

Table S1: Search strategies across the four electronic databases as of 13 January 2022

OVID Medline 78	
No.	Search term
PD concept	
1	exp Parkinson Disease/ or Parkinson disease.tw. or PD.tw.
FUS neuromodulation concept	
2	exp Ultrasonic Waves/ or exp Ultrasonic Therapy/ or ultrasound.tw. or focused ultrasound.tw. or LILFU.tw. or low intensity, low frequency ultrasound.tw.
3	(stimulation or neuromodulation).tw.
4	2 and 3
Combined concept	
5	1 and 4
OVID Embase 264	
No.	Search term

PD concept	
1	exp Parkinson Disease/ or Parkinson disease.tw. or PD.tw.
FUS neuromodulation concept	
2	exp focused ultrasound surgery/ or exp focused ultrasound therapy/ or exp low intensity focused ultrasound/ or exp low intensity pulsed ultrasound/ or exp low intensity ultrasound/ or exp MR-guided focused ultrasound/ or exp pulsed ultrasound/ or exp transcranial magnetic resonance guided focused ultrasound/ or exp ultrasound/ or exp or ultrasound.tw. or focused ultrasound.tw. or LILFU.tw. or low intensity, low frequency ultrasound.tw.
3	exp neuromodulation/ or (stimulation or neuromodulation).tw.
4	2 and 3
Combined concepts	
5	1 and 4
Web of Science 25	

1	Parkinson Disease (All Fields) and focused ultrasound (All Fields) and neuromodulation (All Fields)
Cochrane Central Register of Controlled Trials 6	
No.	Search term
PD concept	
1	MeSH descriptor: [Parkinson Disease] explode all trees
2	(Parkinson disease):ti,ab,kw
3	#1 OR #2
FUS neuromodulation concept	
4	MeSH descriptor: [Ultrasonic Therapy] explode all trees
5	(low intensity focused ultrasound):ti,ab,kw
6	(focused ultrasound):ti,ab,kw
7	(LILFU):ti,ab,kw
8	#4 or #5 or #6 or #7
9	(neuromodulation):ti,ab,kw
10	(stimulation):ti,ab,kw

11	#9 or #10
12	#8 and #11
Combined concepts	
13	#3 and #12

Table S2: Inclusion and exclusion criteria used to assess eligibility of studies.

Inclusion criteria	Exclusion criteria
<ul style="list-style-type: none">• Any published primary studies (preclinical or clinical using quantitative, qualitative or mixed methodology), reporting original data• Studies on FUS in PD	<ul style="list-style-type: none">• Non-primary studies: narrative reviews, systematic reviews and meta-analysis, editorials, commentaries, opinion papers, letters, education papers, conference abstracts, protocols, reports, theses or book chapters• Studies not reporting data on FUS in PD at all• Studies reporting data on FUS but not specific to PD• Overlapping data