

Table S1 Clinical characteristics of patients in three datasets

Clinical Features	TCGA (n=437)	GSE39582 (n=562)	GSE161158 (n=250)
Event			
0	342	371	145
1	95	191	59
Unknown	/	/	46
Stage			
I	74	32	33
II	167	262	76
III	124	204	82
IV	61	60	59
Unknown	11	4	/
Age, years			
≤65	184	223	126
>65	253	339	124
Unknown	/	/	/
T			
0	/	1	/
1	11	11	/
2	76	44	/
3	299	364	/
4	50	119	/
Unknown	1	23	/
N			
0	257	299	/
1	103	133	/
2	77	98	/
3	/	6	/
Unknown	/	26	/
M			
0	324	479	/
1	61	61	/
Unknown	45	22	/
Gender			
Female	201	253	/
Male	236	309	/

Table S2 Full names of cell types in xCell analysis

Cell types	Full name	Group	Subgroup	Parent/Child
Monocytes	Monocytes	Non-lymphocytes	Myeloid	Parent
CD8+ T-cells	CD8+ T-cells	Lymphocytes	Lymphoid	Parent
NK cells	NK cells	Lymphocytes	Lymphoid	Parent
Macrophages	Macrophages	Non-lymphocytes	Myeloid	Parent
Endothelial cells	Endothelial cells	Non-Hematopoietic	Stroma	Parent
DC	Dendritic cells	Non-lymphocytes	Myeloid	Parent
Neutrophils	Neutrophils	Non-lymphocytes	Myeloid	Parent
Erythrocytes	Erythrocytes	HSC	HSC	HSC
CD4+ naive T-cells	CD4+ naive T-cells	Lymphocytes	Lymphoid	CD4+ T-cells
MPP	Multipotent rogenitors	HSC	HSC	Parent
Fibroblasts	Fibroblasts	Non-Hematopoietic	Stroma	Parent
Adipocytes	Adipocytes	Non-Hematopoietic	Stroma	Parent
B-cells	B-cells	Lymphocytes	Lymphoid	Parent
CD4+ T-cells	CD4+ T-cells	Lymphocytes	Lymphoid	Parent
CD8+ Tem	CD8+ effector memory T-cells	Lymphocytes	Lymphoid	CD8+ T-cells
CMP	Common myeloid progenitors	HSC	HSC	HSC
GMP	Granulocyte-macrophage progenitors	HSC	HSC	HSC
MEP	Megakaryocyte-erythroid progenitors	HSC	HSC	HSC
Tregs	Regulatory T-cells	Lymphocytes	Lymphoid	CD4+ T-cells
HSC	Hematopoietic stem cells	HSC	HSC	Parent
Plasma cells	Plasma cells	Lymphocytes	Lymphoid	B-cells
CD4+ Tcm	CD4+ central memory T-cells	Lymphocytes	Lymphoid	CD4+ T-cells
mv Endothelial cells	Microvascular endothelial cells	Non-Hematopoietic	Stroma	Endothelial cells
CD4+ Tem	CD4+ effector memory T-cells	Lymphocytes	Lymphoid	CD4+ T-cells
Memory B-cells	Memory B-cells	Lymphocytes	Lymphoid	B-cells
CD8+ Tcm	CD8+ central memory T-cells	Lymphocytes	Lymphoid	CD8+ T-cells
naive B-cells	naive B-cells	Lymphocytes	Lymphoid	B-cells
Eosinophils	Eosinophils	Non-lymphocytes	Myeloid	Parent
Macrophages M1	Macrophages M1	Non-lymphocytes	Myeloid	Macrophages
ly Endothelial cells	Lymphatic endothelial cells	Non-Hematopoietic	Stroma	Endothelial cells
MSC	Mesenchymal stem cells	Non-Hematopoietic	Stroma	Parent
Macrophages M2	Macrophages M2	Non-lymphocytes	Myeloid	Macrophages
aDC	Activated dendritic cells	Non-lymphocytes	Myeloid	DC
Preadipocytes	Preadipocytes	Non-Hematopoietic	Stroma	Adipocytes

Table S2 (*continued*)

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Cell types	Full name	Group	Subgroup	Parent/Child
CD4+ memory T-cells	CD4+ memory T-cells	Lymphocytes	Lymphoid	CD4+ memory T-cells
Megakaryocytes	Megakaryocytes	HSC	HSC	HSC
pro B-cells	pro B-cells	Lymphocytes	Lymphoid	B-cells
Basophils	Basophils	Non-lymphocytes	Myeloid	Parent
cDC	Conventional dendritic cells	Non-lymphocytes	Myeloid	DC
Astrocytes	Astrocytes	Non-Hematopoietic	Epithelial	Parent
pDC	Plasmacytoid dendritic cells	Non-lymphocytes	Myeloid	DC
Pericytes	Pericytes	Non-Hematopoietic	Stroma	Fibroblasts
Neurons	Neurons	Non-Hematopoietic	Epithelial	Astrocytes
Class-switched memory B-cells	Class-switched memory B-cells	Lymphocytes	Lymphoid	B-cells
Mesangial cells	Mesangial cells	Non-Hematopoietic	Stroma	Fibroblasts
iDC	Immature dendritic cells	Non-lymphocytes	Myeloid	DC
Mast cells	Mast cells	Non-lymphocytes	Myeloid	Parent
Th2 cells	Type 2 T-helper cells	Lymphocytes	Lymphoid	CD4+ T-cells
CLP	Common lymphoid progenitors	HSC	HSC	HSC
Platelets	Platelets	Non-lymphocytes	HSC	Parent
Th1 cells	Type 1 T-helper cells	Lymphocytes	Lymphoid	CD4+ T-cells
CD8+ naive T-cells	CD8+ naive T-cells	Lymphocytes	Lymphoid	CD8+ T-cells
NKT	Natural killer T-cells	Lymphocytes	Lymphoid	Parent
Tgd cells	Gamma delta T-cells	Lymphocytes	Lymphoid	CD4+ T-cells

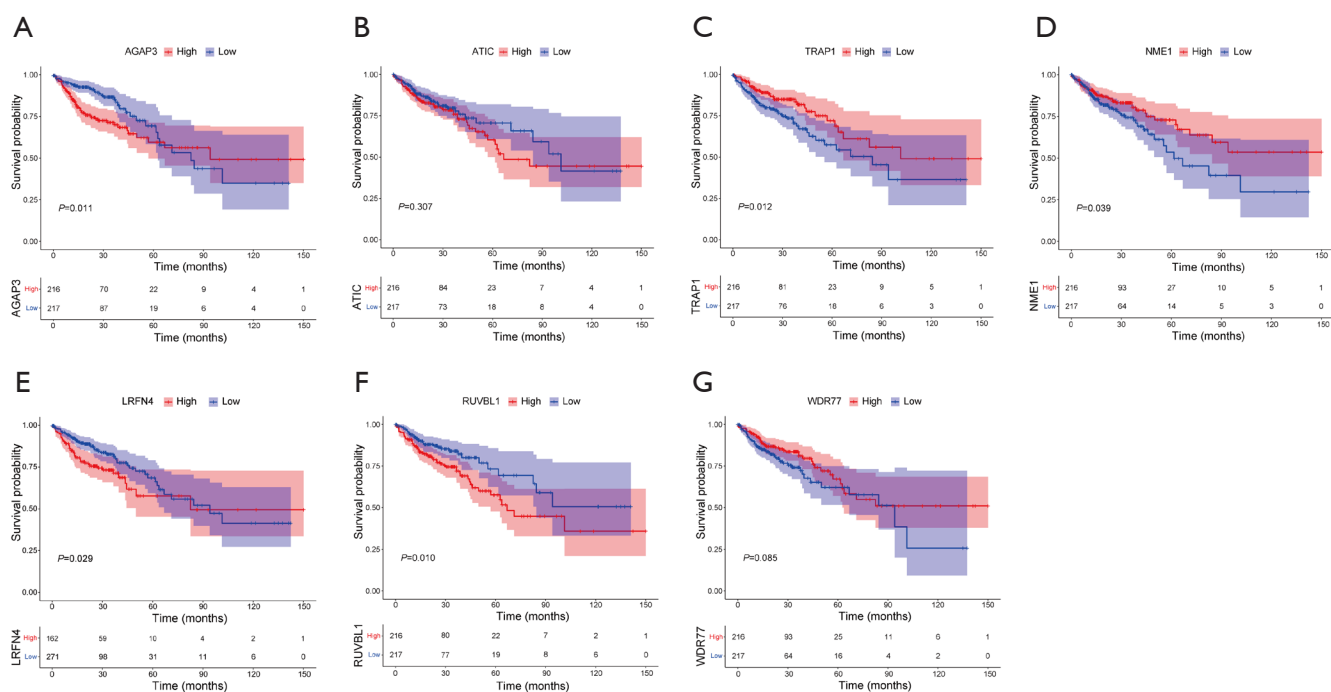


Figure S1 Prognosis analysis between high and low expression levels of NSGs in colorectal cancer patients from the TCGA-COAD dataset. NSGs, neuronal synapse genes; TCGA, The Cancer Genome Atlas; COAD, colon adenocarcinoma.