

Supplementary Materials

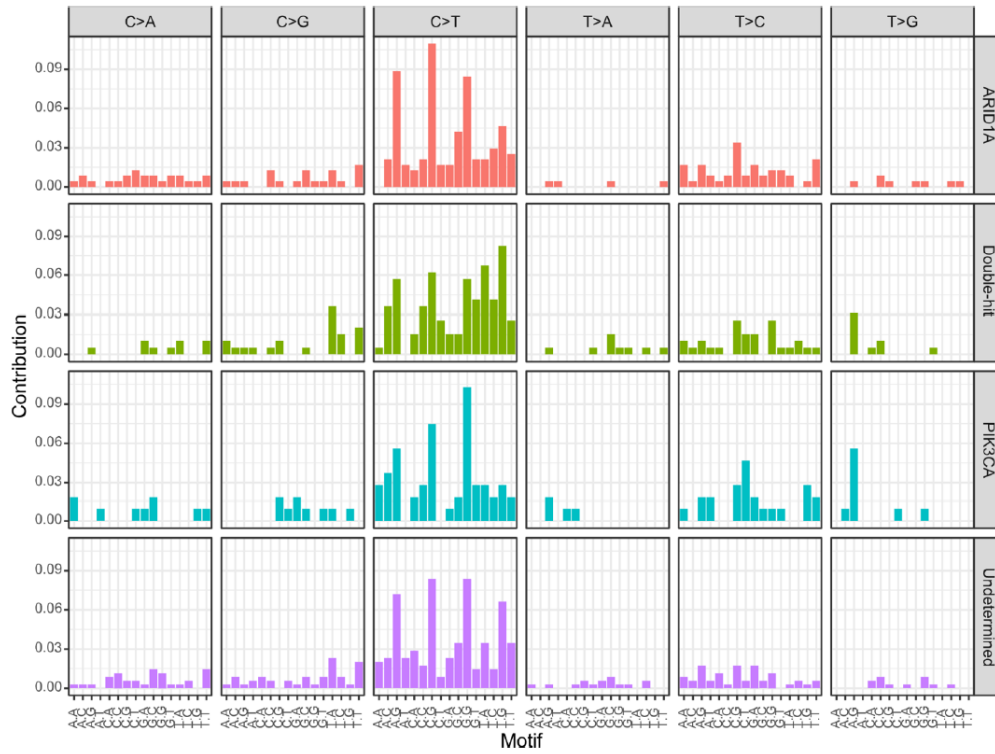


Figure S1. Mutational signatures among the four molecular subgroups.

Table S1. Significant interaction events (co-occurrence or mutually exclusive) among genes.

Gene A	Gene B	P-value	Odds ratio	Type of event	Event ratio
<i>ADAMTS20</i>	<i>PDE4DIP</i>	0.0025	20.46	Co_Occurence	4/6
<i>SYNE1</i>	<i>PIK3CA</i>	0.0034	0.00	Mutually_Exclusive	0/33
<i>KMT2C</i>	<i>MYH9</i>	0.0044	16.34	Co_Occurence	4/7
<i>ARID1A</i>	<i>PKHD1</i>	0.0052	0.00	Mutually_Exclusive	0/34
<i>ATM</i>	<i>KMT2C</i>	0.0094	10.88	Co_Occurence	4/8
<i>TAF1L</i>	<i>KMT2C</i>	0.0094	10.88	Co_Occurence	4/8
<i>CYP2D6</i>	<i>PBRM1</i>	0.0112	15.84	Co_Occurence	3/6
<i>TRRAP</i>	<i>RECQL4</i>	0.0126	14.14	Co_Occurence	3/6
<i>EP400</i>	<i>SYNE1</i>	0.0149	8.96	Co_Occurence	4/9
<i>MYH9</i>	<i>TAF1L</i>	0.0212	10.60	Co_Occurence	3/7
<i>KMT2D</i>	<i>PIK3CA</i>	0.0244	6.54	Co_Occurence	7/18
<i>TRRAP</i>	<i>PDE4DIP</i>	0.0323	8.42	Co_Occurence	3/8
<i>PPP2R1A</i>	<i>PKHD1</i>	0.0323	8.42	Co_Occurence	3/8
<i>ATM</i>	<i>PIK3CA</i>	0.0338	0.00	Mutually_Exclusive	0/30
<i>PIK3CG</i>	<i>CSMD3</i>	0.0463	6.93	Co_Occurence	3/9
<i>PRKDC</i>	<i>RNF213</i>	0.0463	6.93	Co_Occurence	3/9

Table S2. Adjusted p-values from multiple comparisons between nucleotide changes among the molecular subgroups.

		ARID1A	Double-hit	PIK3CA	Undetermined
		adjusted p-value			
CA changes	CA/CG	0.93	1	0.72	0.84
	CA/CT	0.002	0.012	0.01	3.00E-05
	CA/TA	0.93	1	0.72	0.84
	CA/TC	0.47	1	0.72	0.14
	CA/TG	0.34	1	0.49	0.84
CG changes	CG/CA	1	1	1	0.56
	CG/CT	0.0022	0.0076	0.016	0.00019
	CG/TA	1	1	1	0.17
	CG/TC	0.46	1	0.78	0.56
	CG/TG	0.46	0.95	1	0.26
CT changes	CT/CA	0.002	0.003	0.0083	3.00E-05
	CT/CG	0.002	0.003	0.0096	0.00012
	CT/TA	0.023	0.002	0.01	4.20E-05
	CT/TC	0.018	0.00078	0.01	0.00017
	CT/TG	0.0024	0.00078	0.0016	0.00017
TA changes	TA/CA	1	1	0.72	0.93
	TA/CG	1	1	1	0.13
	TA/CT	0.11	0.0034	0.026	5.20E-05
	TA/TC	0.66	0.8	0.3	0.0033
	TA/TG	1	1	1	0.93
TC changes	TC/CA	0.38	0.7	0.39	0.068
	TC/CG	0.38	0.82	0.39	0.31
	TC/CT	0.045	0.00098	0.041	0.00047
	TC/TA	0.38	0.6	0.23	0.0033
	TC/TG	0.069	0.17	0.081	0.028
TG changes	TG/CA	0.26	0.79	0.37	0.64
	TG/CG	0.26	0.71	1	0.26
	TG/CT	0.004	0.00078	0.0016	0.00042
	TG/TA	0.62	0.79	1	0.74
	TG/TC	0.069	0.17	0.081	0.037