



Supplementary Figure 1. Mutational burden and copy number alterations in RCC cell lines and tumors. Comparison of mutational burden and copy number alterations in TCGA clear cell renal tumors to CCLP and CCLE kidney cancer cell lines – SNU349 is a clear outlier based on mutation count.

Supplementary Table 2a. Chromosome 3p loss estimates for CCLF and CCLP cell lines (based on log2 ratios)

Cell Line	Chromosome 3p loss (based on log2 ratio \leq -0.2)
769-P_CCLP	0.92
786-0_CCLP	0.00
A498_CCLP	1.00
A704_CCLP	0.94
ACHN_CCLP	1.00
BB65-RCC_CCLP	0.99
BFTC-909_CCLP	0.03
CAKI-1_CCLP	0.66
CAL-54_CCLP	1.00
HA7-RCC_CCLP	0.80
KMRC-1_CCLP	0.33
KMRC-20_CCLP	0.99
LB1047-RCC_CCLP	1.00
LB2241-RCC_CCLP	0.91
LB996-RCC_CCLP	1.00
NCC010_CCLP	1.00
NCC021_CCLP	1.00
OS-RC-2_CCLP	1.00
RCC-AB_CCLP	1.00
RCC-ER_CCLP	1.00
RCC-FG2_CCLP	1.00
RCC-JF_CCLP	0.80
RCC-JW_CCLP	1.00
RCC-MF_CCLP	1.00
RCC10RGB_CCLP	0.97
RXF393_CCLP	0.99
SK-NEP-1_CCLP	1.00
SN12C_CCLP	0.01
TK10_CCLP	1.00
U031_CCLP	0.00
VMRC-RCW_CCLP	0.01
VMRC-RCZ_CCLP	1.00
769P_CCLE	0.78
786O_CCLE	0.97
A498_CCLE	1.00
A704_CCLE	0.92
ACHN_CCLE	0.56
BFTC909_CCLE	0.07
CAKI1_CCLE	1.00
CAKI2_CCLE	1.00
CAL54_CCLE	0.70

HEKTE_CCLE	0.00
HK2_CCLE	0.00
KMRC1_CCLE	1.00
KMRC20_CCLE	1.00
KMRC2_CCLE	0.82
KMRC3_CCLE	1.00
OSRC2_CCLE	1.00
RCC10RGB_CCLE	0.97
RCC4_CCLE	1.00
SLR20_CCLE	0.00
SLR21_CCLE	0.00
SLR23_CCLE	1.00
SLR25_CCLE	0.67
SLR26_CCLE	0.82
SNU1272_CCLE	1.00
SNU349_CCLE	1.00
TUHR10TKB_CCLE	1.00
TUHR14TKB_CCLE	0.63
TUHR4TKB_CCLE	0.58
UMRC2_CCLE	0.67
UMRC6_CCLE	1.00
UOK101_CCLE	0.97
VMRCRCW_CCLE	0.00
VMRCRCZ_CCLE	1.00

Supplementary Table 2b. Chromosome 3p loss estimates for CCLP cell lines (based on minor allele copy number = 0).

CCLP Cell Line	Chromosome 3p loss (minor allele copy number = 0)
769-P	0.92
786-0	1.00
A498	1.00
A704	0.94
ACHN	1.00
BB65-RCC	1.00
BFTC-909	0.08
CAKI-1	0.09
CAL-54	1.00
HA7-RCC	0.81
KMRC-1	1.00
KMRC-20	0.99
LB1047-RCC	1.00
LB2241-RCC	0.92
LB996-RCC	1.00
NCC010	1.00
NCC021	1.00
OS-RC-2	1.00
RCC-AB	1.00
RCC-ER	1.00
RCC-FG2	1.00
RCC-JF	0.82
RCC-JW	1.00
RCC-MF	1.00
RCC10RGB	0.98
RXF393	1.00
SK-NEP-1	0.05
SN12C	0.01
TK10	1.00
U031	0.04
VMRC-RCW	0.99
VMRC-RCZ	1.00

Supplementary Table 3. Mutations in key kidney cancer genes in kidney cancer cell lines in CCLE and CCLP.

Tier 1 (Green): Identical mutations in given gene,

Tier 2 (Blue): Non-identical mutations reported by CCLE and CCLP,

Tier 3 (Red): Discrepancy in mutational status – only one of the databases reports a mutation.

Cell Line	ARID1A	BAP1	FH	FLCN	MET	MLL3	MTOR	PIK3CA	PTEN	SMARCB1	TP53	TSC2	VHL	KDM5C	CDKN1A	NF2	NFE2L2	PBRM1	SETD2	TSC1
769.P_CCLP	-	p.Y33D	-	-	-	-	-	-	-	-	-	p.I606V	p.I180N	-	-	-	-	-	-	-
769P_CCLE	NA	p.Y33D	-	-	-	-	-	-	-	-	-	p.I606V	p.I180N	NA	-	-	NA	NA	NA	-
786.0_CCLP	-	-	-	-	-	-	-	-	p.Q149*	-	p.?_p.P278A	-	p.G104fs*55	-	-	-	-	-	-	-
786O_CCLE	NA	-	-	-	-	p.A3902G	-	-	p.Q149*	-	p.R248W	p.D1126V	-	NA	-	-	NA	NA	NA	-
A498_CCLP	-	-	-	-	-	p.G2986D	-	-	-	-	-	-	p.G144fs*14	-	-	-	-	-	p.V2033fs*9	-
A498_CCLE	NA	-	-	-	-	p.G2986D	-	-	-	-	-	-	p.V142fs	NA	-	-	NA	NA	NA	-
A704_CCLP	-	-	-	-	-	p.P3633P	-	-	-	-	R_p.Y126D_p	-	p.I180N	-	-	-	-	p.E572fs*16	-	-
A704_CCLE	NA	-	-	-	-	p.H475del	-	-	-	-	-	-	p.I180N	NA	-	-	NA	NA	NA	-
ACHN_CCLP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	p.R57*	-	p.R1052*	-	-
ACHN_CCLE	NA	-	-	-	-	-	-	-	-	-	-	-	-	NA	-	-	NA	NA	NA	-
BB65.RCC_CCLP	-	-	-	-	-	-	-	-	-	-	p.R248W	-	p.P192fs*10	-	-	-	-	-	-	-
BFTC.909_CCLP	-	-	-	-	-	-	-	p.E545K	-	-	E224*_p.S24	-	-	-	-	-	-	p.G1177S	-	-
BFTC909_CCLE	NA	-	-	-	-	-	-	p.E545K	-	-	S241C_p.E22	-	-	NA	-	-	-	NA	NA	-
CAKI.1_CCLP	-	-	-	-	p.V1238I	-	-	-	-	-	-	-	-	-	-	-	-	-	p.?	-
CAKI1_CCLE	NA	-	-	-	p.V1238I	p.G892E	-	-	-	-	-	-	-	NA	-	-	NA	NA	NA	-
CAKI2_CCLE	NA	-	-	-	-	-	-	-	-	-	-	-	p.R177*	NA	-	-	NA	NA	NA	-
CAL.54_CCLP	-	-	p.I120V	-	-	p.C3460F	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CAL54_CCLE	NA	-	p.I120V	-	-	p.C3460F	-	-	-	-	-	-	-	NA	-	-	-	NA	NA	-
HA7.RCC_CCLP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	p.D27A	-	-	-
KMRC1_CCLE	NA	-	-	-	-	-	-	-	p.?	p.P156S	-	-	-	NA	-	-	NA	NA	NA	-
KMRC1_CCLP	-	-	-	-	-	-	-	-	p.?	p.P165S	-	-	-	-	-	-	-	p.W1183*	-	-
KMRC20_CCLE	NA	p.E31K	-	-	-	-	p.W1304R	-	-	-	p.E224_splice	-	-	NA	-	-	NA	NA	NA	-
KMRC20_CCLP	-	-	-	-	-	-	p.W1304R	-	-	-	p.?	-	p.S168fs*5	-	-	-	-	p.N453Y	-	-
KMRC2_CCLE	NA	-	-	-	-	-	p.Y1974H	-	-	-	-	-	-	NA	-	-	NA	NA	NA	-
KMRC3_CCLE	NA	-	-	-	-	-	-	-	-	-	-	-	-	NA	-	-	NA	NA	NA	-
LB1047.RCC_CCLP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	p.?	-	p.R1245G	-	-
LB2241.RCC_CCLP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	p.?	-	-	-	-
LB996.RCC_CCLP	-	-	-	-	-	p.S3080P	-	-	-	-	-	-	-	-	-	p.A105fs*20	-	-	p.G1141*	-
NCC010_CCLP	-	-	-	-	-	-	p.L2209V	-	-	-	-	p.D559V	p.V130F	-	-	-	-	p.K1269*	-	-
NCC021_CCLP	-	-	-	-	-	-	-	-	-	-	p.?	-	-	-	-	-	-	-	-	-
OS.RC.2_CCLP	-	-	-	-	-	-	-	-	p.?	-	-	-	-	-	-	-	-	p.I233T	-	-
OSRC2_CCLE	NA	-	-	-	-	p.Y816fs	-	-	p.N212_splice	-	-	-	-	NA	-	-	NA	NA	NA	-
RCC.AB_CCLP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	p.K294*	-	-	p.R1629fs*15	-
RCC.ER_CCLP	-	-	-	-	-	-	p.P770A	-	-	-	-	-	-	-	-	-	-	-	-	-
RCC.FG2_CCLP	-	-	-	-	-	fs*73_p.P15	-	-	-	-	p.R248W	-	p.D143fs*16	-	-	-	p.G31A	p.D251fs*31	p.L152*	-
RCC.JF_CCLP	-	-	-	-	-	-	-	-	-	-	R213Q_p.R21	p.E75K_p.E75	fs*11_p.F14	-	-	-	-	Q477*_p.Q47	-	-
RCC.JW_CCLP	-	-	-	-	-	p.P2326Q	p.L2138F	-	-	-	-	-	p.H115Y	-	-	-	-	-	p.A879A	-
RCC.MF_CCLP	-	-	-	-	-	p.G2474E	-	-	-	-	-	-	-	-	p.P79H	-	-	p.N528fs*41	257_H1259del	p.Y761*
RCC10RGB_CCLP	-	p.?-p.?	-	-	-	-	-	-	p.R377H	-	-	-	-	-	-	-	-	-	-	-
RCC10RGB_CCLE	NA	-	-	-	-	-	-	-	-	-	-	-	-	NA	-	-	NA	NA	NA	-
RXF393_CCLP	-	-	-	-	-	-	-	-	-	-	p.R175H	-	-	-	-	-	-	-	-	-
SK.NEP.1_CCLP	-	-	-	-	-	-	-	-	-	-	p.G245S	-	-	-	-	-	-	-	-	-
SN12C_CCLP	-	p.F168F	-	-	-	-	-	-	-	-	p.E336*	-	-	-	-	p.?	-	-	-	-
SNU1272_CCLE	NA	-	-	-	-	-	-	-	-	-	-	-	p.H115Q	NA	-	-	NA	NA	NA	-
SNU349_CCLE	NA	-	-	-	-	p.T107A	p.E1799K	-	-	-	-	-	-	NA	-	-	NA	NA	NA	-
SW156_CCLP	-	-	-	-	-	-	-	-	p.T321fs*23	-	-	-	-	-	-	-	-	Q489K_p.D7	-	-
TK10_CCLP	-	-	-	-	-	p.S388P_p.D48	-	p.L719V	-	-	p.L264R	-	-	-	-	-	-	-	-	-
TUHR10TKB_CCLE	NA	-	-	-	-	-	-	p.V2006L	-	-	-	-	p.E186fs	NA	-	-	NA	NA	NA	-
TUHR14TKB_CCLE	NA	p.S287*	-	-	-	-	-	-	-	-	-	-	p.L153P	NA	-	-	NA	NA	NA	-
TUHR4TKB_CCLE	NA	-	-	-	-	-	-	-	-	-	-	-	-	NA	-	-	NA	NA	NA	-
U031_CCLP	-	-	-	-	-	-	p.L2209L	-	-	-	-	-	-	-	-	-	-	-	-	-
VMRC.RCW_CCLP	-	p.K580fs*37	-	-	-	-	-	-	-	-	p.?	-	p.R161fs*12	-	-	-	-	-	-	-
VMRCRCW_CCLE	NA	p.K580fs	-	-	-	-	-	-	-	-	-	-	p.E160fs	NA	-	-	NA	NA	NA	-
VMRCRCZ_CCLE	NA	-	-	-	p.E168D	-	-	-	-	-	-	-	p.V155_splice	NA	-	-	NA	NA	NA	-
VMRC.RCZ_CCLP	-	-	-	-	-	-	-	-	-	-	p.D48fs*74	-	p.?	-	-	-	-	-	-	-