

**Table S1.** Preoperative and postoperative evaluation of the repeated surgery of 42 patients

Patient No.	Gender/ Age (yrs)	1st Pathology	MRI	HDDST	BIPSS	Interval between 1 <sup>st</sup> &2 <sup>nd</sup> surgery (months)	Remission	2nd Pathology	2nd Post-OP Follow-up (months)
Recurrent CD									
#1	F/66	NA	+	+	+	216	R	PA-	13
#2	F/74	NA	+	+	+	199	R	PA+	48
#3	F/70	PA	+	-	NP	195	R	PA+	1
#4	F/52	NA	-	+	+	151	R	PA+	38
#5	M/30	PA	-	+	+	90	R	PA+	147
#6	F/61	PA+	+	+	NP	116	R	PA+	82
#7	M/23	PA+	-	+	NP	25	N	PA+	26
#8	F/54	PA	-	+	+	103	R	PA+	46
#9	F/49	PA+	-	+	NP	87	N	-	68
#10	F/48	NA	+	+	NP	112	R	PA+	43
#11	F/57	PA+	-	+	NP	69	R	PA	64
#12	F/40	PA-	+	+	+	91	N	-	45
#13	M/35	PA+	+	+	+	32	R	NA	1
#14	F/45	PA+	+	+	NP	57	R	PA+	74
#15	F/61	PA-	+	+	NP	87	R	PA+	1
#16	F/25	PA-	-	-	+	24	R	PA+	91
#17	F/70	hyperplasia	+	+	+	7	R	-	107
#18	F/55	PA+	-	+	NP	14	R	PA+	32
#19	F/38	PA+	+	+	NP	18	R	-	7
#20	F/33	PA+	+	+	NP	39	N	hyperplasia	54
#21	F/34	PA+	-	NP	NP	10	N	-	29
#22	F/34	PA+	+	+	NP	65	N	-	6
#23	F/48	PA+	+	+	NP	75	R	PA+	5
#24	F/46	PA+	+	+	+	92	R	-	15
#25	F/66	PA+	+	+	NP	48	R	PA+	1
#26	F/54	PA+	+	+	NP	168	R	PA+	1
#27	F/38	-	+	+	+	50	R	PA+	17
Persisting CD									
#28	M/28	PA+	+	+	NP	37	R	PA-	4
#29	M/33	NA	-	-	+	43	R	PA+	1
#30	F/45	PA-	+	-	NP	37	N	PA+	32
#31	M/41	NA	+	+	+	61	R	-	73
#32	M/18	NA	+	+	NP	1	R	PA+	1
#33	F/45	PA+	-	+	NP	20	N	PA+	2
#34	M/28	PA+	-	+	NP	6	N	PA-	151
#35	F/29	PA-	+	+	+	43	N	-	4
#36	F/46	NA	+	+	+	6	R	PA+	6
#37	F/35	PA+	+	+	NP	5	R	PA+	35
#38	F/19	PA+	+	+	NP	8	N	PA+	12
#39	F/51	PA+	+	+	NP	7	N	PA+	16
#40	M/45	PA	-	+	-	24	N	-	4

#41	F/22	PA+	+	+	+	4	R	PA+	5
#42	F/39	-	+	+	+	3	R	-	3

---

Age, age at 2st operation; Pathology PA+, ACTH-positive staining pituitary adenoma; Pathology PA-, ACTH-negative staining pituitary adenoma; Pathology PA, pituitary adenoma without available immunohistochemical staining result; Pathology -, no pathological evidence of pituitary adenoma; Pathology NA, no available pathological record; MRI +, adenoma identified, MRI -, no adenoma identified; LDDST/HDDST -/+, suppression of both serum cortisol and 24h urinal free cortisol after high-dose dexamethasone but no after lose-dose; HDDST -/-, failure of suppression after either high-dose or low-dose dexamethasone; BIPSS +, central to peripheral ACTH gradients  $\geq 2$  without CRH/vasopressin stimulation; BIPSS -, central to peripheral ACTH gradients  $< 2$  without CRH/vasopressin stimulation; Remission R, remission; Remission N, not remission; NP, not performed.