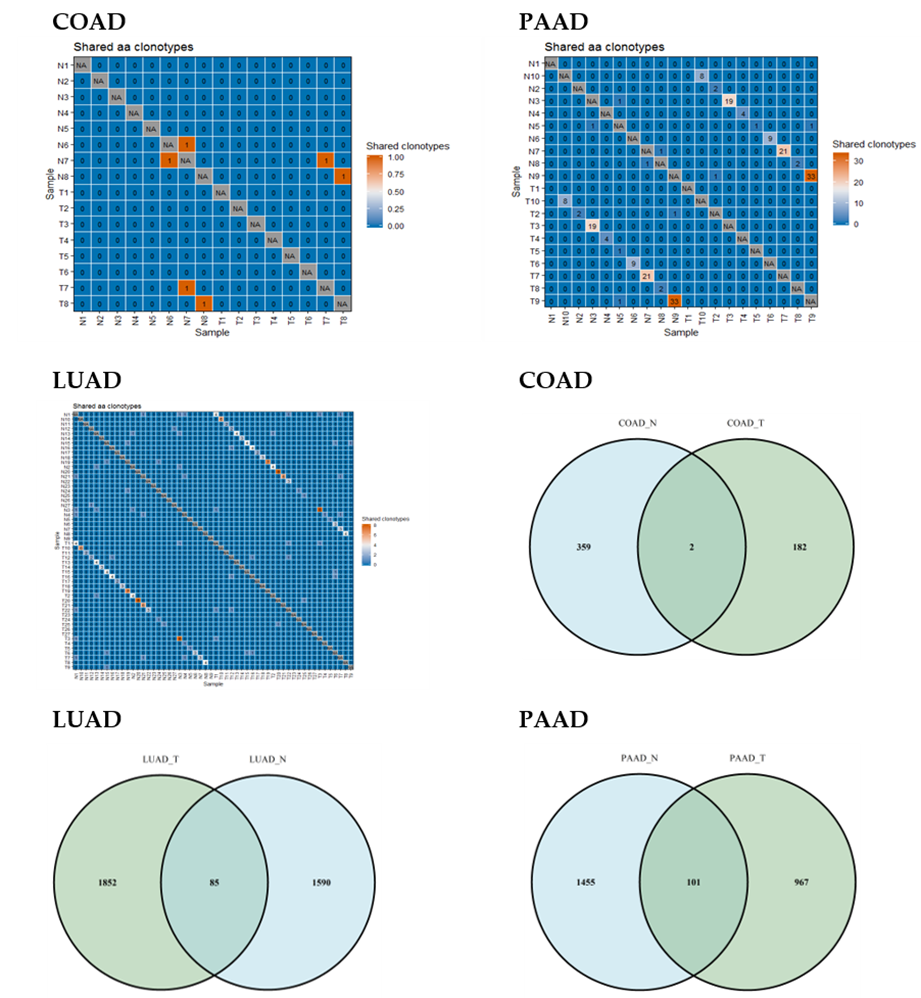
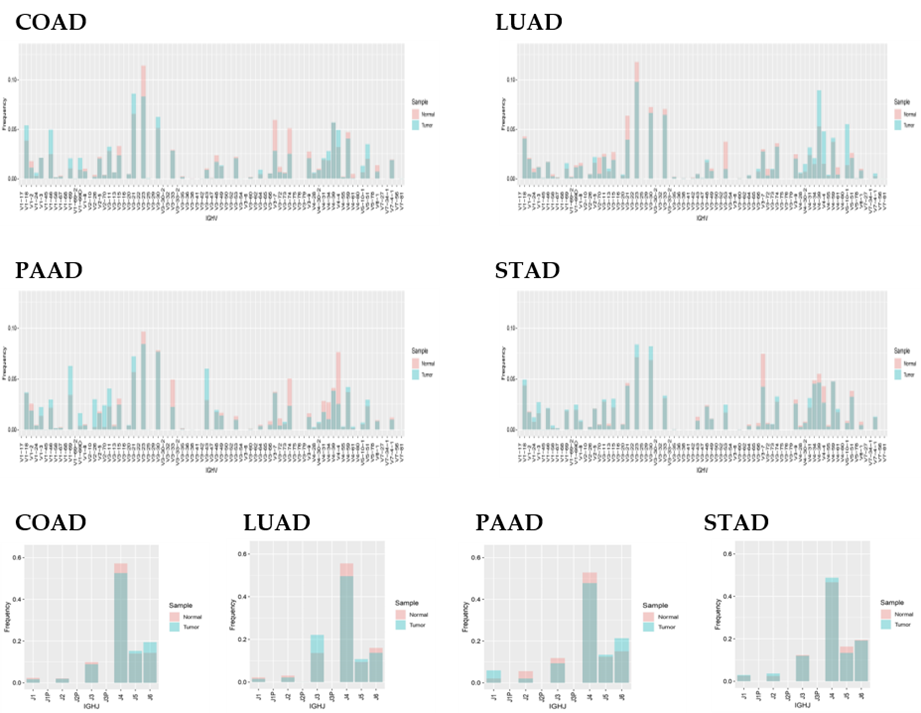
**Supplementary material**



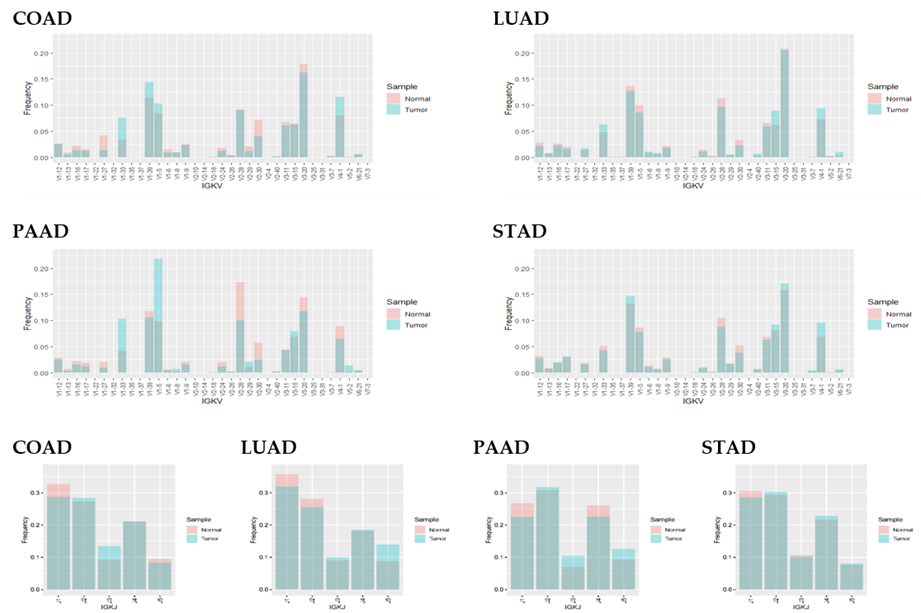
**Figure S1** number of shared TRB sequences of COAD, LUAD, PAAD



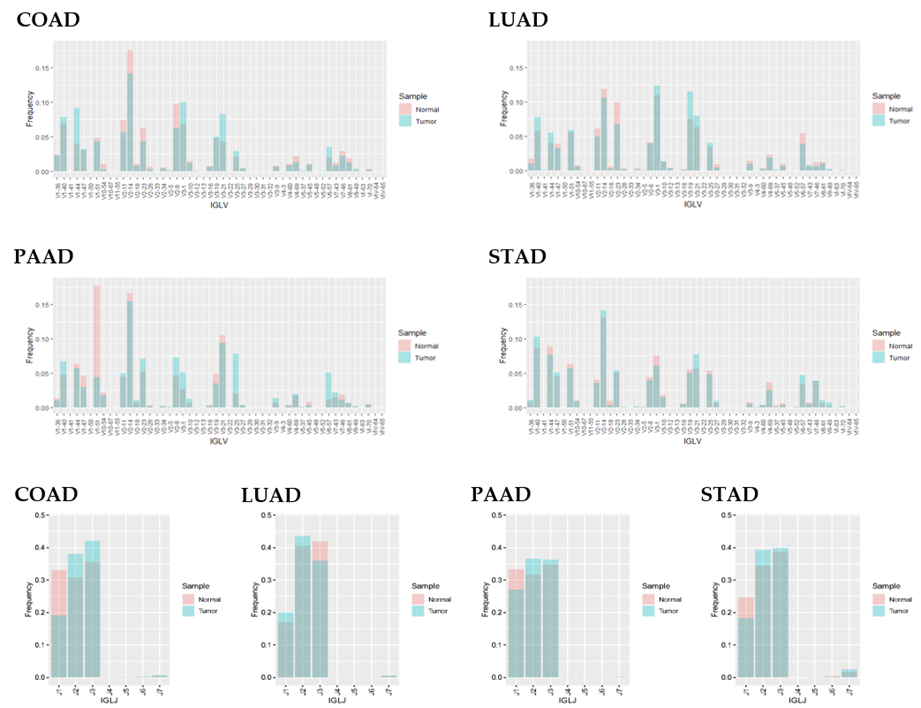
**Figure S2** The usage of TRBV and TRBJ



**Figure S3** The usage of IGHV and IGHJ



**Figure S4** The usage of IGKV and IGKJ



**Figure S5** The usage of IGLV and IGLJ