Study details	Number of part characteristics	ticipants and	participant's	s Prognostic tool Methods Outcomes and results					Comments					
Full citation	Sample size			Prognostic tool/test	Sample selection	Prognostic a	accura	icy (sensiti	vity, specifi	city)				Limitations
Maitra, Nandita, Prediction of Adverse Maternal Outcomes in Procelamosia	Characteristics	s		fullPIERS (Pre- eclampsia Integrated Estimate of Risk).	This study used a prospective cohort of data.	Predicted probability (cut-off)	Total N	Total N with outcome	Sensitivity (95% CI)	Specificity (95%Cl)	LR+ (95% CI)	LR- (95% CI)		this study was assessed using the CASP tool for
Using a Risk Prediction Model, Journal of obstetrics and gynaecology of	Age, years	with outcome (n = 60) 24.8 (2.9)	without outcome (n =262) 24.7 (3.9)	in the model: gestational age, respiratory pulse oximetry, platelets,	variables were obtained within 24 hours of admission for	0.00-0.99%	223	18	0.72 (0.47- 0.90)	0.78 (0.72- 0.84)	1.68 (1.17- 2.41)	0.48 (0.22- 1.03)		prediction rule (CPR). A. Are the results valid? 1 Is the CPR
India, 66, 104-11, 2016 Ref Id	(mean, SD) Gestational age at entry,	35.47	24 5 (4 5)	creatinine, hepatic aspartate transaminase	pre- eclampsia.	1.0-2.4%	23	6	0.58(0.37- 0.78)	0.84(0.78- 0.88)	3.59 (2.29- 5.64)	0.49 (0.30- 0.79)		clearly defined? Yes 2 The population from
803137 Country/ies where the study	weeks (mean, SD)* Pre-	(3.55)	34.5 (4.5)	Outcome(s) PIERS composite. Outcomes	collection Data were collected	2.5-4.9%	17	7	0.42 (0.25- 0.61)	0.88 (0.83- 0.92)	3.47 (2.02- 5.96)	0.66 (0.48- 0.89)		was derived included an appropriate spectrum of
India Aim of the study	eclampsia ^a (n ,%) Singleton	60 (100%)	262 (100%)	mortality or one or more serious central nervous system,	no details regarding sampling were reported.	5.0-9.9%	15	5	0.39 (0.23- 0.57)	0.92 (0.88- 0.95)	4.95 (2.73 - 8.98)	0.66 (0.51- 0.86)		tell (how patients were selected was not reported)
To assess the performance o f the fullPIERS model to predict maternal adverse	pregnancy (n ,%) Mean (SD) sBP ≥ XY	60 (18.6%)	262 (81.3%)	cardiorespiratory, renal, haematological, or hepatic morbidity	Whether the cohort had missing data and methods for handling missing data	10.0-19.9%	12	6	0.31 (0.18- 0.47)	0.94 (0.90- 0.97)	5.11 (2.62- 9.96)	0.73 (0.59- 0.90)		3 Was the rule validated in a different group of patients? Yes 4 Were the
outcomes within 24 hours of	mmHg at entry*	(18.8)			was not reported.				L					predictor variables and the outcome

Table 9: Clinical evidence tables

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Study details	Number of part characteristics	ticipants and	participant's	Prognostic tool	Methods	Outcomes and results						Comments	
admission for preeclampsia	Mean (SD)				Data analysis	20.0-29.9%	5	3	0.24 (0.13 0.40)	8- 0.95 (0.91- 0.97)	4.71 (2.25 -9.86)	0.79 (0.67- 0.94)	evaluated in a blinded fashion?
Study dates	dBP ≥ XY mmHg at entry*	102.69 (8.1)	98.02 (9.1)		Sensitivity, specificity, and likelihood				0.52 (0.38	B 0.97 (0.94-	16.92	0.49	details regarding sampling have
Source of funding	*Between group for gestational a mean sBP (p<0 ^a Pre-eclampsia) differences w lige at entry, m .01) was defined at	ere significant ean SBP and s hypertension		ratios were calculated using MedCalc software.	≥ 30% Data above a	27 are repo	15 rted by co	0.65)	0.99) e risk estimate	(8.19- 34.93) s into di	(0.38- 0.64) chotomous	been provided) 5 Were the predictor variables and the outcome evaluated in the
Not reported	(sBP/dBP≥ 140, hours apart afte age) in combina g/dI of proteinur	90 taken twice r 20 weeks of ition with prote ia or 2+)	e more than 4 gestational inuria (≥ 0.3			data, i.e. the positive test. negative test Likelihood ra Deeks and A	LR for t At this o result o tios wer Itman 2	he 0-0.99 cut-off, a p jives a LR re also cal 004 from	% category positive test of 0.48. culated by raw data re	treats 0.99% a result gives a the NGA using ported in the a	the contract the contract the second se	ut-off for a 68, and a hod of th 95% Cl	whole sample selected initially? Yes 6 Are the statistical
	Inclusion criter sBP/dBP≥ 140/s hours apart afte	ria 90 taken twice r 20 weeks of	more than 4 gestational			Risk category	Numb with outcor	er Nur with me out	nber nout come	Likelihood ratic)	95% CI	methods used to construct and validate the rule clearly
	age; ≥ 0.3 g/dl c weeks of gestat non-proteinuric eclamptic seizu	of proteinuria o ion; non-hyper HELLP syndro re without prior	r 2+ after 20 tensive and ome; one r hypertension			0-0.99%	18	205	,	(18/60)/(205/2 0.38	62) =	0.26 to 0.57	described? No B. What are the results? 7 Can the
	with or without h	hypertension a	nd proteinuria			1-2.4%	6	17		(6/60)/(17/262)	= 1.54	0.63 to 3.74	performance of the rule be calculated? Yes
	Women admitte	d in spontaned ny element of t	ous labour; the composite			2.5-4.9%	7	10		(7/60)/(10/262)	= 3.06	1.21 to 7.70	was the estimate of the treatment
	maternal outcor eligibility criteria predictor variab	nes prior to the or before the les was possib	eir meeting the collection of le			5.0-9.9%	5	10		(5/60)/(10/262)	= 2.18	0.77 to 6.15	effect? The rule is robust, there was not any attempt to
						10-19.9%	6	6		(6/60)/(6/262) =	= 4.37	1.46 to 13.07	refine the rule with other variables to see whether

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes a	Comments				
				20-29.9%	3	2	(3/60)/(2/262) = 6.55	1.12 to 38.34	precision could be improved C. Will the
				≥30%	15	12	(15/60)/(12/262) = 5.45	2.69 to 11.05	locally? Are the results applicable to
				Total	60	262			the scenario? 9 Would the
				These data r category res category, he	efer to the ult, i.e. wh r LR for dis	ER obtained w en an individua sease is 0.38	hen an individual is giver I is given a risk in the 0-0	1 each risk 99%	be reliable and the results interpretable if used for your patient? Yes (UK population)
				Model calib	ration				10 Is the rule acceptable in your case? Yes
				Tool discrin	nination				results of the rule modify your decision about
				Not reported					the management of the patient or the information you can give to him/her? Yes
									Indirectness Unclear where sampling was carried out, study was published in India

Study details	Number of partic characteristics	cipants and	l participant's	Prognostic tool	Methods	Outcomes a	nd result	ts					Comments
													Other information
Full citation Akkermans, J., Payne, B., Dadelszen, P. V., Groen, H., Vries, J. D., Magee, L. A., Mol, B. W., Ganzevoort, W., Predicting complications in	Sample size N=216 (PETRA c Characteristics Participant's cha extracted from C Akkermans 2014 the HDP outcom	cohort) aracteristic Ganzevoort 4 did not re	s (data 2005 as port data on	Prognostic tool/test fullPIERS (Pre- eclampsia Integrated Estimate of Risk). Factors included in the model: gestational age, respiratory	Sample selection This study used data from the Pre- eclampsia Eclampsia TRial Amsterdam (PETRA)	Prognostic a At 48 h of ac Sensitivity (9 Specificity (9 At 7 days of Sensitivity (9 Specificity (9	accuracy Imission 5% Cl) = 5% Cl)= (admission 5% Cl) = 5% Cl) = (v (sensitivity , using a cu 0.91 (95% (0.93 (95% C on, using a 0.90 (95% C 0.23 (95% C	t-off of 20.1% CLNR) CLNR) CLNR) CLNR) Cut-off of 20 CLNR)	% .1%			Limitations The quality of this study was assessed using the CASP tool for clinical prediction rule (CPR). A Are the
pre-eclampsia: External validation of the fullPIERS model using the		Control group* (n = 104)	Treatment group* (n = 110)	pulse oximetry, platelets, creatinine, hepatic aspartate	a randomised controlled trial of plasma volume	Model calibr <u>Risk stratific</u> admission	ation ation tal	ble - Predict	ion of comp	lication with	<u>in 48 ho</u> i	<u>urs of</u>	results valid? 1 Is the CPR clearly defined? Yes
PETRA trial dataset, European Journal of Obstetrics	Age, years (median,range)	30.9 (20- 41)	28.9 (18- 41)	transaminase	expansion in women with hypertensive disorders of	Predicted probability	Total no of women	Total no of women with adverse	Sensitivity (95% CI)	Specificity (95% CI)	LR + (95% CI)	LR - (95% CI)	2 The population from which the rule was derived
Reproductive Biology, 179, 58- 62, 2014	No. with severe pre-eclampsia ^a (n, %)	43 (41%)	52 (47%)	Outcome(s)	between 24 and 34 weeks gestational age.	0.00- 0.0099	37 (17%)	outcomes	-	-	0 (0.00 -1.23)	-	appropriate spectrum of patients? Yes 3 Was the rule
Ref Id 803144	HELLP at entry ^b (n, %)	27 (26%)	27 (25%)	PIERS composite. Out- comes included: maternal mortality	Women were enrolled from 2 different centres in The	0.010- 0.024	59 (27%)	0 (0%)	-	-	0 (0.00- 0.76)	-	validated in a different group of patients? Yes
Country/ies where the study was carried out	Eclampsia at entry ^c (n,%)	32 (31%)	37 (34%)	or one or more serious central nervous system, cardiorespiratory,	Netherlands (Department of Obstetrics at the	0.025- 0.049	34 (16%)	1 (3%)	-	-	0.17 (0.02- 1.23)	-	4 Were the predictor variables and the outcome
The Netherlands Aim of the study	restriction ^d (n, %)	56 (54%)	67 (61%)	renal, haematological, or hepatic morbidity. Outcom es included:	Academic Medical Center [n=118] and the VU								evaluated in a blinded fashion? Yes (the author who collected the

Study details	Number of partic characteristics	cipants and _I	participant's	Prognostic tool	Methods	Outcomes a	ind resul	ts					Comments
To provide external validation of the fullPIERS model at 48 h	Ethnicity: non- white (n, %)	28 (27%)	21 (28%)	maternal mortality or one or more serious central nervous system,	University Medical Center [n=98]).	0.050- 0.099	27 (13%)	1 (4%)	-	-	0.22 (0.03- 1.57)	-	data was not aware of the model parameters)
within admission Study dates	bHELLP: haemoly hypertension, and	g per 24h ysis, elevated telets, with or d proteinuria.	liver without	cardiorespiratory, renal, haematological, or hepatic morbidity	Data collection	0.010-0.19	17 (8%)	1 (6%)	-	-	0.35 (0.04- 2.62)	-	5 Were the predictor variables and the outcome evaluated in the
1st April 2000 to 31st May 2003 Source of	^d Eclampsia: gene caused by epilep ^d Fetal growth res weight <10th cen *N=1 participant f	eralised convu sy triction: estim tile missing in ead	llsions not ated fetal ch group.		Data were collected prospectively, although further	0.20-0.29	13 (6%)	3 (23%)	-	-	1.72 (0.50- 5.93)	-	whole sample selected initially? Yes 6 Are the statistical
funding Dutch National Health Insurance	Were excluded fr because of "unar malformations"	om the Ganzo aticipated con	evoort 2005 genital Women		retrospective data collection was performed to	≥0.30	29 (13%)	26 (90%)	-	-	49.89 (16.02- 154.98)	-	methods used to construct and validate the rule clearly
Board		adverse outcomes (n=73)	adverse outcomes (n=143)		amount of outstanding parameters in the fullPIERS	Total	216	32					Yes B. What are the results? 7 Can the
	Gestational age at inclusion (median, IQR)	29.3 (27.1- 31.3)	30.3 (27.6- 31.4)		dataset. The variable oxygen saturation was	Risk stratific admission	cation tal	ble - Predict	ion of comp	lication with	in 7 days	<u>s of</u>	performance of the rule be calculated? Yes 8 How precise
	Parity ≥1 (n,%)	18 (25%)	47 (33%)		often irretrievable, in which cases the value of 97% was	Predicted probability	Total no of women	of women with adverse outcomes	Sensitivity (95% CI)	Specificity (95% CI)	LR + (95% CI)	LR - (95% Cl)	was the estimate of the treatment effect? In the study it is
	Inclusion criteria Women were ent dataset if they me	a ered into the et at least one	PETRA		imputed (this was also done in the internal validation study by von	0.00- 0.0099	37 (17%)	6 (16%)	-	-	0.48 (0.21- 1.09)	-	mentioned that "the model was adjusted to account for underlying
	eclampsia (dBP ≥ proteinuria ≥0.3g IUGR (< 10th cer	≥110 mmHg a per 24 hours ntile); pregnar); eclampsia; hcy induced		For missing data, the method of last observation	0.010- 0.024	59 (27%)	7 (12%)	-	-	0.33 (0.16- 0.69)	-	maternal outcomes in this population" (page 61)

Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes a	nd result	ts					Comments
hypertension (dBP ≥ 90 mmHg with the absence of proteinuria).		carried forward was used.	0.025- 0.049	39 (16%)	4 (12%)	-	-	0.33 (0.12- 0.90)	-	C. Will the results help locally? Are the results
Exclusion criteria Signs of fetal distress, maternal condition demanding immediate delivery, or previous diagnosis of a lethal fetal congenital		Data analysis Calibration was	0.050- 0.099	27 (13%)	4 (15%)	-	-	0.43 (0.15- 1.19)	-	applicable to the scenario? 9 Would the prediction rule be reliable and
abnormality.		calculated by assessing the slope of the linear predictor	0.010-0.19	17 (8%)	6 (35%)	-	-	1.35 (0.52- 3.50)	-	the results interpretable if used for your patient? Yes (UK
		resulting from application of the fullPIERS model to the study data	0.20-0.29	13 (6%)	8 (62%)	-	-	3.97 (1.35- 11.67)	-	oppulation), although 27% of women did not present with pre-eclamosia
		Further assessment was done by adjusting the	≥0.30	29 (13%)	27 (93%)	-	-	33.53 (8.22- 136.76)	-	10 Is the rule acceptable in your case? Yes 11 Would the
		intercept of the fullPIERS model to reflect the difference in outcome prevalence of the PETRA dataset. Discrimination was calculated using the area under the curve (AUC) ROC. 95% Cls were calculated for	Total Tool discrim AUC ROC (9 AUC ROC (9 Calibration s Calibration s PETRA and *assumed typ	216 nination 95% Cl) 4 95% Cl) 7 slope (95 slope (95 fullPIER	62 8 hours of a days of ad % Cl) = 1.6 % Cl) after S populatio cal error in p	admission= mission= 0.8 9 (1.10-2.28) adjustment n = 1.67 (109 aper, CI repo	0.97 (0.94 to 30 (0.72 to 0.4 * for differenc 9-226) wrted as 110 t	0.99) 87) es betwe	en	results of the rule modify your decision about the management of the patient or the information you can give to him/her? Yes Indirectness PETRA dataset - 73% of participants presented with pre-eclampsia
	Number of participants and participant's characteristics	Number of participants and participant's characteristics Prognostic tool hypertension (dBP ≥ 90 mmHg with the absence of proteinuria). Exclusion criteria Signs of fetal distress, maternal condition demanding immediate delivery, or previous diagnosis of a lethal fetal congenital abnormality. Image: Congenital distress is the state of the st	Number of participants and participant's characteristics Prognostic tool Methods hypertension (dBP ≥ 90 mmHg with the absence of proteinuria). carried forward was used. carried forward was used. Exclusion criteria Data analysis Calibration was calculated by assessing the slope of the linear predictor resulting from application of the fullPIERS model to the study data. Further assessment was done by adjusting the intercept of the fullPIERS model to reflect the difference in outcome prevalence of the PETRA dataset. Discrimination was calculated using the aunder the curve (AUC) ROC. 95% Cls were calculated for application	Number of participants and participant's characteristics Prognostic tool Methods Outcomes a hypertension (dBP ≥ 90 mmHg with the absence of proteinuria). carried forward was used. 0.025-0.049 Exclusion criteria Data analysis 0.050-0.099 Signs of fetal distress, maternal condition demanding immediate delivery, or previous diagnosis of a lethal fetal congenital abnormality. 0.010-0.19 abnormality. 0.010-0.19 0.010-0.19 0.010-0.29 0.010-0.19 0.020-0.29 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.020-0.29 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19 0.010-0.19	Number of participants and participant's characteristics Prognostic tool Methods Outcomes and result hypertension (dBP ≥ 90 mmHg with the absence of proteinuria). carried forward was used. 0.025-0.049 39 Exclusion criteria Signs of fetal distress, maternal condition demanding immediate delivery, or previous diagnosis of a lethal fetal congenital abnormality. Data analysis 0.050-0.049 27 Calibration was calculated by assessing the slope of the fulPIERS model to	Number of participants and participant's Characteristics Prognostic tool Methods Outcomes and results hypertension (dBP ≥ 90 mmHg with the absence of proteinuria). carried forward was used. 0.025-0.049 39 4 (12%) Exclusion criteria Data analysis abnormality. Data analysis calculated by assessing the slope of the linear predictor resulting from application of the fullPIERS model to the study data. Further assessment hat full PIERS model to the fullPIERS model to reflect the difference in outcome prevalence of the PETRA and fullPIERS populatio slope (95% CI) 48 hours of a facilitation slope (95% CI) 7 days of ad calculated using the area under the curve (AUC) ROC. 95% (CI) were calculated for any full provide of the performation full provement of the PETRA and fullPIERS population slope (95% CI) 48 hours of a facilitation slope (95% CI) 48 hours of a facilitat	Number of participants and participant's characteristics Prognostic tool Methods Outcomes and results hypertension (dBP ≥ 90 mmHg with the absence of proteinuria). carried forward was used. 0.025- 0.049 39 (15%) 4 (12%) - Exclusion criteria demanding immediate delivery, or previous diagnosis of a lethal fetal congenital abnormality. Data analysis calculated by assessing the slope of the inear predictor resulting from application of the full/ERS model to the study data. Further assessment difference in outcome prevalence of the full/ERS nodel to the study data. 0.020-0.29 (13%) 13 (6%) 8 (62%) 6 (35%) - 0.30 29 (13%) 27 (93%) - - - 0.010-0.19 17 (08%) 8 (62%) - - - 0.30 29 (13%) 27 (93%) - - - 0.010-0.19 17 (08%) 8 (62%) - - - - 0.020-0.29 13 (6%) 8 (62%) - - - - 0.010-0.19 17 (08%) 6 (25%) - - - - 0.020-0.29 13 (6%) 8 (62%) - -	Number of participants and participant's Characteristics Prognostic tool Methods Outcomes and results hypertension (dBP 2 90 mmHg with the absence of proteinuria). carried forward was used. 0.025- 0.049 39 (16%) 4 (12%) - - Exclusion criteria Data analysis calculated by assessing the slope of the linear predictor resulting from application of the fullPIERS model to reflect the difference in outcome 0.050- 0.099 27 (13%) 4 (15%) - - 0.010-0.19 17 (8%) 6 (35%) - - - 0.010-0.19 17 (8%) 6 (35%) - - - 0.010-0.19 17 (8%) 8 (62%) - - - 0.010-0.19 17 (8%) 8 (62%) - - - 0.010-0.19 13 (6%) 8 (62%) - - - 0.020-0.29 13 (6%) 8 (62%) - - - 0.010-0 17 (8%) 8 (62%) - - - 0.020-02 13 (6%) 8 (62%) - - - <	Number of participants and participant's characteristics Prognostic tool Methods Outcomes and results hypertension (dBP 2.90 mmHg with the absence of proteinuria). carried forward was used. 0.025- 0.049 39 (16%) 4 (12%) - 0.03 (0.12. 0.00) Exclusion criteria Signs of fetal distress, maternal condition demanding immediate delivery, or previous abnormality. Data analysis Calibration was calculated by assessing from application of the full/IERS model to the study data. Further was done by adjusting the intercept of the full/IERS model to reflect the difference in outcome prevalence of the PETRA dataset. Methods 0.025- (0.099 27 (13%) 4 (15%) - - 0.03 (0.52- (0.52) 0.010-0.19 17 (8%) 6 (35%) - - 0.52- (0.52- (0.52) 0.010-0.19 17 (8%) 6 (62%) - - 1.35- (0.52- (Number of participants and participant's characteristics Prognostic tool Methods Outcomes and results hypertension (dBP > 90 mmHg with the absence of proteinuria). carried forward was used. 0.025- 0.049 39 (16%) 4 (12%) . 0.033 (0.12. . Exclusion criteria Data analysis calculated by assessing the slope of the inear predictor application of the full/PIERS model to the siduid ydata. 0.025- 0.049 . . 0.43 (0.15. . 0.43 (0.15. . . 0.13 (0.15. . . 0.14 (0.15. . . 0.15. (0.050- 0.099 . . 0.15. (0.15. . . 0.13.5. (0.52. . . . 0.15. (0.15.

Study details	Number of p characterist	articipants a ics	nd participant's	Prognostic tool	Methods	Outcomes and results		Comments		
					adverse maternal outcomes within 48h and within 7 days after inclusion, with 24h intervals.			Other information		
Full citation Almeida, Silvana T., Katz, Leila, Coutinho, Isabela, Amorim, Melania M. R., Validation of fullPIERS model for prediction of adverse outcomes among women	Sample size N=325 (non p	pre-existing co	phort)	Prognostic tool/test fullPIERS (Pre- eclampsia Integrated	Sample selection This study used data from women	Prognostic accuracy (s Sensitivity (95% Cl)= 60 Specificity (95% Cl)= 65 Risk stratification table		Limitations The quality of this study was assessed using the		
	Characterist	ics		Estimate of Risk). Factors	admitted to a teaching	Predicted probability	With outcome	come Without outcome		CASP tool for clinical
	With Without outcome outcome	included in the model: gestational age, respiratory pulse oximetry,	hospital in Brazil. Sample size calculations	>1.7%	33 (26%)	94 (74%)		prediction rule (CPR). A. Are the results valid?		
with severe pre- eclampsia, International journal of gynaecology and	Age, years (mean, SD)	25.4 (6.5)	25.1 (6.8)	platelets, creatinine, hepatic aspartate transaminase	were performed using OpenEpi, and it was	Model calibration		1 Is the CPR clearly defined? Yes 2 The population from which the rule was derived included an appropriate spectrum of patients? Yes 3 Was the rule validated in a		
obstetrics: the official organ of the International Federation of	Ethnicity: white	14 (25.5)	68 (25.2)	Outcome(s)	assessed that for predicting a 7 day complication	Not reported				
Gynaecology and Obstetrics, 138, 142-147, 2017 Ref Id 803158	Gestational age (mean, SD)	33.6 (4.8)	36.1 (3.4)	composite. Outco mes included: maternal mortality or one or more	ality number of women that would be n, required ry, would be of 283. I, or	Tool discrimination AUC ROC (95% Cl)= 0.7				
	Parity (median IQR)	1 (1-2)	1 (1-2)	nervous system, cardiorespiratory, renal, haematological, or hepatic morbidity						of patients? Yes 4 Were the predictor variables and the outcome

Study details	Number of p characteristi	articipants a ics	nd participant's	Prognostic tool	Methods	Outcomes and results	Comments
Country/ies where the study was carried out	Severe pre- eclampsiaª	55 (100%)	270 (100%)		Data collection		evaluated in a blinded fashion? Can't
Brazil Aim of the study	Mean (SD) sBP, mmHg	167.6 (20.5)	161.4 (18)		applied retrospectively to all patients using the		regarding sampling have been reported) 5 Were the
To assess the performance of the fullPIERS model to predict	Mean (SD) dBP, mmHg	110.1 (11.9)	106.6 (11.6)		fullPIERS online tool.		predictor variables and the outcome evaluated in the
outcomes within 48 hours of admission among women with severe pre- eclampsia from	^a increased BI the 20th weel proteinuria, m and/or uterop	I P (threshold n ks of pregnan- naternal organ blacental insuf	ot reported) from cy with I dysfunction ficiency		Discrimination was calculated using the area under the		selected initially? Yes 6 Are the statistical methods used to construct and
Brazil Study dates	Inclusion cri Women admi (increased BI	i teria itted with seve P from the 20t	ere pre-eclampsi th weeks of	a	curve (AUC) ROC. Sensitivity, specificity and		validate the rule clearly described? Yes
January - December 2014	pregnancy wi dysfunction a insufficiency)	ith proteinuria, ind/or uteropla	, maternal organ acental		ratios were calculated using the software		results? 7 Can the performance of the rule be
Source of funding	Exclusion cr	riteria			Medcalc.		calculated? Yes 8 How precise
Not reported	Women with collagenosis; cardiology, ha women with s	chronic hyper complications aematology, o sickle cell ana	tension; diabetes s related with ir pulmonary; and emia.	s; 1			was the estimate of the treatment effect? The rule is robust (there were not any attempts to refine the rule to see whether precision could be improved)

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes and results	Comments
					C. Will the results help locally? Are the results applicable to the scenario? 9 Would the prediction rule be reliable and the results interpretable if used for your patient? Can't tell (data was obtained from a middle income setting)) 10 Is the rule acceptable in your case? Yes 11 Would the results of the rule modify your decision about the management of the patient or the information you can give to him/her? Yes
					Indirectness Data obtained from a low/middle income setting

Study details	Number of participa characteristics	nts and participant's	Prognostic tool	Methods	Outcomes and results						Comments
											Other information
Full citation	Sample size	n n datas st)	Prognostic tool/test	Sample selection	Prognostic ad	ccuracy (sens	sitivity, speci	ficity)			Limitations
Chan, Patricia, Brown Mark	N=321 (non pre-existi	ng dataset)	Spot urine PRCR	Women with	Total	erse outcome	is Il	1	1	11	Limitations assessed with
Simpson, Judy M., Davis, Gregory, Proteinuria in pre-	Characteristics		and maternal age at diagnosis	pre-eclampsia (ISSHP definition) who	number of women with	Test	Sensitivity (95% CI)	Specificity (95% CI)	LR+ (95%Cl)	LR- (95% Cl)	the QUADAS-2 checklist Domain 1.
eclampsia: how much matters?, BJOG : an		Total cohort (n=321)	Outcome(s)	to the hospital since the year	outcome						Patient selection A. Risk of bias
international journal of obstetrics and gynaecology, 112,	Age (mean, SD)	30 (5)	Adverse maternal outcomes: any new episode of severe	1987 were entered into the study	108	Spot urine PCR> 500 and maternal	10.2 (5.4- 17.9)	100 (97.8- 100)	-	0.9 (0.55-	Was a consecutive or random sample of patients
280-5, 2005 Ref Id	sBP at entry (mean mmHg, SD)	115 (11)	hypertension (≥170/110); renal insufficiency; liver disease: cerebral	Data collection		age > 35 years	,			0.71)	enrolled? yes Was a case- control design avoided? yes
775773	Gestational age	Not reported	irritation and thrombocytopenia.	Data	Perinatal adv	erse outcome	s	·			Did the study avoid
Country/ies where the study was carried out	Pre-eclampsiaª (n, %)	321 (100)	Adverse fetal outcomes: perinatal mortality and/or SGA.	regarding demographic details, laboratory	Total numbe of infants with outcome	r Test	Sensitivity (95% CI)	Specificity (95% CI)	LR+ (95%Cl)	LR- (95% CI)	inappropriate exclusions? yes Could the selection of
Australia Aim of the study	dBP at entry (mean mmHg, SD)	70 (8)		data, time of referral, and delivery were entered into a		GA< 34 weeks and	48.33	39.08	0.79	1.32	introduced bias? low
To assess whether in women with proteinuric	Nulliparity (n, %)	233 (73)		database between the years 1998	60	sBP < 115 mmHg*	(35.39- 61.48)	(33.17- 45.31)	(0.60- 1.04)	(1.02- 1.70)	regarding applicability Is there a
pre-eclampsia, a specific spot urine/creatinine	^a ISHHP research defi	nition		and 2001	*PCR reading information to	was a statistic the discrimina	cally significar tory power of	nt predictor bu the model	t did not ad	dd much	concern that the included patients do
ratio at the time of antenatal diagnosis exists to	f Inclusion criteria			Data analysis	information to the discriminatory power of the model						not match the review question? low

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes and results	Comments
predict adverse outcomes in women and babies within 24 hours of admission Study dates 1998 to 2001 Source of funding Not reported	characteristics Women with pre-eclampsia (ISSHP research definition) with spot protein creatinine results available Exclusion criteria Women with superimposed pre-eclampsia		Area under the curve AUC ROC, sensitivity and specificity were calculated (no details were provided as to how this was done). Likelihood ratios were calculated as sensitivity/ (specificity-1)	Model calibration Not reported Tool discrimination AUC ROC (95% CI) for adverse maternal outcomes = 0.67(0.55-0.71) AUC ROC (95% CI) for adverse fetal outcomes= 0.72	Domain 2. Index test(s) A. Risk of bias Were the index test results interpreted without knowledge of the results of the reference standard? yes If a threshold was used, was it pre-specified? no (data-driven) Could the conduct or interpretation of the index test have introduced bias? low B. Concerns regarding applicability Is there concern that the index test, its conduct, or interpretation differ from the review question? no Domain 3. <u>Reference</u> standard
					A. Risk of bias Is the reference standard likely to correctly classify the

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes and results	Comments
					target condition? yes Were the reference standard results interpreted without knowledge of the results of the index test? yes Could the reference standard, its conduct, or its interpretation have introduced bias? low B. Concerns regarding applicability Is there concern that the target condition as defined by the reference standard does not match the review question? low Domain 4. Flow and timing Was there an appropriate
					interval between index test(s) and reference standard2 ves

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes and results Con	omments
				Did recr star Did recr san star We pati incl ana Con pat hav intr bia: Ind No	d all patients ceived a ference andard? yes d patients ceive the me reference andard? yes ere all titents cluded in the ialysis? yes could the itient flow ive troduced as? low directness c indirectness
Full citation	Sample size	Prognostic	Sample	Prognostic accuracy (sensitivity, specificity)	mitations
Laskin, Samara, Payne, Beth,	N=1405 (from the PIERS cohort)	tool/test Platelets ≤ 100 x	selection Women in the	Sensitivity and specificity of platelet count and abnormal coagulation Lim	mitations sessed with
Hutcheon, Jennifer A., Qu, Ziguang, Douglas,	Characteristics	10 ⁹ /L Platelets ≤ 150 x 10 ⁹ /L	PIERS dataset meeting	Total N the With Sensitivity Adverse (95% Cl) (95% Cl) (95% Cl)	<u>e QUADAS-2</u> iecklist
M. Joanne, Ford, Jason, Lee, Tang, Magee, Laura A.,	Abnormal Normal coagulation (n=105) (n=1300)	Abnormal coagulation (INR> 1.06 and serum	inclusion criteria were selected to	outcome CI) CI) Dor Pat	omain 1. atient election
von Dadelszen, Peter, The role of		fibrinogen < 3.54 g/L)	participate in the study.	A. F Wa	Risk of bias as a

Study details	Number of par characteristics	rticipants and s	l participant's	Prognostic tool	Methods	Outcomes an	d results					Comments
the assessment of inpatient women with preeclampsia,	Maternal range (median,	30 (26 to 34)	32 (28 to 36)	Outcome(s)	Data collection	Platelet <100 x 10 ⁹ /L	152	15.8 (10.6 to 22.8)	92.2 (90.5 to 93.6)	2 (1.3- 3.1)	0.9 (0.9-1)	random sample of patients enrolled? yes Was a case-
Journal of obstetrics and gynaecology Canada : JOGC =	GA at eligibility in	32.7 (30.3 to	36.4 (33.4 to	PIERS composite. Outcomes included: maternal mortality or one or	The data used in this study were	Abnormal coagulation	105	15.1 (10 to 22.1)	93.5 (91.9 to 94.7)	2.17 (1.32- 3.56)	0.91 (0.84- 0.98)	control design avoided? yes Did the study avoid incorporation
d'obstetrique et gynecologie du Canada : JOGC, 33, 900-8, 2011	(median, IQR)	36.7)	38.4)	central nervous system, cardiorespiratory, renal,	the PIERS dataset. it was prospectively collected and							exclusions? yes Could the selection of patients have
Ref Id 776230	Multiple pregnancy (n, %)	10 (9.5)	142 (10.9)	haematological, or hepatic morbidity	it covers women who were admitted to tertiary	Model calibra	ition					introduced bias? low B. Concerns regarding
Country/ies	Parity ≥1	30 (28.6)	354 (27.2)		obstetric centres. Data	To al dia arina						applicability Is there a
where the study was carried out Canada, Australia, new Zealand and	Hypertension and proteinuriaª	76 (72.4)	841 (64.7)		were collected between September 2003 and January 2010.	Not reported	nation					concern that the included patients do not match the review
UK Aim of the study To assess the	Hypertension and hyperuricaem ia ^b	11 (10.5)	212 (16.3)		The list of adverse maternal outcomes was developed by							Question? low Domain 2.Index test(s)A. Risk of bias
relationship between platelet count and adverse outcomes in pregnant women with pre-	HELLP with hypertension and proteinuria ^c	7 (6.7)	39 (3)		Delphi consensus Data analysis							Were the index test results interpreted without knowledge of the results of
eclamspia within 48 hours of admission Study dates	Superimpose d pre- eclampsia ^d	11 (10.5)	208 (16)		The diagnostic value of the different thresholds was assessed by calculating							the reference standard? unclear(no details were provided) If a threshold
					sensitivity and							was used, was

Study details	Number of pa characteristic	rticipants and s	l participant's	Prognostic tool	Methods	Outcomes and results	Comments
Sep 2003 - Jan 2010	sBP, mmHg (median, iQR)	161 (150 to 180)	162 (151 to 178)		specificity (no further details were provided)		it pre-specified? not pre- specified Could the
Source of funding Canadian Institutes for	dBP,mmHg (median, IQR)	103 (100 to 110)	102 (98 to 110)				conduct or interpretation of the index test have introduced
Health Research: CIHR, UNDP, UNFPA, WHO, World Bank Speical Programme of	^a sBP/dBP ≥140 component, me GA) and protei collection or ≥ protein:creatini ^b sBP/dBP ≥140)/90 mmHg (at easured ≥ 4h a nuria (≥0.3g pe 30mg mmol as ne ratio))/90 mmHg (at	l least 1 apart, after 20 w er day by 24h s measured by t least 1				bias? unclear B. Concerns regarding applicability Is there concern that the index test
Research, Development and Research Training in Human Reproduction	component, me GA) and hyper than normal for ^c Definition not ^d rapidly increas	easured ≥ 4h a uricaemia (upp r non-pregnant reported sing requireme	apart, after 20 w ber limit greater t women) ents for				the index test, its conduct, or interpretation differ from the review question? no
	dBP> 120 mml hyperuricaemia	/e arugs, sBP> Hg, new protei a	nuria or new				<u>Domain 3.</u> <u>Reference</u> <u>standard</u> A. Risk of bias Is the reference
	Women with ei mmHg (at leas 4h apart, after proteinuria (≥ 0 or ≥ 30 mg mm protein:creatini (upper limit gre pregnant wome or c) superimp requirements fi sBP> 170 mm proteinuria or r Women with re fibrinogen and hours of their r	ther a)sBP/dE t 1 component 20 w GA) and .3g per day by ol as measured ne ratio) or hyl eater than norm en), or b) HELL oosed PE (rapid or antihyperter Hg or dBP> 12 new hyperurica corded values a platelet cour elevant platele	BP ≥140/90 c, measured ≥ either 24h collection d by peruricaemia nal for non- LP syndrome, dly increasing nsive drugs, c0 mmHg, new memia) c for INR and nt within 12 et count.				standard likely to correctly classify the target condition? yes Were the reference standard results interpreted without knowledge of the results of the index test? unclear(no details were provided)

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes and results	Comments
					Could the
	Exclusion critoria				reference
					conduct or its
	Women admitted in labour or those who had				interpretation
	any of the maternal outcomes prior to data				have
	collection				introduced
					bias? unclear
					B. Concerns
					regarding
					applicability
					is there
					the target
					condition as
					defined by the
					reference
					standard does
					not match the
					review
					question? low
					Domain 4. Flow
					Was there an
					appropriate
					interval
					between index
					test(s) and
					reference
					standard? yes
					Did all patients
					received a
					standard2 ves
					Did patients
					receive the
					same reference
					standard? yes
					Were all
					patients
					included in the
					analysis? yes

Study details	Number of partici characteristics	pants and participant's	Prognostic tool	Methods	Outcomes an	d results				Comments
										Could the patient flow have introduced bias? low
										Indirectness No indirectness
										Other information
Full citation	Sample size		Prognostic tool/test	Sample selection	Prognostic a	ccuracy (sen	sitivity, specif	icity)		Limitations
Livingston, J. R.,	N= 1487				Predictors by	outcome for	hyperuricem	ia (uric acid >:	345 µmol/L)	Limitations
M., Roberts, J. M., Cote, A. M., Magee, L. A., von	Characteristics		vithin 24 h of enrolment)	of women (only women with pre-	Outcome type	Total outcomes	Time since admission	Sensitivity (95% CI)	Specificity (95% CI)	the QUADAS-2 checklist Domain 1.
Dadelszen, P., Uric Acid as a predictor of adverse maternal		Full cohort (n=1487)	Outcome(s)	eclampsia were included)	All adverse maternal	-	48h	0.80 (0.70- 0.87)	0.28 (0.25- 0.30)	Patient selection A. Risk of bias Was a
and perinatal outcomes in women hospitalized with	Age at expected day of delivery (median, IQR)	31 (26 to 35)	PIERS composite outcome. Out- comes included: maternal mortality	Data collection Serum uric		-	7 d	0.82 (0.76- 0.88)	0.28 (0.26- 0.31)	consecutive or random sample of patients enrolled? yes
preeclampsia, Journal of Obstetrics & Gynaecology	Gestational age at entry (median weeks, IQR)	35 (33 to 38)	or one or more serious central nervous system, cardiorespiratory,	acid concentration was measured within 24 bours of		199	Any time	0.83 (0.77- 0.88)	0.29 (0.26- 0.31)	Was a case- control design avoided? Yes Did the study
36, 870-7, 2014	Parity ≥1 (N,%)	390 (26)	haematological, or hepatic morbidity Perinatal outcome comprised perinat	enrolment. Local laboratories were						inappropriate exclusions? Yes

Study details	Number of partici characteristics	pants and participan	t's Prognostic to	Prognostic tool Methods C	Outcomes an	Comments				
658299 Country/ies	Median sBP (IQR), mmHg	160 (150-175)	al or infant mortality, admission to	responsible for measurement of serum acid	Adverse maternal (non-renal)	-	48 h	0.79 (0.70- 0.87)	0.28 (0.25- 0.30)	Could the selection of patients have
was carried out	Median dBP (IQR), mmHg	100 (95-110)	than 48 hours, both.	or		1	 			bias? low B. Concerns
Canada, UK, Australia and New Zealand	Preeclampsia ^a	1487 (100)		Data analysis		-	7 d	0.82 (0.75- 0.87)	0.28 (0.26- 0.31)	regarding applicability Is there a
Aim of the study	^a Preeclampsia was	defined as hypertensi	on	was calculated		196	Any time	0.83 (0.77- 0.88)	0.29 (0.26- 0.31)	concern that the included patients do
To analyse data from an existing	(sBP/dBP ≥ 140/90) or more, more than proteinuria (≥ 0.3 g) mmHg on 2 recording 1 4 hours apart) with 1/day by 24 hour urine	js	univariate logistic	Perinatal	420	Any time	0.78 (0.073-	0.29 (0.27-	not match the review
with pre- eclampsia and	excretion, or \geq 30m urine:creatinine rat	ng/mmol by spot io)	2	using STATA. AUC ROC of		420		0.82)	0.32)	Domain 2.
assess whether uric acid is a good	included in the ana	lyses was not availabl	9	0.7 was determined as	Predictors by age (defined a	outcome for as 1 SD abov	hyperuricemi e the mean va	a corrected fo lue for GA)	or gestational	<u>Index test(s)</u> A. Risk of bias
predictor of adverse and perinatal	Inclusion criteria			the minimum value for a discriminative	Outcome type	Total outcomes	Time since admission	Sensitivity (95% CI)	Specificity (95% CI)	Were the index test results interpreted without
48 hours and 7 days of admission	Not reported			The sensitivity and specificity of	All adverse maternal		48h	0.86 (0.77- 0.92)	0.21 (0.19-0.24)	knowledge of the results of the reference
Study dates	Exclusion criteria	l		hyperuricemia and						standard? uncle ar
September 2003 to December 2011	Women who develo before the clinical p measured; women	oped any of the outcor predictors were admitted in spontaneo	nes pus	hyperuricemia corrected for GA was		-	7 d	0.86 (0.80- 0.91)	0.22 (0.20- 0.24)	If a threshold was used, was it pre-specified?
Source of funding	laboul			assessed to assess the relationship with neonatal		199	Any time	0.86 (0.80- 0.90)	0.22 (0.20- 0.24)	thresholds have not been used Could the conduct or
Canadian Institutes of Health Research; UNDP; UNFPA; WHO; World Bank Special				and maternal outcomes.	Adverse maternal (non-renal)	-	48 h	0.86 (0.77- 0.92)	0.21 (0.19- 0.24)	interpretation of the index test have introduced bias? low

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes an	d results				Comments
Programme of Research, Development & Research Training					-	7 d	0.86 (0.80-0.91)	0.22 (0.20- 0.24)	B. Concerns regarding applicability Is there
in Human Reproduction; Preeclampsia Foundation;					196	Any time	0.86 (0.80- 0.90)	0.22 (0.20- 0.24)	concern that the index test, its conduct, or interpretation
International Federation of Obstetricians and Gynaecologists;				Perinatal	420	Any time	0.92 (0.90- 0.95)	0.26 (0.24- 0.29)	differ from the review question? low
Michael Smith Foundation for Heath Research; Child and Family Research Institute				Model calibra Not applicable	tion				Domain 3. Reference standard A. Risk of bias Is the reference standard likely to correctly classify the target condition? yes Were the reference standard results interpreted without knowledge of the results of the index test? unclear Could the reference standard, its conduct, or its interpretation have introduced bias? no B. Concerns regarding applicability

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes and results	Comments
					Is there concern that the target condition as defined by the reference standard does not match the review question? low
					Domain 4. Flow and timing Was there an appropriate interval between index test(s) and reference standard? yes Did all patients received a reference standard? yes Did patients
					receive the same reference standard? yes Were all patients included in the analysis? yes Could the patient flow have introduced bias? low
					No indirectness

Study details	Number of participant characteristics	ts and participant's	Prognostic tool	Methods	Outcomes and results	Comments
						Other information
Full citation Payne, B. A., Hutcheon, J. A., Ansermino, J. M., Hall, D. R.,	Sample size N= 1300 (PIERS cohor Characteristics	t)	Prognostic tool/test miniPIERS model 25% predicted probability.	Sample selection Data collected after the 1 March 2008 in	Prognostic accuracy (sensitivity, specificity) Not reported for the external validation model Model calibration	Limitations The quality of this study was assessed using the
Bhutta, Z. A., Bhutta, S. Z., Biryabarema, C., Grobman, W. A.,		Total cohort (n=1300)	Factors included in the model are: gestational age at admission, previous deliveries	the PIERS dataset meeting inclusion	Not reported	CASP tool for clinical prediction rule (CPR).
F., Li, J., Magee, L. A., Merialdi, M., Nakimuli, A., Qu,	Maternal range (mean, SD)	31.7 (6)	before 20 weeks gestation, presence/absence	selected to participate in the study.	Complete cohort AUC ROC (95% CI) = 0.71 (0.65-0.76)	results valid? 1 Is the CPR clearly defined?
Sass, N., Sawchuck, D., Steyn, D. W.,	GA at eligibility in weeks (median, IQR)	37 (34.1-38.9)	pain/dyspnoea, presence/absence of headache	date, the PIERS dataset was	GA AUC ROC (95% Cl) = 0.72 (0.63-0.82) Complete cohort - include all but transfusion as an adverse outcome	2 The population from which the rule
Widmer, M., Zhou, J., von Dadelszen, P., Walley, K., Joseph K. S	Parity ≥1 (n, %)	403 (31)	and/or visual changes, presence/absence	not collecting data regarding abdominal pain_vaginal	AUC ROC (95% CI) = 0.75 (0.73-0.78) Women with pre-eclampsia only AUC ROC (95% CI) = 0.72 (0.64-0.79)	was derived included an appropriate spectrum of
Mirembe, F., Noovao, A., Qureshi, R., Duan, T., van	Other HDP ^b (n, %)	280 (21.5)	with abdominal pain, sBP (mmHg), SpO2 (optional).	bleeding or any headache.		patients? Yes 3 Was the rule validated in a different group
Papendorp, E., Ssegirinya, M., Sewagaba, M., Byenkya, R. M.,	sBP, mmHg (median, IQR)	166 (155-180)	Outcome(s)	Data collection		of patients? Yes 4 Were the predictor
Namulema, B., Namiiro, J., Nakayiza, R. M., Akao, G., Nankabirwa, I.,	dBP,mmHg (median, IQR)	104 (98-110)	PIERS composite. Out- comes included: maternal mortality or one or more	The data used in this study were extracted from the PIERS		variables and the outcome evaluated in a blinded

Study details	Number of participants and participant's	Prognostic tool	Methods	Outcomes and results	Comments
	characteristics				
Nakazibwa R	app/dpp>140/00 mmHg (at least 1		datasat itwas		fachion?
Nakazibwe, R.,	$^{\circ}$ SBF/UBF \geq 140/90 IIIIIIIII (at least 1		ualasel. Il was		
Azoom E	Component, measured \geq 411 apart, after 20 w	nervous system,			5 Wore the
Azeem, F.,	GA) and either proteinuna (≥ 0.39 per day by	cardiorespiratory,	it opvoro		5 Were the
Diakia E D	241 collection of 2 soring minor as measured	renal,			predictor
PIPKIN, F. B.,	by protein:creatinine ratio) or	naematological, or	women who		variables and
Cote, A. M.,	nyperuncaemia (upper limit greater than	nepatic morbidity	were admitted		the outcome
Douglas, M. J.,	normal for non-pregnant women)		to tertiary		evaluated in the
Gruslin, A., Kyle,	Other HPD duch as estational		obstetric		whole sample
P., Lee, T.,	hypertension, chronic hypertension, partial		centres in the		selected
Loughna, P.,	HELLP.		UK, Australia		initially? Yes
Mahajan, S.,			and New		6 Are the
Millman, A.,			Zealand.		statistical
Moore, M. P.,	Inclusion criteria				methods used
Moutquin, J. M.,					to construct and
Ouellet, A., Smith,	Women with either a)suspected or		Data analysis		validate the rule
G., Walker, J.,	confirmed pre-eclampsia after 20 weeks of				clearly
Walters, B., Lee,	gestational age defined as BP \geq 140/90 (at		Discrimination		described?
S., Russell, J.,	least 1 component; measured 2 times at		was		Yes
Brown, M., Davis,	least between 4 and 24 hours apart) and		calculated		B. What are the
G., Robson, S., de	either proteinuria (≥0.3g per day by 24h		using the area		results?
Swiet, M.,	collection or \geq 30mg mmol as measured by		under the		7 Can the
Lindheimer, M.,	protein:creatinine ratio) or hyperuricaemia		curve (AUC)		performance of
Roberts, J., Shaw,	(upper limit greater than normal for non-		ROC. Owing		the rule be
D., Donnay, F., A	pregnant women); b) HELLP syndrome,		to the		calculated? No
Risk Prediction	even in the absence of hypertension or		underlying		8 How precise
Model for the	proteinuria; c) superimposed pre-eclampsia.		difference in		was the
Assessment and	Women with other hypertensive disorders of		adverse		estimate of the
Triage of Women	pregnancy, such as gestational		outcomes		treatment
with Hypertensive	hypertension, chronic hypertension, partial		between the		effect? In the
Disorders of	HELLP.		miniPIERS		study it is
Pregnancy in			and fullPIERS		mentioned that
Low-Resourced			dataset (6.5%		"the model
Settings: The			in the		intercept was
miniPIERS (Pre-	Exclusion criteria		fullPIERS		adjusted before
eclampsia			versus 12.5%		estimating
Integrated	Women who were admitted in labour or who		in the		predictive
Estimate of RiSk)	had developed any of the adverse outcomes		miniPIERS),		performance"
Multi-country	prior eligibility or collection of predictor		the model		(page 4)
Prospective	variables. Women with positive HIV/AIDS		intercept was		C. Will the
Cohort Study,	status with CD4 count < 250 cells/ml or		adjusted prior		results help
PLoS Medicine,	AIDS-defining illness.		the estimation		locally? Are the
			of the		results

Study details	Number of participants and participant's	Prognostic tool	Methods	Outcomes and results	Comments
	characteristics				
11, e1001589,			predictive		applicable to
2014			performance.		the scenario?
			Sensitivity		9 Would the
Refia			analyses were		prediction rule
776409			carried out in		be reliable and
//0490			various		interprotoble if
Country/ios			subsets of the		interpretable in
where the study			Sludy data to		used for your
was carried out			deneralis-		(high income
was carried out			ability of the		settting
Canada			miniPIERS		population)
Canada			prognostic		although 21 5%
Aim of the study			tool.		of women did
					not present with
To provide					pre-eclampsia
external validation					10 Is the rule
of the miniPIERS					acceptable in
clinical prediction					your case? Yes
tool within 48					11 Would the
hours of					results of the
admission					rule modify your
					decision about
					the
Study dates					management of
					the patient or
July 2008- March					the information
2012					you can give to
					him/her? Yes
Course of					
Source of					Indiractura
lunding					indirectness
"Bill & Mellinda					21.5% of the
Cotos Foundation					21.3 /0 Of the
					not present with
HO/World Bank					pre-eclamosia
Special					pro columpoid
Programme of					
Research [.]					Other
Development and					information
Research Training					

Study details	Number of part characteristics	ticipants and	participant's	Prognostic tool	Methods	Outcomes and results					Comments
in Human Reproduction; Canadian Institutes of Health Research; Preeclampsia Foundation; the Rockefeller Foundation; United States Agency for International Development; the International Federation of Gynecology and Obstetric; and the Child and Family Research Institute" (page 1)											Conflicts of interest: PVD id a paid consultant of Alere International; JMA is the founder of Lions Gate Technologies and is focused on commercializin g a device for measuring pulse oximeter; JMA holds <5% equity in the company. ZAM is a member of the Educational Board of PLOS medicine.
Full citation	Sample size			Prognostic tool/test	Sample selection	Prognostic accuracy (ser	nsitivity, speci	ficity)			Limitations
Payne, B. A., Hutcheon, J. A., Dunsmuir, D., Cloete, G., Dumont, G., Hall,	N= 852 Characteristics	3		miniPIERS model and oxygen saturation, 25% predicted	Women meeting inclusion criteria were	Predicted probability (cut off)	Sensitivity (95% Cl)	Specificity (95%Cl)	LR+ (95% CI)	LR- (95% CI)	The quality of this study was assessed using the CASP tool for
D., Lim, J., Magee, L. A., Sikandar, R., Qureshi, R., van Papendorp, E.,		Pakistan cohort (n=617)	SA cohort (n=235)	probability Outcome(s)	recruited from participating centres in Pakistan and South Africa.	15%	68.1 (58.8- 76.1)	77.9 (74.7- 80.8)	3.1 (2.6- 3.7)	0.4 (0.4- 0.69	clinical prediction rule (CPR). A. Are the results valid?
Mark Ansermino, J., von Dadelszen, P., Assessing the Incremental Value of Blood Oxygen	Maternal age (median, IQR)	29 (26-33)	27 (23-33)	PIERS composite (within 48 hours of admission=. Outc omes included: maternal mortality	Data collection	25%	49.6 (40.3- 58.8)	91.5 (89.2- 93.4)	5.9 (4.3- 7.9)	0.6 (0.5- 0.7)	1 Is the CPR clearly defined? Yes 2 The population from

Study details	Number of part characteristics	icipants and	participant's	Prognostic tool	Methods	Outcomes a	ind results					Comments
Saturation (SpO2) in the miniPIERS (Pre-eclampsia Integrated Entimate of BiCk)	GA at delivery (median, IQR)	37.2 (35.4- 38.2)	34.6 (30- 37.9)	or one or more serious central nervous system, cardiorespiratory,	Data were collected prospectively during	35%		39.5 (30.8- 48.9)	96.3 (94.6- 97.5)	10.7 (7.0- 16.5)	0.6 (0.5- 0.7)	which the rule was derived included an appropriate
Risk Prediction Model, Journal of Obstetrics and Gynaecology	Multiple pregnancy (n,%)	13 (2.1)	1 (0.4)	haematological, or hepatic morbidity	stays, except for Pakistan, where it was collected from	Data above a data, i.e. the test. At this o test result giv	are reported LR for the 1 cut-off, a pos ves a LR of 0	by converting t 5% category tr itive test result 0.4.	the risk estimate eats 15% as the gives a LR of 3.	s into di cut-off t 1, and a	chotomous for a positive negative	patients? Yes 3 Was the rule validated in a different group
Canada, 37, 16- 24, 2015	Parity ≥1	350 (51.9)	126 (53.6)		records. POM	Deeks and Altman 2004 from raw data reported in the article, with 95% CI calculated using https://www.medcalc.org/calc/relative_risk.php:					ith 95% Cl	of patients? Yes 4 Were the
Ref Id 803790	Pre- eclampsia ^a (n,%)	343 (55.6)	173 (73.6)		was used for data collection.	Risk category	Number with outcome	Number without outcome	Likelihood ratio		95% CI	predictor variables and the outcome
Country/ies where the study was carried out	Other HDP (n,%)	274 (44.4)	62 (26.4)		Data analysis	<25%	80	705	(80/119)/(705/7 0.70	733) =	0.61 to 0.79	evaluated in a blinded fashion? Uncle ar (no details
Canada	sBP (median, IQR), mmHg	150 (140- 160)	146 (140- 160)		The miniPIERS equation was	≥25%	39	28	(39/119)/(28/73 8.58	33) =	5.50 to 13.39	regarding sampling have been provided) 5 Were the
To examine the	dBP (median,	100 (90-	69 (90-		linear predictor	Total	119	733				predictor variables and
of blood oxygen saturation as a predictor in the miniPIERS clinical	IQR), mmHg ^a sBP/dBP ≥140/ dipstick test	90 with prote	inuria ≥2+ on a		variable. A 25% predicted probability was used to define thise at	These data r category resined her LR for dis	efer to the L ult, i.e. when sease is 8.58	R obtained who an individual i 8	en an individual s given a risk in	is given the ≥25 ⁰	each risk % category,	the outcome evaluated in the whole sample selected initially? Yes
prediction model within 48 hours of admission	Inclusion criter	ia			high risk, based on the optimal threshold	Model calib	ration					6 Are the statistical methods used to construct and
Study dates	Women with new gestation) or chi	w (onset after ronic hyperter	20 weeks nsion (sBP/dBP		AUC ROC was used to	Tool discrim	nination					validate the rule clearly described? Yes
January 2011- March 2012 (recruitment in Pakistan); November 2012 -	ary 2011- 2012≥140/90) on at least 2 occasions between 4 and 24 h apart after 20 weeks gestation with or without proteinuria (≥2+ on a dipstick test) or other conditions.was used discriminal the predict ability of oxygen saturation			discriminate the predicted ability of oxygen saturation to	AUC ROC (95% CI) Oxygen saturation alone 0.72 (0.68-0.77) Oxygen saturation adjusted 0.81 (0.76-0.85) AUC ROC (95% CI) - Sensitivity analyses -using non cardiorespiratory outcomes						B. What are the results? 7 Can the performance of the rule be	

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes and results	Comments
December 2013 (recruitment in South Africa)	Exclusion criteria Not reported		differentiate women at risk of developing adverse	0.69 (0.63-0.74) - unadjusted 0.75 (0.69-0.81) - adjusted using miniPIERS outcomes	calculated? No (TP,FP,TN,FN or total % of women with AF
Source of funding			outcomes. The association between		at each predicted probability have not been
Grand Challenge Canada; University of British Columbia			oxygen saturation and the composite maternal		reported) 8 How precise was the estimate of the
PRE-EMPT initiative; Bill & Melinda Gates			outcome was done using logistic regression		treatment effect? The rule was
					fitting to 2 variables C. Will the
					locally? Are the results applicable to
					9 Would the prediction rule be reliable and
					the results interpretable if used for your patient? No, the
					study was conducted in a low/middle income setting
					10 Is the rule acceptable in your case? Yes
					results of the rule modify your decision about

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes and results	Comments
					the management of the patient or the information you can give to him/her? Yes
					39.4% of the population did not present with PE
					Other information PVD is a consultant of
					Alere International (for work not related to the manuscript); JMA and GD are co-founders of LGT medical and hold <5% of equity for the
					company.
Full citation Thangaratinam, S., Allotey, J., Marlin, N., Dodds, J., Cheong-See, F., von Dadelszen, P.,	Sample size For the validation component: N=634 in the PIERS dataset and N=216 in the PETRA dataset.	Prediction of complications in early-onset pre- eclampsia (PREP)	Sample selection For the validation component, this study used data	Prognostic accuracy (sensitivity, specificity) Risk stratification table, PIERS cohort* 48 hours 7 days	Limitations The quality of this study was assessed using the CASP tool for clinical

Study details	Number of partic characteristics	cipants and p	oarticipant's	Prognostic tool	Methods	Outcomes and results						Comments
Ganzevoort, W., Akkermans, J.,	Characteristics				from 2 datasets:	5/59			9			prediction rule (CPR).
Kerry, S., Mol, B. W., Moons, K. G. M., Riley, R. D.,		PIERS (n=634)	PETRA (n=216)	Outcome(s) PIERS	PIERS (Pre- eclampsia integrated	8/70		27/7	0			A. Are the results valid? 1 Is the CPR
Khan, K. S., Prediction of complications in early-onset pre-	Age, years (median, range)	31.2 (6.3)	30 (5)	composite. Outco mes included: maternal mortality or one or more	estimate of risk) and PETRA (pre- eclampsia trial	12/123 47/87		74/1	7			clearly defined? Yes 2 The population from
eclampsia (PREP): Development and external multinational	Gestational age at diagnosis (mean, SD)	30.2 (3)	29.4 (2.6)*	serious central nervous system, cardiorespiratory, renal, baematological, or	Amsterdam) Data	*Calculated by th predicted surviva	e NGA using I probability r	the obser eported in	ved survival pr the study	obability and	I	which the rule was derived included an appropriate spectrum of
validation of prognostic models, BMC Medicine, 15, 68,	New-onset PE (n,%)	51.9 (82)	96 (44) ^{*,d}	hepatic morbidity	Data were collected retrospectively	Model calibratio Observed and e	n expected pro	obability c	of survival usi	ng the PREF	2-S	patients? Yes 3 Was the rule validated in a different group
2017 Ref Id	Superimposed PE (n,%)	95 (15)	-		. Missing predictor values were	model at differen Risk stratification	nt time point No of women	ts in the F Time point	IERS cohort Observed (O)	Expected (E)	O:E ratio	of patients? Yes 4 Were the
776782	HELLP (n,%)	22 (3)	54 (25)* ^{,e}		dealt with by using the ICE package in	<154b	50	48	0.01		0.06	predictor variables and the outcome
Country/ies where the study was carried out	Eclampsia (n,%)	-	5 (2.3)* ^{,f}		Stata with five imputations.	21501	59	hours	0.91	0.95	0.90	evaluated in a blinded fashion? Can't
UK	Fetal growth				Data analysis			1 week	0.81	0.79	1.0	tell 5 Were the
Aim of the study	nancy induced hypertension	-	125 (58) ^{*,g}		Calibration was assessed	>15th-50th	70	48 hours	0.88	0.89	1.0	predictor variables and the outcome
external validation	(11, %)		and them 1		calibration			1 week	0.62	0.60	1.0	whole sample
model within 48 hours and 7 days of admission	^a Some women m diagnostic criteria ^a sBP/dBP ≥140/9 component, meas	atched with m i 0 mmHg (at le sured ≥ 4h ap	east 1 art, after 20 w		estimating the calibration slope.	>50th-85th	123	48 hours	0.90	0.70	1.3	initially? Yes, although a reduced version
Study dates	GA) with either pr 24h collection or by protein:creatin	roteinuria (≥0. ≥ 30mg mmol ine ratio) or	3g per day by as measured		was assessed with the c- statistic from			1 week	0.40	0.23	1.7	since not all the predictor variables were

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes and re	sults						Comments
Not reported	hyperuricaemia (upper limit greater than normal for non-pregnant women) ^b rapidly increasing requirements for		the PREP-L model. The ratio of	>85th	87	48 hours	0.46		0.28	1.6	available in the PREP and PETRA
Source of funding	antihypertensive drugs, sBP> 170 mmHg or dBP> 120 mmHg, new proteinuria or new hyperuricaemia		observed and predicted probability of			1 week	0.14		0.02	7.0	datasets 6 Are the statistical
National Institute for Health Research - Health Technology Assessment programme	^c Definition not reported ^d dBP ≥110 mmHg in combination with proteinuria (≥0.3 g/24h) ^e platelet count <100x10 ⁹ /L and AST ≥ 70U/L and/or LDH ≥ 600U/L ^f convulsions in pregnancy in the absence of epilepsy		outcomes was assessed at 48 hours, 1 week and overall. For missing data, the ICE	Comparison of pre PREP-L model (da Mol BW, Von Dade validation of Predic eclampsia (PREP) 2017;21 (18).)	dicted versu ata obtained elszen P, Ga ction models : a prospect	us observe from Tha anzevoort s for Risks ive cohort	ed risk of ngaratina W, et al. of compl study. H	outcor m S, A Develo licatior ealth 7	me for reduce Allotey J, Mar opment and ns in Early-or Technol Asse	ed rlin N, nset Pre- ess	methods used to construct and validate the rule clearly described? Yes B. What are the results?
	⁹ abdominal circumference<5th percentile for GA or estimated fetal weight<10th percentile for GA and dBP≥90 mmHg		package in STATA was used. The study	Risk stratificatio	n PIERS o	cohort ed/predict	ted (%)	PETF obse	RA cohort erved/predict	ted (%)	7 Can the performance of the rule be calculated? No 8 How practice
	Inclusion criteria		external validation of 2	≤10 th	0/0			0/0			was the estimate of the
	PIERS cohort: Women with either		prediction models: PREP-S and	10-20 th	0/3 (0%))		0/0			treatment effect? The rule
	after 20 weeks of gestational age defined as BP \ge 140/90 (at least 1 component;		PREP-L. The PREP-S is a	20-30 th	6/20 (30	1%)		2/4 (5	50%)		because not all the predictor
	measured 2 at least 4 hours apart) and either proteinuria or hyperuricaemia;		survival model that predicts	30-40 th	8/24 (33	%)		1/1 (′	100%)		variables were available from the PREP and
	hypertension or proteinuria; c) superimposed pre-eclampsia.		adverse outcomes	40-50 th	16/33 (4	·8%)		4/11	(36%)		PETRA datasets
	PETRA cohort: HELLP syndrome; fetal growth restriction and pregnancy induced		before 34 weeks of	50-60 th	21/34 (6	2%)		8/13	(62%)		C. Will the results help
	eclampsia, singleton pregnancies.		age, whereas the PREP-L is	60-70 th	19/38 (5	0%)		18/22	2 (82%)		results applicable to
	Exclusion criteria		a model to predict the	70-80 th	42/58 (7	2%)		25/30	0 (83%)		the scenario? 9 Would the
	Women in whom the outcome took place before the assessment of predictors; women in whom there was insufficient time to obtain the informed consent		complications by discharge only. For	80-90 th	59/72 (8	32%)		70/74	4 (95%)		be reliable and the results interpretable if used for your

					Conniento
	validating the PREP-S, only data from the PIERS was used as the PETRA dataset did not have time to event outcomes. Since not all the predictors from the PREP model were available in the PETRA and PIERS dataset, a slightly reduced model was used to externally validate the tool (rPREP). To develop this, coefficients	90-100 th Tool discriminat PREP-S model p PIERS cohort C-statistic (95% C At 48 hours: 0.7 At 1 week: 0.72 Overall: 0.71 (0. Calibration slope At 48 hours: 0.8 At 1 week: 0.75 Overall: 0.67 (0. PREP- L model p PIERS cohort C-statistic (95% C) Calibration slope PETRA cohort AUC (95% CI)= 0 Calibration slope	$\begin{bmatrix} 147/155 & (95\%) \\ 147/155 & (95\%) \\ \end{bmatrix}$ tion performance CI 5 & (0.69 to 0.81) \\ (0.68 to 0.76) \\ 67 to 0.75) \\ 6 & (95\% CI) \\ 0 & (0.62 to 0.99) \\ (0.61 to 0.89) \\ 56 to 0.79) \\ \hline performance CI 0 = 0.81 & (0.77-0.85) \\ (95\% CI) = 0.93 & (0.72 - 1.13) \\ (95\% CI) = 0.90 & (0.48 - 1.3) \\ (95\% CI) = 0.90 & (0.48 - 1.3) \\ \hline end{tabular}	3)	patient? Yes (the populations from which the data was obtained were high income settings) 10 Is the rule acceptable in your case? Yes 11 Would the results of the rule modify your decision about the management of the patient or the information you can give to him/her? YesIndirectnessThe model was modified for the validation, as not all predictor
	were re- estimated and then adjusted for optimism. The reduced version of the PREP-S did not have serum urea and deep tendon reflex and the reduced				27% of women in the PETRA dataset did not present with pre-eclampsia No indirectness in the PIERS cohort
		PETRA dataset did not have time to event outcomes. Since not all the predictors from the PREP model were available in the PETRA and PIERS dataset, a slightly reduced model was used to externally validate the tool (rPREP). To develop this, coefficients were re- estimated and then adjusted for optimism. The reduced version of the PREP-S did not have serum urea and deep tendon reflex and the reduced version of	PE IKA dataset did not have time to event outcomes. Since not all the predictors from the PREP model were available in the PETRA and PIERS dataset, a slightly reduced model was used to externally validate the tool (rPREP). To develop this, coefficients were re- estimated and then adjusted for optimism. The reduced version of the PREP-S did not have time and deep tendon reflex and the reduced version of	PETRA dataset did not have time to event outcomes. Since not all the predictor from the PREP model were available in the PETRA adaset, a slightly reduced model was used to externally validate the tool (PREP). To develop this. this. coefficients were re- estimated and then adjusted for optimism. The reduced word the adjusted for optimism. The reduced version of the PREP-S did not have serum urea and deep tendon reflex and the reduced version of fellend	PEP-3 model performance to event to event b event b cutcomes. Since not all the preciders from the PREP model PREP mo

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes and results							Comments
			PREP-L did not have serum urea.								Other information
Full citation	Sample size	Prognostic tool/test	Sample selection	Prognost	ic accuracy	(sensitivi	ty, specificit	y)			Limitations
Thangaratinam.	Median sample size was 230 (range 64 -		concontent	Adverse	maternal ou	tcome					Systematic
S., Koopmans, C.	737)	Liver function	A prospective					l	IR+	I.R.	review
M., Iyengar, S.,	,	tests	protocol was	Study	l iver test	Cut-off	Sensitivity	Specificity	(95%	(95%	assessed using
Zamora, J., Ismail,		(AST,ALT,LDH,G	carried out,	olday		out on	(95% CI)	(95% CI)			AMSTAR
K. M. K., Mol, B.	Characteristics	GT,ALP)	MEDLINE,							<i>.,</i>	checklist. Total
W. J., Khan, K. S.,			EMBASE, and		1						score: 11/16
Accuracy of liver	There were 13 included studies, assessing		the Cochrane	Martin			0.70 (0.63-	0.48 (0.43-	1.4	0.62	
function tests for	maternal and fetal outcomes	Outcome(s)	Library were	1999	AST	150	0.77)	0.53)	(1.2 -	(0.48-	In all an advances
predicting adverse			searched for				,	,	1.5)	0.8)	Indirectness
	Inclusion criteria	Adverse matemai	aitationa								No indirectness
womon with		Matornal	Correspondin						11	0.57	NO INGLIECTIESS
nreeclamnsia [.] A	Test accuracy studies: including women with	complications	a authors	Martin	ГОН	1400	0.72 (0.65-	0.49 (0.44-	(1.7	(0.44)	
systematic review.	pre-eclampsia in which liver function tests	Adverse fetal	were	1999	LDII	1400	0.79)	0.54)	1.6)	0.74)	Other
Acta Obstetricia et	(AST. ALT. LDH. GGT. ALP) were carried	outcomes	contacted to						1.0)	0.74)	information
Gynecologica	out, reporting composite maternal or fetal		retrieve								
Scandinavica, 90,	outcomes.		relevant data.						12	0.72	Only studies
574-585, 2011			Language	Martin		100	0.66 (0.59-	0.47 (0.42-	(1 1-	(0.57-	reporting on
			restrictions	1999	/ L I	100	0.73)	0.52)	1 4)	0.91)	composite
Ref Id	Exclusion criteria		were not						1.4)	0.51)	adverse
			applied								maternal
804009	Case reports								22	0.12	outcomes have
Countryling			Data	Girling	AST/ALT/	30/32/14	0.93 (0.52-	0.57 (0.37-	(1 4-	(0.01-	been extracted
where the study			Collection	1997	Bil/GGT	/41	1)	0.76)	3 5)	(0.01	
was carried out			conection						0.0)	1.7)	
Hus carried out			The electronic								
UK			searches were						17	0.83	
			screened and	Menzies	AL T/AST	40/55	0.33 (0.22-	0.80 (0.77-	(1.2	0.03	
Aim of the study			the studies	2007		10/00	0.45)	0.84)	24	0.00	
			likely to meet						2.4)	0.00)	
To assess the			the predefined								
accuracy of liver			criteria were								

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcome	es and result	S					Comments
function tests in women with pre- eclampsia for the prediction of maternal or fetal			selected by 2 independent reviewers; final exclusion and inclusion	Menzies 2007	LDH	600	0.62 (0.49- 0.74)	0.60 (0.56- 0.64)	1.6(1. 3-1.9)	0.63 (0.46- 0.86)	
complications			was done by	Adverse	fetal outcom	e					
Study dates			the reviewers; the studies meeting the inclusion criteria were	Study	Liver test	Cut-off	Sensitivity (95% Cl)	Specificity (95% CI)	LR+ (95% CI)	LR- (95% CI)	
Source of funding			selected and information regarding study characteristics	Girling 1997	AST/ALT/Bi/ GGT	30/32/14, 41	(0.86 (0.23- 1)	0.5 (0.32- 0.68)	1 (0.99- 3)	0.27 (0.02- 3.8)	
"No specific funding"			, quality, and accuracy data were extracted.	Model ca	alibration		I	<u> </u>	<u> </u>	<u> </u>]	
			Data analysis	Not repor	rted						
			A 2x2 table was constructed for each of the studies identified	Tool dise	crimination rted						
Full citation	Sample size	Prognostic	Sample	Prognos	tic accuracy	(sensitivit	y, specificity)			Limitations
Ukah, U. Vivian.	17 studies were included in total, although	tooi/test	selection	Compos	ite maternal (outcomes					AMSTAR
Hutcheon,	for the purpose of this review, 2 studies	Placental growth	A electronic		Test/cut-	Total N					overall quality
Jennifer A.,	have been included (those including women	factor	search was	Author,	off for	and	Sensitivi	ty Specific	ity LR+	LR-	score: 13/16
Haslam, Matthew D., Vatish, Manu, Ansermino, J.	and reporting on maternal adverse outcomes)	Outcome(s)	MEDLINE, Embase, CINAHL until	year	<u>sFlt-1/</u> PLGF ratio	outcom (%)	e (95%Cl)	(95% CI)	(95% CI)	% (95% CI)	Indirectness
Mark, Brown,			January 2017.								No indirectness

Study details	Number of characteris	f participants and p stics	oarticipant's	Prognostic tool	Methods	Outcomes and results						Comments	
Helen, Magee, Laura A., von Dadelszen, Peter, Placental Growth Factor as a	Characteri Type of PE	stics Maternal characteristics	Outcomes	PIERS Google composite. Outco mes included: grey literature maternal mortality sources were or one or more also searched.	Leaños- Miranda 2013	Serum sFlt-PIGF ratio ≥ 871	501 (9.5)	52.1 (37.4- 66.5)	77.9 (73.8- 81.6)	2.36 (1.71- 3.26)	0.61 (0.46 - 0.83)	Other information	
Prognostic Tool in Women With	Leaños-M Prospecti	liranda 2013 ve cohort, Mexico		serious central nervous system,	Titles and abstracts were	Palomaki			61 0 /38 7	60 4 (62 8	2.0	0.5	*Please note that for the
Hypertensive Disorders of Pregnancy: A	PE	GA at presentation: 32	Composite maternal outcome	cardiorespiratory, renal, haematological, or	screened by 2 reviewers.	2015	sFlt-1/PIGF ratio>85	237 (8.9)	81.0)	75.4)	(1.4- 3.0)	(0.3- 1.0)	purpose of this review, only studies
Systematic Review, Hypertension		Mean age: 28.3 Primigravida: 43.5%	fetal/ neonatal outcomes	hepatic morbidity	Data collection	Model calib	oration						including women with PE (with confirmed
(Dallas, Tex. : 1979), 70, 1228- 1237, 2017	Palomaki Prospecti Suspect	2015 ve cohort, USA Mean GA:30	Composite		Study details were	Not reported	d						have been included
Ref Id	ed preterm		maternal outcomes		extracted and, as part of the predictive	Tool discri	mination						
804045	PE (GA ≤3 4 W)				performance measures,	Not reported	d						
where the study was carried out					was assessed with QUIPS								
Canada	Inclusion o	criteria			Prognostic Studies								
Aim of the study	Studies in v independer	which PIGF was use nt or combined mark	ed either as an ker with		Checklist).								
review the evidence	pregnancy*	5. Studies should pe ive performance me	rform at least		Data analysis								
examining the ability of the	sufficient da	ata for this to be cal	culated		2x2 tables were								
placental growth factor (both independently and	Exclusion	criteria			for each of the outcomes								
combined with other factors) to	Not reporte	d			reported, and LRs were								
predict maternal and fetal complications					used for interpreting								

Study details	Number of particip characteristics	ants and participant's	Prognostic tool	Methods	Outcomes and	results			Comments
resulting from hypertensive disorder of pregnancy				the usefulness of a given test.					
Study dates									
Studies published before 30th of January 2017									
Source of funding									
Canadian Institutes of Health Research (CIHR)									
Full citation	Sample size		Prognostic	Sample	Prognostic acc	curacy (sensiti	vity, specificity)		Limitations
Ukah, U. V., Payne, B., Lee, T., Magee, L. A., Von Dadelszen, P., External	N=757 (miniPIERS of Characteristics	cohort)	fullPIERS (Preeclampsia Integrated Estimate of	This study used data from the miniPIERS	With a cut-off of Sensitivity 78 (Specificity 0.66	of 30% (95% CI NR) 6 (95% CI NR)			The quality of this study was assessed using the CASP tool for
Validation of the fullPIERS Model for Predicting Adverse Maternal		miniPIERS cohort (n=757)	Risk). Factors included in the model: gestational age, respiratory	cohort, a multi-country prospective study for	Model calibrati Risk stratificati risk stratificati	ion ion of women on at varying p	with and without advoced	verse outcomes and within 48 hours	clinical prediction rule (CPR). A. Are the
Outcomes in Pregnancy Hypertension in	Age, years (median, IQR)	28 (24-33)	pulse oximetry, platelets, creatinine, hepatic	developing a tool to predict adverse	Predicted	Total no of	Total no of observed adverse	LR +(95% CI)	results valid? 1 Is the CPR clearly defined?
Low- and Middle- Income Countries, Hypertension, 69, 705-711, 2017	No. with pre- eclampsia ^a n (%)	568 (75.03%)	aspartate transaminase	outcomes during pregnancy in low and		women	outcomes		Yes 2 The population from which the rule
		·	Outcome(s)	middle income countries.					was derived included an

Study details	Number of participa characteristics	ints and participar	nt's	Prognostic tool	Methods	ethods Outcomes and results						
Ref Id 804075	Other HDP (type not specified) n (%)	189 (24.97%)		PIERS composite. Outco mes included:	Women from Fiji, Uganda, South	0-0.99%	30 (4%)	2 (6.7%)	-	appropriate spectrum of patients? Yes		
Country/ies where the study was carried out	Gestational age at eligibility, weeks (median, IQR)	36.6 (33.1-38.1)		maternal mortality or one or more serious central nervous system, cardiorespiratory,	Africa, Brazil and Pakistan were enrolled.	1.0-2.4%	107 (14.1%)	3 (2.8%)	0.17 (0.06-0.53)	3 Was the rule validated in a different group of patients? Yes		
Canada Aim of the study	Multiple pregnancy n (%)	18 (2.4%)		renal, haematological, or hepatic morbidity	Data collection	2.5-4.9%	140(18.5%)	12 (8.6%)	0.56 (0.32-0.97)	4 Were the predictor variables and the outcome		
To provide external validation	Parity N (%)	406 (53.6%)			Data was collected					evaluated in a blinded		
of the fullPIERS model within 48 hours of admission with data from low and	sBP ≥ XY mmHg at entry (median, IQR)	160 (150 - 170)			prospectively and entered into a standardised form. The	5.0-9.9%	178 (23.5%)	8 (4.5%)	0.28 (0.14-0.55)	fashion? Yes (the author who collected the data was not aware of the		
middle income countries	dBP ≥ XY mmHg at entry (median, IQR)	100 (100-110)			variable oxygen saturation was often	10.0-29.9%	204(26.9%)	35 (32.1%)	1.23 (0.91-1.67)	model parameters) 5 Were the predictor		
Study dates July 2008 to March 2012	^a severe pre-eclamps one component, twice 4 hours apart at or af without significant pro	ia: BP≥ 140/90 (at e, measured more f ter 20 weeks GA) oteinuria	least han		irretrievable, in which cases the value of 97% was imputed (this was also done	≥0.30	98 (12.1%)	49 (50%)	5.9 (4.23-8.35)	variables and the outcome evaluated in the whole sample selected initially? Yes		
Source of funding Canadian Institutes of Health Research (CIHR)	Inclusion criteria Women with any hyp pregnancy. Exclusion criteria Having experienced a (i.e. hepatic dysfunction	ertensive disorder o any adverse outcon ion, hepatic hemato	of ne ma		in the internal validation study by von Dadelszen). Only women with complete predictor data were included. Sensitivity analyses were conducted to ensure that		Tool discrimination Calibration slope = 0.67 (95% Cl nor reported) AUC ROC (95% Cl)= 0.77 (0.72 - 0.82)					
	or rupture, stroke, co	nical blindness.) be	iore		there were not					performance of		

hospital admission or having been admitted in spontaneous labour. Data analysis	Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes and results	Comments
Discrimation authority and authority		hospital admission or having been admitted in spontaneous labour.		any bias because of missing data. Data analysis Discrimination was calculated using the area under the AUC ROC. Calibration was assessed by estimating the slope in a calibration plot of predicted versus observed outcomes.		the rule be calculated? Yes 8 How precise was the estimate of the treatment effect? The authors of the study did not try to refine/simplify the tool C. Will the results help locally? Are the results applicable to the scenario? 9 Would the prediction rule be reliable and the results interpretable if used for your patient? No (study was developed in low and middle income countries, a different setting than the UK) 10 Is the rule acceptable in your case? Can't tell 11 Would the results of the rule modify your decision about the

Study details	Number of characteris	participar stics	nts and par	rticipant's	Prognostic tool	Methods	Outcomes and	d results			Comments
											the patient or the information you can give to him/her? Can't tell
											Indirectness
											Sample obtained from low and middle income settings (Fiji, Uganda, South Africa, Brazil) No conflicts of interest have been declared
											information
Full citation	Sample siz	e			Prognostic	Sample	Prognostic ac	Limitations			
Ukah, U. V.,	N=1388 (n=	218 in the	BCW coho	ort; N=216	loontest	Selection	<u>PETRA, PREP</u>	The quality of			
Payne, B., Hutcheon, J. A., Ansermino, J. M., Ganzevoort, W.,	in the PETRA cohort; and N= 954 in the PREP cohort) Characteristics		fullPIERS (Pre- eclampsia Integrated Estimate of	The data from this study was obtained from 3 pre-existing	Time since admission	Total N with outcomes	Sensitivity (95% CI)	Specificity (95% CI)	this study was assessed using the CASP tool for		
Thangaratinam, S., Magee, L. A.,				Risk). Factors included in the	cohorts: BCW cohort;	40 h a una				prediction rule	
von Dadelszen, P Assessment of		BCW	PETRA	PREP	model: gestational	PETRA cohort ⁻ PRFP	48 nours	101	0.57 (95% CINR)	0.94 (95% CINR)	(CPR). A Are the
the fullPIERS Risk Prediction Model in Women With		(n=218)	(N=216)	(n=954)	pulse oximetry, platelets, creatining benatic	cohort. Sample size	7 days	179	0.68 (95% CI NR)	0.70 (95% CI NR)	results valid? 1 Is the CPR clearly defined?
Early-Onset Preeclampsia,					aspartate transaminase	were performed by					yes

Study details	Number of characteris	participar tics	nts and par	ticipant's	Prognostic tool	Methods	Outcomes and	Outcomes and results				
Hypertension, 71, 659-665, 2018 Ref Id	Maternal age at estimated day of	35 (30-	30 (27-	30 (26-	Outcome(s)	simulations studies. It was concluded that validation	<u>Sensitivity ana</u> <u>cohort)</u>	clusion of the PETRA	2 The population from which the rule was derived			
867315 Country/ies	delivery (median, IQR)	39)	34)	35)	PIERS composite. Outco mes included: maternal mortality	studies should at minimum have 100 events to have	Time since admission	Total N with outcomes	Sensitivity (95% CI)	Specificity (95% CI)	included an appropriate spectrum of patients? yes	
where the study was carried out	No. with severe				or one or more serious central nervous system,	80% power at the 5% significance	48 hours	69	0.68 (95% CI NR)	0.72 (95% CI NR)	3 Was the rule validated in a different group	
Canada	pre- eclampsia	191 (87.6%)	123 (56.9%)	940 (98.5%)	cardiorespiratory, renal,	level.	7 days	117	0.59 (95% CI NR)	0.74 (95% CI NR)	of patients? yes 4 Were the	
To externally	° n (%)				hepatic morbidity	Data collection		J L		II	variables and the outcome	
validate the fullPIERS model within 48 hours and 7 days of	HELLP syndrome ^b n (%)	27 (12.4%)	93 (43%)	10 (1%)	Data from the PETRA and PREP were collected prospectively whereas data from the BCW were collected retrospectively . Data collection took between 3	Data from the PETRA and PREP were collected prospectively whereas data from the BCW			evaluated in a blinded fashion? unclear BCW and PREP			
admission using data from 3 pre- existing cohorts of women	Multiple pregnanc y	40 (18.4%)	-	84 (8.8%)			Model calibrat	and PREP cohort; yes for PETRA dataset 5 Were the				
Study dates	Gestation al age at eligibility (modian	31 (28.4-	30 (27.4-	31.4 (28.7-		Predicted probability	Total no of women	Total no of women with adverse outcomes (%)*	LR (95% CI)	predictor variables and the outcome		
collected at different time	weeks, IQR)	32.7)	51.4)	32.7)		and 4 years in the 3 cohorts	0.00-0.0099	594 (30.5%)	14 (1.7%)	-	whole sample selected	
on the cohort. All data was collected	Median	161				obtained between the	0.010-0.024	409 (33.1%)	17 (2.8%)	0.55 (0.36-0.86)	6 Are the statistical	
between the years 2000 and 2014	sBP (IQR),	(150- 173)	160 (145- 170)	155 (145- 169)		years 2000 and 2014. The	0.025-0.049	158 (19.1%)	8 (4.5%)	0.68 (0.34-1.34)	methods used to construct and	
Source of	mmeig				va ox	oxygen saturation was	0.050-0.099	91 (7.8%)	6 (13.7%)	0.90 (0.40-2.01)	clearly described? yes	
funding	Median dBP	100 (94- 106)	105 (95- 110)	99 (32- 105)		often irretrievable, in which cases	0.010-0.29	68 (5.1%)	12 (15.6%)	2.73 (1.51-4.92)	B. What are the results?	

Study details	Number of pa characteristic	articipants a cs	and part	ticipant's	Prognostic tool	Methods	Outcomes and	results			Comments
Canadian Institutes of Health Research	(IQR), mmHg					the value of 97% was imputed (this	≥0.30	68 (4.4%)	44 (54.5%)	23.4 (14.83- 36.79)	7 Can the performance of the rule be
	^{a,b} See inclusio	n criteria				procedure is in line with the validation study	* percentages r by the NGA	eport, not calculated	calculated? yes 8 How precise was the estimate of the		
	Inclusion criteria BCW and the PREP study included only women with pre-eclampsia (a) sBP/dBP ≥140/90 mmHg (at least 1 component, measured ≥ 4h apart, after 20 with a) proteinuria (≥0.3g per day by 24h collection or ≥ 30mg mmol as measured by protein:creatinine ratio) or hyperuricaemia, or b) HELLP syndrome, or c) superimposed PE (rapidly increasing requirements for antihypertensive drugs, sBP> 170 mmHg or					von Dadelszen). Data analysis Data from the 3 cohorts was merged into a single dataset. Discrimination	Tool discrimina AUC within 48 BCW (N= 218)	<u>ets)</u>	reatment effect? In the study it is mentioned that "recalibration of the model was also performed to account for differences		
							AUC ROC (95% Calibration slope PETRA (N=216 AUC ROC (95%				
							Calibration slope PREP (N=695) AUC ROC (95% Calibration slope	between the development and validation cohort" (page 3)			
	antinypertensive drugs, sBP> 170 mmHg or dBP> 120 mmHg, new proteinuria or new hyperuricaemia). The PETRA study included women with		n with		calculated using the area under the UC ROC combined dataset USING the area UNDER CONTROL (0.000) Combined dataset AUC ROC combined dataset					C. Will the results help locally? Are the	
	mmHg), HELL hypertension, cohorts includ	.P syndrome and fetal gro ed women b	e, gestat owth res pefore 34	ional striction. All 4 weeks of		curve (AUC) ROC. Calibration was calculate	AUC ROC (95% AUC ROC with AUC ROC (95%		results applicable to the scenario? 9 Would the		
	gestation. Exclusion criteria					d by assessing the slope of the linear	Sensitivity ana cohort) Within 48 h of a AUC ROC (95%	prediction rule be reliable and the results interpretable if			
	Not reported					predictor. Sensitivity analyses excluding the	Within 7 days of AUC ROC (95%)	of admission 5 Cl) 0.70 (0.65-0).75)		used for your patient? Yes (UK, Canada and Dutch
						PETRA cohort were undertaken to					population) 10 Is the rule acceptable in
						account for differences in the study design and					your case? Yes 11 Would the results of the rule modify your

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes and results	Comments
			definitions for PE in the PETRA cohort as compared to the BCW and PREP.		decision about the management of the patient or the information you can give to him/her? Yes
					Indirectness BCW cohort: 12.4% of women did not present with PE PETRA cohort: 43% of women did not present with PE PREP cohort: 1% of women did not present with PE
					Other information Note overlap with PETRA dataset (Thangaratinam 2017)
Full citation Waugh, Jason, Hooper, Richard, Lamb, Edmund, Robson, Stephen, Shennan, Andrew,	Sample size N=959 Characteristics	Prognostic tool/test Tests done in the urine sample:	Sample selection Women were identified through different	Prognostic accuracy (sensitivity, specificity) Prognostic accuracy of the four index tests and the two 24-hour urine samples assessments to predict severe pre-eclampsia at pre-defined thresholds	Limitations Limitations assessed with the QUADAS-2 checklist

Study details	Number of participar characteristics	ognostic tool	Methods	Outcomes and results						Comments		
Milne, Fiona, Price, Christopher, Thangaratinam,		Women included in main analysis (n =959)	•	"(1) sPCR test	hospital settings, across 37 UK trusts,		Threshold (mg/mmol)	Sensitivity (95% CI)	Specificity (95% CI)	LR+ (95% CI)	LR- (95% CI)	<u>Domain 1.</u> <u>Patient</u> <u>selection</u> A. Risk of bias
Shakila, Berdunov, Vladislav, Bingham, Jenn,	Age, years (median, IQR)	30 (26-34)	•	(conducted at the local laboratory), (2) sPCR test	including maternity units, delivery suites or the	Recruitment sample						Was a consecutive or random sample of patients
Spot protein- creatinine ratio and spot albumin- creatinine ratio in	Gestational age (median)	37		at the local laboratory using the	outpatient setting.Those with confirmed hypertension	sPCR (local lab)	30	85 (80-90)	40 (37-44)	1.43 (1.31- 1.55)	0.36 (0.23- 0.45)	enrolled? yes Was a case- control design avoided? yes
the assessment of pre-eclampsia: a diagnostic accuracy study with decision-	Origin: UK (n, %) Origin: Africa (n, %)	706 (74) 59 (6)		m chloride (BZC) assay), (3) sPCR test	and trace of proteinuria were detected through antenatal care	sPCR (using the BZC assay)	30	84 (78-89)	43 (40-47)	1.48 (1.35- 1.61)	0.37 (0.25- 0.50)	avoid inappropriate exclusions? yes Could the
analytic model- based economic evaluation and acceptability	Origin: Europe (n, %)	88 (9)		(conducted at the central laboratory using the	and invited to participate in the study by the midwife.	sPCR (using	30	85 (80-90)	39 (35-42)	1.39	0.38	selection of patients have introduced bias? no
analysis, Health technology	Origin: other (n, %)	106 (11)		pyrogallol red (PGR) assav)	The revised sample	assay)	50	00 (00-90)	39 (33-42)	1.51)	0.51)	B. Concerns regarding applicability
(Winchester, England), 21, 1-	With severe PE ^a	417 (43)	•	(4) sACR test (conducted	estimated that	sACR	2	97 (93-99)	16 (14-19)	1.15	0.19	Is there a concern that
90, 2017 Ref Id	Without severe PE	542(57)		at the central laboratory using an	target should be of 1790	(central lab)	-		10 (11 10)	1.20)	0.35)	patients do not match the
776890	IQR)	145 (140-152)		automated chemistry analvser)"	women. This figure was based on	24-h sample						review question? no
Country/ies where the study was carried out	dBP mmHg (median, IQR)	94 (90-100)		(page 24, para 6)	the prevalence of severe pre- eclampsia of the first 500	sPCR (using the BZC assay)	30	83 (77-88)	44 (41-48)	1.49 (1.36- 1.63)	0.38 (0.25- 0.50)	Domain 2. Index test(s) A. Risk of bias Were the index test results
Aim of the study To assess the ability of spot	^a sBP/dBP ≥160/110 ar gestation and significa from 24 hour urine col central lab BZC assay	fter 20 weeks' ant proteinuria (≥ 300 lection using the)	Ou Adr	n tcome(s) verse maternal d fetal	participants recruited, and under the assumption that 14%	L	1	I				interpreted without knowledge of the results of

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes ar	nd results						Comments
protein:creatinine ratio (sPCR) and spot albumin- creatinine ratio (sACR) in	Inclusion criteria Pregnant women, of 16 years old and older.	outcomes (composite identified by Delphi survey of clinicians)	would have some missing data.	sPCR (using the PGR assay)	30	84 (78-89)	39 (3643)	1.38 (1.26 1.50	0. 6- (C) 0.	.41).27- .55)	the reference standard? yes If a threshold was used, was it pre-specified?
predicting severe pre-eclampsia as compared to 24 hour urine collection	who were ≥20 weeks pregnant, with confirmed gestational hypertension (sBP/dBP ≥140/90) and with 1 trace or more of proteinuria.		Data collection Three differen urine samples	POC- proteinuria dipstick test	1+	92 (88-96)	13 (11-16)	1.06 (1.01 1.12	- (C)	.58).28- .89)	yes Could the conduct or interpretation of the index
Study dates Feb 2013 - Nov 2015	Exclusion criteria Women with pre-gestational diabetes or chronic hypertension and women with pre- existing renal disease (proteinuria before 20		from the stud participants:	Prognostic a samples assidefined three	ccuracy of th essments to sholds	ne four index predict adve	tests and terse perinata	he two al outco	24-hou omes a	ur urine t pre-	introduced bias? no B. Concerns regarding applicability
Source of funding	weeks gestation)		for POC test. 2. Urine sample		Threshold (mg/mmol)	Sensitivity (95% CI)	Specificity (95% CI)	LR+ (95% CI)	LR- (95% CI)		Is there concern that the index test, its conduct, or interpretation
			for 24 hours: women were	Recruitmen sample							differ from the review question? no
			given instructions as to when start and	sPCR (local lab)	30	69 (56-80)	35 (32-39)	1.07 (0.89- 1.26)	0.87 (0.53- 1.20)		Domain 3. Reference standard A. Risk of bias
			finish the collectio 3. Urine sample immedia	sPCR (using the BZC assay)	30	77 (65-87)	39 (36-42)	1.26 (1.08- 1.45)	0.58 (0.31- 0.85)		standard likely to correctly classify the target condition? yes
			before birth The laborator was blinded t	sPCR (using the PGR assay) y	30	79 (67-88)	35 (32-38)	1.21 (1.04- 1.38)	0.60 (0.31- 0.90)		Were the reference standard results interpreted without knowledge of the results of

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes an	d results						Comments
			clinical info and POC	sACR (central lab)	2	94 (84-98)	14 (12-16)	1.09 (1.01- 1.16)	0.46 (0.02- 0.91)		the index test? yes Could the reference standard, its
			Data analysis	24-h sample							conduct, or its interpretation
			ROC curves were plotted with different cut-offs using	sPCR (using the BZC assay)	30	68 (55-79)	39 (36-42)	1.11 (0.91- 1.31)	0.83 (0.52- 1.13)		introduced bias? no B. Concerns regarding
			sACR as index tests and the NICE definition of severe pre-	sPCR (using the PGR assay)	30	71 (58-82)	35 (32-38)	1.09 (0.91- 1.27)	0.83 (0.50- 1.16		Is there concern that the target condition as defined by the
			eclampsia as the reference standard. AUC ROC curve,	Model calibra	tion						reference standard does not match the review question? no
			sensitivity and specificity LR+, LR- were summarised using pre-	Not applicable	nation						<u>Domain 4. Flow</u> and timing Was there an appropriate
			established cut-off points	AUC ROC of t assessments	the four inde to predict s	ex tests and severe PE	the two 24-h	nour ur	ine sam	ples	interval between index
			(30 mg/mmol for sPCR and 2ng/mml for sACR).			AI (9	JC ROC 5% CI)				test(s) and reference standard? yes Did all patients received a
				Recruitment	sample						reference standard? yes
				sPCR (local la	ab)	0.	70 (0.66 - 0.7	(4)			Did patients receive the same reference standard? yes

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes and results	Outcomes and results						
				sPCR (using the BZC assay)	0.72 (0.68 - 0.76)		Were all patients				
				sPCR (using the PGR assay)	0.71 (0.67-0.75)		analysis? yes Could the				
				sACR (central lab)	0.72 (0.68-0.76)		patient flow have introduced				
				24-h sample			bias? no				
				sPCR (using the BZC assay)	0.74 (0.70-0.78)		Indirectness				
				sPCR (using the PGR assay)	0.73 (0.69 - 0.77)		No indirectness				
				AUC ROC of the four index test assessments to predict adverse	s and the two 24-hour u e perinatal outcome	irine samples	Other information				
					AUC ROC (95% CI)						
				Recruitment sample							
				sPCR (local lab)	0.59 (0.51-0.67)						
				sPCR (using the BZC assay)	0.64 (0.56-0.71)						
				sPCR (using the PGR assay)	0.63 (0.56-0.70)						
				sACR (central lab)	0.63 (0.56-0.71)						
				24-h sample							
				sPCR (using the BZC assay)	0.60 (0.52-0.68)						

Study details	Number of participants and participant's characteristics	Prognostic tool	Methods	Outcomes and results	Comments
				sPCR (using the PGR assay) 0.60 (0.52-0.68)	