

## **Description of Additional Supplementary Files**

File Name: Supplementary Data 1

Description: variant calls

File Name: Supplementary Data 2

Description: Survival analyses among patients with gene-level or pathwaylevel somatic mutations by hypermutation status.

File Name: Supplementary Data 3

Description: Distribution of somatic mutated genes and pathways by tumor site, adjusted for MSI status and mutation burden.

File Name: Supplementary Data 4

Description: Distribution of somatic mutated genes and pathways by tumor stage, adjusted for MSI status and mutation burden.

File Name: Supplementary Data 5

Description: Distribution of somatic mutated genes and pathways by sex, adjusted for MSI status and mutation burden.

File Name: Supplementary Data 6

Description: Clinical Attributes.