

Appendix S3: Assessment of Risk of Bias of Included Studies Using Prediction model Risk of Bias Assessment Tool (PROBAST)¹⁷

Study	Risk of Bias				Applicability			Overall	
	Participants	Predictors*	Outcome*	Analysis	Participants	Predictors	Outcome	Risk of Bias	Applicability
Brennan <i>et al.</i> 2004 ²²	+	-	-	+	?	+	+	+	+
Kanda <i>et al.</i> 2014 ²³	?	-	-	-	?	+	+	-	+
Miura <i>et al.</i> 2014 ²⁴	?	-	-	-	?	+	+	-	+
Shen <i>et al.</i> 2018 ¹⁸	?	-	-	-	+	+	+	-	+
Xu <i>et al.</i> 2017 ²⁵	?	-	-	-	?	+	+	-	+
Walczak & Velanovich 2017 ²⁶	?	?	-	-	?	+	+	?	+
Hsu <i>et al.</i> 2012 ²⁷	+	-	-	?	?	+	+	+/?	+
Botsis <i>et al.</i> 2009 ⁸	?	-	-	-	?	+	+	-	+
Liu <i>et al.</i> 2018 ²⁹	+	?	-	?	+	+	+	?	+
Balzano <i>et al.</i> 2017 ¹⁹	+	-	-	-	?	+	+	-	+
Smith & Mezhir 2014 ³⁰	+	-	-	-	+	+	+	-	+
Pu <i>et al.</i> 2017 ³¹	?	-	-	-	?	+	+	-	+
Dasari <i>et al.</i> 2015 ²⁰	+	-	-	-	?	+	+	-	+
Pu <i>et al.</i> 2018 ²¹	+	-	-	?	+	+	+	+	+
Katz <i>et al.</i> 2012 ³²	+	?	-	?	+	+	+	+/?	+

* = low risk of bias / low concern regarding applicability; - = high risk of bias / high level of concern regarding applicability; ? = unclear level of risk of bias / concern regarding applicability; *blinding was an issue across all studies even where risk and concern were low in other areas