | 796878.71929 | 2.091072e+05 | 180569.8     |
| ## | TCGA-AR-A254    | TCGA-AR-A255 | TCGA-AR-A256 | TCGA-AR-A2LE |              |
| ## | ENSG00000211896 | 93144.2914   | 3694.3501    | 1211.79236   | 2335.74710   |
| ## | ENSG00000153002 | 23.7325      | 131.1649     | 13.29813     | 35.19262     |
| ## | ENSG00000108821 | 520536.3299  | 548526.3853  | 106833.04442 | 151101.46136 |
| ## | ENSG00000211592 | 78519.3209   | 24060.6189   | 1663.09775   | 14796.54081  |
| ## | ENSG00000164692 | 422790.0919  | 487977.0746  | 84508.80374  | 129756.48671 |
| ## | ENSG00000115414 | 611687.0917  | 494980.0410  | 189527.48415 | 154887.92639 |
| ## | TCGA-AR-A2LH    | TCGA-AR-A2LJ | TCGA-AR-A2LK | TCGA-AR-A2LM |              |
| ## | ENSG00000211896 | 178348.2528  | 39995.5885   | 42779.237    | 5133.239     |
| ## | ENSG00000153002 | 770.2152     | 110.8303     | 719.974      | 1281.308     |
| ## | ENSG00000108821 | 151921.7547  | 797036.0776  | 257668.114   | 694179.005   |
| ## | ENSG00000211592 | 229418.7915  | 177163.4081  | 25774.136    | 15907.871    |
| ## | ENSG00000164692 | 108446.5919  | 452013.1111  | 251108.091   | 613829.366   |
| ## | ENSG00000115414 | 69596.9916   | 127162.4377  | 335991.005   | 385067.898   |
| ## | TCGA-AR-A2LN    | TCGA-AR-A2LO | TCGA-AR-A2LQ | TCGA-AR-A5QM |              |
| ## | ENSG00000211896 | 34250.86779  | 23510.30     | 23716.8090   | 7068.0531    |
| ## | ENSG00000153002 | 25.45736     | 12850.00     | 345.9683     | 580.4626     |
| ## | ENSG00000108821 | 671152.47371 | 380781.31    | 2497819.2077 | 551654.8074  |
| ## | ENSG00000211592 | 121372.65225 | 74935.27     | 200874.8994  | 193782.3600  |
| ## | ENSG00000164692 | 565243.15773 | 260306.45    | 1657919.7768 | 351997.5673  |
| ## | ENSG00000115414 | 332653.99993 | 126407.65    | 527187.4883  | 128197.0004  |
| ## | TCGA-AR-A5QN    | TCGA-AR-A5QP | TCGA-AR-A5QQ | TCGA-B6-A0I1 |              |
| ## | ENSG00000211896 | 9417.5312    | 8438.44840   | 461701.56670 | 92363.70817  |
| ## | ENSG00000153002 | 790.5816     | 20.77157     | 27.74552     | 20.77477     |
| ## | ENSG00000108821 | 369148.3252  | 514046.38918 | 309310.01151 | 35104.83897  |
| ## | ENSG00000211592 | 15271.3884   | 174509.19005 | 343374.21236 | 55847.08834  |
| ## | ENSG00000164692 | 269447.8251  | 382033.74456 | 171957.99010 | 18566.31841  |
| ## | ENSG00000115414 | 88059.8114   | 161872.80831 | 247463.78035 | 19973.58302  |
| ## | TCGA-B6-A0I2    | TCGA-B6-A0I5 | TCGA-B6-A0I6 | TCGA-B6-A0I8 |              |
| ## | ENSG00000211896 | 1.341555e+06 | 14578.696    | 36852.99021  | 1780.829     |
| ## | ENSG00000153002 | 1.263730e+00 | 109.161      | 48.90829     | 450.731      |
| ## | ENSG00000108821 | 3.927672e+04 | 405847.553   | 441320.93971 | 419992.038   |
| ## | ENSG00000211592 | 8.689835e+05 | 38453.998    | 31925.18214  | 12569.209    |
| ## | ENSG00000164692 | 4.307422e+04 | 212775.964   | 326845.72752 | 359625.015   |
| ## | ENSG00000115414 | 3.480059e+04 | 181322.933   | 432494.78335 | 226381.859   |
| ## | TCGA-B6-A0I9    | TCGA-B6-A0IA | TCGA-B6-A0IB | TCGA-B6-A0IC |              |
| ## | ENSG00000211896 | 285209.83084 | 905.94285    | 1284.756     | 944.5010     |
| ## | ENSG00000153002 | 26.85592     | 27.07981     | 14003.742    | 1116.4027    |
| ## | ENSG00000108821 | 124635.70847 | 145450.60134 | 228397.670   | 13301.6159   |
| ## | ENSG00000211592 | 158089.51695 | 640.06832    | 1771.081     | 495.2559     |
| ## | ENSG00000164692 | 100200.28994 | 73947.58497  | 119440.339   | 9714.6848    |
| ## | ENSG00000115414 | 167631.16411 | 52399.43892  | 80092.721    | 25948.2158   |
| ## | TCGA-B6-A0IE    | TCGA-B6-A0IG | TCGA-B6-A0IH | TCGA-B6-A0IJ |              |
| ## | ENSG00000211896 | 46670.55     | 16963.1655   | 597731.737   | 1.203816e+06 |
| ## | ENSG00000153002 | 49357.31     | 70.6944      | 2076.504     | 2.219515e+01 |
| ## | ENSG00000108821 | 224209.40    | 433540.8402  | 657828.794   | 4.473907e+04 |
| ## | ENSG00000211592 | 895391.25    | 93150.7846   | 455777.381   | 9.320011e+05 |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000164692 | 128336.96    | 265710.5838  | 473758.131   | 3.066814e+04 |
| ## ENSG00000115414 | 35403.84     | 231072.9450  | 128243.100   | 2.302437e+05 |
| ## TCGA-B6-A0IK    | TCGA-B6-A0IM | TCGA-B6-A0IN | TCGA-B6-A0IO |              |
| ## ENSG00000211896 | 79624.078    | 3901.1567    | 74659.84     | 1081.580     |
| ## ENSG00000153002 | 9350.511     | 10271.3358   | 198885.94    | 10290.629    |
| ## ENSG00000108821 | 185715.082   | 503022.3220  | 281797.53    | 164631.488   |
| ## ENSG00000211592 | 64123.699    | 695.1126     | 157489.77    | 3837.456     |
| ## ENSG00000164692 | 139620.849   | 420613.9101  | 187203.08    | 108460.257   |
| ## ENSG00000115414 | 184481.139   | 430380.1693  | 127920.33    | 73187.750    |
| ## TCGA-B6-A0IP    | TCGA-B6-A0IQ | TCGA-B6-A0RE | TCGA-B6-A0RG |              |
| ## ENSG00000211896 | 31433.75     | 5.163243e+05 | 201060.6030  | 19302.45     |
| ## ENSG00000153002 | 14180.00     | 8.441825e+00 | 24.6708      | 19331.91     |
| ## ENSG00000108821 | 228788.57    | 1.054653e+05 | 315166.2817  | 478847.83    |
| ## ENSG00000211592 | 60724.50     | 3.014031e+05 | 121914.5239  | 14887.81     |
| ## ENSG00000164692 | 165658.09    | 9.756294e+04 | 208799.7265  | 299073.12    |
| ## ENSG00000115414 | 109513.21    | 3.343961e+04 | 180784.4215  | 266009.72    |
| ## TCGA-B6-A0RH    | TCGA-B6-A0RI | TCGA-B6-A0RL | TCGA-B6-A0RM |              |
| ## ENSG00000211896 | 80100.13430  | 3165.0292    | 1452.3396    | 16540.157    |
| ## ENSG00000153002 | 12.31508     | 68.5841      | 207.4771     | 118.693      |
| ## ENSG00000108821 | 699379.18222 | 736008.9880  | 7546.0779    | 95274.458    |
| ## ENSG00000211592 | 113274.12287 | 3007.5397    | 769.8281     | 8835.816     |
| ## ENSG00000164692 | 444572.56020 | 489106.2317  | 3315.6281    | 69146.438    |
| ## ENSG00000115414 | 456552.29290 | 935975.6658  | 7715.1036    | 356599.408   |
| ## TCGA-B6-A0RN    | TCGA-B6-A0RO | TCGA-B6-A0RP | TCGA-B6-A0RQ |              |
| ## ENSG00000211896 | 7.516402e+03 | 1162.8680    | 28061.32     | 3813.383     |
| ## ENSG00000153002 | 1.364551e+01 | 251.4791     | 882005.69    | 1260.535     |
| ## ENSG00000108821 | 1.167777e+06 | 88316.4335   | 688857.48    | 60836.500    |
| ## ENSG00000211592 | 6.000272e+04 | 4286.7380    | 23829.04     | 19554.997    |
| ## ENSG00000164692 | 8.916192e+05 | 93659.9189   | 515041.32    | 40127.710    |
| ## ENSG00000115414 | 4.901012e+05 | 48855.6148   | 456817.04    | 16091.988    |
| ## TCGA-B6-A0RS    | TCGA-B6-A0RT | TCGA-B6-A0RU | TCGA-B6-A0RV |              |
| ## ENSG00000211896 | 92414.92599  | 658133.9979  | 6154.1899    | 5784.508     |
| ## ENSG00000153002 | 38.49601     | 51.8794      | 403.5534     | 3736.570     |
| ## ENSG00000108821 | 201866.08707 | 127594.1487  | 112635.0617  | 91619.872    |
| ## ENSG00000211592 | 109871.99248 | 602153.6904  | 27280.6002   | 59039.529    |
| ## ENSG00000164692 | 155289.41232 | 89845.3983   | 108302.6828  | 79428.274    |
| ## ENSG00000115414 | 153208.00295 | 129190.2510  | 83036.9395   | 53606.775    |
| ## TCGA-B6-A0WS    | TCGA-B6-A0WT | TCGA-B6-A0WV | TCGA-B6-A0WW |              |
| ## ENSG00000211896 | 157592.60282 | 309829.22    | 428.8389     | 19613.92     |
| ## ENSG00000153002 | 50.36948     | 34761.07     | 55372.1997   | 102780.20    |
| ## ENSG00000108821 | 516703.59052 | 729923.44    | 187006.8427  | 534865.43    |
| ## ENSG00000211592 | 137346.77128 | 213506.30    | 767.8934     | 14165.69     |
| ## ENSG00000164692 | 399578.36548 | 599503.21    | 144405.3003  | 391469.93    |
| ## ENSG00000115414 | 260867.12104 | 526880.88    | 210916.6793  | 310157.71    |
| ## TCGA-B6-A0WX    | TCGA-B6-A0WY | TCGA-B6-A0WZ | TCGA-B6-A0X0 |              |
| ## ENSG00000211896 | 6.024776e+04 | 9575.48418   | 1227.36521   | 2478.12042   |
| ## ENSG00000153002 | 5.884624e+00 | 36.37246     | 16.55805     | 17.65043     |
| ## ENSG00000108821 | 1.056062e+06 | 251585.73622 | 325824.06857 | 113917.64253 |
| ## ENSG00000211592 | 1.617801e+05 | 13162.50195  | 1261.51618   | 3501.84538   |
| ## ENSG00000164692 | 7.341715e+05 | 205094.79900 | 209360.97735 | 71710.16843  |
| ## ENSG00000115414 | 2.684663e+05 | 122789.97479 | 172592.79978 | 88001.51565  |
| ## TCGA-B6-A0X1    | TCGA-B6-A0X4 | TCGA-B6-A0X5 | TCGA-B6-A0X7 |              |
| ## ENSG00000211896 | 22514.949918 | 1.054567e+02 | 6133.65537   | 5656.3662    |
| ## ENSG00000153002 | 1.467346     | 4.202549e+06 | 64.43436     | 277.0782     |

```

## ENSG00000108821 34774.621878 4.311347e+04 133101.56067 1174933.3412
## ENSG00000211592 14120.266101 2.292538e+01 3877.21367 46663.9421
## ENSG00000164692 28529.599273 3.191213e+04 98246.28957 688461.6802
## ENSG00000115414 75847.090800 1.054644e+05 101449.42071 183806.4376
## TCGA-B6-A1KC TCGA-B6-A1KF TCGA-B6-A1KI TCGA-B6-A1KN
## ENSG00000211896 675.5509 6.489359e+02 1365.99095 36076.17910
## ENSG00000153002 755.4190 6.947922e+00 42.32648 29.24048
## ENSG00000108821 49342.6727 1.718819e+05 335565.10457 217969.53867
## ENSG00000211592 807.0005 7.563508e+03 4053.33766 32394.80207
## ENSG00000164692 46472.4132 1.610945e+05 282223.73508 177082.56881
## ENSG00000115414 48442.4927 1.333918e+05 196375.62880 245222.40149
## TCGA-B6-A2IU TCGA-B6-A3ZX TCGA-B6-A400 TCGA-B6-A401
## ENSG00000211896 7674.8094 1.087378e+06 1.751609e+04 7.488659e+04
## ENSG00000153002 125.6531 1.641071e+00 1.514905e+00 4.439881e+00
## ENSG00000108821 187380.6320 8.542594e+04 3.781467e+05 6.388137e+05
## ENSG00000211592 20453.5267 6.138786e+05 7.245032e+03 2.639687e+04
## ENSG00000164692 129494.4588 5.177250e+04 2.324492e+05 2.895744e+05
## ENSG00000115414 77507.9962 2.744116e+04 1.932647e+05 4.563772e+05
## TCGA-B6-A402 TCGA-B6-A408 TCGA-B6-A409 TCGA-B6-A40B
## ENSG00000211896 3.100148e+04 1.374694e+06 63498.34361 10328.107
## ENSG00000153002 2.161738e+00 1.749276e+00 39.49261 6109.785
## ENSG00000108821 1.352210e+05 4.100818e+05 165066.60372 1096938.469
## ENSG00000211592 2.259665e+04 5.967611e+05 80518.69694 38346.755
## ENSG00000164692 8.401270e+04 2.346120e+05 94809.24373 557594.656
## ENSG00000115414 1.066872e+05 2.323379e+05 79784.71226 307407.505
## TCGA-B6-A40C TCGA-BH-A0AU TCGA-BH-A0AV TCGA-BH-A0AW
## ENSG00000211896 119654.04007 108964.48972 1.068839e+05 225931.1534
## ENSG00000153002 6.53395 48.48498 1.081583e+01 127.6572
## ENSG00000108821 671652.26173 726556.28624 8.844459e+05 352297.5825
## ENSG00000211592 63167.32024 54496.01900 7.716737e+04 257914.7943
## ENSG00000164692 369404.82358 572844.56491 6.988272e+05 244734.5839
## ENSG00000115414 299476.31755 575503.52545 1.108819e+06 286511.5798
## TCGA-BH-A0AY TCGA-BH-A0AZ TCGA-BH-A0BO TCGA-BH-A0B1
## ENSG00000211896 23866.912 2839.165 4.001893e+04 22899.5290
## ENSG00000153002 8489.677 1111.322 3.025189e+01 168.8564
## ENSG00000108821 36667.260 194376.195 1.512592e+06 425504.2024
## ENSG00000211592 268068.207 32926.245 4.149479e+04 13223.7561
## ENSG00000164692 67471.520 154078.349 9.339548e+05 375793.4704
## ENSG00000115414 35276.471 55173.572 5.148245e+05 208825.4400
## TCGA-BH-A0B2 TCGA-BH-A0B3 TCGA-BH-A0B4 TCGA-BH-A0B5
## ENSG00000211896 65509.167 8.603800e+05 34185.31390 928.5059
## ENSG00000153002 2937.978 2.099743e+00 59.90099 433.2147
## ENSG00000108821 894248.252 3.280491e+05 679034.00079 92945.6853
## ENSG00000211592 66586.253 8.820021e+05 20164.85170 1069.8290
## ENSG00000164692 638967.385 2.157129e+05 487049.51025 149218.6898
## ENSG00000115414 365372.949 9.939478e+05 419925.91216 36947.4024
## TCGA-BH-A0B7 TCGA-BH-A0B8 TCGA-BH-A0B9 TCGA-BH-A0BA
## ENSG00000211896 167200.57036 3227.6320 39500.15628 193526.448
## ENSG00000153002 19.65062 109.6833 29.82071 1099.037
## ENSG00000108821 310879.34929 61942.9803 24219.09100 176893.876
## ENSG00000211592 115028.17582 4463.5757 45733.26855 184426.672
## ENSG00000164692 257587.80519 107710.3476 20768.65990 143620.662
## ENSG00000115414 463188.49311 53647.1768 37365.34457 92301.187
## TCGA-BH-A0BC TCGA-BH-A0BD TCGA-BH-A0BF TCGA-BH-A0BG

```

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000211896 | 77531.802    | 6.164209e+04 | 5.014103e+05 | 5.944691e+04 |
| ## ENSG00000153002 | 1200.376     | 7.653177e+00 | 1.452053e+01 | 8.054591e-01 |
| ## ENSG00000108821 | 475329.821   | 3.938657e+05 | 1.382905e+06 | 1.313841e+05 |
| ## ENSG00000211592 | 69546.410    | 5.073886e+04 | 3.943747e+05 | 7.648398e+04 |
| ## ENSG00000164692 | 338384.198   | 2.924194e+05 | 1.087950e+06 | 9.882661e+04 |
| ## ENSG00000115414 | 208457.087   | 2.171555e+05 | 1.164551e+06 | 1.165846e+05 |
| ##                 | TCGA-BH-AOBJ | TCGA-BH-AOBL | TCGA-BH-AOBM | TCGA-BH-AOB0 |
| ## ENSG00000211896 | 16771.955    | 52560.84197  | 6022.619     | 34521.21     |
| ## ENSG00000153002 | 5646.825     | 16.81783     | 4586.597     | 1248.05      |
| ## ENSG00000108821 | 460576.588   | 532490.56880 | 359912.806   | 415404.46    |
| ## ENSG00000211592 | 100454.643   | 51074.29190  | 113075.472   | 79685.04     |
| ## ENSG00000164692 | 393567.791   | 421765.62213 | 232061.818   | 324394.94    |
| ## ENSG00000115414 | 289184.839   | 544535.79221 | 127407.339   | 159845.98    |
| ##                 | TCGA-BH-AOBP | TCGA-BH-AOBQ | TCGA-BH-AOBR | TCGA-BH-AOBS |
| ## ENSG00000211896 | 4811.274     | 29143.895    | 6829.71997   | 5365.544     |
| ## ENSG00000153002 | 1364.533     | 8257.014     | 54.54685     | 2460.053     |
| ## ENSG00000108821 | 514134.977   | 802727.713   | 911690.34146 | 4180.061     |
| ## ENSG00000211592 | 15678.517    | 90315.610    | 5159.22274   | 159605.295   |
| ## ENSG00000164692 | 327136.692   | 567587.508   | 645397.17336 | 9542.076     |
| ## ENSG00000115414 | 353246.673   | 478088.079   | 791158.85249 | 4255.918     |
| ##                 | TCGA-BH-AOBT | TCGA-BH-AOBV | TCGA-BH-AOBW | TCGA-BH-AOBZ |
| ## ENSG00000211896 | 4409.86893   | 5658.226     | 137879.1     | 8391.326     |
| ## ENSG00000153002 | 12.96702     | 3093.095     | 0.0          | 6312.820     |
| ## ENSG00000108821 | 386810.66468 | 279136.478   | 115289.1     | 60972.393    |
| ## ENSG00000211592 | 10222.33769  | 43116.607    | 142589.7     | 46536.877    |
| ## ENSG00000164692 | 242457.42505 | 193430.496   | 124726.2     | 105191.123   |
| ## ENSG00000115414 | 161783.08180 | 47904.168    | 246249.8     | 44875.812    |
| ##                 | TCGA-BH-AOC0 | TCGA-BH-AOC1 | TCGA-BH-AOC3 | TCGA-BH-AOC7 |
| ## ENSG00000211896 | 66573.741    | 8847.1251    | 9942.6085    | 11217.310    |
| ## ENSG00000153002 | 2848.586     | 343.6875     | 252.8151     | 6477.015     |
| ## ENSG00000108821 | 12615.483    | 654910.8686  | 639349.8251  | 462374.035   |
| ## ENSG00000211592 | 108224.930   | 29635.4327   | 29118.4174   | 16204.103    |
| ## ENSG00000164692 | 21191.420    | 455265.8511  | 514286.9797  | 380798.403   |
| ## ENSG00000115414 | 11019.686    | 575369.4021  | 234978.5780  | 362354.671   |
| ##                 | TCGA-BH-AODD | TCGA-BH-AODE | TCGA-BH-AODG | TCGA-BH-AODH |
| ## ENSG00000211896 | 1570.3508    | 9290.278     | 8376.7356    | 17741.98     |
| ## ENSG00000153002 | 386.5283     | 3624.868     | 328.5145     | 31131.86     |
| ## ENSG00000108821 | 94786.1694   | 346279.778   | 32334.5518   | 115251.53    |
| ## ENSG00000211592 | 2029.5923    | 14694.284    | 72078.6743   | 125706.00    |
| ## ENSG00000164692 | 173887.9659  | 233908.862   | 43903.7740   | 114113.58    |
| ## ENSG00000115414 | 95087.2277   | 242996.378   | 14057.2023   | 24903.29     |
| ##                 | TCGA-BH-AODI | TCGA-BH-AODK | TCGA-BH-AODL | TCGA-BH-AOD0 |
| ## ENSG00000211896 | 201175.4639  | 2819.50503   | 8517.984     | 40887.36     |
| ## ENSG00000153002 | 196.3635     | 96.23911     | 1347.478     | 10349.99     |
| ## ENSG00000108821 | 1796313.3688 | 46087.25335  | 112025.007   | 12451.15     |
| ## ENSG00000211592 | 153707.8682  | 15772.68710  | 70192.486    | 214075.03    |
| ## ENSG00000164692 | 1188626.2535 | 49462.38885  | 123249.793   | 22437.89     |
| ## ENSG00000115414 | 855755.2662  | 24464.28128  | 42357.445    | 10564.81     |
| ##                 | TCGA-BH-AODP | TCGA-BH-AODQ | TCGA-BH-AODS | TCGA-BH-AODT |
| ## ENSG00000211896 | 5200.399     | 11401.18     | 199830.287   | 2213.391     |
| ## ENSG00000153002 | 10833.169    | 10570.42     | 2543.276     | 1961.018     |
| ## ENSG00000108821 | 7816.801     | 804981.49    | 515263.550   | 97955.488    |
| ## ENSG00000211592 | 104186.209   | 36565.15     | 141748.935   | 39290.814    |
| ## ENSG00000164692 | 24497.647    | 662222.40    | 366947.495   | 81104.465    |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000115414 | 15319.771    | 573774.02    | 302234.539   | 23294.113    |
| ##                 | TCGA-BH-A0DV | TCGA-BH-A0DX | TCGA-BH-A0DZ | TCGA-BH-A0E0 |
| ## ENSG00000211896 | 5583.6897    | 1.892523e+04 | 68646.68475  | 7426.392     |
| ## ENSG00000153002 | 369.6868     | 3.389015e+01 | 14.82223     | 468.703      |
| ## ENSG00000108821 | 1487010.5768 | 1.309201e+06 | 903718.73310 | 42267.052    |
| ## ENSG00000211592 | 48143.5720   | 2.424888e+04 | 43298.20223  | 52424.308    |
| ## ENSG00000164692 | 1094943.0993 | 7.717493e+05 | 741682.12212 | 37963.728    |
| ## ENSG00000115414 | 623156.7898  | 5.380487e+05 | 918807.76256 | 13904.451    |
| ##                 | TCGA-BH-A0E1 | TCGA-BH-A0E2 | TCGA-BH-A0E6 | TCGA-BH-A0E7 |
| ## ENSG00000211896 | 5197.226     | 56223.06     | 695759.6955  | 1022.15055   |
| ## ENSG00000153002 | 1277.715     | 44781.19     | 411.2199     | 35.60122     |
| ## ENSG00000108821 | 9323.763     | 388364.05    | 229783.9899  | 229012.35554 |
| ## ENSG00000211592 | 158717.350   | 33409.40     | 619922.0916  | 1579.90298   |
| ## ENSG00000164692 | 16305.472    | 321247.40    | 112234.6217  | 235944.30840 |
| ## ENSG00000115414 | 4863.192     | 242797.10    | 50128.2450   | 238214.87502 |
| ##                 | TCGA-BH-A0E9 | TCGA-BH-A0EA | TCGA-BH-A0EB | TCGA-BH-A0EE |
| ## ENSG00000211896 | 21665.6265   | 58086.6435   | 321907.082   | 32766.4315   |
| ## ENSG00000153002 | 152.3518     | 140.3176     | 1439.567     | 261.9938     |
| ## ENSG00000108821 | 107933.5582  | 467484.9841  | 433685.609   | 30238.2873   |
| ## ENSG00000211592 | 65347.8021   | 47013.6503   | 178635.344   | 27418.5077   |
| ## ENSG00000164692 | 83768.6772   | 311209.8978  | 417207.604   | 23523.9800   |
| ## ENSG00000115414 | 58347.3217   | 175239.7343  | 360350.311   | 12924.7068   |
| ##                 | TCGA-BH-A0EI | TCGA-BH-A0GY | TCGA-BH-A0GZ | TCGA-BH-A0HO |
| ## ENSG00000211896 | 11607.4667   | 41886.3694   | 9343.4104    | 15041.7621   |
| ## ENSG00000153002 | 136.0101     | 102.2671     | 356.4955     | 376.8562     |
| ## ENSG00000108821 | 1023061.6049 | 288879.7982  | 584094.8201  | 30902.2119   |
| ## ENSG00000211592 | 5564.0511    | 30569.2256   | 47867.2780   | 25801.6575   |
| ## ENSG00000164692 | 852800.6894  | 233200.9293  | 480295.0203  | 27275.1510   |
| ## ENSG00000115414 | 896137.5142  | 398883.4215  | 297202.9305  | 21105.3934   |
| ##                 | TCGA-BH-A0H3 | TCGA-BH-A0H5 | TCGA-BH-A0H6 | TCGA-BH-A0H7 |
| ## ENSG00000211896 | 12865.000    | 740616.852   | 6711.389     | 14450.9174   |
| ## ENSG00000153002 | 1600.186     | 1824.677     | 1890.721     | 211.0369     |
| ## ENSG00000108821 | 559958.983   | 143247.085   | 807289.786   | 2258948.7354 |
| ## ENSG00000211592 | 30903.882    | 749149.256   | 3803.791     | 14696.3524   |
| ## ENSG00000164692 | 495092.586   | 115068.065   | 742832.070   | 1644083.7698 |
| ## ENSG00000115414 | 251389.528   | 125463.948   | 489687.781   | 880618.1169  |
| ##                 | TCGA-BH-A0H9 | TCGA-BH-A0HA | TCGA-BH-A0HB | TCGA-BH-A0HF |
| ## ENSG00000211896 | 2549.142     | 9004.707     | 60778.45     | 40898.90     |
| ## ENSG00000153002 | 58660.474    | 1996710.456  | 55911.26     | 11040.26     |
| ## ENSG00000108821 | 237607.619   | 951269.401   | 338815.63    | 893154.90    |
| ## ENSG00000211592 | 7135.870     | 38856.676    | 57454.95     | 47478.00     |
| ## ENSG00000164692 | 188474.589   | 837913.174   | 185778.96    | 539990.58    |
| ## ENSG00000115414 | 231426.868   | 371075.193   | 159039.44    | 391771.26    |
| ##                 | TCGA-BH-AOHI | TCGA-BH-A0HK | TCGA-BH-A0HL | TCGA-BH-A0HN |
| ## ENSG00000211896 | 5735.292     | 22478.84218  | 1491.4947    | 3.759460e+02 |
| ## ENSG00000153002 | 169206.964   | 34.30973     | 1162330.7543 | 1.480102e+00 |
| ## ENSG00000108821 | 377742.778   | 271877.78478 | 110774.5045  | 1.434234e+05 |
| ## ENSG00000211592 | 6525.752     | 233929.72809 | 917.7148     | 6.586455e+02 |
| ## ENSG00000164692 | 297831.042   | 183692.82000 | 70749.8145   | 7.355072e+04 |
| ## ENSG00000115414 | 280272.529   | 103397.60214 | 139518.4644  | 3.900809e+04 |
| ##                 | TCGA-BH-A0HO | TCGA-BH-A0HP | TCGA-BH-A0HQ | TCGA-BH-A0HU |
| ## ENSG00000211896 | 1002.047     | 8124.6097    | 5736.993     | 9430.959     |
| ## ENSG00000153002 | 3748422.014  | 164.1838     | 216.715      | 16620.925    |
| ## ENSG00000108821 | 177609.862   | 329304.5766  | 807100.087   | 217997.086   |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000211592 | 6792.363     | 31896.4315   | 24029.164    | 13106.997    |
| ## ENSG00000164692 | 152185.011   | 287169.0473  | 533503.406   | 140236.579   |
| ## ENSG00000115414 | 137566.301   | 116083.7398  | 375952.823   | 110931.434   |
| ## TCGA-BH-A0HW    | TCGA-BH-A0HX | TCGA-BH-A0HY | TCGA-BH-A0RX |              |
| ## ENSG00000211896 | 3255.2818    | 17156.03     | 9701.7671    | 799008.3285  |
| ## ENSG00000153002 | 7028.6456    | 308000.62    | 879.6803     | 706.8151     |
| ## ENSG00000108821 | 58906.7069   | 354605.31    | 690733.3729  | 248344.6154  |
| ## ENSG00000211592 | 156.2096     | 20287.68     | 7911.8548    | 975235.0935  |
| ## ENSG00000164692 | 38184.2124   | 297824.00    | 468603.0439  | 185655.8650  |
| ## ENSG00000115414 | 74249.7835   | 373032.15    | 399226.2959  | 191983.7971  |
| ## TCGA-BH-A0W3    | TCGA-BH-A0W4 | TCGA-BH-A0W5 | TCGA-BH-A0W7 |              |
| ## ENSG00000211896 | 745.8894     | 13677.0835   | 267570.02566 | 281876.4763  |
| ## ENSG00000153002 | 2156.4086    | 395.7292     | 25.17753     | 192.5119     |
| ## ENSG00000108821 | 107701.5729  | 502696.5353  | 405037.67217 | 495927.0110  |
| ## ENSG00000211592 | 471.7902     | 13081.8613   | 293181.45051 | 217158.5202  |
| ## ENSG00000164692 | 72588.9827   | 355128.6453  | 316257.49789 | 359549.3478  |
| ## ENSG00000115414 | 77528.8321   | 392023.4677  | 296649.23593 | 333219.4911  |
| ## TCGA-BH-A0WA    | TCGA-BH-A18F | TCGA-BH-A18G | TCGA-BH-A18H |              |
| ## ENSG00000211896 | 1.605463e+04 | 99078.61516  | 993.7195     | 926053.63867 |
| ## ENSG00000153002 | 2.713764e+00 | 34.96892     | 0.0000       | 47.04896     |
| ## ENSG00000108821 | 1.598054e+05 | 452458.65603 | 624937.6440  | 135676.75080 |
| ## ENSG00000211592 | 1.439200e+04 | 101151.31860 | 2236.8509    | 621224.80097 |
| ## ENSG00000164692 | 1.523552e+05 | 371914.62972 | 376503.8336  | 104170.55212 |
| ## ENSG00000115414 | 2.608126e+05 | 316783.47345 | 326073.5494  | 105987.47231 |
| ## TCGA-BH-A18I    | TCGA-BH-A18J | TCGA-BH-A18K | TCGA-BH-A18L |              |
| ## ENSG00000211896 | 134055.2705  | 9678.7063    | 2511.40965   | 5783.108     |
| ## ENSG00000153002 | 135.2542     | 443.4162     | 30.80784     | 57476.244    |
| ## ENSG00000108821 | 708896.5260  | 24460.8161   | 12604.97156  | 116606.536   |
| ## ENSG00000211592 | 88179.6261   | 60506.9108   | 72933.57266  | 42035.523    |
| ## ENSG00000164692 | 644475.4229  | 34570.0008   | 22987.21436  | 158697.157   |
| ## ENSG00000115414 | 583300.4207  | 13783.5411   | 11845.04479  | 41235.497    |
| ## TCGA-BH-A18M    | TCGA-BH-A18N | TCGA-BH-A18P | TCGA-BH-A18Q |              |
| ## ENSG00000211896 | 7632.4920    | 75148.314    | 849.9883     | 15756.6510   |
| ## ENSG00000153002 | 587.1998     | 5357.772     | 548.3795     | 466.1293     |
| ## ENSG00000108821 | 227520.5819  | 32514.267    | 22146.5363   | 20560.7426   |
| ## ENSG00000211592 | 51156.0530   | 86833.821    | 16955.2100   | 130616.8359  |
| ## ENSG00000164692 | 217763.7757  | 63399.620    | 42570.2469   | 36457.2324   |
| ## ENSG00000115414 | 108115.5423  | 26199.662    | 9718.8849    | 17112.1255   |
| ## TCGA-BH-A18R    | TCGA-BH-A18S | TCGA-BH-A18T | TCGA-BH-A18U |              |
| ## ENSG00000211896 | 10589.27877  | 21653.61     | 5.076520e+03 | 253490.46    |
| ## ENSG00000153002 | 72.31396     | 27668.40     | 4.355285e+00 | 1862.19      |
| ## ENSG00000108821 | 26801.75382  | 41984.96     | 1.203278e+05 | 257932.59    |
| ## ENSG00000211592 | 205876.26738 | 13967.14     | 1.286290e+04 | 112113.81    |
| ## ENSG00000164692 | 51316.18571  | 48073.41     | 9.631189e+04 | 249339.39    |
| ## ENSG00000115414 | 18506.08517  | 64581.75     | 1.053238e+05 | 610320.68    |
| ## TCGA-BH-A18V    | TCGA-BH-A1EN | TCGA-BH-A1EO | TCGA-BH-A1ES |              |
| ## ENSG00000211896 | 1.062383e+05 | 27294.1255   | 9891.489     | 1253.427     |
| ## ENSG00000153002 | 6.133804e+00 | 492.4339     | 1028.241     | 1312.489     |
| ## ENSG00000108821 | 1.568467e+05 | 133304.1993  | 444624.221   | 259072.180   |
| ## ENSG00000211592 | 5.475264e+04 | 24387.9839   | 12222.582    | 4322.463     |
| ## ENSG00000164692 | 7.712952e+04 | 165217.0420  | 505687.579   | 274920.483   |
| ## ENSG00000115414 | 3.712416e+05 | 67021.8159   | 101580.472   | 513069.402   |
| ## TCGA-BH-A1ET    | TCGA-BH-A1EU | TCGA-BH-A1EV | TCGA-BH-A1EW |              |
| ## ENSG00000211896 | 6253.3054    | 17121.50     | 5882.1626    | 28213.14170  |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000153002 | 505.3662     | 11405.94     | 164.1021     | 15.87526     |
| ## ENSG00000108821 | 34350.4643   | 300292.01    | 45311.9033   | 81913.54926  |
| ## ENSG00000211592 | 40867.2821   | 29486.21     | 31689.1071   | 33460.38263  |
| ## ENSG00000164692 | 60263.7191   | 329038.11    | 96590.0498   | 93559.45453  |
| ## ENSG00000115414 | 27020.2475   | 200876.64    | 23013.7291   | 141699.78512 |
|                    | TCGA-BH-A1EX | TCGA-BH-A1EY | TCGA-BH-A1F0 | TCGA-BH-A1F2 |
| ## ENSG00000211896 | 3.903931e+04 | 12634.92090  | 70984.6253   | 718.78621    |
| ## ENSG00000153002 | 6.051294e+00 | 19.17675     | 945.1734     | 49.10962     |
| ## ENSG00000108821 | 3.976148e+05 | 840502.85976 | 65606.5654   | 432673.58012 |
| ## ENSG00000211592 | 4.223682e+04 | 8820.02624   | 98569.9743   | 1271.64144   |
| ## ENSG00000164692 | 3.861324e+05 | 713662.72596 | 88882.1418   | 420181.13538 |
| ## ENSG00000115414 | 5.080158e+05 | 316808.84792 | 25646.6916   | 667001.60381 |
|                    | TCGA-BH-A1F5 | TCGA-BH-A1F6 | TCGA-BH-A1F8 | TCGA-BH-A1FB |
| ## ENSG00000211896 | 2972.73897   | 867770.0830  | 6710.2446    | 62641.6611   |
| ## ENSG00000153002 | 22.20533     | 24.6022      | 698.5804     | 253.3118     |
| ## ENSG00000108821 | 144864.81734 | 260368.9641  | 150967.8419  | 415738.9992  |
| ## ENSG00000211592 | 25220.63227  | 148412.1223  | 41752.4674   | 94867.3241   |
| ## ENSG00000164692 | 139365.29651 | 184442.6912  | 164784.5408  | 374849.1099  |
| ## ENSG00000115414 | 164054.85123 | 246220.1095  | 44244.4183   | 338412.8271  |
|                    | TCGA-BH-A1FC | TCGA-BH-A1FD | TCGA-BH-A1FE | TCGA-BH-A1FG |
| ## ENSG00000211896 | 84755.0228   | 1355.12161   | 7705.59566   | 886.5044     |
| ## ENSG00000153002 | 949.4269     | 51.73399     | 74.17485     | 4140.6509    |
| ## ENSG00000108821 | 52268.7723   | 276318.94861 | 7715.74591   | 6760.9576    |
| ## ENSG00000211592 | 79407.4480   | 3041.49517   | 71414.76415  | 43060.8090   |
| ## ENSG00000164692 | 68072.2352   | 235544.84499 | 15778.94242  | 24584.7063   |
| ## ENSG00000115414 | 36322.0573   | 368760.63490 | 10654.63152  | 14637.1247   |
|                    | TCGA-BH-A1FH | TCGA-BH-A1FJ | TCGA-BH-A1FL | TCGA-BH-A1FM |
| ## ENSG00000211896 | 2116.240     | 3.332491e+03 | 40312.7635   | 12741.804    |
| ## ENSG00000153002 | 1974.699     | 9.318646e+00 | 45.6466      | 750.299      |
| ## ENSG00000108821 | 113411.199   | 1.142832e+05 | 229049.2041  | 24995.950    |
| ## ENSG00000211592 | 30879.232    | 3.796273e+03 | 14202.2252   | 87522.344    |
| ## ENSG00000164692 | 162534.065   | 1.064763e+05 | 164371.3739  | 52122.543    |
| ## ENSG00000115414 | 33639.963    | 1.168952e+05 | 107472.5425  | 24354.101    |
|                    | TCGA-BH-A1FN | TCGA-BH-A1FR | TCGA-BH-A1FU | TCGA-BH-A201 |
| ## ENSG00000211896 | 5631.208     | 15997.28     | 6870.0607    | 3278.507     |
| ## ENSG00000153002 | 1909.942     | 13716.62     | 157.5413     | 30460.982    |
| ## ENSG00000108821 | 378781.411   | 347213.31    | 87552.6284   | 640974.587   |
| ## ENSG00000211592 | 4486.491     | 174974.21    | 55220.1137   | 12496.107    |
| ## ENSG00000164692 | 309272.011   | 287270.64    | 90009.0123   | 482910.302   |
| ## ENSG00000115414 | 459590.675   | 97243.08     | 20356.8557   | 368583.158   |
|                    | TCGA-BH-A202 | TCGA-BH-A203 | TCGA-BH-A204 | TCGA-BH-A208 |
| ## ENSG00000211896 | 11518.0685   | 5850.236     | 6596.299     | 1948.156     |
| ## ENSG00000153002 | 266.7851     | 215.791      | 3800.136     | 11199.032    |
| ## ENSG00000108821 | 186269.2500  | 7155.595     | 180949.369   | 35178.397    |
| ## ENSG00000211592 | 16127.3694   | 78290.573    | 24279.672    | 239247.184   |
| ## ENSG00000164692 | 181483.7051  | 16392.158    | 273803.883   | 50439.590    |
| ## ENSG00000115414 | 1305466.1087 | 13279.107    | 117344.521   | 12417.298    |
|                    | TCGA-BH-A209 | TCGA-BH-A280 | TCGA-BH-A28Q | TCGA-BH-A2L8 |
| ## ENSG00000211896 | 8.790856e+05 | 85956.1102   | 5745.925     | 56796.60541  |
| ## ENSG00000153002 | 7.564819e+00 | 360.5603     | 148.634      | 63.78163     |
| ## ENSG00000108821 | 1.102081e+05 | 590015.7426  | 349079.707   | 532255.84389 |
| ## ENSG00000211592 | 5.485954e+05 | 136644.1158  | 14643.894    | 116805.74156 |
| ## ENSG00000164692 | 1.040094e+05 | 359303.8251  | 304052.398   | 352718.05327 |
| ## ENSG00000115414 | 3.140603e+05 | 92655.7598   | 258932.898   | 193896.16156 |

|    | TCGA-BH-A42T    | TCGA-BH-A42U | TCGA-BH-A42V | TCGA-BH-A5IZ              |
|----|-----------------|--------------|--------------|---------------------------|
| ## | ENSG00000211896 | 6.305383e+03 | 86293.3996   | 184989.2984 4.930746e+04  |
| ## | ENSG00000153002 | 2.582057e+00 | 176.9859     | 144.6212 4.960883e+00     |
| ## | ENSG00000108821 | 3.804420e+05 | 208306.2544  | 207794.4943 2.197981e+05  |
| ## | ENSG00000211592 | 3.625208e+03 | 185315.6964  | 121202.3399 3.206095e+04  |
| ## | ENSG00000164692 | 2.028120e+05 | 115779.6047  | 176724.1571 1.427841e+05  |
| ## | ENSG00000115414 | 1.328933e+05 | 56480.5190   | 84648.3850 8.841410e+04   |
| ## |                 | TCGA-BH-A5J0 | TCGA-BH-A6R8 | TCGA-BH-A6R9 TCGA-BH-A8FY |
| ## | ENSG00000211896 | 29002.69934  | 25405.53     | 1.861496e+05 550.5072     |
| ## | ENSG00000153002 | 18.05736     | 24761.81     | 2.582324e+01 247.2617     |
| ## | ENSG00000108821 | 775007.69139 | 338419.17    | 2.349692e+06 21107.4429   |
| ## | ENSG00000211592 | 30622.70247  | 24325.48     | 1.707702e+05 1167.8840    |
| ## | ENSG00000164692 | 457512.87425 | 214431.11    | 1.815234e+06 13590.0644   |
| ## | ENSG00000115414 | 315256.99435 | 92315.52     | 1.214731e+06 17991.0121   |
| ## |                 | TCGA-BH-A8FZ | TCGA-BH-A8G0 | TCGA-BH-AB28 TCGA-C8-A12K |
| ## | ENSG00000211896 | 9406.9876    | 43957.5540   | 13157.24001 1.518431e+05  |
| ## | ENSG00000153002 | 193.7171     | 338.4979     | 68.09623 5.097659e+00     |
| ## | ENSG00000108821 | 290954.5710  | 903134.8976  | 272525.31827 1.249776e+05 |
| ## | ENSG00000211592 | 108363.4306  | 76820.1601   | 25155.79641 1.713859e+05  |
| ## | ENSG00000164692 | 189557.5055  | 565960.2899  | 188901.04787 9.281903e+04 |
| ## | ENSG00000115414 | 201644.6011  | 177698.4416  | 160690.34966 1.360863e+05 |
| ## |                 | TCGA-C8-A12L | TCGA-C8-A12M | TCGA-C8-A12N TCGA-C8-A12O |
| ## | ENSG00000211896 | 1.151666e+05 | 62789.90     | 6377.958 1.223262e+05     |
| ## | ENSG00000153002 | 4.358573e+00 | 0.00         | 4193.544 6.309608e+00     |
| ## | ENSG00000108821 | 3.126622e+05 | 69682.20     | 1077185.117 7.586393e+05  |
| ## | ENSG00000211592 | 8.874381e+04 | 63345.22     | 7387.648 1.079944e+05     |
| ## | ENSG00000164692 | 2.004093e+05 | 61118.17     | 803186.093 6.046606e+05   |
| ## | ENSG00000115414 | 7.053423e+05 | 88573.11     | 962148.149 8.267101e+05   |
| ## |                 | TCGA-C8-A12P | TCGA-C8-A12Q | TCGA-C8-A12T TCGA-C8-A12U |
| ## | ENSG00000211896 | 270652.76347 | 63782.58335  | 3.275716e+04 125848.313   |
| ## | ENSG00000153002 | 7.69159      | 99.14351     | 4.270339e+01 1978.241     |
| ## | ENSG00000108821 | 760013.68757 | 369902.88902 | 1.305042e+06 41176.719    |
| ## | ENSG00000211592 | 217195.11501 | 58427.28466  | 2.151885e+04 77506.927    |
| ## | ENSG00000164692 | 633983.69100 | 303620.80481 | 9.482690e+05 26736.881    |
| ## | ENSG00000115414 | 537981.66132 | 546963.90428 | 7.580913e+05 47916.190    |
| ## |                 | TCGA-C8-A12V | TCGA-C8-A12W | TCGA-C8-A12X TCGA-C8-A12Y |
| ## | ENSG00000211896 | 7.969264e+05 | 9.624227e+05 | 41058.2354 51649.85       |
| ## | ENSG00000153002 | 5.395027e+00 | 5.899171e+00 | 178.6857 10013.83         |
| ## | ENSG00000108821 | 8.401999e+04 | 6.948905e+05 | 131271.6621 420172.92     |
| ## | ENSG00000211592 | 5.473567e+05 | 3.692728e+05 | 16060.9362 68663.87       |
| ## | ENSG00000164692 | 6.431735e+04 | 5.075918e+05 | 97479.2862 247792.04      |
| ## | ENSG00000115414 | 1.630722e+05 | 8.315118e+05 | 96398.8610 140546.87      |
| ## |                 | TCGA-C8-A12Z | TCGA-C8-A130 | TCGA-C8-A131 TCGA-C8-A132 |
| ## | ENSG00000211896 | 63740.2456   | 8.757517e+04 | 48187.12580 299001.159    |
| ## | ENSG00000153002 | 219.1045     | 6.865102e+00 | 33.90117 5860.681         |
| ## | ENSG00000108821 | 556724.0613  | 3.413819e+05 | 907907.28585 582485.925   |
| ## | ENSG00000211592 | 36157.7245   | 2.413574e+04 | 60951.59506 182317.849    |
| ## | ENSG00000164692 | 401569.2989  | 2.205953e+05 | 528108.38841 424002.642   |
| ## | ENSG00000115414 | 494950.2788  | 2.387173e+05 | 674428.55862 667031.567   |
| ## |                 | TCGA-C8-A133 | TCGA-C8-A134 | TCGA-C8-A135 TCGA-C8-A137 |
| ## | ENSG00000211896 | 577.1560     | 69825.719179 | 107382.37581 3381.725     |
| ## | ENSG00000153002 | 4254115.7665 | 6.697375     | 19.88033 0.000            |
| ## | ENSG00000108821 | 13391.1297   | 38143.785082 | 416244.47076 536282.309   |
| ## | ENSG00000211592 | 338.5242     | 57779.931496 | 91283.03370 18192.921     |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000164692 | 12211.8445   | 31553.009622 | 269515.18852 | 446562.485   |
| ## ENSG00000115414 | 18906.0219   | 57272.605313 | 376916.20214 | 587400.312   |
| ## TCGA-C8-A138    | TCGA-C8-A1HE | TCGA-C8-A1HF | TCGA-C8-A1HG |              |
| ## ENSG00000211896 | 461373.47    | 13287.1049   | 5.411509e+05 | 1380150.4    |
| ## ENSG00000153002 | 10089.58     | 355.7233     | 3.137107e+00 | 0.0          |
| ## ENSG00000108821 | 544162.36    | 173502.6308  | 7.125726e+05 | 254320.3     |
| ## ENSG00000211592 | 309015.83    | 14949.4810   | 3.151953e+05 | 1088628.2    |
| ## ENSG00000164692 | 383368.60    | 133253.3816  | 5.006940e+05 | 176555.7     |
| ## ENSG00000115414 | 251891.86    | 171976.8020  | 5.012822e+05 | 156399.8     |
| ## TCGA-C8-A1HI    | TCGA-C8-A1HJ | TCGA-C8-A1HK | TCGA-C8-A1HL |              |
| ## ENSG00000211896 | 42992.067    | 2.999790e+04 | 166116.98529 | 2964.703     |
| ## ENSG00000153002 | 3696.972     | 5.589497e+00 | 62.26327     | 3267.311     |
| ## ENSG00000108821 | 149986.716   | 7.611031e+04 | 154891.20099 | 296725.757   |
| ## ENSG00000211592 | 86374.342    | 5.357532e+04 | 134623.09202 | 5237.118     |
| ## ENSG00000164692 | 133579.286   | 6.415997e+04 | 99471.23173  | 254793.130   |
| ## ENSG00000115414 | 74613.508    | 1.051552e+05 | 103836.73589 | 307369.853   |
| ## TCGA-C8-A1HM    | TCGA-C8-A1HN | TCGA-C8-A1HO | TCGA-C8-A26V |              |
| ## ENSG00000211896 | 4.612106e+05 | 3782.13646   | 95945.89     | 24269.9570   |
| ## ENSG00000153002 | 1.271102e+00 | 76.39277     | 258237.52    | 148.8447     |
| ## ENSG00000108821 | 7.806222e+04 | 149174.24020 | 109618.52    | 258212.4967  |
| ## ENSG00000211592 | 1.707790e+05 | 4518.97943   | 63369.50     | 17050.9885   |
| ## ENSG00000164692 | 5.552303e+04 | 126590.45474 | 85968.42     | 224703.5358  |
| ## ENSG00000115414 | 3.026953e+05 | 180407.77036 | 81286.39     | 276511.5363  |
| ## TCGA-C8-A26W    | TCGA-C8-A26X | TCGA-C8-A26Y | TCGA-C8-A26Z |              |
| ## ENSG00000211896 | 75252.41     | 1.921544e+06 | 19665.79     | 5337.557     |
| ## ENSG00000153002 | 172.51       | 2.509179e+00 | 0.00         | 321879.251   |
| ## ENSG00000108821 | 388940.19    | 3.036370e+05 | 119494.18    | 393995.795   |
| ## ENSG00000211592 | 115131.44    | 2.795682e+06 | 26736.74     | 24067.711    |
| ## ENSG00000164692 | 288782.49    | 2.353773e+05 | 69283.91     | 301415.009   |
| ## ENSG00000115414 | 195372.38    | 3.632500e+05 | 67333.60     | 263739.003   |
| ## TCGA-C8-A273    | TCGA-C8-A274 | TCGA-C8-A275 | TCGA-C8-A278 |              |
| ## ENSG00000211896 | 25024.13     | 2330.342     | 4.398618e+05 | 1.329896e+06 |
| ## ENSG00000153002 | 15124.73     | 2538.264     | 7.279882e+00 | 2.746714e+01 |
| ## ENSG00000108821 | 465155.48    | 134211.008   | 2.053744e+05 | 3.920951e+05 |
| ## ENSG00000211592 | 32321.54     | 1801.750     | 4.179025e+05 | 1.175288e+06 |
| ## ENSG00000164692 | 351015.39    | 105112.848   | 1.553503e+05 | 3.762860e+05 |
| ## ENSG00000115414 | 412673.39    | 222454.318   | 2.862207e+05 | 4.273123e+05 |
| ## TCGA-C8-A27A    | TCGA-C8-A27B | TCGA-C8-A3M7 | TCGA-C8-A3M8 |              |
| ## ENSG00000211896 | 91292.86     | 1.074750e+05 | 117327.18659 | 2183.629     |
| ## ENSG00000153002 | 18429.32     | 2.197044e+00 | 13.28386     | 105441.819   |
| ## ENSG00000108821 | 88210.40     | 4.265487e+04 | 95596.45510  | 432638.521   |
| ## ENSG00000211592 | 68650.18     | 1.248924e+05 | 240034.33573 | 6066.708     |
| ## ENSG00000164692 | 91920.92     | 4.459120e+04 | 89273.33861  | 235292.553   |
| ## ENSG00000115414 | 175004.47    | 9.593684e+04 | 42934.25986  | 263608.687   |
| ## TCGA-C8-A8HP    | TCGA-C8-A8HQ | TCGA-C8-A8HR | TCGA-D8-A13Y |              |
| ## ENSG00000211896 | 1.042875e+06 | 213614.967   | 42168.4596   | 188.77659    |
| ## ENSG00000153002 | 8.250425e+00 | 4068.096     | 142.2666     | 95.34171     |
| ## ENSG00000108821 | 2.749900e+05 | 938431.892   | 895751.5210  | 195648.81900 |
| ## ENSG00000211592 | 6.854733e+05 | 111575.790   | 38960.4030   | 31.46276     |
| ## ENSG00000164692 | 1.443329e+05 | 568165.604   | 554375.8546  | 138504.81089 |
| ## ENSG00000115414 | 1.219974e+05 | 521151.823   | 295048.8964  | 124623.05772 |
| ## TCGA-D8-A13Z    | TCGA-D8-A140 | TCGA-D8-A141 | TCGA-D8-A142 |              |
| ## ENSG00000211896 | 4.450583e+04 | 760635.730   | 2.152877e+05 | 694314.20686 |
| ## ENSG00000153002 | 2.839197e+00 | 911.297      | 1.217219e+01 | 16.94407     |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000108821 | 3.981307e+05 | 197816.244   | 1.294738e+06 | 587787.56403 |
| ## ENSG00000211592 | 4.753100e+04 | 382701.534   | 9.886423e+04 | 770010.41389 |
| ## ENSG00000164692 | 2.889522e+05 | 164843.956   | 9.616149e+05 | 448104.20622 |
| ## ENSG00000115414 | 4.017719e+05 | 134187.967   | 1.005098e+06 | 850168.55855 |
| ## TCGA-D8-A143    | TCGA-D8-A145 | TCGA-D8-A147 | TCGA-D8-A1J8 |              |
| ## ENSG00000211896 | 9.019615e+05 | 45282.566    | 40367.895273 | 2.518072e+04 |
| ## ENSG00000153002 | 8.596854e+00 | 1292.946     | 4.038647     | 4.224244e+00 |
| ## ENSG00000108821 | 1.129605e+05 | 382758.188   | 99828.899546 | 1.602988e+05 |
| ## ENSG00000211592 | 3.949824e+05 | 468765.119   | 24092.954363 | 2.777440e+04 |
| ## ENSG00000164692 | 7.208999e+04 | 306851.354   | 87337.363432 | 1.771972e+05 |
| ## ENSG00000115414 | 1.125339e+05 | 99317.306    | 78960.401191 | 4.694529e+05 |
| ## TCGA-D8-A1J9    | TCGA-D8-A1JA | TCGA-D8-A1JB | TCGA-D8-A1JC |              |
| ## ENSG00000211896 | 17004.728    | 4120.40296   | 203520.9     | 12139.8991   |
| ## ENSG00000153002 | 930461.672   | 88.68294     | 678536.6     | 443.4637     |
| ## ENSG00000108821 | 430799.135   | 364458.54693 | 153073.3     | 385840.6616  |
| ## ENSG00000211592 | 8605.921     | 6606.50609   | 205524.1     | 18042.8381   |
| ## ENSG00000164692 | 361701.226   | 356194.63875 | 121807.0     | 324714.7829  |
| ## ENSG00000115414 | 560363.643   | 500824.58317 | 64190.9      | 387038.2035  |
| ## TCGA-D8-A1JD    | TCGA-D8-A1JE | TCGA-D8-A1JF | TCGA-D8-A1JG |              |
| ## ENSG00000211896 | 102159.4355  | 12612.386    | 2.514356e+05 | 5.134277e+05 |
| ## ENSG00000153002 | 802.6567     | 774153.545   | 5.009807e+00 | 2.754108e+00 |
| ## ENSG00000108821 | 638593.7730  | 1027511.309  | 3.593585e+05 | 3.004429e+05 |
| ## ENSG00000211592 | 49950.3836   | 8349.634     | 3.762916e+05 | 7.095120e+05 |
| ## ENSG00000164692 | 606137.8593  | 975340.370   | 3.696536e+05 | 2.805631e+05 |
| ## ENSG00000115414 | 698392.3329  | 656068.688   | 3.119290e+05 | 2.876487e+05 |
| ## TCGA-D8-A1JH    | TCGA-D8-A1JI | TCGA-D8-A1JJ | TCGA-D8-A1JK |              |
| ## ENSG00000211896 | 37103.76     | 3370.3554    | 5050.0653    | 568585.81665 |
| ## ENSG00000153002 | 290900.53    | 769.3563     | 177.3035     | 11.94452     |
| ## ENSG00000108821 | 609275.79    | 45746.8542   | 443679.5770  | 487146.73475 |
| ## ENSG00000211592 | 42350.53     | 2551.2562    | 4591.3890    | 205143.19325 |
| ## ENSG00000164692 | 486062.31    | 36406.2497   | 434706.4797  | 342547.67196 |
| ## ENSG00000115414 | 376178.55    | 21284.4189   | 767874.3459  | 598574.53125 |
| ## TCGA-D8-A1JL    | TCGA-D8-A1JM | TCGA-D8-A1JN | TCGA-D8-A1JP |              |
| ## ENSG00000211896 | 48884.96317  | 18332.28     | 22952.973380 | 37801.9193   |
| ## ENSG00000153002 | 14.73456     | 0.00         | 4.333202     | 154.1706     |
| ## ENSG00000108821 | 321657.22521 | 15399.19     | 29945.317734 | 526008.5585  |
| ## ENSG00000211592 | 30586.48496  | 16412.92     | 15112.765746 | 28392.6922   |
| ## ENSG00000164692 | 235966.56607 | 11896.31     | 22187.440947 | 412540.1687  |
| ## ENSG00000115414 | 231950.17136 | 86804.53     | 22002.557642 | 353431.3845  |
| ## TCGA-D8-A1JS    | TCGA-D8-A1JT | TCGA-D8-A1JU | TCGA-D8-A1X5 |              |
| ## ENSG00000211896 | 285.462766   | 699.67102    | 6971.185     | 251494.5     |
| ## ENSG00000153002 | 1.026844     | 10.98517     | 6004.811     | 1162853.4    |
| ## ENSG00000108821 | 15424.230983 | 36480.91450  | 980857.041   | 505673.7     |
| ## ENSG00000211592 | 855.361455   | 967.54024    | 33060.087    | 138884.1     |
| ## ENSG00000164692 | 15171.627240 | 41869.56437  | 936644.819   | 398599.5     |
| ## ENSG00000115414 | 24885.576051 | 85667.44910  | 342925.144   | 658405.4     |
| ## TCGA-D8-A1X6    | TCGA-D8-A1X7 | TCGA-D8-A1X8 | TCGA-D8-A1X9 |              |
| ## ENSG00000211896 | 1259.7662    | 11258.51210  | 4598.1432    | 19778.8730   |
| ## ENSG00000153002 | 152.6100     | 22.93132     | 181.0685     | 142.4916     |
| ## ENSG00000108821 | 86166.6853   | 174679.30457 | 165489.9641  | 345130.2230  |
| ## ENSG00000211592 | 619.9781     | 8214.76200   | 32280.0283   | 12011.1226   |
| ## ENSG00000164692 | 71691.4804   | 184412.88411 | 170138.7732  | 333883.8485  |
| ## ENSG00000115414 | 97148.0017   | 297912.96462 | 113672.8108  | 697325.5430  |
| ## TCGA-D8-A1XA    | TCGA-D8-A1XB | TCGA-D8-A1XC | TCGA-D8-A1XD |              |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000211896 | 7344.708     | 15193.3468   | 297.7256     | 7670.518     |
| ## ENSG00000153002 | 7624.891     | 882.5148     | 274528.6528  | 0.000        |
| ## ENSG00000108821 | 326026.757   | 1049106.7779 | 19838.5335   | 541555.191   |
| ## ENSG00000211592 | 23626.913    | 22646.2073   | 220.7276     | 19305.410    |
| ## ENSG00000164692 | 234470.289   | 868465.0113  | 21397.7429   | 491977.507   |
| ## ENSG00000115414 | 308441.757   | 735693.8962  | 59146.0102   | 533300.852   |
|                    | TCGA-D8-A1XF | TCGA-D8-A1XG | TCGA-D8-A1XJ | TCGA-D8-A1XK |
| ## ENSG00000211896 | 419312.96    | 273.6057     | 11175.4335   | 2.169735e+05 |
| ## ENSG00000153002 | 961352.46    | 1650223.0723 | 119.2394     | 1.494462e+00 |
| ## ENSG00000108821 | 64139.61     | 179881.6970  | 379639.2256  | 3.506158e+04 |
| ## ENSG00000211592 | 289572.81    | 761.5185     | 9026.5126    | 8.548100e+04 |
| ## ENSG00000164692 | 60461.33     | 175183.5856  | 346582.9199  | 3.025838e+04 |
| ## ENSG00000115414 | 111227.26    | 445356.2008  | 344001.4295  | 2.146003e+05 |
|                    | TCGA-D8-A1XL | TCGA-D8-A1XM | TCGA-D8-A1XO | TCGA-D8-A1XQ |
| ## ENSG00000211896 | 200185.96396 | 60202.4816   | 15160.63740  | 8.495472e+05 |
| ## ENSG00000153002 | 22.23272     | 143.7057     | 8.65951      | 3.159616e+00 |
| ## ENSG00000108821 | 174079.62165 | 437535.4062  | 686445.14269 | 1.357924e+05 |
| ## ENSG00000211592 | 144475.90167 | 27788.2173   | 27296.94087  | 8.155616e+05 |
| ## ENSG00000164692 | 137846.27600 | 381083.3247  | 657778.55596 | 1.306177e+05 |
| ## ENSG00000115414 | 81996.83166  | 517717.4551  | 559172.71387 | 2.087613e+05 |
|                    | TCGA-D8-A1XR | TCGA-D8-A1XS | TCGA-D8-A1XT | TCGA-D8-A1XU |
| ## ENSG00000211896 | 1.714896e+03 | 46658.3947   | 1.118797e+04 | 1390.157     |
| ## ENSG00000153002 | 5.232331e+00 | 155.4771     | 2.029502e+00 | 5089068.818  |
| ## ENSG00000108821 | 2.293357e+05 | 360930.7017  | 6.538744e+05 | 810726.888   |
| ## ENSG00000211592 | 1.312661e+03 | 31332.2734   | 8.446111e+03 | 17565.472    |
| ## ENSG00000164692 | 1.940338e+05 | 410785.8224  | 5.565517e+05 | 675622.625   |
| ## ENSG00000115414 | 2.321003e+05 | 452007.6034  | 6.112914e+05 | 577632.867   |
|                    | TCGA-D8-A1XV | TCGA-D8-A1XW | TCGA-D8-A1XY | TCGA-D8-A1XZ |
| ## ENSG00000211896 | 5402.049     | 53137.41737  | 1044.881     | 380706.0489  |
| ## ENSG00000153002 | 59219.871    | 53.94501     | 764.609      | 173.0372     |
| ## ENSG00000108821 | 28487.423    | 111527.33303 | 831197.755   | 248051.7675  |
| ## ENSG00000211592 | 4124.682     | 45514.51206  | 2339.551     | 107904.0953  |
| ## ENSG00000164692 | 34555.986    | 108170.04973 | 812636.299   | 264887.7011  |
| ## ENSG00000115414 | 58905.882    | 154051.07050 | 555590.493   | 436858.8218  |
|                    | TCGA-D8-A1Y0 | TCGA-D8-A1Y1 | TCGA-D8-A1Y2 | TCGA-D8-A1Y3 |
| ## ENSG00000211896 | 89005.28694  | 395.89264    | 439033.755   | 20280.38129  |
| ## ENSG00000153002 | 68.47364     | 12.45816     | 4121.958     | 10.94731     |
| ## ENSG00000108821 | 194740.77316 | 935191.85276 | 484122.128   | 165856.65643 |
| ## ENSG00000211592 | 60195.87331  | 216.63356    | 249883.040   | 18878.13096  |
| ## ENSG00000164692 | 175464.86320 | 803352.68232 | 419758.513   | 118477.71285 |
| ## ENSG00000115414 | 173308.52383 | 837633.38595 | 635792.431   | 64600.05056  |
|                    | TCGA-D8-A27E | TCGA-D8-A27F | TCGA-D8-A27G | TCGA-D8-A27H |
| ## ENSG00000211896 | 13084.48     | 1.309875e+04 | 34141.45801  | 119184.010   |
| ## ENSG00000153002 | 855592.25    | 7.241679e+00 | 39.51744     | 157.374      |
| ## ENSG00000108821 | 51738.01     | 3.276773e+05 | 774417.68992 | 501132.592   |
| ## ENSG00000211592 | 7014.46      | 1.449350e+04 | 16894.91670  | 45693.016    |
| ## ENSG00000164692 | 44418.02     | 2.837152e+05 | 630646.77956 | 425705.719   |
| ## ENSG00000115414 | 96753.56     | 5.398353e+05 | 417328.39502 | 657219.026   |
|                    | TCGA-D8-A27I | TCGA-D8-A27K | TCGA-D8-A27L | TCGA-D8-A27M |
| ## ENSG00000211896 | 78468.5389   | 167401.62    | 153444.9914  | 558802.9625  |
| ## ENSG00000153002 | 465.8774     | 1046.65      | 134.6294     | 128.4589     |
| ## ENSG00000108821 | 820698.9529  | 278792.06    | 521717.2289  | 374247.5898  |
| ## ENSG00000211592 | 111990.2810  | 130115.18    | 156433.7648  | 111870.3115  |
| ## ENSG00000164692 | 614246.1624  | 241473.32    | 489293.4521  | 326083.0633  |

```

## ENSG00000115414 224396.6721    236516.57    457420.7167    536486.6312
##                                     TCGA-D8-A27N TCGA-D8-A27P TCGA-D8-A27R TCGA-D8-A27T
## ENSG00000211896 94381.07      7935.43415   46672.4286     45394.173
## ENSG00000153002 361.50       13.01876    715.6981     8944.726
## ENSG00000108821 718213.56    313772.11375   190815.5868    1014309.557
## ENSG00000211592 86583.48     27361.42503   52553.6002     61705.777
## ENSG00000164692 598465.83    243675.11109   159228.6886    950790.000
## ENSG00000115414 650297.17    229655.91084   145166.4934    416009.637
##                                     TCGA-D8-A27V TCGA-D8-A27W TCGA-D8-A3Z5 TCGA-D8-A3Z6
## ENSG00000211896 1.354392e+03  331677.496    192112.2308   6263.931
## ENSG00000153002 5.426248e+00  528.479     424.6597     10351.961
## ENSG00000108821 3.018888e+05  137902.743    94055.7687    727498.278
## ENSG00000211592 7.079626e+03  335590.083    312746.4330   22798.802
## ENSG00000164692 3.002045e+05  133620.286    58869.8100    367864.177
## ENSG00000115414 7.272746e+04  204154.791    14795.0346   216566.558
##                                     TCGA-D8-A4Z1 TCGA-D8-A73U TCGA-D8-A73W TCGA-D8-A73X
## ENSG00000211896 12084.71     9.073808e+05  8956.921    2.515405e+04
## ENSG00000153002 12424.26     4.802621e+00  145440.008   7.247178e+00
## ENSG00000108821 226482.10    8.139302e+05  340687.983   7.892150e+05
## ENSG00000211592 63908.44     9.324288e+05  3257.361    3.861025e+04
## ENSG00000164692 165530.06    5.260347e+05  219957.742   4.921006e+05
## ENSG00000115414 63733.55     2.395427e+05  365531.240   2.895347e+05
##                                     TCGA-E2-A105 TCGA-E2-A107 TCGA-E2-A108 TCGA-E2-A109
## ENSG00000211896 8538.417    1007.230    383754.2146   170487.8
## ENSG00000153002 30063.437    1108.635    731.6736    112775.8
## ENSG00000108821 127180.574   175514.419    415036.9961   408222.7
## ENSG00000211592 10458.646    2033.961    244800.5441   158757.8
## ENSG00000164692 81787.918    87947.832    283128.9868   262335.7
## ENSG00000115414 113113.742   35787.371    396209.8960   263238.4
##                                     TCGA-E2-A10A TCGA-E2-A10B TCGA-E2-A10C TCGA-E2-A10E
## ENSG00000211896 43937.73    11401.27    49153.48622   25906.444
## ENSG00000153002 484504.60    12583.49    99.48807    8162.075
## ENSG00000108821 316925.05    430828.79    182481.53634   327725.179
## ENSG00000211592 16997.59     10112.30    94826.16532   19689.089
## ENSG00000164692 237870.87    325511.99    97509.79235   257260.226
## ENSG00000115414 422279.36    281977.12    116813.02977   351164.799
##                                     TCGA-E2-A10F TCGA-E2-A14N TCGA-E2-A140 TCGA-E2-A14P
## ENSG00000211896 12870.40022  7.076370e+03  15790.0943   2.650054e+05
## ENSG00000153002 23.44828   3.916088e+00  448.6588   3.418336e+00
## ENSG00000108821 717843.84431  4.899809e+04  475492.5618   8.862264e+04
## ENSG00000211592 19177.08572  1.019227e+04  9972.2395   2.090666e+05
## ENSG00000164692 538450.07157  3.903948e+04  241798.9206   6.502701e+04
## ENSG00000115414 627454.33182  1.175910e+05  156992.5930   9.109182e+04
##                                     TCGA-E2-A14Q TCGA-E2-A14R TCGA-E2-A14S TCGA-E2-A14T
## ENSG00000211896 3479.493   5.839130e+05  41508.5652    38382.08
## ENSG00000153002 11057.503   1.294773e+00  210.0129    1058673.27
## ENSG00000108821 241098.048   5.883192e+04  45479.7175    214954.46
## ENSG00000211592 36849.880   1.231089e+06  38479.2887    27926.04
## ENSG00000164692 173297.841   3.912287e+04  36644.0627    124664.60
## ENSG00000115414 95923.337   2.281922e+05  49690.3163    151720.40
##                                     TCGA-E2-A14U TCGA-E2-A14V TCGA-E2-A14W TCGA-E2-A14X
## ENSG00000211896 3599.237    7908.3323    96.80057   1.866926e+06
## ENSG00000153002 1182.722    757.3211    51.71537   8.965745e+00
## ENSG00000108821 13572.528   370447.8898   189719.83923  7.329625e+04

```

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000211592 | 11468.920    | 9795.0383    | 43.75916     | 1.091410e+06 |
| ## ENSG00000164692 | 12990.489    | 268112.7850  | 139456.47363 | 6.996291e+04 |
| ## ENSG00000115414 | 7381.678     | 252157.1462  | 155387.46095 | 7.873589e+04 |
| ## TCGA-E2-A14Y    | TCGA-E2-A14Z | TCGA-E2-A150 | TCGA-E2-A152 |              |
| ## ENSG00000211896 | 1.483431e+05 | 11809.879    | 15877.36252  | 2.627832e+04 |
| ## ENSG00000153002 | 1.620085e+00 | 1287.289     | 14.66992     | 5.422236e+00 |
| ## ENSG00000108821 | 1.419616e+05 | 282916.451   | 215390.47183 | 7.775660e+05 |
| ## ENSG00000211592 | 1.036352e+05 | 18893.975    | 11066.75865  | 1.512912e+04 |
| ## ENSG00000164692 | 9.256519e+04 | 188470.605   | 164069.46472 | 6.471536e+05 |
| ## ENSG00000115414 | 1.761762e+05 | 285549.387   | 227583.42861 | 9.172688e+05 |
| ## TCGA-E2-A153    | TCGA-E2-A154 | TCGA-E2-A155 | TCGA-E2-A156 |              |
| ## ENSG00000211896 | 1546.5958    | 2230.42755   | 60092.68177  | 318.5272     |
| ## ENSG00000153002 | 175.6480     | 10.39221     | 67.32585     | 495.9347     |
| ## ENSG00000108821 | 1366930.2307 | 448073.02069 | 48355.80511  | 38576.0576   |
| ## ENSG00000211592 | 690.6838     | 1462.70322   | 29735.05782  | 262.0793     |
| ## ENSG00000164692 | 944648.5352  | 332193.41089 | 49711.82703  | 33663.0786   |
| ## ENSG00000115414 | 1379743.6061 | 438703.14652 | 95841.91859  | 116405.5470  |
| ## TCGA-E2-A158    | TCGA-E2-A159 | TCGA-E2-A15A | TCGA-E2-A15C |              |
| ## ENSG00000211896 | 10390.0455   | 585824.5558  | 344897.48226 | 237154.32284 |
| ## ENSG00000153002 | 754.2429     | 124.7227     | 29.92358     | 60.25937     |
| ## ENSG00000108821 | 116546.2461  | 199164.9270  | 289325.24433 | 397187.88769 |
| ## ENSG00000211592 | 11385.2272   | 364361.5689  | 154926.82457 | 224099.48794 |
| ## ENSG00000164692 | 194142.4794  | 166348.2788  | 232078.11733 | 294371.10472 |
| ## ENSG00000115414 | 151381.0955  | 169622.0233  | 409809.20095 | 452569.31217 |
| ## TCGA-E2-A15D    | TCGA-E2-A15E | TCGA-E2-A15F | TCGA-E2-A15G |              |
| ## ENSG00000211896 | 40697.11629  | 1491.83310   | 16074.07     | 2046.2934    |
| ## ENSG00000153002 | 15.24903     | 15.24872     | 579316.09    | 267.4616     |
| ## ENSG00000108821 | 327595.73233 | 291687.68081 | 140018.75    | 169264.9784  |
| ## ENSG00000211592 | 34266.26199  | 7156.73256   | 18319.10     | 2261.7486    |
| ## ENSG00000164692 | 221119.38891 | 224215.90726 | 104285.26    | 113161.7256  |
| ## ENSG00000115414 | 186093.21699 | 236101.01373 | 144077.53    | 90947.5545   |
| ## TCGA-E2-A15H    | TCGA-E2-A15I | TCGA-E2-A15J | TCGA-E2-A15K |              |
| ## ENSG00000211896 | 5450.284     | 11237.77     | 250.3749     | 9381.6073    |
| ## ENSG00000153002 | 180583.856   | 2737.50      | 25.8020      | 177.4053     |
| ## ENSG00000108821 | 553597.079   | 21843.92     | 253560.0558  | 10678.4682   |
| ## ENSG00000211592 | 61910.429    | 108099.51    | 134.7438     | 44730.7902   |
| ## ENSG00000164692 | 337187.747   | 62029.82     | 170887.5876  | 8871.2114    |
| ## ENSG00000115414 | 459749.036   | 29969.35     | 238217.4233  | 16612.5316   |
| ## TCGA-E2-A15L    | TCGA-E2-A15M | TCGA-E2-A150 | TCGA-E2-A15P |              |
| ## ENSG00000211896 | 112606.267   | 96340.237    | 13034.96358  | 11300.53     |
| ## ENSG00000153002 | 83.675       | 1819.772     | 26.63893     | 986456.54    |
| ## ENSG00000108821 | 696885.135   | 239336.449   | 106960.65104 | 258575.01    |
| ## ENSG00000211592 | 66628.121    | 97878.038    | 8946.41987   | 46232.51     |
| ## ENSG00000164692 | 628233.600   | 257555.412   | 73526.65674  | 212333.73    |
| ## ENSG00000115414 | 875021.605   | 179495.939   | 122966.38863 | 93258.72     |
| ## TCGA-E2-A15R    | TCGA-E2-A15S | TCGA-E2-A15T | TCGA-E2-A1AZ |              |
| ## ENSG00000211896 | 1628.588     | 248.4005     | 13986.893324 | 184631.53640 |
| ## ENSG00000153002 | 11526.071    | 3367.1271    | 1.694559     | 14.36989     |
| ## ENSG00000108821 | 215557.777   | 53747.6666   | 62538.562099 | 380157.24593 |
| ## ENSG00000211592 | 3399.590     | 4240.1394    | 12746.475840 | 46854.82378  |
| ## ENSG00000164692 | 181259.330   | 45133.0781   | 49470.119972 | 259053.19862 |
| ## ENSG00000115414 | 114609.399   | 24574.3231   | 84011.171592 | 269728.23092 |
| ## TCGA-E2-A1B0    | TCGA-E2-A1B1 | TCGA-E2-A1B4 | TCGA-E2-A1B5 |              |
| ## ENSG00000211896 | 1.759524e+05 | 28181.1304   | 966.59791    | 128770.70875 |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000153002 | 6.549164e+00 | 295.5851     | 57.16439     | 41.41977     |
| ## ENSG00000108821 | 3.306930e+05 | 417998.3012  | 387040.05846 | 99649.25159  |
| ## ENSG00000211592 | 1.458010e+05 | 51709.2393   | 7538.27589   | 313324.89301 |
| ## ENSG00000164692 | 2.814030e+05 | 465814.6613  | 193871.18193 | 88398.74630  |
| ## ENSG00000115414 | 6.141766e+05 | 319293.8231  | 122971.00227 | 37477.05631  |
| ##                 | TCGA-E2-A1B6 | TCGA-E2-A1BC | TCGA-E2-A1BD | TCGA-E2-A1IE |
| ## ENSG00000211896 | 2.058556e+05 | 17040.65592  | 3928.98787   | 2509.948     |
| ## ENSG00000153002 | 5.922028e+00 | 50.65593     | 79.39406     | 1341142.207  |
| ## ENSG00000108821 | 3.278790e+04 | 630642.05335 | 363396.09203 | 159106.654   |
| ## ENSG00000211592 | 3.531608e+05 | 16777.24507  | 7599.43613   | 5469.073     |
| ## ENSG00000164692 | 2.319895e+04 | 551774.81785 | 214450.80822 | 118313.843   |
| ## ENSG00000115414 | 2.204179e+04 | 480635.65152 | 153347.24310 | 116175.403   |
| ##                 | TCGA-E2-A1IF | TCGA-E2-A1IG | TCGA-E2-A1IH | TCGA-E2-A1II |
| ## ENSG00000211896 | 51871.12     | 936.27255    | 245820.6     | 3.502658e+05 |
| ## ENSG00000153002 | 384008.04    | 93.91623     | 180880.3     | 4.301135e+00 |
| ## ENSG00000108821 | 1016984.99   | 59828.97180  | 666897.7     | 2.793874e+04 |
| ## ENSG00000211592 | 67053.96     | 21162.93832  | 350710.8     | 2.575046e+05 |
| ## ENSG00000164692 | 500326.59    | 91403.60763  | 559514.3     | 2.824985e+04 |
| ## ENSG00000115414 | 272389.32    | 27078.21581  | 451086.0     | 6.554069e+04 |
| ##                 | TCGA-E2-A1IJ | TCGA-E2-A1IK | TCGA-E2-A1IL | TCGA-E2-A1IN |
| ## ENSG00000211896 | 35557.2460   | 57637.53     | 12490.7510   | 10518.392    |
| ## ENSG00000153002 | 141.5662     | 1000150.86   | 199.9091     | 2688.639     |
| ## ENSG00000108821 | 1159226.0619 | 47802.97     | 564868.2451  | 1121355.294  |
| ## ENSG00000211592 | 68918.6071   | 137406.39    | 14341.1005   | 6906.057     |
| ## ENSG00000164692 | 904131.8191  | 39634.72     | 381964.4773  | 904666.225   |
| ## ENSG00000115414 | 616871.4843  | 28222.64     | 272705.8064  | 765517.979   |
| ##                 | TCGA-E2-A1IO | TCGA-E2-A1IU | TCGA-E2-A1L6 | TCGA-E2-A1L7 |
| ## ENSG00000211896 | 181922.0297  | 169903.44    | 2422.459     | 106883.1429  |
| ## ENSG00000153002 | 413.5712     | 301227.54    | 18830.065    | 569.1878     |
| ## ENSG00000108821 | 1285294.3952 | 82615.38     | 238711.055   | 199118.6127  |
| ## ENSG00000211592 | 95190.7618   | 113228.46    | 6896.063     | 93445.1475   |
| ## ENSG00000164692 | 935175.7872  | 72275.67     | 179999.174   | 145664.1331  |
| ## ENSG00000115414 | 507854.4824  | 66635.62     | 147717.291   | 154988.7324  |
| ##                 | TCGA-E2-A1L8 | TCGA-E2-A1L9 | TCGA-E2-A1LA | TCGA-E2-A1LB |
| ## ENSG00000211896 | 163578.49250 | 3.407736e+03 | 871636.95    | 8924.119     |
| ## ENSG00000153002 | 73.68627     | 6.816835e+00 | 45316.53     | 1093.489     |
| ## ENSG00000108821 | 435768.03306 | 7.761437e+05 | 410961.20    | 72483.421    |
| ## ENSG00000211592 | 174595.42702 | 7.701660e+03 | 940775.06    | 53709.845    |
| ## ENSG00000164692 | 321169.97566 | 5.977737e+05 | 229799.05    | 47166.028    |
| ## ENSG00000115414 | 290379.16347 | 8.599785e+05 | 205471.74    | 8059.195     |
| ##                 | TCGA-E2-A1LE | TCGA-E2-A1LG | TCGA-E2-A1LH | TCGA-E2-A1LI |
| ## ENSG00000211896 | 18746.044    | 152023.978   | 3570.207     | 309385.61631 |
| ## ENSG00000153002 | 2.178        | 149.524      | 1164.587     | 50.65279     |
| ## ENSG00000108821 | 865966.185   | 13334.746    | 3133.039     | 41045.64191  |
| ## ENSG00000211592 | 15488.846    | 87560.754    | 49892.116    | 272051.29608 |
| ## ENSG00000164692 | 503794.222   | 52172.523    | 4881.711     | 30115.09203  |
| ## ENSG00000115414 | 353294.436   | 32475.572    | 4206.848     | 37040.85567  |
| ##                 | TCGA-E2-A1LK | TCGA-E2-A1LL | TCGA-E2-A1LS | TCGA-E2-A2P5 |
| ## ENSG00000211896 | 11594.60     | 18148.31918  | 847.6575     | 1796.6978    |
| ## ENSG00000153002 | 0.00         | 13.71625     | 717.3588     | 172.7389     |
| ## ENSG00000108821 | 35612.85     | 102520.42942 | 41130.0024   | 467928.3489  |
| ## ENSG00000211592 | 10141.12     | 25774.55666  | 4319.9031    | 5228.0174    |
| ## ENSG00000164692 | 23832.85     | 109916.91964 | 35113.3525   | 308556.4560  |
| ## ENSG00000115414 | 52755.50     | 254122.76090 | 41416.3732   | 186608.1255  |

|    |                 |              |              |              |              |
|----|-----------------|--------------|--------------|--------------|--------------|
| ## | TCGA-E2-A2P6    | TCGA-E2-A3DX | TCGA-E2-A56Z | TCGA-E2-A570 |              |
| ## | ENSG00000211896 | 84246.23609  | 699938.1476  | 27832.923    | 19398.3977   |
| ## | ENSG00000153002 | 20.86293     | 185.0402     | 21583.570    | 22.8306      |
| ## | ENSG00000108821 | 164275.55315 | 894974.6513  | 153806.982   | 1008906.9350 |
| ## | ENSG00000211592 | 61881.17880  | 315669.4277  | 1921.407     | 7390.7718    |
| ## | ENSG00000164692 | 101045.23843 | 645331.3785  | 112442.954   | 688296.8541  |
| ## | ENSG00000115414 | 57159.20309  | 270982.6380  | 102184.695   | 396647.3860  |
| ## |                 | TCGA-E2-A573 | TCGA-E2-A574 | TCGA-E2-A576 | TCGA-E2-A9RU |
| ## | ENSG00000211896 | 857643.0905  | 2475.69092   | 33103.3644   | 24834.0479   |
| ## | ENSG00000153002 | 113.8227     | 12.79427     | 270.2601     | 196.8101     |
| ## | ENSG00000108821 | 134251.1067  | 130407.17933 | 206702.7842  | 588915.0556  |
| ## | ENSG00000211592 | 483406.3117  | 1967.11876   | 85419.0028   | 15401.9770   |
| ## | ENSG00000164692 | 89978.5679   | 87015.41826  | 127828.8375  | 375407.8473  |
| ## | ENSG00000115414 | 96278.2622   | 70128.58334  | 44900.9889   | 255702.8692  |
| ## |                 | TCGA-E9-A1N3 | TCGA-E9-A1N4 | TCGA-E9-A1N5 | TCGA-E9-A1N6 |
| ## | ENSG00000211896 | 14559.16     | 3970.3906    | 1036.99074   | 22332.04738  |
| ## | ENSG00000153002 | 2074004.52   | 602.9592     | 11.84166     | 89.83958     |
| ## | ENSG00000108821 | 55208.86     | 9896.3061    | 580237.76581 | 27836.44959  |
| ## | ENSG00000211592 | 14551.73     | 19079.1559   | 48082.19878  | 145154.27672 |
| ## | ENSG00000164692 | 50479.92     | 17427.8390   | 321512.80491 | 48872.73374  |
| ## | ENSG00000115414 | 65991.86     | 7465.3711    | 95254.28171  | 22281.36864  |
| ## |                 | TCGA-E9-A1N8 | TCGA-E9-A1N9 | TCGA-E9-A1NA | TCGA-E9-A1NC |
| ## | ENSG00000211896 | 3210.605146  | 5014.7511    | 4108.535     | 8.040020e+05 |
| ## | ENSG00000153002 | 4.848026     | 467.0183     | 1916.226     | 9.130325e+00 |
| ## | ENSG00000108821 | 66730.652362 | 21581.5601   | 99636.569    | 2.512574e+05 |
| ## | ENSG00000211592 | 2318.568382  | 107511.9739  | 88767.051    | 7.137710e+05 |
| ## | ENSG00000164692 | 56021.363171 | 40865.9977   | 120265.136   | 1.713840e+05 |
| ## | ENSG00000115414 | 83669.654821 | 16320.0107   | 45808.424    | 3.715560e+05 |
| ## |                 | TCGA-E9-A1ND | TCGA-E9-A1NE | TCGA-E9-A1NF | TCGA-E9-A1NG |
| ## | ENSG00000211896 | 7280.5578    | 68162.91     | 1224.04708   | 4463.414     |
| ## | ENSG00000153002 | 266.1402     | 455243.94    | 73.59777     | 4296.395     |
| ## | ENSG00000108821 | 394466.5439  | 134243.08    | 130455.27093 | 64546.878    |
| ## | ENSG00000211592 | 138965.4408  | 88211.37     | 1430.63731   | 11983.040    |
| ## | ENSG00000164692 | 326252.8580  | 138988.59    | 187113.93123 | 117199.212   |
| ## | ENSG00000115414 | 74099.9287   | 201284.97    | 130364.88771 | 80729.092    |
| ## |                 | TCGA-E9-A1NH | TCGA-E9-A1NI | TCGA-E9-A1QZ | TCGA-E9-A1R0 |
| ## | ENSG00000211896 | 41595.71595  | 2113.1652    | 34690.79     | 127379.29919 |
| ## | ENSG00000153002 | 25.23733     | 9251.3267    | 12523.57     | 45.99402     |
| ## | ENSG00000108821 | 701640.34526 | 564010.3842  | 106680.59    | 350900.42000 |
| ## | ENSG00000211592 | 30394.92802  | 546.8101     | 71479.88     | 155119.72347 |
| ## | ENSG00000164692 | 594562.92335 | 499924.5088  | 111614.67    | 273530.94334 |
| ## | ENSG00000115414 | 814541.85570 | 464313.1638  | 146371.68    | 166512.66769 |
| ## |                 | TCGA-E9-A1R2 | TCGA-E9-A1R3 | TCGA-E9-A1R4 | TCGA-E9-A1R5 |
| ## | ENSG00000211896 | 3857.08457   | 11623.66     | 1.993953e+04 | 7.664681e+03 |
| ## | ENSG00000153002 | 12.38772     | 17551.45     | 4.014401e+00 | 6.971853e+00 |
| ## | ENSG00000108821 | 322713.53825 | 735738.47    | 2.103456e+05 | 6.618276e+05 |
| ## | ENSG00000211592 | 8234.45325   | 15585.87     | 2.117998e+04 | 7.675139e+03 |
| ## | ENSG00000164692 | 238117.81977 | 675503.77    | 1.684182e+05 | 6.839109e+05 |
| ## | ENSG00000115414 | 183339.33578 | 859575.73    | 3.624512e+05 | 7.755429e+05 |
| ## |                 | TCGA-E9-A1R6 | TCGA-E9-A1R7 | TCGA-E9-A1RA | TCGA-E9-A1RB |
| ## | ENSG00000211896 | 6083.987     | 6679.509     | 14378.66818  | 8301.472     |
| ## | ENSG00000153002 | 146584.471   | 2278.342     | 82.12981     | 1310.591     |
| ## | ENSG00000108821 | 307554.168   | 91088.985    | 468100.63730 | 32676.058    |
| ## | ENSG00000211592 | 4859.064     | 22971.018    | 15399.93451  | 113439.601   |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000164692 | 227709.713   | 98117.438    | 364627.78933 | 94549.516    |
| ## ENSG00000115414 | 314726.976   | 131514.011   | 311248.17400 | 95145.675    |
| ## TCGA-E9-A1RC    | TCGA-E9-A1RD | TCGA-E9-A1RE | TCGA-E9-A1RF |              |
| ## ENSG00000211896 | 369.93039    | 23921.962    | 9.835348e+04 | 80387.51     |
| ## ENSG00000153002 | 44.31458     | 7234.108     | 5.601816e+00 | 10117.96     |
| ## ENSG00000108821 | 466206.69477 | 331232.115   | 1.440459e+05 | 514624.33    |
| ## ENSG00000211592 | 368.64590    | 16561.606    | 3.345244e+04 | 57628.02     |
| ## ENSG00000164692 | 377697.63889 | 263638.837   | 1.076381e+05 | 388099.26    |
| ## ENSG00000115414 | 616380.44847 | 245526.191   | 2.169647e+05 | 524107.01    |
| ## TCGA-E9-A1RG    | TCGA-E9-A1RH | TCGA-E9-A1RI | TCGA-E9-A226 |              |
| ## ENSG00000211896 | 33025.2916   | 14628.7807   | 2819.9990    | 2.723104e+03 |
| ## ENSG00000153002 | 146.1595     | 494.0585     | 191.0045     | 5.255267e+01 |
| ## ENSG00000108821 | 527672.5139  | 104535.7977  | 18517.7787   | 5.928274e+05 |
| ## ENSG00000211592 | 34332.6075   | 53318.7903   | 4881.3453    | 5.360372e+03 |
| ## ENSG00000164692 | 328201.2686  | 190358.9855  | 57782.0795   | 6.851160e+05 |
| ## ENSG00000115414 | 237743.3940  | 65562.1405   | 26620.4470   | 1.031121e+06 |
| ## TCGA-E9-A227    | TCGA-E9-A228 | TCGA-E9-A229 | TCGA-E9-A22A |              |
| ## ENSG00000211896 | 6593.2552    | 510.9193     | 26534.414    | 83257.1501   |
| ## ENSG00000153002 | 229.6444     | 810765.9144  | 1123.897     | 189.9344     |
| ## ENSG00000108821 | 375913.1442  | 144607.9616  | 873840.851   | 1330105.5384 |
| ## ENSG00000211592 | 22099.9943   | 581.3654     | 53398.337    | 74733.0761   |
| ## ENSG00000164692 | 286873.4433  | 112537.9496  | 913671.857   | 1112999.7488 |
| ## ENSG00000115414 | 202503.7256  | 77334.9417   | 579372.449   | 939961.8132  |
| ## TCGA-E9-A22B    | TCGA-E9-A22D | TCGA-E9-A22E | TCGA-E9-A22G |              |
| ## ENSG00000211896 | 3204.858     | 375991.7     | 40861.29     | 3304.67080   |
| ## ENSG00000153002 | 3361426.575  | 196947.3     | 18110.50     | 16.99934     |
| ## ENSG00000108821 | 365740.276   | 192198.6     | 1994896.57   | 75127.71274  |
| ## ENSG00000211592 | 6941.356     | 352830.9     | 35574.90     | 4018.64288   |
| ## ENSG00000164692 | 316918.765   | 145246.3     | 1978254.73   | 60632.37946  |
| ## ENSG00000115414 | 463772.220   | 126730.8     | 1246234.31   | 42141.35240  |
| ## TCGA-E9-A22H    | TCGA-E9-A243 | TCGA-E9-A244 | TCGA-E9-A245 |              |
| ## ENSG00000211896 | 16985.42     | 463144.08499 | 50592.40433  | 3953.714     |
| ## ENSG00000153002 | 19377.74     | 21.71917     | 52.15232     | 5272094.725  |
| ## ENSG00000108821 | 82578.66     | 241235.35704 | 151882.44891 | 145893.249   |
| ## ENSG00000211592 | 16947.25     | 477256.39938 | 71454.26258  | 21636.309    |
| ## ENSG00000164692 | 70678.76     | 273116.23610 | 133798.63285 | 106239.371   |
| ## ENSG00000115414 | 87006.46     | 487583.29163 | 322005.17083 | 70073.964    |
| ## TCGA-E9-A247    | TCGA-E9-A248 | TCGA-E9-A249 | TCGA-E9-A24A |              |
| ## ENSG00000211896 | 1228.6553    | 1.086059e+06 | 3807.41415   | 752.3237     |
| ## ENSG00000153002 | 256.1616     | 1.747817e+01 | 74.22396     | 400.0753     |
| ## ENSG00000108821 | 187556.2999  | 6.208079e+04 | 152867.67818 | 377745.4715  |
| ## ENSG00000211592 | 5495.9699    | 1.008611e+06 | 7501.43059   | 1383.9417    |
| ## ENSG00000164692 | 145269.6971  | 6.403419e+04 | 119378.24060 | 364344.8471  |
| ## ENSG00000115414 | 233528.1017  | 1.459660e+05 | 136483.42667 | 501853.0779  |
| ## TCGA-E9-A295    | TCGA-E9-A2JS | TCGA-E9-A2JT | TCGA-E9-A3H0 |              |
| ## ENSG00000211896 | 8863.4133    | 9.107182e+03 | 6.655459e+05 | 4476.9687    |
| ## ENSG00000153002 | 235.6327     | 6.338265e+00 | 7.352737e+00 | 387.7778     |
| ## ENSG00000108821 | 436754.2079  | 4.074916e+05 | 9.427312e+04 | 164648.4395  |
| ## ENSG00000211592 | 5996.9808    | 5.843881e+03 | 4.238485e+05 | 9801.8482    |
| ## ENSG00000164692 | 316235.8677  | 2.763294e+05 | 7.696294e+04 | 90622.4396   |
| ## ENSG00000115414 | 170410.3204  | 3.020781e+05 | 3.977279e+04 | 56500.2500   |
| ## TCGA-E9-A3Q9    | TCGA-E9-A3QA | TCGA-E9-A3X8 | TCGA-E9-A54X |              |
| ## ENSG00000211896 | 124143.226   | 3.222550e+05 | 95074.10320  | 243.2949     |
| ## ENSG00000153002 | 1047.483     | 8.647797e-01 | 32.10723     | 38187.4585   |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000108821 | 38567.168    | 1.366118e+05 | 848332.71950 | 12489.6081   |
| ## ENSG00000211592 | 77895.204    | 3.749927e+05 | 575210.24993 | 217.9810     |
| ## ENSG00000164692 | 34940.155    | 7.545635e+04 | 497698.80309 | 7858.5666    |
| ## ENSG00000115414 | 30523.406    | 1.405500e+05 | 149633.46530 | 13317.9359   |
| ##                 | TCGA-E9-A54Y | TCGA-E9-A5FK | TCGA-E9-A5FL | TCGA-E9-A5U0 |
| ## ENSG00000211896 | 45695.09473  | 399731.342   | 6.803636e+02 | 1.411733e+01 |
| ## ENSG00000153002 | 15.30458     | 5047.365     | 9.449494e+00 | 1.751844e+06 |
| ## ENSG00000108821 | 39459.57271  | 296123.468   | 5.738621e+05 | 5.294704e+04 |
| ## ENSG00000211592 | 46007.74538  | 312225.335   | 1.069683e+03 | 3.411688e+01 |
| ## ENSG00000164692 | 14051.78822  | 194957.436   | 2.636333e+05 | 3.556390e+04 |
| ## ENSG00000115414 | 26441.93663  | 67539.751    | 8.967948e+04 | 6.708319e+04 |
| ##                 | TCGA-E9-A5UP | TCGA-E9-A6HE | TCGA-EW-A1IW | TCGA-EW-A1IX |
| ## ENSG00000211896 | 261.450350   | 4366.53185   | 15040.1611   | 3.788260e+04 |
| ## ENSG00000153002 | 8.592265     | 60.77368     | 448.6865     | 8.477536e+01 |
| ## ENSG00000108821 | 19686.106617 | 593878.14474 | 247087.1005  | 1.337433e+06 |
| ## ENSG00000211592 | 137.476240   | 18183.94486  | 19874.5713   | 3.467404e+04 |
| ## ENSG00000164692 | 10665.455817 | 391054.57511 | 199662.0928  | 9.064301e+05 |
| ## ENSG00000115414 | 20347.711024 | 205309.55730 | 214144.9595  | 5.862170e+05 |
| ##                 | TCGA-EW-A1IY | TCGA-EW-A1IZ | TCGA-EW-A1J1 | TCGA-EW-A1J2 |
| ## ENSG00000211896 | 5.181986e+04 | 1270358.6518 | 183068.27    | 8503.588     |
| ## ENSG00000153002 | 5.165778e+00 | 68.6866      | 307992.03    | 1414.607     |
| ## ENSG00000108821 | 2.373572e+05 | 51316.9030   | 114679.88    | 517345.614   |
| ## ENSG00000211592 | 5.762038e+04 | 1163110.2511 | 57049.14     | 15033.815    |
| ## ENSG00000164692 | 2.783831e+05 | 39453.5826   | 101492.18    | 466771.798   |
| ## ENSG00000115414 | 3.145087e+05 | 49975.2248   | 94237.07     | 546886.974   |
| ##                 | TCGA-EW-A1J3 | TCGA-EW-A1J5 | TCGA-EW-A1J6 | TCGA-EW-A1OV |
| ## ENSG00000211896 | 282.1713     | 19935.28900  | 19581.885    | 448468.59025 |
| ## ENSG00000153002 | 4024.6974    | 21.63874     | 8548.337     | 19.12866     |
| ## ENSG00000108821 | 245986.5671  | 133684.72810 | 51214.784    | 267213.65086 |
| ## ENSG00000211592 | 2533.6977    | 27706.00046  | 18104.881    | 444894.26438 |
| ## ENSG00000164692 | 184687.7792  | 117533.81404 | 31891.028    | 172949.00400 |
| ## ENSG00000115414 | 199795.6300  | 137484.12995 | 25513.054    | 140745.91285 |
| ##                 | TCGA-EW-A1OW | TCGA-EW-A1OX | TCGA-EW-A1OY | TCGA-EW-A1OZ |
| ## ENSG00000211896 | 1.769845e+05 | 4.009809e+01 | 171281.979   | 2.565027e+04 |
| ## ENSG00000153002 | 1.265603e+00 | 1.867239e+06 | 6088.727     | 3.844321e+00 |
| ## ENSG00000108821 | 3.061533e+05 | 2.821204e+04 | 188751.953   | 6.357430e+05 |
| ## ENSG00000211592 | 7.811052e+04 | 2.624602e+02 | 138372.077   | 1.476315e+04 |
| ## ENSG00000164692 | 3.334334e+05 | 2.242941e+04 | 127261.880   | 4.740797e+05 |
| ## ENSG00000115414 | 3.721431e+05 | 3.454025e+04 | 218790.427   | 6.697903e+05 |
| ##                 | TCGA-EW-A1P0 | TCGA-EW-A1P1 | TCGA-EW-A1P3 | TCGA-EW-A1P4 |
| ## ENSG00000211896 | 14282.9520   | 9076.92881   | 42848.2774   | 5.922501e+04 |
| ## ENSG00000153002 | 624.1005     | 18.96106     | 277.9843     | 8.462831e+00 |
| ## ENSG00000108821 | 186633.8782  | 563962.77835 | 285646.1077  | 3.230686e+05 |
| ## ENSG00000211592 | 4746.0669    | 14311.53487  | 43665.0355   | 5.154710e+04 |
| ## ENSG00000164692 | 157540.6335  | 395843.21302 | 170513.3036  | 2.280437e+05 |
| ## ENSG00000115414 | 172390.8396  | 349423.83702 | 130457.7658  | 2.099089e+05 |
| ##                 | TCGA-EW-A1P5 | TCGA-EW-A1P6 | TCGA-EW-A1P7 | TCGA-EW-A1P8 |
| ## ENSG00000211896 | 8146.192     | 195291.91496 | 843609.508   | 52562.64899  |
| ## ENSG00000153002 | 7149.040     | 81.53665     | 364.238      | 26.83543     |
| ## ENSG00000108821 | 270001.931   | 307492.16372 | 221221.499   | 163513.22231 |
| ## ENSG00000211592 | 5144.305     | 148818.93883 | 478436.996   | 33627.77094  |
| ## ENSG00000164692 | 206005.823   | 240418.08041 | 158014.762   | 132242.99327 |
| ## ENSG00000115414 | 198111.006   | 323915.97382 | 361661.258   | 122362.58685 |
| ##                 | TCGA-EW-A1PA | TCGA-EW-A1PB | TCGA-EW-A1PC | TCGA-EW-A1PD |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000211896 | 253066.70    | 32924.24310  | 2221.092     | 564.5655     |
| ## ENSG00000153002 | 68353.77     | 55.29076     | 304.945      | 8545.1210    |
| ## ENSG00000108821 | 137350.58    | 45780.75097  | 333551.907   | 596683.6181  |
| ## ENSG00000211592 | 190942.16    | 26449.60115  | 1451.902     | 1415.2458    |
| ## ENSG00000164692 | 105400.29    | 31084.65384  | 284661.885   | 440707.6976  |
| ## ENSG00000115414 | 113235.39    | 223301.58237 | 354427.307   | 399221.9228  |
|                    | TCGA-EW-A1PE | TCGA-EW-A1PF | TCGA-EW-A1PG | TCGA-EW-A1PH |
| ## ENSG00000211896 | 86836.456    | 61706.70     | 3259.12671   | 107486.00267 |
| ## ENSG00000153002 | 3126.276     | 1706314.42   | 89.88695     | 25.09423     |
| ## ENSG00000108821 | 347990.622   | 713702.31    | 447435.47314 | 100246.78335 |
| ## ENSG00000211592 | 210690.003   | 50051.97     | 37233.49293  | 92407.16146  |
| ## ENSG00000164692 | 273805.050   | 505828.15    | 327519.03748 | 111117.23003 |
| ## ENSG00000115414 | 349896.985   | 520107.73    | 437588.50312 | 69320.47410  |
|                    | TCGA-EW-A2FR | TCGA-EW-A2FS | TCGA-EW-A2FV | TCGA-EW-A2FW |
| ## ENSG00000211896 | 1.051264e+05 | 1091726.52   | 170152.18551 | 13940.015    |
| ## ENSG00000153002 | 1.025523e+01 | 247575.70    | 12.70105     | 12474.418    |
| ## ENSG00000108821 | 1.527684e+06 | 87198.34     | 133239.95565 | 224264.797   |
| ## ENSG00000211592 | 5.904645e+04 | 1199344.05   | 118546.33899 | 9311.386     |
| ## ENSG00000164692 | 1.398408e+06 | 52941.65     | 120863.15931 | 155892.442   |
| ## ENSG00000115414 | 1.482030e+06 | 69095.19     | 147599.60950 | 148233.553   |
|                    | TCGA-EW-A3E8 | TCGA-EW-A3U0 | TCGA-EW-A423 | TCGA-EW-A424 |
| ## ENSG00000211896 | 220203.90342 | 1.629837e+06 | 3789.1016    | 47606.66637  |
| ## ENSG00000153002 | 24.42902     | 8.013295e+00 | 126.9733     | 14.98767     |
| ## ENSG00000108821 | 298532.95686 | 3.950875e+05 | 150336.3519  | 686357.81967 |
| ## ENSG00000211592 | 200334.96924 | 8.516480e+05 | 9505.6392    | 84229.86907  |
| ## ENSG00000164692 | 209555.07264 | 1.909368e+05 | 66259.0371   | 404468.06935 |
| ## ENSG00000115414 | 102219.15195 | 2.281616e+05 | 40696.3033   | 160811.86352 |
|                    | TCGA-EW-A6S9 | TCGA-EW-A6SA | TCGA-EW-A6SB | TCGA-EW-A6SC |
| ## ENSG00000211896 | 1.412919e+05 | 6534.408     | 5.952245e+06 | 31728.008    |
| ## ENSG00000153002 | 9.863925e-01 | 22349.279    | 3.419199e+01 | 6942.117     |
| ## ENSG00000108821 | 9.235998e+05 | 32890.783    | 2.961976e+04 | 686187.113   |
| ## ENSG00000211592 | 1.784976e+05 | 2352.143     | 3.192263e+06 | 49601.941    |
| ## ENSG00000164692 | 6.616909e+05 | 28837.498    | 1.857385e+04 | 492374.395   |
| ## ENSG00000115414 | 5.424528e+05 | 69317.188    | 1.128905e+04 | 463532.024   |
|                    | TCGA-EW-A6SD | TCGA-GI-A2C8 | TCGA-GI-A2C9 | TCGA-GM-A2D9 |
| ## ENSG00000211896 | 747463.8736  | 22180.06     | 10087.79556  | 1808.861     |
| ## ENSG00000153002 | 135.7107     | 146299.48    | 17.50745     | 6500.118     |
| ## ENSG00000108821 | 360775.9430  | 1107425.04   | 379784.84420 | 492665.594   |
| ## ENSG00000211592 | 469244.9063  | 16907.60     | 4472.27938   | 12029.303    |
| ## ENSG00000164692 | 253488.9761  | 755490.21    | 272513.16600 | 265712.496   |
| ## ENSG00000115414 | 588640.7696  | 369526.96    | 233134.52286 | 199613.083   |
|                    | TCGA-GM-A2DA | TCGA-GM-A2DB | TCGA-GM-A2DC | TCGA-GM-A2DD |
| ## ENSG00000211896 | 92789.69404  | 6.948395e+04 | 14216.93     | 79150.91144  |
| ## ENSG00000153002 | 32.70602     | 8.348426e+00 | 180664.26    | 42.91855     |
| ## ENSG00000108821 | 710178.44018 | 1.525550e+05 | 172630.79    | 629211.96464 |
| ## ENSG00000211592 | 255488.49814 | 1.538427e+05 | 29109.74     | 57239.04046  |
| ## ENSG00000164692 | 381537.48536 | 7.421959e+04 | 93795.59     | 323267.72619 |
| ## ENSG00000115414 | 177956.16075 | 5.541059e+04 | 55278.63     | 156434.21565 |
|                    | TCGA-GM-A2DF | TCGA-GM-A2DH | TCGA-GM-A2DI | TCGA-GM-A2DK |
| ## ENSG00000211896 | 3009595.4    | 5.529442e+04 | 356911.37892 | 13033.57     |
| ## ENSG00000153002 | 0.0          | 6.301789e-01 | 77.22689     | 26936.21     |
| ## ENSG00000108821 | 192799.0     | 9.423759e+04 | 354348.28104 | 230185.43    |
| ## ENSG00000211592 | 2822220.9    | 2.613226e+04 | 159876.36069 | 33337.20     |
| ## ENSG00000164692 | 109140.3     | 7.598194e+04 | 280590.33914 | 108234.15    |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000115414 | 129936.6     | 2.284499e+05 | 292927.85667 | 146255.37    |
| ##                 | TCGA-GM-A2DL | TCGA-GM-A2DM | TCGA-GM-A2DN | TCGA-GM-A2DO |
| ## ENSG00000211896 | 8582.12732   | 657.3200     | 1.297534e+06 | 613769.8558  |
| ## ENSG00000153002 | 12.64495     | 3723858.5686 | 3.383328e+01 | 336.0116     |
| ## ENSG00000108821 | 582406.14832 | 134636.4751  | 1.568332e+05 | 75371.6072   |
| ## ENSG00000211592 | 5600.44819   | 829.5759     | 1.319779e+06 | 495690.6463  |
| ## ENSG00000164692 | 480309.56046 | 79036.9223   | 1.237791e+05 | 38785.7166   |
| ## ENSG00000115414 | 738351.25420 | 216888.1362  | 1.341878e+05 | 77054.2904   |
| ##                 | TCGA-GM-A3NW | TCGA-GM-A3NY | TCGA-GM-A3XG | TCGA-GM-A3XL |
| ## ENSG00000211896 | 10983.8609   | 2.269159e+04 | 1893.026     | 7.543548e+05 |
| ## ENSG00000153002 | 858.6234     | 2.733597e+00 | 2401.824     | 2.792821e+00 |
| ## ENSG00000108821 | 155303.8892  | 4.740640e+05 | 69371.368    | 4.696500e+04 |
| ## ENSG00000211592 | 14103.6278   | 1.873844e+05 | 9685.860     | 3.239970e+05 |
| ## ENSG00000164692 | 94982.2852   | 1.628285e+05 | 43300.169    | 2.848398e+04 |
| ## ENSG00000115414 | 37626.6496   | 8.506680e+04 | 19887.999    | 7.655587e+04 |
| ##                 | TCGA-GM-A3XN | TCGA-GM-A4E0 | TCGA-GM-A5PV | TCGA-GM-A5PX |
| ## ENSG00000211896 | 18370.16346  | 1879.50483   | 1356.6330    | 7758.759     |
| ## ENSG00000153002 | 10.30054     | 50.74468     | 445.1102     | 210.296      |
| ## ENSG00000108821 | 829728.63478 | 402028.62051 | 16619.3151   | 481714.075   |
| ## ENSG00000211592 | 135422.98062 | 48685.61578  | 16452.2587   | 26834.399    |
| ## ENSG00000164692 | 438306.21165 | 200308.76405 | 14503.6403   | 429006.932   |
| ## ENSG00000115414 | 170913.50809 | 109235.72779 | 14425.1574   | 170667.326   |
| ##                 | TCGA-HN-A2NL | TCGA-HN-A2OB | TCGA-JL-A3YW | TCGA-JL-A3YX |
| ## ENSG00000211896 | 352869.40547 | 5.732911e+03 | 3.386709e+05 | 6316.615     |
| ## ENSG00000153002 | 19.77081     | 1.280447e+01 | 7.558058e+00 | 959.709      |
| ## ENSG00000108821 | 70477.54333  | 1.193423e+06 | 1.397933e+06 | 424994.068   |
| ## ENSG00000211592 | 143156.83589 | 5.044380e+04 | 1.911291e+05 | 23175.755    |
| ## ENSG00000164692 | 43790.54539  | 8.429696e+05 | 7.670664e+05 | 212764.039   |
| ## ENSG00000115414 | 33440.52669  | 2.647848e+05 | 7.769060e+05 | 182487.446   |
| ##                 | TCGA-LD-A66U | TCGA-LD-A74U | TCGA-LD-A7W5 | TCGA-LD-A7W6 |
| ## ENSG00000211896 | 45357.6104   | 18257.0792   | 258034.5028  | 76559.6235   |
| ## ENSG00000153002 | 441.0691     | 106.8411     | 19.4372      | 159.6271     |
| ## ENSG00000108821 | 705311.7484  | 912451.0983  | 394727.4236  | 193866.6675  |
| ## ENSG00000211592 | 130273.4778  | 17736.5965   | 182617.3559  | 113854.7532  |
| ## ENSG00000164692 | 405092.7440  | 544982.5365  | 222382.6281  | 119010.0481  |
| ## ENSG00000115414 | 82671.2487   | 172819.8293  | 123999.6191  | 38550.4223   |
| ##                 | TCGA-LD-A9QF | TCGA-LL-A440 | TCGA-LL-A441 | TCGA-LL-A442 |
| ## ENSG00000211896 | 559065.3863  | 2430.790     | 322870.8405  | 375.6512     |
| ## ENSG00000153002 | 191.7261     | 2696.401     | 628.2054     | 810.0432     |
| ## ENSG00000108821 | 1088189.7663 | 2041106.302  | 225841.3244  | 41576.1767   |
| ## ENSG00000211592 | 298247.8054  | 19063.940    | 150627.4657  | 153.7414     |
| ## ENSG00000164692 | 627348.9688  | 1038185.014  | 115295.7390  | 37405.5781   |
| ## ENSG00000115414 | 324226.0314  | 293503.100   | 67409.5576   | 53813.8489   |
| ##                 | TCGA-LL-A50Y | TCGA-LL-A5YL | TCGA-LL-A5YM | TCGA-LL-A5YN |
| ## ENSG00000211896 | 125225.1770  | 28329.5728   | 289150.68    | 248151.596   |
| ## ENSG00000153002 | 116.0104     | 528.2552     | 3434089.09   | 2250.393     |
| ## ENSG00000108821 | 173717.5268  | 313060.3936  | 333185.51    | 275244.070   |
| ## ENSG00000211592 | 186626.9069  | 49653.4751   | 37787.94     | 188766.796   |
| ## ENSG00000164692 | 112169.1726  | 240740.9964  | 174237.54    | 153823.974   |
| ## ENSG00000115414 | 88950.9788   | 136531.3346  | 86013.68     | 76684.419    |
| ##                 | TCGA-LL-A5Y0 | TCGA-LL-A5YP | TCGA-LL-A6FP | TCGA-LL-A6FQ |
| ## ENSG00000211896 | 1.580404e+06 | 361292.92642 | 346.0661     | 3308.0926    |
| ## ENSG00000153002 | 1.661706e+01 | 19.44238     | 936.7456     | 765.8353     |
| ## ENSG00000108821 | 2.523361e+05 | 685362.19712 | 60736.2832   | 407339.1043  |

|                    |              |              |              |              |
|--------------------|--------------|--------------|--------------|--------------|
| ## ENSG00000211592 | 1.040949e+06 | 122031.32655 | 541.0805     | 4192.3561    |
| ## ENSG00000164692 | 1.645270e+05 | 421073.39086 | 34199.6677   | 192027.2767  |
| ## ENSG00000115414 | 9.148448e+04 | 278807.40511 | 16621.3158   | 118437.6114  |
| ##                 | TCGA-LL-A6FR | TCGA-LL-A73Y | TCGA-LL-A73Z | TCGA-LL-A740 |
| ## ENSG00000211896 | 12003.13284  | 1.651279e+05 | 38589.691    | 1.931004e+04 |
| ## ENSG00000153002 | 49.88833     | 9.623142e+00 | 3392.888     | 6.824944e+00 |
| ## ENSG00000108821 | 852831.06947 | 4.341104e+05 | 224706.453   | 6.141301e+05 |
| ## ENSG00000211592 | 7090.12984   | 9.437765e+04 | 50834.462    | 1.776988e+04 |
| ## ENSG00000164692 | 551066.52277 | 3.189757e+05 | 171823.544   | 4.709211e+05 |
| ## ENSG00000115414 | 252979.74395 | 4.041982e+05 | 88607.128    | 4.313387e+05 |
| ##                 | TCGA-LL-A7SZ | TCGA-LL-A7T0 | TCGA-LL-A8F5 | TCGA-LL-A9Q3 |
| ## ENSG00000211896 | 7.604944e+06 | 269491.3     | 4.408235e+06 | 9556.1333    |
| ## ENSG00000153002 | 2.204070e+00 | 43.3         | 5.409874e+01 | 187.2463     |
| ## ENSG00000108821 | 2.630778e+05 | 272052.6     | 2.098943e+05 | 496165.0190  |
| ## ENSG00000211592 | 4.840712e+06 | 202615.1     | 1.949366e+06 | 30330.6218   |
| ## ENSG00000164692 | 1.504983e+05 | 139519.2     | 1.202074e+05 | 273778.7844  |
| ## ENSG00000115414 | 1.404434e+05 | 182747.0     | 1.007106e+06 | 118237.8502  |
| ##                 | TCGA-LQ-A4E4 | TCGA-MS-A51U | TCGA-OK-A5Q2 | TCGA-OL-A5D6 |
| ## ENSG00000211896 | 195.87166    | 14350.6650   | 40019.05470  | 84745.7404   |
| ## ENSG00000153002 | 12.97163     | 109.0256     | 69.98751     | 73.2461      |
| ## ENSG00000108821 | 288796.54377 | 760294.9474  | 342468.59553 | 917721.5445  |
| ## ENSG00000211592 | 1010.49020   | 105874.4118  | 53013.07360  | 57382.6868   |
| ## ENSG00000164692 | 154354.64873 | 481015.9007  | 200395.92407 | 495894.4242  |
| ## ENSG00000115414 | 63481.87433  | 371869.4059  | 114985.53406 | 361603.3299  |
| ##                 | TCGA-OL-A5D7 | TCGA-OL-A5D8 | TCGA-OL-A5DA | TCGA-OL-A5RU |
| ## ENSG00000211896 | 370957.08    | 65106.0173   | 14879.445    | 892219.3421  |
| ## ENSG00000153002 | 0.00         | 112.1551     | 335.212      | 165.1767     |
| ## ENSG00000108821 | 92240.42     | 247125.8428  | 317712.655   | 124753.9382  |
| ## ENSG00000211592 | 178014.86    | 29316.2134   | 16375.770    | 455343.0459  |
| ## ENSG00000164692 | 44082.44     | 131000.4848  | 174695.097   | 95604.2461   |
| ## ENSG00000115414 | 54241.83     | 138207.5695  | 143229.271   | 42477.7391   |
| ##                 | TCGA-OL-A5RV | TCGA-OL-A5RW | TCGA-OL-A5RX | TCGA-OL-A5RY |
| ## ENSG00000211896 | 60058.3681   | 73266.215    | 73980.05737  | 1210342.4280 |
| ## ENSG00000153002 | 199.2533     | 978.633      | 39.03675     | 461.7944     |
| ## ENSG00000108821 | 171552.8685  | 226385.093   | 188632.06772 | 434059.1601  |
| ## ENSG00000211592 | 54541.0749   | 44379.768    | 106341.52065 | 829703.9190  |
| ## ENSG00000164692 | 102356.5502  | 140548.329   | 119104.36822 | 300963.1234  |
| ## ENSG00000115414 | 152986.0795  | 101146.318   | 104846.19637 | 367824.0591  |
| ##                 | TCGA-OL-A5RZ | TCGA-OL-A5S0 | TCGA-OL-A66H | TCGA-OL-A66I |
| ## ENSG00000211896 | 38984.57932  | 1.196626e+05 | 123427.57    | 283163.42    |
| ## ENSG00000153002 | 12.73434     | 5.833927e+00 | 2507246.46   | 0.00         |
| ## ENSG00000108821 | 107253.35716 | 3.006427e+05 | 223175.12    | 429171.25    |
| ## ENSG00000211592 | 21976.28117  | 2.744571e+04 | 68561.20     | 59850.74     |
| ## ENSG00000164692 | 66969.87552  | 2.006740e+05 | 137456.79    | 299229.31    |
| ## ENSG00000115414 | 77435.90831  | 1.491896e+05 | 63190.09     | 117914.40    |
| ##                 | TCGA-OL-A66J | TCGA-OL-A66K | TCGA-OL-A66L | TCGA-OL-A66N |
| ## ENSG00000211896 | 7770.8131    | 58559.91194  | 81809.843    | 434738.105   |
| ## ENSG00000153002 | 118.4034     | 89.56313     | 1811.262     | 7387.551     |
| ## ENSG00000108821 | 364907.3426  | 739955.09058 | 731834.434   | 1055612.989  |
| ## ENSG00000211592 | 9391.7552    | 46550.71265  | 73073.499    | 309928.769   |
| ## ENSG00000164692 | 234816.3772  | 490183.42711 | 396151.902   | 590169.428   |
| ## ENSG00000115414 | 143491.8587  | 175189.90292 | 80311.499    | 82484.848    |
| ##                 | TCGA-OL-A66O | TCGA-OL-A66P | TCGA-OL-A6V0 | TCGA-OL-A6VQ |
| ## ENSG00000211896 | 68364.76     | 8.422671e+06 | 32408.832754 | 15171.04866  |

```

## ENSG00000153002 1939390.94 1.099494e+01      3.722693      16.55324
## ENSG00000108821 409885.49 7.857581e+05 79066.272161 645648.26945
## ENSG00000211592 78973.40 5.677466e+06 25936.000666 41551.40278
## ENSG00000164692 241366.38 4.231338e+05 50176.314766 412093.02388
## ENSG00000115414 83243.64 8.435541e+04 54270.346162 223474.31961
##          TCGA-OL-A6VR TCGA-OL-A97C TCGA-PE-A5DC TCGA-PE-A5DD
## ENSG00000211896 46813.0667 8310.9494    3237.5952 142833.1107
## ENSG00000153002 119.7878 218.1872    308.4992 284.1807
## ENSG00000108821 24794.4194 1031237.5319 177446.3477 587410.6136
## ENSG00000211592 39007.8598 6103.8324    2634.8690 79019.0358
## ENSG00000164692 19575.8026 1468306.1954 93767.3011 317429.8768
## ENSG00000115414 19484.9291 446360.5538 98806.4880 138521.3140
##          TCGA-PE-A5DE TCGA-PL-A8LV TCGA-PL-A8LX TCGA-PL-A8LY
## ENSG00000211896 4.954735e+05 1.436664e+06 4124.061 8038.1313
## ENSG00000153002 3.652866e+00 8.581960e+00 4110626.248 633.4677
## ENSG00000108821 2.023578e+05 2.639198e+05 96531.731 5790.8644
## ENSG00000211592 3.811156e+05 3.401178e+05 3011.098 47829.0122
## ENSG00000164692 1.269444e+05 1.439440e+05 53888.487 3711.1504
## ENSG00000115414 8.118616e+04 1.582231e+05 65725.786 2310.4667
##          TCGA-PL-A8LZ TCGA-S3-A6ZF TCGA-S3-A6ZG TCGA-S3-A6ZH
## ENSG00000211896 185477.34661 60239.2696 40289.69251 9923.628
## ENSG00000153002 22.96052 477.3901 36.78183 945823.828
## ENSG00000108821 319557.57751 273453.8250 150846.26553 102603.320
## ENSG00000211592 151153.67081 31941.5025 136076.76327 22492.850
## ENSG00000164692 205834.14035 218396.5476 122354.74344 75503.638
## ENSG00000115414 209300.03028 256340.5031 143916.08979 55946.020
##          TCGA-S3-AA0Z TCGA-S3-AA10 TCGA-S3-AA11 TCGA-S3-AA12
## ENSG00000211896 179922.53618 1.378609e+06 6297.29061 169478.408
## ENSG00000153002 19.39514 5.721529e+00 93.86369 8310.829
## ENSG00000108821 101050.43899 1.755686e+05 248676.19147 241055.130
## ENSG00000211592 104656.17171 4.824165e+05 8048.20936 32813.396
## ENSG00000164692 55103.35397 1.013546e+05 150764.33342 133868.324
## ENSG00000115414 64133.55451 7.517746e+04 176273.59509 140217.363
##          TCGA-S3-AA14 TCGA-S3-AA15 TCGA-S3-AA17 TCGA-UL-AAZ6
## ENSG00000211896 1.154511e+04 5.582394e+06 1.288181e+06 17826.54
## ENSG00000153002 1.175225e+01 2.175389e+01 2.063827e+01 226206.68
## ENSG00000108821 1.202308e+06 7.971386e+05 1.487686e+05 129679.57
## ENSG00000211592 4.613198e+04 4.212538e+06 4.965842e+05 33385.78
## ENSG00000164692 7.389137e+05 4.105751e+05 9.022362e+04 72891.99
## ENSG00000115414 4.235760e+05 2.152345e+05 1.232322e+05 60134.82
##          TCGA-UU-A93S TCGA-V7-A7HQ TCGA-W8-A86G TCGA-WT-AB41
## ENSG00000211896 1.015172e+05 166766.763 11850.68535 939507.02
## ENSG00000153002 4.604374e+00 155.374 73.53823 13103.77
## ENSG00000108821 5.449047e+04 750327.347 395418.72575 252587.60
## ENSG00000211592 6.835654e+04 126498.662 24933.13601 641214.08
## ENSG00000164692 5.001962e+04 342464.506 220258.02186 141269.18
## ENSG00000115414 1.677857e+05 109070.540 98190.69252 59738.54
##          TCGA-WT-AB44 TCGA-XX-A899 TCGA-XX-A89A TCGA-Z7-A8R5
## ENSG00000211896 12244.29368 50350.10691 38879.4729 30729.433
## ENSG00000153002 26.46115 30.98222 191.7756 8892.621
## ENSG00000108821 860256.65061 542018.96581 1238882.6556 212913.398
## ENSG00000211592 34873.38418 40048.01869 110671.5266 77972.803
## ENSG00000164692 407535.31819 340629.53187 686093.0666 147837.580
## ENSG00000115414 223019.34521 267704.37952 467053.7483 38417.489

```

```

##                                     TCGA-Z7-A8R6
## ENSG00000211896      1892.885
## ENSG00000153002      1488.989
## ENSG00000108821     264828.110
## ENSG00000211592      6290.528
## ENSG00000164692     145370.372
## ENSG00000115414     199476.347

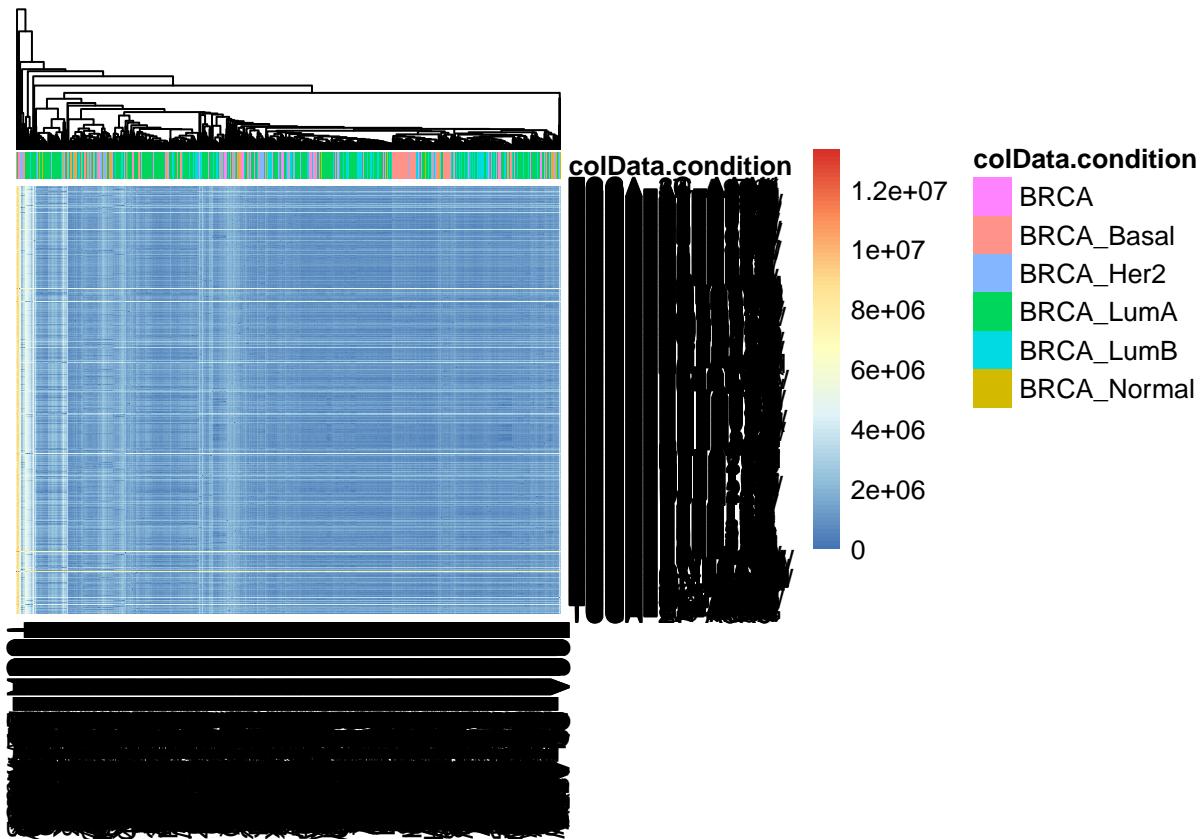
RNAseq.distance <- dist(t(data.RNAseq.normalized.DESeq.top500))

annot_col = data.frame(colData$condition)
row.names(annot_col) <- rownames(colData)

RNAseq.distance.Matrix = as.matrix(RNAseq.distance)
rownames(RNAseq.distance.Matrix) = colnames(data.RNAseq.filtered)
colnames(RNAseq.distance.Matrix) = colnames(data.RNAseq.filtered)

pheatmap(RNAseq.distance.Matrix,
         clustering_distance_rows = RNAseq.distance,
         clustering_distance_cols = RNAseq.distance,
         cluster_rows=FALSE, show_rownames=TRUE,
         cluster_cols=TRUE,
         annotation_col=annot_col)

```



```

#Use ward.D2 to divide the result into 6 groups
hclust_result <- hclust(RNAseq.distance, method = "ward.D2")
cluster_assignments <- cutree(hclust_result, k = 6)
colData$Cluster <- as.factor(cluster_assignments)
clinical.patients$Cluster <- as.factor(cluster_assignments[match(clinical.patients$PATIENT_ID, rownames

#DE analysis on all genes
dds <- DESeqDataSetFromMatrix(
  countData = data.RNAseq.filtered,
  colData = colData,
  design = ~ Cluster
)

## converting counts to integer mode

dds <- DESeq(dds)

## estimating size factors

## estimating dispersions

## gene-wise dispersion estimates

## mean-dispersion relationship

## final dispersion estimates

## fitting model and testing

## -- replacing outliers and refitting for 1821 genes
## -- DESeq argument 'minReplicatesForReplace' = 7
## -- original counts are preserved in counts(dds)

## estimating dispersions

## fitting model and testing

res <- results(dds, contrast = c("Cluster", "1", "2")) #Compare Cluster 1 and Cluster 2
sig_genes <- subset(res, padj < 0.05)
head(sig_genes)

## log2 fold change (MLE): Cluster 1 vs 2
## Wald test p-value: Cluster 1 vs 2
## DataFrame with 6 rows and 6 columns
##           baseMean log2FoldChange      lfcSE       stat      pvalue
##           <numeric>     <numeric> <numeric> <numeric> <numeric>
## ENSG000000000005    89.4063      1.469479  0.2731800   5.37916 7.48348e-08
## ENSG000000000457   1568.9932      0.343452  0.0600376   5.72062 1.06139e-08
## ENSG000000000938    587.0502     -1.119402  0.1051640  -10.64435 1.85280e-26

```

```

## ENSG00000000971 3254.5346      -0.430251 0.1103046 -3.90057 9.59664e-05
## ENSG00000001036 2676.3268     -0.211590 0.0744209 -2.84315 4.46697e-03
## ENSG00000001561 1815.8114     0.578881 0.1110874 5.21104 1.87784e-07
##                                     padj
##                                     <numeric>
## ENSG00000000005 5.06668e-07
## ENSG00000000457 8.13882e-08
## ENSG00000000938 6.48080e-25
## ENSG00000000971 3.54673e-04
## ENSG00000001036 1.07701e-02
## ENSG00000001561 1.18104e-06

#pathway analysis

gene_list <- rownames(sig_genes)
mapped_genes <- mapIds(
  org.Hs.eg.db,
  keys = gene_list,
  column = "ENTREZID",
  keytype = "ENSEMBL",
  multiVals = "first")

## 'select()' returned 1:many mapping between keys and columns

mapped_genes <- na.omit(mapped_genes)
head(mapped_genes)

## ENSG00000000005 ENSG00000000457 ENSG00000000938 ENSG00000000971 ENSG00000001036
##          "64102"           "57147"           "2268"           "3075"           "2519"
## ENSG00000001561
##          "22875"

kegg_results <- enrichKEGG(
  gene = mapped_genes,
  organism = "hsa",
  keyType = "kegg",
  pvalueCutoff = 0.05
)

## Reading KEGG annotation online: "https://rest.kegg.jp/link/hsa/pathway"...
## Reading KEGG annotation online: "https://rest.kegg.jp/list/pathway/hsa"...
head(kegg_results)

##                                     category
## hsa04724                    Organismal Systems
## hsa00410                    Metabolism
## hsa04660                    Organismal Systems
## hsa04925                    Organismal Systems
## hsa04514 Environmental Information Processing

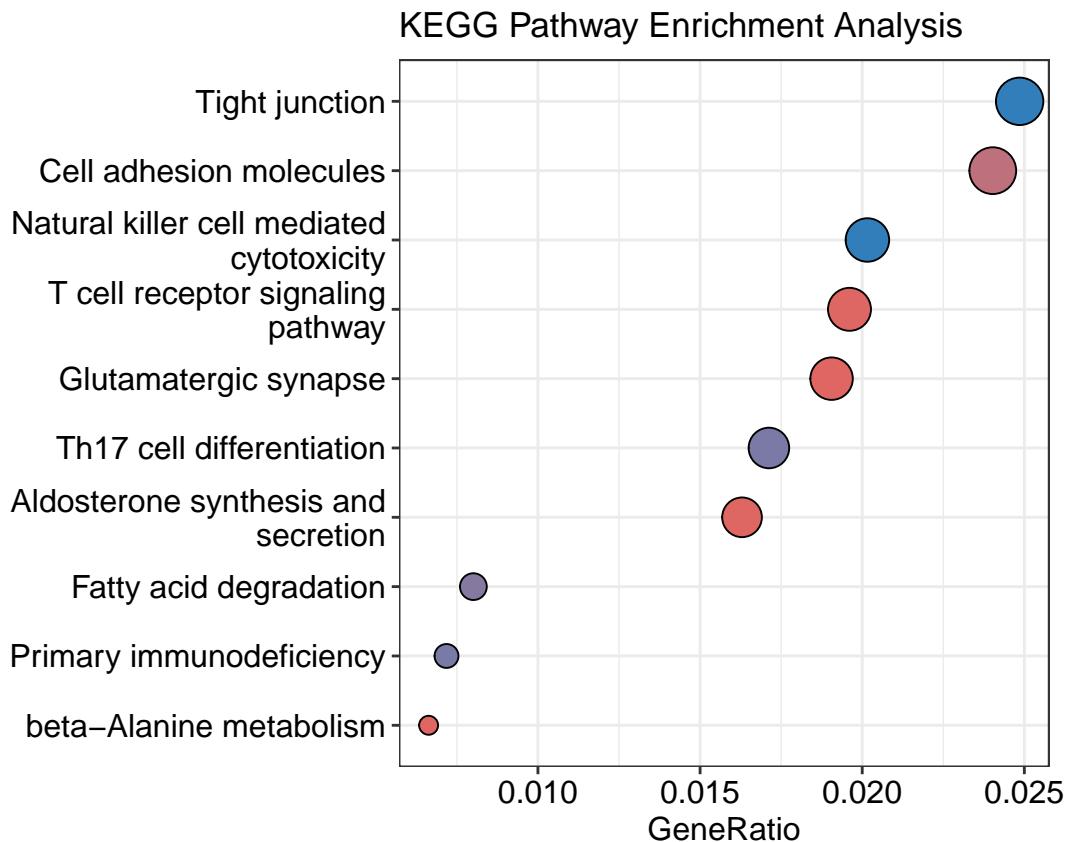
```

```

## hsa00071                         Metabolism
##                                         subcategory      ID
## hsa04724                         Nervous system hsa04724
## hsa00410     Metabolism of other amino acids hsa00410
## hsa04660                         Immune system hsa04660
## hsa04925                         Endocrine system hsa04925
## hsa04514   Signaling molecules and interaction hsa04514
## hsa00071                         Lipid metabolism hsa00071
##                                         Description GeneRatio BgRatio RichFactor
## hsa04724             Glutamatergic synapse    69/3621 116/8875  0.5948276
## hsa00410           beta-Alanine metabolism  24/3621  31/8875  0.7741935
## hsa04660   T cell receptor signaling pathway 71/3621 122/8875  0.5819672
## hsa04925 Aldosterone synthesis and secretion 59/3621  98/8875  0.6020408
## hsa04514           Cell adhesion molecules  87/3621 158/8875  0.5506329
## hsa00071          Fatty acid degradation   29/3621  43/8875  0.6744186
##                                         FoldEnrichment zScore      pvalue    p.adjust      qvalue
## hsa04724        1.457911 4.121084 3.392822e-05 0.006223702 0.004951537
## hsa00410        1.897533 4.155621 3.618431e-05 0.006223702 0.004951537
## hsa04660        1.426390 3.936748 7.115400e-05 0.006563397 0.005221797
## hsa04925        1.475590 3.930084 7.631857e-05 0.006563397 0.005221797
## hsa04514        1.349590 3.680726 1.824670e-04 0.012553732 0.009987670
## hsa00071        1.652987 3.563182 3.653597e-04 0.020947287 0.016665528
##
## hsa04724
## hsa00410
## hsa04660
## hsa04925
## hsa04514 4267/3683/920/933/923/1272/9369/999/1001/51208/4756/5817/8516/5788/6614/3383/2734/4897/958/
## hsa00071
##                                         Count
## hsa04724      69
## hsa00410      24
## hsa04660      71
## hsa04925      59
## hsa04514      87
## hsa00071      29

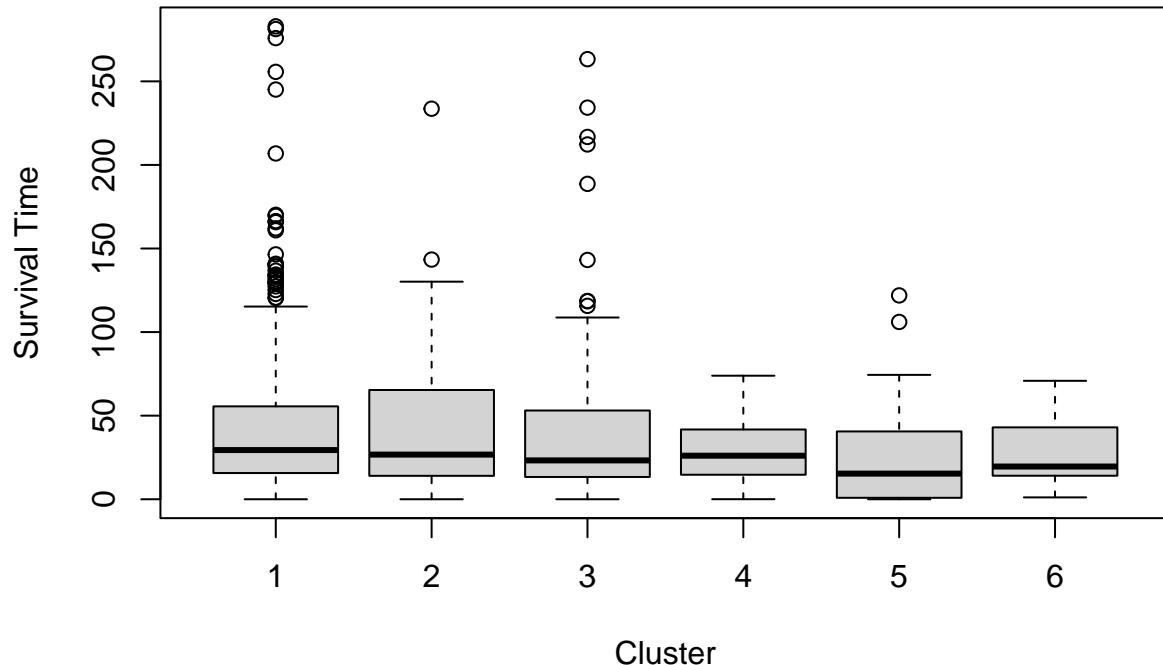
dotplot(kegg_results, showCategory = 10) + ggtitle("KEGG Pathway Enrichment Analysis")

```



```
#Comparing patient survival data
boxplot(clinical.patients$OS_MONTHS ~ clinical.patients$Cluster,
        main = "Survival Comparison Across Clusters",
        xlab = "Cluster", ylab = "Survival Time")
```

## Survival Comparison Across Clusters



```
#Compare other clinical features
table(clinical.patients$Cluster, clinical.patients$AGE)
```

```
##
##      26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
##  1  1  1  1  5  2  3  1  1  7  4  4  4  9  9 17 14  8 11 13 21 20 15 19 14 19
##  2  0  0  0  0  0  0  1  0  0  0  0  0  1  2  1  0  3  2  1  0  2  1  2  5  5  5
##  3  1  0  0  0  0  0  0  0  2  2  4  2  0  2  5  1  1  4  3  4  7  7  2  5  10
##  4  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0
##  5  0  0  0  1  0  0  0  0  0  1  1  0  0  0  0  0  0  0  0  0  0  0  0  1  1  0
##  6  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1
##      51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
##  1 20 17 12 25 15 19 13 24 20 15 25 36 24 21 11 17 17 18 14 15 12 8 13 7 11
##  2  3  5  4  4  6  1  1  1  5  1  3  6  3  4  2  2  0  0  3  0  0  1  2  4  0
##  3  7  5  7  4  2 10  1  4  4  5  4  7  6  0  8  6  4  4  3  3  6  3  2  4  1
##  4  0  1  0  1  0  2  0  0  2  0  3  0  1  0  1  1  0  0  0  0  1  0  0  0  1
##  5  0  0  0  0  1  1  0  0  0  0  1  1  0  0  1  0  0  0  0  1  0  1  0  0  0
##  6  1  0  1  0  0  0  0  1  0  0  1  1  0  0  0  0  0  0  0  0  0  0  1  0  0  1
##      76 77 78 79 80 81 82 83 84 85 86 87 88 89 90
##  1  7 10 13 14 14  4  2  4  9  5  1  2  3  2  6
##  2  0  1  0  0  0  1  0  0  1  0  0  0  1  0  1
##  3  5  2  1  4  3  1  3  1  0  0  0  1  0  1  2
##  4  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0
```

```

##   5 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0
##   6 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0


##      Female Male  

## 1     737   11  

## 2      97    0  

## 3     195   1  

## 4      17    0  

## 5      13    0  

## 6      10    0


##      American Indian or Alaska Native Asian Black or African American White  

## 1      59                      0   37                  117   535  

## 2      8                       1   8                   29   51  

## 3     22                      0  14                  24  136  

## 4      0                      0   0                   1   16  

## 5      0                      0   0                   4    9  

## 6      1                      0   1                   7    1

#Correlation analysis of clustering and mutation data  

mutation_matrix <- data.RNAseq.normalized.DESeq  

mutation_enrichment <- apply(mutation_matrix, 1, function(x) {  

  tapply(x, colData$Cluster, mean)  

})  

mutation_enrichment <- as.data.frame(t(mutation_enrichment))  

head(mutation_enrichment)

##          1         2         3         4         5         6
## ENSG00000000003 3290.1861 2978.59709 2636.8703 2772.20151 2551.88399 2401.03669
## ENSG00000000005 150.5360  39.92641  77.2347  42.46718  27.05692  37.72937
## ENSG00000000419 2427.2152 2401.75067 2107.5389 1900.02475 1982.43714 2978.58499
## ENSG00000000457 1618.2345 1275.24531 1600.3721 1268.55031 1255.77480 1038.00479
## ENSG00000000460 731.3336  715.77833  631.0342  491.72834  384.49918  784.47469
## ENSG00000000938 499.9394 1086.11436  648.6028  803.35303  301.39212 1059.22649

```