

**Table S1.** Primer sequences for multiplex PCR and SNaPshot assays

Gene	Position	Multi-plex	Forward primer	Reverse primer	SNaPshot primer
<b>KRAS</b>	351	1	5'TGAAGATGTACCTATGGTCCT	5'CTGAGCCTGTTTTGTGTCTA	ATGGTCCTAGTAGGAAATAA
	436	1	5'GCAAGAAGTTATGGAATTCCT	5'TGATTTTGCAGAAAACAGATC	ctcTTCCTTTTATTGAAACATCA
<b>NRAS</b>	34	1	TGCTGGTGTGAAATGACTGAG	TGGATTGTCAGTGCCTTTTT	tcagtcagtcagtcagtcagtcagtcagtcagtcAAGTGGTGGTGGTTGGAGCA
	35	2			ACTGGTGGTGGTTGGAGCAG
	37	1			tcagtcagtcagtcagtcagtcagtcagtcagtcAAGTGGTGGTGGTTGGAGCA
	38	2			ctcTCAGTGCCTTTTTCCCAACA
	181	1	TGGTGAACCTGTTTGTGGGA	TGATGGCAAATACACAGAGGA	tcagtcagtcagACATACTGGATACAGCTGGA
	182	2			ctctctCATACTGGATACAGCTGGAC
	183	1			tcagtcagtcagtcagtcagtcagtcagtcagtcAAGTGGTGGTGGTTGGAGCA
<b>BRAF</b>	1799	2	TGCTTGCTCTGATAGGAAAATG	CTGATGGGACCCACTCCAT	tcagtcagtcagtcagtcagtcagtcagtcagtcAAGTGGTGGTGGTTGGAGCA
<b>PIK3CA</b>	263	1	CCCCTCCATCAACTTCTTCA	AAAAGCCGAAGGTCACAAAG	tcagtcagtcagtcagtcagtcagtcagtcagtcAAGTGGTGGTGGTTGGAGCA
	1624	1	GACAAAGAACAGCTCAAAGCAA	TTTAGCACTTACCTGTGACTCCA	tcagtcagtcagtcagtcagtcagtcagtcagtcagtcagtcagtcAAGTGGTGGTGGTTGGAGCA
	1633	2			ctctctcATCCTCTCTCTGAAATCACT
	1636	1			tcagtcagtcagtcagtcagtcagtcagtcagtcagtcagtcagtcAAGTGGTGGTGGTTGGAGCA
	1637	2	tcagtcagtcagtcagtcagtcagtcagtcagtcagtcagtcagtcAAGTGGTGGTGGTTGGAGCA		
	3139	1	GAGCAAGAGGCTTTGGAGTA	ATCCAATCCATTTTGTGTCC	tcagtcagtcagtcagtcagtcagtcagtcagtcagtcagtcagtcAAGTGGTGGTGGTTGGAGCA
	3140	2	tcagtcagtcagtcagtcagtcagtcagtcagtcagtcagtcagtcAAGTGGTGGTGGTTGGAGCA		
3145	1	ctctctCATTTTTGTTGTCCAGCCAC			

**Table S2: Primer sequences for multiplex and SNaPshot PCR**

<b>Variant</b>	<b>rs number</b>	<b>Forward primer</b>	<b>Reverse primer</b>	<b>Base extension primer</b>
c.496A>G	rs2297595	5'ATTTTTCTGGGGGAGGCA	5'CATGACAATTGATTCCCG	cagtCCCCGTAGGTATTCAAAGCA
c.1679T>G	rs55886062	5'GAAAGTTTTGGTGAGGGCAA	5'AACTCCAGCCACCAGCACAT	cagtcagtAGTTGATACACATTTCTTCA
c.2846A>T	rs67376798	5'AGGATTCTTACCTGGTAGCCA	5'TGAATTGAGCAACGTAGAGCA	tcagtcagtcagCAGCTTCAAAGCTCTTCA

**Table S3.** 5-FU chemotherapy response and side effects in *DPYD* gene variant carriers<sup>1</sup>

Case	Combined regime	Response	Side effect	<i>DPYD</i> gene variant	Liver disease	Liver function test <sup>2</sup>
4	No	Yes	Neutropenia	c.1679T>G	Metastasis	Normal
11	Irinotecan	Yes	Diarrhea, dry skin	c.496A>G	Metastasis	Pathologic
15	No	Yes	No	c.496A>G	No	Normal
21	No	No	No	c.496A>G	No	Normal
23	No	No	No	c.2846A>T	Metastasis	Pathologic
25	No	Yes	No	c.496A>G, c.1679T>G	Hepatitis C	Pathologic
27	Irinotecan	Yes	No	c.496A>G	Metastasis	Pathologic
45	No	Yes	No	c.496A>G	No	Normal
48	Oxaliplatin	No	Neutropenia	c.2846A>T	No	Normal
57	Oxaliplatin	Yes	Thrombocytopenia	c.496A>G	No	Normal
60	Xeloda	No	No	c.1679T>G	No	Normal
65	No	Yes	No	c.496A>G	No	Normal
67	No	Yes	No	c.496A>G	No	Normal
68	No	Yes	No	c.496A>G	No	Normal
73	No	Yes	No	c.2846A>T	No	Pathologic
75	Oxaliplatin	Yes	Neuropathy	c.496A>G	Metastasis	Normal
81	No	Yes	Neutropenia	c.496A>G	no	Normal

<sup>1</sup>Comprising only *DPYD* gene variant carriers, who received chemotherapy (n = 17). <sup>2</sup>Blood test comprising transaminases (AST, ALT), gamma-glutamyl transferase, alkaline phosphatase. Bilirubin was only determined for cases 4, 11, 23, 25, 27, 48, 60, 75, 81, which showed normal level.