

Table 2: Characteristics of studies included in systematic review.

First author	Year	Country	Time	Setting	Speciality	Respondent(s)	Patients	Patient age (years)	Male patients (%)
Mahes A.	2023	USA	1-year	Hospital outpatient	Unselected	Physicians	301	74.7 ± 8.2	67.1
Lin C.A.	2023	Brazil	1-year	Hospital outpatient	General medicine	Physicians	840	60.9 ± 14.9	31.9
Um Y.W.	2023	South Korea	30-days	Emergency department	Unselected	Physicians	300	70.5 (59.3-81.8)	54
Dogbey D.M.	2022	South Africa	6-months	Inpatient	Oncology	Physicians	43	58 (45-68)	35
Kim S.H.	2022	South Korea	7-days 21-days 42-days	Inpatient	Oncology	Physicians	130	66.0 ± 12.2	50.8
Maes H.	2022	Belgium	1-year	Hospital inpatient	Unselected Cardiology	Physicians	381	Not reported	81.4
Gaffney L.	2022	Ireland	1-year	Emergency department	Unselected	Physicians	191	79 (74-83)	45
Ikari T.	2021	Japan, Korea, Taiwan	1-day	Inpatient	Oncology	Physicians	1411	72.6 ± 12.2	50.7
Ikari T.	2021	Japan, Korea, Taiwan	3-days	Inpatient	Oncology	Physicians	1411	72.6 ± 12.2	50.7
Moor C.C.	2021	Netherlands	1-year	Outpatient	Respiratory	Physicians Specialist nurses	140	74.0 ± 6.5	87.1
Gonzalez-Jaramillo V.	2021	Colombia	1-year	Outpatient	Cardiology	Physicians	174	70 (58-77)	55.2
Tripp D.	2021	USA	30-days 1-year	Inpatient	Respiratory	Physicians Advanced practice providers	428	Not reported	49.1
Ermers D.J.M.	2021	Netherlands	1-year	Hospital outpatient	Oncology	Physicians Trainee physicians	379	59.4 ± 15	55.7
Yarnell C.	2021	Canada	1-year	Hospital inpatient	General medicine	Physicians Trainee physicians	417	75 (60-85)	52.0

Ros M.M.	2021	Netherlands	2-days 10-days 1-year	Intensive care unit	Unselected	Physicians	3140	63.5 ± 16.6	57.1
Flierman I.	2020	Netherlands	1-year	Inpatient	Unselected	Nurses	234	81.2 ± 6.6	48.4
Van Wijmen M.P.S.	2020	Netherlands	1-year	Primary care	Unselected	Physicians	57	Not reported	28.4
Ramer S.J.	2020	USA	2-years	Hospital outpatient	Nephrology	Physicians Advanced practitioners	377	72 (66-78)	49
Lai C.-F.	2020	Taiwan	1-year	Hospital outpatient	Nephrology	Nurses	401	56.2 ± 14	49.9
Rauh L.A.	2020	USA	1-year	Hospital outpatient	Oncology	Physician Nurse Advanced practice providers	358	Not reported	Not reported
Yen Y.-F.	2020	Taiwan	1-year	Hospital inpatient	Unselected	Nurses	21098	62.8 ± 19.0	53.2
Ouchi K.	2019	USA	30-days	Emergency department	Unselected	Physicians	10737	75.9 ± 8.8	48.5
Verhoef M.J.	2019	Netherlands	1-year	Emergency department	Oncology	Physicians	245	62 (45-79)	48
Aaronson E.L.	2019	USA	1-year	Emergency department	Cardiology	Physicians	193	74.5 ± 12.6	
Schmidt R.J.	2019	USA	1-year	Hospital outpatient	Nephrology	Physicians Trainee physicians Nurse practitioners	749	69.3 ± 14.6	50.9
Lakin J.R.	2019	USA	2-years	Primary care	Primary care	Physicians Nurses	2611	Not reported	40.9
Veldhoven C.M.M.	2019	Netherlands	1-year	Primary care	Unselected	Physicians	292	84 ± 5.5	40.1
Haydar S.A.	2019	USA	30-days	Emergency department	Unselected	Physicians	6122	66 (51-79)	51.7
Straw S.	2019	UK	1-year	Hospital inpatient	Cardiology	Physicians Trainee-physicians Nurses Nurse practitioners	129	71 ± 14	64
Rice J.	2018	Canada	3-months	Nursing home	Unselected	Physicians	301	85.9 ± 9.0	67.8

			6-months			Nurses Support workers			
Burke K.	2018	UK	90-days 1-year	Hospice	Paediatric	Physicians Nurses Administrators	327	7.6 ± 5.3	56.6
Ouchi K.	2018	USA	1-year	Emergency department	Unselected	Physicians	207	75 ± 7.5	51.2
Liyanage T.	2018	Australia	1-year	Nursing home	Unselected	Nurses	187	82.4 ± 9.1	44.4
Mitchell G.K.	2018	Australia	1-year	Primary care	Unselected	Physicians	4365	Not reported	Not reported
Ebke M.	2018	Germany	1-year	Hospital outpatient	Neurorehabilitation	Physicians	236	63 ± 14	57.7
Mudge A.M.	2018	Australia	1-year	Hospital inpatient	Unselected	Physicians Nurses	100	60.2 ± 18.9	53.8
Gulini J.E.H.M.B.	2018	Brazil	1-day	Intensive care unit	Unselected	Physicians	170	57 ± 15.6	51.2
Salat H.	2017	USA	1.9-years	Hospital outpatient	Nephrology	Physician	488	71 (65-77)	49
Malhotra R.	2017	USA	6-months 1-year	Hospital outpatient	Nephrology	Physician	215	Not reported	55
Hadique S.	2017	USA	6-months	Intensive care unit	Unselected	Physician	1043	Not reported	53.7
Gomez- Batiste X.	2017	Spain	1-year 2-years	Primary care Hospital outpatient Intermediate care centre Nursing home	Unselected	Physician/nurse	1059	Not reported	Not reported
Javier A.D.	2017	USA	1-year	Hospital outpatient	Nephrology	Physicians Trainee physicians Nurse practitioners	388	71 (65-77)	49.7
Amro O.W.	2016	USA	1-year	Hospital outpatient	Nephrology	Physicians	201	66	52.2
Lakin J.R.	2016	USA	1-year	Primary care	Unselected	Physicians	1737	65	39.7

Carmen J.	2016	Spain	1-year	Hospital outpatient	Nephrology	Physicians	49	Not reported	Not reported
Hamano J.	2015	Japan	7-days 30-days	Hospital and community palliative care	Oncology	Physicians	2361	69.1 ± 12.8	57.5
Feyi K.	2015	UK	1-year	Hospital outpatient	Nephrology	Physicians Nurses	178	72	63.2
Moroni M.	2014	Italy	1-year	Primary care	Primary care/oncology	Physicians	231	70.2 (SE 0.9)	50.6
O'Callaghan A.	2014	New Zealand	6-months 1-year	Hospital inpatient	Acute medicine	Physicians Nurse practitioners	501	Not reported	Not reported
Da Silva Gane M.	2013	UK	1-year	Hospital outpatient	Nephrology	Physician Nurses	3896	Not reported	Not reported
Pang W.-F.	2013	China	1-year	Hospital outpatient	Nephrology	Physicians	367	60.2 ± 12.3	55.9
Haga K.	2012	UK	1-year	Hospital outpatient	Cardiology	Nurses	138	77 ± 10	66
Fenning S.	2012	UK	1-year	Hospital outpatient	Cardiology	Physicians	172	66 ± 14	61
Moss A.H.	2010	USA	1-year	Hospital outpatient	Oncology	Physicians	826	Not reported	Not reported
Cohen L.M.	2010	USA	6-months	Hospital outpatient	Nephrology	Physicians	450	Not reported	56.7
Moss A.H.	2008	USA	1-year	Hospital outpatient	Nephrology	Physicians	147	66.4 ± 14.8	55.1
Barnes S.	2008	UK	1-year	Primary care	Cardiology	Physicians	231	77	54.1

Age is displayed as mean ± standard deviation or median (interquartile range) where available.

Table 3: Accuracy of individual studies.

First author	Sample size	Surprise Question results				Diagnostic test results				
		Surprise Question responses	Total	Dead	Alive	Sensitivity (95% CI)	Specificity (95% CI)	Positive predictive value (95% CI)	Negative predictive value (95% CI)	Accuracy (95% CI)
Rice J.	301	Not surprised	191	62	134	0.646	0.544	0.316	0.825	0.569
		Surprised	194	34	160	(0.541 – 0.741)	(0.485 – 0.602)	(0.276 – 0.360)	(0.779 – 0.863)	(0.518 – 0.619)
Ikari T.	1411	Not surprised	847	232	615	0.820	0.455	0.274	0.910	0.528
		Surprised	564	51	513	(0.770 – 0.863)	(0.425 – 0.4840)	(0.259 – 0.289)	(0.886 – 0.929)	(0.502 – 0.554)
Ikari T.	1411	Not surprised	1179	636	543	0.944	0.263	0.539	0.836	0.588
		Surprised	232	38	194	(0.923 – 0.960)	(0.232 – 0.297)	(0.528 – 0.551)	(0.786 – 0.877)	(0.562 – 0.614)
Dogbey D.M.	43	Not surprised	21	18	3	0.667	0.813	0.857	0.591	0.721
		Surprised	22	9	13	(0.460 – 0.835)	(0.544 – 0.960)	(0.676 – 0.945)	(0.446 – 0.721)	(0.563 – 0.847)
Moor C.C.	140	Not surprised	39	19	20	0.679	0.821	0.487	0.911	0.793
		Surprised	101	9	92	(0.477 – 0.841)	(0.738 – 0.887)	(0.372 – 0.604)	(0.856 – 0.946)	(0.716 – 0.857)
Gonzalez-Jaramillo V.	174	Not surprised	83	17	66	0.850	0.571	0.205	0.967	0.603
		Surprised	91	3	88	(0.621 – 0.968)	(0.489 – 0.651)	(0.166 – 0.250)	(0.911 – 0.988)	(0.527 – 0.677)
Tripp D.	381 (30 days)	Not surprised	19	2	17	0.125	0.953	0.105	0.961	0.919
		Surprised	362	14	348	(0.016 – 0.384)	(0.927 – 0.973)	(0.029 – 0.318)	(0.954 – 0.968)	(0.887 – 0.944)
	365 (365 days)	Not surprised	108	38	70	0.469	0.754	0.352	0.833	0.690
		Surprised	257	43	214	(0.357 – 0.583)	(0.699 – 0.803)	(0.285 – 0.425)	(0.801 – 0.861)	(0.640 – 0.738)
Flierman I.	234	Not surprised	135	59	76	0.808	0.528	0.437	0.859	0.615
		Surprised	99	14	85	(0.699 – 0.891)	(0.448 – 0.607)	(0.389 – 0.486)	(0.788 – 0.909)	(0.550 – 0.678)
Kim S.H.	130 (7 days)	Not surprised	20	7	13	0.467	0.887	0.350	0.927	0.839
		Surprised	110	8	102	(0.213 – 0.734)	(0.815 – 0.938)	(0.204 – 0.531)	(0.888 – 0.954)	(0.764 – 0.897)
	130 (21 days)	Not surprised	54	37	17	0.529	0.717	0.685	0.566	0.615
		Surprised	76	33	43	(0.406 – 0.649)	(0.586 – 0.826)	(0.579 – 0.775)	(0.493 – 0.636)	(0.526 – 0.699)
	130 (42 days)	Not surprised	100	87	13	0.821	0.458	0.870	0.367	0.754
		Surprised	30	19	11	(0.734 – 0.889)	(0.256 – 0.672)	(0.821 – 0.907)	(0.242 – 0.512)	(0.671 – 0.825)
Ouchi K.	10737	Not surprised	3324	685	2639	0.433	0.820	0.206	0.931	0.782
		Surprised	12899	896	12003	(0.409 – 0.458)	(0.813 – 0.826)	(0.196 – 0.217)	(0.928 – 0.933)	(0.776 – 0.788)
Erners D.J.M.	379 (SQ1)	Not surprised	188	103	85	0.873	0.674	0.548	0.922	0.736
		Surprised	191	15	176	(0.799 – 0.927)	(0.614 – 0.731)	(0.501 – 0.594)	(0.879 – 0.950)	(0.689 – 0.780)
	188 (SQ2)	Not surprised	105	42	63	0.408	0.259	0.400	0.265	0.340
		Surprised	83	61	22	(0.312 – 0.509)	(0.170 – 0.365)	(0.339 – 0.465)	(0.196 – 0.348)	(0.273 – 0.413)
Yarnell C.	417 (AP – 365 days)	Not surprised	298	143	155	0.894	0.397	0.480	0.857	0.588
		Surprised	119	17	102	(0.835 – 0.937)	(0.337 – 0.460)	(0.452 – 0.508)	(0.789 – 0.906)	(0.539 – 0.635)
		Not surprised	250	132	118	0.825	0.541	0.528	0.832	0.650

	417 (SMR – 365 days)	Surprised	167	28	139	(0.757 – 0.881)	(0.478 – 0.603)	(0.490 – 0.565)	(0.777 – 0.876)	(0.602 – 0.696)	
	288 (AP - admission)	Not surprised	53	21	32	0.636	0.875	0.396	0.949	0.847	
		Surprised	235	12	223	(0.451 – 0.796)	(0.828 – 0.913)	(0.303 – 0.498)	(0.922 – 0.967)	(0.800 – 0.887)	
	288 (SMR – admission)	Not surprised	47	16	31	0.485	0.878	0.340	0.930	0.833	
		Surprised	241	17	224	(0.308 – 0.665)	(0.832 – 0.916)	(0.242 – 0.455)	(0.904 – 0.949)	(0.785 – 0.875)	
Van Wijmen M.P.S.	57	Not surprised	19	18	1	0.692	0.968	0.947	0.790	0.842	
		Surprised	38	8	30	(0.482 – 0.857)	(0.833 – 0.999)	(0.720 – 0.992)	(0.677 – 0.870)	(0.721 – 0.925)	
Ramer S.J.	377	Not surprised	124	45	79	0.672	0.745	0.363	0.913	0.732	
		Surprised	253	22	231	(0.546 – 0.782)	(0.693 – 0.793)	(0.307 – 0.423)	(0.881 – 0.937)	(0.684 – 0.776)	
Lai C.-F.	401	Not surprised	34	18	16	0.529	0.956	0.529	0.956	0.920	
		Surprised	367	16	351	(0.351 – 0.702)	(0.930 – 0.975)	(0.388 – 0.667)	(0.939 – 0.969)	(0.889 – 0.945)	
Rauh L.A.	231 (MD – UPMC)	Not surprised	90	36	54	0.706	0.700	0.400	0.894	0.701	
		Surprised	141	15	126	(0.562 – 0.825)	(0.627 – 0.766)	(0.334 – 0.470)	(0.845 – 0.929)	(0.638 – 0.760)	
	168 (RN – UPMC)	Not surprised	61	31	30	0.689	0.756	0.508	0.869	0.738	
		Surprised	107	14	93	(0.534 – 0.818)	(0.671 – 0.829)	(0.417 – 0.599)	(0.810 – 0.912)	(0.665 – 0.803)	
	199 (APP – UPMC)	Not surprised	81	35	46	0.796	0.703	0.432	0.924	0.724	
		Surprised	118	9	109	(0.647 – 0.902)	(0.625 – 0.774)	(0.364 – 0.503)	(0.870 – 0.956)	(0.656 – 0.785)	
	78 (MD – UVA)	Not surprised	39	19	20	0.864	0.643	0.487	0.923	0.705	
		Surprised	39	3	36	(0.651 – 0.971)	(0.504 – 0.766)	(0.392 – 0.584)	(0.805 – 0.972)	(0.591 – 0.803)	
	130 (RN – UVA)	Not surprised	82	29	53	0.725	0.411	0.354	0.771	0.508	
		Surprised	48	11	37	(0.561 – 0.854)	(0.308 – 0.520)	(0.297 – 0.414)	(0.658 – 0.855)	(0.419 – 0.596)	
	22 (APP – UVA)	Not surprised	17	8	9	1.000	0.357	0.471	1.000	0.591	
		Surprised	5	0	5	(0.631 – 1.000)	(0.128 – 0.649)	(0.376 – 0.568)		(0.364 – 0.793)	
	309 (MD – combined)	Not surprised	129	55	74	0.753	0.686	0.426	0.900	0.702	
		Surprised	180	18	162	(0.639 – 0.847)	(0.623 – 0.745)	(0.371 – 0.483)	(0.857 – 0.931)	(0.648 – 0.753)	
	298 (RN – combined)	Not surprised	143	60	83	0.706	0.610	0.420	0.839	0.638	
		Surprised	155	25	130	(0.597 – 0.800)	(0.541 – 0.676)	(0.368 – 0.473)	(0.786 – 0.880)	(0.580 – 0.692)	
	221 (APP – combined)	Not surprised	98	43	55	0.827	0.675	0.439	0.927	0.710	
		Surprised	123	9	114	(0.697 – 0.918)	(0.598 – 0.745)	(0.378 – 0.501)	(0.874 – 0.959)	(0.646 – 0.769)	
	Verhoef M.-J.	245	Not surprised	203	172	31	0.891	0.404	0.847	0.500	0.788
			Surprised	42	21	21	(0.839 – 0.931)	(0.270 – 0.549)	(0.815 – 0.875)	(0.373 – 0.628)	(0.731 – 0.837)
Maes H.	190 (Acute Geriatric Unit)	Not surprised	66	31	35	0.674	0.757	0.470	0.879	0.737	
		Surprised	124	15	109	(0.520 – 0.805)	(0.679 – 0.825)	(0.384 – 0.557)	(0.826 – 0.918)	(0.668 – 0.798)	
	189 (Cardiology Unit)	Not surprised	63	23	40	0.622	0.737	0.365	0.889	0.714	
		Surprised	126	14	112	(0.448 – 0.775)	(0.659 – 0.805)	(0.285 – 0.453)	(0.840 – 0.924)	(0.644 – 0.778)	
Yen Y.-F.	21098	Not surprised	2620	799	1821	0.456	0.906	0.305	0.948	0.868	
		Surprised	18478	955	17523	(0.432 – 0.479)	(0.901 – 0.910)	(0.291 – 0.319)	(0.946 – 0.950)	(0.864 – 0.873)	
	193	Not surprised	103	44	59	0.786	0.569	0.427	0.867	0.632	

Aaronson E.L.		Surprised	90	12	78	(0.656 – 0.884)	(0.482 – 0.654)	(0.371 – 0.486)	(0.794 – 0.916)	(0.560 – 0.700)
Schmidt R.J.	749	Not surprised	173	61	112	0.604	0.827	0.353	0.931	0.797
		Surprised	576	40	536	(0.502 – 0.700)	(0.796 – 0.856)	(0.302 – 0.407)	(0.913 – 0.945)	(0.766 – 0.825)
Lakin J.R.	1448 (Nurses)	Not surprised	352	112	240	0.526	0.806	0.318	0.908	0.765
		Surprised	1096	101	995	(0.457 – 0.595)	(0.783 – 0.827)	(0.282 – 0.356)	(0.895 – 0.919)	(0.742 – 0.786)
	1163 (Physicians)	Not surprised	452	143	309	0.794	0.686	0.316	0.948	0.703
		Surprised	711	37	674	(0.728 – 0.851)	(0.656 – 0.715)	(0.291 – 0.343)	(0.932 – 0.961)	(0.675 – 0.729)
Veldhoven C.M.M.	292 (SQ1)	Not surprised	161	24	137	0.923	0.485	0.149	0.985	0.524
		Surprised	131	2	129	(0.749 – 0.991)	(0.424 – 0.547)	(0.130 – 0.171)	(0.944 – 0.996)	(0.465 – 0.583)
	161 (SQ2)	Not surprised	22	10	12	0.417	0.912	0.455	0.899	0.830
		Surprised	139	14	125	(0.221 – 0.634)	(0.852 – 0.954)	(0.289 – 0.631)	(0.864 – 0.926)	(0.772 – 0.892)
Burke K.	325 (majority vote – 90 days)	Not surprised	36	15	21	0.833	0.932	0.417	0.990	0.926
		Surprised	289	3	286	(0.586 – 0.964)	(0.897 – 0.957)	(0.310 – 0.531)	(0.971 – 0.996)	(0.892 – 0.952)
	306 (majority vote – 365 days)	Not surprised	106	25	81	0.833	0.707	0.236	0.975	0.719
		Surprised	200	5	195	(0.653 – 0.944)	(0.649 – 0.760)	(0.195 – 0.282)	(0.946 – 0.989)	(0.665 – 0.769)
	238 (100% agreement - 90 days)	Not surprised	21	14	7	0.933	0.969	0.667	0.995	0.966
		Surprised	217	1	216	(0.681 – 0.998)	(0.936 – 0.987)	(0.488 – 0.808)	(0.970 – 0.999)	(0.935 – 0.985)
	175 (100% agreement – 365 days)	Not surprised	57	21	36	0.955	0.765	0.368	0.992	0.789
		Surprised	118	1	117	(0.772 – 0.999)	(0.689 – 0.829)	(0.302 – 0.441)	(0.945 – 0.999)	(0.721 – 0.847)
	290 (75 – 100% agreement – 90 days)	Not surprised	26	14	12	0.824	0.956	0.539	0.989	0.948
		Surprised	264	3	261	(0.566 – 0.962)	(0.925 – 0.977)	(0.391 – 0.679)	(0.969 – 0.996)	(0.916 – 0.971)
	236 (75 – 100% agreement – 365 days)	Not surprised	80	24	56	0.923	0.733	0.300	0.987	0.754
		Surprised	156	2	154	(0.749 – 0.991)	(0.668 – 0.792)	(0.250 – 0.355)	(0.953 – 0.997)	(0.694 – 0.808)
	122 (Neurology – 365 days)	Not surprised	28	7	21	0.875	0.816	0.250	0.989	0.820
		Surprised	94	1	93	(0.474 – 0.997)	(0.732 – 0.882)	(0.173 – 0.347)	(0.937 – 0.998)	(0.740 – 0.883)
	27 (Oncology – 365 days)	Not surprised	22	12	10	1.000	0.333	0.546	1.000	0.630
		Surprised	5	0	5	(0.735 – 1.000)	(0.118 – 0.616)	(0.456 – 0.632)		(0.424 – 0.806)
73 (Congenital – 365 days)	Not surprised	24	4	20	0.667	0.702	0.167	0.959	0.699	
	Surprised	49	2	47	(0.223 – 0.957)	(0.577 – 0.807)	(0.093 – 0.282)	(0.882 – 0.987)	(0.580 – 0.801)	
Ouchi K.	207	Not surprised	102	34	68	0.773	0.583	0.333	0.905	0.623
		Surprised	105	10	95	(0.622 – 0.885)	(0.503 – 0.660)	(0.282 – 0.289)	(0.844 – 0.943)	(0.553 – 0.690)
Liyantage T.	187	Not surprised	80	30	50	0.714	0.655	0.375	0.888	0.668
		Surprised	107	12	95	(0.554 – 0.843)	(0.572 – 0.732)	(0.309 – 0.446)	(0.829 – 0.928)	(0.596 – 0.735)
Mitchell G.K.	2840 (Intuition)	Not surprised	154	32	122	0.337	0.956	0.208	0.977	0.935
		Surprised	2686	63	2623	(0.243 – 0.441)	(0.947 – 0.963)	(0.159 – 0.268)	(0.973 – 0.980)	(0.925 – 0.944)

	1525 (ST)	Not surprised	179	25	154	0.532	0.896	0.140	0.984	0.885
		Surprised	1346	22	1324	(0.381 – 0.679)	(0.879 – 0.911)	(0.107 – 0.181)	(0.978 – 0.988)	(0.868 – 0.900)
Ebke M.	236 (Neurorehabilitation Physicians)	Not surprised	45	17	28	0.500	0.861	0.378	0.911	0.809
		Surprised	191	17	174					
	236 (Palliative Care Physicians)	Not surprised	83	23	60	0.677	0.703	0.277	0.928	0.699
		Surprised	153	11	142	(0.495 – 0.826)	(0.635 – 0.765)	(0.219 – 0.344)	(0.887 – 0.955)	(0.636 – 0.757)
Mudge A.M.	100	Not surprised	52	16	36	0.889	0.561	0.308	0.958	0.620
		Surprised	48	2	46	(0.653 – 0.986)	(0.447 – 0.670)	(0.249 – 0.374)	(0.860 – 0.989)	(0.518 – 0.715)
Salat H.	488	Not surprised	171	56	115	0.644	0.713	0.328	0.902	0.701
		Surprised	317	31	286	(0.534 – 0.744)	(0.666 – 0.757)	(0.281 – 0.378)	(0.874 – 0.925)	(0.658 – 0.741)
Malhotra R.	208 (180 days)	Not surprised	203	10	193	0.769	0.010	0.049	0.400	0.058
		Surprised	5	3	2	(0.462 – 0.950)	(0.001 – 0.037)	(0.037 – 0.065)	(0.109 – 0.785)	(0.030 – 0.099)
	189 (365 days)	Not surprised	162	13	149	0.650	0.118	0.080	0.741	0.175
		Surprised	27	7	20	(0.408 – 0.846)	(0.074 – 0.177)	(0.059 – 0.108)	(0.580 – 0.855)	(0.123 – 0.236)
Hadique S.	500 (Derivation cohort)	Not surprised	238	148	90	0.822	0.719	0.622	0.878	0.756
		Surprised	262	32	230	(0.758 – 0.875)	(0.666 – 0.767)	(0.577 – 0.665)	(0.839 – 0.908)	(0.716 – 0.793)
	543 (Validation cohort)	Not surprised	204	139	65	0.739	0.817	0.681	0.856	0.790
		Surprised	339	49	290	(0.671 – 0.801)	(0.773 – 0.856)	(0.628 – 0.730)	(0.822 – 0.883)	(0.753 – 0.824)
Gomez-Batiste X.	1059 (365 days)	Not surprised	837	268	569	0.937	0.264	0.320	0.919	0.446
		Surprised	222	18	204	(0.902 – 0.962)	(0.233 – 0.297)	(0.309 – 0.332)	(0.877 – 0.947)	(0.416 – 0.476)
	1059 (730 days)	Not surprised	837	373	464	0.914	0.287	0.446	0.842	0.529
		Surprised	222	35	187	(0.883 – 0.940)	(0.253 – 0.324)	(0.432 – 0.460)	(0.792 – 0.882)	(0.498 – 0.559)
Javier A.D.	388	Not surprised	137	33	104	0.635	0.691	0.241	0.924	0.683
		Surprised	251	19	232	(0.490 – 0.764)	(0.638 – 0.740)	(0.196 – 0.292)	(0.894 – 0.946)	(0.634 – 0.729)
Amro O.W.	201	Not surprised	50	22	28	0.550	0.826	0.440	0.881	0.771
		Surprised	151	18	133	(0.385 – 0.707)	(0.759 – 0.881)	(0.336 – 0.549)	(0.839 – 0.913)	(0.707 – 0.827)
Lakin J.R.	1737	Not surprised	114	23	91	0.205	0.944	0.202	0.945	0.896
		Surprised	1623	89	1534	(0.135 – 0.292)	(0.932 – 0.955)	(0.143 – 0.277)	(0.940 – 0.950)	(0.881 – 0.910)
Hamano J.	2361 (7 days)	Not surprised	931	282	649	0.847	0.680	0.303	0.964	0.704
		Surprised	1430	51	1379	(0.804 – 0.884)	(0.659 – 0.700)	(0.287 – 0.320)	(0.955 – 0.972)	(0.685 – 0.722)
	2361 (30 days)	Not surprised	1851	1066	785	0.956	0.370	0.576	0.904	0.647
		Surprised	510	49	461	(0.942 – 0.967)	(0.343 – 0.397)	(0.565 – 0.587)	(0.876 – 0.926)	(0.627 – 0.666)
Feyi K.	178	Not surprised	58	37	21	0.726	0.835	0.638	0.883	0.803
		Surprised	120	14	106	(0.583 – 0.841)	(0.758 – 0.895)	(0.535 – 0.730)	(0.828 – 0.923)	(0.737 – 0.859)
Moroni M.	231	Not surprised	126	87	39	0.837	0.693	0.691	0.838	0.758
		Surprised	105	17	88	(0.751 – 0.902)	(0.605 – 0.772)	(0.629 – 0.746)	(0.768 – 0.890)	(0.697 – 0.811)
O'Callaghan A.	501 (180 days)	Not surprised	99	56	43	0.727	0.899	0.566	0.948	0.872
		Surprised	402	21	381	(0.614 – 0.823)	(0.866 – 0.926)	(0.487 – 0.641)	(0.926 – 0.963)	(0.840 – 0.900)

	501 (365 days)	Not surprised	99	67	32	0.626	0.919	0.677	0.901	0.856
		Surprised	402	40	362	(0.527 – 0.718)	(0.887 – 0.944)	(0.593 – 0.751)	(0.876 – 0.920)	(0.823 – 0.886)
Da Silva Gane M.	3896	Not surprised	938	281	657	0.496	0.803	0.300	0.904	0.758
		Surprised	2958	285	2673	(0.455 – 0.538)	(0.789 – 0.816)	(0.278 – 0.323)	(0.896 – 0.911)	(0.744 – 0.772)
Pang W.-F.	367	Not surprised	109	27	82	0.614	0.746	0.248	0.934	0.730
		Surprised	258	17	241	(0.455 – 0.756)	(0.695 – 0.793)	(0.196 – 0.308)	(0.907 – 0.9540)	(0.682 – 0.775)
Haga K.	138	Not surprised	120	39	81	0.886	0.138	0.325	0.722	0.377
		Surprised	18	5	13	(0.754 – 0.962)	(0.076 – 0.225)	(0.297 – 0.355)	(0.497 – 0.873)	(0.296 – 0.463)
Fenning S.	172	Not surprised	38	6	32	0.353	0.794	0.158	0.918	0.750
		Surprised	134	11	123	(0.142 – 0.617)	(0.721 – 0.854)	(0.084 – 0.277)	(0.886 – 0.941)	(0.678 – 0.813)
Moss A.H.	826	Not surprised	131	53	78	0.747	0.897	0.405	0.974	0.884
		Surprised	695	18	677	(0.629 – 0.842)	(0.873 – 0.918)	(0.346 – 0.466)	(0.962 – 0.983)	(0.860 – 0.905)
Cohen L.M.	450	Not surprised	71	39	32	0.379	0.908	0.549	0.831	0.787
		Surprised	379	64	315	(0.285 – 0.480)	(0.872 – 0.936)	(0.447 – 0.648)	(0.808 – 0.852)	(0.746 – 0.824)
Moss A.H.	147	Not surprised	34	10	24	0.455	0.808	0.294	0.894	0.755
		Surprised	113	12	101	(0.244 – 0.678)	(0.728 – 0.873)	(0.189 – 0.427)	(0.851 – 0.926)	(0.677 – 0.822)
Ros M.M.	3140 (ICU stay)	Not surprised	153	98	55	0.363	0.981	0.641	0.942	0.928
		Surprised	2987	172	2815	(0.306 – 0.423)	(0.975 – 0.986)	(0.568 – 0.708)	(0.937 – 0.947)	(0.918 – 0.937)
	3140 (Hospital stay)	Not surprised	252	148	104	0.378	0.962	0.587	0.916	0.889
		Surprised	2888	244	2644	(0.329 – 0.428)	(0.954 – 0.969)	(0.531 – 0.641)	(0.909 – 0.921)	(0.878 – 0.900)
3140 (365 days)	Not surprised	609	363	246	0.509	0.899	0.596	0.862	0.810	
	Surprised	2531	350	2181	(0.471 – 0.546)	(0.886 – 0.910)	(0.562 – 0.629)	(0.852 – 0.871)	(0.796 – 0.824)	
Gulini J.E.H.M.B	170	Not surprised	89	41	48	0.820	0.600	0.461	0.889	0.665
		Surprised	81	9	72	(0.686 – 0.914)	(0.507 – 0.688)	(0.398 – 0.524)	(0.813 – 0.936)	(0.588 – 0.7350)
Haydar S.A.	6122	Not surprised	918	107	811	0.682	0.864	0.117	0.990	0.859
		Surprised	5204	50	5154	(0.603 – 0.754)	(0.855 – 0.873)	(0.104 – 0.130)	(0.988 – 0.992)	(0.850 – 0.868)
Carmen J.	49	Not surprised	20	7	13	0.778	0.675	0.350	0.931	0.694
		Surprised	29	2	27	(0.400 – 0.972)	(0.509 – 0.814)	(0.234 – 0.487)	(0.796 – 0.979)	(0.546 – 0.818)
Barnes S.	231	Not surprised	95	11	84	0.786	0.613	0.116	0.978	0.623
		Surprised	136	3	133	(0.492 – 0.953)	(0.545 – 0.678)	(0.087 – 0.153)	(0.942 – 0.992)	(0.558 – 0.686)
Straw S.	114 (Consultants)	Not surprised	64	33	31	0.846	0.587	0.516	0.880	0.675
		Surprised	50	6	44	(0.695 – 0.941)	(0.467 – 0.699)	(0.441 – 0.590)	(0.774 – 0.940)	(0.581 – 0.760)
	128 (Junior Doctors)	Not surprised	65	33	32	0.750	0.619	0.508	0.825	0.664
		Surprised	63	11	52	(0.597 – 0.868)	(0.507 – 0.723)	(0.428 – 0.587)	(0.734 – 0.890)	(0.575 – 0.745)
	89 (Heart Failure Nurses)	Not surprised	60	27	33	0.900	0.441	0.450	0.897	0.596
		Surprised	29	3	26	(0.735 – 0.979)	(0.312 – 0.576)	(0.388 – 0.514)	(0.740 – 0.963)	(0.496 – 0.698)
	123 (Staff Nurses)	Not surprised	50	29	21	0.659	0.734	0.580	0.795	0.707
		Surprised	73	15	58	(0.501 – 0.795)	(0.623 – 0.827)	(0.475 – 0.678)	(0.715 – 0.856)	(0.619 – 0.786)
	119 (2 or more)	Not surprised	62	26	36	0.818	0.577	0.500	0.860	0.659

	129 (3 or more)	Surprised	57	8	49	(0.673 – 0.918)	(0.465 – 0.683)	(0.429 – 0.571)	(0.761 – 0.922)	(0.570 – 0.740)
		Not surprised	54	31	23	0.705	0.729	0.574	0.827	0.721
	129 (4 'no's')	Surprised	75	13	62	(0.548 – 0.832)	(0.622 – 0.820)	(0.475 – 0.667)	(0.748 – 0.885)	(0.635 – 0.796)
		Not surprised	18	14	4	0.318	0.953	0.778	0.730	0.736
	129 (all 'no')	Surprised	111	30	81	(0.186 – 0.476)	(0.884 – 0.987)	(0.551 – 0.909)	(0.687 – 0.769)	(0.652 – 0.810)
		Not surprised	35	23	12	0.523	0.859	0.657	0.777	0.744
	32 (Diabetes)	Surprised	94	21	73	(0.367 – 0.675)	(0.766 – 0.925)	(0.514 – 0.777)	(0.716 – 0.827)	(0.660 – 0.817)
		Not surprised	20	9	11	0.900	0.500	0.450	0.917	0.625
	82 (no diabetes)	Surprised	12	1	11	(0.555 – 0.998)	(0.282 – 0.718)	(0.339 – 0.566)	(0.621 – 0.987)	(0.437 – 0.789)
		Not surprised	44	24	20	0.828	0.623	0.546	0.868	0.695
	35 (IHD)	Surprised	38	5	33	(0.642 – 0.942)	(0.479 – 0.752)	(0.450 – 0.638)	(0.743 – 0.938)	(0.584 – 0.792)
		Not surprised	20	14	6	0.824	0.667	0.700	0.800	0.743
	79 (no IHD)	Surprised	15	3	12	(0.566 – 0.962)	(0.450 – 0.867)	(0.539 – 0.823)	(0.577 – 0.922)	(0.567 – 0.875)
		Not surprised	44	19	25	0.864	0.562	0.432	0.914	0.646
	18 (eGFR < 30)	Surprised	35	3	32	(0.651 – 0.971)	(0.424 – 0.693)	(0.352 – 0.516)	(0.784 – 0.969)	(0.530 – 0.750)
		Not surprised	17	10	7	0.909	0.000	0.588	0.000	0.556
96 (eGFR > 30)	Surprised	1	1	0	(0.587 – 0.998)	(0.000 – 0.410)	(0.542 – 0.633)	0.000	(0.308 – 0.785)	
	Not surprised	47	23	24	0.821	0.647	0.489	0.898	0.698	
Mahes A.	301	Surprised	49	5	44	(0.631 – 0.939)	(0.522 – 0.759)	(0.399 – 0.580)	(0.796 – 0.952)	(0.596 – 0.788)
		Not surprised	136	25	111	0.807	0.589	0.184	0.964	0.611
Lin C.A.	840	Surprised	165	6	159	(0.625 – 0.926)	(0.528 – 0.648)	(0.152 – 0.220)	(0.928 – 0.982)	(0.554 – 0.667)
		Not surprised	214	32	182	0.615	0.768	0.149	0.968	0.759
Um Y.W.	300	Surprised	626	20	606	(0.483 – 0.748)	(0.739 – 0.798)	(0.101 – 0.196)	(0.954 – 0.982)	(0.730 – 0.788)
		Not surprised	118	25	93	0.833	0.662	0.212	0.973	0.679
Gaffney L.	191	Surprised	182	5	177	(0.653 – 0.944)	(0.603 – 0.718)	(0.176 – 0.253)	(0.942 – 0.988)	(0.623 – 0.731)
		Not surprised	56	20	36	0.571	0.769	0.357	0.889	0.733
		Surprised	135	15	120	(0.394 – 0.737)	(0.695 – 0.833)	(0.270 – 0.455)	(0.844 – 0.922)	(0.664 – 0.794)

Sensitivity (the ability of the prompt to successfully identify those patients who were dying); specificity (the ability of the prompt to successfully identify those who were not dying); positive predictive value (the proportion of patients who died when the respondent predicted death); negative predictive value (the proportion of the patients who survived when the respondent predicted survival); accuracy (the proportion of correct predictions amongst all cases).

Table 4: Newcastle-Ottawa scale for included studies.

First author	Representativeness of exposed cohort	Selection of non-exposed cohort	Ascertainment of exposure	Outcome of interest accounted for	Age/gender	Other factors	Ascertainment of outcomes	Length of follow-up	Adequacy of follow-up	Quality of study
Rice J.	*	*	*	*	*		*	*	*	Good
Ikari T.	*	*	*	*	*	*		*	*	Good
Dogbey D.M.	*	*	*	*	*	*	*	*	*	Good
Moor C.C.	*	*	*	*	*	*	*	*	*	Good
Gonzalez-Jaramillo V.	*	*	*	*	*	*	*	*	*	Good
Tripp D.	*	*	*	*	*	*	*	*	*	Good
Flierman I.	*	*	*	*			*	*	*	Poor
Kim S.H.		*	*	*		*		*	*	Good
Ouchi K.	*	*	*	*	*	*	*	*		Good
Ermers D.J.M.	*	*	*	*			*	*	*	Poor
Yarnell C.	*	*	*	*	*	*	*	*	*	Good
Van Wijmen M.P.S.	*	*	*	*	*	*	*	*	*	Good
Ramer S.J.	*	*	*	*	*	*	*	*	*	Good
Lai C.-F.		*	*	*	*	*			*	Poor
Rauh L.A.	*	*	*	*	*	*	*	*	*	Good
Verhoef M.J.	*	*	*	*			*	*	*	Poor
Maes H.	*	*	*	*	*	*	*	*	*	Good
Yen Y.-F.	*	*	*	*	*	*	*		*	Good
Aaronson E.L.	*	*	*	*		*	*		*	Good
Schmidt R.J.	*	*	*	*	*	*	*	*	*	Good
Lakin J.R.	*	*	*	*	*	*	*	*	*	Good

Veldhoven C.M.M.	*	*	*	*			*		*	Poor
Burke K.	*	*	*	*	*	*	*		*	Good
Ouchi K.	*	*	*	*			*	*	*	Poor
Liyanage T.	*	*	*	*			*	*	*	Poor
Mitchell G.K.	*	*	*	*			*		*	Poor
Ebke M.	*	*	*	*	*	*		*	*	Good
Mudge A.M.	*	*	*	*			*	*	*	Poor
Salat H.	*	*	*	*	*	*	*	*	*	Good
Malhotra R.	*	*	*	*				*	*	Poor
Hadique S.	*	*	*	*	*	*	*	*	*	Good
Gomez-Batiste X.	*	*	*	*	*	*	*	*	*	Good
Javier A.D.	*	*	*	*	*	*	*	*	*	Good
Amro O.W.	*	*	*	*	*	*	*	*	*	Good
Lakin J.R.	*	*	*	*	*	*	*		*	Good
Hamano J.		*	*	*	*	*		*	*	Good
Feyi K.	*	*	*	*	*	*		*	*	Good
Moroni M.	*	*	*	*	*	*	*	*	*	Good
O'Callaghan A.	*	*	*	*	*	*	*	*	*	Good
Da Silva Gane M.	*	*	*	*	*	*	*	*	*	Good
Pang W.-F.	*	*	*	*			*	*	*	Poor
Haga K.	*	*	*	*			*	*	*	Poor
Fenning S.	*	*	*	*	*	*	*	*	*	Good
Moss A.H.	*	*	*	*	*	*	*	*	*	Good
Cohen L.M.	*	*	*	*	*	*		*	*	Good

Moss A.H.	*	*	*	*	*	*		*	*	Good
Ros M.M.	*	*	*	*	*	*	*	*	*	Good
Gulini J.E.H.M.B.	*	*	*	*	*	*	*	*	*	Good
Haydar S.A.	*	*	*	*	*	*	*			Poor
Carmen J.	*	*	*	*				*	*	Poor
Barnes S.	*	*	*	*	*	*	*			Poor
Straw S.	*	*	*	*	*	*	*	*	*	Good
Mahes A.	*	*	*	*	*	*	*	*	*	Good
Lin C.A.	*	*	*	*	*	*	*	*	*	Good
Um Y.W.	*	*		*	*	*	*	*	*	Good
Gaffney L.	*	*	*	*	*	*	*	*	*	Good
* denotes a study having met a particular quality item, scoring one point. The maximum points a study can score is nine, and the minimum is zero.										

