On-line Table: Clinical data and tumor types

Family	Patient	Sex	Gene Mutation	Café au Lait Macules	Brain Malignancy (Age at Diagnosis, Major Mutations)	Colorectal Malignancy (Age at Diagnosis)	Hematologic Malignancy (Age at Diagnosis)
1	1	Female	*MSH6* compound heterozygous (c.3984_3987 dup [GTCA] and c.3959del4 [CAAG])	+	–	Multiple colonic adenomas with low-grade dysplasia (6 yr)	T-cell NHL (6 yr)
	2	Male	*MSH6* compound heterozygous (c.3984_3987 dup [GTCA] and c.3959del4 [CAAG])	+	Diffuse astrocytoma WHO grade II, multicentric: insula, temporal, frontal (12 yr, *IDH* mutant, *ATRX* loss of nuclear expression) Glioblastoma: temporal (18 yr, *TP53* mutant)	Adenocarcinoma of the cecum (16 yr)	–
	3	Male	*MSH6* compound heterozygous (c.3984_3987 dup [GTCA] and c.3959del4 [CAAG])	+	Glioblastoma, parietal (11 yr, *TP53* mutant)	–	T-cell NHL (14 yr)
2	4	Female	*MSH6* homozygous (c.2150_2153delTCAG)	+	Pleomorphic xanthoastrocytoma (6 yr, *TP53*-positive, *BRAF*-negative, *ATRX* loss of nuclear expression)	–	–
3	5	Female	*MSH6* homozygous (C.G3072INS+AATC P. M1024INSN FRAMESHIFT)	+	Diffuse astrocytoma WHO grade II, frontal (14 years, *IDH* and *TP53* mutants, retained nuclear expression of *ATRX*)	Adenocarcinoma of the rectum (14 yr)	–
4	6	Female	*MSH6* homozygous (chr2:48,026,014C>T,p. R298X,nonsense)	+	Glioblastoma, parietal (8 yr, no *IDH* or *TP53* mutations)		–
5	7	Male	*MSH6* NA genetic details	+	Glioblastoma, frontal (8 yr, *TP53* mutant) brain stem/cerebellar infiltrative tumor (NA pathology)	–	–
6	8	Male	*PMS2* compound heterozygous (c.1239_1240insA, c.1927C>T p.Q643*)	+	Anaplastic astrocytoma WHO grade III, polymorphous phenotype: frontal, diencephalic, partly intraventricular with infiltrating element (14 yr, *TP53* mutant; no *IDH1*, BRAF V600E, or histone H3 K27M mutations) Glioblastoma WHO grade IV, giant-cell variant: left occipital (23 yr, *TP53* mutant; no *IDH1*, BRAF V600E, or histone H3 K27M mutations) Anaplastic astrocytoma WHO grade III, left temporo-occipital (25 yr, *TP53* mutant; no *IDH1*, BRAF V600E, or histone H3 K27M mutations)	Adenocarcinoma of the duodenum, moderately differentiated (15 yr) adenoma of the rectum with low-grade dysplasia (17 yr)	–

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On-line Table: Continued

Family	Patient	Sex	Gene Mutation	Café au Lait Macules	Brain Malignancy (Age at Diagnosis, Major Mutations)	Colorectal Malignancy (Age at Diagnosis)	Hematologic Malignancy (Age at Diagnosis)
7	9	Male	*MSH6* compound heterozygous (c.1168_1170delGATinsAA p.D390fs, c.2150_2153TCAG p.V717fs)	+	DIPG (7 yr)-no histopathology	—	—
8	10	Female	*PMS2* compound heterozygous (c.1831dupA p,I611Nfs*2, Del)	+	Glioblastoma WHO grade IV; left parietal lobe (15 yr, *POLE*, NF1, RB1, *TP53*, and *ATRX* mutations; no *IDH1*, BRAF V600E, or histone H3 K27M mutations)	Multiple colonic, cecum, and rectal polyps with no high-grade dysplasia	B-cell ALL (10 yr)
9	11	Female	*MSH6* homozygous (c.3701_3706dupAACTTG)	+	Anaplastic astrocytoma WHO grade III, diffusely infiltrative admixed with mature ganglion cells: left frontal lobe (12 yr, *IDH1* and *TP53* mutations; no BRAF V600E mutation)	Adenocarcinoma of the colon well to moderately differentiated, grade 2 of 4 (13 yr)	—
	12	Female	*MSH6* homozygous (c.3701_3706dupAACTTG)	+	Astrocytoma WHO grade II, infiltrative with only mild cytologic pleomorphism: left frontal lobe (9 yr, *TP53* and *ATRX* mutations; no *IDH1*, BRAF V600E, or histone H3 K27M mutations) Anaplastic astrocytoma *NOS*, WHO grade III: right parietal lobe (11 yr, *TP53* and *ATRX* mutations; no *IDH1*, BRAF V600E,or histone H3 K27M mutations)	—	—
10	13	Female	*MSH6* homozygous (c.2057G>A p.G688D)	+	Glioblastoma WHO grade IV, diffusely infiltrating hypercellular astrocytic tumor with moderate to marked nuclear pleomorphism: right frontal lobe (9 yr, *TP53* mutation; no *IDH*, histone H3 K27M, BRAF V600E, or *ATRX* mutations)	—	—
11	14	Female	*MSH6* homozygous (c.3991C>A p.R1331*)	+	Medulloblastoma WHO grade IV, large-cell/anaplastic, *SHH*-activated (5 yr, *POLE NF1 RB1 ATRX ASXL1 IDH BCORL1 TP53* mutations)	—	—

Note:—indicates absent; +, present; NA, not applicable; DPIG, diffuse intrinsic pontine glioma; ALL, acute lymphoblastic leukemia.