## **Supplementary Tables and Figures**

## Supplementary Table 1 Advanced Pubmed Search Protocol for Included ERFA vs PRFA vs Biliary Stenting Alone Studies

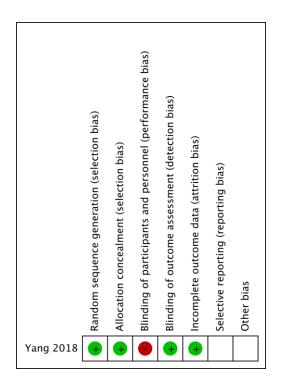
Search number	Query	Filters	Search Details	Results
15	endoscopic radiofrequency ablation AND cholangiocarcinoma NOT photodynamic thera	Review, from 2011 - 2020	((("endoscope s"[All Fi	11
14	endoscopic radiofrequency ablation AND cholangiocarcinoma NOT photodynamic thera	Clinical Trial, Randomized Controlle	((("endoscope s"[A <b>ll</b> Fi	16
13	endoscopic radiofrequency ablation AND cholangiocarcinoma NOT photodynamic thera	Clinical Trial, Review, from 2011 -:	(((("endoscope s"[A <b>ll</b> Fi	16
12	endoscopic radiofrequency ablation AND cholangiocarcinoma NOT photodynamic thera	from 2011 - 2020	((("endoscope s"[All Fi	43
11	endoscopic radiofrequency ablation AND cholangiocarcinoma NOT photodynamic thera	from 2011 - 2022	((("endoscope s"[All Fi	52
10	endoscopic radiofrequency ablation AND cholangiocarcinoma NOT photodynamic thera	ру	(("endoscope s"[All Fie	60
9	percutaneous radiofrequency ablation AND cholangiocarcinoma NOT photodynamic the	from 2011 - 2020	((("percutaneous"[A <b>ll</b> F	56
8	percutaneous radiofrequency ablation AND cholangiocarcinoma NOT photodynamic the	from 2011 - 2022	((("percutaneous"[A <b>ll</b> F	62
7	percutaneous radiofrequency ablation AND cholangiocarcinoma NOT photodynamic the	erapy	(("percutaneous"[All Fi	87
6	percutaneous radiofrequency ablation AND cholangiocarcinoma	from 2011 - 2020	(("percutaneous"[All Fi	62
5	percutaneous radiofrequency ablation AND cholangiocarcinoma	from 2011 - 2022	(("percutaneous"[All Fi	69
4	percutaneous radiofrequency ablation AND cholangiocarcinoma		("percutaneous"[All Fie	94
3	endoscopic radiofrequency ablation AND cholangiocarcinoma	from 2011 - 2020	(("endoscope s"[All Fie	60
2	endoscopic radiofrequency ablation AND cholangiocarcinoma	from 2011 - 2022	(("endoscope s"[All Fie	73
1	endoscopic radiofrequency ablation AND cholangiocarcinoma		("endoscope s"[All Fiel	83

## Supplementary Table 2 Advanced Pubmed Search Protocol for Included endoscopic radiofrequency ablation vs photodynamic therapy

Search number	Query	Filters	Search Details	Results
12	cholangiocarcinoma AND endoscopic radiofrequency ablation	Clinical Trial, Randomized Controlle	(("cholangiocarcinoma	6
11	endoscopic radiofrequency ablation AND photodynamic therapy AND	Clinical Trial, Randomized Controlle	(("endoscope s"[All Fie	13
10	endoscopic radiofrequency ablation AND photodynamic therapy AND	Randomized Controlled Trial, Revie	(("endoscope s"[All Fie	13
9	endoscopic radiofrequency ablation AND photodynamic therapy AND	Review, from 2011 - 2020	(("endoscope s"[All Fie	13
8	endoscopic radiofrequency ablation AND photodynamic therapy AND	Review, from 2011 - 2022	(("endoscope s"[All Fie	16
7	endoscopic radiofrequency ablation AND photodynamic therapy AND	Review	(("endoscope s"[All Fie	18
6	endoscopic radiofrequency ablation AND photodynamic therapy	Review, from 2011 - 2020	(("endoscope s"[All Fie	66
5	cholangiocarcinoma AND endoscopic radiofrequency ablation	from 2011 - 2022	(("cholangiocarcinoma	73
4	cholangiocarcinoma AND endoscopic radiofrequency ablation		("cholangiocarcinoma"	83
3	endoscopic radiofrequency ablation AND photodynamic therapy	from 2011 - 2020	(("endoscope s"[All Fie	100
2	endoscopic radiofrequency ablation AND photodynamic therapy	from 2011 - 2022	(("endoscope s"[All Fie	107
1	endoscopic radiofrequency ablation AND photodynamic therapy		("endoscope s"[All Fiel	164

## Supplementary Table 3 Newcastle-Ottawa Scale Scores for Retrospective Case-control Studies

Study	Selection			Comparability	Exposure			Total Score of Quality	
Author, year	Is Case Definition Adequate?	Representitiveness of Cases	Selection of Controls	Definition of Controls	Comparability of Cases and Controls	Ascertainment of Exposure	Same method of ascertainment for Cases and Controls	Non-Response Rate	
Strand et al 2014	1	1	1	1	2	1	1	1	9
Schmidt et al. 2016	1	1	0	1	2	1	1	1	8
Wu et al. 2017	1	1	1	1	0	1	1	1	7
Cui at al. 2017	1	1	1	1	0	1	1	1	7
Bokeymayer et al. 2019	1	1	1	1	2	1	1	1	9



Supplementary Figure 1 Cochrane Risk of Bias Assessment for Randomized Controlled Trials.