

**mSWI/SNF complex genomic alterations and immune checkpoint blockade in solid tumors**

**Supplemental Data Files**

## **Supplementary Tables:**

**Table S1: Studies mSWISNF and ICIs.** Published literature to date examining mSWI/SNF alterations and ICIs.

**Table S2: Oncopanel Gene List.** List of genes covered by each of the Oncopanel versions (1-3.1)

**Table S3: Master table of the DFCI cohort.** Clinical, pathological, and molecular covariates for 676 patients treated with ICIs at DFCI.

**Table S4: Master table of the MSKCC cohort.** Clinical, pathological, and molecular covariates for 848 patients treated with ICIs at MSKCC.

**Table S5: Outcomes by tumor.** Summary of median follow-up, OS and TTF for overall cohort across tumor types.

**Table S5 A:** Median follow-up, OS and TTF for DFCI cohort.

**Table S5 B:** Median follow-up and OS for MSKCC cohort.

**Table S6: Mutational status\_specimen.** Site of specimens sequenced and ICI treatment information across tumor histologies and mSWI/SNF mutational status in DFCI and MSKCC cohorts.

**Table S7: LOF SNVs\_small indels\_DFCI.** All LOF single nucleotide variant and small indel calls identified in 676 patients in DFCI cohort.

**Table S8: LOF CNVs\_DFCI.** Copy number variation (CNV) events identified in 676 patients in DFCI cohort. 2DEL, homozygous deletion.

**Table S9: LOF SNVs\_CNVs\_MSKCC.** All LOF single nucleotide variant, small indel calls, and homozygous deletions identified in 848 patients in MSKCC cohort.

**Table S10: Distribution of LOF GAs.** Rate of mSWI/SNF complex GAs across the entire cohort and across the different tumor subtypes

**Table S10A:** Rate of mSWI/SNF complex GAs across the entire cohort and across the different tumor subtypes by individual genes in DFCI and MSKCC cohorts.

**Table S10B:** Rate of mSWI/SNF complex GAs across the entire cohort and across the different tumor subtypes by complex in DFCI and MSKCC cohorts.

**Table S11: TMB and LOF GAs.** Association of tumor mutation burden with LOF GAs in mSWI/SNF

**Table S11 A:** Association of tumor mutation burden with LOF GAs in mSWI/SNF in DFCI cohort

**Table S11 B:** Association of tumor mutation burden with LOF GAs in mSWI/SNF in MSKCC cohort

**Table S12: ORR\_DCR\_PBAF.** Response rates in the LOF and WT PBAF in DFCI cohort

**Table S12 A:** Overall response rate in the LOF and WT PBAF

**Table S12 B:** Disease control rate in the LOF and WT PBAF

**Table S13: ORR\_DCR\_BAF.** Response rates in the LOF and WT BAF in DFCI cohort

**Table 13 A:** Overall response rate in the LOF and WT BAF

**Table 13 B:** Disease control rate in the LOF and WT BAF

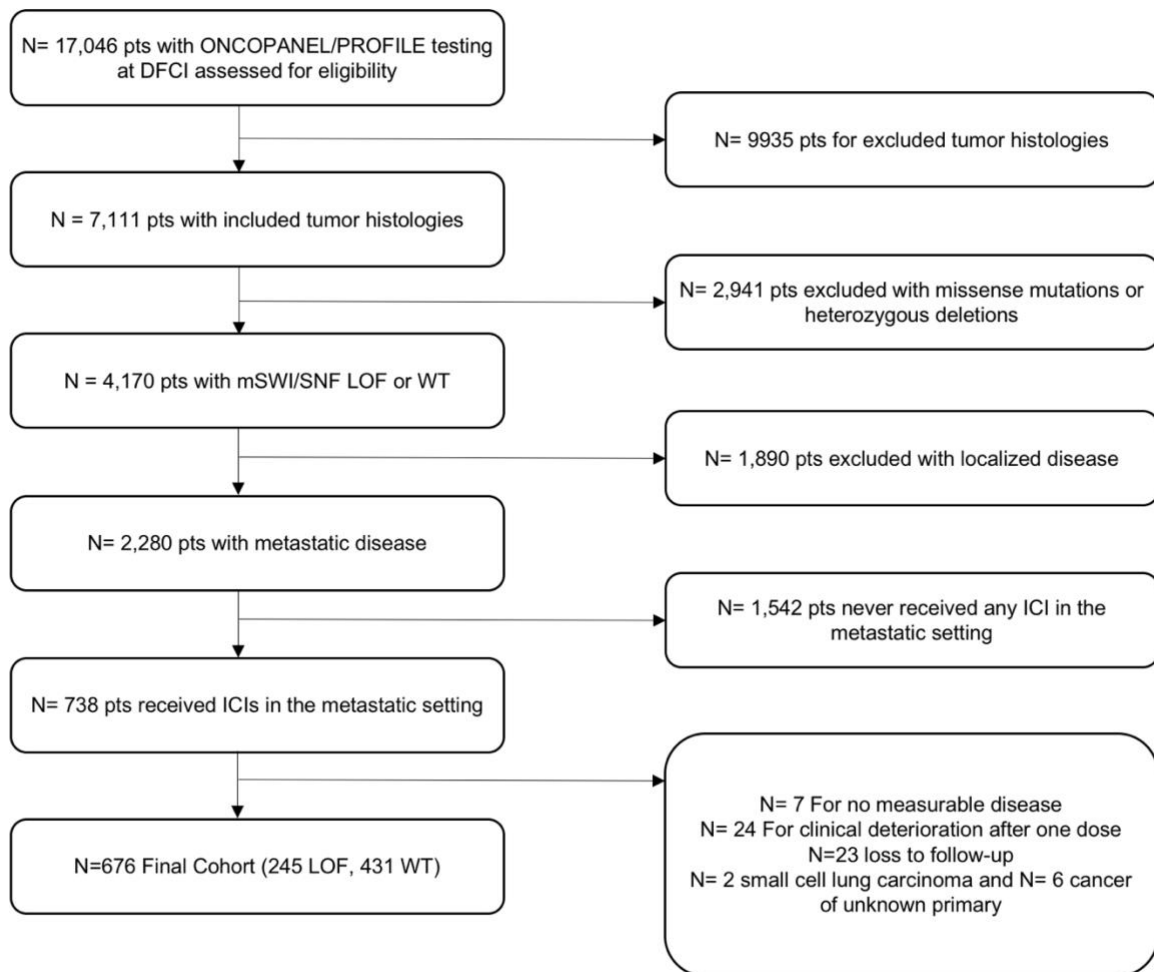
**Table S14: MSI CRC.** MSI Status of the DFCI CRC by mSWI/SNF mutational status

**Table S15: TMB PBRM1 RCC.** Association of LOF PBRM1 with treatment outcomes in DFCI RCC cohort after adjustment for line of therapy and TMB

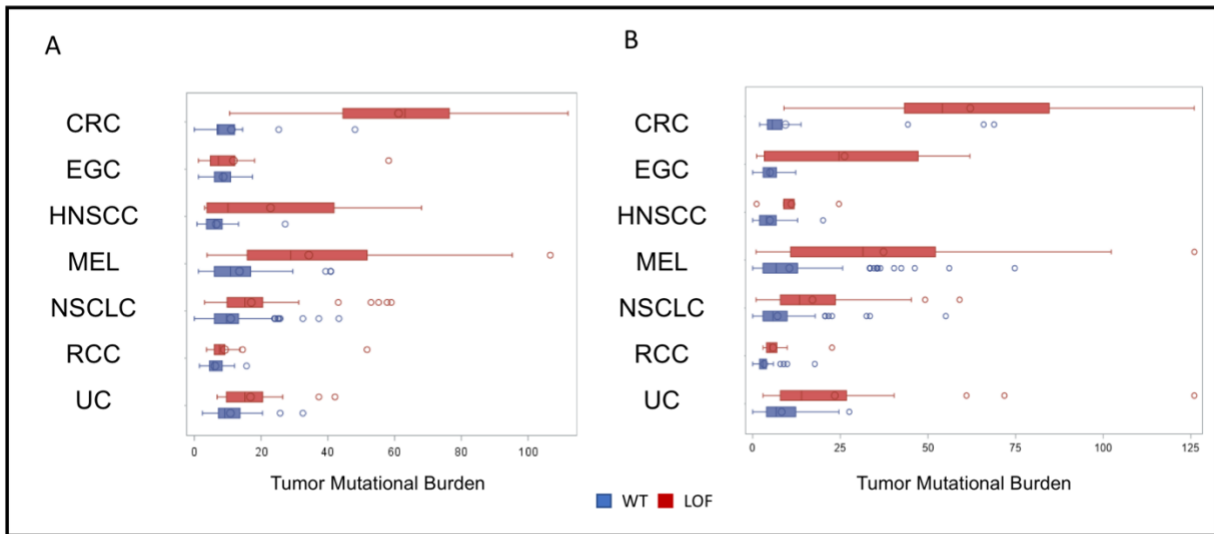
**Table S16: Single agent RCC.** Association of LOF mSWI/SNF or LOF PBRM1 with treatment outcomes in DFCI (N=28) and MSKCC (N=95) mRCC cohorts treated with ICI monotherapy.

**Table S17: TMB NSCLC.** Association of LOF mSWI/SNF with treatment outcomes in DFCI NSCLC cohort after adjustment for line of therapy and TMB

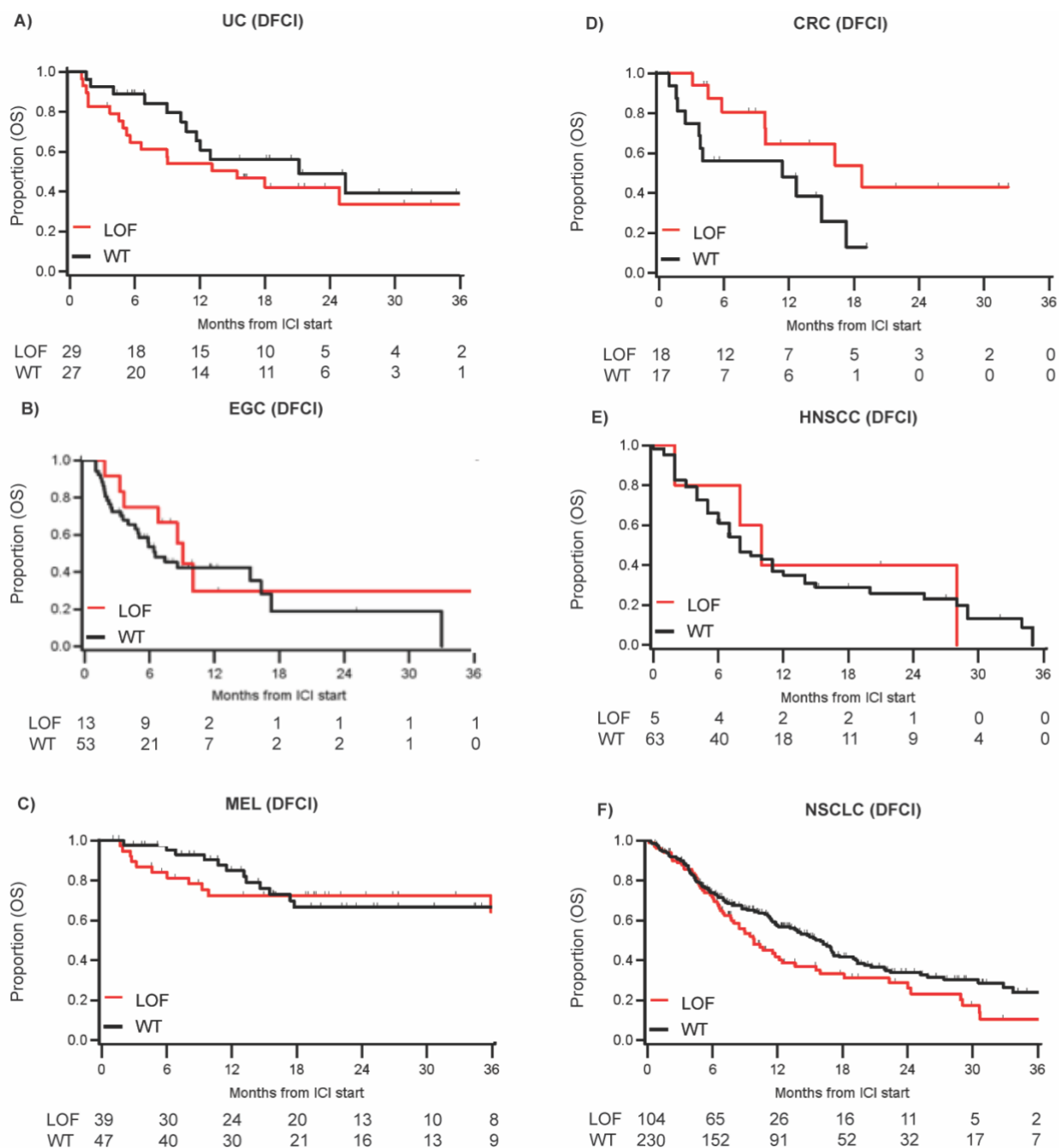
## **Supplementary Figures**



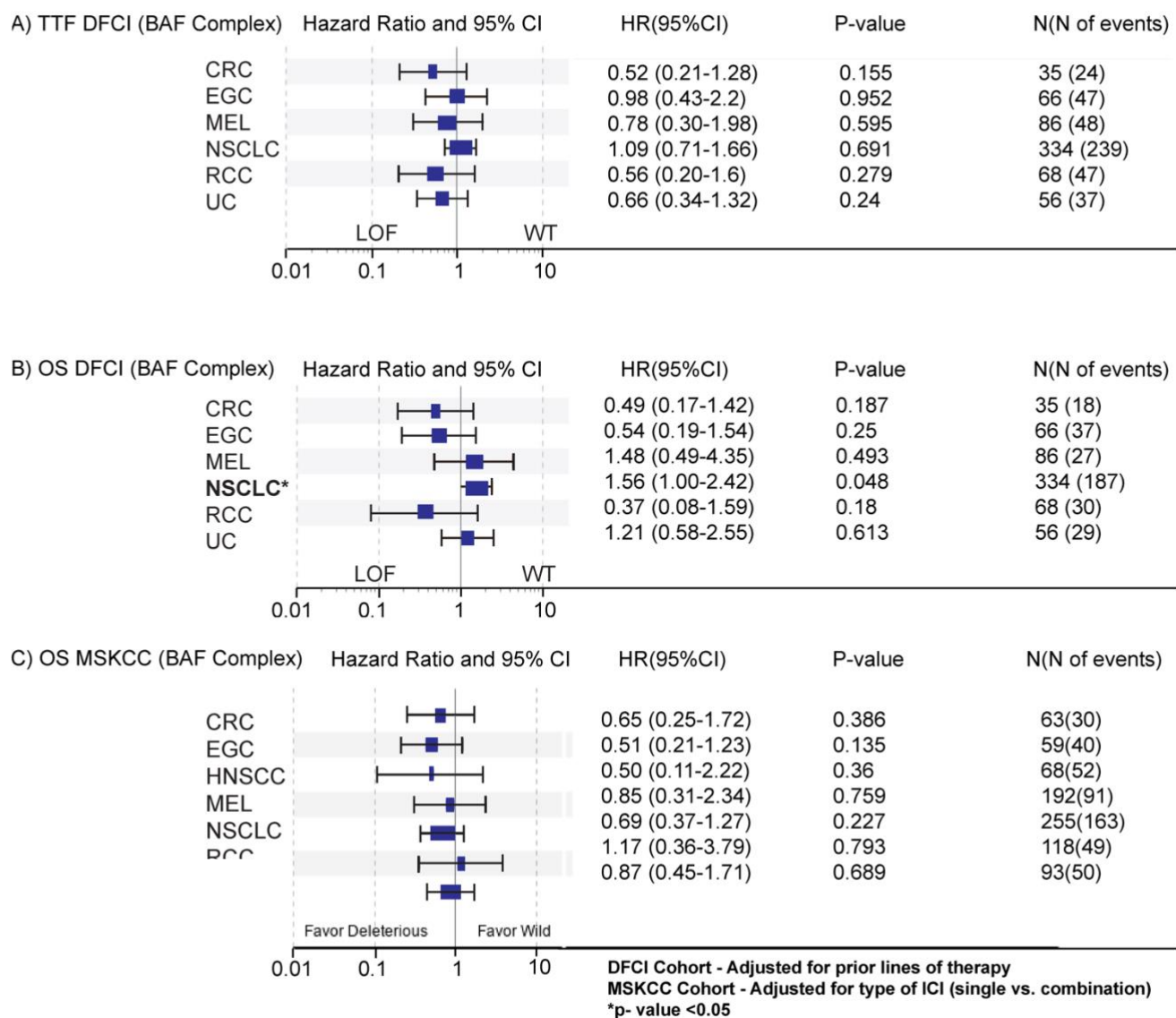
**Figure S1:** CONSORT Diagram of the DFCI Cohort.



**Figure S2:** Association of Tumor Mutation Burden with LOF GAs in mSWI/SNF genes. **S2A:** Association of Tumor Mutation Burden with LOF GAs in mSWI/SNF genes in DFCI Cohort. **S2B:** Association of Tumor Mutation Burden with LOF GAs in mSWI/SNF genes in MSKCC Cohort.

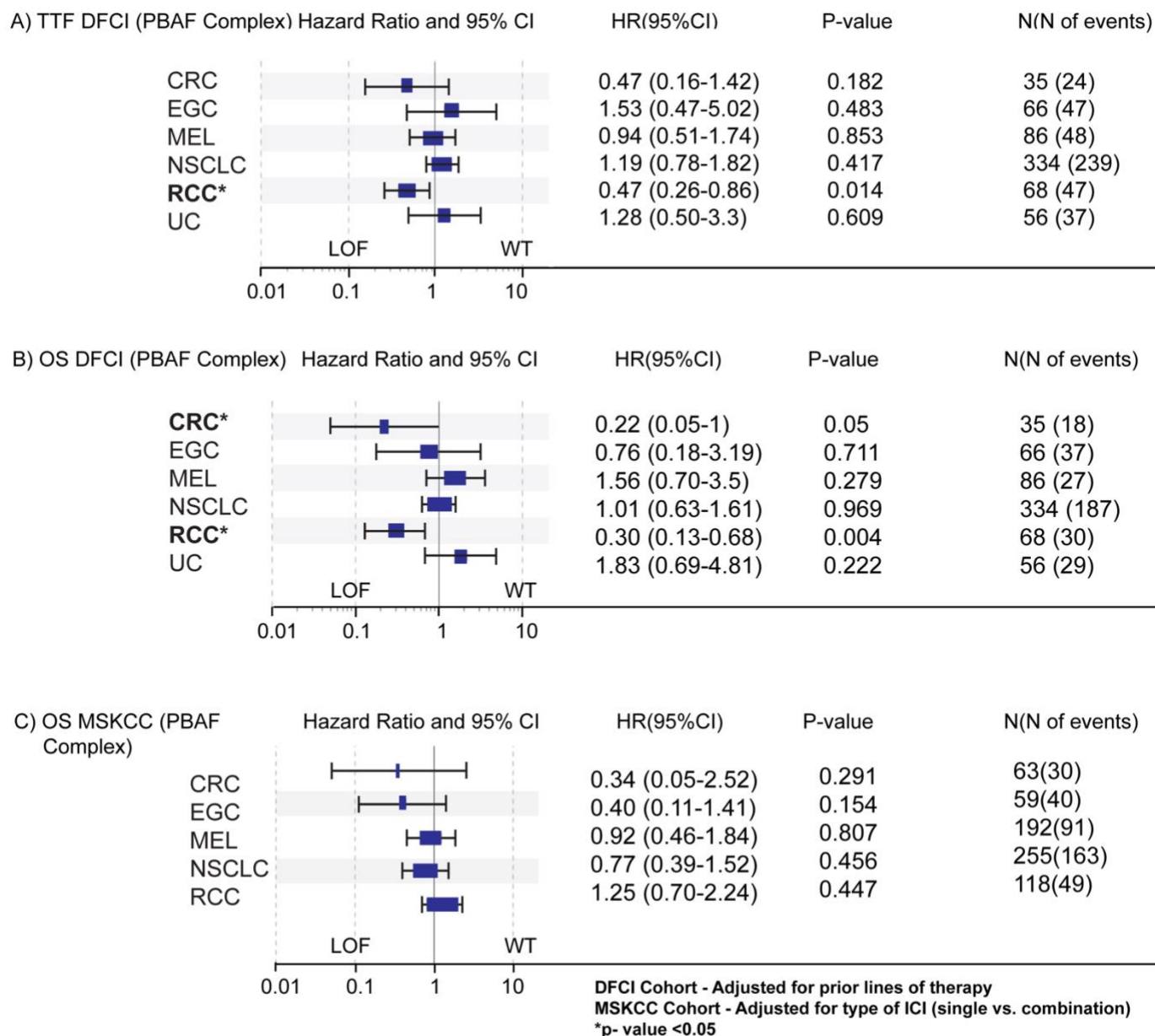


**Figure S3:** OS in patients with LOF mSWI/SNF complex genes and WT across different tumor histologies in the DFCI cohort. **S3A:** Urothelial Carcinoma – DFCI. **S3B:** Esophagogastric carcinoma – DFCI. **S3C:** Melanoma – DFCI. **S3D:** Colorectal adenocarcinoma – DFCI. **S3E:** Head and neck squamous cell carcinoma – DFCI. **S3F:** Non-small cell lung carcinoma – DFCI.



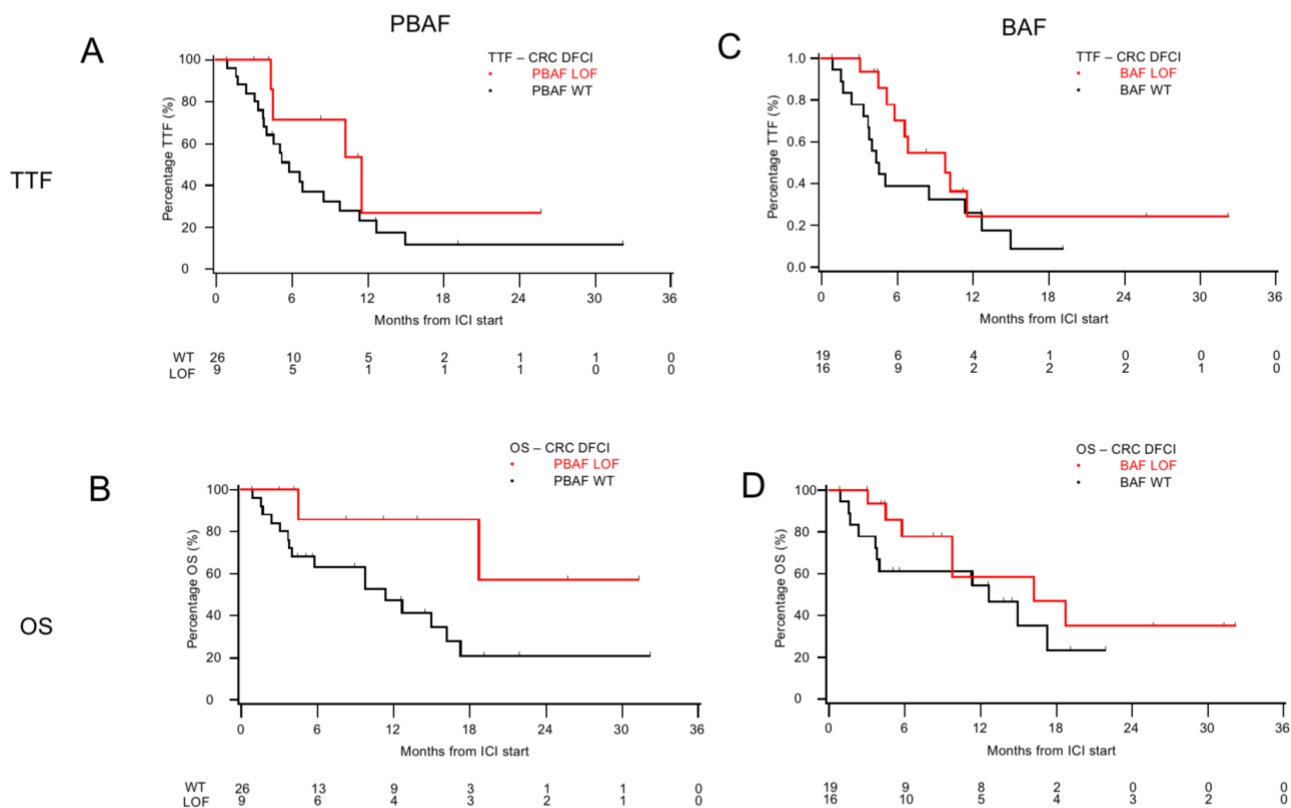
**Figure S4:** Survival outcomes in patients with LOF BAF complex genes and WT across different tumor types in the DFCI and MSKCC Cohorts. HNSCC DFCI cohort was excluded from the analysis due to number of patients with BAF mutation <3. **S4A:** DFCI: Adjusted Hazard Ratios for Time to Treatment Failure. **S4B:** DFCI: Adjusted Hazard Ratios for Overall Survival. **S4C:** MSKCC: Adjusted Hazard Ratios for Overall Survival.



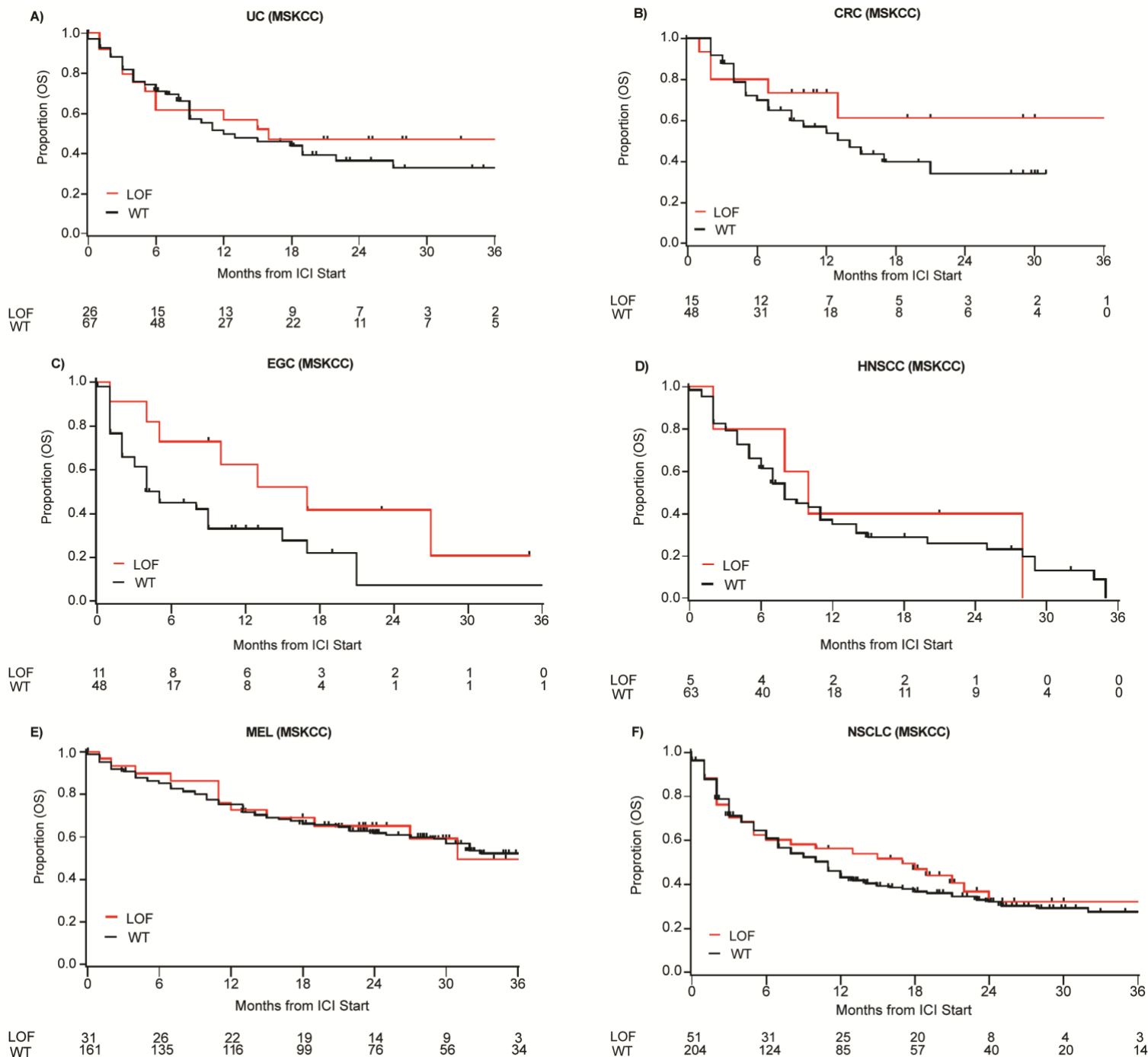


**Figure S5:** Survival outcomes in patients with LOF PBAF complex genes and WT across different tumor types in the DFCI and MSKCC Cohorts. HNSCC DFCI and MSKCC cohorts as well as UC MSKCC cohort were excluded from the analysis due to number of patients with PBAF mutation <3. **S5A:** DFCI: Adjusted Hazard Ratios for Time to Treatment Failure. **S5B:** DFCI: Adjusted Hazard Ratios for Overall Survival. **S5C:** MSKCC: Adjusted Hazard Ratios for Overall Survival.

## Colorectal adenocarcinoma - DFCI



**Figure S6:** Kaplan Meier Survival curves for OS and TTF in DFCI CRC cohort by mSWI/SNF complex. **S6A:** Kaplan Meier Survival curve for TTF LOF and WT PBAF. **S6B:** Kaplan Meier Survival curve for OS LOF and WT PBAF. **S6C:** Kaplan Meier Survival curve for TTF LOF and WT BAF. **S6D:** Kaplan Meier Survival curve for OS LOF and WT BAF.



**Figure S7:** OS in patients with LOF mSWI/SNF complex genes and WT across different tumor histologies in the MSKCC cohort. **S7A:** Urothelial Carcinoma – MSKCC. **S7B:** Esophagogastric carcinoma – MSKCC. **S7C:** Melanoma – MSKCC. **S7D:** Colorectal adenocarcinoma – MSKCC. **S7E:** Head and neck squamous cell carcinoma – MSKCC. **S7F:** Non-small cell lung carcinoma – MSKCC.