

ONLINE MATERIAL

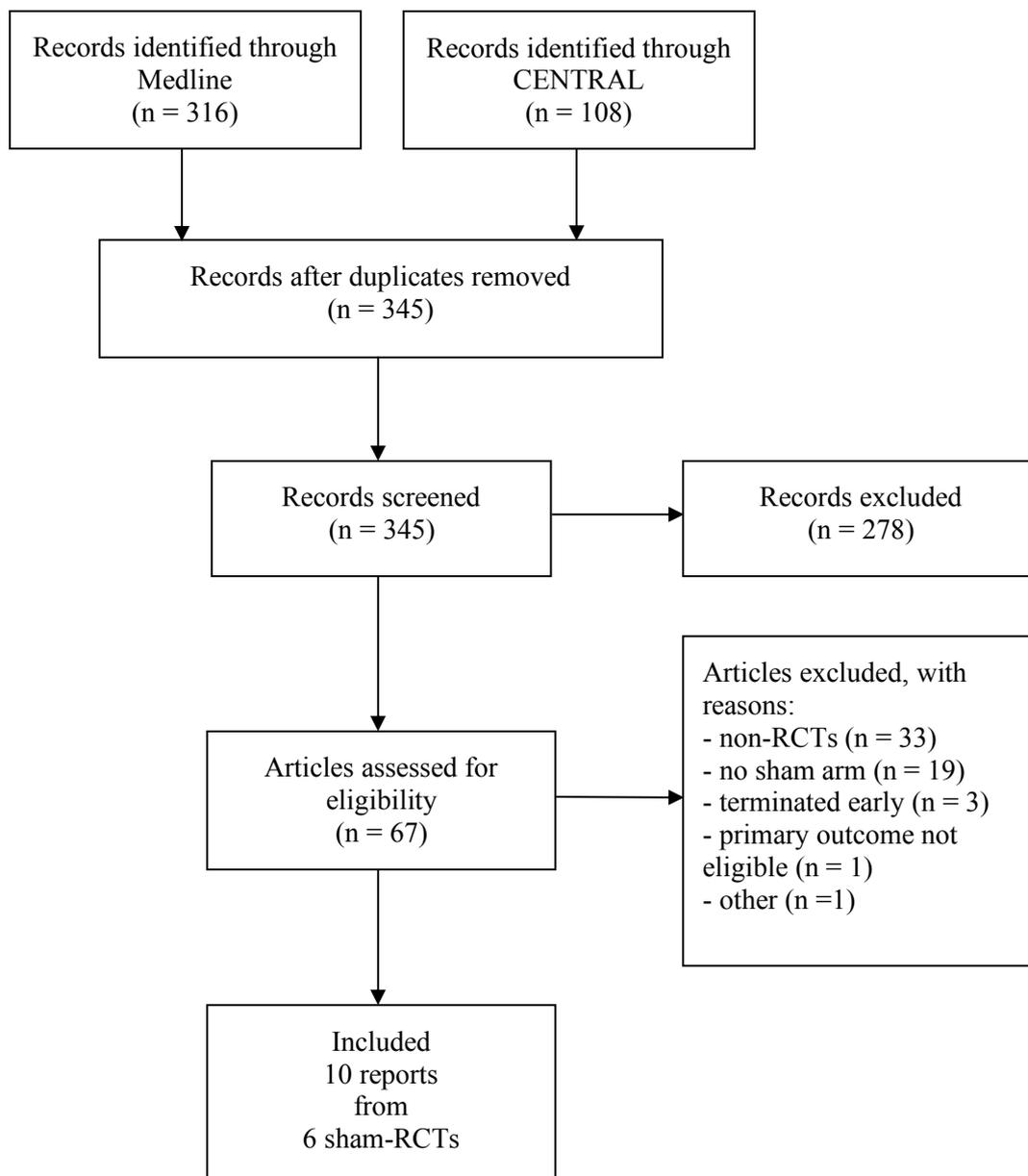
Online Box 1: Medline and CENTRAL search algorithm.

Query	Results
Medline	
#1 ((renal) OR (kidney)) OR ("renal artery"[MeSH Major Topic])	1100395
#2 (((("denervation"[MeSH Major Topic]) OR (denervation)) OR (ablation)) OR (sympathectomy))	187380
#3 (catheter) AND (denervation)	3340
#4 #1 AND #2	10372
#5 #3 OR #4	12742
#6 (hypertens*) OR ("hypertension"[MeSH Major Topic])	520549
#7 #5 AND #6	3086
#8 (randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[tiab] OR placebo[tiab] OR sham[all] OR randomly[tiab] OR trial[tiab] OR groups[tiab] NOT (animals [mh] NOT humans [mh]))	2511832
#9 #7 AND #8	450
#10 #9 NOT review[pt]	316
CENTRAL	
#1 renal OR kidney	83632
#2 denervation OR ablation OR sympathectomy	9370
#3 catheter AND denervation	271
#4 MeSH descriptor: [Hypertension] explode all trees	16969
#5 hypertens*	66501
#6 #1 AND #2	852
#7 #6 OR #3	903
#8 #4 OR #5	66501

#9	#7 AND #8	503
#10	random*	1097795
#11	MeSH descriptor: [Randomized Controlled Trial] explode all trees	125
#12	#10 OR #11	1097795
#13	#9 AND #12	373
#14	sham	16792
#15	placebo	294952
#16	MeSH descriptor: [Placebos] explode all trees	23696
#17	#14 OR #15 OR #16	315084
#18	#13 AND #17	129
#19	#18 in Trials	108

*search on December 9th, 2019

Online Figure: Study selection flowchart.



Online Table 1: Sample-size recalculations in individual sham RCTs in Stata. Results are shown in Table 2, column 6.

Trial	Coding
SYMPPLICITY HTN-3 [19, 20]	power twomeans 5, diff(15) sd(25) power(0.95) alpha(0.025) onesided nratio(2)
Desch S., et al. [21]	power twomeans 3, diff(6) sd(8) power(0.80) alpha(0.05)
ReSET [22]	power twomeans 5, diff(10) sd(13) power(0.80) alpha(0.05)
SPYRAL HTN-OFF MED [23, 24]	Not prospectively powered. Proof-of-concept trials.
SPYRAL HTN-ON MED [23, 25]	Not prospectively powered. Proof-of-concept trials.
RADIANCE-HTN SOLO [26, 27]	power twomeans 9.9, diff(6) sd(12) power(0.80) alpha(0.05)

Online Table 2: Mean changes in each group of intervention and the difference between the groups for the efficacy outcome of 24-hour ambulatory systolic blood pressure as given in individual trials.

Trials	Number of patients*	Follow up	Mean change from baseline to follow-up in 24-hour ambulatory SBP (mmHg)		
	Sample size		Active arm	Sham arm	Difference in change between 2 arms
SYMPPLICITY HTN-3 [19, 20]	535	6	-6.75±15.11	-4.79±17.25	-1.96 (-4.97 to 1.06)
Desch S., et al. [21]	71	6	-7.0 (-10.8 to -3.2)	-3.5 (-6.7 to -0.2)	not reported
ReSET [22]	69	6	-3.7±16.4	-2.6±12.8	not reported
SPYRAL HTN-OFF MED [23, 24]	80	3	-5.5 (-9.1 to -2.0)	-0.5 (-3.9 to 2.9)	-5.0 (-9.9 to -0.2)
SPYRAL HTN-ON MED [23, 25]	80	6	-9.0 (-12.7 to -5.3)	-1.6 (-5.2 to 2.0)	-7.4 (-12.5 to -2.3)

RADIANCE-HTN SOLO [26, 27]	146	6	-16.5±11.8	-14.9±12.8	-2.4 (-6.0 to 1.1) (unadj) & -4.3 (-7.7 to -1.0) (adj)
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Data are presented as absolute numbers, mean±standard deviation, or mean (95% confidence interval) as provided in individual trials.

*As participants assigned in their original intervention groups

Abbreviations: SBP, systolic blood pressure; CI, confidence interval.