Variability in Expression of TP53BP2 in Common Cancer Tissues

By Gunica Sharma

How does the variability in TP53BP2 expression across colon, breast, and lung cancer prone tissues correlate with factors such as age and sex, and what implications can these patterns have for the development of personalized cancer treatments?

Databases Used

GTEX Portal Database

Has a set of patient expression data for multiple genes including our 3 tissues

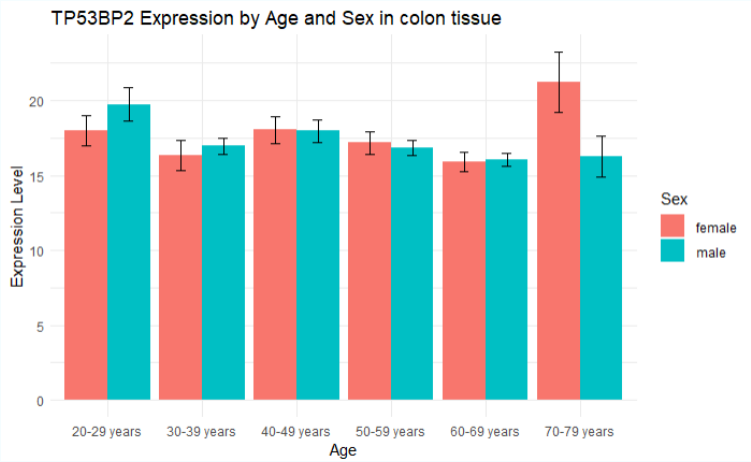
The Human Atlas

Houses demographic data for the patients that were tested for expression of TP53BP2

Data Integration

We used the GTEx Portal Database to obtain gene expression data for TP53BP2 across colon, breast, and lung tissues. Then, we got demographic information like age and sex, from the Human Protein Atlas. The Human Protein Atlas data required manual conversion into an xls format for use in R. We used the shared primary key (patient ID) across both databases. Using R, we cleaned, merged, and prepared the data for subsequent analysis of TP53BP2 expression

Results



This figure shows one of the expression results for the colon tissues and the differences in expression between age groups and sexes. Potential age or sex-related mechanism of TP53BP2 in colon, as eldest female group indicated an unusual expression level