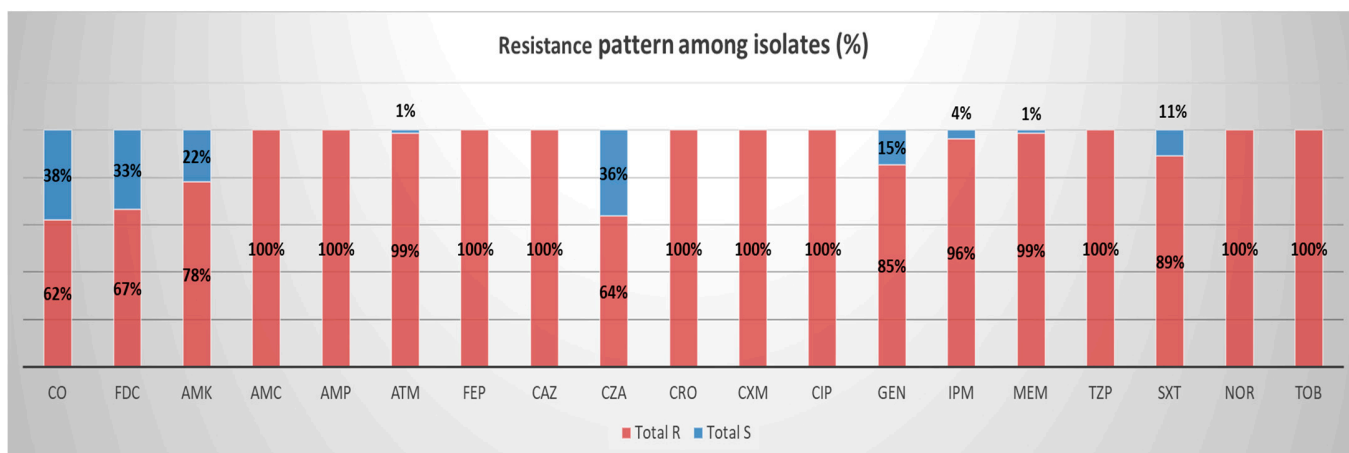
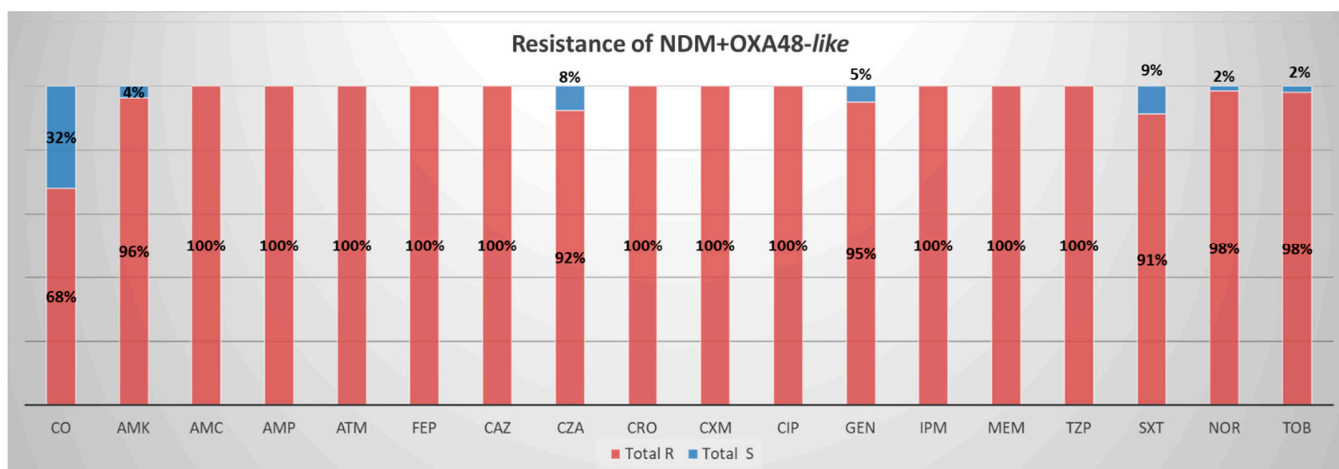


## Supplementary material

**Figure S1. Resistance pattern (%)**



**Figure S2. Resistance pattern only for NDM+OXA-48-like(%)**



### Abbreviations:

Total S= total sensibilities, Total R= total resistance

CO - Colistin

FDC - Cefiderocol

AMK - Amikacin

AMC - Amoxicillin - Clavulanic Acid

AMP - Ampicillin

ATM - Aztreonam

TOB - Tobramycin

FEP - Cefepime

CAZ - Ceftazidime

CZA - Ceftazidime - Avibactam

CRO - Ceftriaxone

CXM - Cefuroxime Axetil

CIP - Ciprofloxacin

GEN - Gentamicin

IPM - Imipenem

MEM - Meropenem

TZP - Piperacillin - tazobactam

SXT - Trimethoprim - Sulfamethoxazole

NOR - Norfloxacin

**Table S3. Past hospitalization and distribution of cabapenemases**

Carbapenemase type		OXA-48 n=34	NDM n=16	KPC n=23	NDM+OXA-48-like n=48	Total n=162
Previous hospitalization	No, n(%)	3(8.8)	3(18.8)	9(28.1)	16(20.0)	31(19.1)
	Yes, n(%)	31(91.2)	13(81.3)	23(71.9)	64(80.0)	131(80.9)

**Table S4. Comparison of specialties and carbapenemases distribution**

Carbapenemase type		OXA-48 n=31	NDM n=13	KPC n=23	NDM+OXA-48-like n=64	Total n=131
Admission in different medical specialties	Surgery wards, n(%)	10(32.3)	6(46.2)	6(26.1)	18(28.1)	40(30.5)
	Medical wards, n(%)	21(67.7)	7(53.8)	17(73.9)	46(71.9)	91(69.5)

**Table S5. Carbapenem regimen**

Carbapenem based regimen	All n=75(%)	Recovered n=32 (%)	Deceased n=18 (%)	NDM+ OXA-48-like n=46 (%)	Recovered NDM+ OXA-48-like n=22 (%)	Deceased NDM +OXA-48-like n=12 (%)
Monotherapy (meropenem)	17(22.3)	5(15.6)	3(16.7)	7(15.2)	4(18.1)	2(16.6)
Combinations of antibiotics	58(77.3)	27(84.38)	15(83.3)	39(84.7)	18(81.8)	10(83.3)
Carbapenem spared regimen	n=76(%)	n=30(%)	n=25(%)	n=31(%)	n=11(%)	n=12(%)
Monotherapies	45(59.2)	17(56.6)	16(64.0)	11(35.4)	2(18.1)	5(41.6)
Combinations of antibiotics	31(40.8)	13(43.3)	9(36.0)	20(64.5)	9(81.8)	7(58.3)

Table S6. Colistin based regimen

Colistin based regimen (n=76)	All n=7 (%)	Cured n=27 (%)	Deceased n=32 (%)	NDM+ OXA-48-like n=45 (%)	Cured NDM+ OXA-48-like n=18 (%)	Deceased NDM +OXA-48-like n=16 (%)
Monotherapy	15(19.0)	4(14.8)	8(25.0)	6(13.0)	1(5.0)	2(12.5)
Combinations of antibiotics	16(80.0)	23(85.0)	24(75)	39(86.6)	17(95.0)	14(87.5)
Colistin spared regimen (n=75)	n=77(%)	n=34(%)	n=16(%)	n=32(%)	n=14(%)	n=23(%)
Monotherapy	47(61.0)	19(55.0)	12(75.0)	12(37.5)	5(35.7)	5(21.7)
Combinations of antibiotics	30(38.0)	15(44.1)	4(25.0)	20(62.5)	9(64.2)	4(17.3)

Table S7. Bivariate analysis of factors associated with patient's outcomes

variable	Survivor n=108	Not-survivor n=48	RR (%CI)	p-value
Age, average (S.D.)	66.19(15.73)	70.96(13.18)	-	0.069
Gender				0.058
F	41(63.1)	24(36.9)	-	
M	67(73.6)	24(26.4)	-	
Disease Severity				<b>0.014</b>
mild	15(93.8)	1(6.3)	reference	-
moderate	76(70.4)	32(29.6)	4.74 (0.69-32.33)	0.112
severe/critical	17(53.1)	15(46.9)	<b>7.50 (1.08-51.84)</b>	<b>0.0411</b>
ICU_admission				<b>&lt;0.0001</b>
no	95(79.4)	26(20.6)	reference	-
yes	13(34.2)	22(65.8)	2.92 (1.91-4.47)	<b>&lt;0.0001</b>
Sample type				<b>0.001</b>
other	37(55.2)	30(44.8)	reference	-
urinary	71(79.8)	18(20.2)	0.45(0.28-0.72)	<b>0.0011</b>
Carbapenemase_type				0.991
OXA-48	21(70.0)	9(30.0)	-	
NDM	10(66.7)	5(33.3)	-	
KPC	22(71.0)	9(29.0)	-	
NDM+OXA-48-like	55(68.8)	25(31.3)	-	
G-neg coinfection				<b>0.019</b>

	no	69(76.7)	21(23.3)	reference	-
	yes	39(59.1)	27(40.9)	1.75(1.09-2.81)	<b>0.020</b>
<b>G-neg carriage</b>					<b>0.026</b>
	no	73(72.3)	28(27.7)	reference	
	yes	35(63.6)	20(36.4)	1.31(0.81-2.09)	0.258
<b>G-neg bacteria coinfection and/or carriage</b>					0.075
	<i>Pseudomonas spp.</i>	10(62.5)	6(37.5)	-	
	<i>E.coli</i>	9(75.0)	3(25.0)	-	
	<i>Acinetobacter spp.</i>	6(60.0)	4(40.0)	-	
	<i>Proteus spp.</i>	3(50.0)	3(50.0)	-	
	<i>Providencia spp.</i>	5(83.3)	1(16.7)	-	
<b>Comorbid neoplasm</b>					0.661
	no	75(68.2)	35(31.8)	-	
	yes	33(71.7)	13(28.3)	-	
<b>Comorbid (diabetes mellitus)</b>					<b>0.007</b>
	no	80(76.2)	25(23.8)	reference	
	yes	28(54.9)	23(45.1)	1.89(1.19-2.99)	<b>0.006</b>
<b>Transit_urology ward</b>					<b>0.033</b>
	no	94(66.7)	47(33.3)	reference	
	yes	14(93.3)	1(6.7)	0.10(0.01-0.66)	<b>0.0175</b>
<b>Transit surgery or medical specialties</b>					0.305
	Medical wards	29(74.4)	10(25.6)	-	
	Surgery wards	56(65.1)	30(34.9)	-	
<b>Hospitalisation in the past</b>					0.480
	no	23(74.2)	8(25.8)	-	
	yes	90(67.7)	43(32.3)	-	
<b>UTI/non UTI*</b>					<b>0.002</b>
	Non UTI	35(55.6)	28(44.4)	reference	
	UTI	73(78.5)	20(21.5)	0.48(0.30-0.77)	<b>0.0014</b>
<b>Carbapenem based regimen</b>					0.058
	Carbapenem spared	47(62.7)	28(37.3)	reference	
	Carbapenem based	54(77.1)	16(22.9)	0.61(0.36-1.03)	0.0648
<b>Ceft-Avi based regimen</b>					0.198
	Ceft-Avi spared	81(72.3)	31(27.7)	-	
	Ceft-Avi based	20(60.6)	13(39.4)	-	
<b>Colistin based regimen</b>					<b>0.008</b>
	Colistin -spared	60(77.6)	17(22.1)	reference	
	Colistin -based	44(57.9)	32(42.1)	1.90(1.16-3.13)	

\*UTI : urinary tract infection