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CORRECTION

Correction to: Ganglioglioma with adverse clinical outcome and atypical histopathological features were defined by alterations in *PTPN11/KRAS/NF1* and other RAS-/MAP-Kinase pathway genes

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In the original publication, incorrect version of Fig. 3 and wrong format of Table 1 were published. Specifically, the labels in Fig. 3 were missing and columns of Table 1 were not in the right format.

The correct versions of Fig. 3 and Table 1 are shown below.

The original article has been corrected.

The original article can be found online at https://doi.org/10.1007/s00401-023-02561-5.

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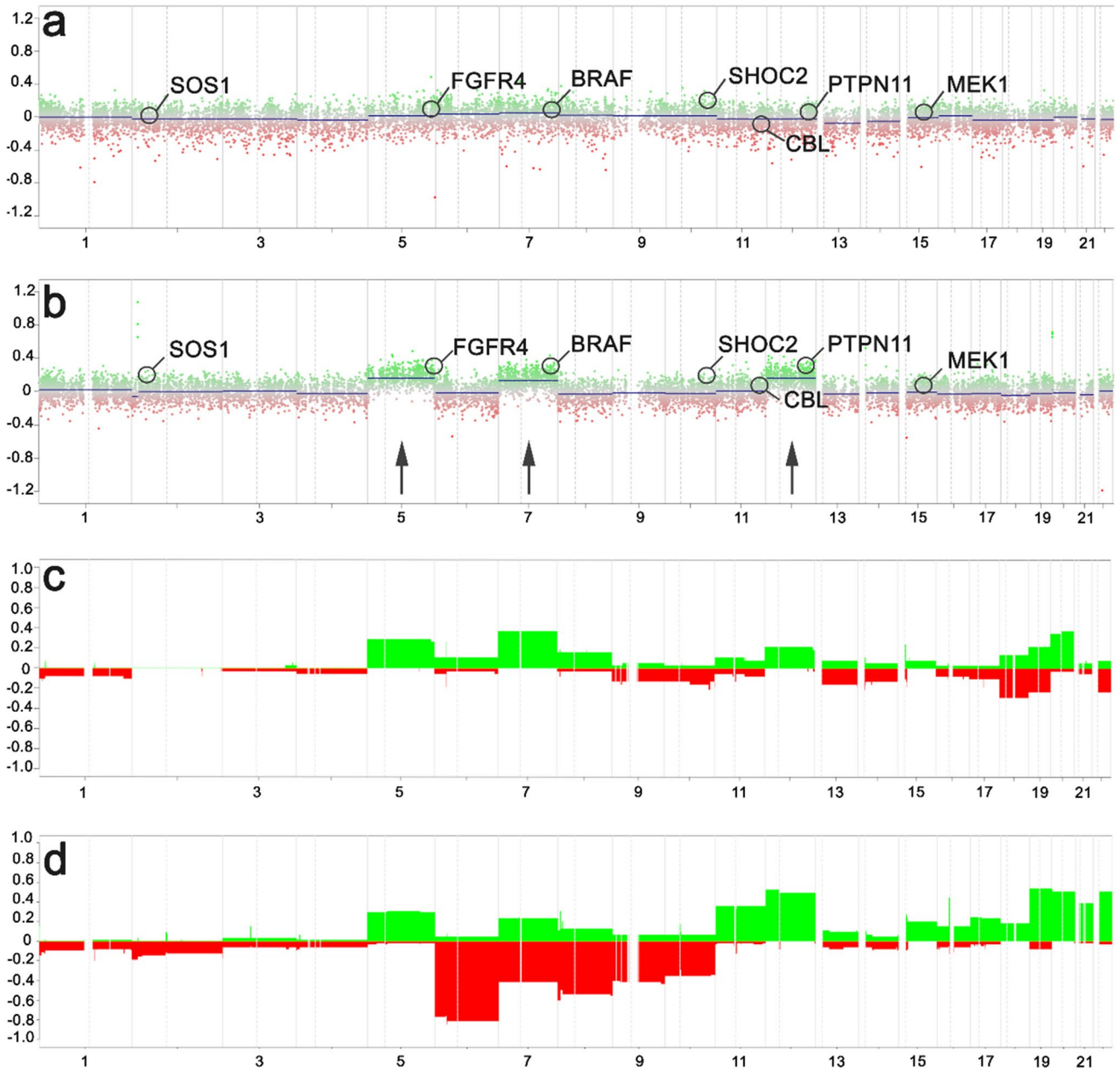

Fig. 3 Copy number profile of different methylation groups. While the published reference cohort of ganglioglioma showed a flat profile with marginal gains at chromosomes 5, 7 and 12 in 3 (**a** and **c**) (**c** represents a summary plot of the entire LGG, GG cohort, $n=38$), frequent gains and losses were evident within the new ganglioglioma methylation class with adverse outcome as shown in **b** (patient sample #7, see Table 1) and **d** (summary plot of entire GG, PTPN11 cohort, $n=63$). Notably, 31 of 63 tumors of this new methylation class showed gains on the long arm of chromosome 12, including *PTPN11*. *X*-axis list chromosmes; *Y*-axis indicates log(*R*) ratio in **a** and **b**, and the percentage of samples showing an alteration in **c** and **d**. Gains are labeled in green, losses in red

Table 1 Summary of 72 patients with WES and SNP, 28 of which also had DNA methylation analysis

ID	GTT	Outcome	FU	DoE	Onset	Sex	DX	MC	OG
1	SNP, WES, 850k	Engel 4	4	2	N/A	M	GG 1	GG, PTPN11	Complex Genetic Variant
2	SNP, WES, 850k	Engel 1a	2	2	N/A	M	GG 1	GG, PTPN11	
3**	SNP, WES, 450k	Engel 1b	2	4	11–15	M	GG 1	GG, PTPN11	
4	SNP, WES, 850k	Engel 2b	2	40	11–15	F	GG 1	GG, PTPN11	
5	SNP, WES, 850k	Engel 1a	2	4	6–10	M	GG 1	GG, PTPN11	
6	SNP, WES, 850k	Engel 1a	2	1	11–15	F	GG 1	GG, PTPN11	
7	SNP, WES, 850k	Engel 1c	2	2	16–20	F	GG 1	GG, PTPN11	
8	SNP, WES, 850k	Engel 2d SUDEP	2	13	16–20	F	GG 1	GG, PTPN11	
9	SNP, WES	Engel 1b*	6	4	6–10	F	GG 1		
10	SNP, WES, 850k	Engel 1b	3	4	16–20	F	GG 1	GG, PTPN11	
11	SNP, WES, 850k	Engel 1a	2	3	11–15	M	GG 1	GG, PTPN11	
12**	SNP, WES	Engel 1c	2	5	16–20	F	GG 1		
13	SNP, WES, 850k	Engel 1a	2	0.3	6–10	M	GG 1	GG, PTPN11	
14	SNP, WES	Engel 2b	2	45	0–5	M	MNVT		
15	SNP, WES	N/A	N/A	N/A	N/A	M	GG 1		
16	SNP, WES	Engel 1a	2	1.75	0–5	M	GG 1		Non-complex Variant
17	SNP, WES	Engel 1a	2	8.75	0–5	M	GG 1		
18	SNP, WES	N/A	N/A	N/A	N/A	F	GG 1		
19	SNP, WES, 850k	Engel 1a	2	13	6–10	M	GG 1	GG, PTPN11	
20	SNP, WES	Engel 1a	2	5	11–15	M	PXA/ GG		
21	SNP, WES	Engel 1a	2	No seizures		F	GG 1		
22	SNP, WES	Engel 1a	2	5	0–5	M	GG 1		
23	SNP, WES	Engel 1a	2	7	11–15	M	GG 1		
24	SNP, WES	Engel 1a	2	3	0–5	M	GG 1		
25	SNP, WES	Engel 1a	2	9	6–10	F	GG 1		
26	SNP, WES	Engel 1a	2	1	6–10	M	GG 1		
27	SNP, WES	Engel 1a	2	3	16–20	M	GG 1		
28	SNP, WES	Engel 1a	2	7	6–10	F	GG 1		
29	SNP, WES	Engel 1a	2	9	6–10	F	GG 1		
30	SNP, WES	Engel 1a	2	1	0–5	M	GG 1		
31	SNP, WES, 850k	Engel 1a	2	N/A	N/A	M	GG 1	GG, PTPN11	
32	SNP, WES	Engel 1a	2	3	0–5	F	GG 1		
33	SNP, WES	Engel 1a	2	2.25	0–5	F	GG 1		
34	SNP, WES	Engel 1a	2	6	11–15	M	GG 1		
35	SNP, WES	Engel 1a	2	3	0–5	M	GG 1		
36	SNP, WES, 850k	Engel 1a	2	N/A	N/A	M	GG 1	GG, PTPN11	
37	SNP, WES, 850k	Engel 1a	2	11	11–15	F	GG 1	GG, PTPN11	
38	SNP, WES, 850k	Engel 1a	2	N/A	N/A	M	GG 1	GG, PTPN11	
39	SNP, WES, 850k	Engel 2a	2	6	0–5	M	GG 1	GG, PTPN11	
40	SNP, WES	Engel 1a	2	N/A	N/A	M	GG 1		
41	SNP, WES, 850k	Engel 1a	2	6	0–5	M	GG 1	GG, PTPN11	
42	SNP, WES	Engel 3a	2	2	0–5	M	GG 1		
43*	SNP, WES, 850k	Engel 3a	2	24	0–5	F	GG 1	GG, PTPN11	
44	SNP, WES	Engel 1c	2	6	0–5	F	GG 1		

Table 1 (continued)

ID	GTT	Outcome	FU	DoE	Onset	Sex	DX	MC	OG
45*	SNP, WES	Engel 3a	2	8	46–50	F	GG 1		No detected Variant
46*	SNP, WES, 850k	Engel 2b	2	16	16–20	M	GG 1	GG, PTPN11	
47**	SNP, WES, 850k	Engel 3a	2	4	21–25	F	GG 1	GG, PTPN11	
48	SNP, WES, 850k	Engel 1b	2	11	11–15	M	GG 1	GG, PTPN11	
49	SNP, WES, 850k	Engel 1b	2	30	0–5	F	GG 1	GG, PTPN11	
50	SNP, WES, 850k	Engel 1b	2	6	0–5	M	GG 1	GG, PTPN11	
51	SNP, WES	Engel 1a	2	4	6–10	M	GG 1		
52	SNP, WES	Engel 1a	2	5	6–10	F	GG 1		
53	SNP, WES	Engel 1a	2	14	11–15	M	GG 1		
54	SNP, WES	Engel 1a	2	0	0–5	M	GG 1		
55	SNP, WES	Engel 1a	2	13	26–30	M	GG 1		
56	SNP, WES, 850k	Engel 1a	2	12	26–30	M	GG 1	GG, PTPN11	
57	SNP, WES	N/A	N/A	N/A	N/A	F	GG 1		
58	SNP, WES, 450k	N/A	N/A	N/A	N/A	M	GG 1	LGG, GG	
59	SNP, WES	N/A	N/A	N/A	N/A	M	GG 1		
60	SNP, WES	Engel 1a	2	24	0–5	F	GG 1		
61	SNP, WES	Engel 1a	2	2	6–10	M	GG 1		
62	SNP, WES	Engel 1a	2	0.25	0–5	F	GG 1		
63	SNP, WES	Engel 1a	2	2	0–5	F	GG 1		
64	SNP, WES	Engel 1a	2	4	0–5	M	GG 1		
65	SNP, WES	N/A	N/A	N/A	N/A	F	GG 1		
66	SNP, WES	Engel 1a	2	2	11–15	F	GG 1		
67	SNP, WES, 850k	Engel 1a	2	0.5	6–10	F	GG 1	GG, PTPN11	
68	SNP, WES	N/A	N/A	N/A	N/A	M	GG 1		
69	SNP, WES	Engel 1a	2	4	0–5	F	GG 1		
70	SNP, WES	Engel 1a	2	N/A	N/A	M	GG 1		
71	SNP, WES	Engel 1a	2	6	6–10	F	GG 1		
72	SNP, WES, 850k	Engel 1a	2	0.25	6–10	M	GG 1	GG, PTPN11	

ID = case numbers, GTT = Genetic testing tool using either Single Nucleotide Polymorphism (SNP), Whole-Exome Sequencing (WES), 850 k or 450 k DNA methylation arrays; Outcome = most recent postsurgical outcome, i.e. seizure freedom, according to Engel [21]; N/A = not available; Follow-up (FU) in years; DoE. = Duration of Epilepsy; Onset = disease onset (age in years); Sex: F—female, M = male; DX = histopathology diagnosis: Ganglioglioma CNS WHO grade 1 (GG 1), Ganglioglioma analogue CNS WHO grade 2 (GG 2), Ganglioglioma analogue CNS WHO grade 3 (GG 3), composite pleomorphic xanthoastrocytoma with ganglioglioma (PXA/ GG), multinucleated vacuolated tumor (MNVT). MC—methylation classes: Ganglioglioma with adverse clinical outcome (GG, PTPN11), Ganglioglioma (LGG, GG), Pleomorphic Xantoastrocytoma (LGG, PXA), (also see Fig. 2); Oncoplot Group (OG) = genetic subgroups from WES/SNP-array (see also Fig. 1). Sixty-two cases were located in the temporal lobe, cases #10, #17, #23, #43 and #50 in the parietal lobe, cases #41, #46 and #67 in the frontal lobe, case #24 in the occipital lobe and case #15 had no localizing data

*Adverse outcome due to incomplete resection

**Patient received a second surgery due to lack of seizure freedom