

Nr	Author/year	Group	Biomarker	urinary BM: adjusted (+)/unadjusted (-)	time point	BRT within	Patients n	RRT n	Cut-off	Result							sensitivity		specificity		PPV		NPV					
											% CI	CI lower	CI upper	p	SE	CI lower	CI upper	CI lower	CI upper	CI lower	CI upper	CI lower	CI upper					
1	Siew et al. 2013	ICU	u NGAL	to u Cr	of sample collection																							
1	Siew et al. 2013	ICU	u L-FABP	+	enrolm + 48 h (not specified which is used)	28d	127	372		HR	3.44		1.73	6.83	0.004													
1	Tiranathangul et al. 2010	ICU	u IL-18	-	enrolm	28d	391	86		OR	1.05		0.56	1.98	0.872													
3	Pickering et al. 2012	ICU	CCL		ICU entry	?	484	not stated		AUC	0.75	95	0.59	0.91	0.018	na												
3	Pickering et al. 2012	ICU	p Cr		ICU entry	?	484	not stated		AUC	0.72	95	0.56	0.89	na													
3	Pickering et al. 2012	ICU	UO		ICU entry	?	484	not stated		AUC	0.5	95	0.41	0.75	na													
4	Koyner et al. 2015	ICU	u NGAL	-	before FST	24d	77	11	150 ng/ml	AUC± SEM	0.93	na		<0.001	0.06													
4	Koyner et al. 2015	ICU	u TIMP-2 x IGFBP-7	-	before FST	24d	77	11>0.3		AUC± SEM	0.91	na		0.009	0.08													
4	Koyner et al. 2015	ICU	u IGFBP-7 x FST	-	before FST	24d	77	11		AUC± SEM	0.9	na		0.29	0													
4	Koyner et al. 2015	ICU	Uromodulin + FST	-	before FST	24d	77	11		AUC± SEM	0.89	na		0.65	0.06													
4	Koyner et al. 2015	ICU	u IGFBP7 x TIMP-2 + FST	-	before FST	24d	77	11		AUC± SEM	0.89	na		0.23	0.07													
4	Koyner et al. 2015	ICU	u NGAL + FST	-	before FST	24d	77	11		AUC± SEM	0.88	na		0.35	0.06													
4	Koyner et al. 2015	ICU	FST (2-hr UOP)		before FST	24d	77	11		AUC± SEM	0.86	na		0.0001	0.08													
4	Koyner et al. 2015	ICU	u ACK + FST	-	before FST	24d	77	11		AUC± SEM	0.86	na		0.51	0.08													
4	Koyner et al. 2015	ICU	u IL-18 + FST	-	before FST	24d	77	11		AUC± SEM	0.85	na		0.7	0.09													
4	Koyner et al. 2015	ICU	u KIM-1 + FST	-	before FST	24d	77	11		AUC± SEM	0.85	na		0.77	0.9													
4	Koyner et al. 2015	ICU	FeNa + FST		before FST	24d	77	11		AUC± SEM	0.85	na		0.27	0.09													
4	Koyner et al. 2015	ICU	u Cr + FST	-	before FST	24d	77	11		AUC± SEM	0.84	na		0.9	0.09													
4	Koyner et al. 2015	ICU	u TIMP-2 + FST	-	before FST	24d	77	11		AUC± SEM	0.83	na		0.57	0.09													
4	Koyner et al. 2015	ICU	u NGAL + FST	-	before FST	24d	77	11		AUC± SEM	0.8	na		0.92	0.13													
4	Koyner et al. 2015	ICU	u ACR	-	before FST	24d	77	11		AUC± SEM	0.67	na		0.13	0.09													
4	Koyner et al. 2015	ICU	u Cr	-	before FST	24d	77	11		AUC± SEM	0.64	na		0.19	0.11													
4	Koyner et al. 2015	ICU	FeNa		before FST	24d	77	11		AUC± SEM	0.64	na		0.18	0.09													
4	Koyner et al. 2015	ICU	u TIMP-2	-	before FST	24d	77	11		AUC± SEM	0.62	na		0.33	0.12													
4	Koyner et al. 2015	ICU	u IL-18	-	before FST	24d	77	11		AUC± SEM	0.61	na		0.26	0.07													
4	Koyner et al. 2015	ICU	u KIM-1	-	before FST	24d	77	11		AUC± SEM	0.61	na		0.27	0.1													
4	Koyner et al. 2015	ICU	u TIMP-2 x IGFBP-7	-	before FST	24d	77	11		AUC± SEM	0.57	na		0.61	0.12													
4	Koyner et al. 2015	ICU	Uromodulin		before FST	24d	77	11		AUC± SEM	0.55	na		0.6	0.11													
4	Koyner et al. 2015	ICU	p NGAL		before FST	24d	77	11		AUC± SEM	0.52	na		0.88	0.13													
4	Koyner et al. 2015	ICU	u NGAL	-	before FST	24d	77	11		AUC± SEM	0.5	na		0.96	0.08													
5	Endre et al. 2011	ICU	u NGAL/uCr	+	ICU entry	7d	528			ROC-AUC	0.79	95	0.65	0.94<0.0001	na	0.64	0.39	0.89	0.76	0.72	0.8	0.07	0.003	0.12	0.99	0.97	1	
5	Endre et al. 2011	ICU	u IL-18/uCr	+	ICU entry	7d	528			ROC-AUC	0.73	95	0.59	0.86	0.001	na	0.67	0.45	0.88	0.76	0.73	0.8	0.09	0.04	0.14	0.98	0.97	1
5	Endre et al. 2011	ICU	u CysC/uCr	+	ICU entry	7d	528			ROC-AUC	0.71	95	0.57	0.84	0.003	na	0.56	0.33	0.79	0.76	0.72	0.8	0.08	0.03	0.12	0.98	0.97	0.99
5	Endre et al. 2011	ICU	u AP/uCr	+	ICU entry	7d	528			ROC-AUC	0.63	95	0.49	0.77	0.08	na	0.61	0.39	0.84	0.76	0.73	0.8	0.08	0.04	0.13	0.98	0.97	1
5	Endre et al. 2011	ICU	u KIM-1/uCr	+	ICU entry	7d	528			ROC-AUC	0.62	95	0.48	0.76	0.1	na	0.44	0.21	0.67	0.76	0.72	0.79	0.06	0.02	0.1	0.97	0.96	0.99
5	Endre et al. 2011	ICU	u GGT/uCr	+	ICU entry	7d	528	19		ROC-AUC	0.6	95	0.46	0.74	0.15	na	0.26	0.07	0.48	0.75	0.71	0.79	0.04	0.02	0.07	0.97	0.95	0.98
6	Linko et al. 2013	ICU	p NGAL	baseline	?	369	47	304 ng/ml	AUC	0.733	95	0.655	0.81	na	68	55	81	74	69	79							positive likelihood ratio (95%CI): 2.64 (2.02-3.46)	
7	Cruz et al. 2009	ICU	p NGAL		during ICU stay	301	15			AuROC	0.82	95	0.7	0.95	na	0.87	0.6	0.98	0.65	0.6	0.71	0.12	0.06	0.19	0.99	0.96	1	
8	Constantin et al. 2010	ICU	p NGAL		during ICU stay	88	7	303 ng/ml	ROC	0.788	95	0.687	0.868	0.002	na	90			72									
9	Tiranathangul et al. 2013	ICU	p NGAL		enrolm	3d	47	18	960 ng/ml	AuROC	0.813	95	0.66	0.9<0.001	na	72.2			89.6			81.25			83.8			
9	Tiranathangul et al. 2013	ICU	u NGAL	-	enrolm	3d	47	18	2600 ng/ml	AuROC	0.806	95	0.63	0.98	0.005	na	54.5			90.9			75			80		
9	Tiranathangul et al. 2013	ICU	s Cr		enrolm	3d	47	18	2.35 mg/dl	AuROC	0.708	95	0.552	0.864	0.018	na	61.1			69			55			74.1		
10	Nisula et al. 2015	ICU	u NGAL adm	-	admission	3d	1439	96		AUC	0.827	95	0.765	0.889	na													
10	Nisula et al. 2015	ICU	u IL-18 (max in 24h) (non-septic pts n=749, RRT (n=16))	-	admission/24h MAX	3d	1439	96	65 pg/ml	AUC	0.78	95	0.668	0.893	na	0.688			0.806								LR+ N/A	
10	Nisula et al. 2015	ICU	u IL-18*NGAL adm	-	admission	3d	1439	96		AUC	0.761	95	0.708	0.826	na													
10	Nisula et al. 2015	ICU	u IL-18 (max in 24h) (all study pts n=1439, RRT n=49)	-	admission/24h MAX	3d	1439	96	65 pg/ml	AUC	0.655	95	0.572	0.739	na	0.551			0.739								LR+ 2.04(1.54-2.69)	
10	Nisula et al. 2015	ICU	u IL-18 (max in 24h) (known baseline Cr, n=917, RRT n=32)	-	admission/24h MAX	3d	1439	96	54 pg/ml	AUC	0.643	95	0.539	0.748	na	0.563			0.698								LR+ 1.86 (1.35-2.57)	
10	Nisula et al. 2015	ICU	u IL-18 adm.	-	admission	3d	1439	96		AUC	0.598	95	0.498	0.697	na													
11	Nejat et al. 2010	ICU	p CysC		admission	30d	444	14		AUC	0.84	95	0.69	0.99	na													
11	Nejat et al. 2010	ICU	p Cr		admission	30d	444	14		AUC	0.77	95	0.59	0.94	na													
12	Rovakkers et al. 2011	ICU	s CysC		Day 0 (1, day of AKI)	?	151	14		AUC	0.66	na			na													
12	Rovakkers et al. 2011	ICU	u CysC	-	Day 0 (1, day of AKI)	?	151	14		AUC	0.61	na			na													
12	Rovakkers et al. 2011	ICU	uCysC (corr)	*	Day 0 (1, day of AKI)	?	151	14		AUC	0.6	na			na											LR+ 1.79 (1.35-2.37)		
13	Jalkanen et al. 2013	ICU	s supPAR (baseline, all patients)		baseline	all patients	7	454	not stated	13 ng/ml	AUC	0.78	95	0.7	0.87	na										LR+ 1.15 (1.00-1.33)		
13	Jalkanen et al. 2013	ICU	s supPAR (baseline, all patients)		baseline	all patients	7	454	not stated	13 ng/ml	AUC	0.73	95	0.64	0.83	na												
13	Jalkanen et al. 2013	ICU	s supPAR (day 2, non-operative cohort)		day 2 non-operative	?	454</td																					

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											% CI	CI lower	CI upper	p	SE	CI lower	CI upper	CI lower	CI upper	CI lower	CI upper	CI lower	CI upper	CI lower	CI upper	CI lower	CI upper			
15	Herget-Rosenthal et al. 2004	ICU	s CysC (increase ≥50%) Rday -0	-	ARF Risk fulfilled day 0	7	85	17	AUC	0.76	95	0.69	0.85	na	82	59	94	93	84	97	78	55	91	95	86	98				
15	Herget-Rosenthal et al. 2004	ICU	s CysC (increase ≥50%) Rday -1	-	ARF Risk fulfilled day -1	7	85	17	AUC	0.75	95	0.62	0.85	na	76	53	90	93	84	93	76	53	90	93	84	97				
15	Herget-Rosenthal et al. 2004	ICU	s CysC (increase ≥50%) Rday -2	-	ARF Risk fulfilled day -2	7	85	17	AUC	0.69	95	0.51	0.84	na	53	31	74	82	70	89	45	26	66	86	75	93				
16	Koziolek et al. 2012	ICU	combination (log reg model incl urine albumin, p crea, BUN, daily UO, fluid balance, p sodium) comb w/o daily UO	-	admission	7	120	52	0.53±0.0004	AUC %	0.89	95	0.83	0.95	na	73			83											
16	Koziolek et al. 2012	ICU	u Na/crea	-	admission	7	120	52	0.48±0.0002	AUC %	0.88	95	0.82	0.94	na	77			82											
16	Koziolek et al. 2012	ICU	s CysC	-	admission	7	120	52	2.4±0.0004	mg/ml	AUC %	0.74	na			na	71			74										
16	Koziolek et al. 2012	ICU	daily urine output	-	admission	7	120	52	1689.7±20.3	AUC %	0.73	95	0.64	0.84	na	78			70											
16	Koziolek et al. 2012	ICU	u albumin	-	admission	7	120	52	63.2±0.7	mg/ml	AUC %	0.73	na			na	61			62										
16	Koziolek et al. 2012	ICU	p Cr	-	admission	7	120	52	2.8±0.01	mg/dl	AUC %	0.7	na			na	42			78										
16	Koziolek et al. 2012	ICU	BUN	-	admission	7	120	52	23.1±0.08	mg/dl	AUC %	0.7	95	0.6	0.79	na	42			81										
16	Koziolek et al. 2012	ICU	Fluid balance	-	admission	7	120	52	2.5±0.007	mmol/mg	AUC %	0.7	95	0.6	0.81	na	78			51										
16	Koziolek et al. 2012	ICU	p Na	-	admission	7	120	52	1218.1±1.2	AUC %	0.64	95	0.51	0.77	na	71			50											
16	Koziolek et al. 2012	ICU	u Potassium/crea	-	admission	7	120	52	141.9±0.05	mmol/l	AUC %	0.63	na			na	40			58										
16	Koziolek et al. 2012	ICU	u protein/crea	-	admission	7	120	52	17.3±0.004	mg/mg	AUC %	0.6	na			na	56			65										
17	Pickering et al. 2013	ICU	p NGAL (no AKI on entry cohort (n=276, RRT n=6)	-	ICU entry	30d	528	197		AUC	0.92	95	0.76	1	na												structural AKI uNGAL >18.7ng/ml			
17	Pickering et al. 2013	ICU	p NGAL (not functional-AKI on entry cohort (n=373, RRT n=12)	-	ICU entry	30d	528	197		AUC	0.84	95	0.7	0.98	na															
17	Pickering et al. 2013	ICU	p NGAL (not structural-AKI on entry cohort (n=349, RRT n=8)	-	ICU entry	30d	528	197		AUC	0.84	95	0.66	1	na												functional AKI increase in p CreA either >0.3mg/dl or >50%			
17	Pickering et al. 2013	ICU	p NGAL	-	ICU entry	30d	528	197		AUC	0.79	95	0.66	0.91	na															
18	Pipili et al. 2014	ICU	u NGAL + s CysC	-	admission		106	50		AUC	0.8	na			na															
18	Pipili et al. 2014	ICU	s Cr	-	admission		106	50	≥ 1.74	mg/dl	AUC	0.785	na			na				0.84			0.96							
18	Pipili et al. 2014	ICU	s CysC (multivariable Cox regr. analysis)	-	admission		106	50	≥ 1.4	mg/l	HR	3	na	1.3	6.9	0.01	na													
18	Pipili et al. 2014	ICU	APACHE II (multivariable Cox regr. analysis)	-	admission		106	50	≥ 15		HR	5.5	na	1.3	226	0.02	na													
18	Pipili et al. 2014	ICU	s CysC	-	admission		106	50	≥ 1.4	mg/l	AUC	0.764	na			na				0.69			0.88							
18	Pipili et al. 2014	ICU	normalized u NGAL	*	admission		106	50	≥ 10.3	ng/ml	AUC	0.737	na			na				0.71			0.9							
18	Pipili et al. 2014	ICU	APACHE II	-	admission		106	50	≥ 15		AUC	0.728	na			na				0.52			0.62							
18	Pipili et al. 2014	ICU	u NGAL	-	admission		106	50	≥ 106.7	ng/ml	AUC	0.727	na			na				0.66			0.86							
19	Ralib et al. 2012	ICU	u CysC normalized (U/mmol Cr)	*	admission	7d	480	12		AUC	0.88	95	0.75	1	na															
19	Ralib et al. 2012	ICU	u CysC concentration (U/L)	-	admission	7d	480	12		AUC	0.86	95	0.72	0.99	na															
19	Ralib et al. 2012	ICU	u CysC ER	-	admission	7d	480	12		AUC	0.85	95	0.71	0.99	na															
19	Ralib et al. 2012	ICU	u NGAL normalized (U/mmol Cr)	*	admission	7d	449	10		AUC	0.84	95	0.68	0.99	na															
19	Ralib et al. 2012	ICU	u NGAL concentration (U/L)	-	admission	7d	449	10		AUC	0.82	95	0.65	0.98	na															
19	Ralib et al. 2012	ICU	u IL-18 ER	-	admission	7d	481	12		AUC	0.81	95	0.65	0.96	na															
19	Ralib et al. 2012	ICU	u NGAL ER	-	admission	7d	449	10		AUC	0.8	95	0.63	0.96	na															
19	Ralib et al. 2012	ICU	u IL-18 normalized (U/mmol Cr)	*	admission	7d	481	12		AUC	0.8	95	0.65	0.95	na															
19	Ralib et al. 2012	ICU	u IL-18 concentration (U/L)	-	admission	7d	481	12		AUC	0.8	95	0.65	0.95	na															
19	Ralib et al. 2012	ICU	u KIM-1 normalized (U/mmol Cr)	*	admission	7d	481	12		AUC	0.69	95	0.52	0.86	na															
19	Ralib et al. 2012	ICU	u KIM-1 concentration (U/L)	-	admission	7d	481	12		AUC	0.65	95	0.47	0.82	na															
19	Ralib et al. 2012	ICU	u KIM-1 ER	-	admission	7d	481	12		AUC	0.61	95	0.44	0.78	na															
19	Ralib et al. 2012	ICU	u AP normalized (U/mmol Cr)	*	admission	7d	484	12		AUC	0.6	95	0.42	0.77	na															
19	Ralib et al. 2012	ICU	u GGT normalized (U/mmol Cr)	*	admission	7d	484	12		AUC	0.55	95	0.38	0.72	na															
19	Ralib et al. 2012	ICU	u AP concentration (U/L)	-	admission	7d	484	12		AUC	0.5	95	0.33	0.67	na															
19	Ralib et al. 2012	ICU	u AP ER	-	admission	7d	484	12		AUC	0.49	95	0.33	0.66	na															
19	Ralib et al. 2012	ICU	u GGT concentration (U/L)	-	admission	7d	484	12		AUC	0.49	95	0.32	0.63	na															
19	Ralib et al. 2012	ICU	u GGT ER	-	admission	7d	484	12		AUC	0.44	95	0.28	0.59	na															
20	Endre et al. 2010	ICU	u GGT x u AP (6-12 hours of insult and not AKI on admission)	*	6-12h after insult & w/o AKI on adm	7d	486	?		AUC	0.75	95	0.52	0.98	na															
20	Endre et al. 2010	ICU	u GGT x u AP (not AKI on admission)	*	admission (w/o AKI)	7d	486	?		AUC	0.69	95	0.53	0.86	na															
20	Endre et al. 2010	ICU	u GGT x u AP (all patients)	*	admission	7d	486	?		AUC	0.62	95	0.48	0.76	na															
21	Hjortrup et al. 2015	Sepsis	p Cr + p NGAL	-	during ICU stay	222	40			AuROC	0.76	95	0.69	0.83	0.84	na														
21	Hjortrup et al. 2015	Sepsis	p Cr	-	during ICU stay	222	40	166	μmol/l	AuROC	0.74	95	0.67	0.82	na	0.63		0.75		0.36		0.9								
21	Hjortrup et al. 2015	Sepsis	p Cr + u NGAL	-	during ICU stay	222	40			AuROC	0.73	95	0.62	0.83	0.7	na														
21	Hjortrup et al. 2015	Sepsis	p NGAL	-	during ICU stay	222	40	641	ng/ml	AuROC	0.7	95	0.61	0.78	na	0.69		0.64		0.3		0.9								
21	Hjortrup et al. 2015	Sepsis	u NGAL	-	during ICU stay	222	40	1832	ng/ml	AuROC	0.62	95	0.51	0.73	na	0.46		0.77		0.28		0.88								
22	Renhua et al. 2014	hospitalized	s Cr peak	-	peak	7	103	48		AUC	0.781	95	0.677	0.885	<0.001	na														
22	Renhua et al. 2014	hospitalized	u NGAL	-	after AKI diagnosis (consultation)	103	48			AUC	0.775	95	0.68	0.869	<0.001															

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											% CI	CI lower	CI upper	p	SE	CI lower	CI upper	CI lower	CI upper	CI lower	CI upper	CI lower	CI upper			
22	Renhua et al. 2014	hospitalized	u IL-18	-	after AKI diagnosis (consultation)	median t consul->rt 2.17 (0,3)d	103	48		AUC	0.6	95	0.494	0.712	0.072	na										
22	Renhua et al. 2014	hospitalized	u NAG	-	after AKI diagnosis (consultation)	median t consul->rt 2.17 (0,3)d	103	48		AUC	0.599	95	0.489	0.71	0.083	na										
22	Renhua et al. 2014	hospitalized	s Cr baseline	-	baseline	7	103	48		AUC	0.492	95	0.365	0.62	0.906	na										
23	Maisel et al. 2016	hospitalized	p NGAL combined p? Cr	-	enrollment	5d	927	11		AUC	0.914	95	0.827	1	na											
23	Maisel et al. 2016	hospitalized	p NGAL first	-	enrollment	5d	927	11		AUC	0.902	95	0.827	0.976	na											
23	Maisel et al. 2016	hospitalized	p NGAL peak	-	peak	5d	927	11		AUC	0.884	95	0.796	0.961	na											
23	Maisel et al. 2016	hospitalized	p? Cr	-	enrollment	5d	927	11		AUC	0.875	95	0.754	0.998	na											
24	Park et al. 2013	hospitalized	u CysC / u Cr ratio	+	admission	7	213	35	0.019 mg/g	AUC	0.75	95	0.68	0.82	na	71.8		64.3								
25	Cemil et al. 2014	hospitalized	s NGAL	-	admission	7	60	30	615 ng/ml	AUC	0.84	95	0.74	0.94 <0.001	na	82		80								
26	Rewa et al. 2015	hospitalized	wb NGAL	-	w/i 48h of admission	30d	227	24		OR (per 100ng/ml)	2.16	95	1.07	4.37	na											
27	Shum et al. 2015	(major) surgery	p NGAL (0h)	-	admission	?	151	7		AuROC	0.88	95	0.771	0.989	0.059											
27	Shum et al. 2015	(major) surgery	p NGAL (6h)	-	admission +6h	?	151	7		AuROC	0.837	95	0.678	0.997	0.088											
27	Rewa et al. 2015	hospitalized	wb NGAL	-	w/i 48h of admission	30d	227	24		AUC	0.68	na			na											
28	Gozce et al. 2015	(major) surgery	u TIMP-2 x IGFBP-7	-	admission	48h	107	10	430	AUC	0.832	95	0.746	0.919	na									RRT in 30d		
29	Sumida et al. 2014	cardiac surgery	s NGAL (1 post-OP day -POD)	-	1 post-OP day	?	31	6	215 ng/ml	AUC-ROC	0.85	95	0.65	0.95 <0.05	na	100		72								
29	Sumida et al. 2014	cardiac surgery	s Cr (pre)	-	pre OP	?	31	6	1.78 mg/dl	AUC-ROC	0.81	95	0.55	0.94 <0.05	na	83		84								
29	Sumida et al. 2014	cardiac surgery	s Cr (0h)	-	incident (OP)	?	31	6	1.43 mg/dl	AUC-ROC	0.79	95	0.5	0.93 <0.05	na	83		76								
29	Sumida et al. 2014	cardiac surgery	s Cr (1 POD)	-	1 post-OP day	?	31	6	1.58 mg/dl	AUC-ROC	0.79	95	0.49	0.93	na	83		76								
29	Sumida et al. 2014	cardiac surgery	s NGAL (0h)	-	incident (OP)	?	31	6	186 ng/ml	AUC-ROC	0.74	95	0.51	0.88 <0.05	na	83		68								
29	Sumida et al. 2014	cardiac surgery	p NGAL (pre OP)	-	pre OP	?	31	6	65 ng/ml	AUC-ROC	0.67	95	0.44	0.84	na	100		44								
30	Kiessling et al. 2014	cardiac surgery	s Cr postop day 4	-	4, POD	?	70	?		AUC	0.928	95	0.816	1	na											
30	Kiessling et al. 2014	cardiac surgery	s Cr postop day 2	-	2, POD	?	70	?		AUC	0.904	95	0.797	1	na											
30	Kiessling et al. 2014	cardiac surgery	s Cr postop day 3	-	3, POD	?	70	?		AUC	0.904	95	0.784	1	na											
30	Kiessling et al. 2014	cardiac surgery	s CysC T6 discharge (max. day 6)	-	discharge	?	70	?		AUC	0.899	95	0.77	1	na											
30	Kiessling et al. 2014	cardiac surgery	s Cr postop day 1	-	1, POD	?	70	?		AUC	0.876	95	0.72	1	na											
30	Kiessling et al. 2014	cardiac surgery	s CysC T5 24 h postop	-	24h postop	?	70	?		AUC	0.849	95	0.73	0.96	na											
30	Kiessling et al. 2014	cardiac surgery	s CysC T4 OP-end	-	OP end	?	70	?		AUC	0.733	95	0.58	0.88	na											
30	Kiessling et al. 2014	cardiac surgery	s CysC T2 start CPB	-	start CPB	?	70	?		AUC	0.671	95	0.5	0.84	na											
30	Kiessling et al. 2014	cardiac surgery	s CysC T1 preoperative	-	preoperative	?	70	?		AUC	0.659	95	0.47	0.84	na											
30	Kiessling et al. 2014	cardiac surgery	s CysC T3 20 min after CPB start	-	20 min after CPB start	?	70	?		AUC	0.65	95	0.45	0.84	na											
31	Garcia-Alvarez et al. 2015	cardiac surgery	u NGAL (2 post-op day)	+	2, POD	?	288	22		AuROC	0.77	95	0.68	0.86	na											
31	Garcia-Alvarez et al. 2015	cardiac surgery	u NGAL (1 post-op day)	+	1, POD	?	288	22		AuROC	0.72	95	0.62	0.81	na											
31	Garcia-Alvarez et al. 2015	cardiac surgery	u NGAL (baseline - 1. postop day)	-	ICU admission - 1. POD	?	288	22		AuROC	0.7	95	0.61	0.8	na											
31	Garcia-Alvarez et al. 2015	cardiac surgery	u NGAL (admission to ICU)	+	ICU admission	?	288	22		AuROC	0.68	95	0.57	0.79	na											
31	Garcia-Alvarez et al. 2015	cardiac surgery	Δ u NGAL (baseline - admission to ICU)	+	ICU admission	?	288	22		AuROC	0.64	95	0.53	0.76	na											
32	Dusse et al. 2016	cardiac surgery	u TIMP-2 x IGFBP-7	-	Max 24h	72 h	40	7		AUC	0.919	0.97	0.824	1	0.001	0.048	100		80							
33	Du et al. 2013	cardiac surgery	u miR-21	-	?	?	120	6	≥ 3.90	2 ^{Δct} OR	2.59	95	1.37	4.92	0.003	59		73.2		67.7		65.2		AUC 0.99 (0.96-1.00)		
33	Du et al. 2013	cardiac surgery	u miR-21	-	?	?	120	6	≥ 10.99	2 ^{Δct} OR	1.2	95	1.05	1.36	0.005	66.7		65.9		65		67.5		AUC 0.97 (0.9-1.00)		
34	Alge et al. 2013	cardiac surgery	u AnCr - best cut-off (patient at any stage of AKI at sample coll)	-	after AKI serum creatinine criteria were met	30d	97	9	>58.63 ng/mg	AUC	0.71	95	0.54	0.88	na	66.7		77.3		75.6		69.9		LR+ 2.93; LR- 0.43		
34	Alge et al. 2013	cardiac surgery	u AnCr - max PPV cut-off (patient at any stage of AKI at sample coll)	-	after AKI serum creatinine criteria were met	30d	97	9	>572.0 ng/mg						na	11.1		96.6		76.5		52.1		LR+ 3.26; LR- 0.92		
34	Alge et al. 2013	cardiac surgery	u AnCr - max NPV cut-off (patient at any stage of AKI at sample coll)	-	after AKI serum creatinine criteria were met	30d	97	9	>20.01 ng/mg						na	88.9		40.9		60.1		78.6		LR+ 1.5; LR- 0.27		
34	Alge et al. 2013	cardiac surgery	u AnCr - max PPV cut-off (patient at AKI stage 1 at sample coll)	-	after AKI serum creatinine criteria were met	30d	97	9	>572.0 ng/mg						na	12.5		97.2		81.6		52.6		LR+ 4.43; LR- 0.90		
34	Alge et al. 2013	cardiac surgery	u AnCr - max NPV cut-off (patient at AKI stage 1 at sample coll)	-	after AKI serum creatinine criteria were met	30d	97	9	>19.95 ng/mg						na	87.5		39.4		59.1		75.9		LR+ 1.44; LR- 0.32		
34	Alge et al. 2013	cardiac surgery	u AnCr - best cut-off (patient at AKI stage 1 at sample coll)	-	after AKI serum creatinine criteria were met	30d	97	9	>34.44 ng/mg	AUC	0.68	95	0.49	0.87	na	75		63.4		67.2		71.7		LR+ 2.05; LR- 0.39		
35	Haase-Fielitz et al. 2009	cardiac surgery	p NGAL	-	6h after commencement of CPB	?	100	4	>340 ng/ml	AUC-ROC	0.83	95	0.6	0.98	na	75		100								
36	McIlroy et al. 2015	cardiac surgery	u NGAL (baseline)	-	baseline	603	14		OR	6.7	95	1.7	25.6	0.006												
36	McIlroy et al. 2015	cardiac surgery	u NGAL (<1hr post CPB)	-	<1hr post CPB	603	14		OR	3.3	95	1	10.7	0.05												
36	McIlroy et al. 2015	cardiac surgery	u NGAL (3hr post-CPB)	-	3hr post CPB	603	14		Median time to RRT 4d (2-6)	OR	10.6	95	2.1	52.9	0.004											
36	McIlroy et al. 2015	cardiac surgery	u NGAL (18-24hr post CPB)	-	18-24hr post CPB	603	14		Median time to RRT 4d (2-6)	OR	10.9	95	2.3	51.1	0.003											
36	McIlroy et al. 2015	cardiac surgery	u NGAL (corr for Cr) (baseline)	+	baseline	603	14		Median time to RRT 4d (2-6)	OR	12.5	95	2.6	59.9	0.002											
36	McIlroy et al. 2015	cardiac surgery	u NGAL (corr for Cr) (<1hr post CPB)	+	<1hr post CPB	603	14		Median time to RRT 4d (2-6)	OR	3.2	95	1	10.4	0.05											
36	McIlroy et al. 2015	cardiac surgery	u NGAL (corr for Cr) (3hr post CPB)	+	3hr post CPB	603	14		Median time to RRT 4d (2-6)	OR	9.8	95	2	48.3	0.005											

Nr	Author/year	Group	Biomarker	urinary BM: adjusted (+) / unadjusted (-)	time point	BRT within to u Cr	Patients n	BRT n	Cut-off		Result	% CI	CI lower	CI upper	p	SE	sensitivity		specificity		PPV		NPV	
36	McIlroy et al. 2015	cardiac surgery	u NGAL (corr for u Cr) (18-24hr post CPB)	+	18-24hr post CPB	Median time to RRT 4d (2-6)	603	14	DR	22.9	95	2.9	183	0.003										
36	McIlroy et al. 2015	cardiac surgery	varying serum cr-based metrics of renal injury	?		Median time to RRT 4d (2-6)	603	14																
36	McIlroy et al. 2015	cardiac surgery	AKI KDIGO ICU admit		ICU adm	Median time to RRT 4d (2-6)	603	14	OR	1.7	95	0.2	17.4	0.64										
36	McIlroy et al. 2015	cardiac surgery	AS cr-initial ≥ 0.0mg/dl		initial	Median time to RRT 4d (2-6)	603	14	OR	5.7	95	1.6	20.1	0.007										
36	McIlroy et al. 2015	cardiac surgery	AKI KDIGO 24hr		24h	Median time to RRT 4d (2-6)	603	14	OR	9.9	95	3	33.3	0.001										
36	McIlroy et al. 2015	cardiac surgery	AS cr-peak day 1 ≥ 0.2mg/dl		peak d1	Median time to RRT 4d (2-6)	603	14	OR	7.1	95	2.1	24.6	0.002										
37	Bagshaw et al. 2010	ICU	p NGAL peak		peak 0-24 (48?) h	5d	83	13	AuROC	0.78	95	0.61	0.95	na										
37	Bagshaw et al. 2010	ICU	u NGAL peak	+	peak 0-24h	5d	83	13	AuROC	0.7	95	0.58	0.82	na										
38	Royakkers et al. 2012	ICU	u NGAL	?	?	140	11	AUC	0.47	95	0.37	0.58	na											
38	Royakkers et al. 2012	ICU	u NGAL corr.	+	?	140	11	AUC	0.27	95	0	0.57	na											
38	Royakkers et al. 2012	ICU	u NGAL	-	?	140	11	AUC	0.26	95	0.03	0.5	na											
38	Royakkers et al. 2012	ICU	sNGAL/uNGAL	?	?	140	11	AUC	0.26	95	0.01	0.51	na											
39	Sriswat et al. 2011	hospitalized	p NGAL	?	?	181	14	AUC	0.62	95	0.45	0.81	na											
40	Susantitaphong et al. 2012	hospitalized	KLK1 risk-allele (I or G) unadjusted	?	?	?	92	OR	1.44	95	0.83	2.5	0.195											
40	Susantitaphong et al. 2012	hospitalized	KLK1 risk-allele (I or G) adjusted	?	?	?	92	OR	1.54	95	0.85	2.81	0.155											Adjustment variables were sex, race, preexisting CKD and the APACHE II score
41	Planta et al. 2015	renal transplantation	u TIMP-2 (12h + base model)	+	12h post OP	7d	56	22	AUB	0.9	95	0.78	1	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u TIMP-2 x IGFBP-7 (12h + base model)	+	12h post OP	7d	56	22	AUB	0.88	95	0.74	1	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u VEGF-A (4h + base model)	+	4h post OP	7d	56	22	AUB	0.85	95	0.72	0.99	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u TIMP-2 (8h + base model)	+	8h post OP	7d	56	22	AUB	0.84	95	0.68	1	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u IGFBP-7 (12h + base model)	+	12h post OP	7d	56	22	AUB	0.83	95	0.67	0.98	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u TIMP-2 x IGFBP-7 (8h + base model)	+	8h post OP	7d	56	22	AUB	0.82	95	0.64	1	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u TIMP-2 (4h + base model)	+	4h post OP	7d	56	22	AUB	0.81	95	0.66	0.97	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u VEGF-A (8h + base model)	+	8h post OP	7d	56	22	AUB	0.81	95	0.64	0.98	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u TIMP-2 x IGFBP-7 (4h + base model)	+	4h post OP	7d	56	22	AUB	0.8	95	0.64	0.96	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u IGFBP-7 (8h + base model)	+	8h post OP	7d	56	22	AUB	0.78	95	0.61	0.95	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u VEGF-A (12h + base model)	+	12h post OP	7d	56	22	AUB	0.77	95	0.59	0.94	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u IGFBP-7 (12h + base model)	+	4h post OP	7d	56	22	AUB	0.75	95	0.59	0.92	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u MIF (4h + base model)	+	4h post OP	7d	56	22	AUB	0.73	95	0.56	0.9	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u MCP-1 (12h + base model)	+	12h post OP	7d	56	22	AUB	0.73	95	0.55	0.91	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u CXCL16 (12h + base model)	+	12h post OP	7d	56	22	AUB	0.72	95	0.54	0.89	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u TFF3 (4h + base model)	+	4h post OP	7d	56	22	AUB	0.71	95	0.53	0.89	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	base model																				risk prediction model for DGF after entering nine recipient-, eight donor- and three transplantation-related factors	
41	Planta et al. 2015	renal transplantation	u CXCL16 (4h + base model)	+	4h post OP	7d	56	22	AUB	0.7	95	0.52	0.88	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u MCP-1 (8h + base model)	+	8h post OP	7d	56	22	AUB	0.7	95	0.53	0.87	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u MCP-1 (4h + base model)	+	4h post OP	7d	56	22	AUB	0.7	95	0.51	0.9	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u MIF (8h + base model)	+	8h post OP	7d	56	22	AUB	0.69	95	0.5	0.88	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u MIF (12h + base model)	+	12h post OP	7d	56	22	AUB	0.69	95	0.51	0.88	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u TFF3 (12h + base model)	+	12h post OP	7d	56	22	AUB	0.67	95	0.48	0.86	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u CXCL16 (8h + base model)	+	8h post OP	7d	56	22	AUB	0.66	95	0.47	0.85	na										Komb. mit Transplant-spez. Base model
41	Planta et al. 2015	renal transplantation	u TFF3 (8h + base model)	+	8h post OP	7d	56	22	AUB	0.65	95	0.45	0.85	na										Komb. mit Transplant-spez. Base model
42	Mahdavi-Mazdeh et al. 2012	renal transplantation	u NGAL (48hours)		OP +48h	7d	33	6	AUC	0.85	95	0.68	1	0.009 na										
42	Mahdavi-Mazdeh et al. 2012	renal transplantation	u NGAL (72hours)		OP +72h	7d	33	6	AUC	0.83	95	0.61	1	0.01 na										
42	Mahdavi-Mazdeh et al. 2012	renal transplantation	u Cr (72hours)		OP +72h	7d	33	6	AUC	0.82	95	0.55	1.1	0.02 na										
42	Mahdavi-Mazdeh et al. 2012	renal transplantation	u NGAL (after operation)		baseline/after OP	7d	33	6	AUC	0.8	95	0.66	0.94	0.02 na										
42	Mahdavi-Mazdeh et al. 2012	renal transplantation	u NGAL (24hours)		OP +24h	7d	33	6	AUC	0.8	95	0.61	0.99	0.03 na										
42	Mahdavi-Mazdeh et al. 2012	renal transplantation	u Cr (48hours)		OP +48h	7d	33	6	AUC	0.8	95	0.55	1.1	0.02 na										
42	Mahdavi-Mazdeh et al. 2012	renal transplantation	u NGAL (12hours)		OP +12h	7d	33	6	AUC	0.74	95	0.55	0.92	0.08 na										
42	Mahdavi-Mazdeh et al. 2012	renal transplantation	u Cr (12 hours)		OP +12h	7d	33	6	AUC	0.71	95	0.5	0.92	0.11 na										
42	Mahdavi-Mazdeh et al. 2012	renal transplantation	u Cr (after operation)		baseline/after OP	7d	33	6	AUC	0.53	95	0.3	0.76	0.85 na										
43	Hanson et al. 2011	malaria	p Cr (should have had dialysis)		enrollm	?	163	?	AUC	0.83	95	0.74	0.92	na										p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.
43	Hanson et al. 2011	malaria	p Cr clearance (should have had dialysis)		enrollm	?	163	?	AUC	0.78	95	0.68	0.88	0.1 na										p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.
43	Hanson et al. 2011	malaria	BUN (should have had dialysis)		enrollm	?	163	?	AUC	0.77	95	0.66	0.87	0.18 na										p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.
43	Hanson et al. 2011	malaria	RFI (should have had dialysis)		enrollm	?	163	?	AUC	0.75	95	0.64	0.86	0.21 na										p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.
43	Hanson et al. 2011	malaria	FeNa (should have had dialysis)		enrollm	?	163	?	AUC	0.75	95	0.64	0.86	0.21 na										p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.

Nr	Author/year	Group	Biomarker	urinary BM: adjusted (+)/unadjusted (-) to u Cr	time point of sample collection	BRT within	Patients n	RRT n	Cut-off	Result							sensitivity		specificity		PPV		NPV		
											% CI	CI lower	CI upper	p	SE	CI lower	CI upper	CI lower	CI upper	CI lower	CI upper	CI lower	CI upper		
43	Hanson et al. 2011	malaria	urine:plasma cr ratio (should have had dialysis)	-	enrollm	?	163	?		AUC	0.75	95	0.65	0.86	0.23	na									p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.
43	Hanson et al. 2011	malaria	u Osm (had dialysis)	-	enrollm	?	163	?		AUC	0.74	95	0.6	0.87	na										p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.
43	Hanson et al. 2011	malaria	u Osm (should have had dialysis)	-	enrollm	?	163	?		AUC	0.71	95	0.59	0.82	0.1	na									p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.
43	Hanson et al. 2011	malaria	p Bicarb (should have had dialysis)	-	enrollm	?	163	?		AUC	0.7	95	0.59	0.82	0.09	na									p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.
43	Hanson et al. 2011	malaria	p Cr (had dialysis)	-	enrollm	?	163	?		AUC	0.69	95	0.55	0.83	na										p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.
43	Hanson et al. 2011	malaria	u NGAL (should have had dialysis)	-	enrollm	?	163	?		AUC	0.68	95	0.55	0.8	0.045	na									p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.
43	Hanson et al. 2011	malaria	p Cr clearance (had dialysis)	-	enrollm	?	163	?		AUC	0.66	95	0.51	0.81	na										p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.
43	Hanson et al. 2011	malaria	BUN (had dialysis)	-	enrollm	?	163	?		AUC	0.66	95	0.51	0.81	na										p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.
43	Hanson et al. 2011	malaria	u Na (should have had dialysis)	-	enrollm	?	163	?		AUC	0.65	95	0.53	0.77	0.02	na									p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.
43	Hanson et al. 2011	malaria	p potassium (should have had dialysis)	-	enrollm	?	163	?		AUC	0.65	95	0.54	0.77	0.02	na									p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.
43	Hanson et al. 2011	malaria	RFI (had dialysis)	-	enrollm	?	163	?		AUC	0.64	95	0.48	0.8	na										
43	Hanson et al. 2011	malaria	FeNa (had dialysis)	-	enrollm	?	163	?		AUC	0.64	95	0.48	0.79	na										
43	Hanson et al. 2011	malaria	urine:plasma cr ratio (had dialysis)	-	enrollm	?	163	?		AUC	0.64	95	0.49	0.78	na										
43	Hanson et al. 2011	malaria	p Bicarb (had dialysis)	-	enrollm	?	163	?		AUC	0.64	95	0.52	0.77	na										
43	Hanson et al. 2011	malaria	u NGAL (had dialysis)	-	enrollm	?	163	?		AUC	0.62	95	0.44	0.79	na										
43	Hanson et al. 2011	malaria	u Na (had dialysis)	-	enrollm	?	163	?		AUC	0.61	95	0.45	0.76	na										
43	Hanson et al. 2011	malaria	plasma urea:creatinine ratio (should have had dialysis)	-	enrollm	?	163	?		AUC	0.6	95	0.48	0.72	0.0001	na									p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.
43	Hanson et al. 2011	malaria	plasma urea:creatinine ratio (had dialysis)	-	enrollm	?	163	?		AUC	0.56	95	0.41	0.72	na										
43	Hanson et al. 2011	malaria	p potassium (had dialysis)	-	enrollm	?	163	?		AUC	0.44	95	0.26	0.61	na										
43	Hanson et al. 2011	malaria	Fractional excretion of urea nitrogen (should have had dialysis)	-	enrollm	?	163	?		AUC	0.41	95	0.28	0.54	<0.0001	na									p: comparison of AUC in patients who should have had dialysis with plasma creatinine, using chi squared.
43	Hanson et al. 2011	malaria	Fractional excretion of urea nitrogen (had dialysis)	-	enrollm	?	163	?		AUC	0.37	95	0.21	0.53	na										
44	Haase-Fielitz et al. 2011	cardiac surgery	u hepcidin adjusted to u Cr (6hours) NO RRT	+	6h after commencement of CPB	7d	100	5	2720 ng/mg	AUC-ROC	0.88	95	0.7	0.99	na	66.3		100							AUC-ROC for NO initiation of RRT
44	Haase-Fielitz et al. 2011	cardiac surgery	u hepcidin (6hours) NO RRT	-	6h after commencement of CPB	7d	100	5	550 ng/ml	AUC-ROC	0.81	95	0.72	0.88	na	100		57.4							AUC-ROC for NO initiation of RRT
44	Haase-Fielitz et al. 2011	cardiac surgery	u hepcidin (24hours) NO RRT	-	6h after commencement of CPB	7d	100	5		AUC-ROC	0.77	95	0.64	0.89	na									AUC-ROC for NO initiation of RRT	
44	Haase-Fielitz et al. 2011	cardiac surgery	u hepcidin adjusted to u Cr (24hours) NO RRT	+	6h after commencement of CPB	7d	100	5		AUC-ROC	0.73	95	0.53	0.92	na									AUC-ROC for NO initiation of RRT	
44	Haase-Fielitz et al. 2011	cardiac surgery	p hepcidin (6hours) NO RRT	-	6h after commencement of CPB	7d	100	5	295 ng/ml	AUC-ROC	0.56	95	0.45	0.66	na	80		45.2							AUC-ROC for NO initiation of RRT
45	Valette et al. 2013	contrast-induced	p NGAL H0 (pts w/o AKI at admission n=57)	-	baseline/before CM inj				Gd (3-14)	AuROC	0.9	95	0.79	0.96	na	1		0.74		0.17		1			
45	Valette et al. 2013	contrast-induced	p NGAL H2 (pts w/o AKI at admission n=57)	-	CM inj +2				Gd (3-14)	AuROC	0.87	95	0.76	0.95	na	1		0.74		0.17		1			
45	Valette et al. 2013	contrast-induced	s Cr J0 (pts w/o AKI at admission n=57)	-	baseline/before CM inj				Gd (3-14)	AuROC	0.85	95	0.73	0.93	na	1		0.67		0.14		1			
45	Valette et al. 2013	contrast-induced	p NGAL H0 (Overall population n=98)	-	baseline/before CM inj				Gd (3-14)	AuROC	0.83	95	0.72	0.89	na	0.83		0.79		0.2		0.99			
45	Valette et al. 2013	contrast-induced	p NGAL H0 (pts w/o AKI at inclusion n=84)	-	baseline/before CM inj				Gd (3-14)	AuROC	0.82	95	0.72	0.9	na	1		0.65		0.15		1			
45	Valette et al. 2013	contrast-induced	p NGAL H6 (pts w/o AKI at admission n=57)	-	CM inj +6				Gd (3-14)	AuROC	0.8	95	0.76	0.89	na	0.67		0.94		0.37		0.98			
45	Valette et al. 2013	contrast-induced	p NGAL H24 (pts w/o AKI at admission n=57)	-	CM inj +24				Gd (3-14)	AuROC	0.8	95	0.68	0.9	na	0.67		0.94		0.37		0.98			
45	Valette et al. 2013	contrast-induced	p NGAL H24 (Overall population n=98)	-	CM inj +24				Gd (3-14)	AuROC	0.79	95	0.69	0.86	na	0.84		0.72		0.16		0.99			
45	Valette et al. 2013	contrast-induced	p NGAL H2 (pts w/o AKI at inclusion n=84)	-	CM inj +2				Gd (3-14)	AuROC	0.78	95	0.68	0.87	na	1		0.59		0.13		1			
45	Valette et al. 2013	contrast-induced	p NGAL H24 (pts w/o AKI at inclusion n=84)	-	CM inj +24				Gd (3-14)	AuROC	0.78	95	0.68	0.87	na	0.8		0.76		0.18		0.98			
45	Valette et al. 2013	contrast-induced	p NGAL H2 (Overall population n=98)	-	CM inj +2				Gd (3-14)	AuROC	0.77	95	0.67	0.85	na	1		0.54		0.12		1			
45	Valette et al. 2013	contrast-induced	s Cr J0 (Overall population n=98)	-	baseline/before CM inj				Gd (3-14)	AuROC	0.75	95	0.64	0.83	na	1		0.49		0.11		1			
45	Valette et al. 2013	contrast-induced	p NGAL H6 (Overall population n=98)	-	CM inj +6				Gd (3-14)	AuROC	0.75	95	0.65	0.83	na	0.67		0.84		0.21		0.98			
45	Valette et al. 2013	contrast-induced	p NGAL H6 (pts w/o AKI at inclusion n=84)	-	CM inj +6				Gd (3-14)	AuROC	0.75	95	0.64	0.83	na	0.6		0.86		0.21		0.97			
45	Valette et al. 2013	contrast-induced	s Cr J0 (pts w/o AKI at inclusion n=84)	-	baseline/before CM inj				Gd (3-14)	AuROC	0.73	95	0.62	0.82	na	1		0.51		0.12		1			
46	Lukasz et al. 2014	HUS	s NGAL (optimal sens + specificity)	-	admission/referral	9 (4-8)	39	24	330 ng/ml	AUC	0.76	95	0.61	0.91	na										
46	Lukasz et al. 2014	HUS	s NGAL unadjusted (per 100ng/ml increase)	-	admission/referral	9 (4-8)	39	24		OR	1.82	95	1.14	2.91	0.013										
46	Lukasz et al. 2014	HUS	s NGAL (adjusted for age & gender)	-	admission/referral	9 (4-8)	39	24		OR	1.96	95	1.15	3.35	0.014										
46	Lukasz et al. 2014	HUS	s NGAL (adjusted for leukocytes, CRP, onset of diarrhoea)	-	admission/referral	9 (4-8)	39	24		OR	2.06	95	1.08	3.93	0.028										
46	Lukasz et al. 2014	HUS	s NGAL (adj for LDH, platelets)	-	admission/referral	9 (4-8)	39	24		OR	1.67	95	1	2.78	0.048										
46	Lukasz et al. 2014	HUS	s NGAL (adj for AKIN on admission)	-	admission/referral	9 (4-8)	39	24		OR	1.75	95	1.07	2.87	0.027										
46	Lukasz et al. 2014	HUS	s NGAL cut-off ≥ 330 ng/ml	-	admission/referral	9 (4-8)	39	24 ≥ 330	ng/ml	OR	7.5	95	1.38	45.19		83.3		60		76.9		69.2			

Nr	Author/year	Group	Biomarker	urinary BM: adjusted (+)/unadjusted (-)	time point	BRT within of sample collection	Patients n	BRT n	Cut-off	Result									sensitivity		specificity		PPV		NPV			
											% CI	CI lower	CI upper	p	SE	CI lower	CI upper	CI lower	CI upper	CI lower	CI upper	CI lower	CI upper	CI lower	CI upper			
46	Lukasz et al. 2014	HUS	s NGAL cut-off ≥ 495 ng/ml		admission/referral	S (4.8–8)	39	24	≥ 495 ng/ml	OR	5.5	95	0.86	44.65		45.8		86.7		84.6		50						
46	Lukasz et al. 2014	HUS	AKIN		admission/referral	S (4.8–8)	39	24	≥ stage I	OR	7.3	95	1.01	66.07		91.7		40		71		75						
46	Lukasz et al. 2014	HUS	combined model (NGAL ≥ 300ng/ml & AKIN ≥ stage I)		admission/referral	S (4.8–8)	39	24	NGAL ≥ 300ng/ml & AKIN ≥ stage I	OR	20	95	3.07	160.65		83.3		80		87		75						
47	Drey et al. 2015	Sepsis	s CAF		w/i 24h of clinical onset	?	61 ?		348 µM	AUC	0.772	95	0.641	0.903	0.002 na	79		77		50		92						
47	Drey et al. 2015	Sepsis	s Cr		w/i 24h of clinical onset	?	61 ?		1.7 mg/dl	AUC	0.688	95	0.555	0.822	0.033 na	64		62		33		85						
48	Gaipov et al. 2015	cardiac surgery	Uric acid		2nd hour postop	?	60	7	5.6 mg/dl	AUC	0.782	95	0.648	0.883	0.0002 na	98.7		65.3		22.7		100						
48	Gaipov et al. 2015	cardiac surgery	u NGAL	-	2nd hour postop	?	60	7	5.91 mg/ml	AUC	0.722	95	0.584	0.836	0.1496 na	58.1		93.9		50		95.8						
48	Gaipov et al. 2015	cardiac surgery	s Cr		2nd hour postop	?	60	7	1.54 mg/dl	AUC	0.651	95	0.509	0.776	0.3391 na	38.8		98		66.7		94.1						
48	Gaipov et al. 2015	cardiac surgery	s NGAL		2nd hour postop	?	60	7	168.1 ng/ml	AUC	0.52	95	0.38	0.658	0.8573 na	3.1		73.5		0		87.8						
49	de Geus et al. 2011	ICU	p NGAL		?	7d	632	28		AUC	0.88				0.06													
49	de Geus et al. 2011	ICU	u NGAL	?	?	7d	632	28		AUC	0.89				0.04													
50	Herget-Rosenthal, Poppen et al. 2004	ICU/hospitalized	u CysC	+	inclusion	4d (2-6)	73	26	1 g/mol	AUC	0.92	95	0.86	0.96		92	83	96	83	73	90							
50	Herget-Rosenthal, Poppen et al. 2004	ICU/hospitalized	u α1-microglobulin	+	inclusion	4d (2-6)	73	26	20 g/mol	AUC	0.86	95	0.78	0.92		88	78	93	81	70	88							
50	Herget-Rosenthal, Poppen et al. 2004	ICU/hospitalized	Retinol-binding protein	+	inclusion	4d (2-6)	73	26		AUC	0.8	95	0.72	0.87														
50	Herget-Rosenthal, Poppen et al. 2004	ICU/hospitalized	β2-microglobulin	+	inclusion	4d (2-6)	73	26		AUC	0.51	95	0.42	0.6														
50	Herget-Rosenthal, Poppen et al. 2004	ICU/hospitalized	NAG	+	inclusion	4d (2-6)	73	26	4.5 µmol/L	AUC	0.81	95	0.73	0.88		85	75	91	62	50	72							
50	Herget-Rosenthal, Poppen et al. 2004	ICU/hospitalized	α-GST	+	inclusion	4d (2-6)	73	26		AUC	0.64	95	0.55	0.72														
50	Herget-Rosenthal, Poppen et al. 2004	ICU/hospitalized	GGT	+	inclusion	4d (2-6)	73	26		AUC	0.64	95	0.55	0.73														
50	Herget-Rosenthal, Poppen et al. 2004	ICU/hospitalized	LD	+	inclusion	4d (2-6)	73	26		AUC	0.59	95	0.5	0.69														
50	Herget-Rosenthal, Poppen et al. 2004	ICU/hospitalized	Liano score	+	inclusion	4d (2-6)	73	26	0.6	AUC	0.83	95	0.75	0.9		77	66	85	74	63	83							
51	Glassford et al. 2013	ICU	p NGAL		inclusion	33.46 (7.37-224.23) hours	102	7		AUC	0.78	95	0.579	0.982														
51	Glassford et al. 2013	ICU	u NGAL	+	inclusion	33.46 (7.37-224.23) hours	102	7		AUC	0.705	95	0.49	0.92														
51	Glassford et al. 2013	ICU	u NGAL E1	+	inclusion	33.46 (7.37-224.23) hours	102	7		AUC	0.699	95	0.478	0.923														
51	Glassford et al. 2013	ICU	u NGAL E2	+	inclusion	33.46 (7.37-224.23) hours	102	7		AUC	0.531	95	0.321	0.741														
51	Glassford et al. 2013	ICU	p NGAL : u NGAL	+	inclusion	33.46 (7.37-224.23) hours	102	7		AUC	0.375	95	0.18	0.57														
51	Glassford et al. 2013	ICU	p NGAL : u NGAL E1	+	inclusion	33.46 (7.37-224.23) hours	102	7		AUC	0.392	95	0.177	0.608														
51	Glassford et al. 2013	ICU	p NGAL : u NGAL E2	+	inclusion	33.46 (7.37-224.23) hours	102	7		AUC	0.629	95	0.415	0.842														
51	Glassford et al. 2013	ICU	u NGAL : u NGAL E1	+	inclusion	33.46 (7.37-224.23) hours	102	7		AUC	0.552	95	0.311	0.793														
51	Glassford et al. 2013	ICU	u NGAL : u NGAL E2	+	inclusion	33.46 (7.37-224.23) hours	102	7		AUC	0.609	95	0.412	0.806														
51	Glassford et al. 2013	ICU	u NGAL E1 : u NGAL E2	+	inclusion	33.46 (7.37-224.23) hours	102	7		AUC	0.612	95	0.427	0.797														
52	Chun et al. 2017	Burn injuries	p NGAL	N/A		N/A	76	20	252.5 ng/ml	AUC	0.69			<0.001		0.625		0.669										
53	Ho et al. 2017	hospitalized	mtDNA	-	early-morning urine sample	N/A	107	27	25.5 PCR cycle	AUC	0.641					0.815		0.55										
54	Skinner et al. 2017	Crush injuries	venous bicarbonate		admission	N/A	310	12	18.85 mmol/L	AUC	0.847	95	0.756	0.938	<0.001	83.3		79.5										
54	Skinner et al. 2017	Crush injuries	CK		admission	N/A	310	12	279.1 mmol/L	AUC	0.722	95	0.544	0.9	0.026	77.8		67.9										
54	Skinner et al. 2017	Crush injuries	BE		admission	N/A	310	12	7.25 mmol/L	AUC	0.871	95	0.795	0.947	<0.001	83.3		80.2										
55	Albeladi et al. 2017	ICU	u NGAL (24h max.)		admission	N/A	75	17		AUC	0.84	95	0.75	0.95	<0.001													
55	Albeladi et al. 2017	ICU	u NGAL (2. 24h max)		admission + 1day	N/A	75	17		AUC	0.93	95	0.87	0.998	<0.001													
56	Dihazi et al. 2016	ICU	B2M		inclusion	N/A	120	52	>0.3889	AUC	0.6295			<0.05		51-80		60-70										
56	Dihazi et al. 2016	ICU	CST 6		inclusion	N/A	120	52	>0.3773	AUC	0.5521			n.s.		46-76		44-74										
56	Dihazi et al. 2016	ICU	FABP1		inclusion	N/A	120	52	>0.2895	AUC	0.9995			<0.001		88-100		88-100										
56	Dihazi et al. 2016	ICU	FABP3		inclusion	N/A	120	52	<0.04008	AUC	1			<0.001		92-100		88-99										
56	Dihazi et al. 2016	ICU	s CysC		inclusion	N/A	120	52	>2.4	AUC	0.74			<0.001		71		65										
56	Dihazi et al. 2016	ICU	Logistic regression model		inclusion	N/A	120	52	>0.53	AUC	0.53			<0.001		77		83										
57	Haines et al. 2017	ICU	Cardiac troponin I (AKI with RRT vs lower stage)		inclusion	N/A	34 vs. 84	43		OR	1.35	95	1.14	1.6	0.001													
57	Haines et al. 2017	ICU	Cardiac troponin I (AKI with RRT vs lower stage) adj.		inclusion	N/A	35 vs. 84	44		OR	1.12	95	0.93	1.45	0.199													
57	Haines et al. 2017	ICU	Cardiac troponin T (AKI with RRT vs lower stage)		inclusion	N/A	36 vs. 84	45		OR	1.55	95	1.23	1.96	<0.001													
57	Haines et al. 2017	ICU	Cardiac troponin T (AKI with RRT vs lower stage) adj.		inclusion	N/A	37 vs. 84	46		OR	1.31	95	0.94	1.84	0.109													
57	Haines et al. 2017	ICU	NT-proBNP (AKI with RRT vs lower stage)		inclusion	N/A	38 vs. 84	47		OR	1.48	95	1.21	0.81	<0.001													
57	Haines et al. 2017	ICU	NT-proBNP (AKI with RRT vs lower stage) adj.		inclusion	N/A	39 vs. 84	48		OR	1.43	95	1.09	1.84	0.011													
58	Itenov et al. 2016	ICU	oNGAL univ.		admission	28 days	454	39		HR	8.05	95	4.07	15.91	<0.001													
58	Itenov et al. 2016	ICU	oNGAL multivar.		admission	28 days	454	39		HR	2.46	95	1.11	5.45	0.03													
58	Itenov et al. 2016	ICU	sTM univ.		admission	28 days	454	39		HR	4.86	95	2.58	9.29	<0.001													

Nr	Author/year	Group	Biomarker	urinary BM: adjusted (+) / unadjusted (-)	time point	BRT within	Patients n	BRT n	Cut-off	Result	% CI	CI lower	CI upper	p	SE	sensitivity		specificity		PPV		NPV			
																CI lower	CI upper	CI lower	CI upper	CI lower	CI upper	CI lower	CI upper		
58	Itenov et al. 2016	ICU	sTM multivar.	to u Cr	of sample collection																				
58	Itenov et al. 2016	ICU	Procalcitonin univ.		admission	28 days	454	39	HR	2.5	95	1.23	5.13	<0.01											
58	Itenov et al. 2016	ICU	Procalcitonin multivar.		admission	28 days	454	39	HR	2.75	95	1.47	5.17	0.002											
58	Itenov et al. 2016	ICU	Creatinine univ.		admission	28 days	454	39	HR	7.08	95	3.64	13.79	<0.001											
58	Itenov et al. 2016	ICU	Creatinine multivar.		admission	28 days	454	39	HR	3.11	95	1.44	6.68	0.004											
58	Itenov et al. 2016	ICU	Vasopressor treatment univ.		admission	28 days	454	39	HR	6.34	95	3.14	12.73	<0.001											
58	Itenov et al. 2016	ICU	Vasopressor treatment multivar.		admission	28 days	454	39	HR	2.63	95	1.23	5.65	0.01											
58	Itenov et al. 2016	ICU	Platelets univ.		admission	28 days	454	39	HR	2.78	95	1.48	5.22	0.001											
58	Itenov et al. 2016	ICU	Platelets multivar.		admission	28 days	454	39	HR	1.42	95	0.7	2.88	0.33											
58	Itenov et al. 2016	ICU	Bilirubin univ.		admission	28 days	454	39	HR	2.9	95	1.55	5.45	0.001											
58	Itenov et al. 2016	ICU	Bilirubin multivar.		admission	28 days	454	39	HR	1.87	95	0.93	3.77	0.008											
58	Itenov et al. 2016	ICU	Mechanic ventilation univ.		admission	28 days	454	39	HR	3.76	95	1.34	10.64	0.01											
58	Itenov et al. 2016	ICU	Mechanic ventilation multivar.		admission	28 days	454	39	HR	4.69	95	1.62	13.62	0.004											
58	Itenov et al. 2016	ICU	Age univ.		admission	28 days	454	39	HR	2.03	95	1.07	3.88	0.03											
58	Itenov et al. 2016	ICU	Age multivar.		admission	28 days	454	39	HR	1.62	95	0.84	3.15	0.15											
58	Itenov et al. 2016	ICU	Sex univ.		admission	28 days	454	39	HR	1.53	95	0.77	3.02	0.22											
58	Itenov et al. 2016	ICU	Sex multivar.		admission	28 days	454	39	HR	1.34	95	0.64	2.81	0.44											
59	O'Sullivan et al. 2017	ICU	kgFR	kinetic	N/A	107	16		AUC	0.901	95	0.82	0.97		0.87		0.85								
59	O'Sullivan et al. 2017	ICU	MDRD	N/A	N/A	107	16		AUC	0.79	95	0.66	0.92		0.56		0.91								
60	Plewes et al. 2017	ICU/gen. ward	CFH univ.	N/A	N/A	107	32		OR	1.01	95	0.99	1	0.063											
60	Plewes et al. 2017	ICU/gen. ward	CFH Multivar. Isof model	N/A	N/A	107	32		OR	1.06	95	0.98	1.14	0.156											
60	Plewes et al. 2017	ICU/gen. ward	Log F2-IsoP univ.	N/A	N/A	107	32		OR	3.45	95	1.3	9.16	0.013											
60	Plewes et al. 2017	ICU/gen. ward	Log F2-IsoP multivar. F2-IsoP model	N/A	N/A	107	32		OR	7.37	95	1.86	29.23	0.005											
60	Plewes et al. 2017	ICU/gen. ward	Log Isof univ.	N/A	N/A	107	32		OR	3.46	95	1.62	749	0.001											
60	Plewes et al. 2017	ICU/gen. ward	Log Isof Multivar. Isof model	N/A	N/A	107	32		OR	5.5	95	1.76	17.24	0.003											
60	Plewes et al. 2017	ICU/gen. ward	LogPHR2 univ.	N/A	N/A	107	32		OR	1.92	95	1.27	2.91	0.002											
60	Plewes et al. 2017	ICU/gen. ward	LogRCD at 55.169 Pa univ.	N/A	N/A	107	32		OR	0.29	95	0.08	1.09	0.066											
60	Plewes et al. 2017	ICU/gen. ward	LogRCD at 55.949 Pa univ.	N/A	N/A	107	32		OR	0.1	95	0.01	0.75	0.025											
60	Plewes et al. 2017	ICU/gen. ward	LogRCD at 55.949 Pa multivar. F2-IsoP model	N/A	N/A	107	32		OR	0.057	95	0.002	1.33	0.075											
60	Plewes et al. 2017	ICU/gen. ward	LogRCD at 55.949 Pa Multivar. Isof model	N/A	N/A	107	32		OR	31	95	0.001	1.44	0.076											
60	Plewes et al. 2017	ICU/gen. ward	Age univ.	N/A	N/A	107	32		OR	1	95	0.97	1.03	0.94											
60	Plewes et al. 2017	ICU/gen. ward	SBP univ.	N/A	N/A	107	32		OR	1.02	95	0.99	1.04	0.26											
60	Plewes et al. 2017	ICU/gen. ward	Numb. of severity criteria univ.	N/A	N/A	107	32		OR	1.9	95	1.38	2.62	<0.001											
60	Plewes et al. 2017	ICU/gen. ward	GCS univ.	N/A	N/A	107	32		OR	0.95	95	0.85	1.07	0.393											
60	Plewes et al. 2017	ICU/gen. ward	LogLactate univ.	N/A	N/A	107	32		OR	1.22	95	0.64	2.3	0.548											
61	Hu et al. 2017	Surgical ICU	u COX3	N/A	admission		125	18	AUC	0.778	95	0.671	0.885												
61	Hu et al. 2017	Surgical ICU	u ND1	N/A	admission		125	18	AUC	0.762	95	0.642	0.882												
62	Kim et al. 2017	Sepsis	p PENK		day of sepsis diagnosis	N/A	167	24	AUC	0.872															
62	Kim et al. 2017	Sepsis	p NGAL		day of sepsis diagnosis	N/A	167	24	AUC	0.741															
63	Mårtensson et al. 2017	ICU	p Endostatin (all patients)		0-h samples	N/A	1112	103	37 ng/ml	AUC	0.67	95	0.61	0.73		38.8	29.4	48.9	90.1	88.1	91.9			LR+ 3.92 (2.89-5.32)	
63	Mårtensson et al. 2017	ICU	p Endostatin (septic patients)		0-h samples	N/A	276	41	37 ng/ml	AUC	0.63	95	0.53	0.73		41.5	26.3	57.9	79.1	73.4	84.2			LR+ 1.99 (1.28-3.09)	
63	Mårtensson et al. 2017	ICU	p Endostatin (nonseptic patients)		0-h samples	N/A	836	62	37 ng/ml	AUC	0.66	95	0.57	0.75		37.1	25.2	50.3	93.4	91.4	95.1			LR+ 5.63 (3.70-8.56)	
63	Mårtensson et al. 2017	ICU	p Endostatin (CKD patients)		0-h samples	N/A	67	15	37 ng/ml	AUC	0.75	95	0.58	0.92		73.3	44.9	92.2	53.8	39.5	67.8			LR+ 1.59 (1.04-2.43)	
63	Mårtensson et al. 2017	ICU	p Endostatin (non-CKD patients)		0-h samples	N/A	1040	85	37 ng/ml	AUC	0.64	95	0.57	0.71		31.8	22.1	42.8	92	90.1	93.7			LR+ 3.99 (2.73-5.83)	