

SUPPLEMENTS

Supplementary 1, Table 1

Bacteria-, leukocyte and erythrocyte counts median and (min – max) values in urine among patients with suspected urinary tract infection estimated by flow cytometer analysis.

Group	Bacteria	Cell counts median and (min – max) values / μL		
		Bacterial Cells	WBC ^a	RBC ^b
EC ^c	<i>Escherichia coli</i>	17,914 (14 – 87,742)	348 (2 - 9,296)	23 (1 - 36,127)
KC ^c	<i>Klebsiella pneumoniae</i>	20,866 (3 – 85,528)	153 (0 - 8,906)	16 (1 - 2,817)
	<i>Klebsiella oxytoca</i>	27,239 (118 -	351 (49 - 2,586)	17 (4, 69)
	Klebsiella "other"	55,644)	70 (5 - 136)	55 (19 - 91)
	All Klebsiella (K ^d)	29,817 (72 - 59,563)	160 (0 - 8906)	18 (1 - 2,817)
	<i>Enterobacter spp.</i>	24,240 (3 - 85,528)	166 (5 - 795)	30 (6 - 959)
	<i>Citrobacter spp.</i>	4,345 (61 - 12,577)	144 (19 - 494)	9 (2 - 31)
	<i>Citrobacter freundii</i>	8,405 (348 - 34,635)	226	7
	<i>Acinetobacter spp.</i>	15,220	118	24
	<i>Pantoea spp.</i>	163	56	15
	Aggregated	7,143	157 (0 - 9,296)	17 (0 - 36,127)
	15,346 (3 - 87,742)			
PR ^c	<i>Proteus vulgaris</i>	13,107 (2,128 -	79 (12 - 8,482)	197 (9 - 8,119)
	<i>Proteus mirabilis</i>	26,215)	903 (3 - 7,897)	52 (1 - 591)
	<i>Morganella morganii</i>	1,956 (9 - 77,272)	207 (4 - 1,104)	19 (3 - 167)

	<i>Providentia rettgeri</i>	249 (7 - 32,239)	9	8
	Aggregated	30,689	207 (3 - 8,482)	38 (1 - 8,119)
		2,128 (2,128 - 77,272)		
PS ^c	<i>P. aeruginosa</i>	6,888 (172 - 23,231)	1,278 (8 - 9,812)	73 (10 - 1,702)
	<i>Pseudomonas "other"</i>	3,467	294	12
	Aggregated	5,177 (172 - 23,231)	1,175 (8 - 9,812)	62 (10 - 1,702)
ST ^c	<i>S. saprophyticus</i> ^d	3,732 (1,119 - 649)	3,745 (155 - 154 (9, 409)	
	<i>S. aureus</i> ^e	474 (89 - 26,358)	1,374)	32 (6 - 117)
	CoNS ^f	4,383 (82 - 17,107)	936 (6 - 9,017)	19 (6 - 335)
	Aggregated	3,392 (82 - 17,107)	462 (17 - 6,271)	24 (6 - 409)
			466 (17 - 6,271)	
EN ^c	<i>Enterococcus faecalis</i>	2,623 (19 - 69,738)	200 (1 - 7,132)	19 (0 - 1,141)
	<i>Enterococcus faecium</i>	1,116 (45 - 37,509)	34 (1 - 2,196)	35 (3 - 78)
	Aggregated	2,103 (19 - 69,738)	120 (1 - 7,132)	20 (0 - 1,141)
SR ^c	Alpha-streptococci	2,877 (27 - 22,441)	64 (5 - 836)	19 (2 - 3,398)
	Streptococci Group C	1,286 (410 - 17,342)	1,399 (68 - 631)	59 (14 - 153)
	Streptococci Group A	111	782	6
	Streptococci Group G	467 (186 - 17,370)	467 (5 - 836)	28 (3 - 299)
	<i>Gemella hemolysans</i>	17,370)	973	16
	Aggregated	4,503	269 (5 - 17,370)	22 (2 - 3,398)
		1,583 (27 - 22,441)		
GB ^c	<i>Streptococcus</i>	272 (11 - 6,942)	36 (2 - 7,885)	19 (4 - 5,049)

<i>agalactiae</i>				
OT ^c	<i>Candida glabrata</i>	518	94	4
	<i>Diphtheroid rod</i>	18,266	65	40
	<i>H. influenzae</i>	2,263	434	108
	Aggregated	2,263 (515 - 18,266)	94 (65 - 434)	40 (4 - 108)
NE ^{c;g}	Negative / No growth	33 (1 - 12,313)	7 (0 - 3,793)	9 (0 - 81,386)

^a WBC= white blood cells/ leukocytes; ^b RBC= red blood cells/erythrocytes. ^c denotes all uropathogens or group of uropathogens presented in the right column. ^d denote all Klebsiella species only (K); ^e *Staphylococcus saprophyticus*; ^f *Staphylococcus aureus*; ^g Coagulase negative staphylococci; ^f Negative control

“+” (“-“) indicates that the observed value is higher (lower) than the value observed for *E. coli* / negative culture. * indicate that the corresponding p-value < 0.05.

Supplementary 2, Table 1

Bacteria-, leukocyte and erythrocyte counts median and (interquartile range) in urine among patients with suspected urinary tract infection estimated by flow cytometer analysis.

Group	Bacteria	Cell counts median and (min – max) values / μL		
		Bacterial Cells	WBC ^a	RBC ^b
EC ^c	<i>Escherichia coli</i>	17,914 (32,480)	348 (1,189)	23 (57)
KC ^c	<i>Klebsiella pneumonia</i>	20,866 (52,002)	153 (638)	16 (119)
	<i>Klebsiella oxytoca</i>	27,239 (24,635)	351 (822)	17 (8)
	Klebsiella "other"	29,817 (29,746)	70 (65)	55 (36)
	All Klebsiella (K ^d)	24,240 (49,774)	160 (632)	18 (52)
	<i>Enterobacter spp.</i>	4,345 (6,151)	166 (391)	30 (19)
	<i>Citrobacter spp.</i>	8,405 (16,090)	144 (315)	9 (14)
	<i>Citrobacter freundii</i>	15,220	226	7
	<i>Acinetobacter spp.</i>	163	118	24
	<i>Pantoea spp.</i>	7,143	56	15
			15,346 (33,693)	157 (416)

	Aggregated			
PR ^c	<i>Proteus vulgaris</i>	13,107 (12,044)	79 (4,235)	197 (4,055)
	<i>Proteus mirabilis</i>	1,956 (25,535)	903 (1,837)	52 (89)
	<i>Morganella morganii</i>	249 (2,103)	207 (585)	19 (24)
	<i>Providentia rettgeri</i>	30,689	9	8
	Aggregated	2,128 (25,966)	207 (1,169)	38 (158)
PS ^c	<i>P. aeruginosa</i>	6,888 (7,089)	1,278 (2,367)	73 (135)
	<i>Pseudomonas "other"</i>	3,467	294	12
	Aggregated	5,177 (6,271)	1,175 (1889)	62 (111)
ST ^c	<i>S. saprophyticus</i> ^d	3,732 (1,854)	3,745 (365)	154 (281)
	<i>S. aureus</i> ^e	474 (11,408)	936 (1,308)	32 (25)
	CoNS ^f	4,383 (1,272)	462 (1,176)	19 (96)
	Aggregated	3,392 (6,098)	466 (1185)	24 (94)
EN ^c	<i>Enterococcus faecalis</i>	2,623 (6,107)	200 (633)	19 (52)

	<i>Enterococcus faecium</i>	1,116 (1,557)	34 (607)	35 (41)
	Aggregated	2,103 (5,737)	120 (626)	20 (51)
SR ^c	Alpha-streptococci	2,877 (4,924)	64 (399)	19 (50)
	Streptococci Group C	1,286 (5,079)	1,399 (3,253)	59 (38)
	Streptococci Group A	111	782	6
	Streptococci Group G	467 (8,592)	467 (216)	28 (148)
	<i>Gemella hemolysans</i>	4,503	973	16
	Aggregated	1,583 (4,873)	269 (629)	22 (57)
GB ^c	<i>Streptococcus agalactiae</i>	272 (1,272)	36 (365)	19 (18)
OT ^c	<i>Candida glabrata</i>	518	94	4
	<i>Diphtheroid rod</i>	18,266	65	40
	<i>H. influenzae</i>	2,263	434	108
	Aggregated	2,263 (8,874)	94 (184)	40 (52)
NE ^{c,g}	Negative / No growth	33 (53)	7 (25)	9 (19)

^a WBC= white blood cells/ leukocytes; ^b RBC= red blood cells/erythrocytes. ^c denotes all uropathogens or group of uropathogens presented in the right column. ^d denote all *Klebsiella spp.* only (K); ^e *Staphylococcus saprophyticus*; ^f *Staphylococcus aureus*; ^g Coagulase negative staphylococci; ^f Negative control.

“+” (“-“) indicates that the observed value is higher (lower) than the value observed for *Escherichia coli* / negative culture. * indicate that the corresponding p-value < 0.05.

Supplementary

Table 3. Differences in bacteria counts (median values) between groups of bacteria (row-column).

B	K	KC	PR	PS	ST	EN**	SR	GB
EC	-6,326	2,568	15,786*	12,737*	14,522**	15,811**	16,331**	17,642**
K		8,894	22,112*	19,063*	20,848**	22,137**	22,657*	23,968**
KC			13,219	10,169	11,955**	13,243**	13,764*	15,074**
PR				3,050	-1,264	24	545	1,856*
PS					1,786	3,074	3,595	4,905**
ST						1,288	1,129	3,120*
EN							521	1,831*
SR								1,311*

* corresponding p-value < 0.05 and ** locally Bonferroni adjusted p-value < 0.05 (*i.e.* p-value < 0.05/36). Group of bacteria: EC = *Escherichia coli*; KC = *Klebsiella spp.*, *Enterobacter spp.*, *Citrobacter spp.*, *Acinetobacter spp.*, *Pantoea spp.*; K = *Klebsiella spp.*; PR = *Proteus spp.*; *Morganella spp.* and *Providentia rettgeri* group; EN = *Enterococcus spp.* group; PS = *Pseudomonas spp.* group; ST = *Staphylococcus spp.* group; SR = Streptococci (A,C,G), Alpha-haemolytic streptococci and *Gemella hemolysans* group; GB = *Streptococcus agalactiae* (GBS). NE = specimens with negative culture.

Supplementary

Table 4. Differences in leukocyte counts (median values) between groups of bacteria (row-column).

W	K	KC	PR	PS	ST	EN	SR	GB
EC	187*	191*	140	-828	-118	227*	78	311*
K		<u>4</u>	-48	-1015*	-306	34	-109	124
KC			-50	-1,018*	-309*	37	-112	121
PR				-96	-258	87	-62	171
PS					710	1,055*	906	1,139*
ST						345*	196	429*
EN							-149	84
SR								233

* corresponding p-value < 0.05 and ** locally Bonferroni adjusted p-value < 0.05 (*i.e.* p-value < 0.05/36). Group of bacteria: EC = *Escherichia coli*; KC = *Klebsiella spp.*, *Enterobacter spp.*, *Citrobacter spp.*, *Acinetobacter spp.*, *Pantoea spp.*; K = *Klebsiella spp.*; PR = *Proteus spp.*; *Morganella spp.* and *Providentia rettgeri* group; EN = *Enterococcus spp.* group; PS = *Pseudomonas spp.* group; ST = *Staphylococcus spp.* group; SR = Streptococci (A,C,G), Alpha-haemolytic streptococci and *Gemella hemolysans* group; GB = *Streptococcus agalactiae* (GBS). NE = specimens with negative culture.

Supplementary

Table 5. Differences in erythrocyte counts (median values) between groups of bacteria (row-column).

R	K	KC	PR	PS	ST	EN	SR	GB
EC	5	6	-15	-38*	0	3	1	4
K		<u>1</u>	-20	-43*	-5	-2	-4	-1
KC			-21	-44*	-6	-3	-4	-1
PR				-23	14	18	16	19
PS					38	42*	40	43*
ST						4	2	5
EN							-2	1
SR								3

* corresponding p-value < 0.05 and ** locally Bonferroni adjusted p-value < 0.05 (*i.e.* p-value < 0.05/36). Group of bacteria: EC = *Escherichia coli*; KC = *Klebsiella spp.*, *Enterobacter spp.*, *Citrobacter spp.*, *Acinetobacter spp.*, *Pantoea spp.*; K = *Klebsiella spp.*; PR = *Proteus spp.*; *Morganella spp.* and *Providentia rettgeri* group; EN = *Enterococcus spp.* group; PS = *Pseudomonas spp.* group; ST = *Staphylococcus spp.* group; SR = Streptococci (A,C,G), Alpha-haemolytic streptococci and *Gemella hemolysans* group; GB = *Streptococcus agalactiae* (GBS). NE = specimens with negative culture.