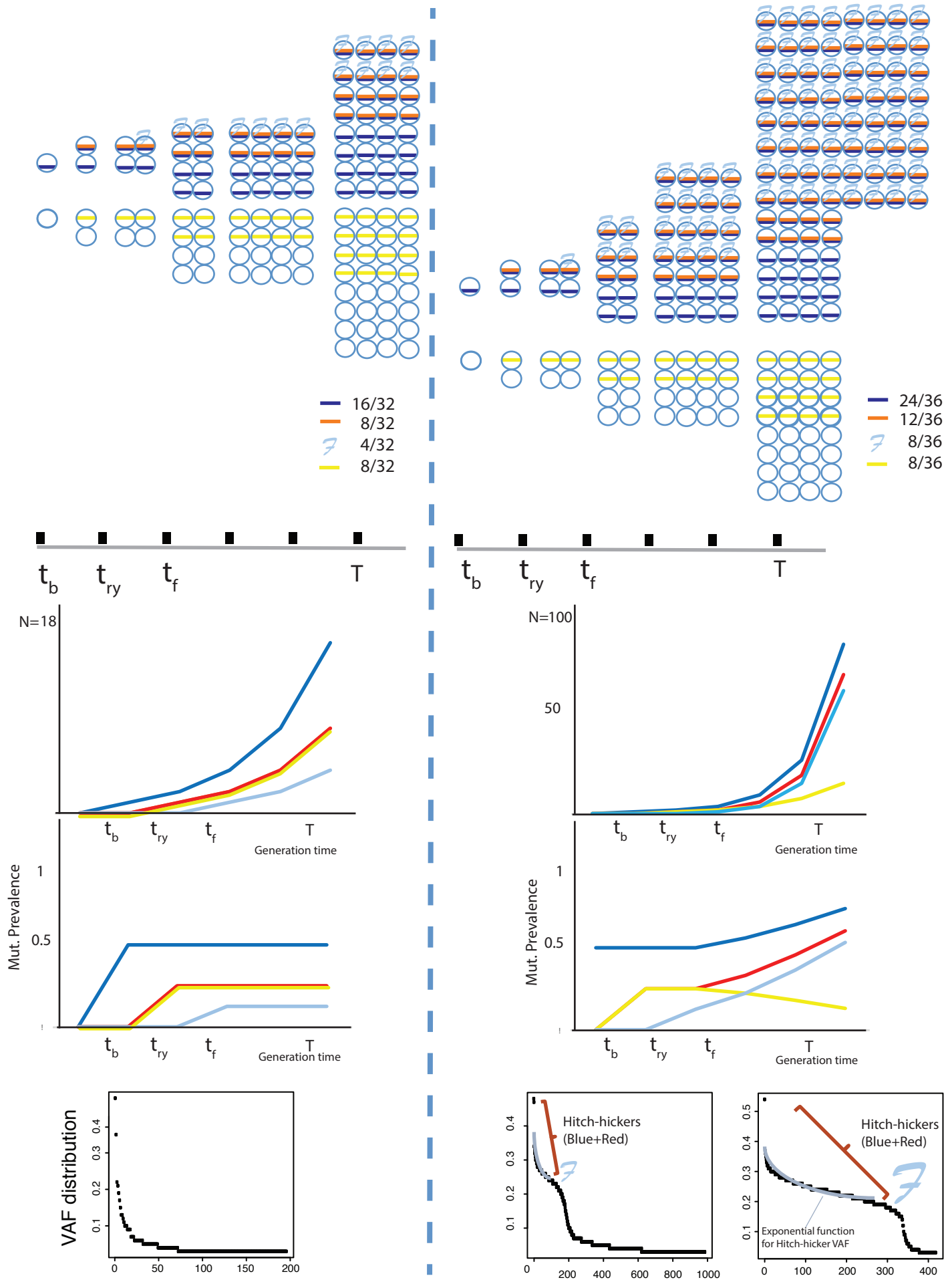
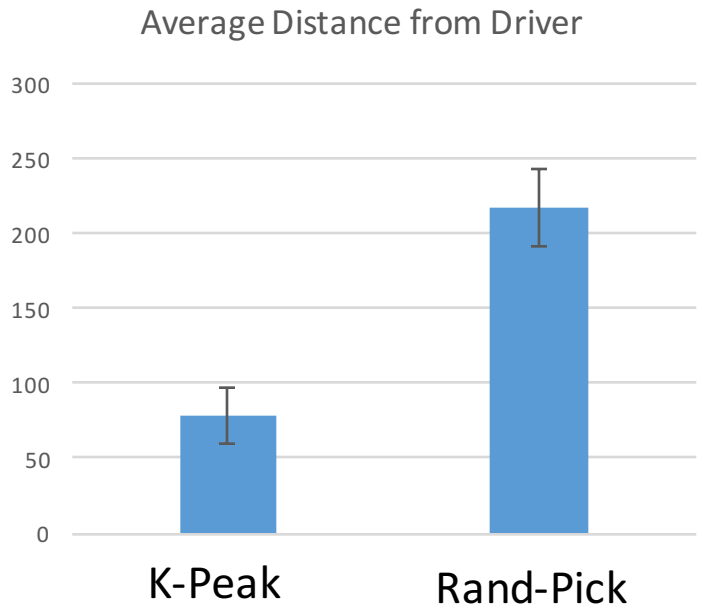
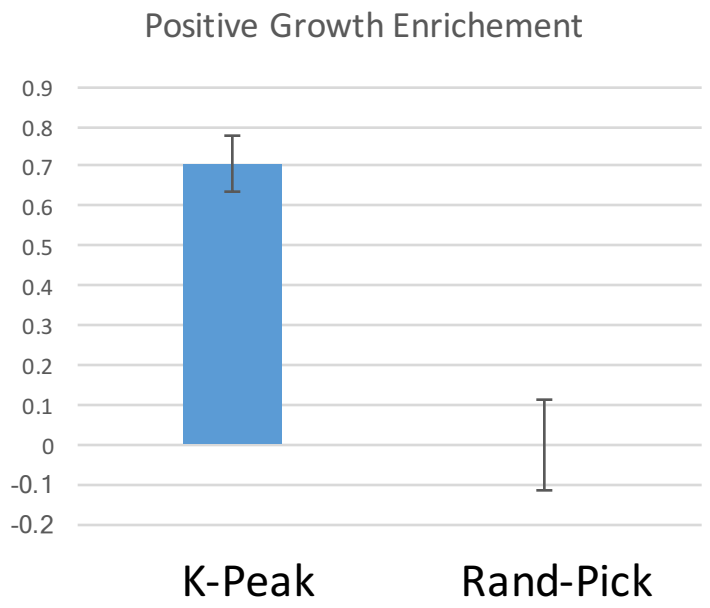
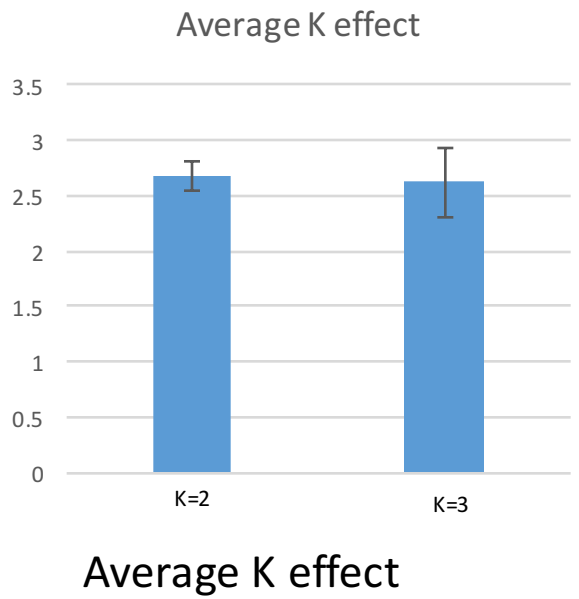
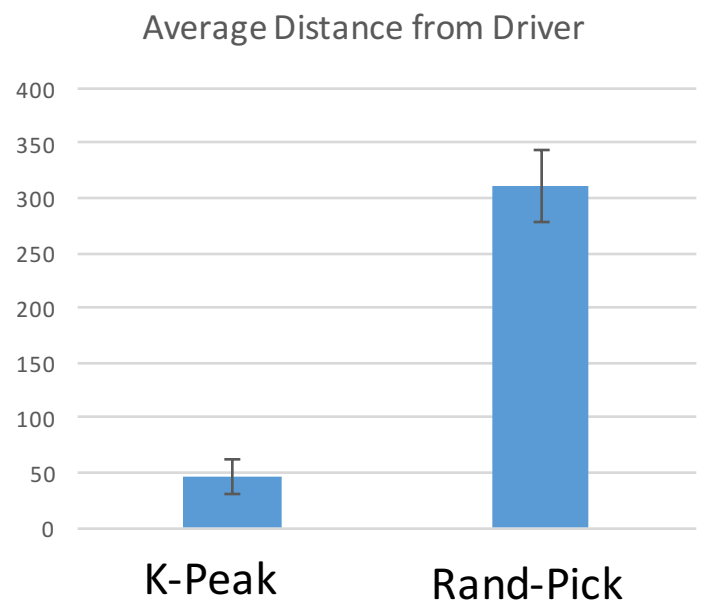

16/32
8/32
4/32
8/32
24/36
12/36
8/36
8/36
t_b
t_ry
t_f
T
N=18
N=100
50
Generation time
Mut. Prevalence
1
0.5
VAF distribution
Hitch-hickers
(Blue+Red)
Exponential function
for Hitch-hicker VAF

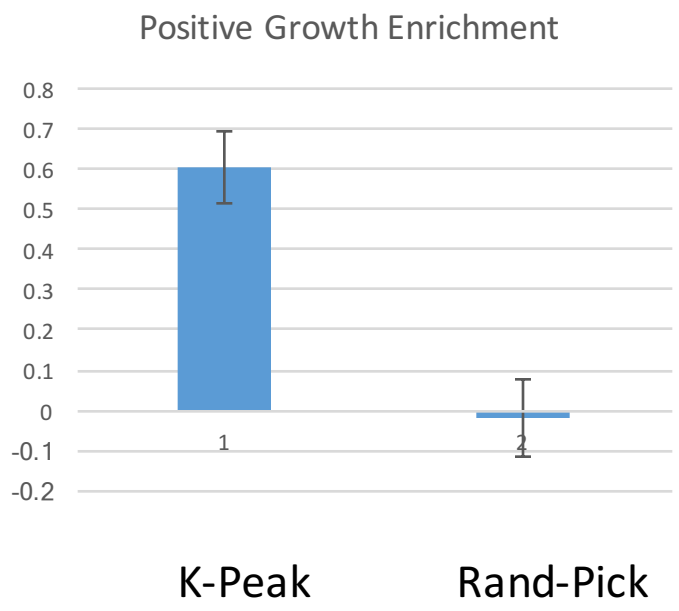
Simulations Under Logarithmic Growth, K=3



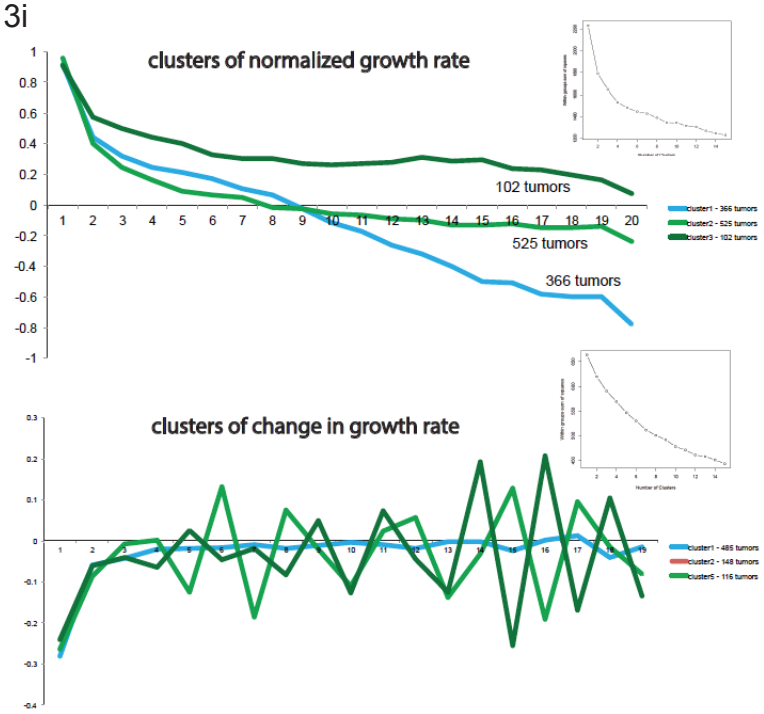




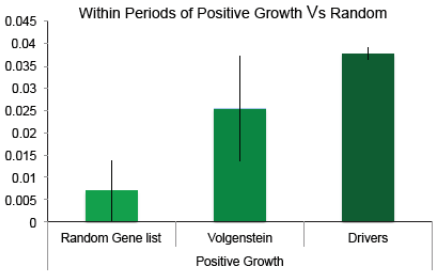


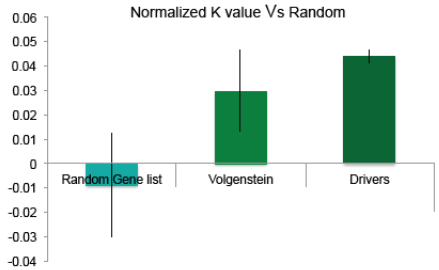


3i

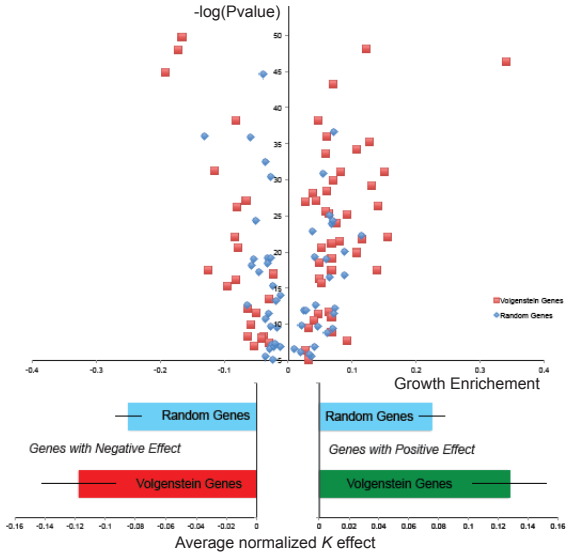


3ii



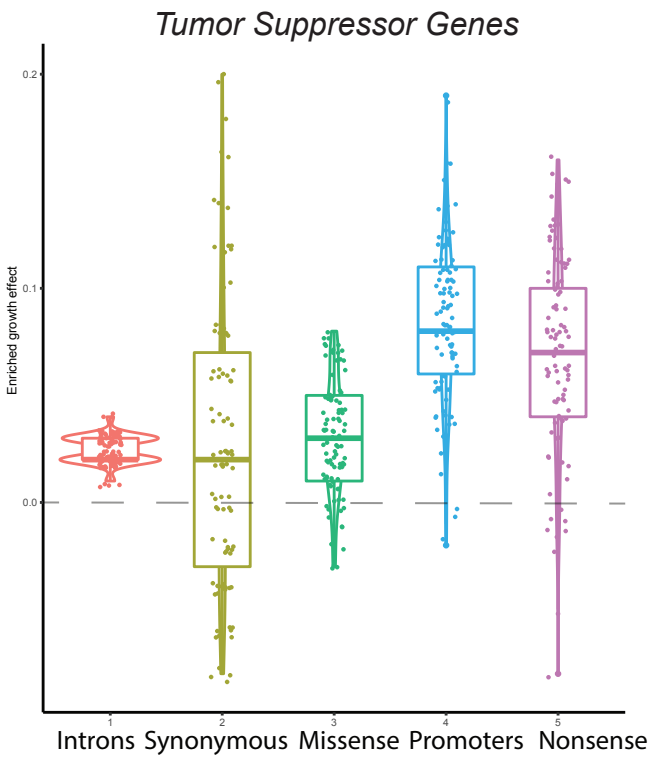


3iii

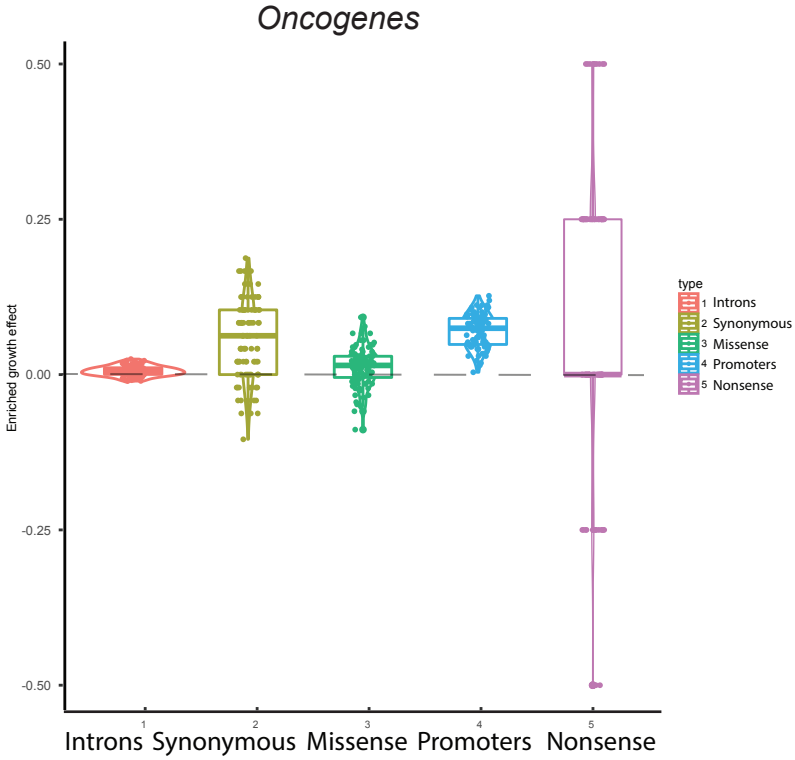


3iv

4i


Tumor Suppressor Genes
Enriched growth effect
0.2
0.1
0.0
1
2
3
4
5
Introns
Synonymous
Missense
Promoters
Nonsense

4ii


Oncogenes
Enriched growth effect
0.50
0.25
0.00
-0.25
-0.50
1
2
3
4
5
Introns
Synonymous
Missense
Promoters
Nonsense
type
1 Introns
2 Synonymous
3 Missense
4 Promoters
5 Nonsense

4iii

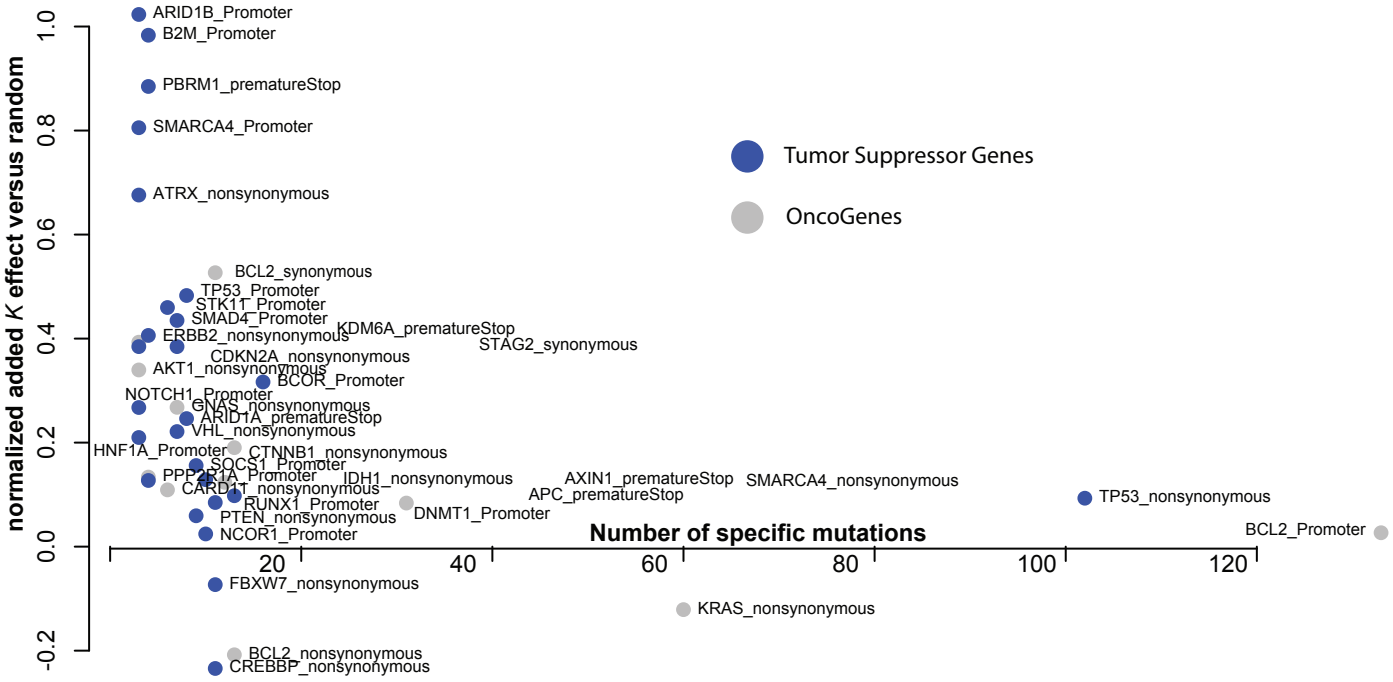
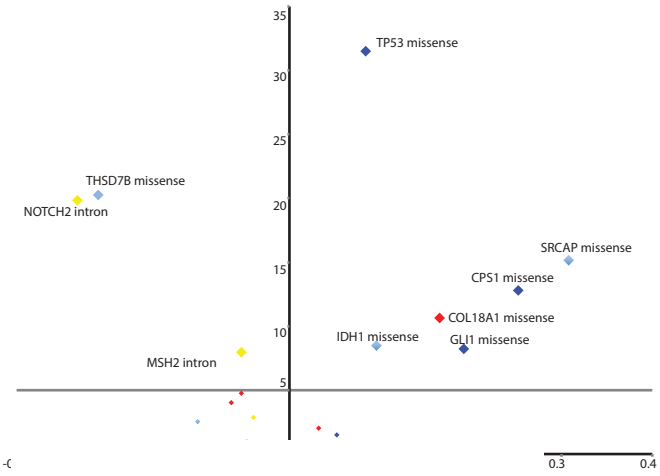
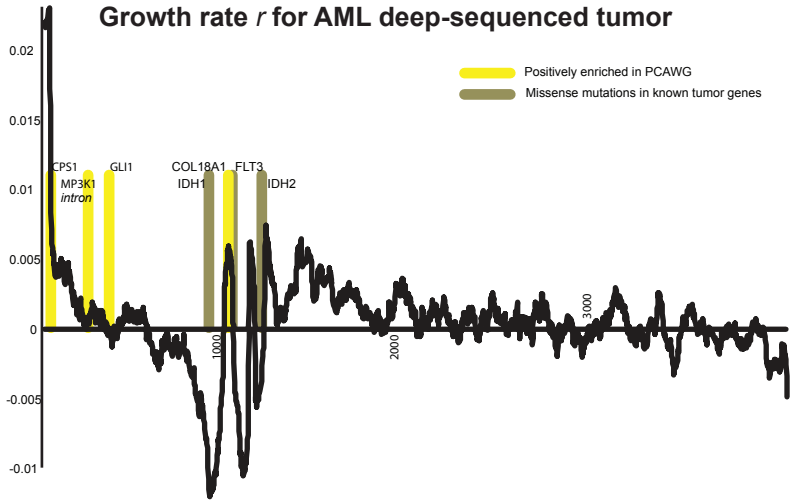

normalized added K effect versus random
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
Number of specific mutations
20
40
60
80
100
120
Tumor Suppressor Genes
OncoGenes
ARID1B_Promoter
B2M_Promoter
PBRM1_prematureStop
SMARCA4_Promoter
ATRX_nonsynonymous
BCL2_synonymous
TP53_Promoter
STK11_Promoter
SMAD4_Promoter
ERBB2_nonsynonymous
KDM6A_prematureStop
STAG2_synonymous
CDKN2A_nonsynonymous
AKT1_nonsynonymous
BCOR_Promoter
NOTCH1_Promoter
GNAS_nonsynonymous
ARID1A_prematureStop
VHL_nonsynonymous
HNF1A_Promoter
CTNNB1_nonsynonymous
SOCS1_Promoter
PPP2R1A_Promoter
IDH1_nonsynonymous
AXIN1_prematureStop
SMARCA4_nonsynonymous
CARD11_nonsynonymous
APC_prematureStop
TP53_nonsynonymous
RUNX1_Promoter
DNMT1_Promoter
PTEN_nonsynonymous
NCOR1_Promoter
BCL2_Promoter
FBXW7_nonsynonymous
KRAS_nonsynonymous
BCL2_nonsynonymous
CREBBP_nonsynonymous

Figure 5

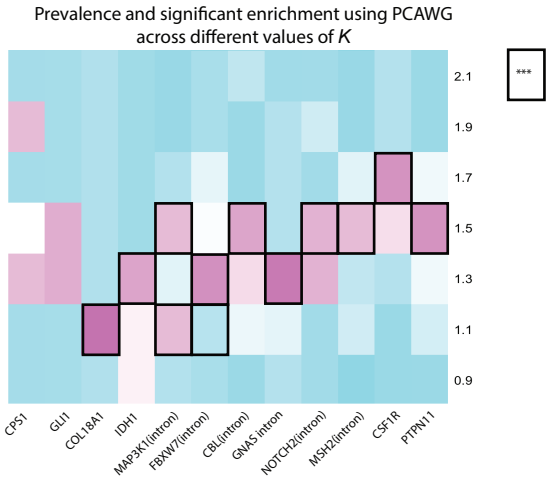
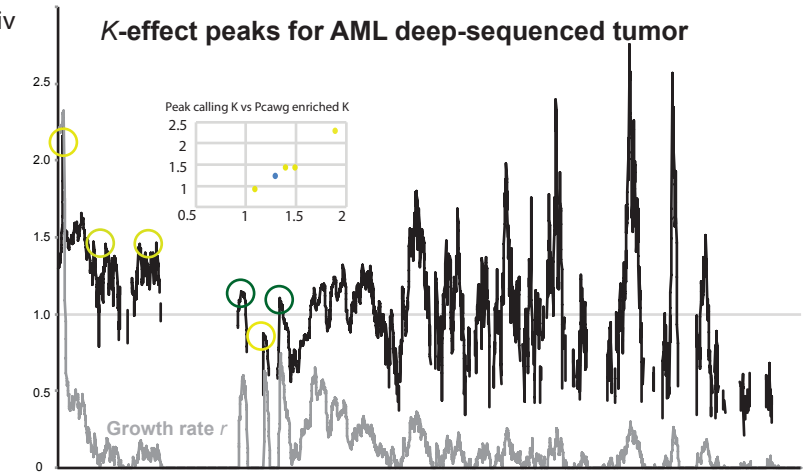
5i



5ii



5iii



5iv