

**Supplementary Table S1.** Gene names and underlying explanations.

Gene name	HGNC* approved full name	Previous name**
<i>ABL</i>	ABL proto-oncogene 1, non-receptor tyrosine kinase	v-abl Abelson murine leukemia viral oncogene homolog 1
<i>AKT1</i>	AKT serine/threonine kinase 1	v-akt murine thymoma viral oncogene homolog 1
<i>ALK</i>	ALK receptor tyrosine kinase	Anaplastic lymphoma kinase (Ki-1)
<i>BCR</i>	BCR activator of RhoGEF and GTPase	Breakpoint cluster region
<i>BRAF</i>	ABL proto-oncogene 1, non-receptor tyrosine kinase	v-abl Abelson murine leukemia viral oncogene homolog 1
<i>BRCA1</i>	BRCA1 DNA repair associated	Breast cancer 1, early onset
<i>BRCA2</i>	BRCA2 DNA repair associated	Breast cancer 2, early onset
<i>CCND1</i>	Cyclin D1	Cyclin D1 (PRAD1: parathyroid adenomatosis 1)
<i>CHEK2</i>	Checkpoint kinase 2	CHK2 (checkpoint, S.pombe) homolog
<i>EGFR</i>	Epidermal growth factor receptor	Epidermal growth factor receptor (avian erythroblastic leukemia viral (v-erb-b) oncogene homolog
<i>FGFR1</i>	Fibroblast growth factor receptor 1	fms-related tyrosine kinase 2
<i>FGFR2</i>	Fibroblast growth factor receptor 2	Bacteria-expressed kinase
<i>FGFR3</i>	Fibroblast growth factor receptor 3	Achondroplasia, thanatophoric dwarfism
<i>HER2</i>	erb-b2 receptor tyrosine kinase 2	v-erb-b2 avian erythroblastic leukemia viral oncogene homolog 2 (neuro/glioblastoma derived oncogene homolog)
<i>KRAS</i>	KRAS proto-oncogene, GTPase	v-Ki-ras2 Kirsten rat sarcoma 2 viral oncogene homolog
<i>MAPK1</i>	Mitogen-activated protein kinase 1	-
<i>MAP2K1 (MEK)</i>	Mitogen-activated protein kinase kinase 1	MAPK/ERK kinase 1
<i>MET</i>	MET proto-oncogene, receptor tyrosine kinase	met proto-oncogene
<i>MLH1</i>	mutL homolog 1	mutL (E. coli) homolog 1 (colon cancer, nonpolyposis type 2)
<i>MSH2</i>	mutS homolog 2	mutS (E. coli) homolog 2 (colon cancer, nonpolyposis type 1)
<i>MSH6</i>	mutS homolog 6	mutS (E. coli) homolog 6
<i>NRAS</i>	NRAS proto-oncogene, GTPase	neuroblastoma RAS viral (v-ras) oncogene homolog
<i>NTRK1</i>	Neurotrophic receptor tyrosine kinase 1	Neurotrophic tyrosine kinase, receptor, type 1
<i>NTRK2</i>	Neurotrophic receptor tyrosine kinase 2	Neurotrophic tyrosine kinase, receptor, type 2
<i>NTRK3</i>	Neurotrophic receptor tyrosine kinase 3	Neurotrophic tyrosine kinase, receptor, type 3
<i>PALB2</i>	Partner and localizer of BRCA2	-
<i>PDCD1 (PD1)</i>	Programmed cell death 1	Systemic lupus erythematosus susceptibility 2
<i>CD274 (PD-L1)</i>	CD274 molecule	Programmed cell death 1 ligand 1
<i>PIK3CA</i>	Phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha	Phosphoinositide-3-kinase, catalytic, alpha polypeptide

<i>PMS2</i>	PMS1 homolog 2, mismatch repair system component	Postmeiotic segregation increased ( <i>S. cerevisiae</i> ) 2
<i>RAD51C</i>	RAD51 paralog C	RAD51 ( <i>S. cerevisiae</i> ) homolog C
<i>RET</i>	ret proto-oncogene	Multiple endocrine neoplasia and medullary thyroid carcinoma 1
<i>ROS1</i>	ROS proto-oncogene 1, receptor tyrosine kinase	v-ros avian UR2 sarcoma virus oncogene homolog 1
<i>TP53</i>	Tumor protein p53	-

\* HUGO Gene Nomenclature Committee at the University of Cambridge

\*\* Gene names often reflect rather historical context of their discovery than actual gene function or its medical significance