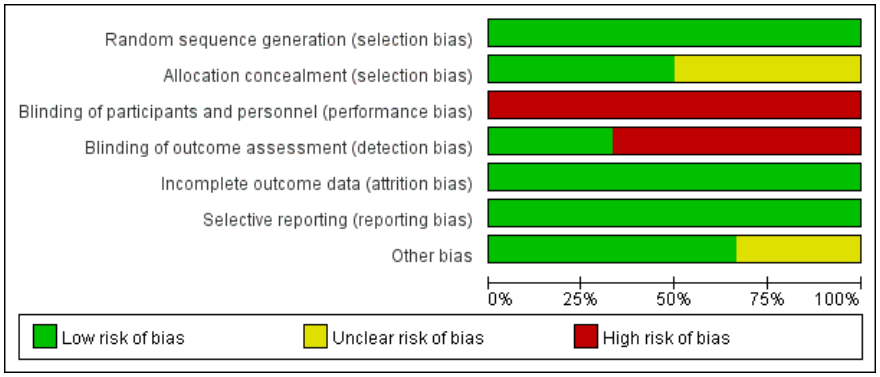
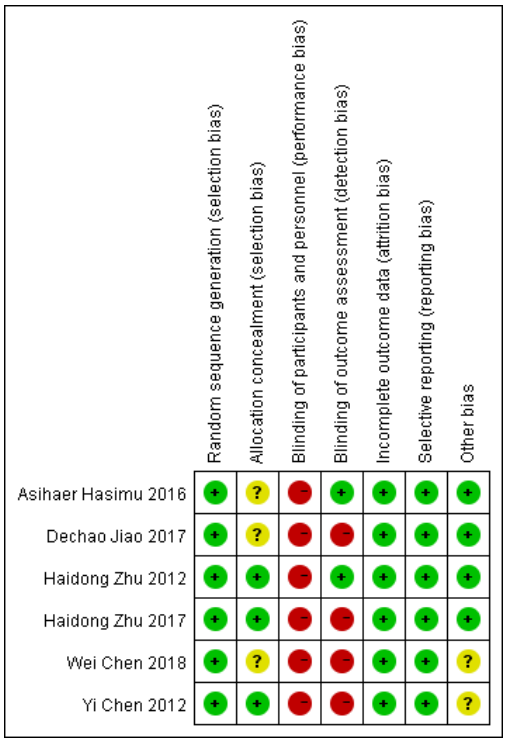
Supplementary Figures



Supplementary Figure 1 Risk of bias graph: Assessment using Cochrane Collaboration tool in the randomized controlled trial included in the meta-analysis.



Supplementary Figure 2 Risk of bias summary: Assessment using Cochrane Collaboration tool in the randomized controlled trial included in the meta-analysis.

Supplementary Table 1 PubMed, EMBASE, Cochrane, Web of Science, clinicaltrials.gov Search Strategy

Database	Step	Strategy	Outcome
PubMed	1	"^{125}I seed" or "brachytherapy" (All Fields)	25332
	2	"biliary stent" (All Fields)	6744
	3	"malignant obstructive jaundice" or "malignant biliary obstruction" (All Fields)	7492
	4	Step 1, step 2 and step 3	60
EMBASE	1	"^{125}I seed" or "brachytherapy" (All Fields)	42288
	2	"biliary stent" (All Fields)	15049
	3	"malignant obstructive jaundice" or "malignant biliary obstruction" (All Fields)	5436
	4	Step 1, step 2 and step 3	81
Cochrane	1	"^{125}I seed": ti, ab, kw or "brachytherapy": ti, ab, kw	2109
	2	"biliary stent": ti, ab, kw	88
	3	"malignant obstructive jaundice": ti, ab, kw or "malignant biliary obstruction": ti, ab, kw	455
	4	Step 1, step 2 and step 3	20
Web of Science	1	"^{125}I seed" or "brachytherapy" (All Fields)	28705
	2	"biliary stent" (All Fields)	5015
	3	"malignant obstructive jaundice" or "malignant biliary obstruction" (All Fields)	3408
	4	Step 1, step 2 and step 3	53
clinicaltrials.gov	1	"malignant obstructive jaundice" (Completed)	2
	2	"malignant biliary obstruction" (Completed)	23
	3	Step 1 and Step 2	25

Supplementary Table 2 Primary outcomes of studies included in meta-analysis

Ref.	Intervention	Stent patency (mo)	Patient survival (mo)
Chen *et al*[25], 2012	^{125}I seed group	Mean: 10.2	-
	Control group	Mean: 7.2	-
Hasimu *et al*[13], 2017	^{125}I seed group	Median: 6.37	Median: 7.42
	Control group	Median: 2.94	Median: 4.64
Chen *et al*[26], 2018	^{125}I seed group	Median: 8.1	Median: 9.33
	Control group	Median: 3.9	Median: 4.63
Jiao *et al*[14], 2017	^{125}I seed group	Median ± range: 12.27 ± 1.41	Median ± range: 11.83 ± 2.38
	Control group	Median ± range: 7.4 ± 1.16	Median ± range: 9.03 ± 0.97
Pan *et al*[15], 2020	^{125}I seed group	Mean ± SD: 7.72 ± 8.55	Mean ± SD: 10.35 ± 11.02
	Control group	Mean ± SD: 3.68 ± 4.02	Mean ± SD: 5.77 ± 7.31
Wang *et al*[24], 2017	^{125}I seed group	Mean: 9.84	Mean: 10.2
	Control group	Mean: 5.57	Mean: 5.4
Zhu *et al*[20], 2012	^{125}I seed group	Median: 7.4; Mean: 8.03	Median: 7.4; Mean: 8.03
	Control group	Median: 2.5; Mean: 3.36	Median: 2.5; Mean: 3.36
Zhou *et al*[22], 2019	^{125}I seed group	Median: 6.47	Median: 6.47
	Control group	Median: 2.87	Median: 3.2
Zhou *et al*[23], 2020	^{125}I seed group	Median ± range: 12.9 ± 0.93	Median ± range: 5.9 ± 0.6
	Control group	Median ± range: 4.03 ± 0.3	Median ± range: 4.1 ± 0.68
Zhu *et al*[21], 2018	^{125}I seed group	-	Median: 6.73
	Control group	-	Median: 3.47

Supplementary Table 3 Secondary outcomes of studies included in meta-analysis

Ref.	Intervention	Sample size	Hemobilia	pancreatitis	cholangitis	pain	Post-treatment reduced level of TBIL (μmol)	Post-treatment reduced level of DBIL (μmol)	Post-treatment reduced level of ALT (μmol)	Post-treatment reduced level of AST (μmol)
Chen *et al*[25], 2012	^{125}I seed group	17	1	-	3	-	45.4 ± 49.89	-	26.8 ± 37.42	-
	Control group	17	2	-	2	-	48.5 ± 40.52	-	25.6 ± 39.24	-
Hasimu *et al*[13], 2017	^{125}I seed group	28	-	-	-	3	262.6 ± 139.32	162.19 ± 93.81	85.6 ± 58.5	61.1 ± 48.9
	Control group	27	-	-	-	4	264.65 ± 117.02	159.85 ± 68.76	86.8 ± 74.9	73.5 ± 77.4
Chen *et al*[26], 2018	^{125}I seed group	13	1	1	-	1	265.5 ± 104.04	211.5 ± 42.55	118.6 ± 24.97	-
	Control group	19	2	1	-	2	266.7 ± 89.94	200.4 ± 38.54	110.6 ± 22.56	-
Jiao *et al*[14], 2017	^{125}I seed group	31	4	0	11	-	166.3 ± 46.41	152.7 ± 43.95	54.7 ± 19.09	-
	Control group	30	1	1	7	-	135.4 ± 47.37	125.5 ± 43.48	39.2 ± 30.71	-
Pan *et al*[15], 2020	^{125}I seed group	30	0	-	-	-	177.72 ± 167.80	-	36.20 ± 58.90	23.10 ± 62.79
	Control group	54	1	-	-	-	156.41 ± 149.48	-	47.19 ± 82.95	37.52 ± 71.11
Wang *et al*[24], 2017	^{125}I seed group	24	-	-	-	-	292.24 ± 90.03	147.29 ± 104.99	-	-
	Control group	26	-	-	-	-	289.77 ± 97.46	138.6 ± 100.85	-	-
Zhu *et al*[20], 2012	^{125}I seed group	12	0	-	-	1	256.15 ± 201.82	73.25 ± 90.54	-	-
	Control group	11	2	-	-	2	101.6 ± 279.34	16.7 ± 87.23	-	-
Zhou *et al*[22], 2019	^{125}I seed group	45	0	2	1	-	84.9 ± 125.70	59.9 ± 84.82	45.6 ± 81.23	55.9 ± 77.51
	Control group	87	1	1	3	-	74.1 ± 125.63	53.6 ± 89.96	55.5 ± 71.99	53.5 ± 73.42
Zhou *et al*[23], 2020	^{125}I seed group	40	4	-	6	-	146.3 ± 107.52	115.7 ± 81.39	89 ± 101.64	72 ± 69.75
	Control group	36	3	-	6	-	172.2 ± 117.05	154 ± 105.10	68.6 ± 71.55	68.6 ± 71.55
	^{125}I seed group	164	3	1	4	1	-	-	-	-

Zhu *et al*[21], 2018	Control group	164	2	0	5	1	-	-	-	-

TBIL: Total bilirubin; DBIL: Direct bilirubin; ALT: Alanine aminotransferase; AST: Aspartate aminotransferase.

Supplementary Table 4 Quality assessment of non-randomized studies using Newcastle-Ottawa Scale

Ref.	Selection				Comparability	Exposure			NOS
	Representativeness of the exposed cohort	Selection of the non exposed cohort	Ascertainment of exposure	outcome of interest not present at start	Comparability of cohorts on the basis of the design or analysis	Assessment of outcome	Follow-up long enough for outcomes to occur	Adequacy of follow up of cohorts	Overall score
Pan *et al*[15], 2020	1	1	1	1	2	1	1	1	9
Wang *et al*[24], 2017	1	1	1	1	0	1	1	1	7
Zhou *et al*[22], 2019	1	1	1	1	2	1	1	1	9
Zhou *et al*[23], 2020	1	1	1	1	2	1	1	1	9

NOS: Newcastle–Ottawa Scale.