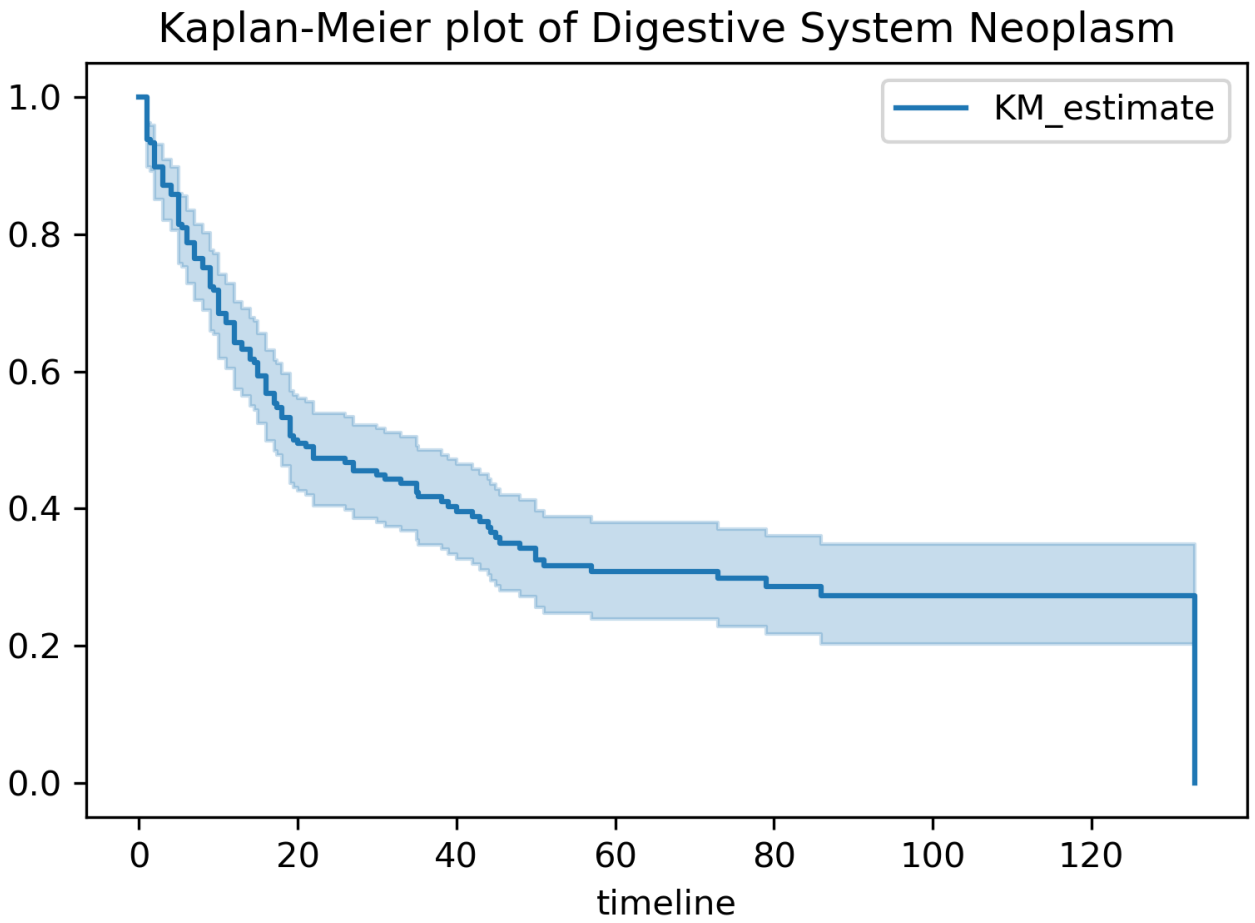
Survival Analysis of Digestive System Neoplasms

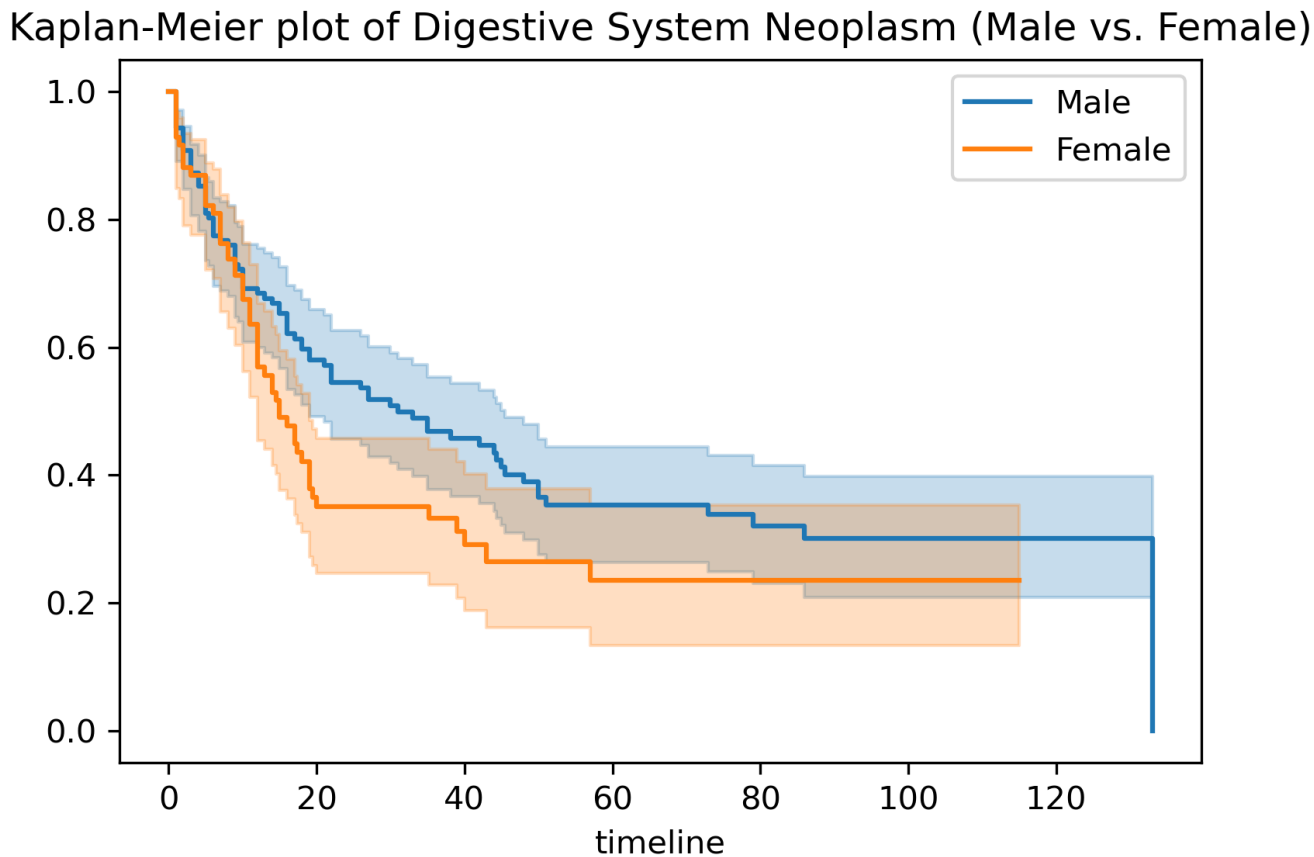
Merve Güngör & Angela Topic

BIO392

08.10.21

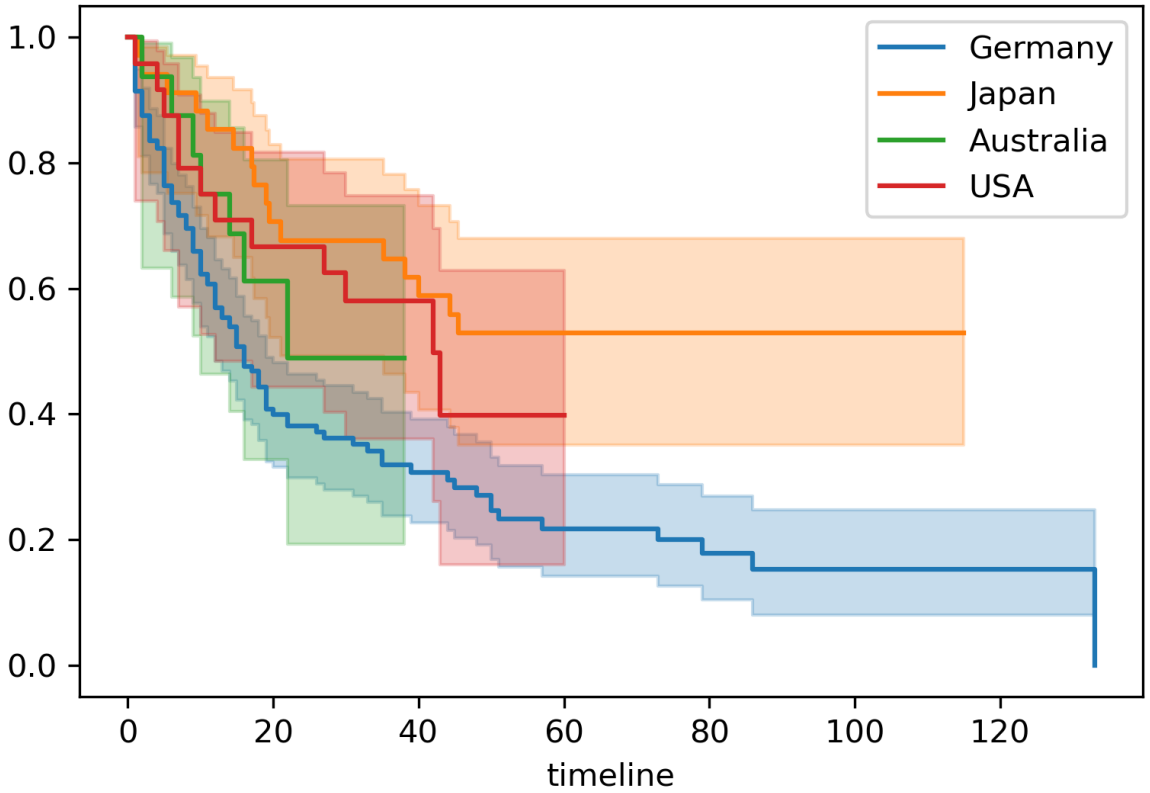


The probability to survive is smaller in the first 20 months after the disease onset.

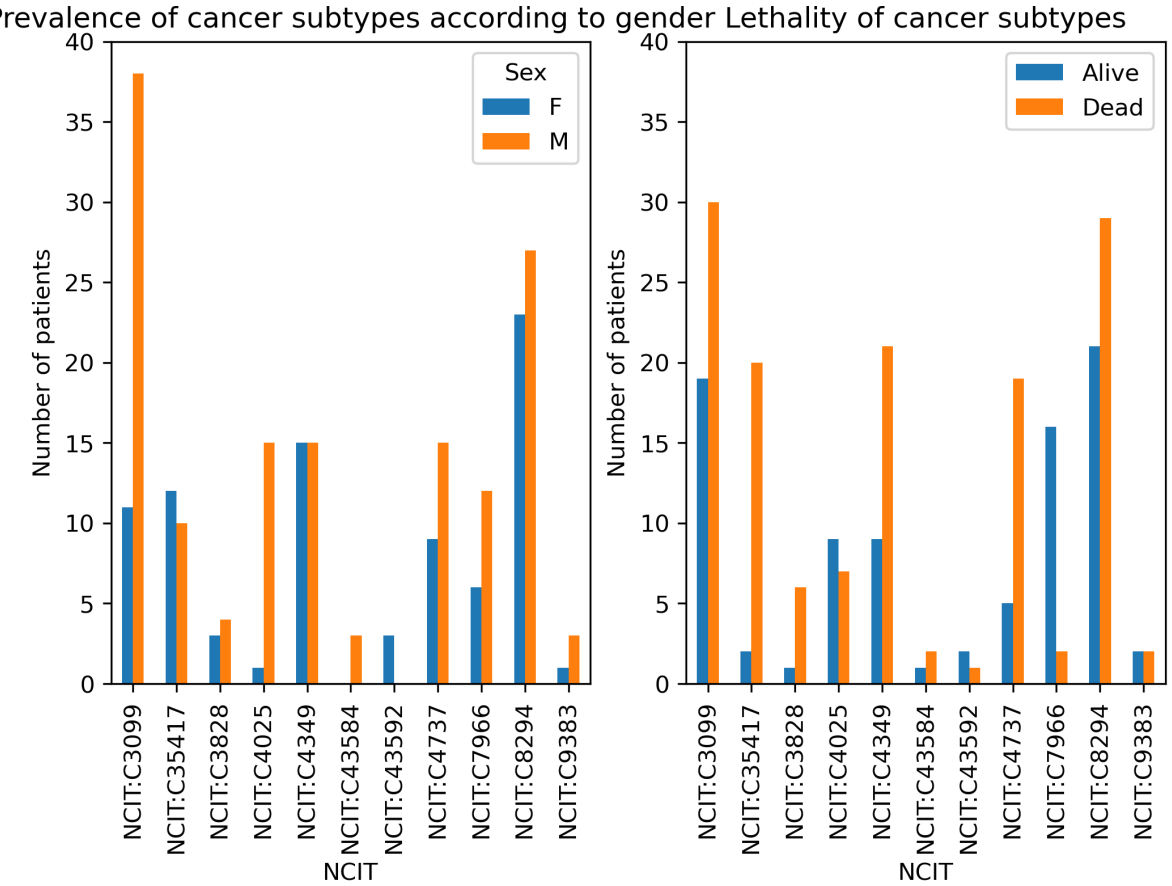


Probability of survival in females is slightly lower than in males suffering from digestive system neoplasm.

Kaplan-Meier plot of Digestive System Neoplasm in different countries

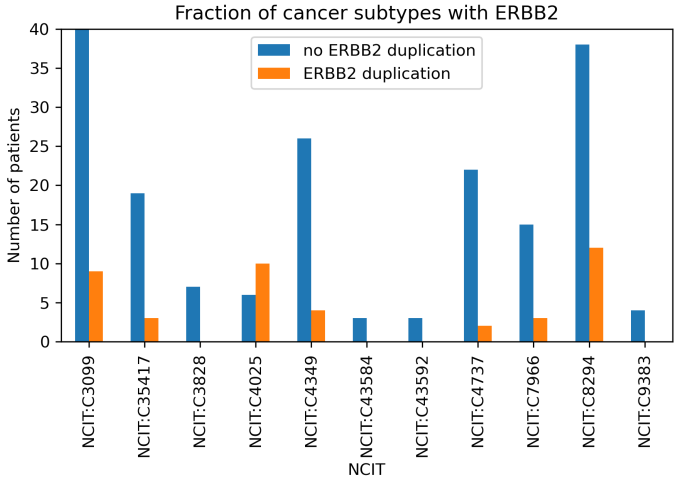


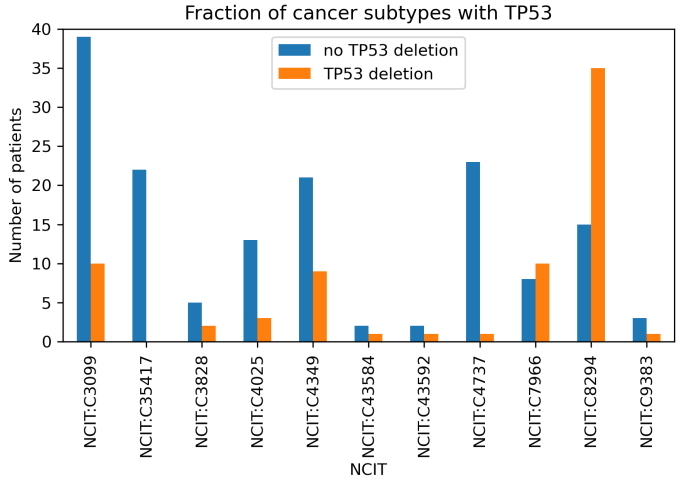
Looking at the plot it seems that the patients in Germany have the highest lethality but it was also the biggest patient group with the longest follow up.

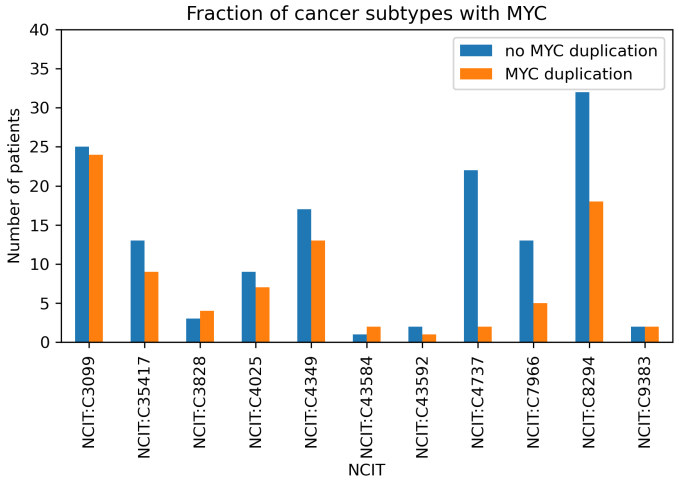


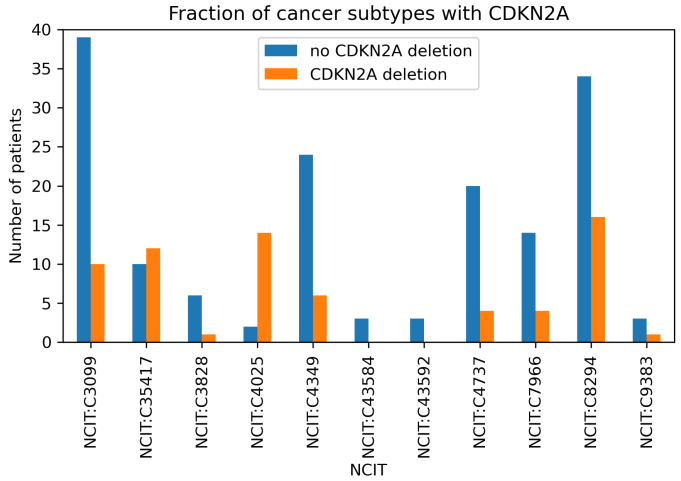
Hepatocellular Carcinoma (NCIT:C3099) and Pancreatic adenocarcinoma (NCIT:C8294) are more common than the other cancer subtypes. In plot 1 can be seen that overall more male individuals are affected by digestive system neoplasm espsecially Hepatocellular Carcinoma and Esophageal adenocarcinoma seem (NCIt:C4025) to be much more frequent in male patients.
Might be due to the tendency of men to have an unhealthier lifestyle than women.

Intrahepatic cholangiocarcinoma (NCIT:C35417), combined hepatocellular carcinoma and cholangiocarcinoma (NCIIT:C3828), Colon adenocarcinoma (NCIT:C4349) and Enteropathy type T.cell lymphoma (NCIT:4737) seem to have a higher lethality than others.
In comparison Colon Mucinous Adenocarcinoma (NCIT:C7966) seems to have a very good prognosis.

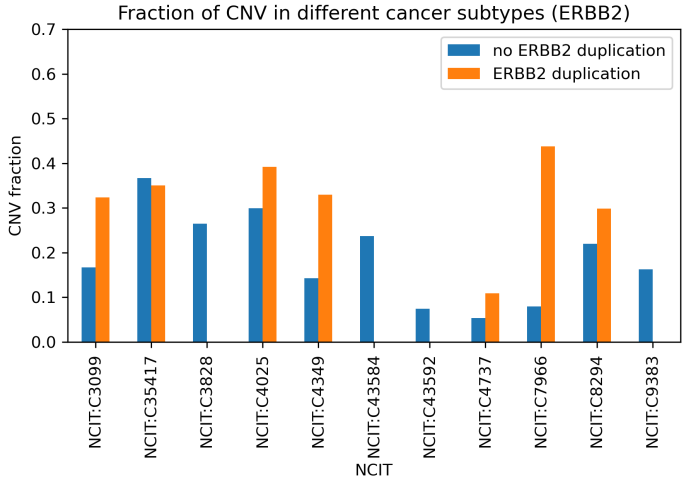


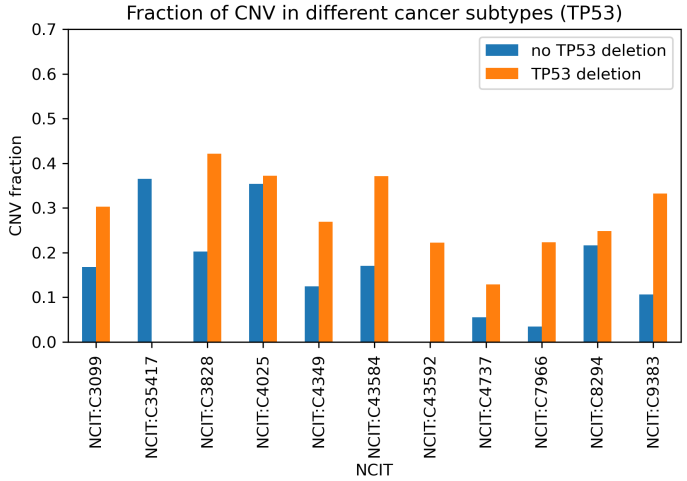


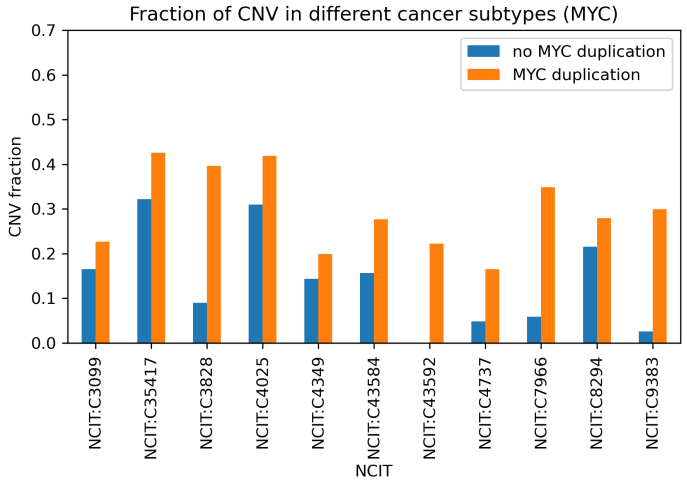


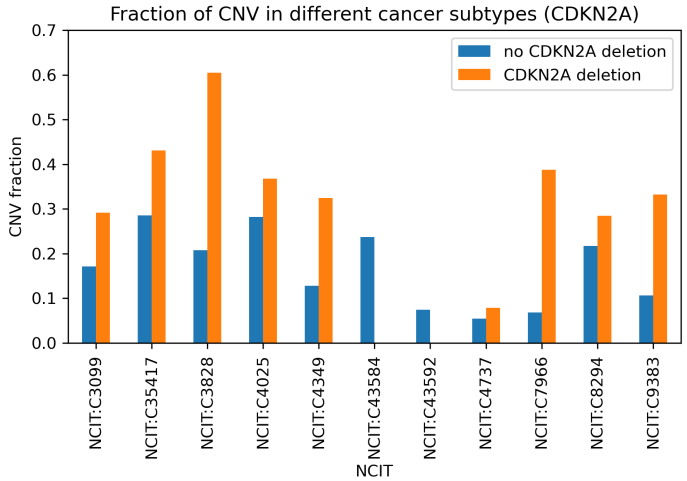


* Hepatocellular carcinoma (NCIT:C3099): Only higher occurance of MYC duplication detected (~50% of samples); other dup/del of the genes of interest are less likely to be involved in this disease.
* Enteropathy type T-cell lymphoma (NCIT:C4737): Only rare detection of the duplications or deletions in GoI
* Pancreatic adenocarcinoma (NCIT:C8294): High duplication of TP53 detected.

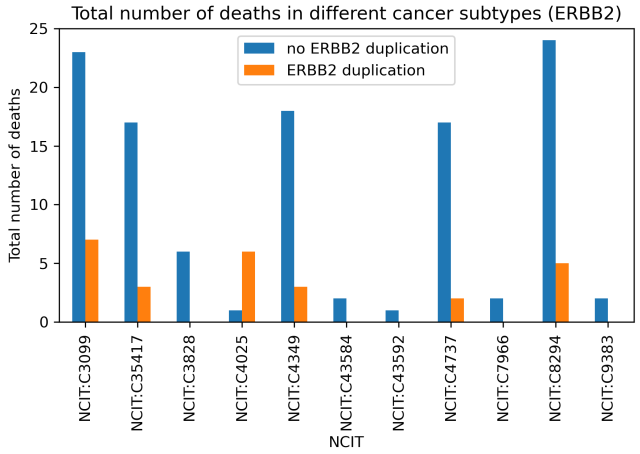


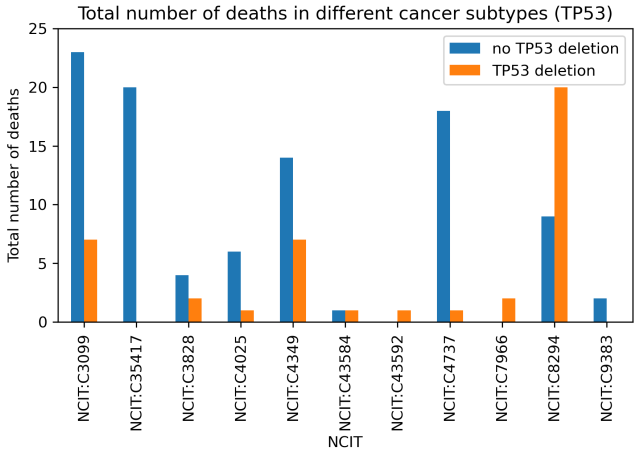


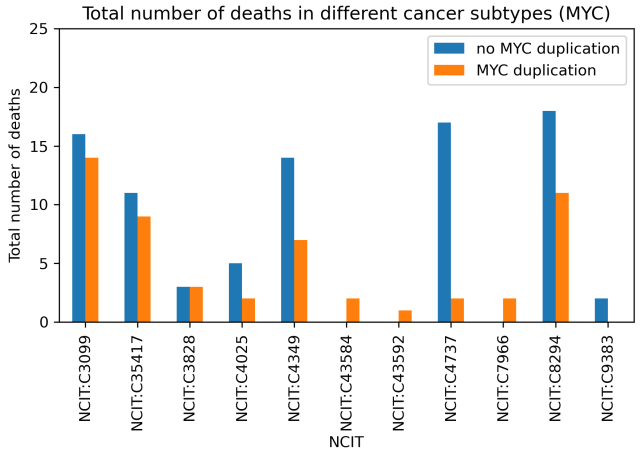


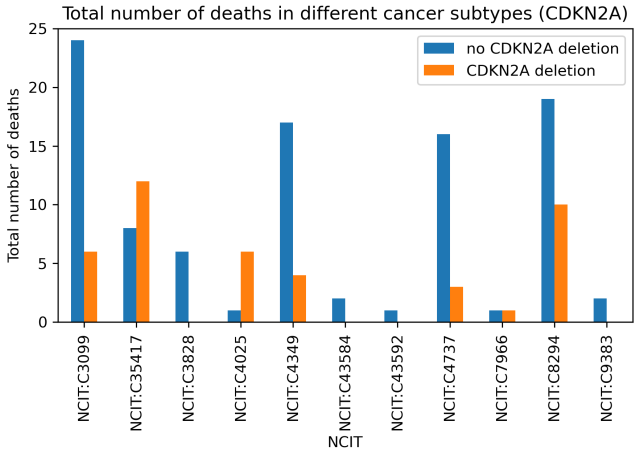


The duplication or deletion of the GoIs seem to lead to a higher CNV fraction.









* Pancreatic adenocarcinoma (NCIT:C8294): High number of deaths with this TP53 duplication