

Table S2: Overview of the strand asymmetry and correlation with replication timing in mutational signatures.

signature	strand asymmetry		correlation with replication timing		
	sample type	dominant mutation types	sample type	enriched in	effect of MMR
1	all	NCG>NCT leading	all	late	slope decreased in MSI
2	all	TCN>TTN lagging	all	late	NA (not in MSI)
3	all	mixed	all	late	NA (not in MSI)
4	lung	C>A leading	all	late	n.s.
5	-	-	all	early	n.s.
6	MSI (n.s.)	C>T leading	all	late	slope increased in MSI
7	all	C>T lagging	all	late	NA (not in MSI)
8	all	C>A leading	all	late	n.s.
9	all	mixed	all	late	n.s.
10	all	POLE-MUT: leading, POLE-WT: lagging	all	late	NA (not in MSI)
12	all	T>C leading	all	late	n.s.
13	all	TCN>TGN lagging	all	late	NA (not in MSI)
14	all	POLE-MUT: leading, POLE-WT: lagging	all	late	n.s.
15	MSI (n.s.)	C>T leading	all	late	n.s.
16	all	mixed	all	early	NA (not in MSI)
17	all	T>N lagging	all	late	n.s.
18	all	mixed	all	late	slope increased in MSI
19	-	-	-	-	NA (not in MSI)
20	MSI	C>T leading, C>A and T>C lagging	all	early	slope decreased (negative) in MSI
21	all	C>T leading, T>C lagging	-	-	n.s.
22	kidney (n.s.)	T>A leading	all	late	NA (not in MSI)
23	all	C>T leading	-	-	NA (not in MSI)
25	all	mixed	-	-	NA (not in MSI)
26	MSI (n.s.)	C>T leading, C>A and T>C lagging	MSI (n.s.)	early	slope decreased in MSI
28	all	POLE-MUT: leading, POLE-WT: lagging	all	late	NA (not in MSI)
N1	all	mixed	all	late	NA (not in MSI)
N2	all	mixed	-	-	NA (not in MSI)
N3	all	mixed	all	late	slope increased in MSI
N4	all	mixed	all	late	slope increased in MSI