Detection of somatic quantitative genetic alterations by multiplex polymerase chain reaction for the prediction of outcome in diffuse large B-cell lymphomas

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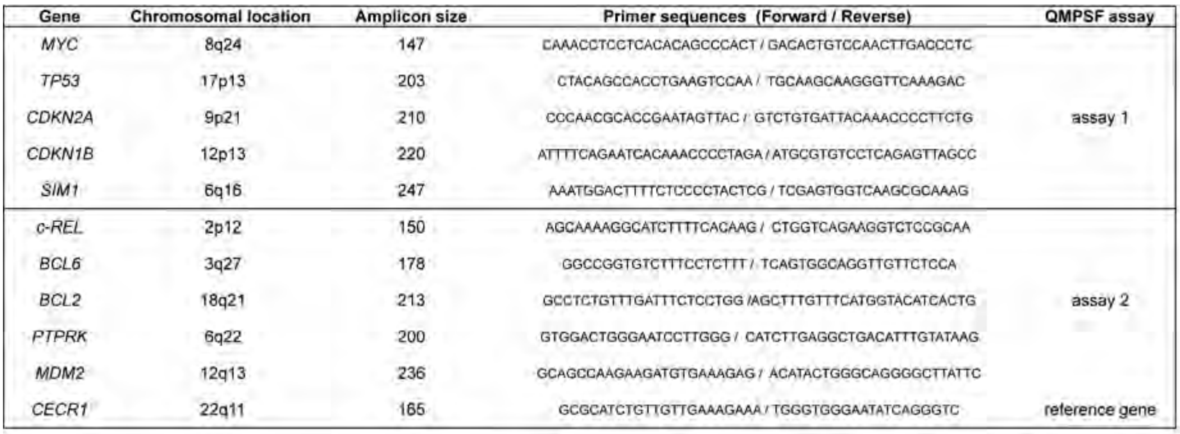
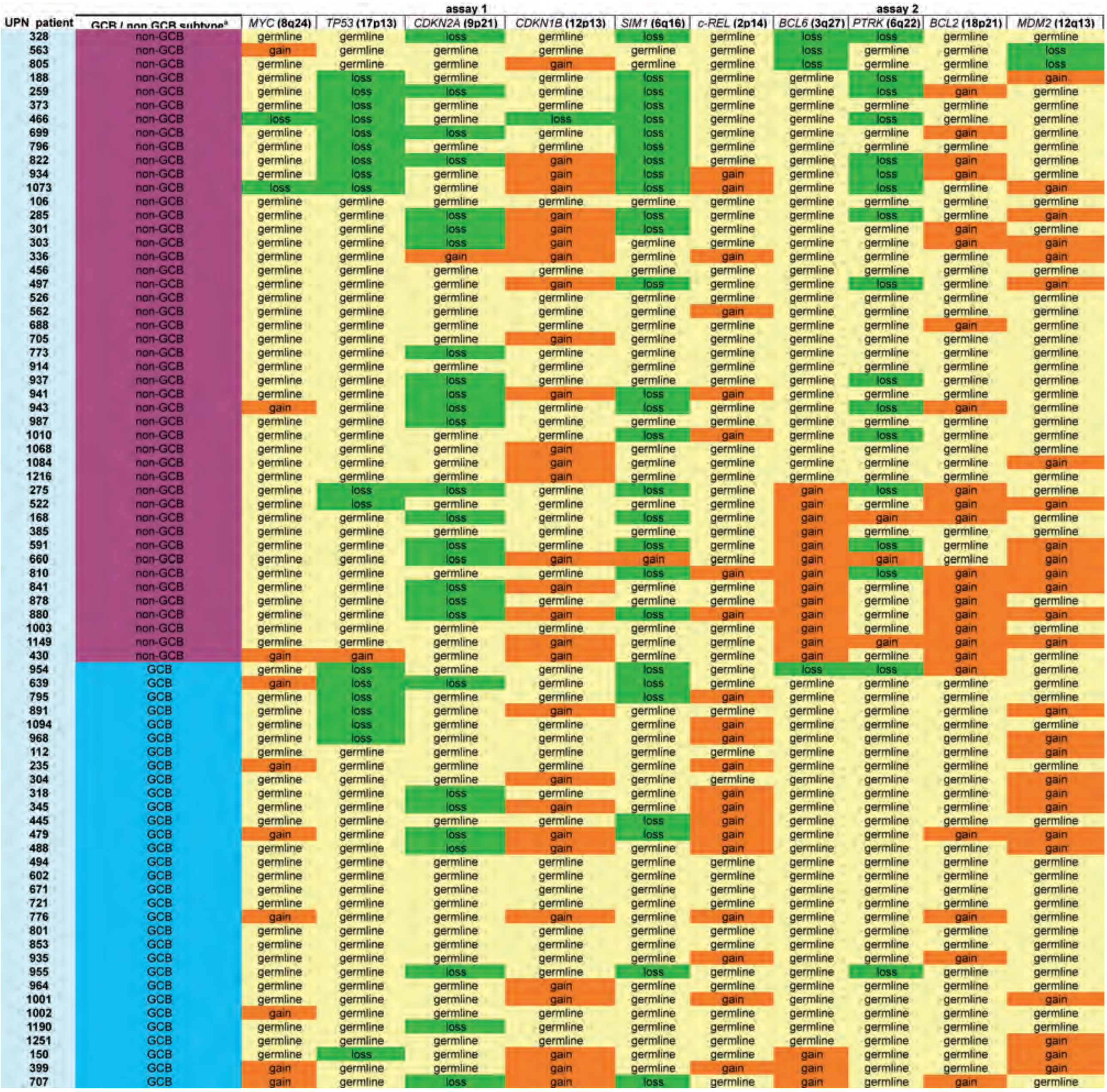


Gene	Chromosomal location	Amplicon size	Primer sequences (Forward / Reverse)	QMPSF assay
MYC	8q24	147	CAAACCTCCTCACACAGCCCACT / GACACTGTCCAACTTGACCCTC	assay 1
TP53	17p13	203	CTACAGCCACCTGAAGTCCAA / TGCAAGCAAGGGTTCAAAGAC	
CDKN2A	9p21	210	CCCAACGCACCGAATAGTTAC / GTCTGTGATTACAAACCCCTTCTG	
CDKN1B	12p13	220	ATTTTCAGAATCACAAACCCCTAGA / ATGCGTGTCCTCAGAGTTAGCC	
SIM1	6q16	247	AAATGGACTTTTCTCCCCTACTCG / TCGAGTGGTCAAGCGCAAAG	
c-REL	2p12	150	AGCAAAAGGCATCTTTTCACAAG / CTGGTCAGAAGGTCTCCGCAA	assay 2
BCL6	3q27	178	GGCCGGTGTCTTTCCTCTTT / TCAGTGGCAGGTTGTTCTCCA	
BCL2	18q21	213	GCCTCTGTTTGATTTCTCCTGG /AGCTTTGTTTCATGGTACATCACTG	
PTPRK	6q22	200	GTGGACTGGGAATCCTTGGG / CATCTTGAGGCTGACATTTGTATAAG	
MDM2	12q13	236	GCAGCCAAGAAGATGTGAAAGAG / ACATACTGGGCAGGGGCTTATTC	
CECR1	22q11	165	GCGCATCTGTTGTTGAAAGAAA / TGGGTGGGAATATCAGGGTC	reference gene

Supplementary Table S1. Sequences and locations of primers used in the QMPSF assays[1]

[1]two decanucleotides extensions, for the forward and for the reverse primers respectively, were added on the 5' side of these oligonucleotides. Their sequences are available upon signing a material and confidential information transfer agreement.



UPN patient	GCB / non GCB subtype[a]	*MYC* (8q24)	*TP53* (17p13)	*CDKN2A* (9p21)	*CDKN1B* (12p13)	*SIM1* (6q16)	*c-REL* (2p14)	*BCL6* (3q27)	*PTRK* (6q22)	*BCL2* (18p21)	*MDM2* (12q13)
		assay 1						assay 2			
328	non-GCB	germline	germline	loss	germline	loss	germline	loss	loss	germline	germline
563	non-GCB	gain	germline	germline	germline	germline	germline	loss	germline	germline	loss
805	non-GCB	germline	germline	germline	gain	germline	germline	loss	germline	germline	loss
188	non-GCB	germline	loss	germline	germline	loss	germline	germline	loss	germline	gain
259	non-GCB	germline	loss	loss	germline	loss	germline	germline	loss	gain	germline
373	non-GCB	germline	loss	germline	germline	loss	germline	germline	germline	germline	germline
466	non-GCB	loss	loss	germline	loss	loss	germline	germline	loss	germline	germline
699	non-GCB	germline	loss	loss	germline	loss	germline	germline	germline	gain	germline
796	non-GCB	germline	loss	germline	germline	loss	germline	germline	germline	germline	germline
822	non-GCB	germline	loss	loss	gain	loss	germline	germline	loss	gain	germline
934	non-GCB	germline	loss	germline	gain	loss	gain	germline	loss	gain	germline
1073	non-GCB	loss	loss	germline	gain	loss	gain	germline	loss	germline	gain
106	non-GCB	germline	germline	germline	germline	germline	germline	germline	germline	germline	germline
285	non-GCB	germline	germline	loss	gain	loss	germline	germline	loss	germline	gain
301	non-GCB	germline	germline	loss	gain	loss	germline	germline	germline	gain	germline
303	non-GCB	germline	germline	loss	gain	germline	germline	germline	germline	gain	gain
336	non-GCB	germline	germline	gain	gain	germline	gain	germline	germline	germline	gain
456	non-GCB	germline	germline	germline	germline	germline	germline	germline	germline	germline	germline
497	non-GCB	germline	germline	germline	gain	loss	germline	germline	loss	germline	gain
526	non-GCB	germline	germline	germline	germline	germline	germline	germline	germline	germline	germline
562	non-GCB	germline	germline	germline	germline	germline	gain	germline	germline	germline	germline
688	non-GCB	germline	germline	germline	germline	germline	germline	germline	germline	gain	germline
705	non-GCB	germline	germline	germline	gain	germline	germline	germline	germline	germline	germline
773	non-GCB	germline	germline	loss	germline	germline	germline	germline	germline	germline	germline
914	non-GCB	germline	germline	germline	germline	germline	germline	germline	germline	germline	germline
937	non-GCB	germline	germline	loss	germline	germline	germline	germline	loss	germline	germline
941	non-GCB	germline	germline	loss	gain	loss	gain	germline	germline	germline	germline
943	non-GCB	gain	germline	loss	germline	loss	germline	germline	loss	gain	germline
987	non-GCB	germline	germline	loss	germline	germline	germline	germline	germline	germline	germline
1010	non-GCB	germline	germline	germline	germline	loss	gain	germline	loss	germline	germline
1068	non-GCB	germline	germline	germline	gain	germline	germline	germline	germline	germline	germline
1084	non-GCB	germline	germline	germline	gain	germline	germline	germline	germline	germline	gain
1216	non-GCB	germline	germline	germline	gain	germline	germline	germline	germline	germline	germline
275	non-GCB	germline	loss	loss	germline	loss	germline	gain	loss	gain	germline
522	non-GCB	germline	loss	germline	germline	germline	germline	gain	germline	gain	gain
168	non-GCB	germline	germline	loss	germline	loss	germline	gain	gain	gain	germline
385	non-GCB	germline	germline	germline	germline	germline	germline	gain	germline	germline	germline
591	non-GCB	germline	germline	loss	germline	loss	germline	gain	loss	germline	gain
660	non-GCB	germline	germline	loss	gain	gain	germline	gain	gain	germline	gain
810	non-GCB	germline	germline	germline	germline	loss	gain	gain	loss	gain	gain
841	non-GCB	germline	germline	loss	gain	germline	germline	gain	germline	gain	gain
878	non-GCB	germline	germline	loss	germline	germline	germline	gain	germline	gain	germline
880	non-GCB	germline	germline	loss	gain	loss	gain	gain	germline	gain	gain
1003	non-GCB	germline	germline	germline	germline	germline	germline	gain	germline	gain	germline
1149	non-GCB	germline	germline	germline	gain	germline	germline	gain	gain	gain	gain
430	non-GCB	gain	gain	germline	gain	germline	germline	gain	germline	gain	germline
954	GCB	germline	loss	germline	germline	loss	germline	loss	loss	gain	germline
639	GCB	gain	loss	loss	germline	loss	germline	germline	germline	germline	germline
795	GCB	germline	loss	germline	germline	loss	gain	germline	germline	germline	germline
891	GCB	germline	loss	germline	gain	germline	germline	germline	germline	germline	gain
1094	GCB	germline	loss	germline	germline	germline	gain	germline	germline	germline	germline
968	GCB	germline	loss	germline	germline	germline	gain	germline	germline	germline	gain
112	GCB	germline	germline	germline	germline	germline	germline	germline	germline	germline	gain
235	GCB	gain	germline	germline	germline	germline	gain	germline	germline	germline	germline
304	GCB	germline	germline	germline	gain	germline	germline	germline	germline	germline	gain
318	GCB	germline	germline	loss	germline	germline	gain	germline	germline	germline	gain
345	GCB	germline	germline	loss	gain	germline	gain	germline	germline	germline	gain
445	GCB	germline	germline	germline	germline	loss	gain	germline	germline	germline	germline
479	GCB	gain	germline	loss	gain	loss	gain	germline	germline	gain	gain
488	GCB	germline	germline	loss	gain	germline	gain	germline	germline	germline	gain
494	GCB	germline	germline	germline	germline	germline	germline	germline	germline	germline	germline
602	GCB	germline	germline	germline	germline	germline	germline	germline	germline	germline	germline
671	GCB	germline	germline	germline	germline	germline	germline	germline	germline	germline	germline
721	GCB	germline	germline	germline	germline	germline	germline	germline	germline	germline	germline
776	GCB	gain	germline	germline	gain	germline	gain	germline	germline	gain	germline
801	GCB	germline	germline	germline	germline	germline	germline	germline	germline	germline	germline
853	GCB	germline	germline	germline	germline	germline	germline	germline	germline	germline	germline
935	GCB	germline	germline	germline	germline	germline	gain	germline	germline	gain	germline
955	GCB	germline	germline	loss	germline	loss	germline	germline	loss	germline	germline
964	GCB	germline	germline	germline	gain	germline	germline	germline	germline	germline	germline
1001	GCB	germline	germline	germline	gain	germline	gain	germline	germline	germline	gain
1002	GCB	gain	germline	germline	germline	germline	germline	germline	germline	germline	germline
1190	GCB	germline	germline	loss	germline	germline	germline	germline	germline	germline	germline
1251	GCB	germline	germline	germline	germline	germline	germline	germline	germline	germline	gain
150	GCB	germline	loss	germline	gain	germline	germline	gain	germline	germline	gain
399	GCB	gain	germline	germline	gain	germline	gain	gain	germline	germline	gain
707	GCB	gain	germline	loss	gain	loss	germline	gain	germline	gain	germline

Supplementary Table S2. Gene copy number abnormalities detected by QMPSF in 77 *de novo* DLBCL.

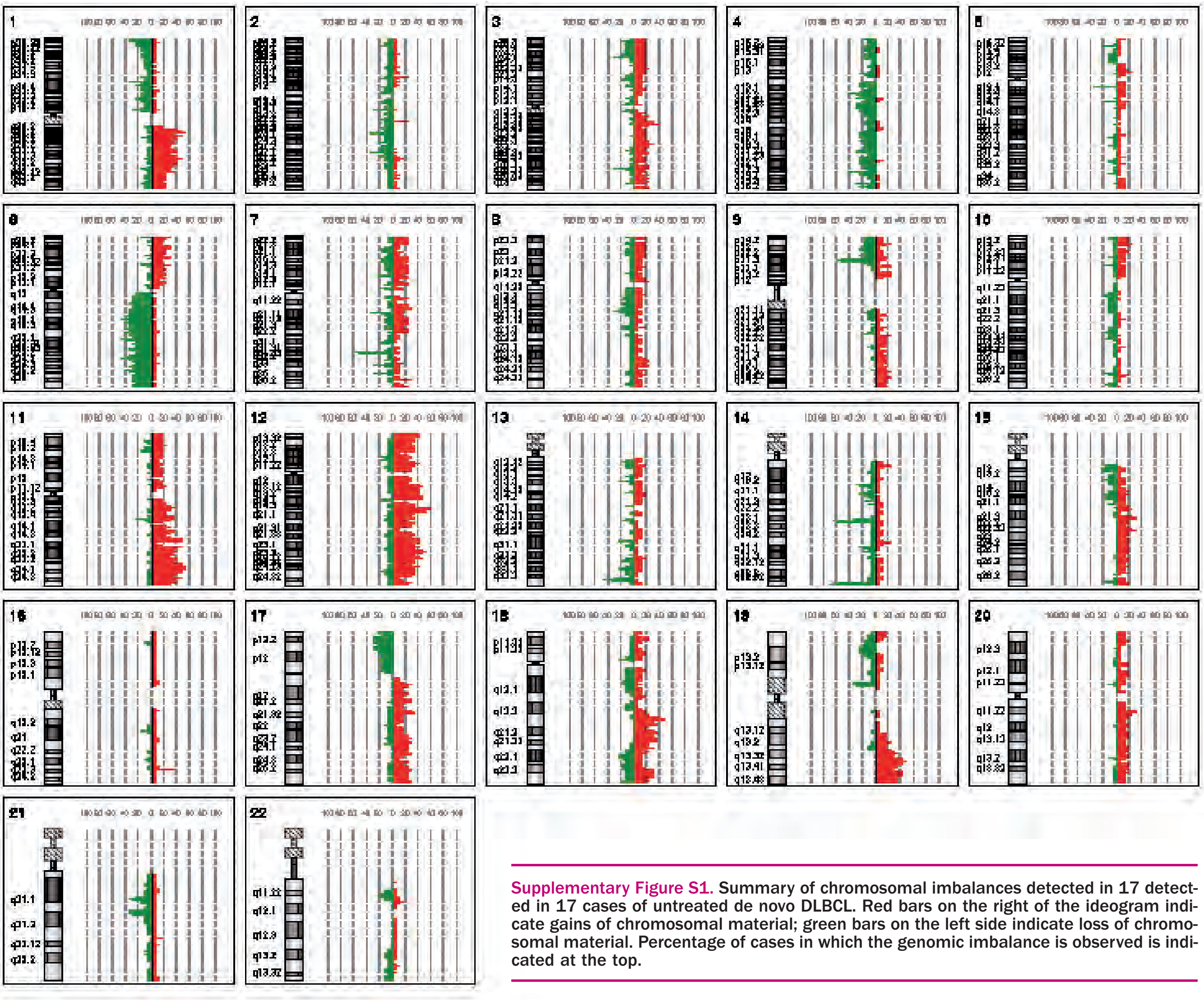
[a]*determined by immunohistochemistry*

UPN patient	*TP53* allelic status		*TP53* mutations					p53 IHC
	QMPSF	CGH	Exon	Codon	p53 structural domain	Nucleotide	Amino acid	
954	deletion	deletion	5	147	S3	GTT > GGT	Val > Gly	+
1073	deletion	ND	5	175	L2	CGC > CAC	Arg > His	+
934	deletion	ND	5	141	S3	TGC > CGC	Cys > Arg	+
968	deletion	ND	8	278	S10	CTT > TCT	Leu > Ser	+
150	deletion	deletion	5	175	L2	CGC > CAC	Arg > His	-
385	germline	germline	5	133	S2'	ATG > AAG	Met > Lys	+
			6	218	S5	GTG > GAG	Val > Glu	
112	germline	ND	5	161	S4	GCC > ACC	Ala > Thr	-
			7	248	L3	CGG > TGG	Arg > Trp	
1216	germline	germline	5	163	S4	TAC > TAT	Tyr > Tyr	-
479	germline	ND	5	179	H1	CAT > TAT	His > Tyr	+
1010	germline	ND	7	249	L3	AGG > AAG	Arg > Lys	-
671	germline	ND	8	273	S10	CGT > CAT	Arg > His	-
1190	germline	ND	7	246	L3	ATG > ACG	Met > Thr	+

Supplementary Table S3. *TP53* mutations, *TP53* allelic status assessed by QMPSF/CGH and p53 protein expression in 12 DLBCL.

IHC: immunohistochemistry; ND: not done; -, < 10%; +, > 10% positive tumor cells

Supplementary Figure 1



Supplementary Figure S1. Summary of chromosomal imbalances detected in 17 detected in 17 cases of untreated de novo DLBCL. Red bars on the right of the ideogram indicate gains of chromosomal material; green bars on the left side indicate loss of chromosomal material. Percentage of cases in which the genomic imbalance is observed is indicated at the top.