

# 81P: *NF1* Mutation as an indicator stratified patients benefit from Immune Checkpoint Inhibitors in gastroesophageal cancers

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## Background/Methods:

- For locally advanced and metastatic gastroesophageal cancers, treatment options are limited. Data showed that checkpoint inhibitors in metastatic gastroesophageal cancer have demonstrated poor response for PD-L1+ patients and unselected patients. Therefore, investigating predictive biomarkers of ICIs is important to identify the target population that derives the best therapeutic benefit.
- Somatic mutations in *NF1* are common in cancer. Targeting neurofibromin 1-regulated pathways offers potential therapeutic options for the treatment of tumors. However, its role in gastroesophageal cancer immunotherapy remains unknown. Here we aimed to demonstrate the association between *NF1* and ICIs.

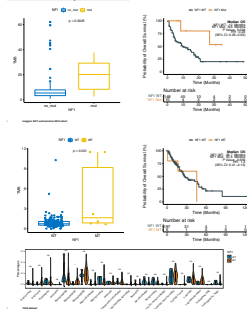
## Methods:

- 158 patients from two public immunotherapy cohorts (Janjigian 2017 and Samstein 2019 cohort) were included to analyze the association between *NF1* gene mutation and efficacy of ICI therapy. Genomic, survival and mRNA data of gastroesophageal cancer patients from the Cancer Genome Atlas (TCGA) database was used to explore the potential mechanisms of anti-tumor immunity.

## *NF1* mutation predicts immunotherapy efficacy in gastroesophageal cancer



## Results/Graphs/Data:



## Future Directions for Research:

- Our results demonstrated that *NF1* mutation is an independent classifier that could stratify patients with gastroesophageal cancer for ICIs. The role of *NF1* in immunotherapy is needed to be further studied.