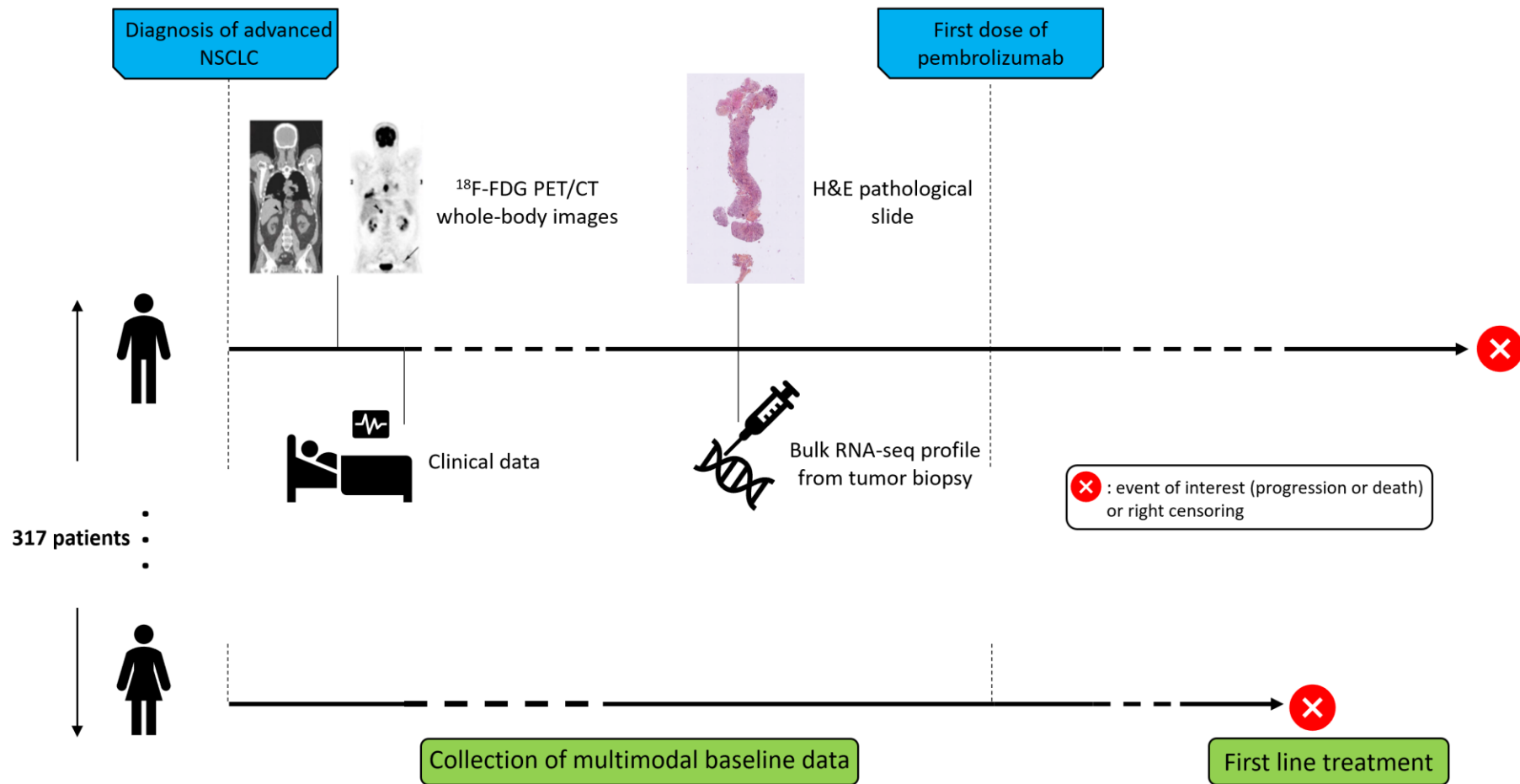


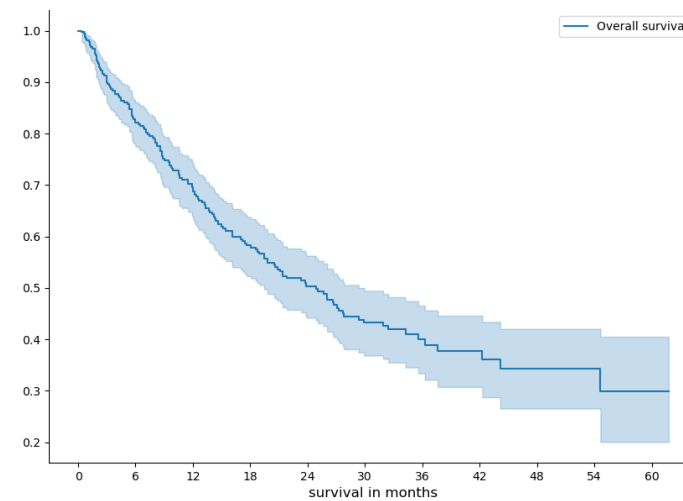
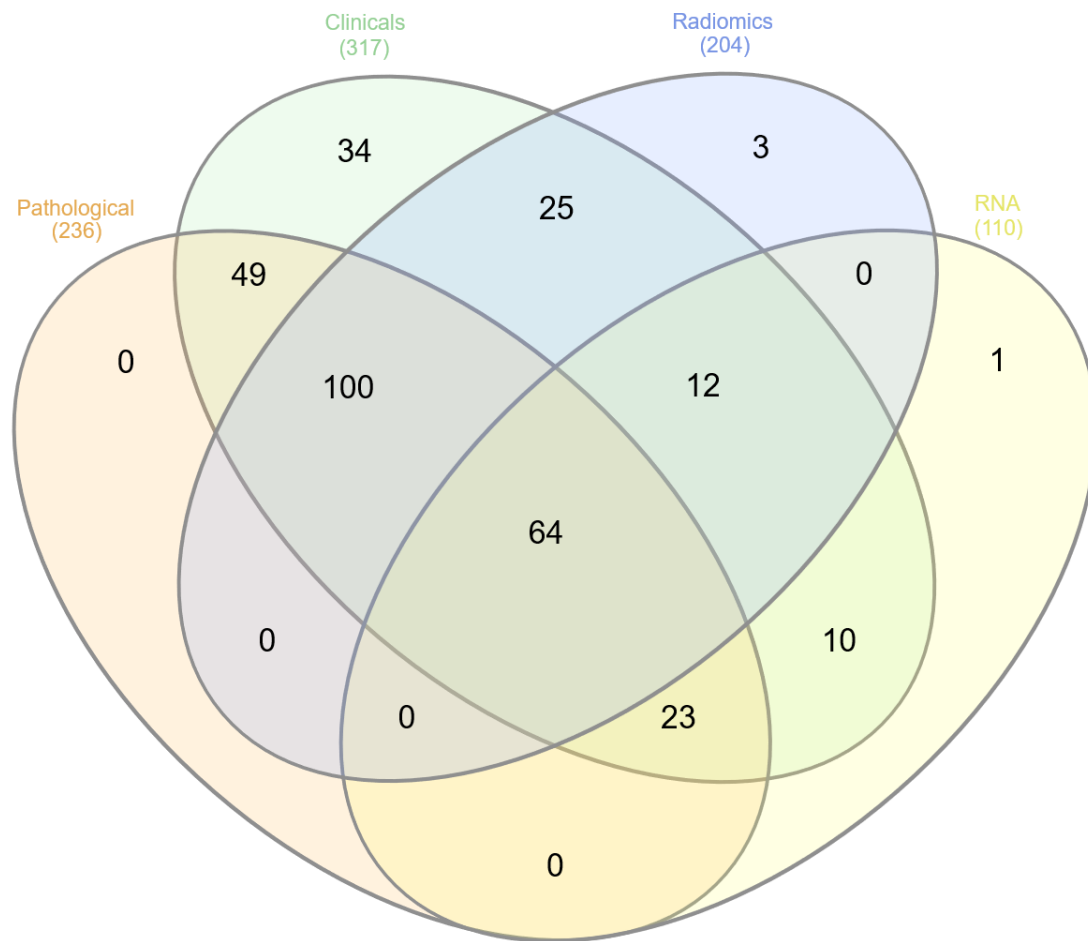
TIPIT project – 26/04/2023



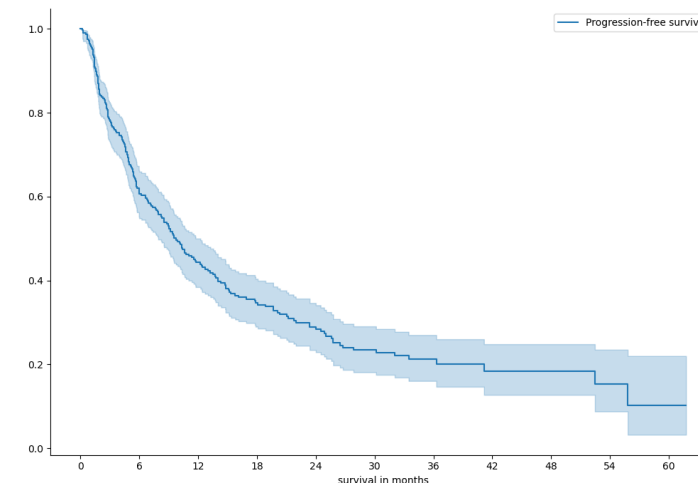
TIPIT & CAPRICORN data



A brief reminder on the data



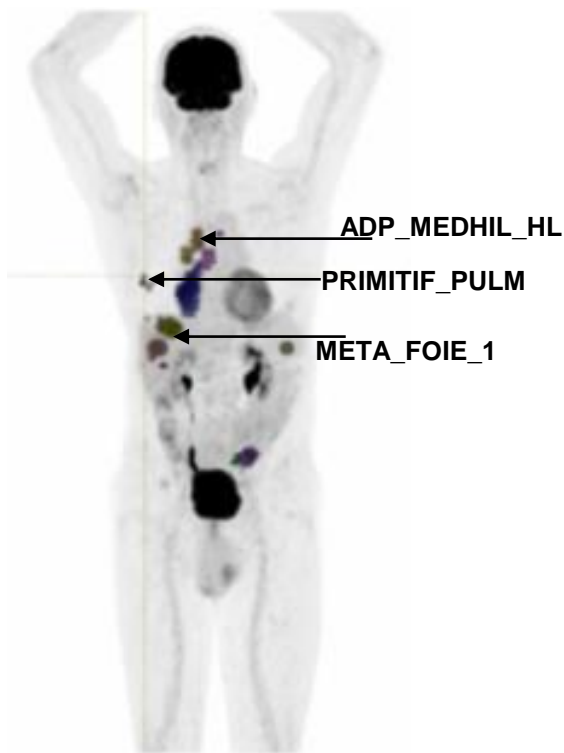
288 patients with
12 months OS
outcome



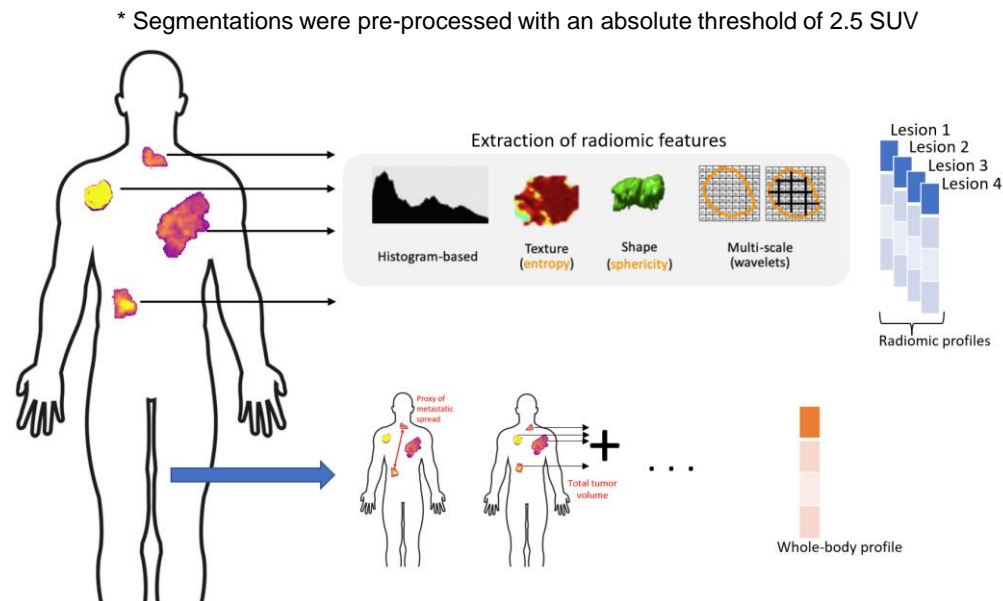
291 patients with
6 months PFS
outcome

Extraction of radiomic data

1. Segmentation and annotation of each lesion by Marie and Erwin



2. Extraction of radiomic features at the lesion and the whole-body level*



3. Aggregation of lesion features at the TNM level

Total volume in the N1 regions



Mean intensity in the M1a regions



40 radiomic features in total

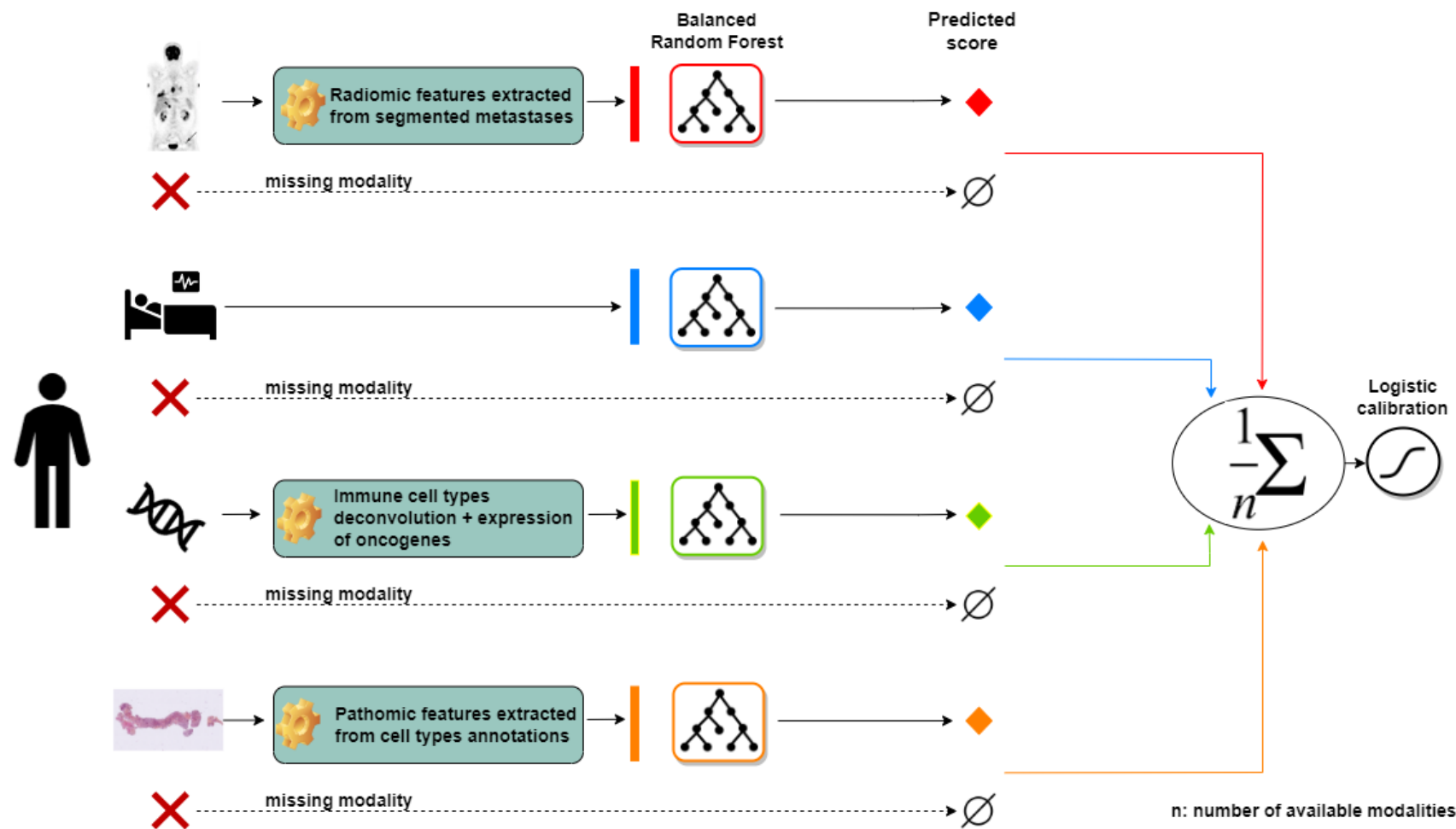
Clinical data

characteristics	
Sex	189 (women) 128 (men)
Age	65.66 (+- 10) years
Therapy	196 (chemo + immuno) 121 (immuno alone)
Histology	232 (adeno) 44 (squamous) 39 (others)
Cancer history	265 (no cancer history) 52 (cancer history)
PD-L1 expression	146 (PD-L1 > 50%) 171 (PD-L1 <= 50%)
ECOG	244 (ECOG 0 or 1) 36 (ECOG >= 2) 37 (missing value)

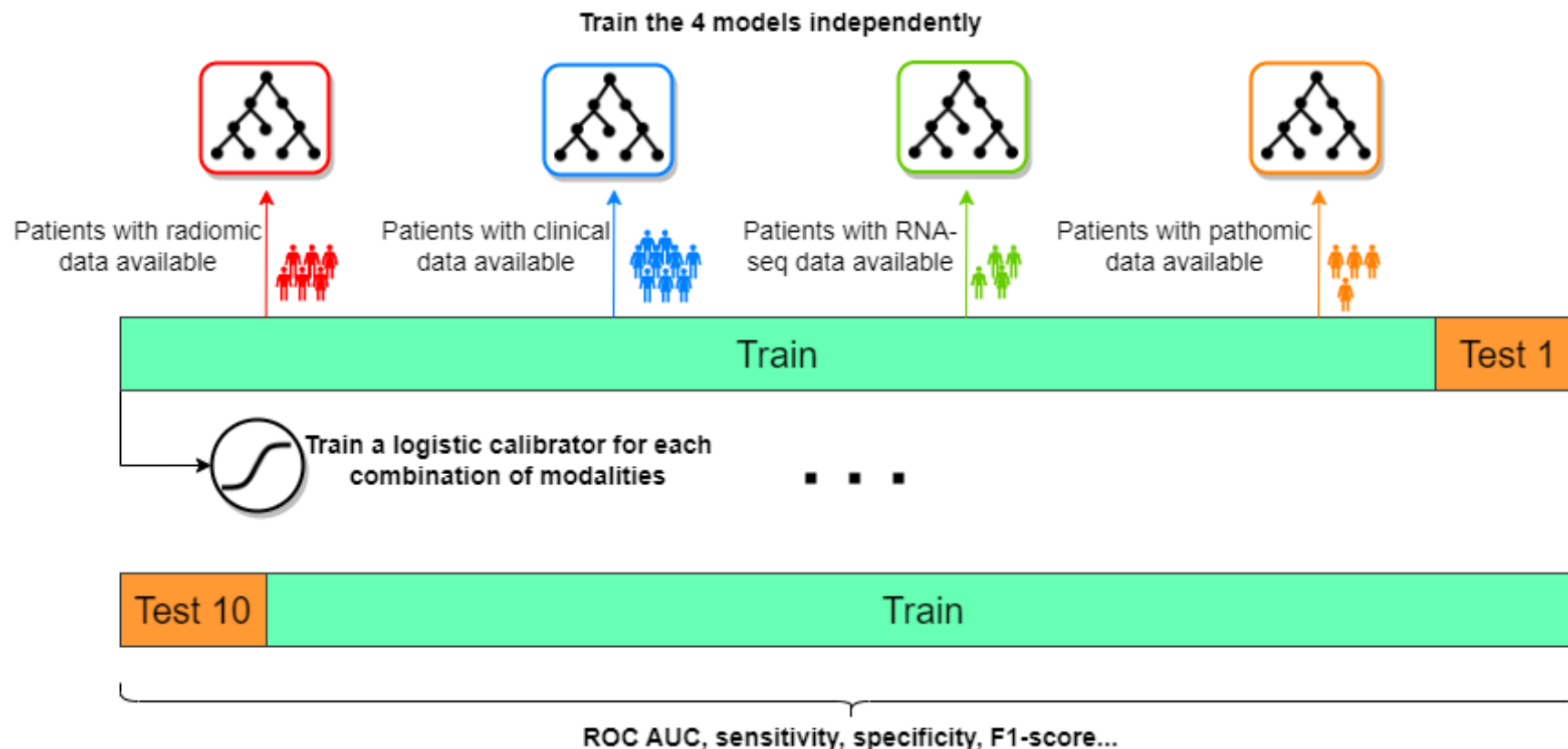
- Histology
- Age, Sex
- Height, weight, BMI
- Smoking status, pack-years
- ECOG
- Neutrophils, lymphocytes, ASAT, albumin, Idh
- Alterations of oncogenes
- PD-L1, TILS
- Brain metastasis
- Treatment history (lung surgery ?...)
- Chemotherapy + immuno or immuno alone ?

42 clinical features in total

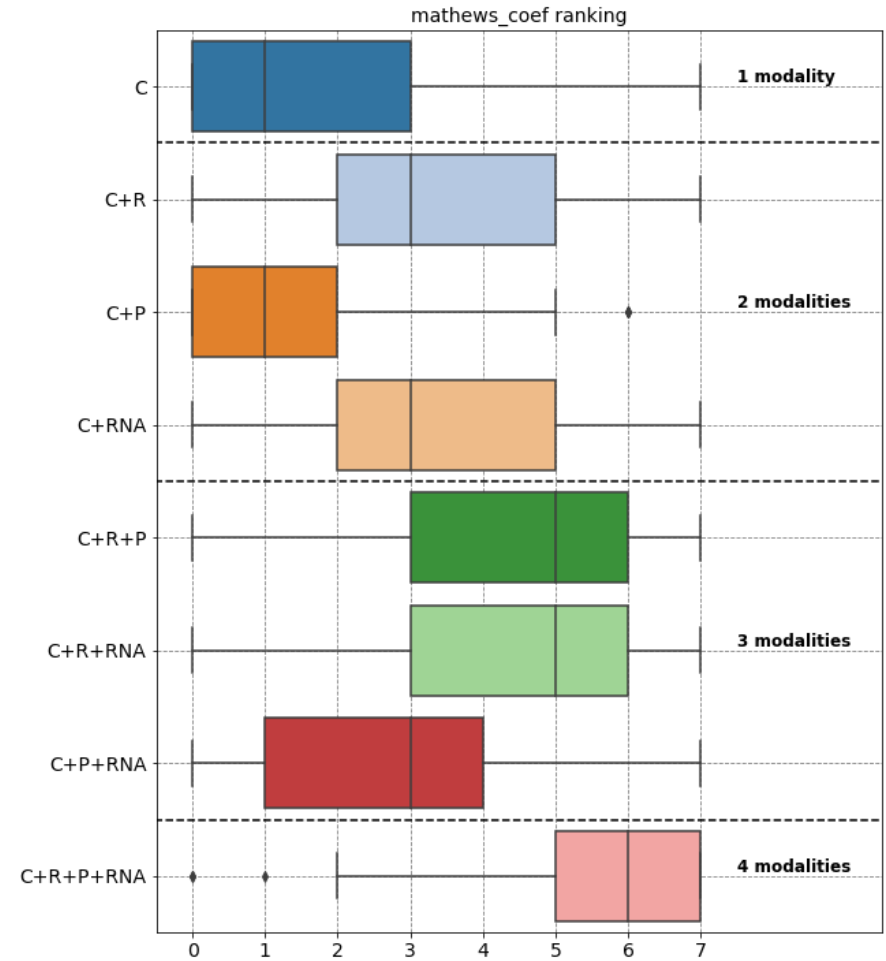
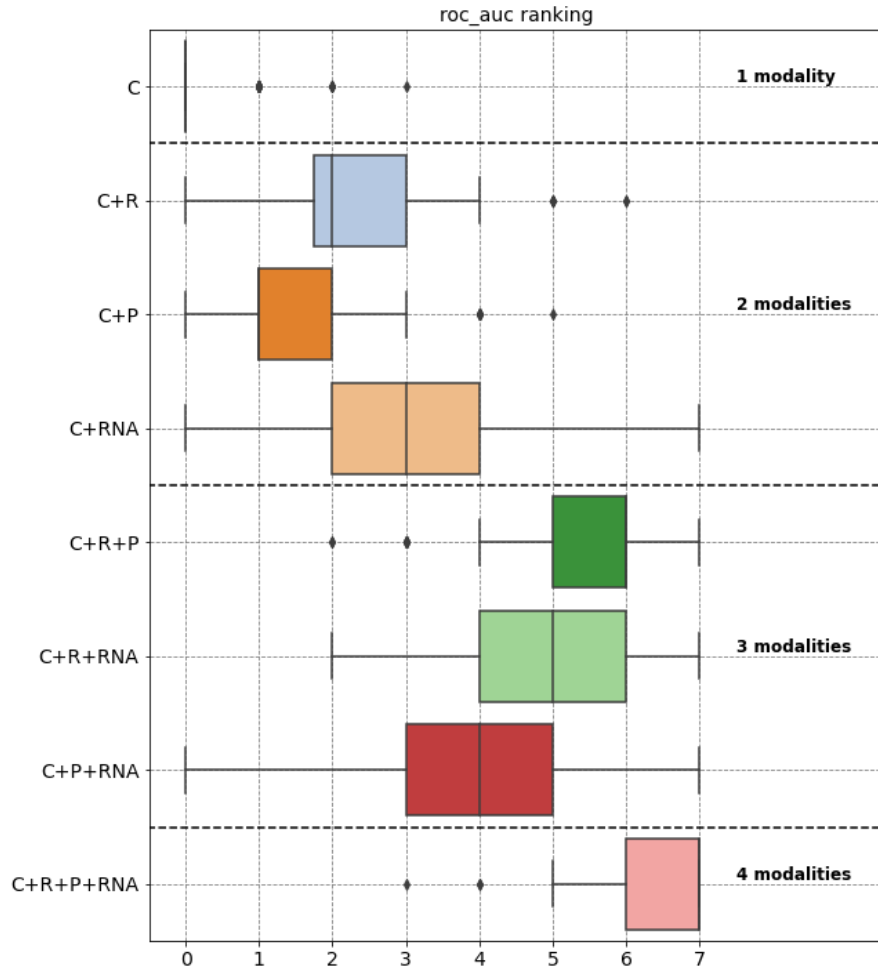
Late fusion approach - I



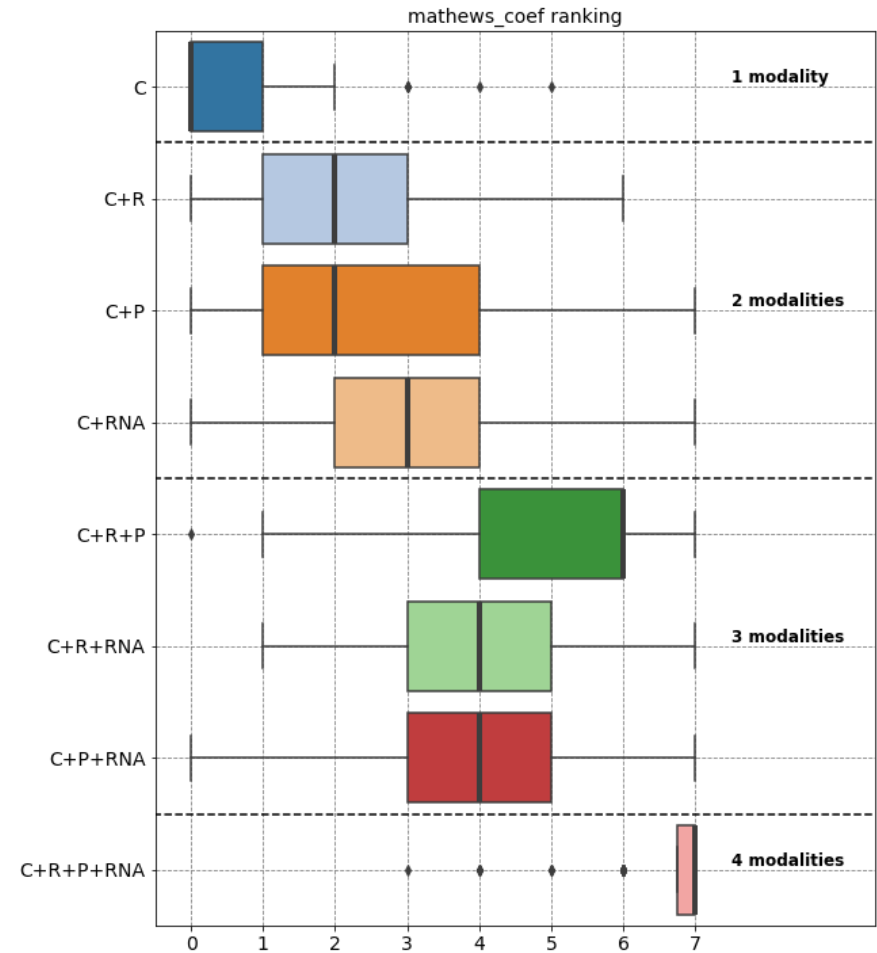
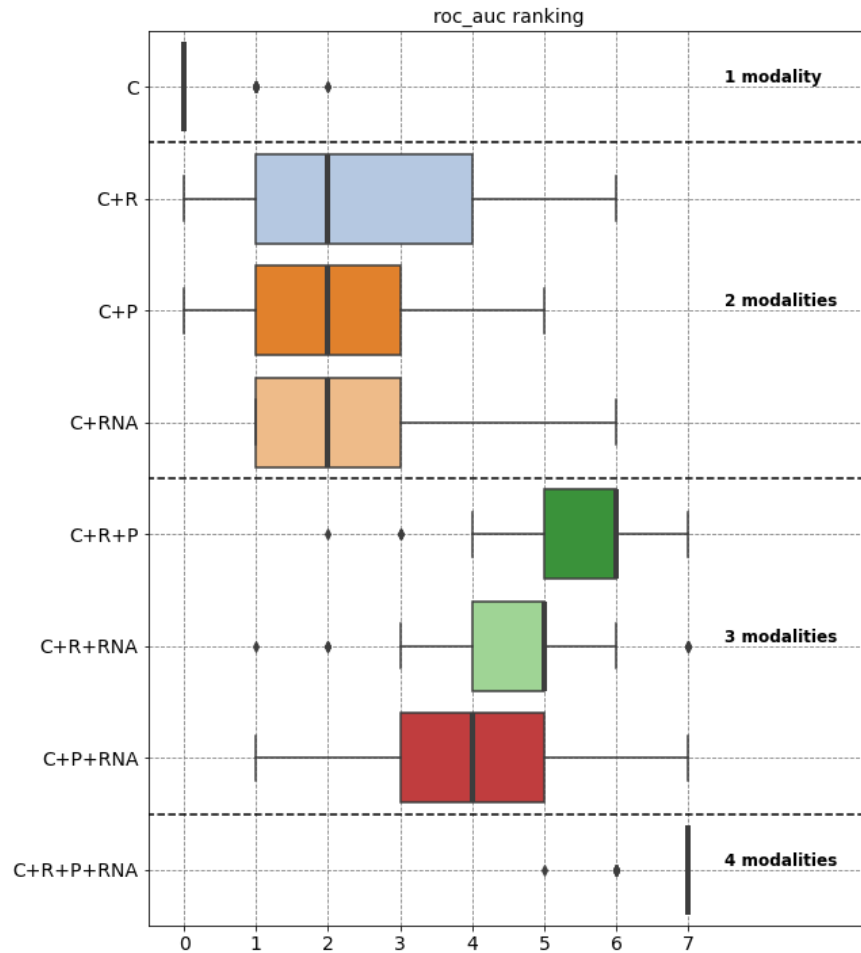
Late fusion approach - II



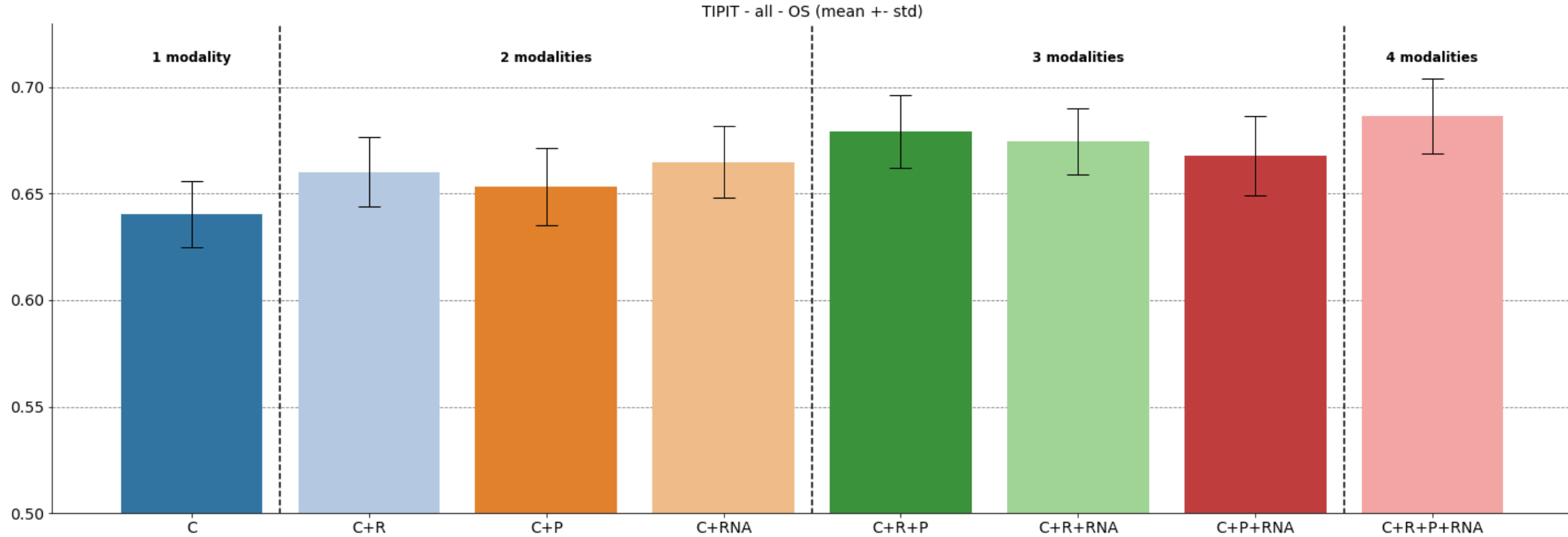
First approach – compare all the patients - OS



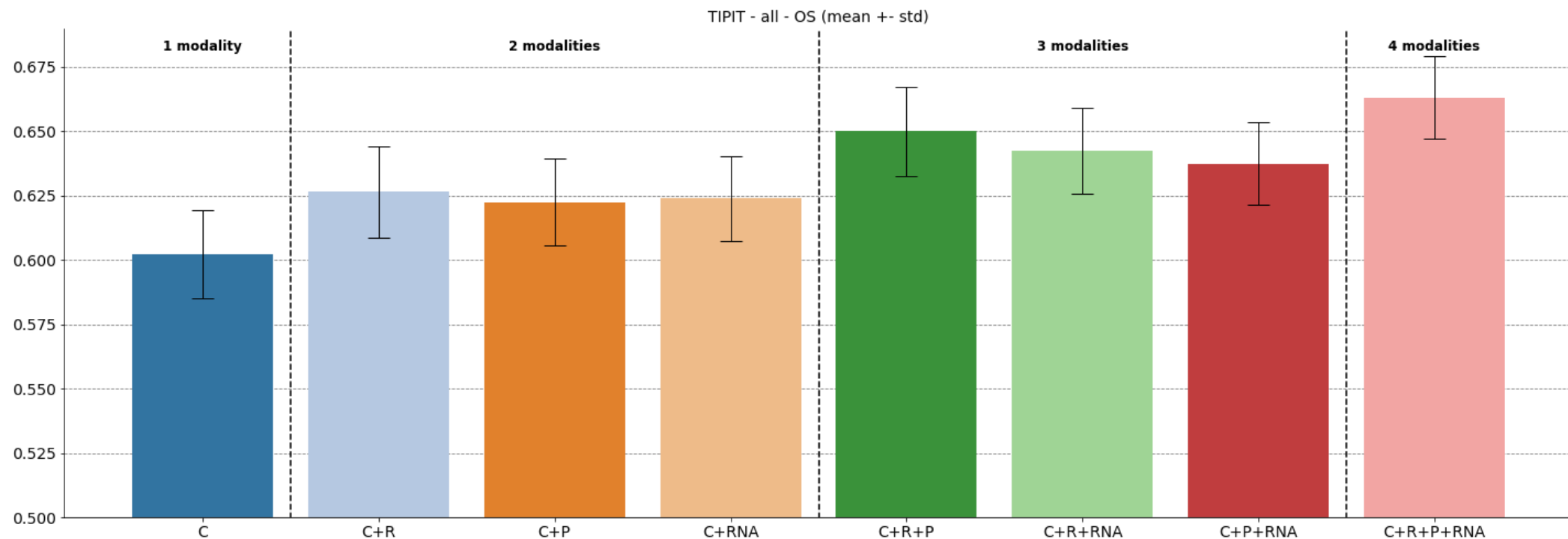
First approach – compare all the patients - PFS



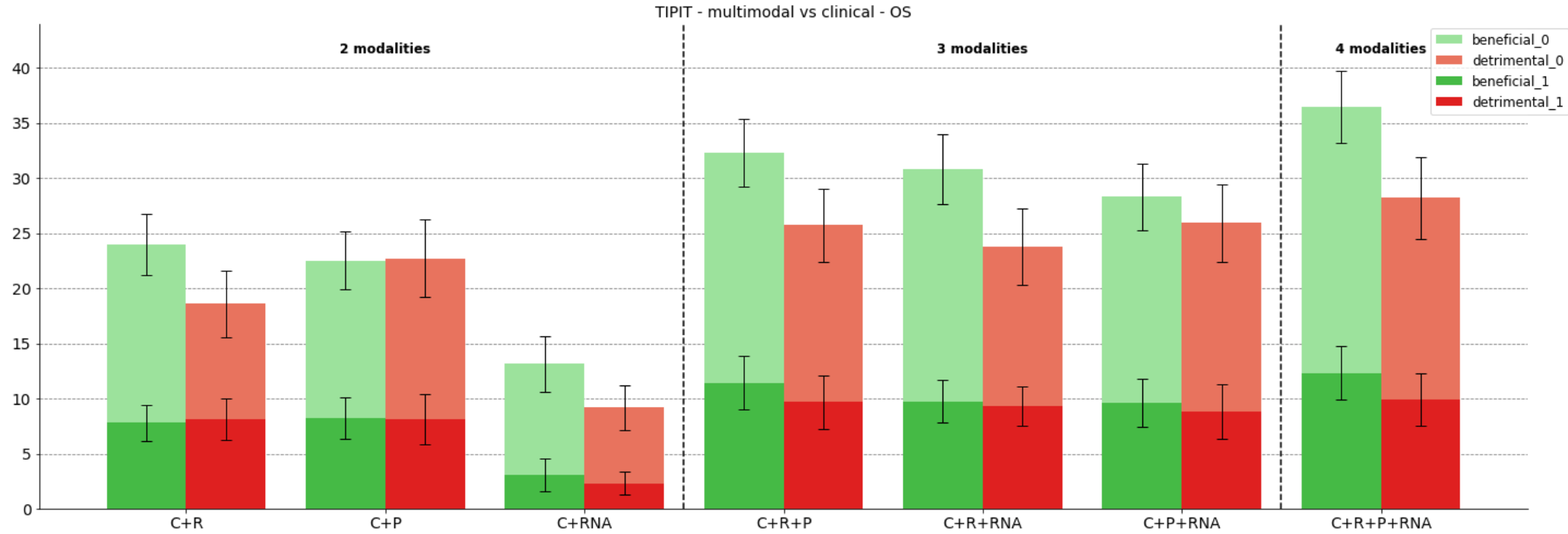
First approach – compare all the patients - OS



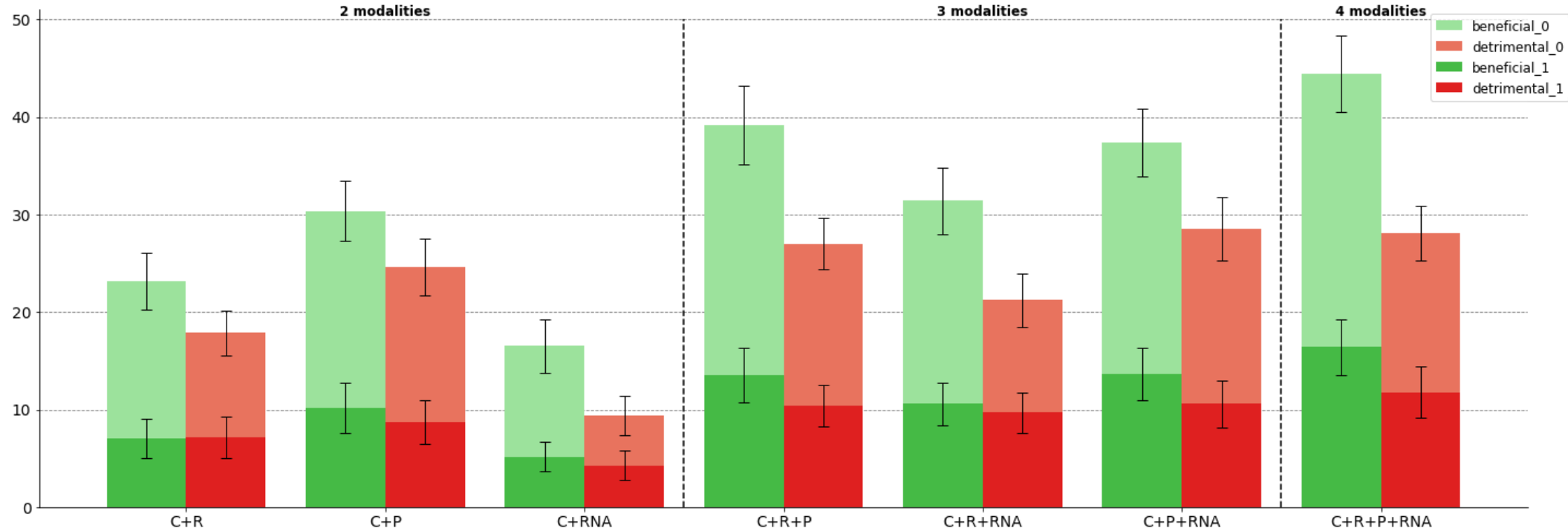
First approach – compare all the patients - PFS



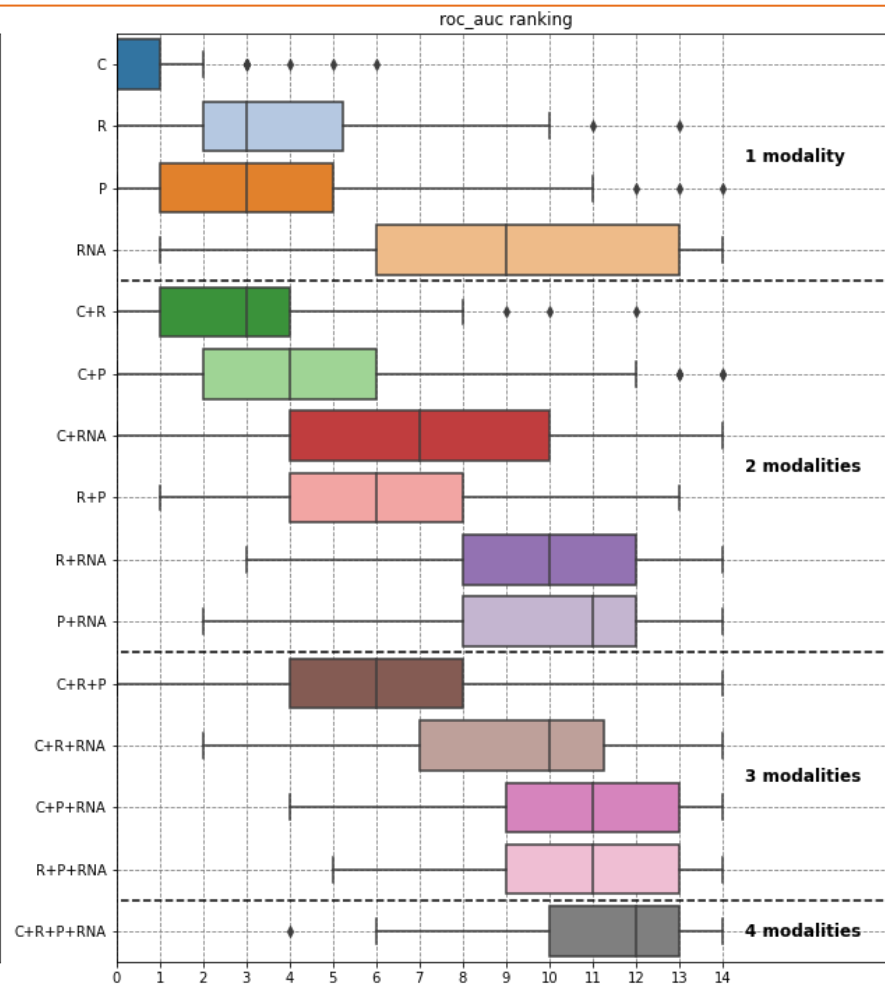
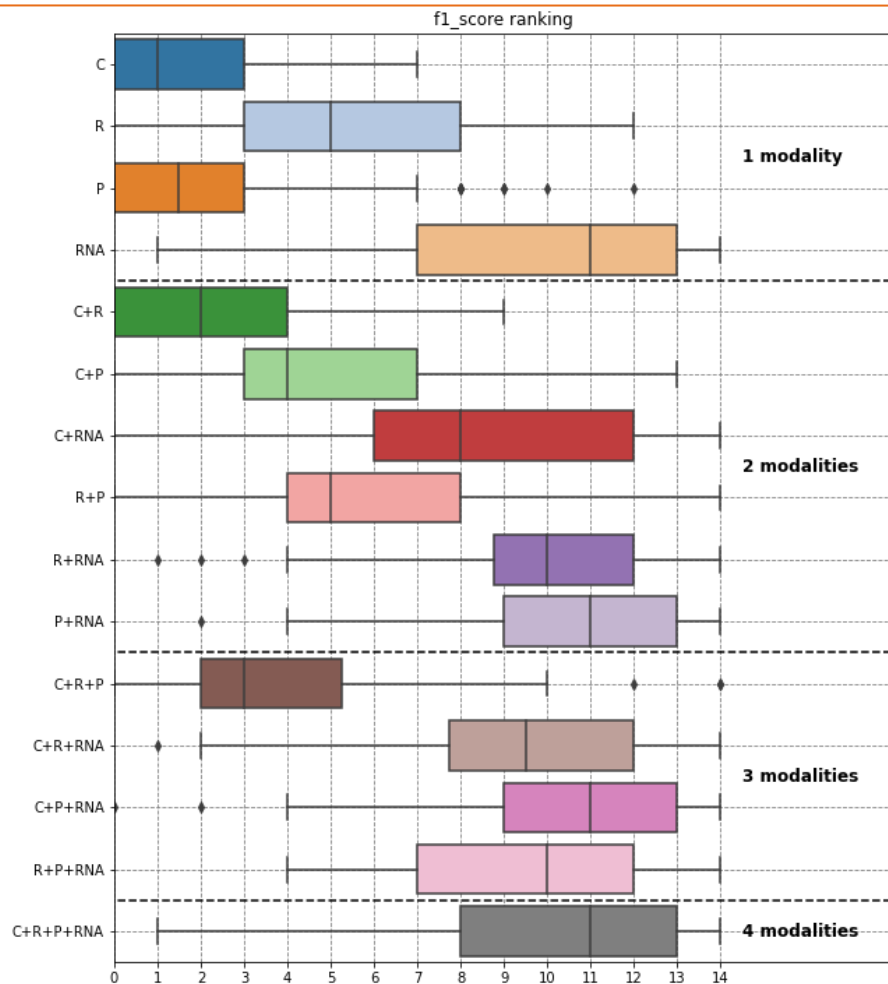
First approach – compare all the patients - OS



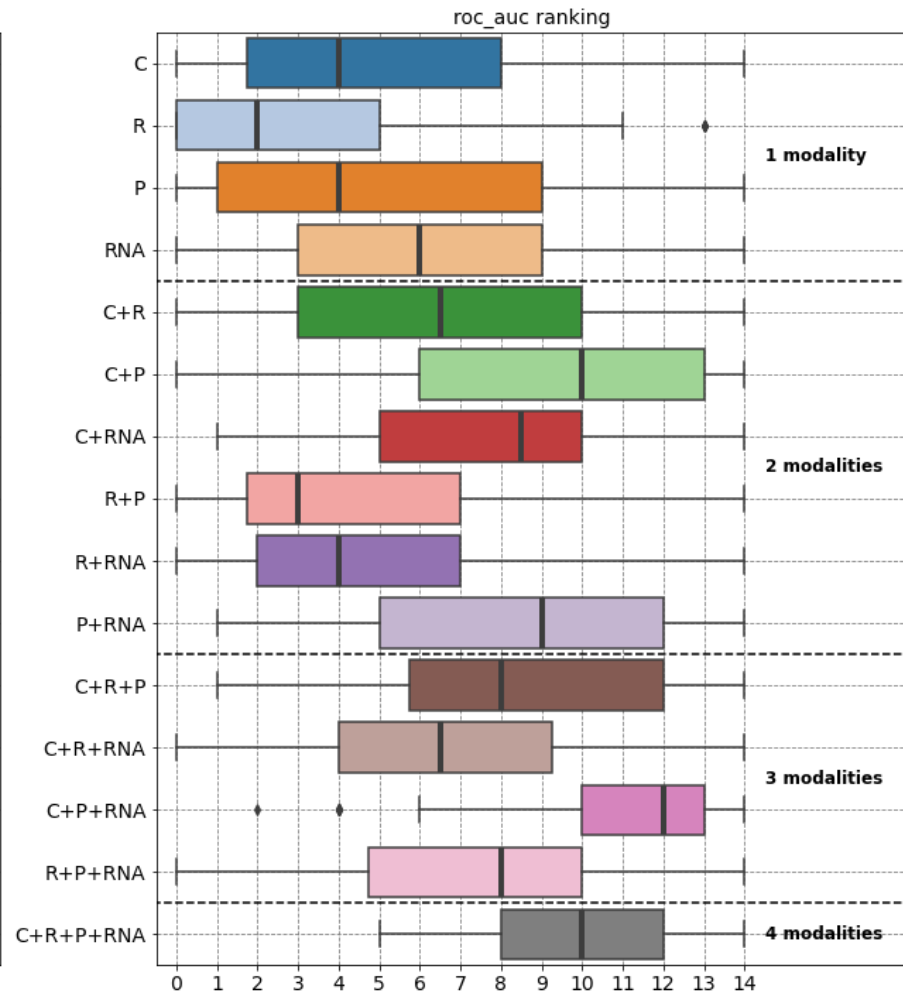
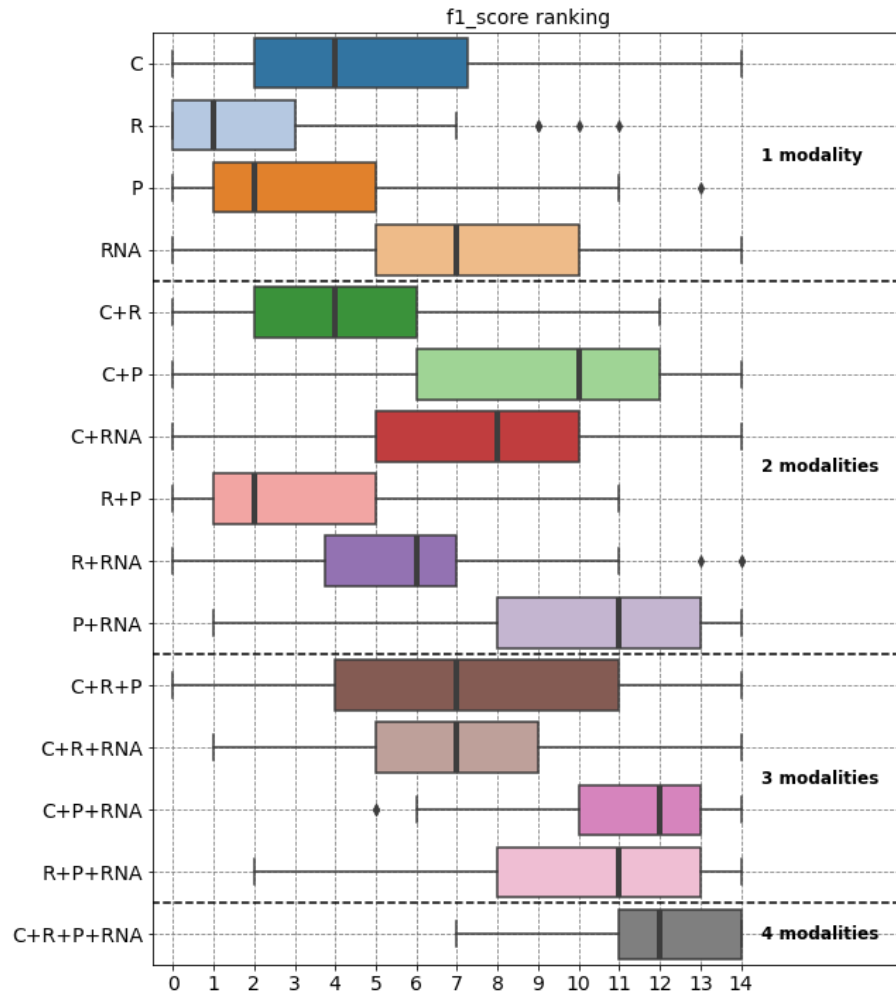
First approach – compare all the patients - PFS



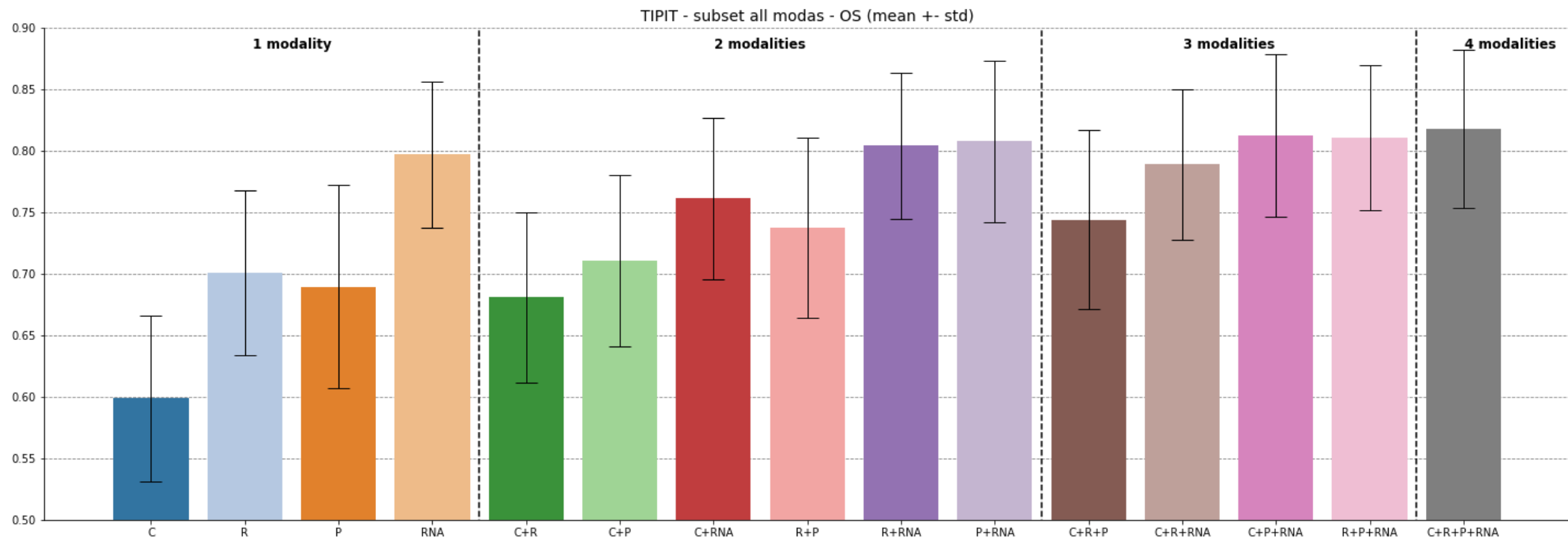
Second approach – compare patients with 4 modalities - OS



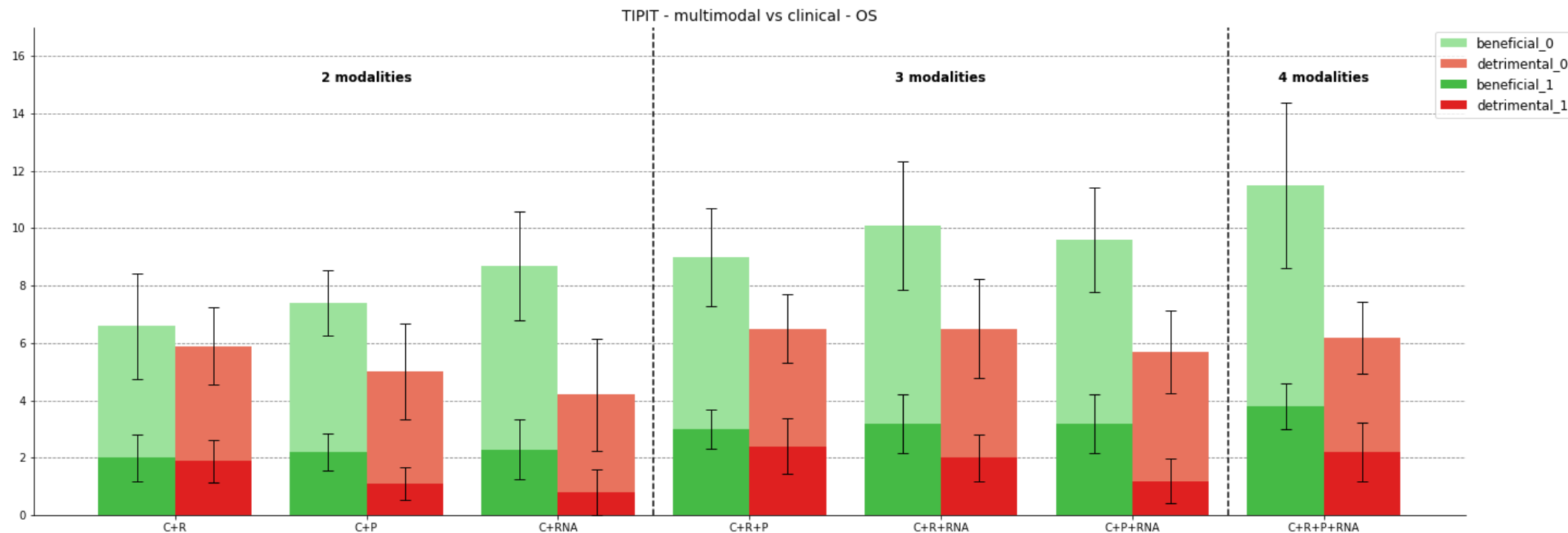
Second approach – compare patients with 4 modalities - PFS



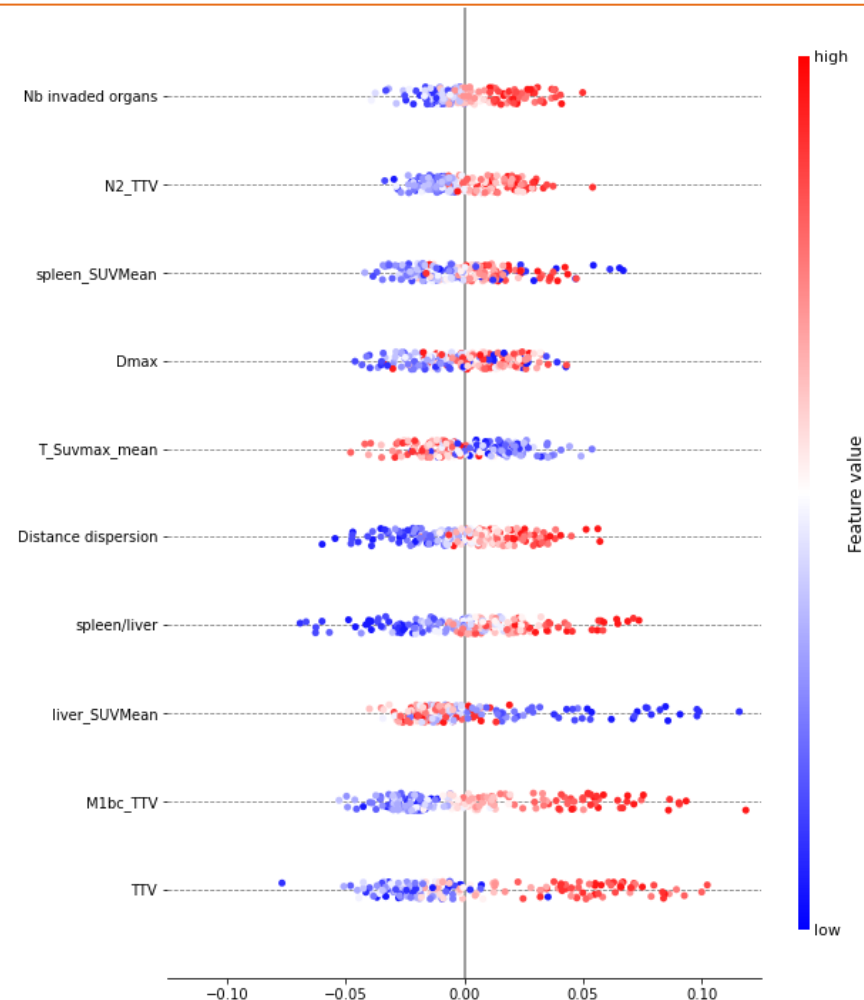
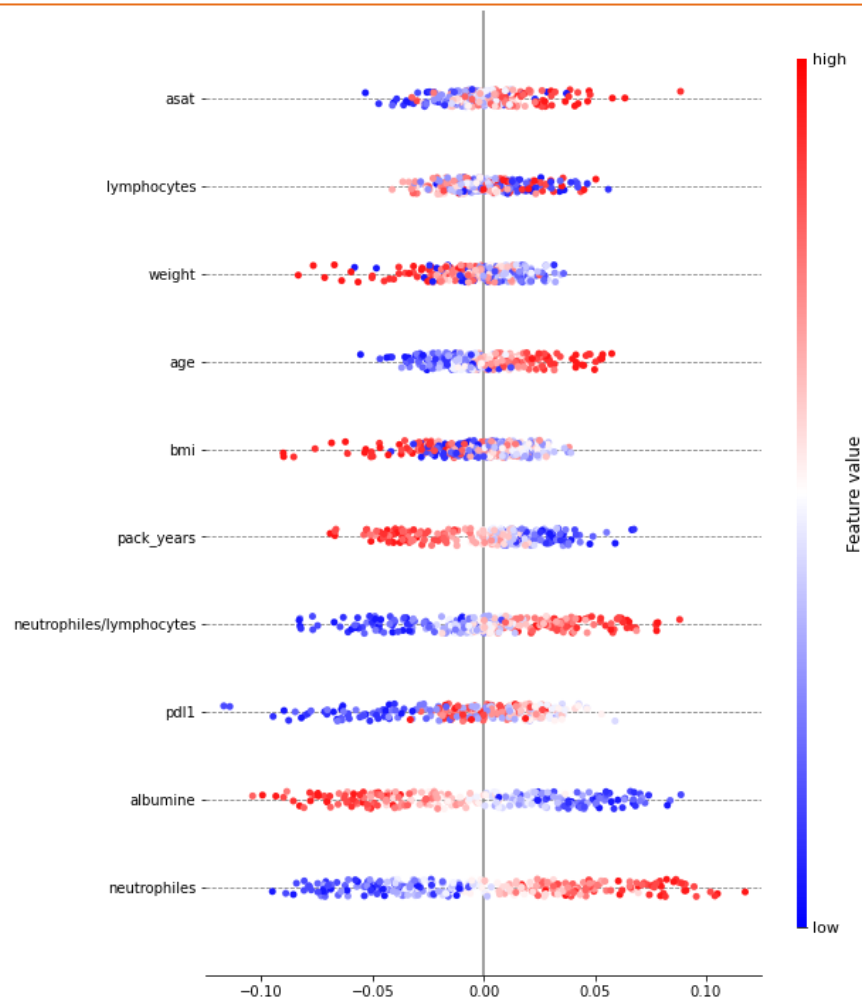
Second approach – compare patients with 4 modalities



Second approach – compare patients with 4 modalities



Interpretation – SHAP values – OS



Interpretation – SHAP values – PFS

