

**Supplementary Table S1.** Detailed demographic and clinical features of the patients treated with vemurafenib.

Pz. N°	Sex	Age at diagnosis	Age at the start of vemurafenib	Tumor site	Tumor Histology	Previous treatment (chemo-radiotherapy)
1	F	0,3	4,9	hypothalamic /chiasmatic	ganglioglioma	4 lines of chemotherapy
2	F	1,0	2,8	hypothalamic /chiasmatic	ganglioglioma	2 lines of chemotherapy
3	M	3,9	9,3	hypothalamic /chiasmatic	ganglioglioma	3 lines of chemotherapy + RT
4	F	11,2	11,3	basal ganglia	ganglioglioma	only surgery
5	M	13,8	18,8	spinal cord	pilocytic astrocytoma	1 line of chemotherapy
6	M	2,8	3,5	hypothalamic /chiasmatic	pilocytic astrocytoma	1 line of chemotherapy

**Supplementary Table S2.** Lipid levels before and after switch of treatment from vemurafenib to dabrafenib and trametinib.

Lipid category	+1 month Vemur.	+3 months Vemur.	+6 months Vemur.	+12 months Vemur.	+24 months Vemur.	+1 month Dab./Tra.	+3 months Dab./Tra.	+6 months Dab./Tra.
Total cholesterol	206	225	191	215	182	135	163	165
LDL cholesterol	94	108	70	87	72	50	71	71
HDL cholesterol	94	109	119	129	108	80	96	88
Triglycerides	78	77	75	52	34	66	68	59

**Supplementary Table S3.** Fasting blood glucose, biochemical liver and kidney function tests before and during vemurafenib.

Category		-1 month Vemur.	+1 month Vemur.	+3 months Vemur.	+6 months Vemur.	+12 months Vemur.	Last follow up
Fasting blood glucose (mg/dL)	Mean ± SD	90.5 ± 4.3	86 ± 8.6	85.6 ± 4.5	86.5 ± 5.9	86.8 ± 10.5	93 ± 4.5
	Median (range)	91 (83 – 95)	85 (77 – 99)	87 (80 – 91)	87 (80 – 93)	89 (73 – 100)	93 (87 – 99)
Aspartate aminotransferase (U/L)	Mean ± SD	20.2 ± 4.0	29.2 ± 12.4	24.4 ± 9.6	18.9 ± 3.4	21.2 ± 7.1	23.5 ± 6.8
	Median (range)	21 (15 – 25)	25 (17 – 50)	20 (15 – 39)	19 (14 – 24)	19 (14 – 33)	21 (18 – 36)
Alanine aminotransferase (U/L)	Mean ± SD	16.3 ± 4.5	32.6 ± 14.2	28.4 ± 14.2	16.5 ± 5.3	15.3 ± 3.3	19.2 ± 6.7
	Median (range)	16 (13 – 25)	38 (17 – 48)	23 (11 – 44)	16 (9 – 23)	16.5 (10 – 19)	19 (11 – 30)

Creatinine	Mean + SD	0.4 ± 0.2	0.6 ± 0.3	0.6 ± 0.3	0.6 ± 0.3	0.6 ± 0.2	0.6 ± 0.1
	Median						
	(range)	0.2 (0.2 – 0.7)	0.3 (0.3 – 0.9)	0.3 (0.3 – 1.0)	0.4 (0.4 – 1.0)	0.5 (0.5 – 0.9)	0.5 (0.4 – 0.8)