Uk2

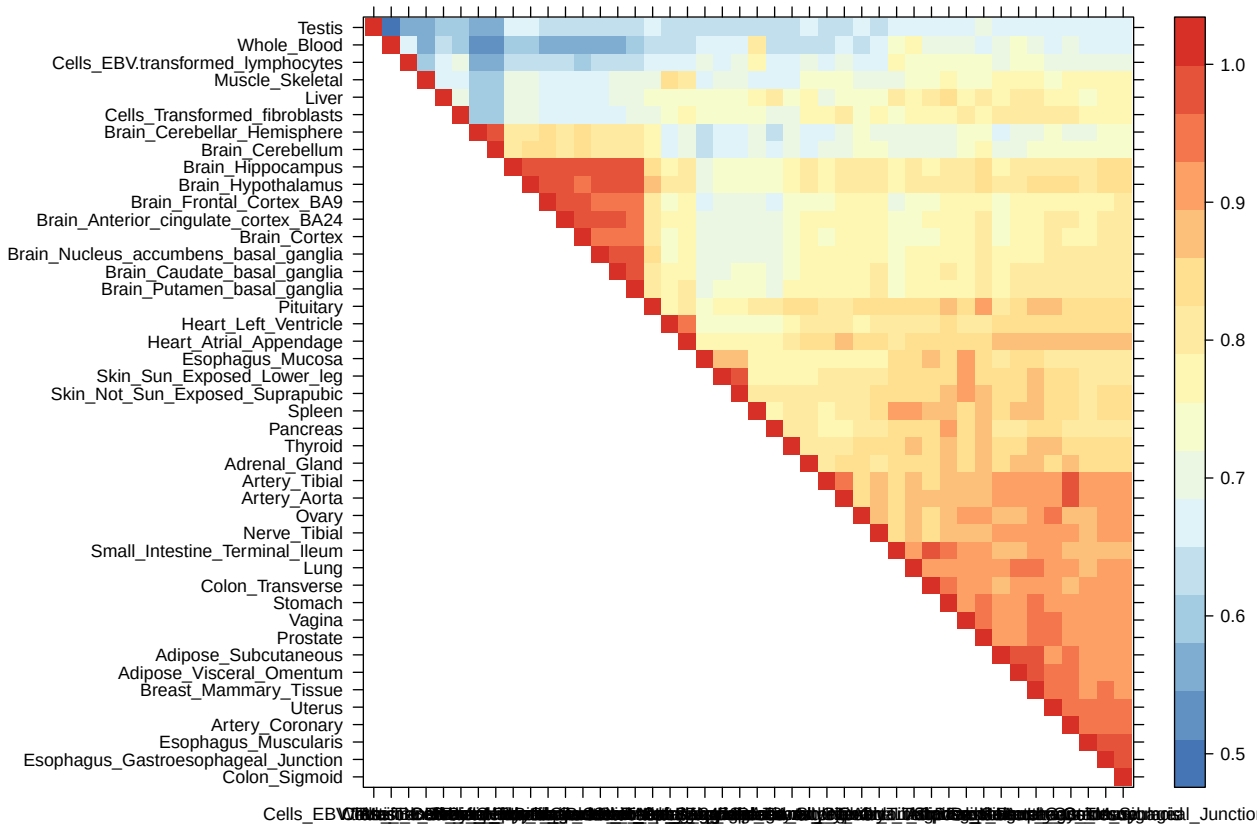
Here we plot the correlation matrix and the first 3 eigenvectors of Uk2. Recall, UK2 is the second most common pattern of sharing.

```
library('knitr')

knitr::opts_chunk$set(cache=TRUE)
opts_chunk$set(fig.path = "/Users/sarahurbut/Dropbox/PaperEdits/Paper/NGRevision/Figureswithres/")
covmat=readRDS("../../Data_vhat/covmatwithvhat.rds")

z.stat=read.table("../../Data/maxz.txt")
names=colnames(z.stat)
pis=readRDS("../../Data_vhat/piswithvhat.rds")$pihat
pi.mat=matrix(pis[-length(pis)],ncol=54,nrow=22,byrow = T)
```

```
## [1] 0.2004572
```

Here we make the lattice plot:

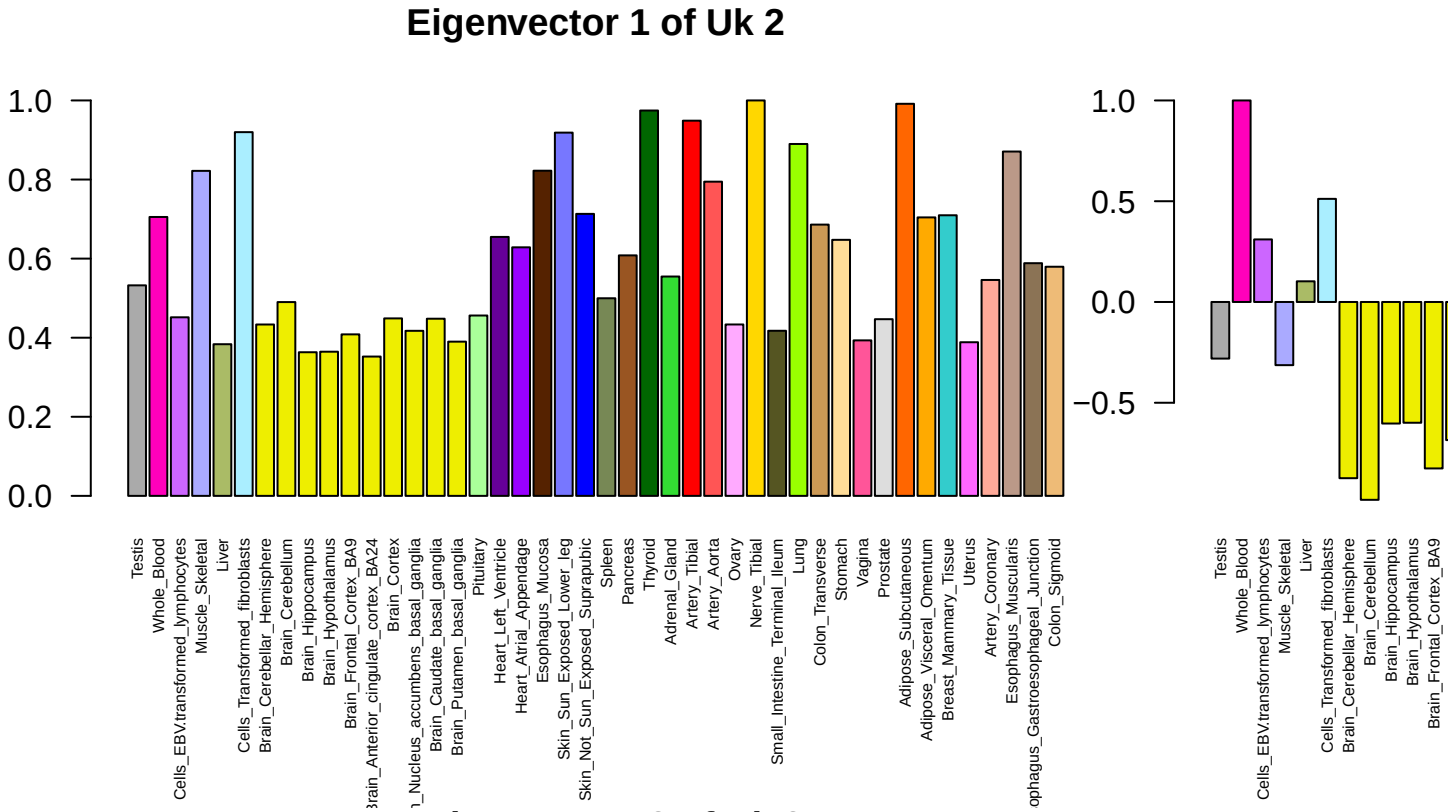
```
library(lattice)


clrs <- colorRampPalette(rev(c("#D73027","#FC8D59","#FEE090","#FFFFBF",
                               "#E0F3F8","#91BFDB","#4575B4")))(64)
#clrs[63:64] <- "darkviolet"
lat=x[rev(h),rev(h)]
#lat=x[h,h]
lat[lower.tri(lat)] <- NA
n=nrow(lat)
print(levelplot(lat[n:1,],col.regions = clrs,xlab = "",ylab = "",colorkey = TRUE))
```

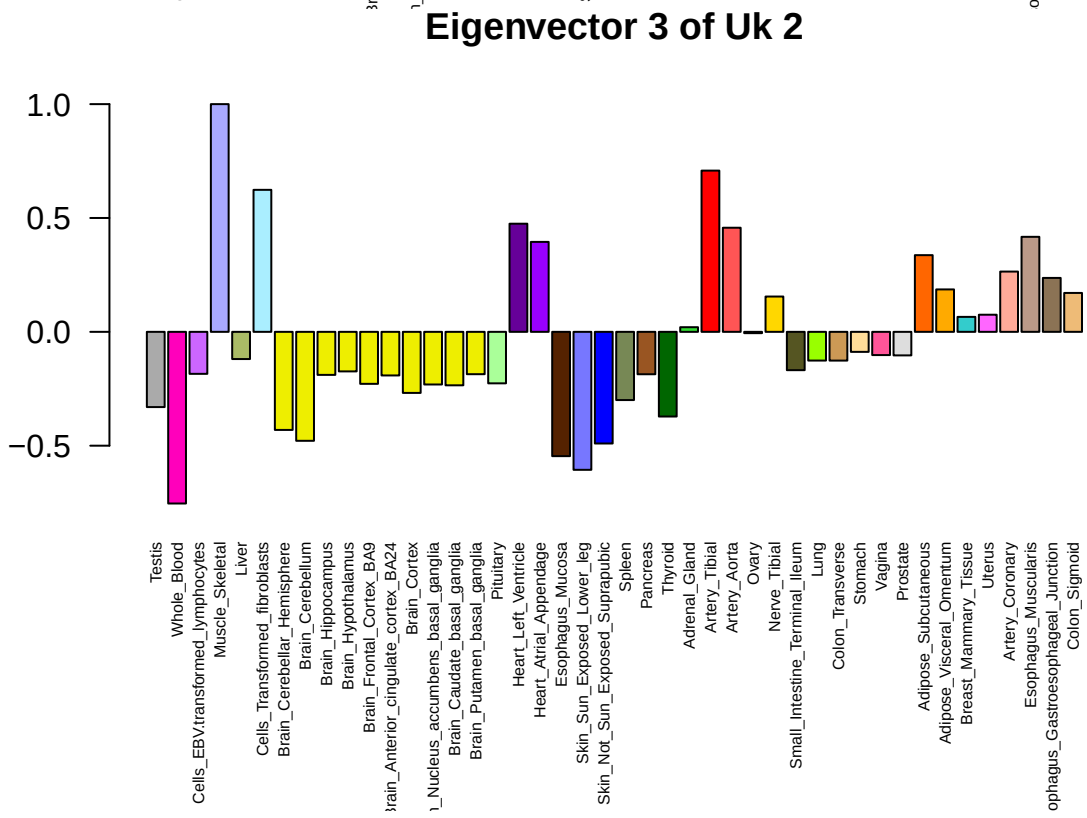



```
#print(levelplot(lat,col.regions = clrs,xlab = "",ylab = "",colorkey = TRUE))
```

And the SVD Plots:

```
missing.tissues=c(7,8,19,20,24,25,31,34,37)
color.gtex=read.table("../../Data/GTExColors.txt",sep = '\t', comment.char = '')[-missing.tissues,]
col = as.character(color.gtex[,2])


k=2
h=read.table(paste0("../../Data/uk",k,"rowIndices.txt"))[,1]
for(g in 1:3){
v=svd(covmat[[k]])$v[h,]
rownames(v)=colnames(v)=names[h]
par(mar=c(8,4.1,4.1,2.1))
barplot(v[,g]/v[which.max(abs(v[,g])),g],las=2,main=paste("Eigenvector",g,"of Uk",k),cex.names = 0.5,co
```


Eigenvector 1 of Uk 2
1.0
0.8
0.6
0.4
0.2
0.0
Testis
Whole_Blood
Cells_EBV.transformed_lymphocytes
Muscle_Skeletal
Liver
Cells_Transformed_fibroblasts
Brain_Cerebellar_Hemisphere
Brain_Cerebellum
Brain_Hippocampus
Brain_Hypothalamus
Brain_Frontal_Cortex_BA9
Brain_Anterior_cingulate_cortex_BA24
Brain_Cortex
Brain_Caudate_basal_ganglia
Brain_Putamen_basal_ganglia
Pituitary
Heart_Left_Ventricle
Heart_Atrial_Appendage
Esophagus_Mucosa
Skin_Sun_Exposed_Lower_leg
Skin_Not_Sun_Exposed_Suprapubic
Spleen
Pancreas
Thyroid
Adrenal_Gland
Artery_Tibial
Artery_Aorta
Ovary
Nerve_Tibial
Small_Intestine_Terminal_Ileum
Lung
Colon_Transverse
Stomach
Vagina
Prostate
Adipose_Subcutaneous
Adipose_Visceral_Omentum
Breast_Mammary_Tissue
Uterus
Artery_Coronary
Esophagus_Muscularis
Colon_Sigmoid
1.0
0.5
0.0
−0.5
Testis
Whole_Blood
Cells_EBV.transformed_lymphocytes
Muscle_Skeletal
Liver
Cells_Transformed_fibroblasts
Brain_Cerebellar_Hemisphere
Brain_Cerebellum
Brain_Hippocampus
Brain_Hypothalamus
Brain_Frontal_Cortex_BA9


Eigenvector 3 of Uk 2
1.0
0.5
0.0
−0.5
Testis
Whole_Blood
Cells_EBV.transformed_lymphocytes
Muscle_Skeletal
Liver
Cells_Transformed_fibroblasts
Brain_Cerebellar_Hemisphere
Brain_Cerebellum
Brain_Hippocampus
Brain_Hypothalamus
Brain_Frontal_Cortex_BA9
Brain_Cortex
Brain_Caudate_basal_ganglia
Brain_Putamen_basal_ganglia
Pituitary
Heart_Left_Ventricle
Heart_Atrial_Appendage
Esophagus_Mucosa
Skin_Sun_Exposed_Lower_leg
Skin_Not_Sun_Exposed_Suprapubic
Spleen
Pancreas
Thyroid
Adrenal_Gland
Artery_Tibial
Artery_Aorta
Ovary
Nerve_Tibial
Small_Intestine_Terminal_Ileum
Lung
Colon_Transverse
Stomach
Vagina
Prostate
Adipose_Subcutaneous
Adipose_Visceral_Omentum
Breast_Mammary_Tissue
Uterus
Artery_Coronary
Esophagus_Muscularis
Colon_Sigmoid