

Supplementary Table 1 Endpoints of included studies

Ref.	HN	GI	HE	Severe Infection#	PICD	Ascites	SBP	HRS	Renal impairment	Hospital stay (days)	Mortality	PE	AE	In hospital mortality
Ginès <i>et al</i> , 1988 ^[49]	a	a	a	a		a			a	a	a	a		a
Sola-Vera <i>et al.</i> , 2003 ^[52]	a	a		a	a	a	a		a	a				a
Compean <i>et al.</i> , 2002 ^[48]	a					a		a	a	a	a			a
Planas <i>et al.</i> , 1990 ^[50]	a	a	a	a		a	a		a	a	a	a		a
Bajaj <i>et al.</i> , 2018 ^[53]	a						a							a
Singh <i>et al.</i> , a					a	a			a					

2006^[54]

Moreau *et al.*, 2002^[55]

Salerno	<i>et</i>	a	a	a	a	a	a	a	a
<i>al.</i> , 1991 ^[56]									

García-	a	a	a	a	a
Compeán <i>et</i>					
<i>al.</i> , 1993 ^[57]					

Fassio <i>et al.</i> , 1992 ^[58]	a	a	a	a	a	a
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Altman *et al.*, 1998^[59]

Singh <i>et al.</i> ,	a
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2006^[60]

Appenrodt	a	a	a	a	a
<i>et al.</i>					

et al.,
2008^[37]

Abdel- Khalek and

Khalek and
Arif,

Arif,
2020^[13]

Salerno	<i>et</i>	a	a	a	a	a	a
<i>al.</i> , 1987 ^[61]							

al., 1987^[61]

Moreau	<i>et</i>	a	a	a	a	a
<i>al.</i> , 2006 ^[62]						

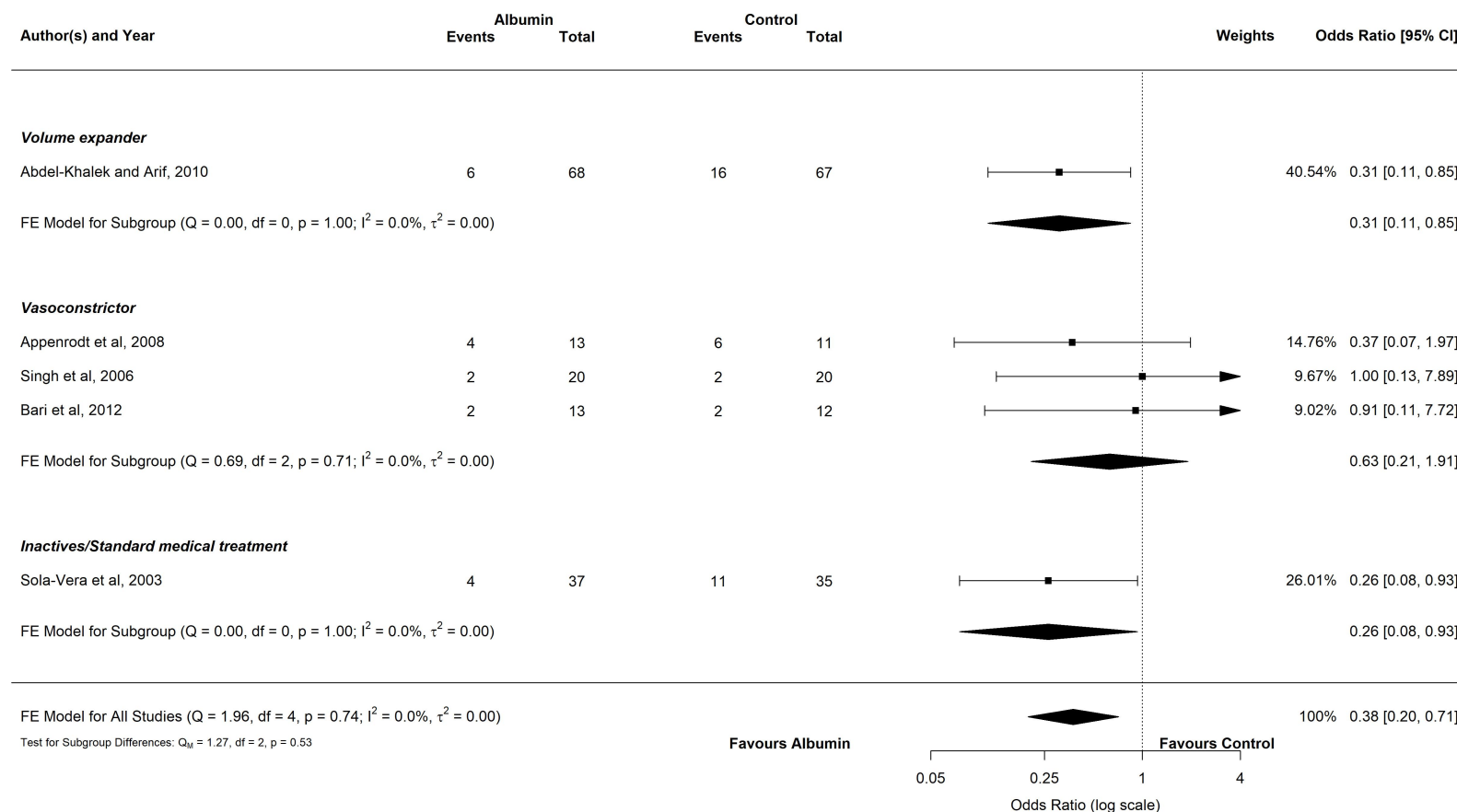
al., 2006^[62]

Jalan <i>et al.</i> , 2007 ^[63]	a	a	a
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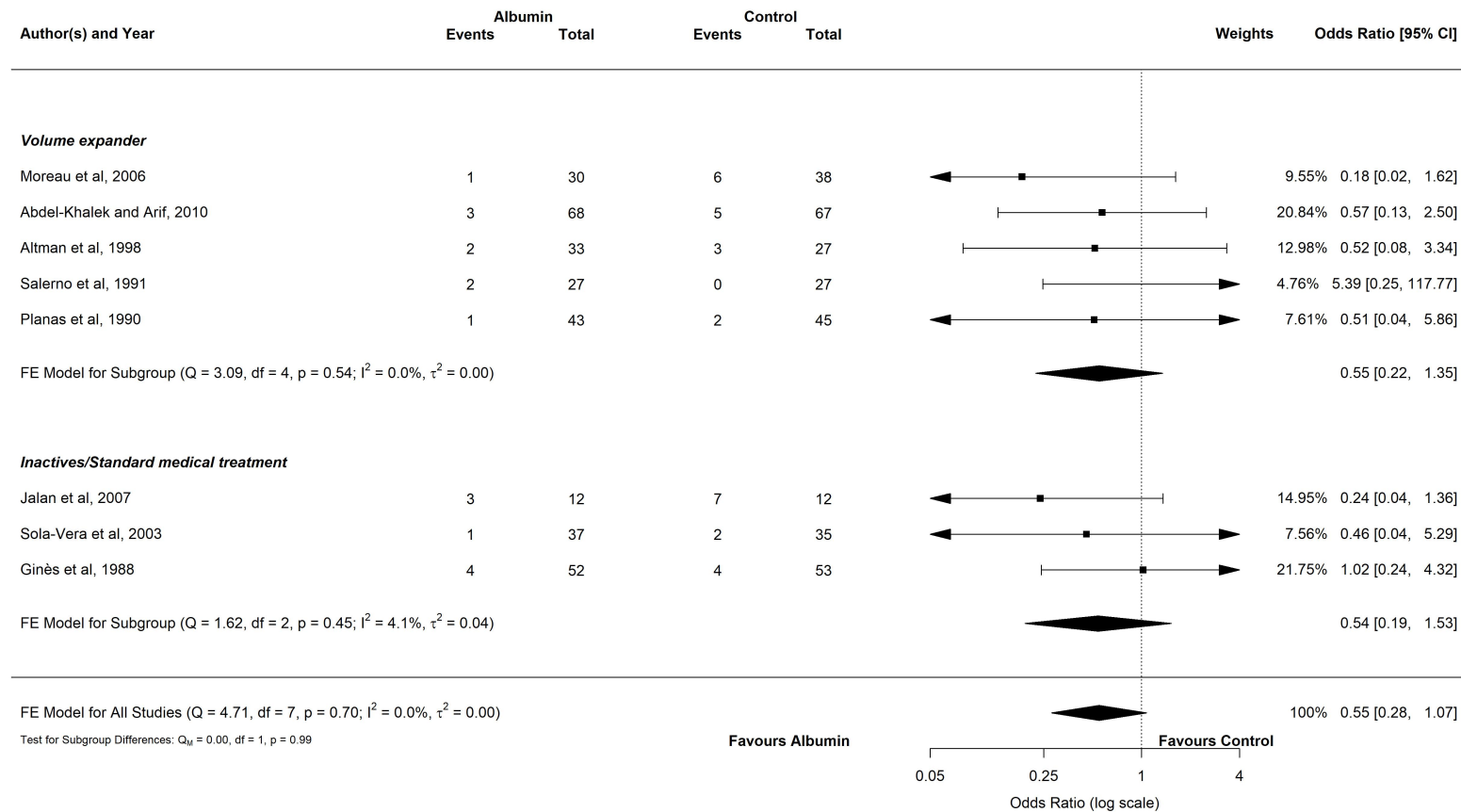
Sort <i>et al.</i> , 1999 ^[64]	a							a			a
Bari <i>et al.</i> , 2012 ^[65]			a			a					a
Solà <i>et al.</i> , 2018 ^[25]											a
Caraceni <i>et al.</i> , 2018 ^[24]											a
Hu <i>et al.</i> , 2023 ^[38]									a		a
Khanna <i>et al.</i> , 2024 ^[66]	a	a			a	a	a	a		a	
Pascoli <i>et al.</i> , 2018 ^[67]	a	a			a	a	a			a	
Guevara <i>et al.</i> , 2012 ^[68]							a	a		a	

Thévenot etal, 2014 ^[69]	a			a			a		a
Devisetty <i>et</i> <i>al</i> , 2023 ^[70]						a		a	a
Simón- Talero <i>et al.</i> , 2013 ^[71]	a	a					a	a	
Romanelli <i>et al.</i> , 2006 ^[72]	a	a			a	a			
Abootalebi <i>et al.</i> , 2017 ^[73]									
Boyer <i>et al.</i> , 2016 ^[74]						a		a	a

AE: Adverse event; GI: Gastrointestinal bleeding; HE: Hepatic encephalopathy; HN: Hyponatremia; HRS: Hepatorenal syndrome; PICD: Post paracentesis circulatory dysfunction; PE: Peripheral edema; SBP: Spontaneous bacterial peritonitis#complication arising during hospitalization.

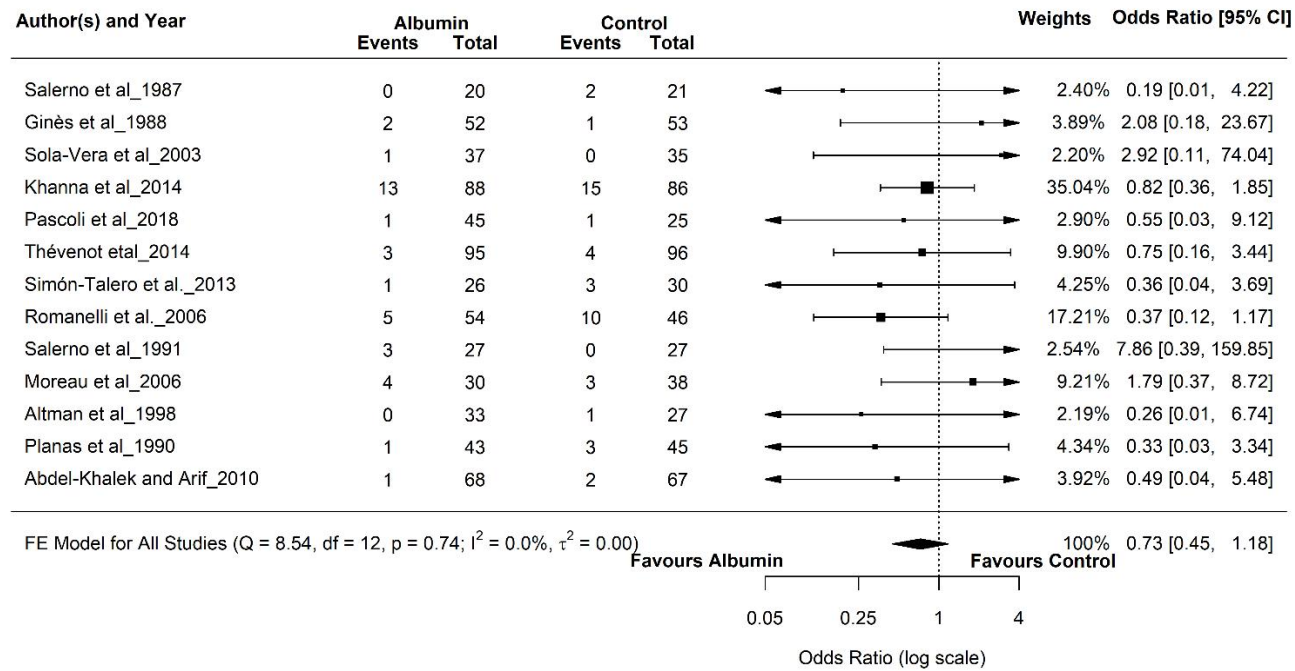


Supplementary Figure 1 Forest plot comparing albumin with other treatment groups for post paracentesis circulatory dysfunction. 95%CI: 95% confidence interval; df: Degrees of freedom; FE: Fixed effect.

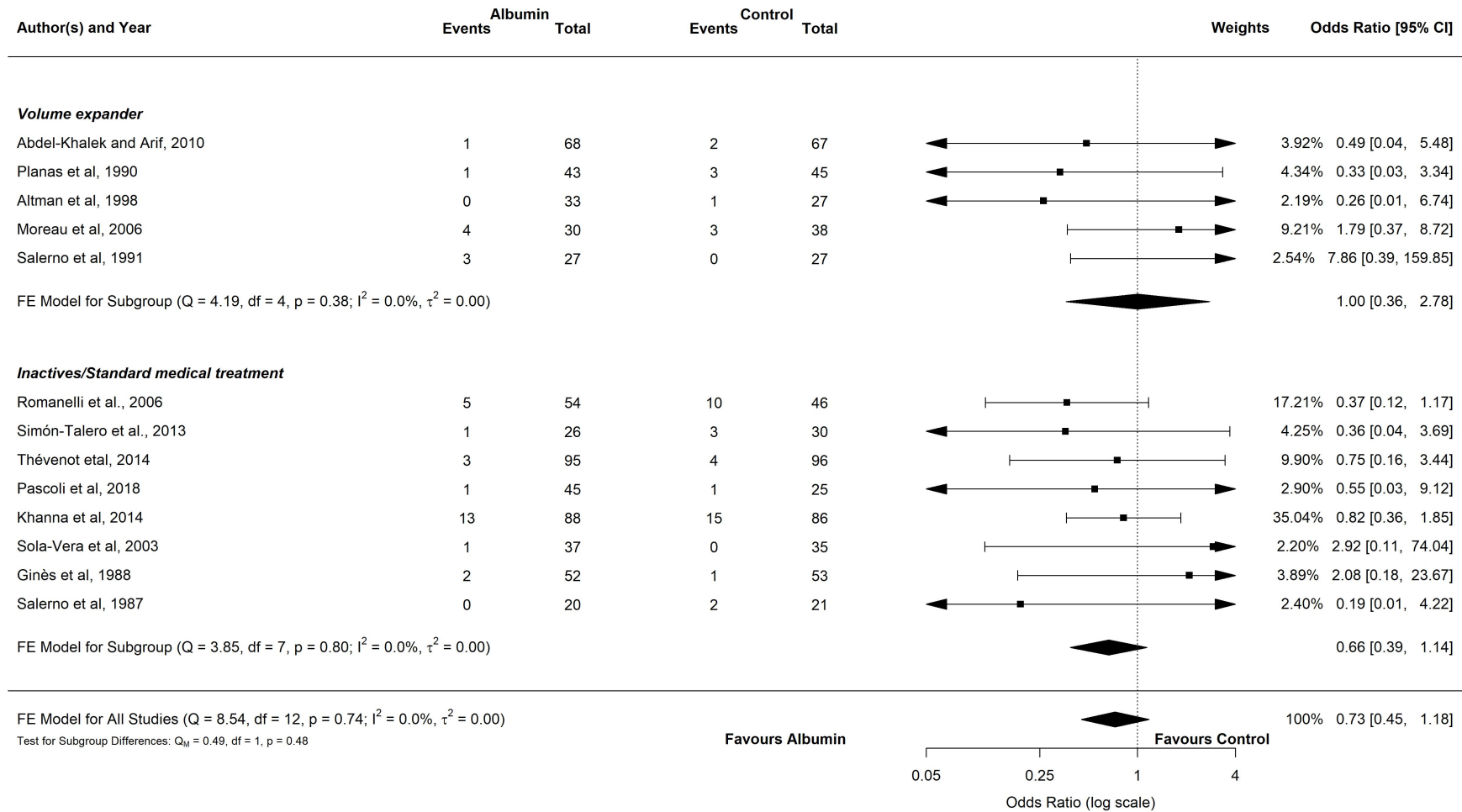


Supplementary Figure 2 Forest plot comparing albumin with other treatment groups for severe infection. 95%CI: 95% confidence interval; df: Degrees of freedom; FE: Fixed effect.

A

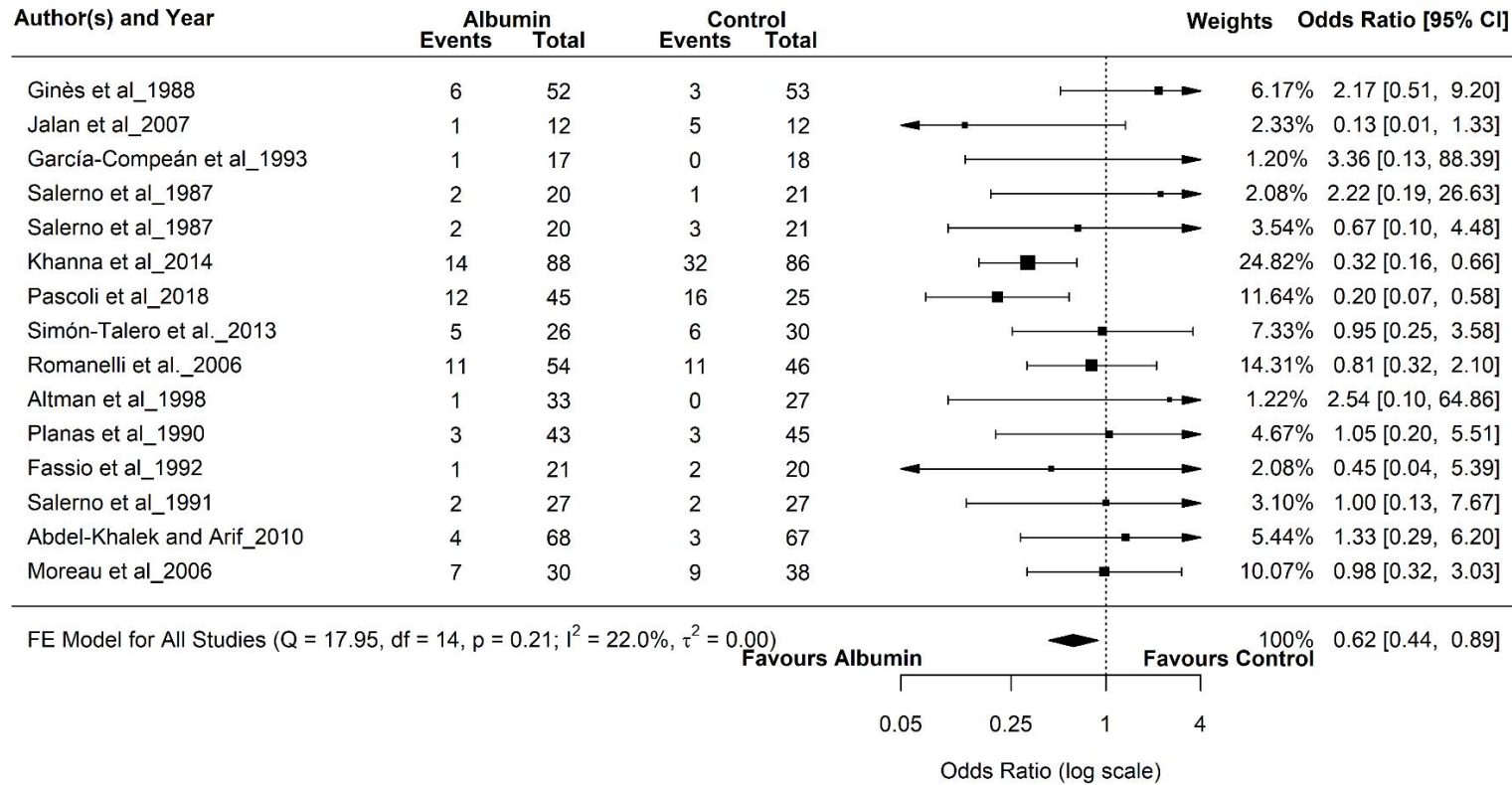


B

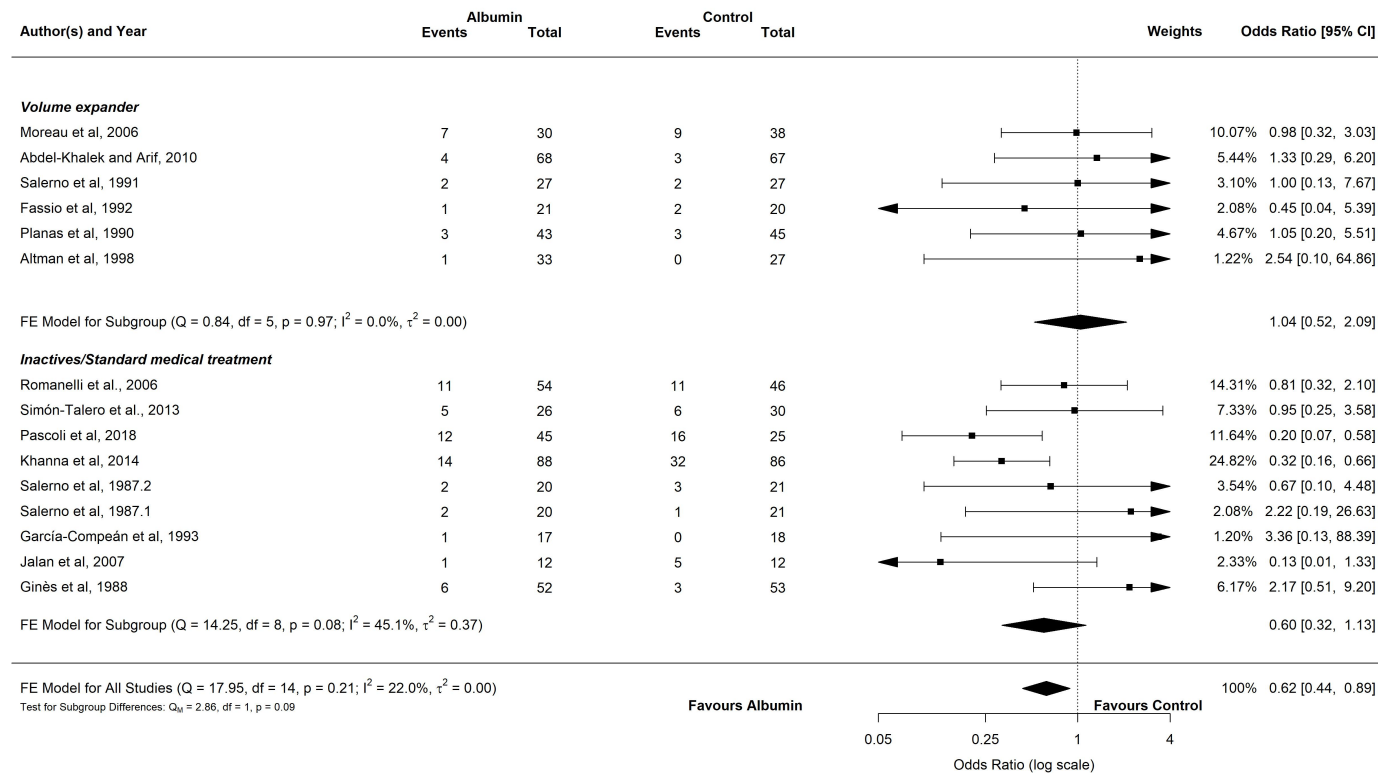


Supplementary Figure 3 Forest plot for gastrointestinal bleeding comparing albumin and control and albumin *vs* control across other treatment groups. A: Forest plot for gastrointestinal (GI) bleeding comparing albumin and control; B: Forest plot for GI bleeding comparing albumin *vs* control across other treatment groups. 95%CI: 95% confidence interval; df: Degrees of freedom; FE: Fixed effect.

A

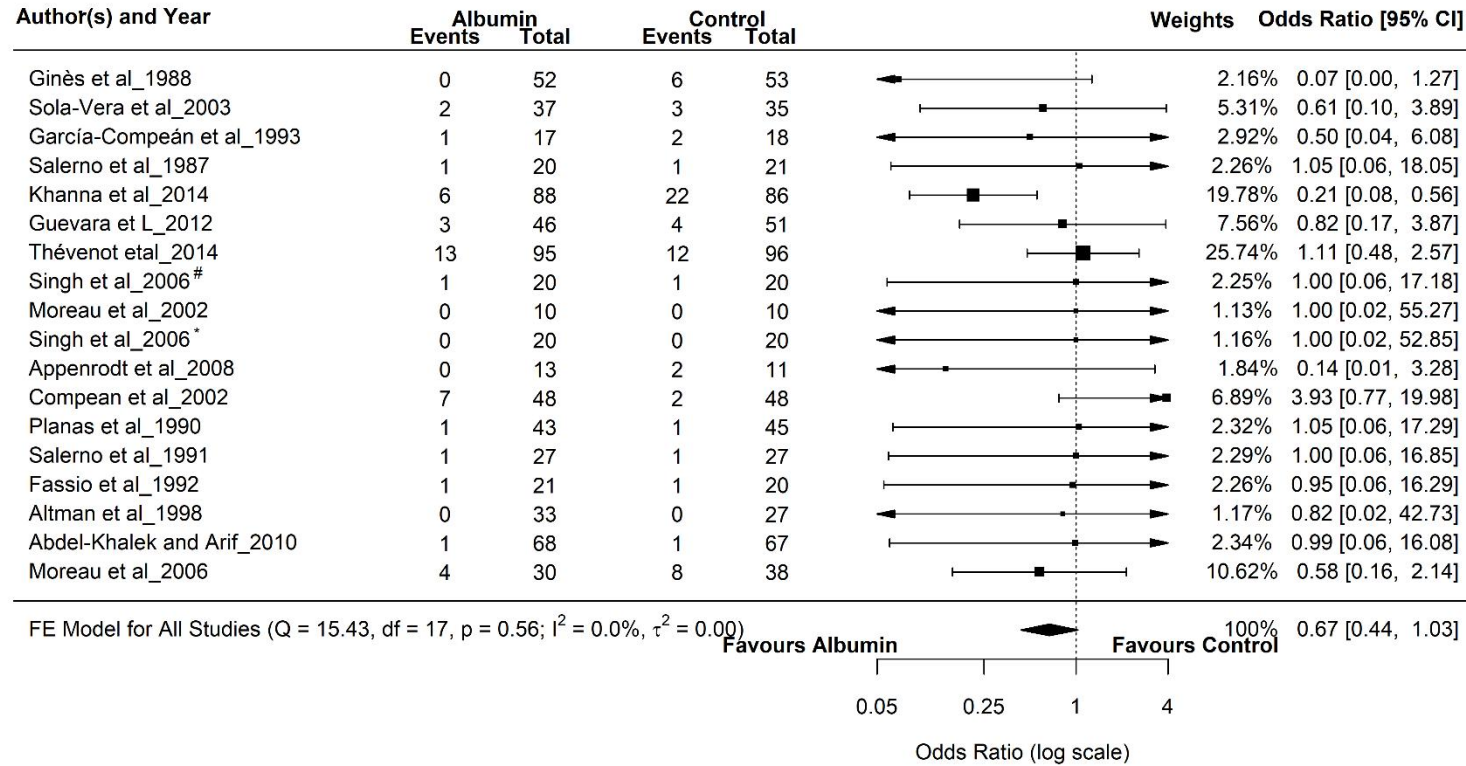


B

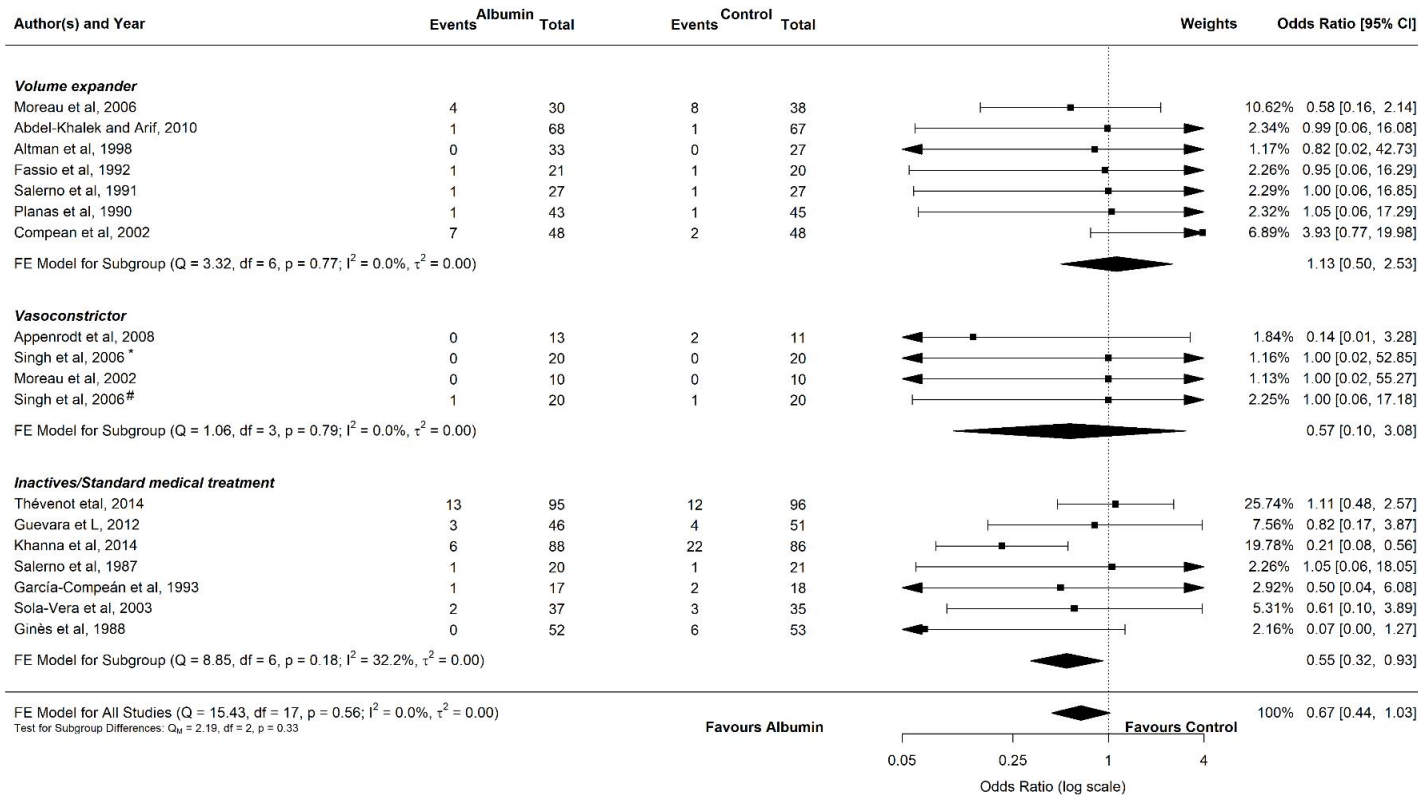


Supplementary Figure 4 Forest plot for hepatic encephalopathy comparing albumin and control and albumin *vs* control across other treatment groups. A: Forest plot for hepatic encephalopathy (HE) comparing albumin and control; B: Forest plot for HE comparing albumin *vs* control across other treatment groups. 95%CI: 95% confidence interval; df: Degrees of freedom; FE: Fixed effect.

A

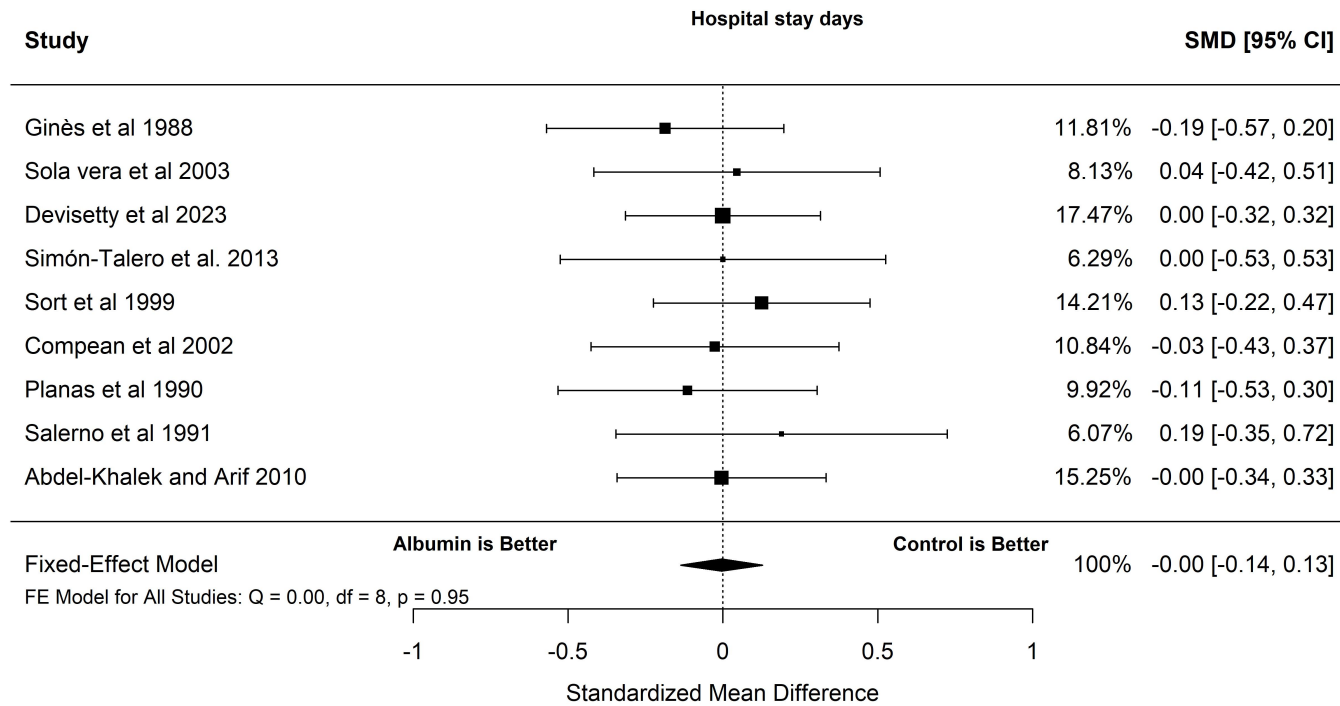


B

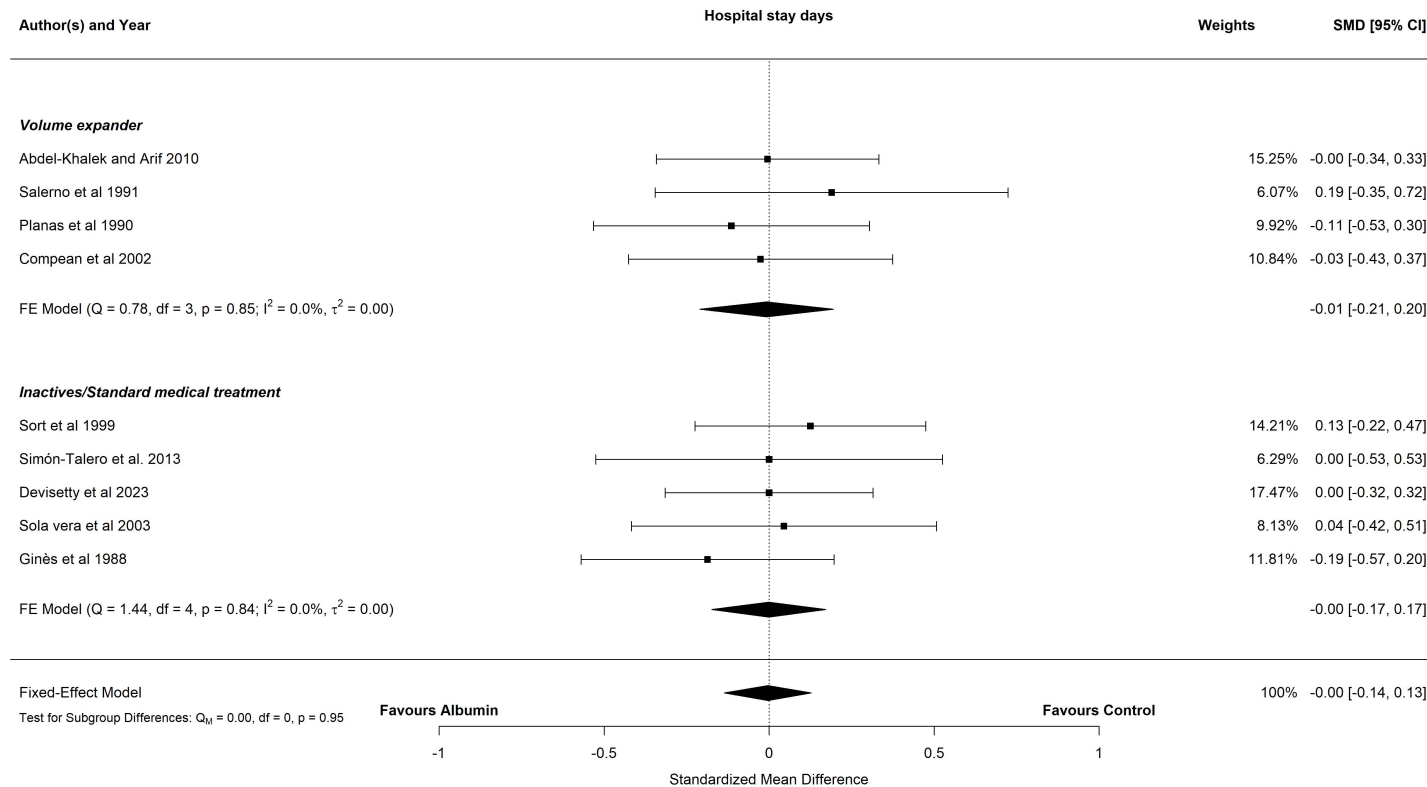


Supplementary Figure 5 Forest plot for renal impairment comparing albumin and control and albumin *vs* control across other treatment groups. A: Forest plot for renal impairment comparing albumin and control; B: Forest plot for renal impairment comparing albumin *vs* control across other treatment groups. 95%CI: 95% confidence interval; df: Degrees of freedom; FE: Fixed effect. # Singh V et al., J Gastroenterol Hepatol. 2006; *Singh V et al., J Intern Med. 2006.

A

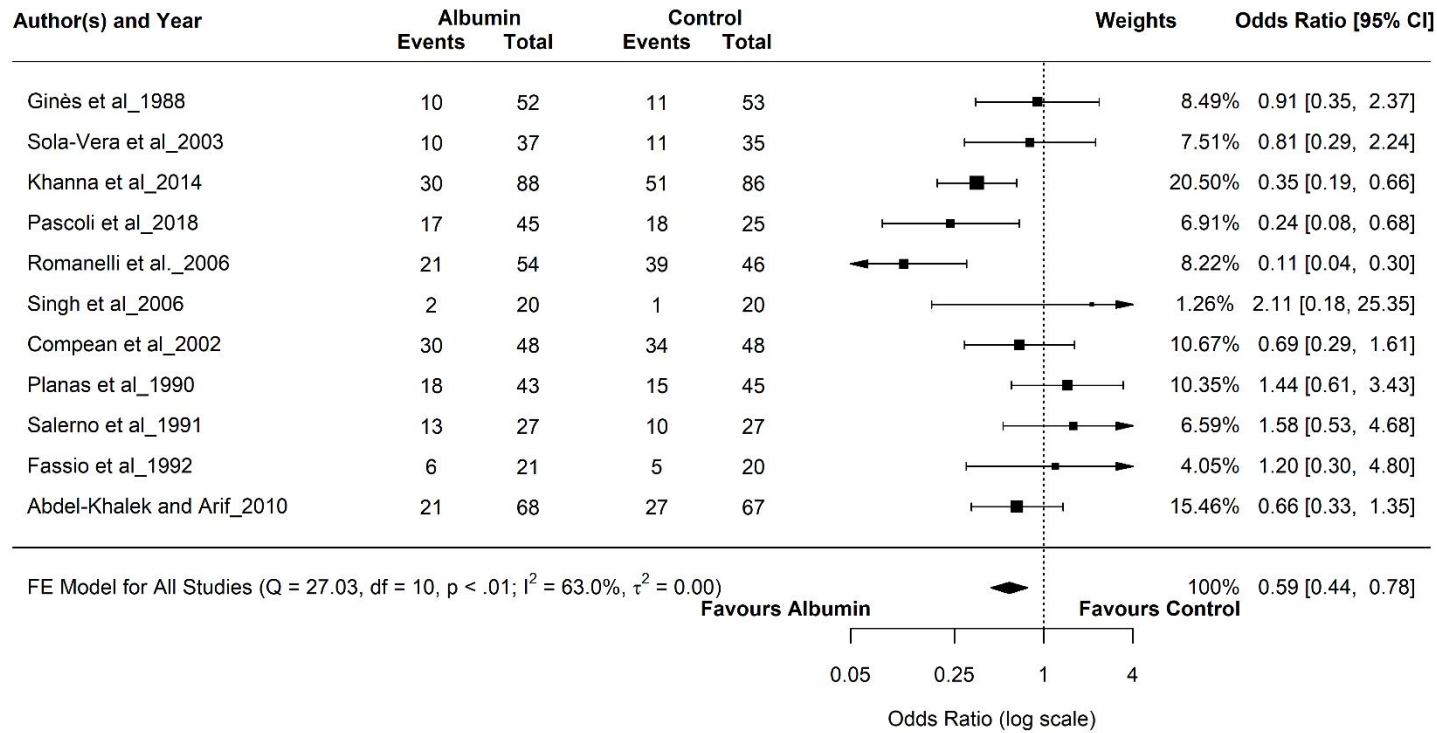


B

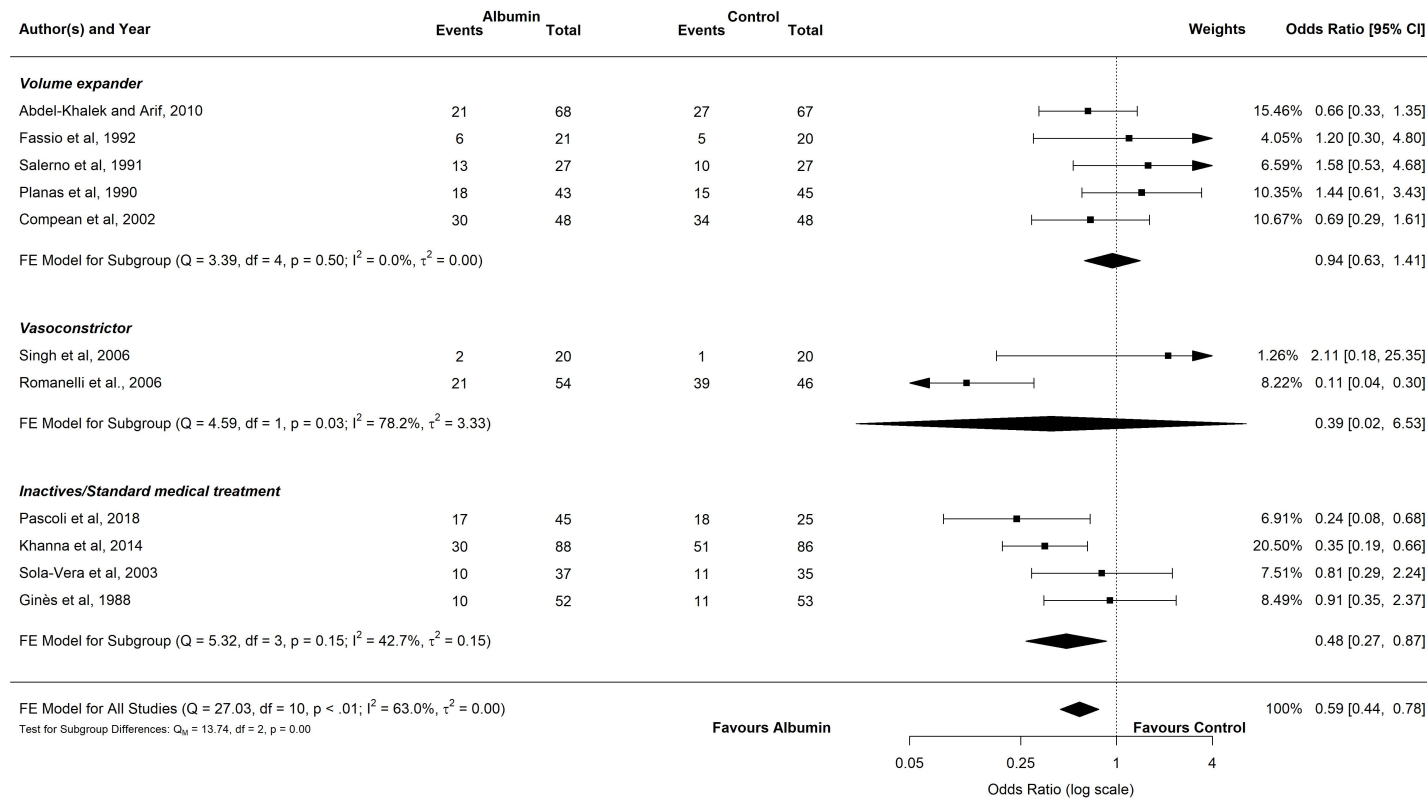


Supplementary Figure 6 Forest plot for hospital stay days comparing albumin and control and albumin *vs* control across other treatment groups. A: Forest plot for hospital stay days comparing albumin and control; B: Forest plot for hospital stay days comparing albumin *vs* control across other treatment groups. 95%CI: 95% confidence interval; df: Degrees of freedom; FE: Fixed effect; SMD, standardized mean difference.

A

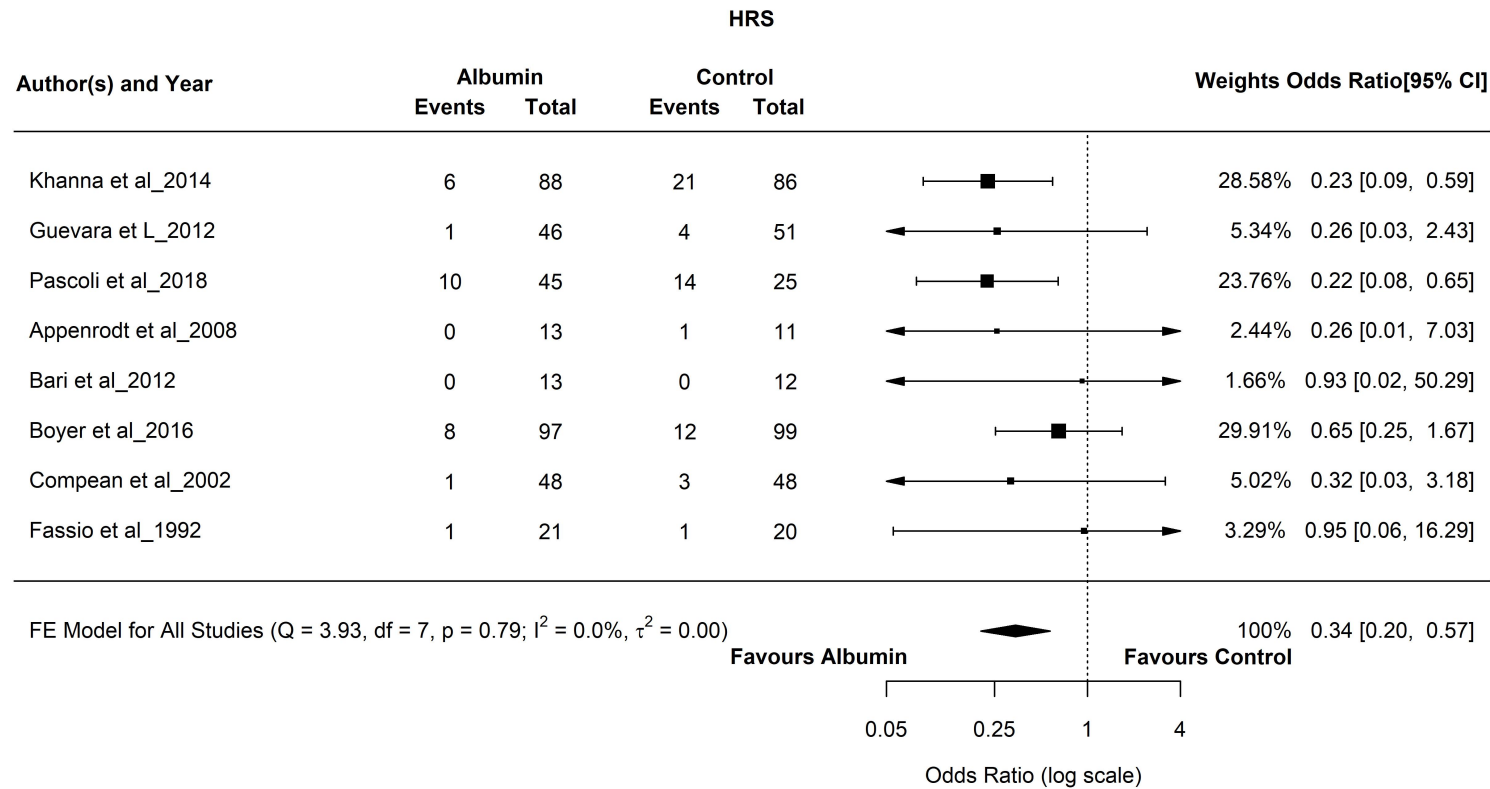


B

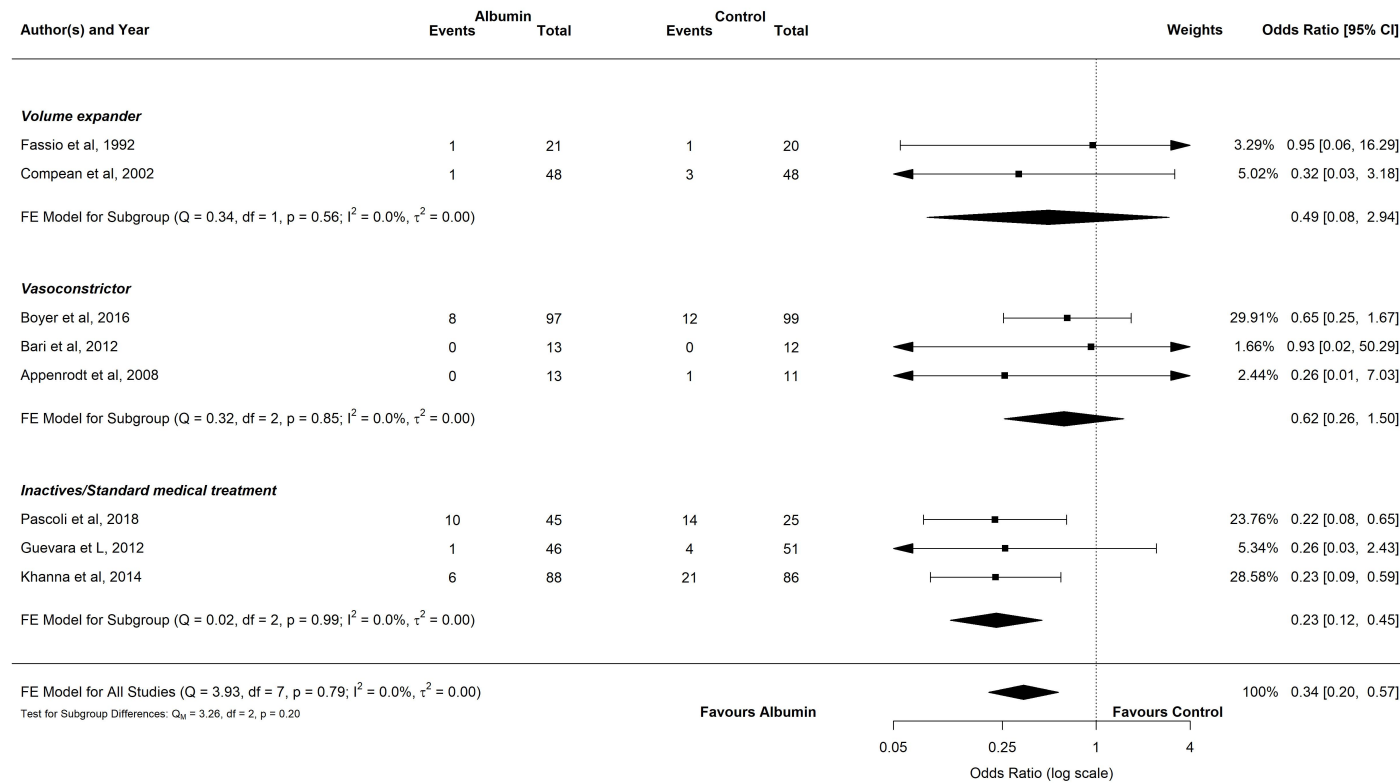


Supplementary Figure 7 Forest plot for ascites reappearance comparing albumin and control and comparing albumin *vs* control across other treatment groups. A: Forest plot for ascites reappearance comparing albumin and control; B: Forest plot for ascites reappearance comparing albumin *vs* control across other treatment groups. 95% CI: 95% confidence interval; df: Degrees of freedom; FE: Fixed effect.

A

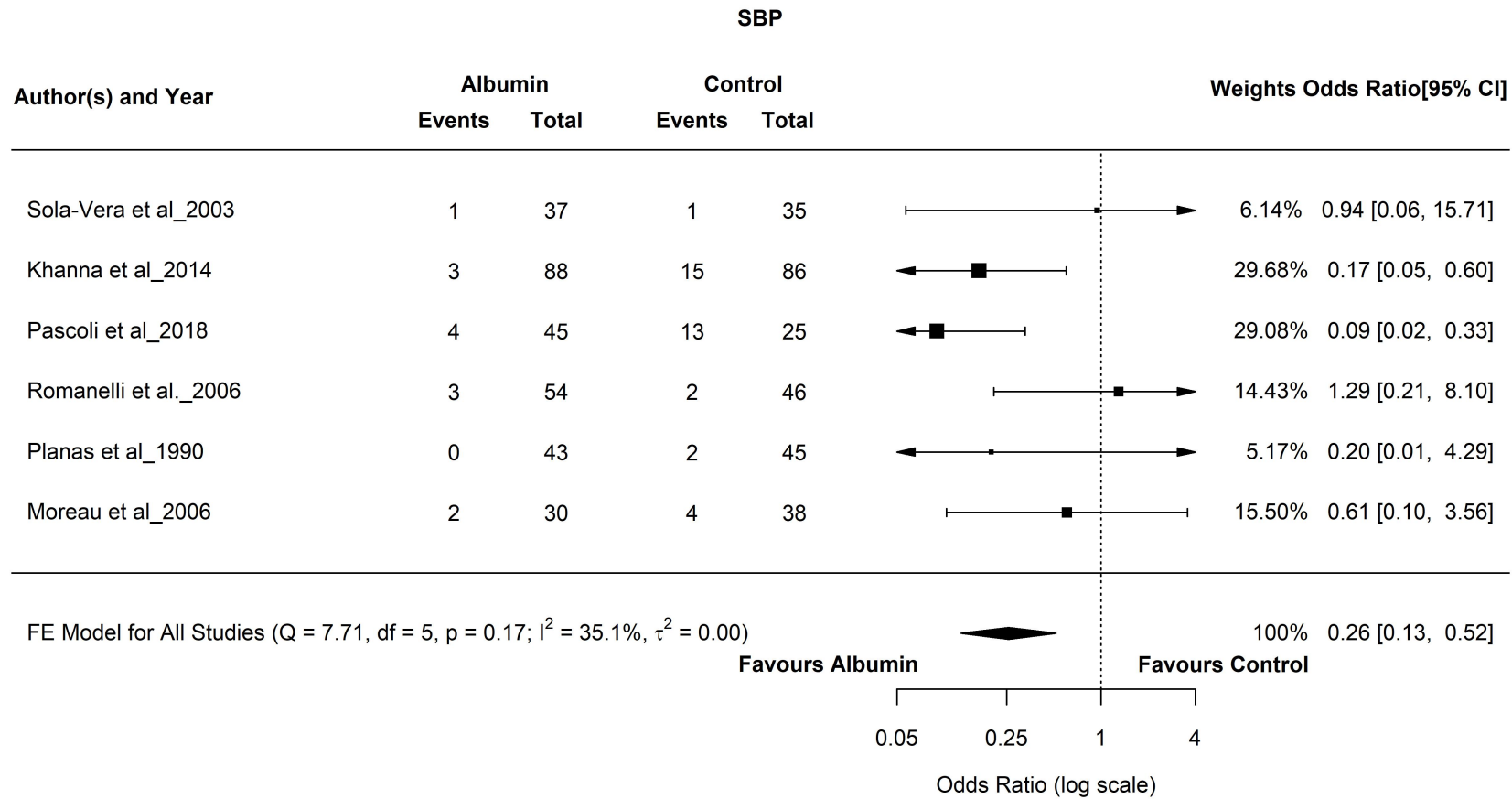


B

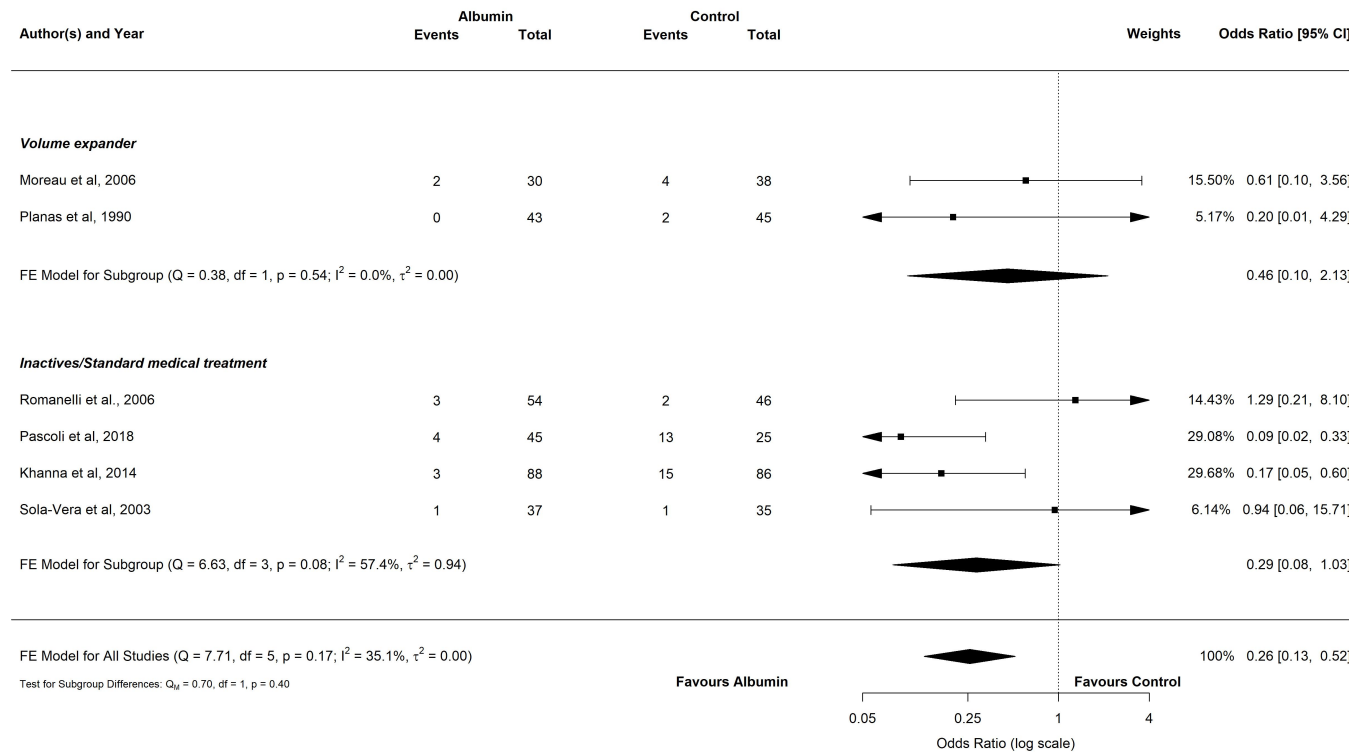


Supplementary Figure 8 Forest plot for hepatorenal syndrome comparing albumin and control and albumin *vs* control across other treatment groups. A: Forest plot for hepatorenal syndrome (HRS) comparing albumin and control; B: Forest plot for HRS comparing albumin *vs* control across other treatment groups. 95%CI: 95% confidence interval; df: Degrees of freedom; FE: Fixed effect.

A

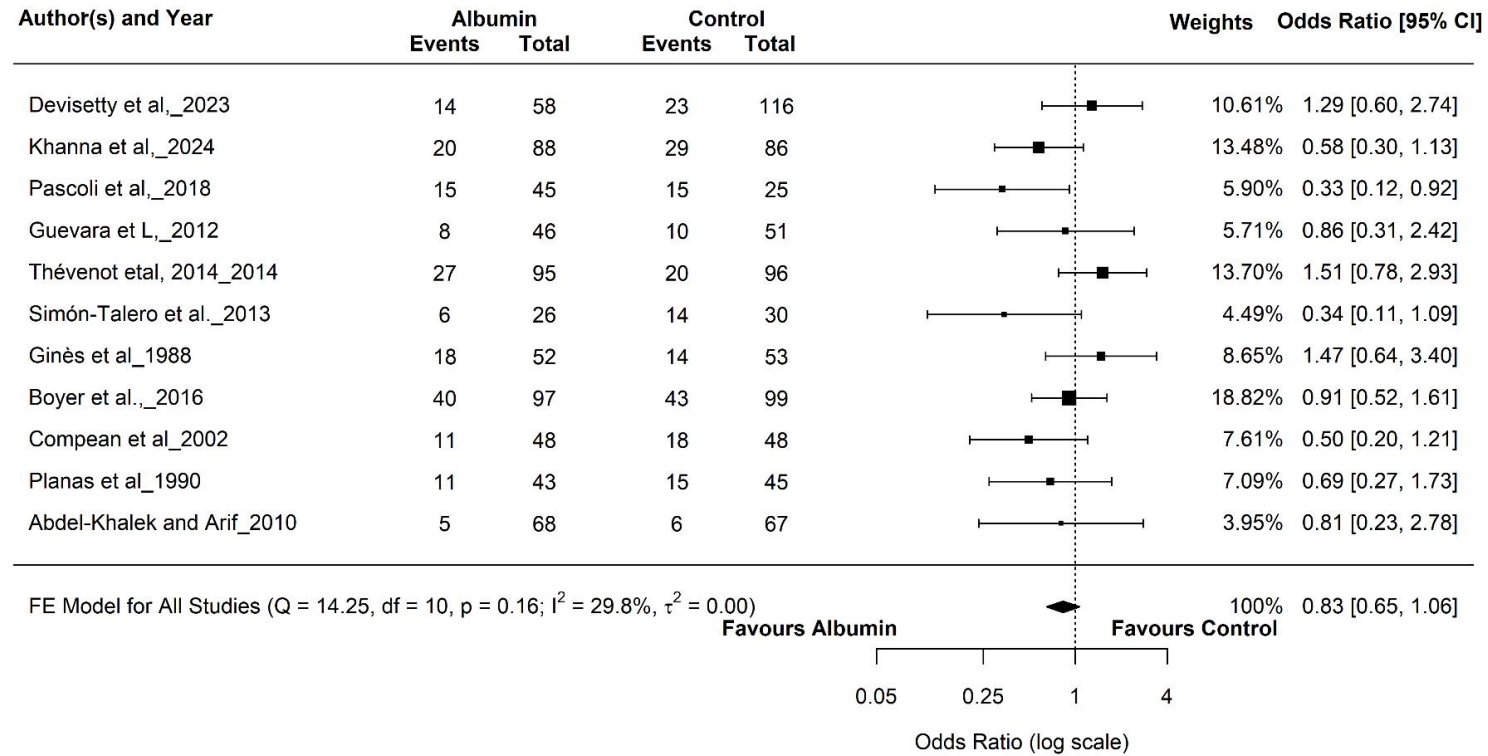


B

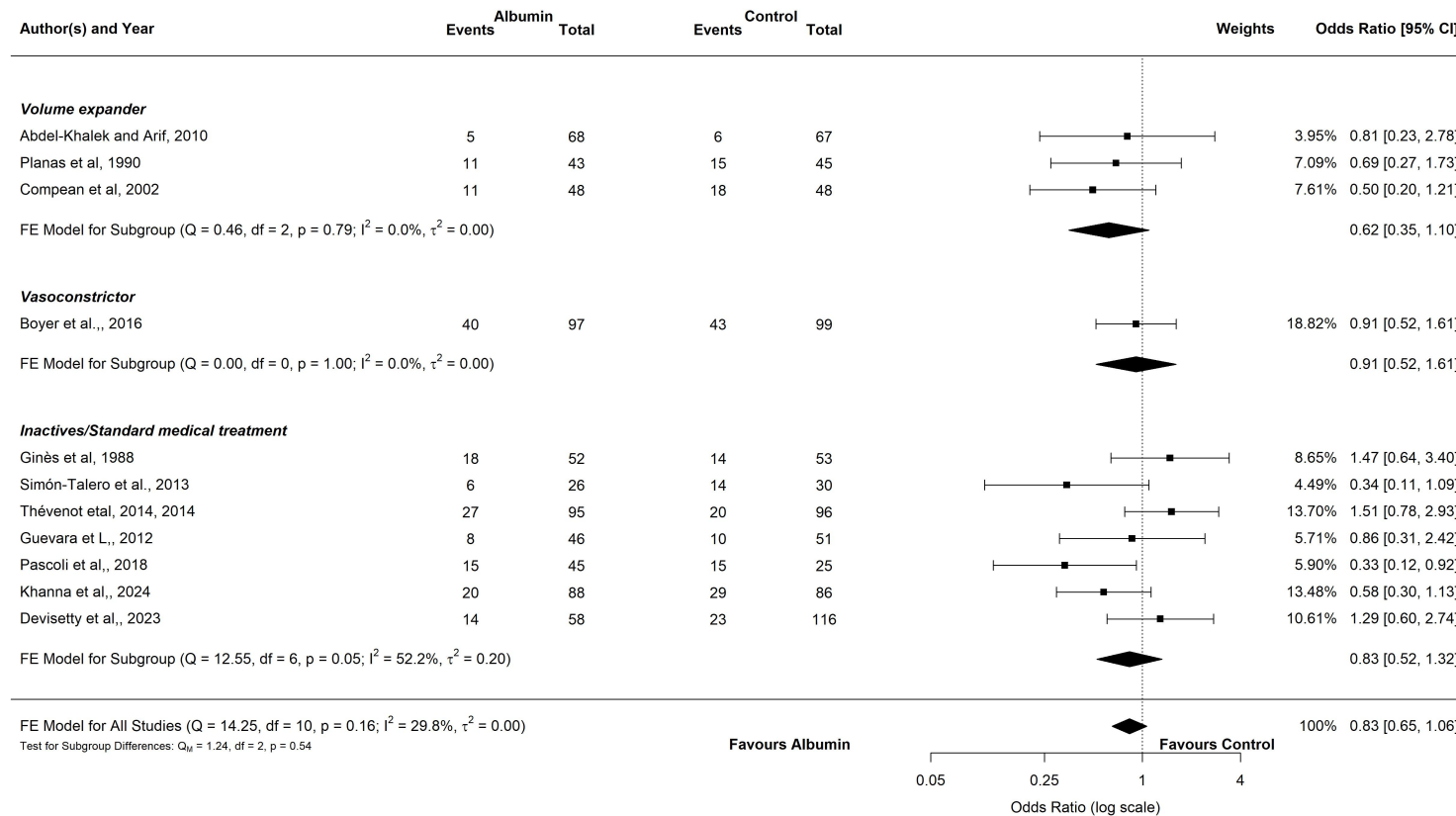


Supplementary Figure 9 Forest plot for spontaneous bacterial peritonitis comparing albumin and control and albumin *vs* control across other treatment groups. A: Forest plot for spontaneous bacterial peritonitis (SBP) comparing albumin and control; B: Forest plot for SBP comparing albumin *vs* control across other treatment groups. 95%CI: 95% confidence interval; df: Degrees of freedom; FE: Fixed effect.

A

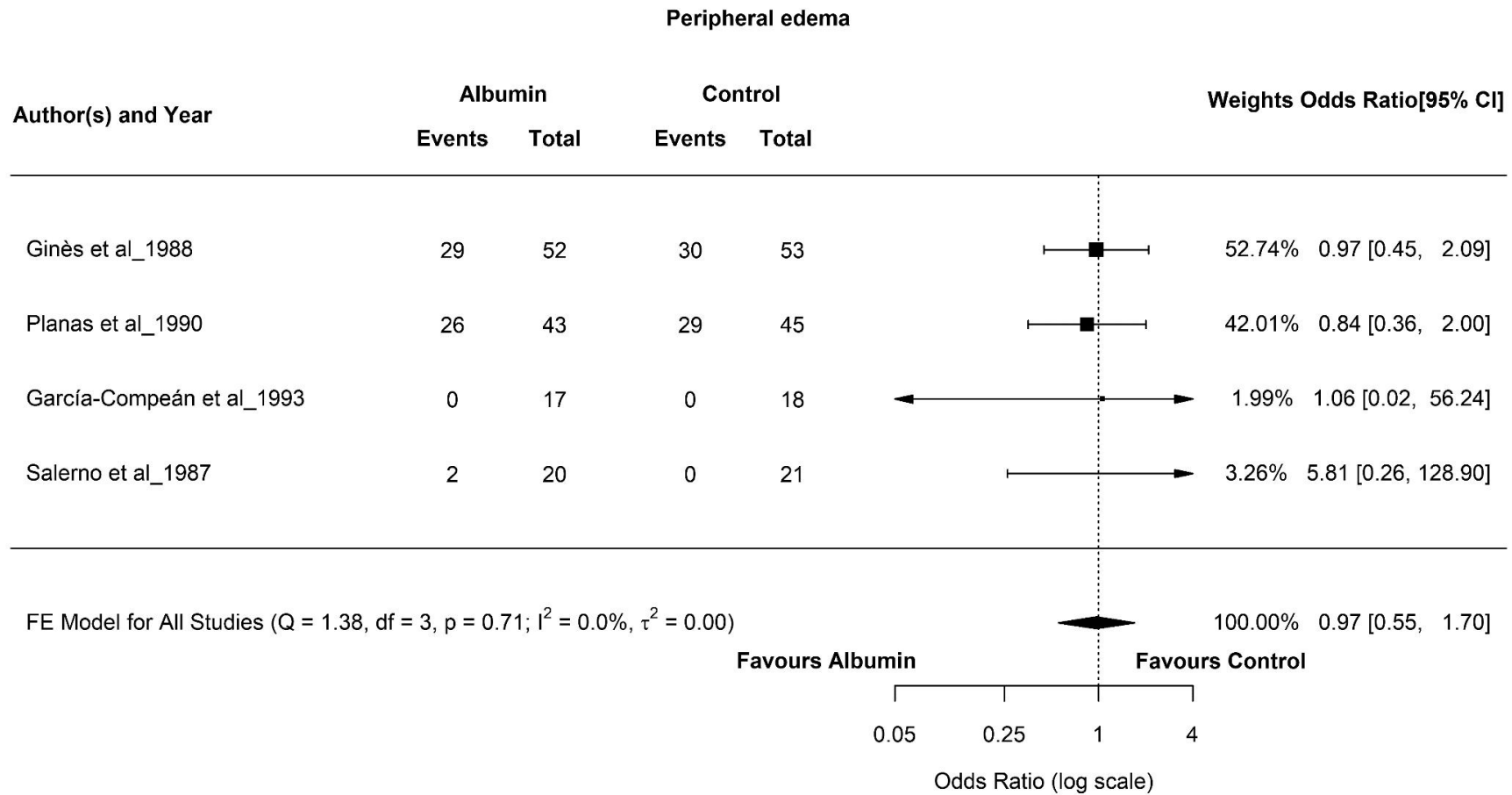


B

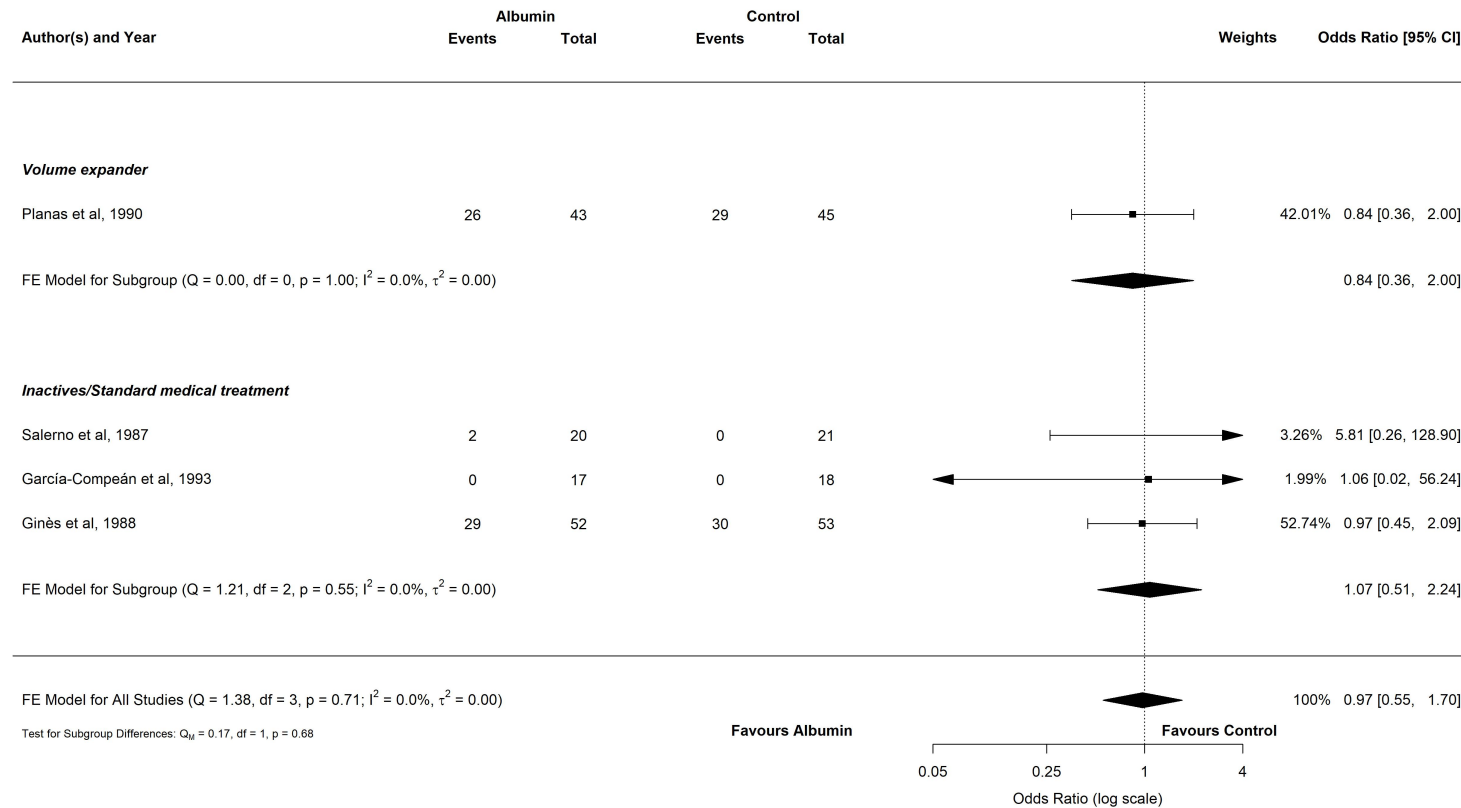


Supplementary Figure 10 Forest plot for mortality during follow up comparing albumin and control and albumin *vs* control across other treatment groups. A: Forest plot for mortality during follow up comparing albumin and control; B: Forest plot for mortality during follow up comparing albumin *vs* control across other treatment groups. 95%CI: 95% confidence interval; df: Degrees of freedom; FE: Fixed effect.

A

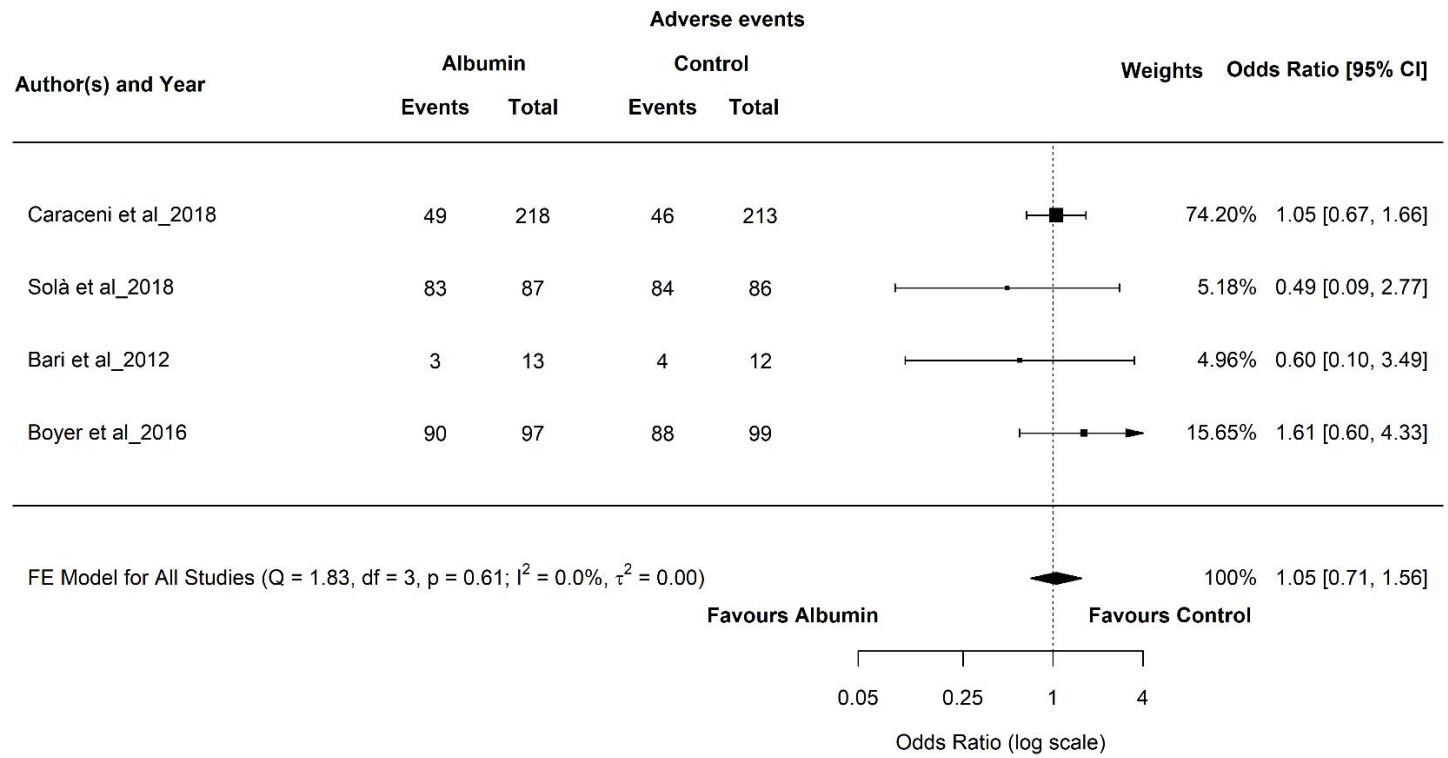


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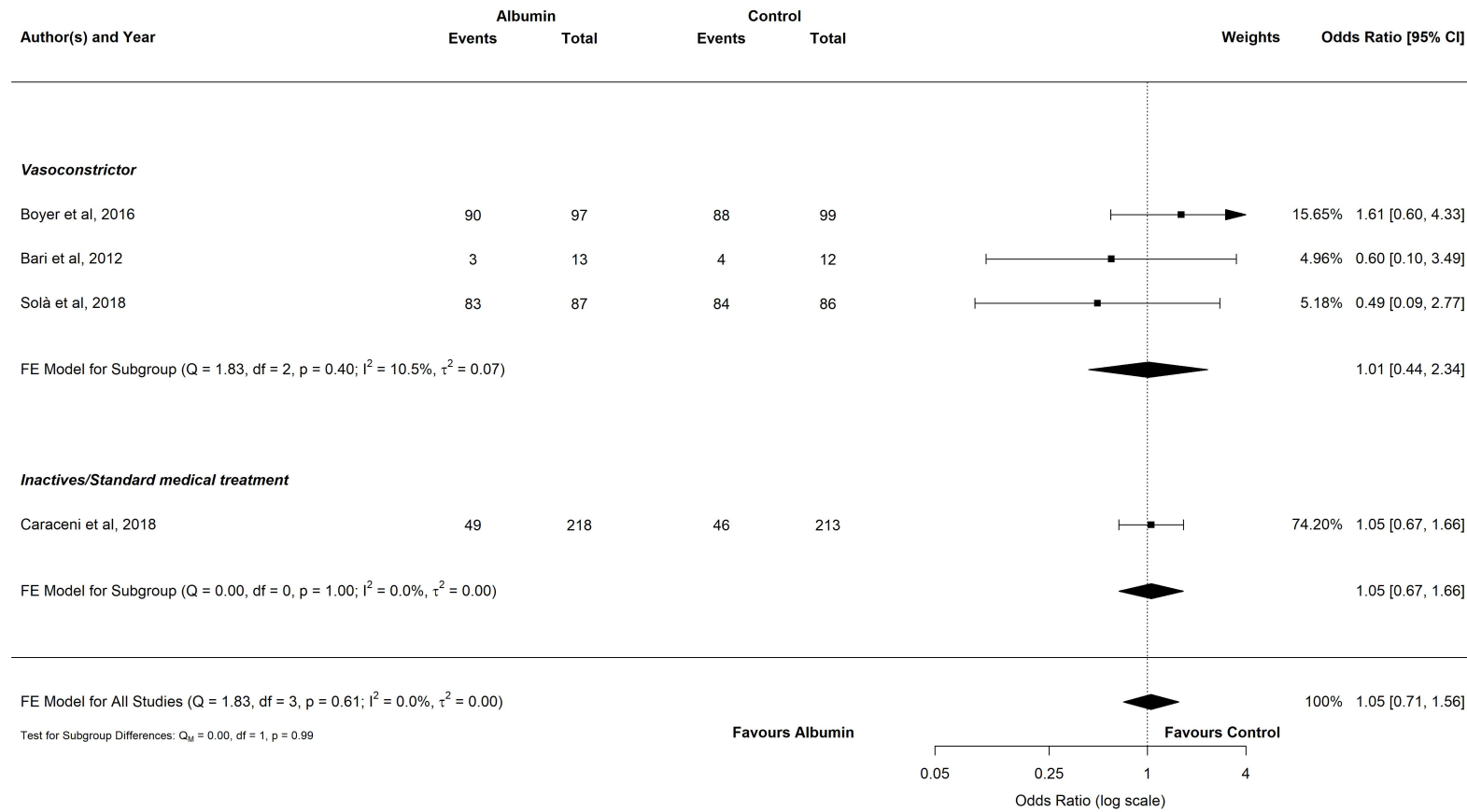


Supplementary Figure 11 Forest plot for peripheral edema comparing albumin and control and albumin *vs* control across other treatment groups. A: Forest plot for peripheral edema comparing albumin and control; B: Forest plot for peripheral edema comparing albumin *vs* control across other treatment groups. 95%CI: 95% confidence interval; df: Degrees of freedom; FE: Fixed effect.

A

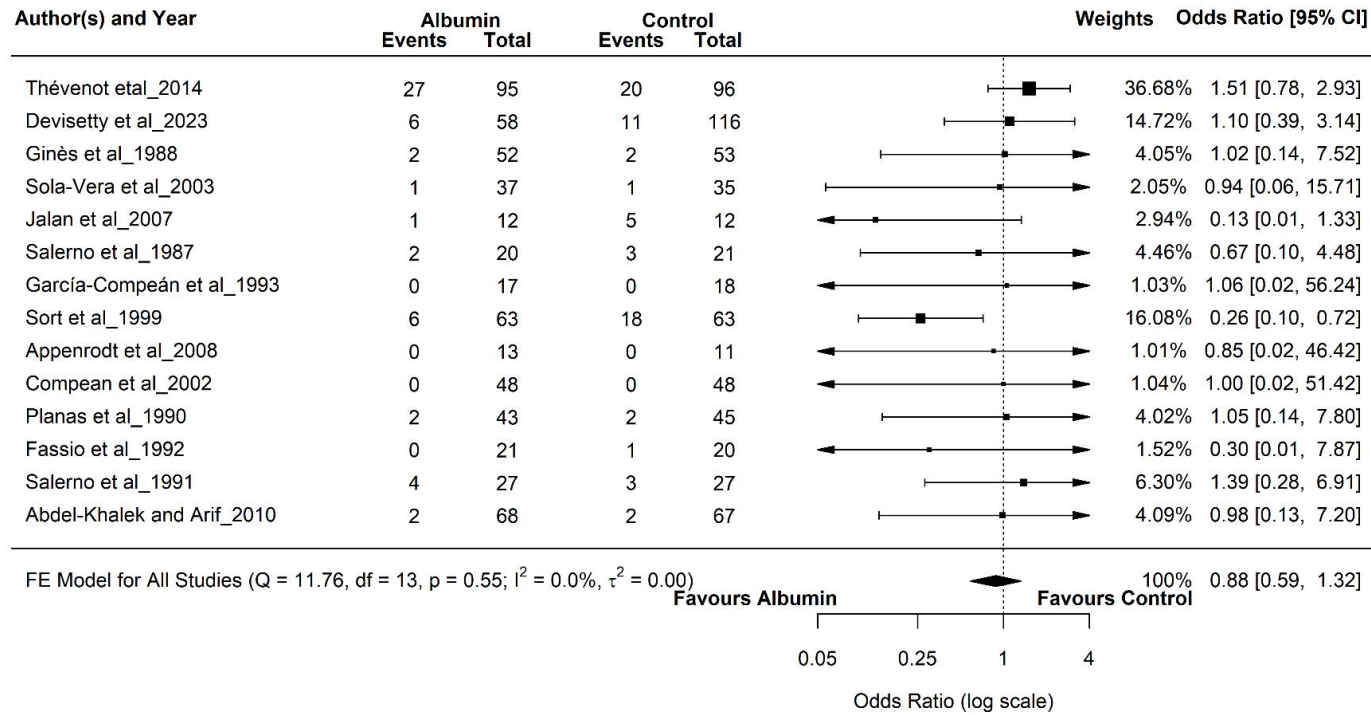


B

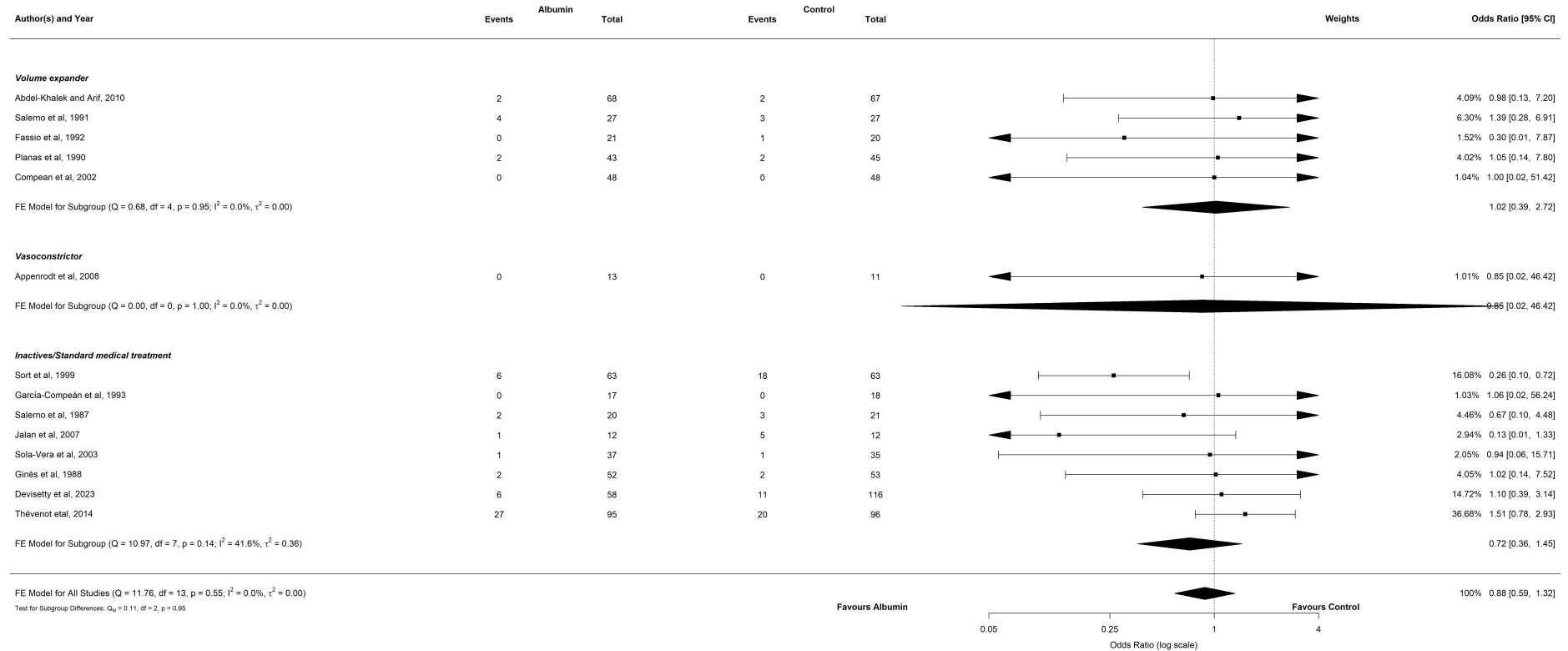


Supplementary Figure 12 Forest plot for overall AE comparing albumin and control and albumin *vs* control across other treatment groups. A: Forest plot for overall AE comparing albumin and control; B: Forest plot for overall AE comparing albumin *vs* control across other treatment groups.

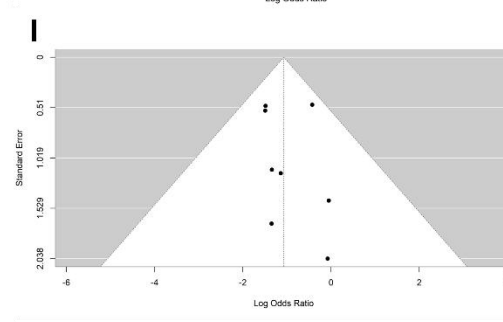
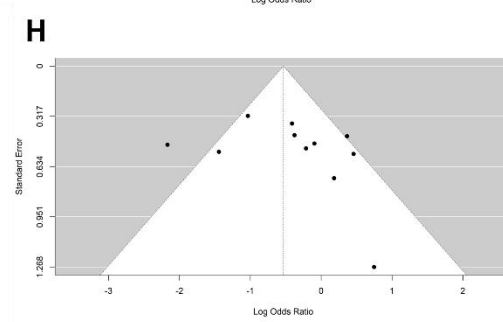
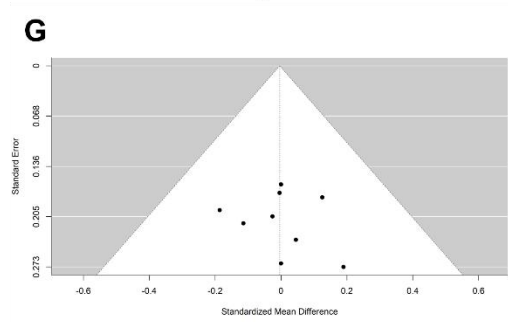
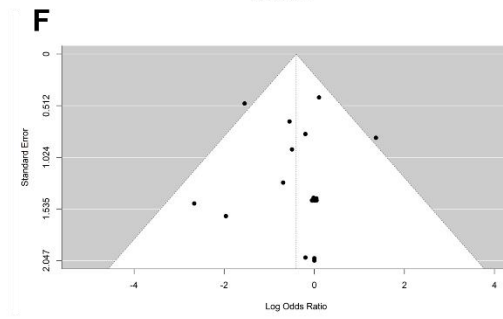
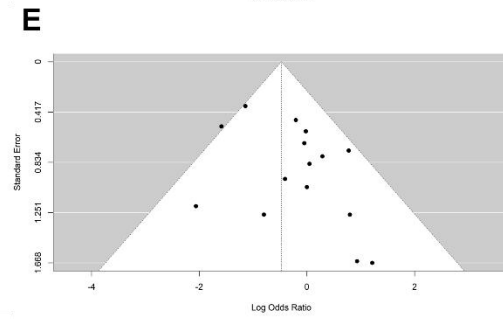
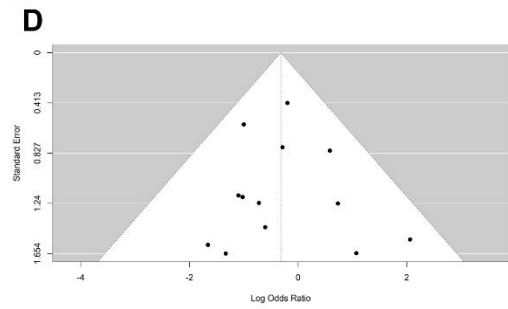
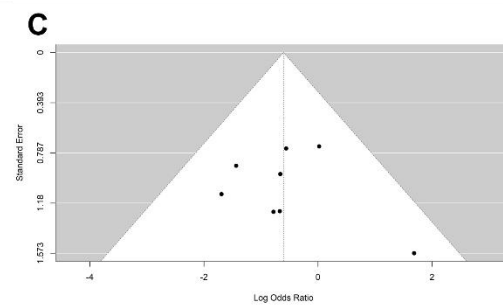
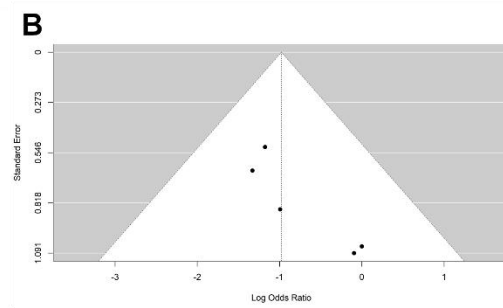
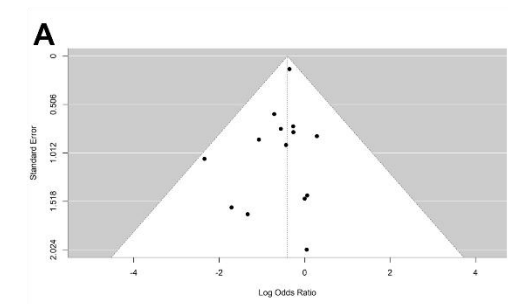
A

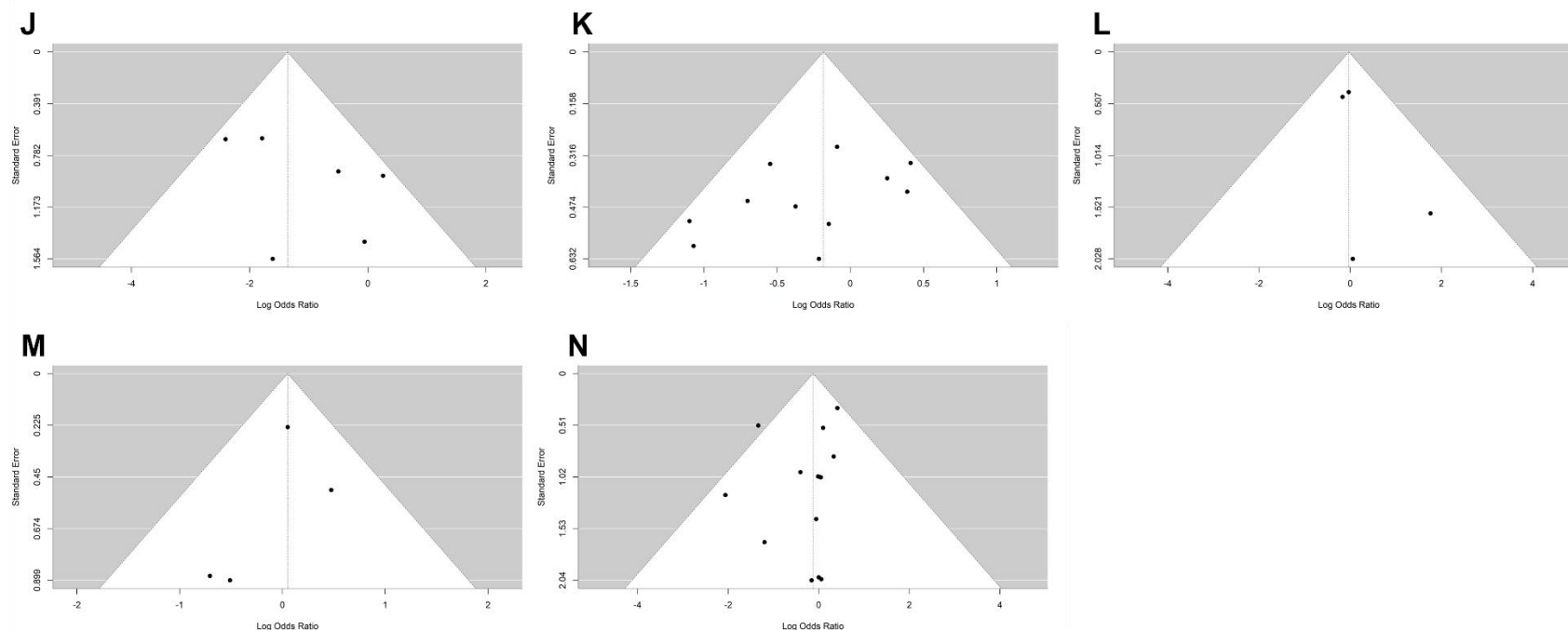


B



Supplementary Figure 13 Forest plot for in hospital mortality comparing albumin and control and albumin *vs* control across other treatment groups. A: Forest plot for in hospital mortality comparing albumin and control; B: Forest plot for in hospital mortality comparing albumin *vs* control across other treatment groups. 95%CI: 95% confidence interval; df: Degrees of freedom; FE: Fixed effect.





Supplementary Figure 14 Funnel plot showing symmetric distribution of studies. A: Hyponatremia; B: Paracentesis-induced circulatory dysfunction; C: Severe infection; D: Gastrointestinal bleeding; E: Hepatic encephalopathy; F: Renal impairment; G: Hospital stay days; H: Ascites reappearance; I: Hepatorenal syndrome; J: Spontaneous bacterial peritonitis; K: Mortality during follow up; L: Peripheral edema; M: Overall adverse events; N: In hospital mortality.