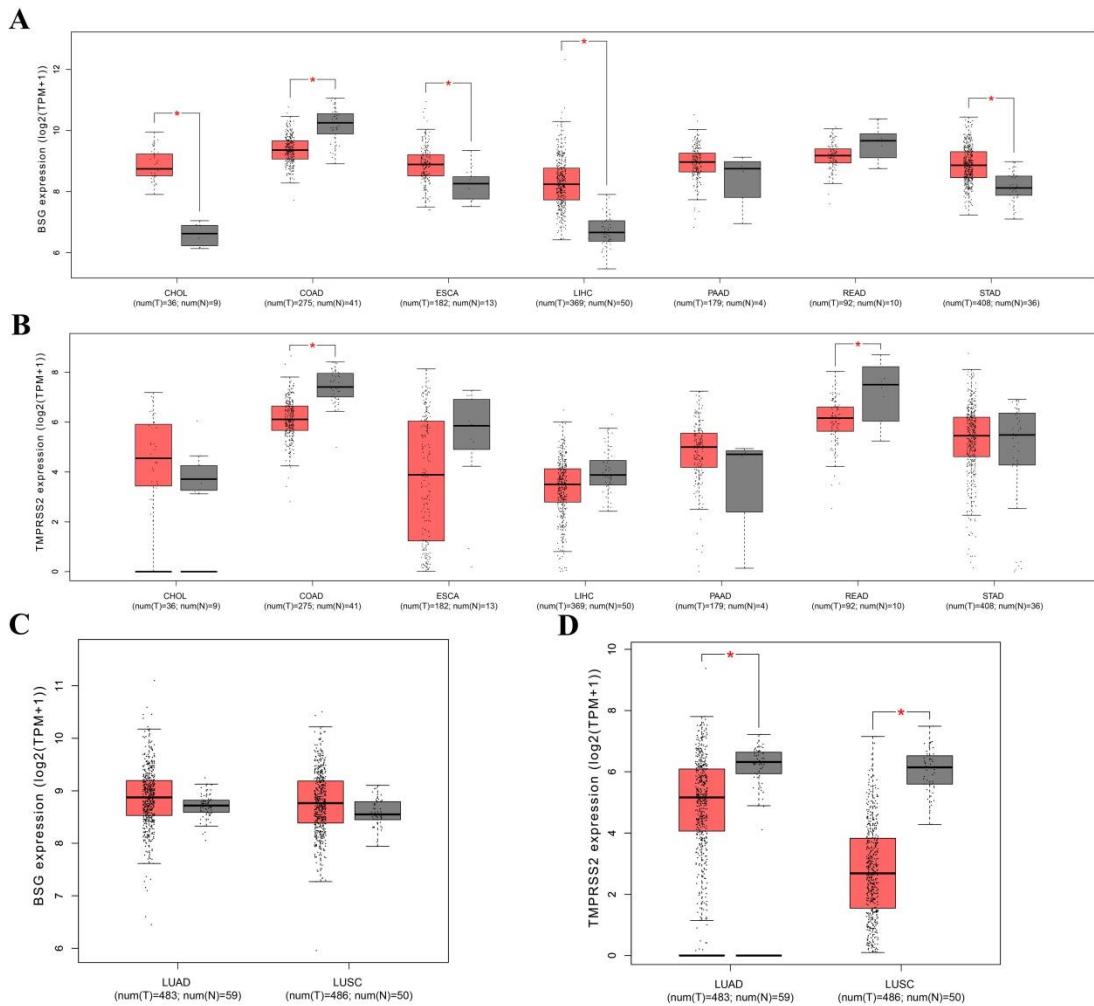


## Supplementary material



**Figure S1** Differential expressions of BSG or TMPRSS2 between aerodigestive cancers and

adjacent normal tissues.

(**A** and **B**) Boxplot showing differential BSG or TMPRSS2 expression between human digestive cancer and adjacent normal tissue (from TCGA), as obtained from GEPIA2. (**C** and **D**) Boxplot showing differential BSG or TMPRSS2 expression between lung cancer and adjacent normal lung (from TCGA), as obtained from GEPIA2.  $|\log_2\text{FC}|$  cutoff, 0.5; p-value cutoff, 0.05; jitter size, 0.4 (red color: cancer; gray color: normal). BSG, basigin; TMPRSS2, transmembrane serine protease 2; TPM, transcripts per million; TCGA, The Cancer Genome Atlas; GEPIA2, Gene Expression Profiling Interactive Analysis 2; FC, fold change; CHOL,

cholangiocarcinoma; COAD, colon adenocarcinoma; ESCA, esophageal carcinoma; LIHC, liver hepatocellular carcinoma; PAAD, pancreatic adenocarcinoma; READ, rectum adenocarcinoma; STAD, stomach adenocarcinoma; LUAD, lung adenocarcinoma; LUSC, lung squamous cell carcinoma. \*, p < 0.05.

**Table S1** Driver gene analysis of ACE2, BSG and TMPRSS2 in aerodigestive cancers through OncoVar.

Tissues	Project	Gene	Consensus_Score	Driver Level	Onco_gene_OncoVar
Bile duct	TCGA-CHOL	ACE2	0	0	N
		BSG	0	0	N
		TMPRSS2	10	2	N
	ICGC-BTCA	ACE2	0	0	N
		BSG	0	0	N
		TMPRSS2	10	2	N
Colon	TCGA-COAD	ACE2	0	0	N
		BSG	0	0	N
		TMPRSS2	10	2	N
	ICGC-ESAD	ACE2	0	0	N
		BSG	0	0	N
		TMPRSS2	10	2	N
Esophagus	TCGA-ESCA	ACE2	0	0	N
		BSG	0	0	N
		TMPRSS2	10	2	N
	ICGC-ESAD	ACE2	0	0	N
		BSG	0	0	N
		TMPRSS2	10	2	N
Liver	TCGA-LIHC	ACE2	0	0	N
		BSG	0	0	N
		TMPRSS2	10	2	N
	ICGC-LICA	ACE2	0	0	N
		BSG	0	0	N
		TMPRSS2	10	2	N
Pancreas	TCGA-PAAD	ACE2	0	0	N
		BSG	0	0	N
		TMPRSS2	10	2	N
	ICGC-PACA	ACE2	0	0	N
		BSG	0	0	N
		TMPRSS2	10	2	N

Rectum	TCGA-READ	ACE2	0	0	N
		BSG	0	0	N
		TMPRSS2	10	2	N
Stomach	TCGA-STAD	ACE2	0	0	N
		BSG	0	0	N
		TMPRSS2	10	2	N
	ICGC-GACA	ACE2	0	0	N
		BSG	0	0	N
		TMPRSS2	10	2	N
Lung	TCGA-LUAD	ACE2	0	0	N
		BSG	0	0	N
		TMPRSS2	10	2	N
	TCGA-LUSC	ACE2	0	0	N
		BSG	0	0	N
		TMPRSS2	10	2	N

Consensus\_Score, a sum of weights for all driver sets; TCGA, The Cancer Genome Atlas; ICGC, International Cancer Genome Consortium; CHOL, cholangiocarcinoma; BTCA, biliary tract cancer; COAD, colon adenocarcinoma; ESCA, esophageal carcinoma; ESAD, esophageal adenocarcinoma; LIHC, liver hepatocellular carcinoma; LICA, liver cancer; PAAD, pancreatic adenocarcinoma; PACA, pancreatic cancer; READ, rectum adenocarcinoma; STAD, stomach adenocarcinoma; GACA, gastric cancer; LUAD, lung adenocarcinoma; LUSC, lung squamous cell carcinoma.