

Supplementary Table 1. Search strategy:

The literature search was performed independently by 2 investigators (SSS and DH), who screened titles and abstracts of all articles identified and excluded those with no relevance to the research question. The full text of all remaining articles was read in full to ensure that they met the inclusion criteria.

Component	Number	Defined Search
Target	#1	exp "Esophageal and Gastric Varices"/
Condition	#2	(Esophag* varic* or esophag* varix or oesophag* varic* or oesophagi* varix or gastroesophag* varic* or gastroesophag* varix or gastroesophag* varic* or gastroesophag* varix or gastric varic* or gastric varix)
	#3	(hvpq or hepatic venous pressure gradient or hepat* vein* or hepat* ven*)
	#4	1 or 2 or 3
Index Tests	#5	(AST:ALT ratio or aspartate aminotransferase or alanine aminotransferase or apri or BARD scor* or ELF test* or ELF scor* or enhanced liver fibrosis panel* or fib4 or fib 4 or fibroindex or fibrometer or fibrotest or forns or hepascore or lok index* or lok scor* or nafld fibrosis scor* or platelet* or thrombocyto* or pohl index* or pohl scor* or testa scor* or testa index*)
	#6	(capsule endoscop* or endoscop* capsule or capsule enteroscop* or enteroscop* capsule or pillcam or ct scan* or cat scan* or helical ct* or mri or magnetic resonance imag* or mr angiogra* or magnetic resonance angiogra* or mr elastogra* or magnetic resonance elastogra* or nmr imag* or sple* imag* or sple* enlarg* or sple* stiff* or sple* length* platelet sple* ratio or platelet sple* index or transient elastogr* or fibroscan or liver stiff* or ultraso* or arfi imag*)
	#7	exp Angiogenic Proteins/
	#8	exp Biological Markers/

	#9	exp Diagnostic Imaging/
	#10	5 or 6 or 7 or 8 or 9
	#11	4 and 10

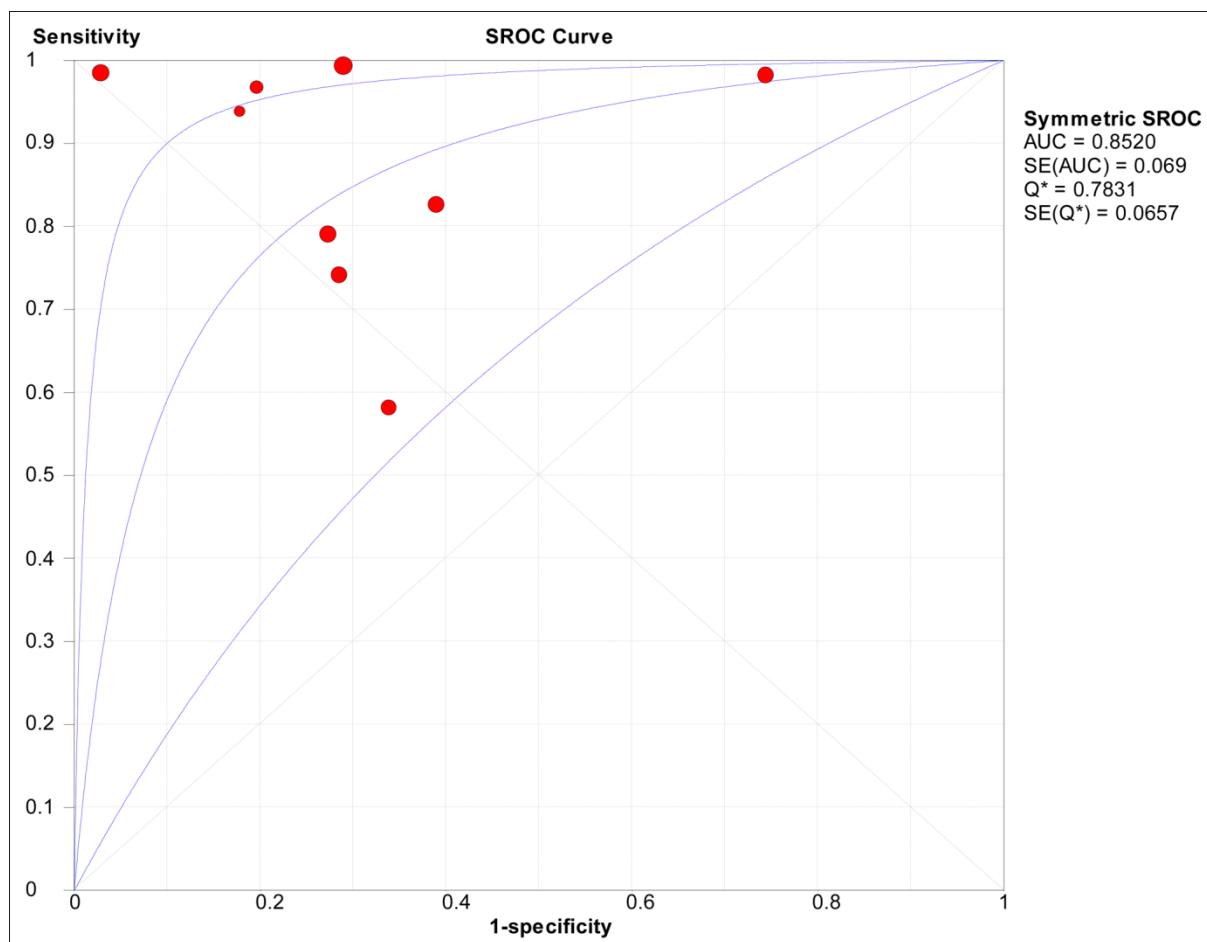
Supplementary Table 2. Quality assessment results using QUADAS-2 tool.

Author Year	Patient selection bias	Index test bias	Reference test bias	Patient flow bias	Patient applicability concerns	Index test applicability concerns	Reference test applicability concerns
Giannini ²⁵ 2003	Unclear	High	Unclear	High	Low	Low	Low
Giannini ²⁶ 2006	High	Low	Low	Low	Low	Low	Low
Camma ²⁷ 2009	Low	High	Low	Low	Low	Low	Low
Agha ²⁸ 2009	Low	Low	Low	Unclear	Unclear	Low	Low
Abu El- Makarem ²⁹ 2011	Low	High	Low	Unclear	Low	Low	Low
Esmat ³⁰ 2011	Unclear	High	High	Unclear	Low	Low	Low
Colecchia ³¹ 2012	Low	High	Unclear	High	Low	Low	Low
Mangone ³² 2012	Low	Low	Low	Low	Low	Low	Low
Calvaruso ³³ 2013	Low	Unclear	Unclear	Low	Low	Low	Low
Wang ³⁴ 2012	Low	Low	Unclear	Unclear	Unclear	Low	Low
Kazemi ³⁵ 2006	Unclear	High	Low	High	Low	Low	Low
Castera ³⁶ 2009	Low	High	High	High	Low	Low	Low
Pritchett ³⁷ 2011	High	High	Unclear	High	Unclear	Unclear	High
Burton Jr ³⁸ 2007	Low	High	High	Unclear	Low	Low	Low
Emam ³⁹ 2009	Unclear	High	Unclear	High	Low	Low	Low
Colli ⁴⁰ 2001	Low	Low	Low	Low	Low	Low	Low
Berzigotti ⁴¹ 2008	Low	High	Unclear	Unclear	Low	Low	Low
Berzigotti ⁴² 2013	Low	Unclear	Unclear	High	Low	Low	Low
Liu ⁴³ 2008	High	Unclear	Low	Low	Low	Low	Low
Takuma ⁴⁴ 2013	Low	Low	Low	Low	Low	Low	Low
Lisotti ⁴⁵ 2014	Low	Unclear	Unclear	Low	Low	Low	Low

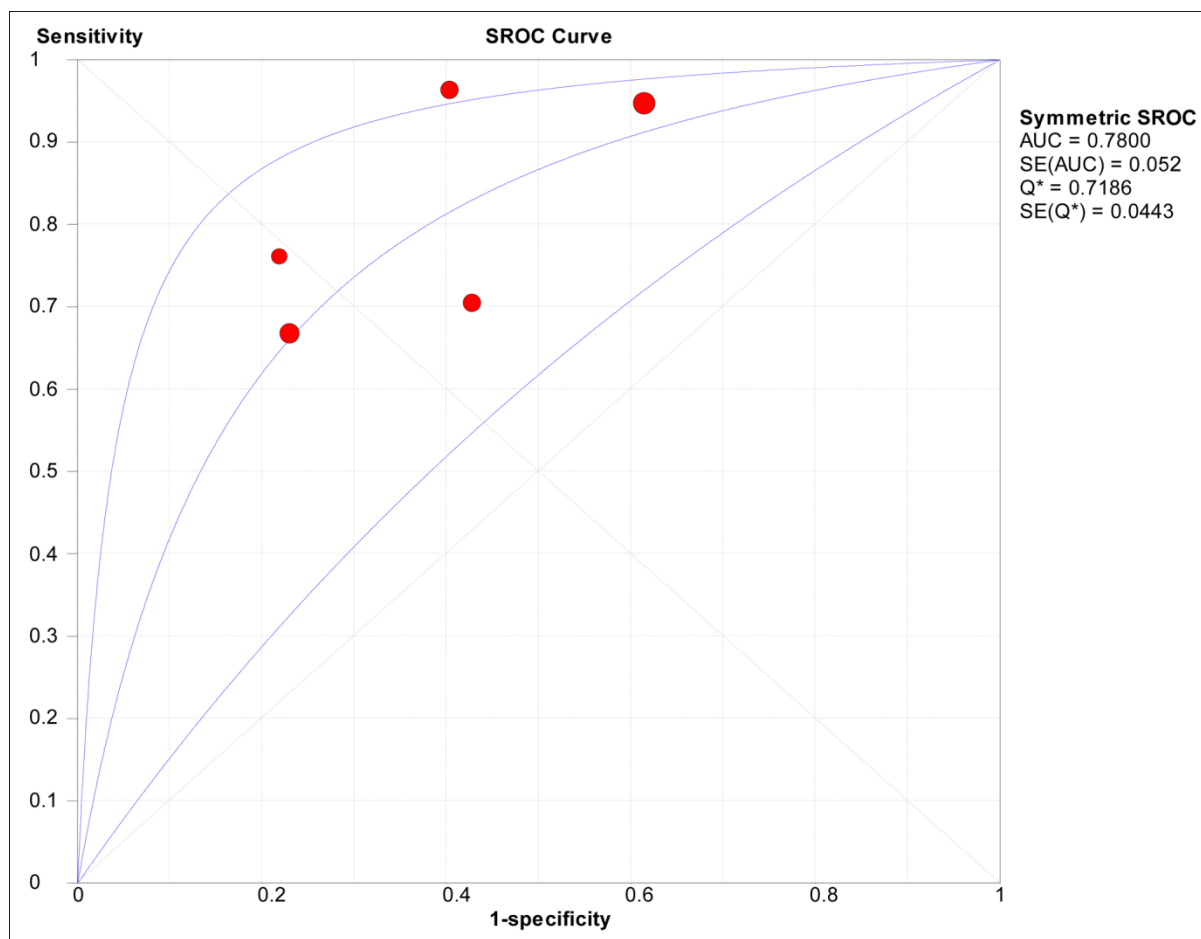
Supplementary Table 3. Subgroup analysis of studies reporting the diagnostic test performance characteristics of platelet count/spleen diameter ratio for the detection of oesophageal varices in patients with compensated cirrhosis.

Variable	Subgroup	N	Sensitivity	\bar{P}	Specificity	\bar{P}	LR+	LR-
Cut-off used	909	4	0.87 (0.81-0.92)	93	0.78 (0.73-0.83)	92	4.0 (1.9-7.8)	0.16 (0.02-0.71)
	Other	5	0.86 (0.81-0.91)	82	0.59 (0.52-0.67)	89	2.6 (1.4-4.7)	0.23 (0.12-0.46)
Aetiology	Viral	6	0.88 (0.83-0.92)	83	0.72 (0.65-0.77)	94	3.8 (1.7-8.6)	0.15 (0.05-0.39)
	Mixed	3	0.84 (0.77-0.90)	94	0.70 (0.64-0.76)	0	2.6 (1.8-3.9)	0.22 (0.05-1.05)
Study location	Western	6	0.85 (0.80-0.88)	90	0.63 (0.58-0.68)	85	2.2 (1.4-3.4)	0.28 (0.15-0.54)
	Other	3	1.0 (0.93-1.0)	0	0.92 (0.86-0.96)	79	9.0 (2.6-31.4)	0.04 (0.008-0.18)
Study design	Prosp	8	0.84 (0.79-0.88)	85	0.71 (0.66-0.76)	92	3.1 (1.8-5.5)	0.25 (0.13-0.47)
	Retro	1	1.0 (0.94-1.0)	NA	0.71 (0.66-0.71)	NA	3.5 (2.8-3.5)	0.00 (0.00-0.09)
*Varices prevalence	>43%	5	0.89 (0.85-0.93)	89	0.60 (0.54-0.67)	88	2.5 (1.4-4.4)	0.16 (0.05-0.45)
	≤43%	4	0.81 (0.73-0.88)	89	0.81 (0.75-0.86)	91	4.6 (1.9-11.2)	0.18 (0.04-0.76)
Index test bias	High	5	0.94 (0.90-0.97)	82	0.62 (0.55-0.68)	89	2.8 (1.5-5.4)	0.07 (0.01-0.41)
	Unclear or low	4	0.77 (0.70-0.84)	86	0.79 (0.74-0.84)	91	3.7 (1.7-8.0)	0.33 (0.15-0.74)

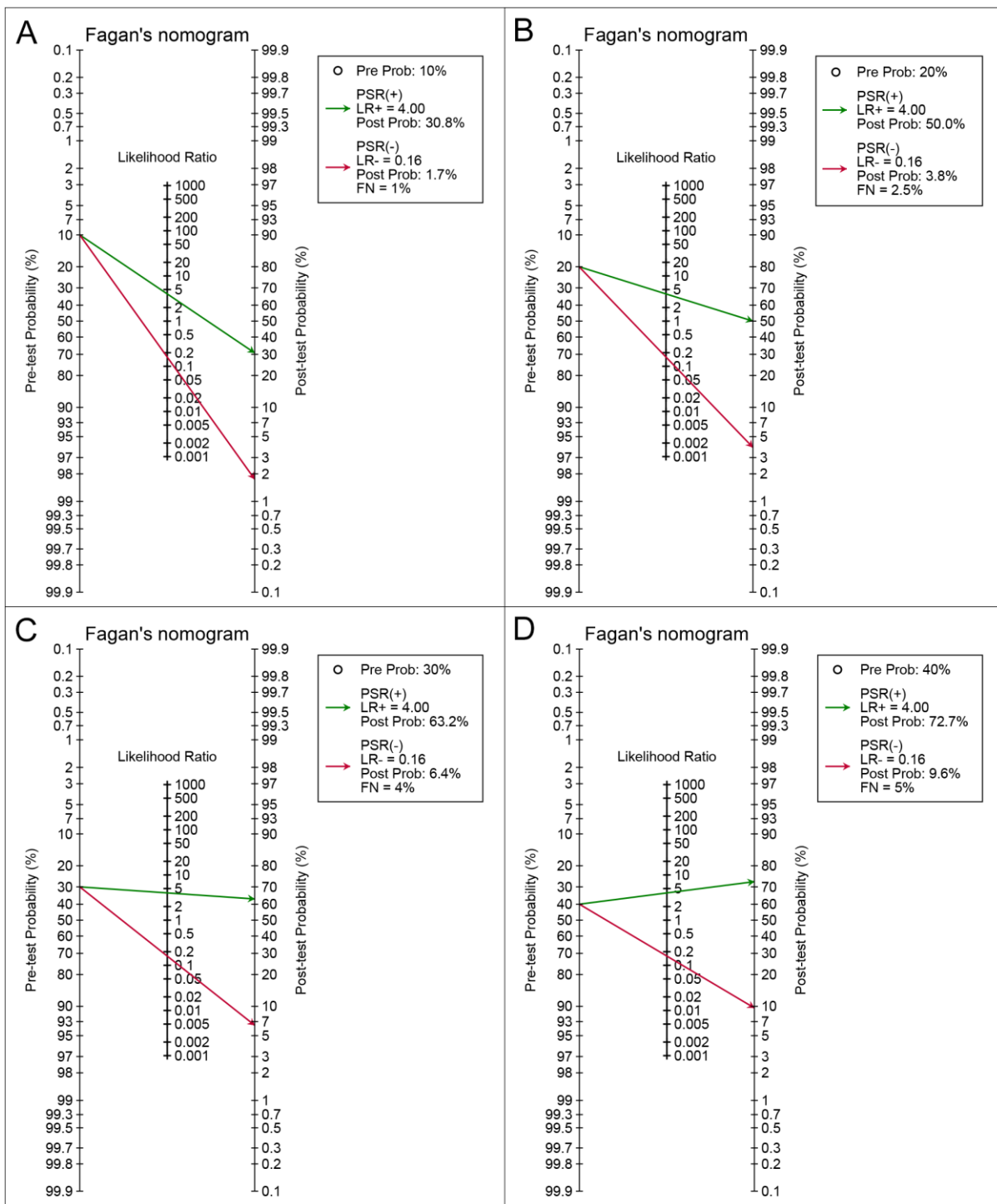
Data presented as values (95% confidence interval). . \bar{P} presented as percentage. *The pooled prevalence of varices across the eight studies was 0.43. N, number of studies; LR+, positive likelihood ratio; LR-, negative likelihood ratio; DOR, diagnostic odds ratio; prosp, prospective; retro, retrospective.

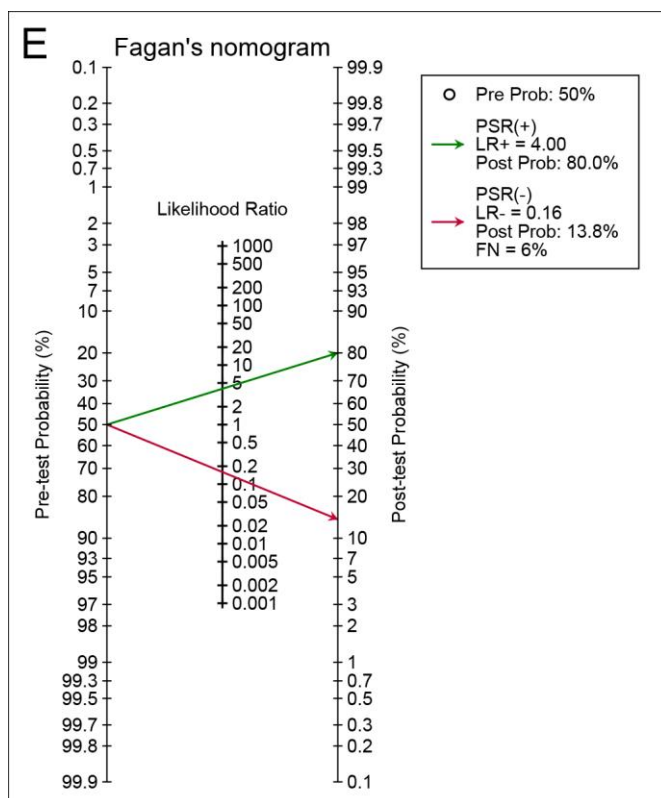


Supplementary Figure 1. Summary receiver operating characteristic (SROC) curve for the eight studies evaluating the diagnostic accuracy of platelet count/spleen diameter ratio for the detection of any size oesophageal varices in patients with compensated cirrhosis.



Supplementary Figure 2. Summary receiver operating characteristic (SROC) curve for the four studies evaluating the diagnostic accuracy of liver stiffness measurement by transient elastography for the detection of any size oesophageal varices in patients with compensated cirrhosis.





Supplementary Figure 3. Fagan's nomogram calculating the post-test probability of oesophageal varices (OV), based on the pre-test probability (prevalence) using platelet count/spleen diameter ratio (PSR) at a cut-off of 909. (A) At a hypothetically low pre-test probability of 10%, (B) At a pre-test probability of 20% observed in some studies (table 1), (C) At a pre-test probability of OV of 30% observed in most studies (table 1), (D) At a pre-test probability of OV of 40% (pooled prevalence of OV in the 9 studies included), (E) At a high pre-test probability of 50% observed in some studies (table 1).

Supplementary references

36. Berzigotti A, Gilibert R, Abraldes JG, et al. Noninvasive prediction of clinically significant portal hypertension and esophageal varices in patients with compensated liver cirrhosis. *Am J Gastroenterol.* 2008; 103: 1159-67.
37. Berzigotti A, Seijo S, Arena U, et al. Elastography, spleen size, and platelet count identify portal hypertension in patients with compensated cirrhosis. *Gastroenterology.* 2013; 144: 102-11.

38. Liu CH, Hsu SJ, Liang CC, et al. Esophageal varices: noninvasive diagnosis with duplex Doppler US in patients with compensated cirrhosis. *Radiology*. 2008; 248: 132-9.
39. Takuma Y, Nouse K, Morimoto Y, et al. Measurement of spleen stiffness by acoustic radiation force impulse imaging identifies cirrhotic patients with esophageal varices. *Gastroenterology*. 2013; 144: 92-101.
40. Lisotti A, Azzaroli F, Buonfiglioli F, et al. Indocyanine green retention test as a noninvasive marker of portal hypertension and esophageal varices in compensated liver cirrhosis. *Hepatology*. 2014; 59: 643-50.
41. de Franchis R. Evolving consensus in portal hypertension. Report of the Baveno IV consensus workshop on methodology of diagnosis and therapy in portal hypertension. *J Hepatol*. 2005; 43: 167-76.
42. Sebastianes PM, Sales DM, Santos J-EM, et al. Interobserver variability of ultrasound parameters in portal hypertension. *Memórias do Instituto Oswaldo Cruz*. 2010; 105: 409-13.
43. Winkfield B, Aube C, Burtin P and Cales P. Inter-observer and intra-observer variability in hepatology. *Eur J Gastroenterol Hepatol*. 2003; 15: 959-66.
44. Friedrich-Rust M, Ong MF, Martens S, et al. Performance of transient elastography for the staging of liver fibrosis: a meta-analysis. *Gastroenterology*. 2008; 134: 960-74.
45. Foucher J, Castera L, Bernard PH, et al. Prevalence and factors associated with failure of liver stiffness measurement using FibroScan in a prospective study of 2114 examinations. *Eur J Gastroenterol Hepatol*. 2006; 18: 411-2.
46. Ji D, Shao Q, Han P, et al. The frequency and determinants of liver stiffness measurement failure: a retrospective study of "real-life" 38,464 examinations. *PLoS One*. 2014; 9: e105183.

