Serum soluble urokinase-type plasminogen activator receptor as a biological marker of bacterial infection in adults: a systematic review and meta-analysis

Running title: Usefulness of suPAR for bacterial infection in adults

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Table S1. Characteristics of included studies

Study type	Author	Year	Country	Study design	Clinical setting	Type of infection	Baseline information (percent of patients)	Sample size	Mean or median age (years)	Prevalence (infection rate/mortality)	Tested sample	Measured time	Type of assay kit	Cut-off (ng/ml)	TP	FP	FN	TN	QUADAS scores
Diagnostic value of suPAR	Kofoed [13]	2007	Denmark	PR	ED, etal	SIRS with infection	Solid tumours and haematological malignancies (9.3%); HIV infection (11.3%)	151	56 (20 to 94)	63.6%	Plasma	D0	Luminex	2.7	34	18	62	37	13
	Koch [14]	2011	Germany	PR	ICU	Sepsis	Diabetes mellitus (32.7%); liver cirrhosis (7.0%)	273	64 (18 to 90)	72.2%	Serum	D0	ViroGates	5.5	148	21	49	55	12
	Yilmaz [15]	2011	Turkey	PR	NA	SIRS with infection	Trauma (14.1%); Diabetes mellitus (9.4%); malignancies (5.9%)	138	43.6	61.6%	Plasma	D0	ViroGates	2.8	78	8	7	45	9
	Hoenigl [16]	2013	Austria	PR	ED	SIRS with bacteremia	Malignancies (20.5%); Cardiovascular disease (25.8%)	132	67.3	41.7%	Serum	D0	ViroGates	7.9	34	18	21	59	11
	Kaya [17]	2013	Turkey	PR	NA	Neutropenic patients with infection	Hematologic malignancies (100%)	50	46.8	45.0%	Serum	D1	ViroGates	5.87	18	10	0	22	9
	Loonen [18]	2014	Netherlands	RR	ED	Bacteremia	NA	125	62.2	16.0%	Serum	NA	ViroGates	7.5	16	24	4	81	11

	Reichsoellner [19]	2014	Austria	PR	ED	SIRS with positive blood culture	Impaired renal function (52.8%); malignancies (22.0%)	159	65.9	69.2%	Plasma	D0	ViroGates	7.6	61	7	49	42	12
	Barati [20]	2015	Iran	PR	ICU	Sepsis	Malignancies (12.0%); trauma (9.6%); renal diseases (2.4%)	83	62.4	48.2%	Plasma	D1	USCN Life Science	8.45	26	11	14	32	12
	Zeng [21]	2016	China	PR	ICU	Sepsis	NA	126	59	73.9%	Plasma	D1	USCN Life Science	9.52	59	2	23	42	11
Prognostic value of suPAR	Wittenhagen [22]	2004	Denmark	MPR	NA	Bacteraemia	NA	141	64	17.0% (In-hospital)	Plasma	D1	NA	10	9	6	15	111	12
	Huttunen [23]	2011	Finland	PR	NA	Bacteraemia	Diabetes mellitus (25%); malignancies (17%); Cardiovascular disease (31%)	132	62 (18 to 93)	13.6% (month)	Plasma	D1-4	ViroGates	11	15	27	3	87	12
	Koch [14]	2011	Germany	PR	ICU	Sepsis	Diabetes mellitus (32.7%); liver cirrhosis (7.0%)	197	65 (20 to 90)	35.9% (ICU)	Serum	D0	ViroGates	6	38	55	22	82	12
	Molkanen [24]	2011	Finland	PR	NA	Bacteremia	Diabetes mellitus (24%); malignancies (19%); Chronic renal failure (26); Cardiovascular	59	NA	32.2% (month)	Serum	D2-5	ViroGates	9.25	15	13	4	27	11

						disease (36%)											
Savva [25]	2011	Greece	MPR	ICU, et al	VAP with sepsis	Diabetes mellitus (15%); Cardiovascular disease (21%)	180	58.4	27.8% (month)	Serum	D1	ViroGates	12.9	29	26	22	103	11
Giamarellos [26]	2012	Greece	MPR	ICU, et al	Sepsis	Diabetes mellitus (22.5%); Cardiovascular disease (16.4%); chronic renal disease (9.2%)	1914	66.1	21.9% (month)	Serum	D1	ViroGates	12	261	467	158	1028	12
Subervivola [27]	2013	Spain	PR	ICU	Severe sepsis and septic shock	ARDS (40.9%); CVVHDF (18.2%)	137	62.6	29.9% (In-hospital)	Serum	D0	ViroGates	9.7	33	52	8	44	9
Donadello [28]	2014	Belgium	PR	ICU	Sepsis	NA	94	62 ±9	18.1% (ICU)	Serum	D0	ViroGates	10.2	12	27	5	50	9
Tsirigotis [29]	2016	Greece	PR	ICU	Severe sepsis and septic shock	Diabetes mellitus (22.9%); malignancies (16.2%); Chronic renal failure (12.4%)	105	NA	36.2% (month)	Serum	D1	ViroGates	7.6	31	18	7	49	10
Zeng [21]	2016	China	PR	ICU	Sepsis	Diabetes mellitus; Cardiovascular disease	82	58.74 ± 1.91	37.8% (month)	Plasma	D1	USCN Life Science	12.01	27	14	4	37	11

Abbreviations: PR, prospective recruitment; RR, retrospective recruitment; MPR, multicentre prospective recruitment; ED, emergency department; ICU, intensive care units; SIRS, Systemic Inflammatory Response Syndrome; ARDS, Acute Respiratory Distress Syndrome; CVVHDF, continuous veno-venous hemodialysis filtration; NA, not available; TP, true positive; FP, false positive; TN, true negative; FN, false negative.

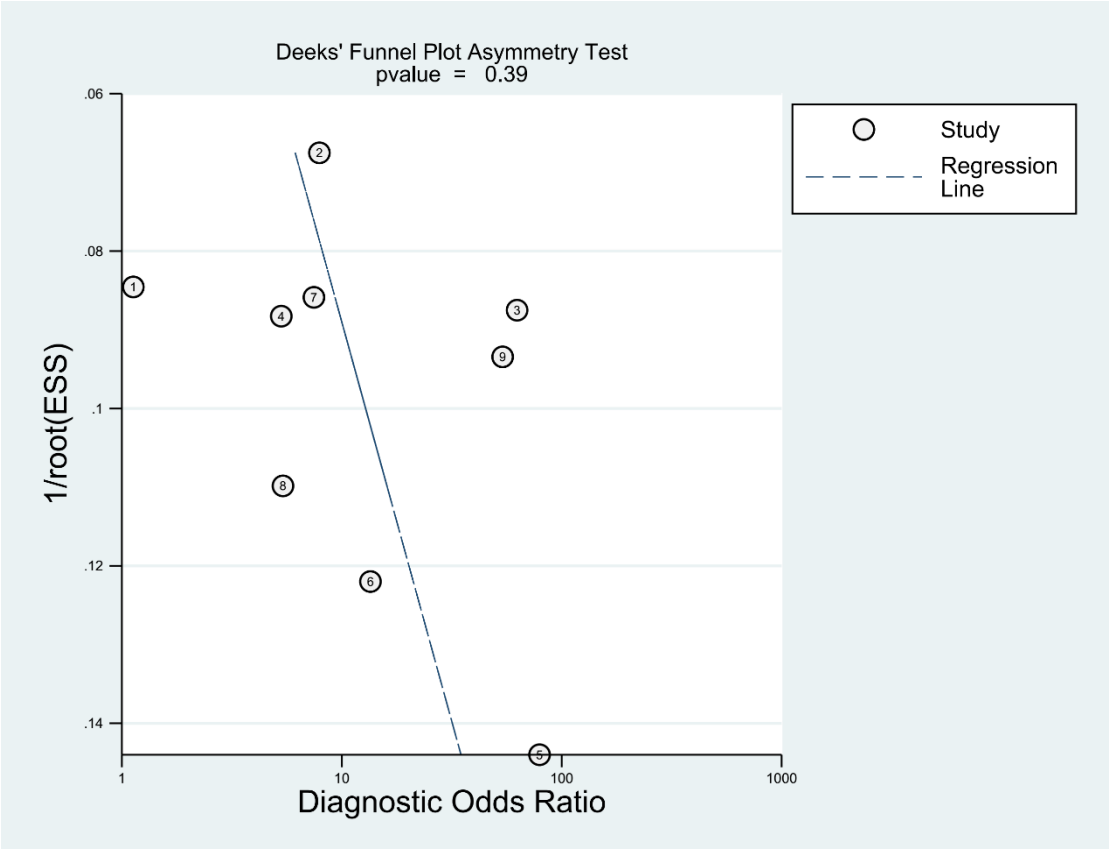

Figure S1. Deek's funnel plot asymmetry test for publication bias of studies evaluating the value of suPAR for the diagnosis of bacterial infections.

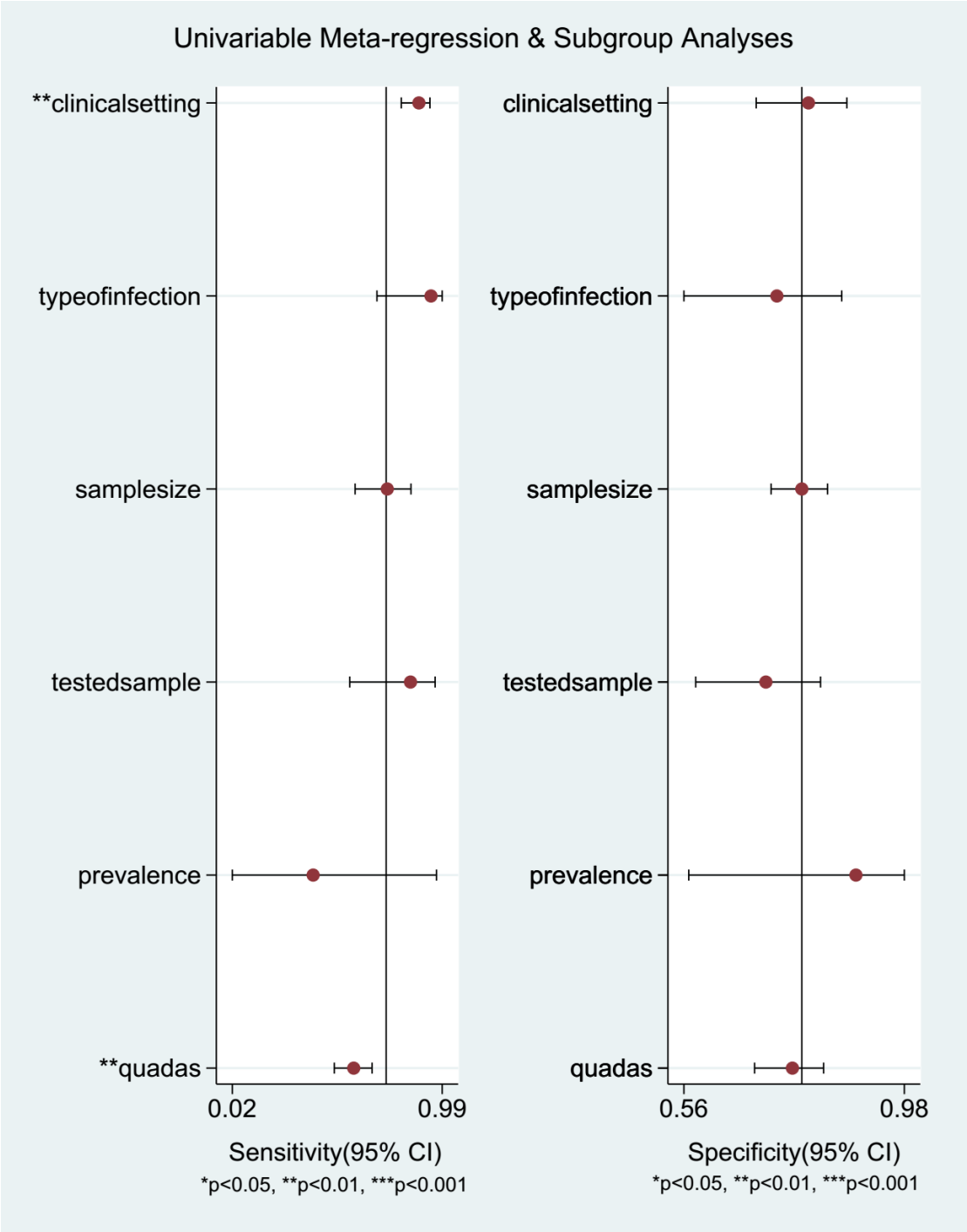

Figure S2. Univariate meta-regression and subgroup analysis of studies evaluating the value of suPAR for the diagnosis of bacterial infections.

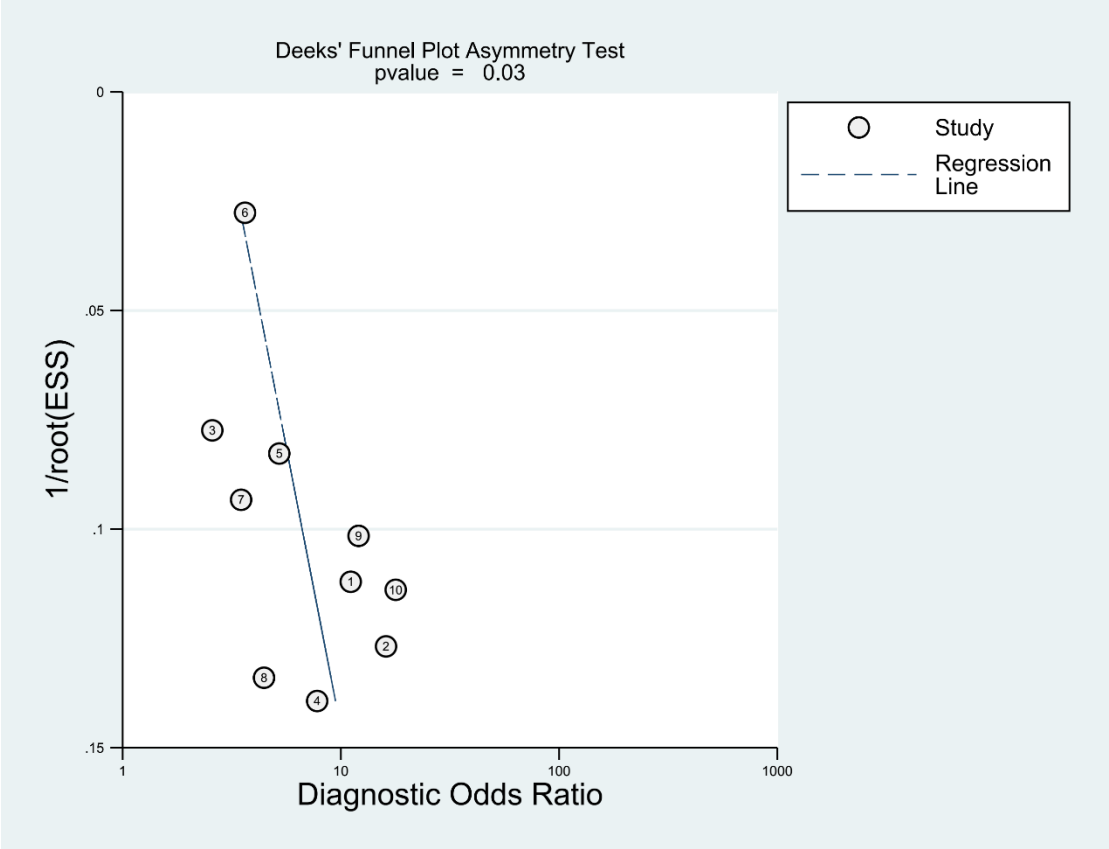

Figure S3. Deek's funnel plot asymmetry test for publication bias of studies evaluating the value of suPAR for the prediction of mortality in bacterial infections.

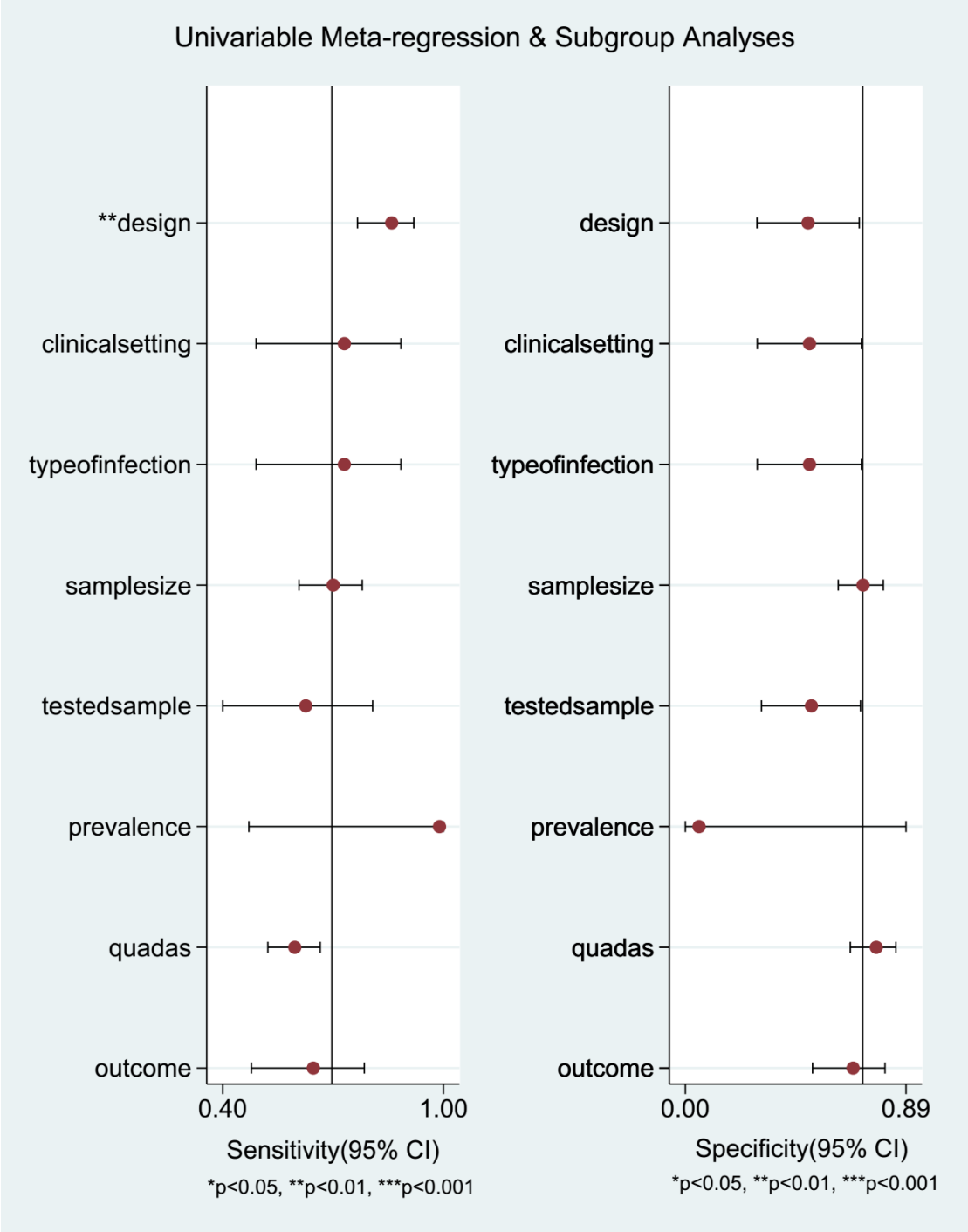

Figure S4. Univariate meta-regression and subgroup analysis of studies evaluating the value of suPAR for the prediction of mortality in bacterial infections.