

**Appendix 1** to Kim SJ, Roh D, Jung HH, et al. A study of novel bilateral thermal capsulotomy with focused ultrasound for treatment-refractory obsessive-compulsive disorder: 2-year follow-up. *J Psychiatry Neurosci* 2018.

DOI: 10.1503/jpn.170188

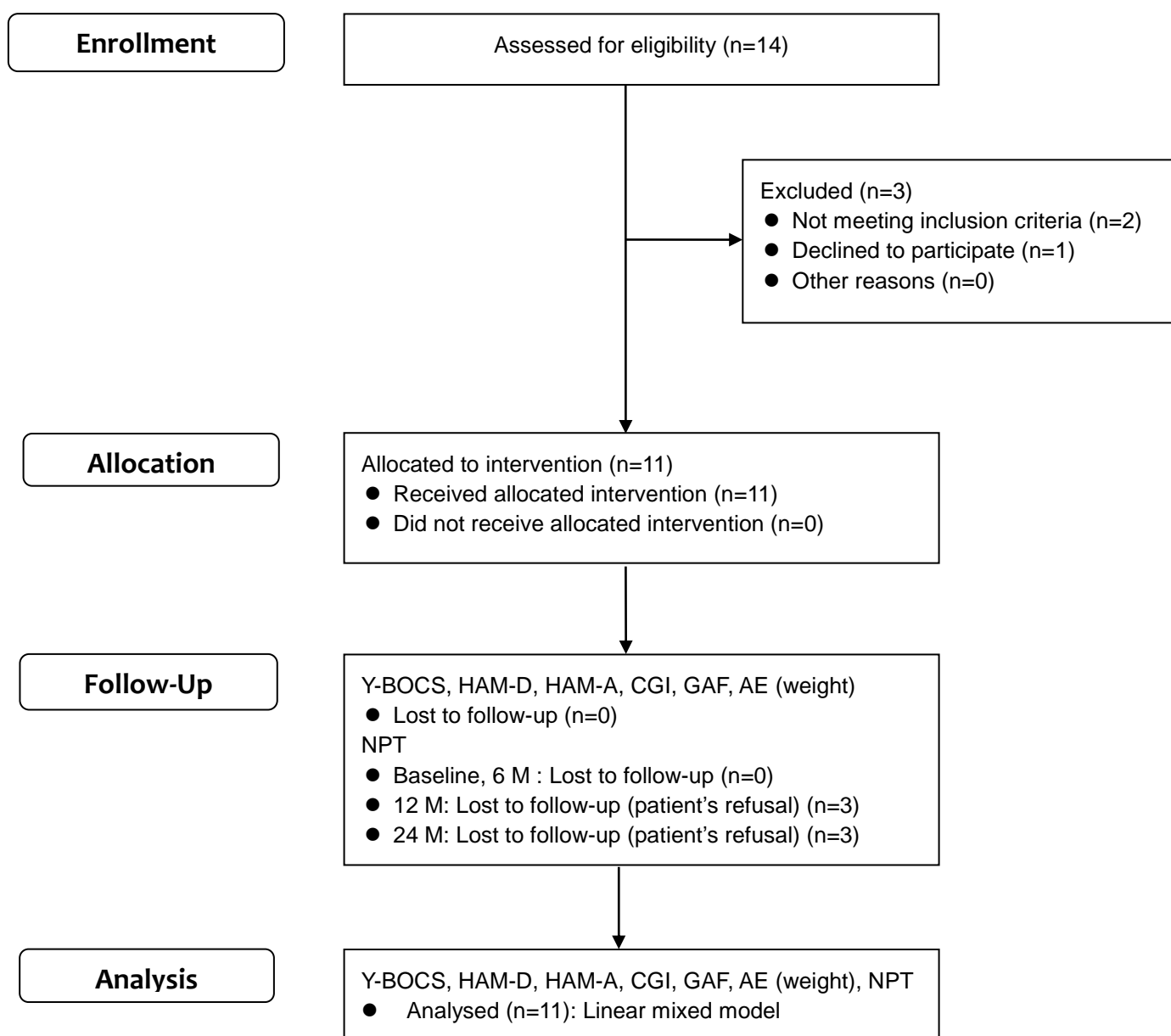
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**Supplementary Table S1. The number, temperature, total duration of sonication, skull density ratio, and lesion size of the patients**

Patient number	Number of sonication	Mean/maximal temperature (°C)		Total duration (minutes)	Skull density ratio	Lesion size (diameter, mm)	
		Right	Left			Right	Left
1	26	60 / 64	51 / 54	222	0.48	69.90	12.10
2	33	52 / 54	51 / 53	328	0.34	37.40	18.40
3	36	51 / 53	52 / 54	322	0.29	6.20	29.60
4	23	56 / 59	55 / 58	180	0.64	142.70	133.80
5	23	60 / 64	53 / 58	167	0.43	70.80	55.70
6	28	52 / 54	53 / 56	268	0.42	16.40	12.10
7	27	60 / 65	54 / 57	167	0.61	121.90	94.30
8	37	53 / 57	52 / 54	324	0.45	66.50	19.90
9	26	57 / 62	55 / 58	128	0.63	48.60	59.20
10	36	56 / 59	56 / 58	178	0.64	59.60	40.30
11	27	51 / 53	49 / 51	185	0.41	13.40	1.50

**Supplementary Figure S1. CONSORT flow diagram**



Abbreviations: Y-BOCS=Yale-Brown Obsessive-Compulsive Disorder Scale, HAM-D=Hamilton Rating Scale for Depression, HAM-A=Hamilton Rating Scale for Anxiety, CGI=Clinical Global Impression, GAF=Global Assessment of Functioning, AE=Adverse Event, NPT=Neuropsychological Test, M=Months

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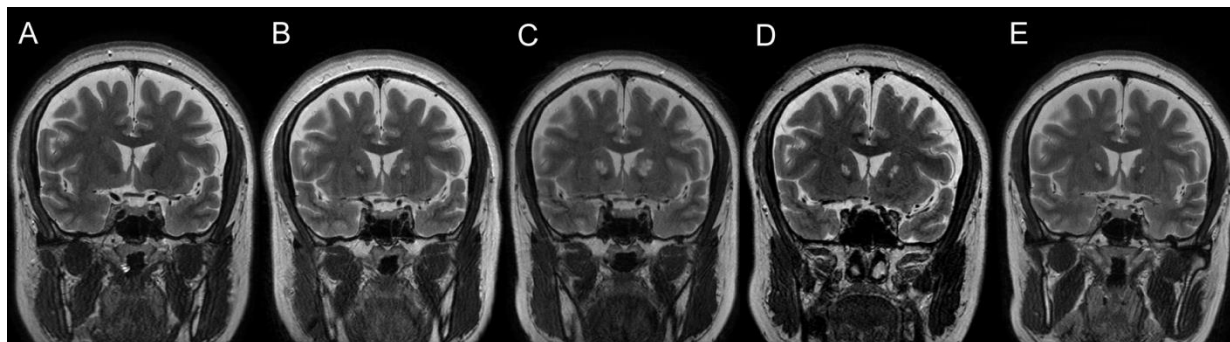
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### **Supplementary Figure S2. T2-weighted coronal 3T-MRI images before and after MRgFUS**

These are sequential T2-weighted coronal images before and after bilateral thermal lesioning of the anterior limb of internal capsulotomy (ALIC) with MRI guided focused ultrasound (MRgFUS) in patient 10. (A) Baseline (pre-MRgFUS) (B) Immediately after MRgFUS (C) 1-week follow-up (D) 1-month follow-up (E) 6-month follow-up. Distinct lesions, which had an elliptical shape along the bilateral internal capsule, were maintained until the 6-month follow-up. The lesions were slightly enhanced immediately after the procedure, perhaps as a result of the opening of the blood brain barrier. At one week after the procedure, the lesions were more well-defined in shape and the enhancement disappeared. In addition, mild edema surrounding the lesion was observed. At one month, the lesion appeared to be more clearly demarcated and the edema had completely disappeared. At six months, the lesions appeared smaller in size with a hyper-intense signal. Edemas or any type of tissue reactions around lesions were not observed. Pattern of change in the follow-up MRI was similar in all patients, and also similar to that in thalamotomy with MRgFUS (Wintermark M, Druzgal J, Huss DS, et al. Imaging findings in MR imaging-guided focused ultrasound treatment for patients with essential tremor. *AJNR Am J Neuroradiol* 2014;35:891-896).



**Supplementary Figure S3. Individual's improvement in clinical outcomes and global functioning**

Panel A, B, C, and D show the changes of individual's (A) Yale-Brown Obsessive-Compulsive Symptom Scale (Y-BOCS), (B) Hamilton Rating Scale for Depression (HAM-D), (C) Hamilton Rating Scale for Anxiety (HAM-A), and (D) Global Assessment of Functioning (GAF) respectively during the 24-months follow-up period after MRgFUS. Higher scores of Y-BOCS, HAM-D, and HAM-A indicate more severe symptoms. Higher GAF scores indicate better global psychosocial and occupational functioning. W denotes week and M month(s)

