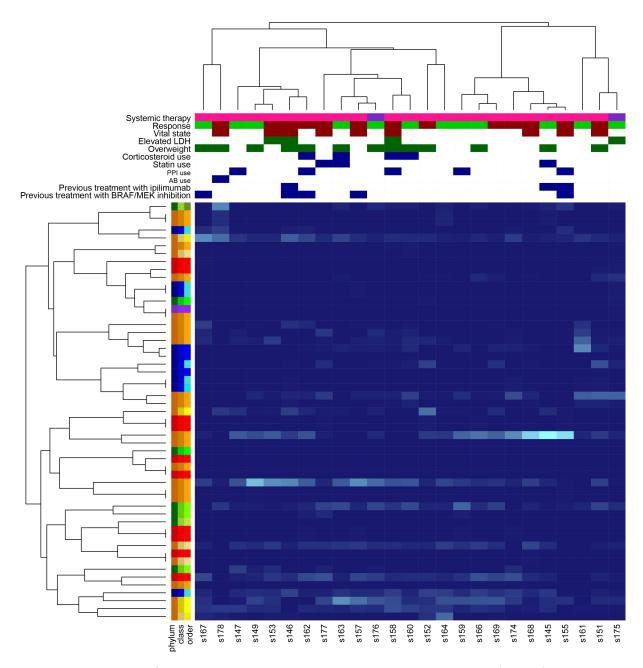


Figure S1. Venn diagram of the overlap of main taxa identified in previous publications.



**Figure S2.** Heatmap of taxa relative abundances at genus level in all samples (n = 25). Samples are listed in columns, taxa are listed in rows. Data was ordered according to dendrogram results of complete-linkage clustering over abundance data. The top rows show metadata-variables (i.e. systemic therapy received (pink = monotherapy, purple = combination therapy), response to ICI therapy (green = response, dark red = non-response), vital state at last follow-up, elevated LDH (>250 U/L), overweight (BMI > 25), corticosteroid use, statin use, PPI use, antibiotics use, previous

treatment with ipilimumab and previous treatment with BRAF/MEK inhibition) of covariates included in the final analysis (blank = "no/not present", colour = "yes/present").