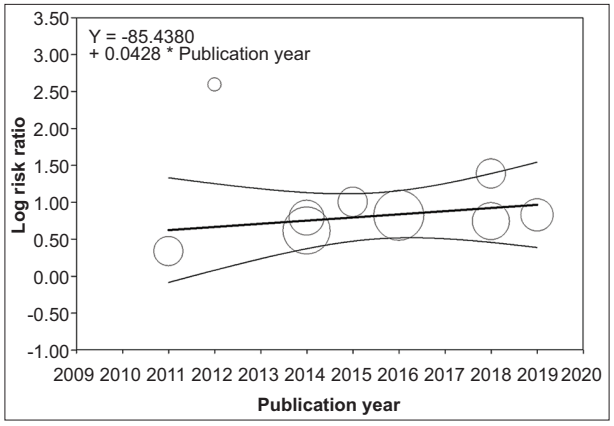
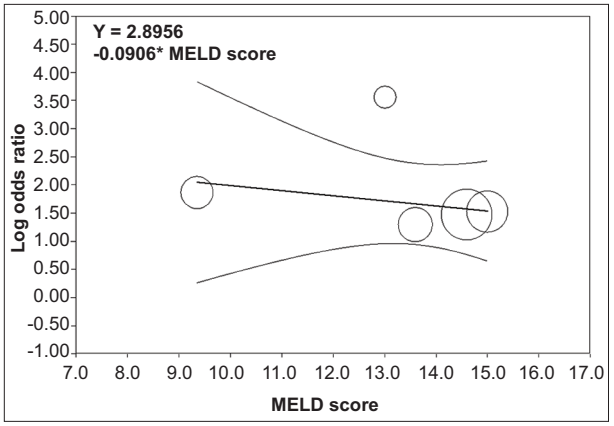
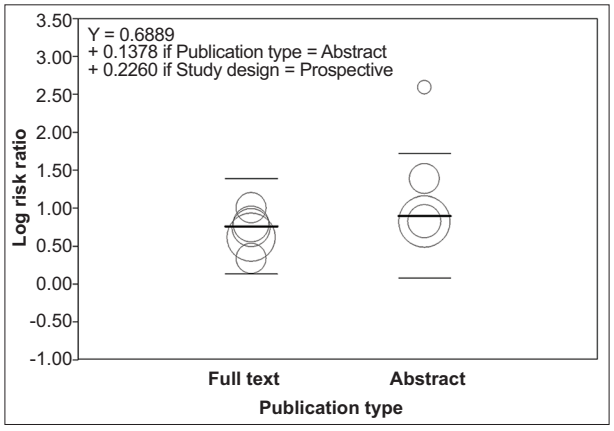
Supplementary material



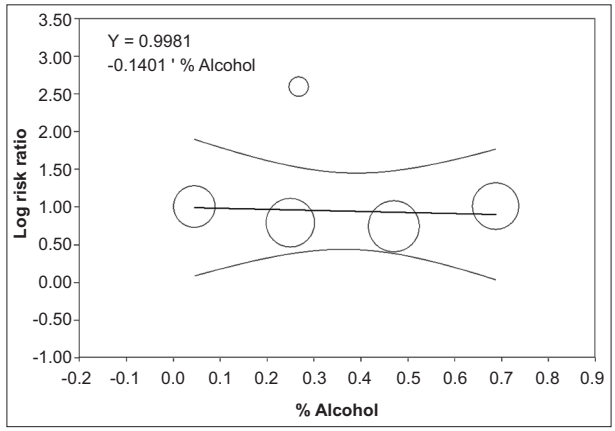
Supplementary Figure 1 Regression of log risk ratio on publication year. Meta-regression model did not demonstrate significant moderating effect of year of publication (P=0.46). (Note: bubbles represent study, size of the bubble represents study weight, central thick line represents meta-regression line, curved upper and lower lines represent 95% confidence interval)



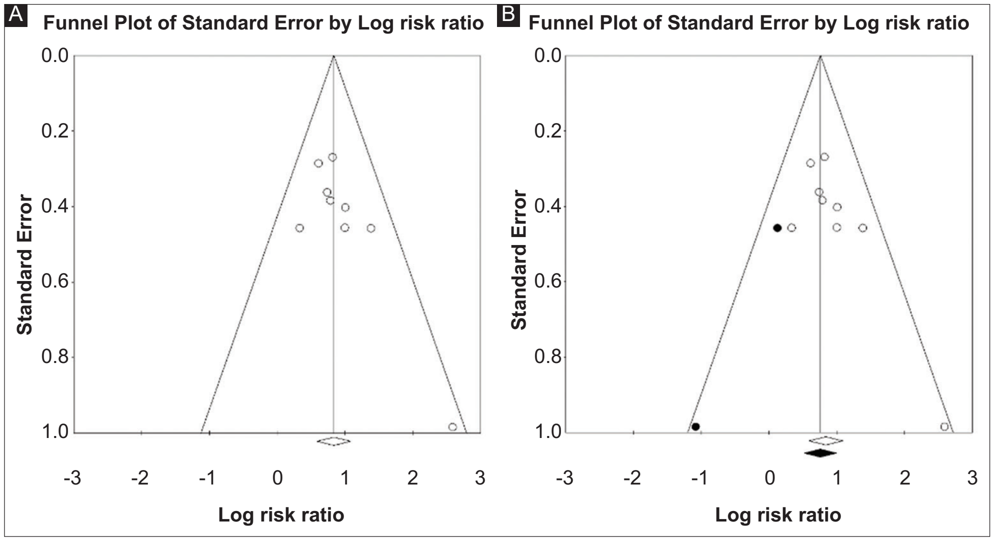
Supplementary Figure 3 Regression of log odds ratio on model for end-stage liver disease (MELD) score. Meta-regression model did not demonstrate significant moderating effect based on MELD score (P=0.56). (Note: bubbles represent study, size of the bubble reprsents study weight, central thick line represents meta-regression line, curved upper and lower lines represent 95% confidence interval)



Supplementary Figure 2 Regression of log risk ratio on publication type. Meta-regression model did not demonstrate significant moderating effect based on study design (P=0.63) and publication type (P=0.76). (Note: bubbles represent a study, size of the bubble represents study weight, central thick line represents meta-regression line, upper and lower thin lines represent 95% confidence interval)



Supplementary Figure 4 Regression of log risk ratio on the percentage of alcoholic cirrhosis as the etiology of liver cirrhosis. Meta-regression model did not demonstrate significant moderating effect based on the percentage of alcoholic cirrhosis as the etiology of liver cirrhosis (P=0.88). (Note: bubbles represent study, size of the bubble represents study weight, central thick line represents meta-regression line, curved upper and lower lines represent 95% confidence interval)



Supplementary Figure 5 Publication bias assessment. (A) Funnel plot demonstrating visible asymmetry suggesting publication bias after plotting actual studies using portal vein recanalization as outcome. (B) Adjusted funnel plot using the "trim and fill test" without significantly altering the outcomes (Note: Filled circles represent "additionally filled" studies)

Supplementary Table 1 Search strategy used in PubMed

Search	Query	Items found
#1	((anticoagulants[MeSH Terms]) OR heparin[MeSH Terms]) OR enoxaparin[MeSH Terms]) OR warfarin[MeSH Terms]) OR anticoagula*[Text Word]) OR anti-coagula*[Text Word]) OR anti coagula*[Text Word]) OR heparin[Text Word]) OR enoxaparin[Text Word]) OR lovenox[Text Word]) OR fondaparinux[Text Word]) OR Arixtra[Text Word]) OR vitamin K antagonis*[Text Word]) OR VKA[Text Word]) OR warfarin[Text Word]) OR coumadin[Text Word]) OR novel oral anticoagula*[Text Word]) OR NOAC*[Text Word]) OR direct-acting oral anticoagula*[Text Word]) OR direct oral anticoagula*[Text Word]) OR DOAC*[Text Word]) OR target-specific oral anticoagula*[Text Word]) OR TSOAC*[Text Word]) OR oral direct inhibit*[Text Word]) OR ODI*[Text Word]) OR non-vitamin K antagonis*[Text Word]) OR direct thrombin inhibit*[Text Word]) OR thrombin inhibit*[Text Word]) OR dabigatran[Text Word]) OR Pradaxa[Text Word]) OR bivalirudin[Text Word]) OR Angiomax[Text Word]) OR argatroban[Text Word]) OR Argatra[Text Word]) OR Novastan[Text Word]) OR Arganova[Text Word]) OR Exembol[Text Word]) OR desirudin[Text Word]) OR Iprivask[Text Word]) OR Revasc[Text Word]) OR direct factor Xa inhibit*[Text Word]) OR direct factor X inhibit*[Text Word]) OR factor Xa inhibit*[Text Word]) OR factor X inhibit*[Text Word]) OR apixaban[Text Word]) OR eliquis[Text Word]) OR rivaroxaban[Text Word]) OR xarelto[Text Word]) OR edoxaban[Text Word]) OR Lixiana[Text Word]) OR Savaysa[Text Word]) OR betrixaban[Text Word]) OR Bevyxxa[Text Word]	209254
#2	((((((((venous thrombosis[MeSH Terms]) OR blood coagulation[MeSH Terms]) OR portal vein[MeSH Terms]) OR thrombosis[MeSH Terms]) OR portal vein thrombosis[Text Word]) OR portal venous thrombosis[Text Word]) OR PVT[Text Word]) OR (portal[Text Word] AND vein[Text Word] AND thrombosis[Text Word])) OR (portal[Text Word] AND venous[Text Word] AND thrombosis[Text Word])	196402
#3	(((((((((((liver cirrhosis[MeSH Terms]) OR fibrosis[MeSH Terms]) OR liver cirrhosis[Text Word]) OR hepatic cirrhosis[Text Word]) OR cirrhosis[Text Word]) OR liver fibrosis[Text Word]) OR hepatic fibrosis[Text Word]) OR fibrosis[Text Word]) OR (liver[Text Word] AND cirrhosis[Text Word])) OR (hepatic[Text Word] AND cirrhosis[Text Word])) OR (liver[Text Word] AND fibrosis[Text Word])) OR (hepatic[Text Word] AND fibrosis[Text Word])	330378
#4	#1 AND #2 AND #3	693
#5	((((benign[Text Word]) OR nonmalignant[Text Word]) OR non malignant[Text Word]) OR stasis[Text Word]) OR portal hypertension[Text Word]	260606
#6	#4 AND #5	147
#7	#6 NOT ("case reports"[Publication Type] OR "editorial"[Publication Type] OR "guideline"[Publication Type] OR "introductory journal article"[Publication Type] OR "meta analysis"[Publication Type] OR "news"[Publication Type] OR "practice guideline"[Publication Type] OR "review"[Publication Type] OR "systematic review"[Publication Type])	128

Supplementary Table 2 Quality assessment of the studies using the Newcastle-Ottawa Scale

Criteria	Condition	Chen 2015	Chung 2014	Noronha Ferreira 2019	Scheiner 2018	Senzolo 2012
Selection						
Representativeness of exposed cohort	Patients diagnosed with non-malignant portal vein thrombosis who underwent anticoagulation	*	*	*	*	*
Selection of non-exposed cohort	Patients diagnosed with non-malignant portal vein thrombosis who did undergo anticoagulation	*	*	*	*	*
Ascertainment of exposure?	Secure records	*	*	*	*	*
Demonstration that outcome of interest was not present at start of study?	Yes	*	*	*	*	*
Comparability						
Study controls for baseline imbalances?	Age and severity of liver cirrhosis	**	**	**	*	**
Outcome						
Assessment of outcome	Confirmation by ultrasound	*	*	*	*	*
Was follow up long enough for outcomes to occur	6 months	*	-	*	*	*
Adequacy of follow up of cohorts	Complete follow up or less than 10% lost to follow up	*	-	*	*	*

A study can be awarded a star (*) for a criterion if it satisfies the condition for that criterion. A study can be awarded 2 stars (**) in the comparability item if it controls for both age and severity of liver cirrhosis