META-ANLAYSIS
TUMOR RESPONSE ASSOCIATED WITH BALLOON EMBOLIZATION
SUMMARY OF RESULTS

Embolization Meta-Analysis Using A Random Effects Model

Three outcome studies were combined in a meta-analysis using a random effects model, to evaluate tumor response between two treatment arms '*End-hole catheter Embolization*' and '*Balloon Embolization*'. The tumor response in the three studies are respectively:

Study	Balloon Embolization (%)	End-hole Catheter Embolization (%)
Arai H, Abe T, Takayama H, et al. Safety and efficacy of balloon-occluded transcatheter arterial chemoembolization using miriplatin for hepatocellular carcinoma. Hepatology Research (2015) 45: 663-666.	55.1	39.6
Ogawa M, Takayasu K, Hirayama M, et al. Efficacy of a microballoon catheter in transarterial chemoembolization using miriplatin, a lipophilic anticancer drug: short-term results. Hepatology Research (2016) 46: E60-69.	48.5	28.6
Irie T, Kuramochi M, Kamoshida T, Takahashi N. Selective balloon-occluded transarterial chemoembolization for patients with one or two hepatocellular carcinoma nodules: retrospective comparison with conventional super-selective TACE. Hepatology Research (2016) 46:209-214.	87.9	64.3

A directional zero-effect chi-square test designed to test the overall null hypothesis that the treatment effects between the two treatment arms are the same (zero difference), against the alternative hypothesis that the '*Balloon Embolization*' treatment arm is more effective than the '*End-hole catheter Embolization*' treatment arm. The results are presented as ratio, odds ratio, and difference in tumor response. The following table shows the *p*-values from the result of the hypothesis testing:

Outcome Measure of Tumor Response	Estimate	P-value
Ratio	1.41	0.0040
Odds Ratio	2.33	0.0041
Difference	0.19	0.0019

The table below shows the results in terms of 95% confidence intervals:

Outcome Measure of Tumor Response	Estimate	95% Lower Confidence Limit	95% Upper Confidence Limit
Ratio	1.41	1.12	1.78
Odds Ratio	2.33	1.31	4.15
Difference	0.19	0.072	0.32

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