

**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

<b>PD concept</b>	
1	exp Parkinson Disease/ or Parkinson disease.tw. or PD.tw.
<b>FUS neuromodulation concept</b>	
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
<b>Combined concepts</b>	
5	1 and 4
<b>Web of Science 25</b>	

1	Parkinson Disease (All Fields) and focused ultrasound (All Fields) and neuromodulation (All Fields)
<b>Cochrane Central Register of Controlled Trials 6</b>	
No.	Search term
<b>PD concept</b>	
1	MeSH descriptor: [Parkinson Disease] explode all trees
2	(Parkinson disease):ti,ab,kw
3	#1 OR #2
<b>FUS neuromodulation concept</b>	
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
<b>Combined concepts</b>	
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"><li>• Any published primary studies (preclinical or clinical using quantitative, qualitative or mixed methodology), reporting original data</li><li>• Studies on FUS in PD</li></ul>	<ul style="list-style-type: none"><li>• 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</li><li>• Studies not reporting data on FUS in PD at all</li><li>• Studies reporting data on FUS but not specific to PD</li><li>• Overlapping data</li></ul>

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