

**Supplementary table 1:** Summary of pathogen distribution in the external validation cohort (NeoOBS-SA study), based on all culture positive hospital acquired infection episodes (n=186)

Organism, n (%)	Blood culture <sup>1</sup>		Blood culture and/or CSF		Total	
<b>Gram-negative organisms</b>	<b>92</b>	<b>(49.5)</b>	<b>8</b>	<b>(4.3)</b>	<b>100</b>	<b>(53.8)</b>
<i>Klebsiella</i> spp.	40	(21.5)	1	(0.5)	41	(22.0)
<i>A. baumannii</i>	34	(18.3)	6	(3.2)	40	(21.5)
<i>S. marcescens</i>	10	(5.4)			10	(5.4)
<i>E. coli</i>	5	(2.7)	1	(0.5)	6	(3.2)
Other <sup>2</sup>	3	(1.6)			3	(1.6)
<b>Gram-positive organisms</b>	<b>41</b>	<b>(22.0)</b>			<b>41</b>	<b>(22.0)</b>
<i>S. aureus</i>	17	(9.1)			17	(9.1)
<i>Enterococcus</i> spp.	9	(4.8)			9	(4.8)
CONS	12	(6.5)			12	(6.5)
<i>S. agalactiae</i>	3	(1.6)			3	(1.6)
<b>Fungi</b>	<b>23</b>	<b>(12.4)</b>			<b>23</b>	<b>(12.4)</b>
<i>C. albicans</i>	8	(4.3)			8	(4.3)
<i>C. parapsilosis</i>	8	(4.3)			8	(4.3)
<i>C. auris</i>	4	(2.2)			4	(2.2)
Other <i>Candida</i> species	3	(1.6)			3	(1.6)
<b>Polymicrobial</b>	<b>21</b>	<b>(11.3)</b>	<b>1</b>	<b>(0.5)</b>	<b>22</b>	<b>(11.8)</b>
<b>Total</b>	<b>177</b>	<b>(95.2)</b>	<b>9</b>	<b>(4.8)</b>	<b>186</b>	<b>(100.0)</b>

<sup>1</sup>This included 3 central line associated blood stream infections (CLABSI): *S. marcescens* 1, *C. albicans* 1, polymicrobial 1.

<sup>2</sup> Other included *E. cloacae* 1, *Citrobacter freundii* 2