Supplementary Table 1. Details of Search Strategy

Ovid MEDLINE 1946 to January week 2, 2013			
Number	Searches	Results	Search type
1	Exp liver/pa, us or exp liver diseases/pa, us	118,403	Advanced
2	1 and ((stiff* or elastogra*).mp. or elasticity imaging techniques/) [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]	670	Advanced
3	2 and (predict* or prognos*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]	251	Advanced
4	"sensitivity and specificity"/ or roc curve/ or disease progression/ or predictive value of tests/	448,263	Advanced
5	2 and 4	294	Advanced
6	2 and (outcome*.mp. or mo.fs. or treatment outcome/) [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]	50	Advanced
7	3 or 5 or 6	380	Advanced
8	Limit 7 to (clinical trial, all or clinical trial, phase i or clinical trial, phase ii or clinical trial, phase iii or clinical trial, phase iv or clinical trial or comparative study or controlled clinical trial or evaluation studies or meta-analysis or multicenter study or practice guideline or randomized controlled trial or systematic reviews)	153	Advanced
9	7 and (consecutive*.mp. or follow-up studies/ or cohort*.mp. or mortality.mp. or retrospective studies/ or prospective studies/) [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier]	181	Advanced
10	8 or 9	236	
Embase 1988 to 2013 week 4			
Number	Searches	Results	Search type
1	Exp liver disease/ or exp liver/ or exp liver fibrosis/ or exp liver cirrhosis/	647,789	Advanced
2	1 and (stiff* or rigid*).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	2969	Advanced
3	Elastography/	3789	Advanced
4	2 and 3	973	Advanced
5	1 and 3	1812	Advanced
6	4 or 5	1812	Advanced
7	Mortality/ or prediction/ or risk/ or follow up/	1,291,123	Advanced
8	"prediction and forecasting"/ or exp adverse outcome/ or exp predictive value/ or exp prognosis/	423,300	Advanced
9	Outcome*.mp. or treatment outcome/ [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	1,542,733	Advanced
10	6 and (7 or 8 or 9)	717	Advanced
11	Diagnostic accuracy/ or diagnostic value/	251,307	Advanced
12	6 and 11	494	Advanced
13	(10 or 12) and (exp *liver disease/ or exp *liver/ or exp *liver fibrosis/ or exp *liver cirrhosis/)	927	Advanced
14	Limit 13 to (evidence based medicine or consensus development or meta-analysis or outcomes research or "systematic review")	26	Advanced
15	Exp case control study/ or exp case study/ or exp clinical trial/ or exp "clinical trial (topic)"/ or exp longitudinal study/ or exp major clinical study/ or exp prospective study/ or exp retrospective study/	2,592,489	Advanced
16	Comparative study/ or comparative effectiveness/	529,537	Advanced
17	"types of study"/ or exp comparative study/ or exp controlled study/ or exp observational study/	4,543,161	Advanced
18	13 and (15 or 16 or 17 or gold standard/)	460	Advanced
19	14 or 18	475	
Web of Science			
	Topic=(elastogr* AND (liver OR hepat*) AND (stiff* OR rigid* OR fibrosis)) AND Topic=(risk* OR assess* OR evaluat* OR progress* OR predict* OR outcome* OR mortality OR death* OR sever* OR value OR accura* OR prognos*)	1208	

Supplementary Table 2. Study-Level Quality Assessment Using the Quality In Prognosis Studies Tool

Study	Study participation	Study attrition	Prognostic factor measurement	Outcome measurement	Study confounding	Statistical analysis and reporting
Akima[21]	M	L	L	L	L	M
Chon[25]	L	L	L	L	L	L
Corpechot[11]	L	L	M	L	L	L
Fernandez-Montero[22]	M	M	M	M	M	M
Forestier[23]	M	M	L	L	H	H
Fung[24]	L	L	M	L	M	H
Klibansky[26]	L	M	L	L	M	H
Masuzaki[27]	L	L	L	L	L	L
Merchante[28]	L	L	L	L	L	L
Robic[29]	L	M	L	M	H	H
Salmon[30]	L	M	M	L	H	H
Tuma[31]	M	M	L	M	H	L
Vergniol[32]	L	L	M	L	M	L
Asrani[33]	L	M	L	L	L	L
Calvaruso[34]	M	M	M	L	M	M
Narita[35]	M	M	M	L	M	L
Vu[36]	M	M	M	M	M	M

NOTE. For assessing the risk of bias across each domain, the following criteria were used for each category. The criteria for STUDY PARTICIPATION included the following: there was a (a) low risk of bias if the study clearly defined the sampling frame, period and place of recruitment, description of population of interest, as well as baseline study sample; ensured adequate participation of eligible subjects; and clearly reported inclusion and exclusion criteria; there was a (b) moderate risk of bias if all of the earlier-described criteria were met except insufficient description of inclusion and exclusion criteria; and there was a (c) high risk of bias if the study failed to clearly define the sampling frame, period and place of recruitment; there was an inadequate description of the population of interest, as well as the baseline study sample; was not able to confirm adequate participation of eligible subjects, and did not report inclusion and exclusion criteria. The criteria for STUDY ATTRITION included the following: there was a (a) low risk of bias if the study reported a 100% follow-up rate or less than a 20% attrition rate at the end of the study, or in case of more than 20% attrition a clear statement that patients compliant with follow-up evaluation were not significantly different from those lost to follow-up evaluation; there was a (b) moderate risk of bias if the study did not report any attrition rate or an attrition rate of more than 20% but with no description of any systematic differences between those followed up and those lost to follow-up evaluation; and there was a (c) high risk of bias if the attrition rate was higher than 20% with reported systematic differences between those followed up and those lost to follow-up evaluation. The criteria for PROGNOSTIC FACTOR MEASUREMENT included the following: there was a (a) low risk of bias if studies clearly described elastographic technique using a valid and reliable method; used appropriate cut-off values from previous experience or published literature, and failure of elastography (or unsuccessful measurement) occurred in less than 10% of the sample; there was a (b) moderate risk of bias if the failure rate was not reported or was between 10% and 25%; and there was a (c) high risk of bias with failure rates of greater than 25%. The criteria for OUTCOME MEASUREMENT included the following: there was a (a) low risk of bias if the study clearly and appropriately defined outcomes studied (new hepatic decompensation based on ascites, variceal bleeding, hepatic encephalopathy, progressive jaundice, spontaneous bacterial peritonitis, hepatorenal syndrome, meeting minimal listing criteria for liver transplantation; HCC; liver-related mortality based on medical record review), and used a valid and reliable method of ascertainment; there was a (b) moderate risk of bias if study inappropriately reported the presence of esophageal varices or the development of sepsis as suggestive of hepatic decompensation; and there was a (c) high risk of bias if there was no clear report of which outcomes were measured or how they were measured. The criteria for STUDY CONFOUNDING included the following: there was a (a) low risk of bias if the study clearly defined and adequately measured relevant confounders, in particular, markers of hepatic synthetic function such as MELD or its components, Child–Pugh score, as well as type of treatment for cohort members; there was a (b) moderate risk of bias if the study adjusted for at least 3 other confounding variables, including measures of hepatic synthetic function; and there was a (c) high risk of bias if the study reported unadjusted analysis or did not report adjusted analysis. The criteria for STATISTICAL ANALYSIS AND REPORTING included the following: there was a (a) low risk of bias if the study performed a multivariate Cox proportional hazard model without overfitting; there was a (b) moderate risk of bias if the study reported a multivariate Cox regression analysis instead of a time to event analysis; and there was a (c) high risk of bias if the study just reported a univariate analysis or if there was selective reporting of results.
H, high risk of bias; L, low risk of bias; M, moderate risk of bias.