Supplementary Table 1 Search Strategy

S.no.	Searches	Results
1	exp Pancreatic Neoplasms/	239088
2	((pancreas or pancreatic or "islet cell*") adj5 (cancer* or carcinoma* or metastas* or tumor* or tumour* or neoplas* or adenoma* or incidentaloma* or malignan*)).ti,ab.	212541
3	1 or 2	295128
4	(((((endoscop* adj3 (ultrasonic or ultrasonograph* or ultrasound)) or echoendoscop* or endosonograph* or EUS) adj3 injection*) or "EUS FNI" or "Intra tumoral injection*" or "Intratumoral injection*").ti,ab.	7547
5	3 and 4	575
6	limit 5 to english language	539
7	((control* adj3 study) or (control* adj3 trial) or (randomized adj3 study) or (randomized adj3 trial) or (randomised adj3 study) or (randomised adj3 trial) or "pragmatic clinical trial" or (random* adj1 allocat*) or (doubl* adj blind*) or (doubl* adj mask*) or (singl* adj blind*) or (singl* adj mask*) or (tripl* adj blind*) or (tripl* adj mask*) or (trebl* adj blind*) or (trebl* adj mask*) or "latin square" or placebo* or nocebo* or random* or "clinical study" or "clinical trial" or (("phase 0" or "phase 1" or "phase I" or "phase 2" or "phase II" or "phase 3" or "phase III" or "phase 4" or "phase IV") adj5 (trial or study)) or study or trial).mp,pt.	30911670
8	6 and 7	421
9	limit 8 to (conference abstract or editorial or erratum or note or addresses or autobiography or bibliography or biography or blogs or comment or dictionary or directory or interactive tutorial or interview or lectures or legal cases or legislation or news or newspaper article or overall or patient education handout or periodical index or portraits or published erratum or video-audio media or webcasts) [Limit not valid in CCTR,Embase,Ovid MEDLINE(R),Ovid MEDLINE(R) Daily Update,Ovid MEDLINE(R) PubMed not MEDLINE,Ovid MEDLINE(R) In-Process,Ovid MEDLINE(R) Publisher; records were retained]	147
10	8 not 9	274
11	remove duplicates from 10	172
12	from 11 keep 8, 13, 19, 25-29, 34-35, 38...	101

Database(s): EBM Reviews - Cochrane Central Register of Controlled Trials June 2021, Embase 1974 to 2021 July 13 , Ovid MEDLINE(R) and Epub Ahead of Print, In-Process, In-Data-Review & Other Non-Indexed Citations and Daily 1946 to July 13, 2021

Supplementary Table 2 Quality assessment Pre-Post Studies

Criteria	[28]	[51]	[23]	[17]	[9]	[26]	[22]	[40]	[42]	[32]	[36]
Was the study question or objective clearly stated?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Were eligibility/selection criteria for the study population prespecified and clearly described?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Were the participants in the study representative of those who would be eligible for the test/service/intervention in the general or clinical population of interest?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Were all eligible participants that met the prespecified entry criteria enrolled?	Y	Y	NR	Y	NR	NR	NR	NR	Y	NR	NR
Was the sample size sufficiently large to provide confidence in the findings?	N	N	N	N	N	N	N	N	N	N	N
Was the test/service/intervention clearly described and delivered consistently across the study	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y

population?

Were the outcome measures prespecified, clearly defined, valid, reliable, and assessed consistently across all study participants?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Were the people assessing the outcomes blinded to the participants' exposures/interventions?	N	N	N	N	N	N	N	N	N	N	N
Was the loss to follow-up after baseline 20% or less? Were those lost to follow-up accounted for in the analysis?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Did the statistical methods examine changes in outcome measures from before to after the intervention? Were statistical tests done that provided p values for the pre-to-post changes?	N	N	Y	N	N	Y	N	N	N	N	N

Were outcome measures of interest taken multiple times before the intervention and multiple times after the intervention (i.e., did they use an interrupted time-series design)?	N	Y	N	Y	Y	Y	N	Y	N	N	Y
If the intervention was conducted at a group level (e.g., a whole hospital, a community, etc.) did the statistical analysis take into account the use of individual-level data to determine effects at the group level?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Study Quality	G	G	G	G	G	G	F	G	G	F	G

Y: Yes; N: No; NR: Not Reported; NA: Not Applicable; G: Good; F: Fair

Supplementary Table 3 Quality assessment Controlled Studies

CRITERIA	[25]	[34]
Was the study described as randomized, a randomized trial, a randomized clinical trial, or an RCT	NA	Y
Was the method of randomization adequate (i.e., use of randomly generated assignment)?	NA	NR
Was the treatment allocation concealed (so that assignments could not be predicted)?	NA	NR
Were study participants and providers blinded to treatment group assignment?	NA	N
Were the people assessing the outcomes blinded to the participants' group assignments?	NA	Y
Were the groups similar at baseline on important characteristics that could affect outcomes (e.g., demographics, risk factors, co-morbid conditions)?	Y	Y
Was the overall drop-out rate from the study at endpoint 20% or lower of the number allocated to treatment?	Y	Y
Was the differential drop-out rate (between treatment groups) at endpoint 15 percentage points or lower?	Y	Y
Was there high adherence to the intervention protocols for each treatment group?	Y	Y
Were other interventions avoided or similar in the groups (e.g., similar background treatments)?	Y	Y
Were outcomes assessed using valid and reliable measures, implemented consistently across all study participants?	Y	Y
Did the authors report that the sample size was sufficiently large to be able to detect a difference in the main outcome between groups with at least 80% power?	N	Y

Were outcomes reported or subgroups analyzed prespecified (i.e., identified before analyses were conducted)?	Y	Y
Were all randomized participants analyzed in the group to which they were originally assigned, i.e., did they use an intention-to-treat analysis?	NA	Y
Study Quality	Good	Good

Y: Yes; N: No; NR: Not Reported; NA: Not Applicable