Table 38: Clinical evidence profile: Comparison 1. Aztreonam lysine versus placebo

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Aztreonam lysine	Placebo	Relative (95% CI)	Absolute		
Lung function: relative change in FEV$_1$% predicted (follow-up: 28 days; range of scores: 0-100; Better indicated by higher values)												
1 (Wainwright 2011)	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[1]	none	76	81	-	MD 2.79 higher (0.48 TO 5.10 higher)	MODERATE	CRITICAL
Number of patients with 1 or more exacerbations												
NMA outcome												
Suppression of the organism: adjusted mean change sputum density (follow-up 28 days; measured with: log10 CFU/G; Better indicated by higher values)												
2 (Retsch-Bogart 2009, Wainwright 2011)	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	156	165	-	MD 1.40 lower (1.94 lower to 0.85 higher)	HIGH	IMPORTANT
Nutritional status (follow-up 28 days; measured with: % weight change (kg) ; Better indicated by higher values)												

Quality assessment							No of patients		Effect		Qualit y	Importa nce
No of studies	Design	Risk of bias	Inconsiste ncy	Indirectn ess	Imprecisi on	Other considerat ions	Aztre onam lysine	Plac ebo	Relati ve (95% CI)	Absolute		
1 1 (Retsch-Bogart 2009)	randomis ed trials	no serious risk of bias	no serious inconsisten cy	no serious indirectne ss	no serious imprecisio n	none	80	84	-	MD 1 higher (0.33 to 1.67 higher)	HIGH	IMPORT ANT
Quality of life: CFQ-R body image (follow-up 28 days; range of scores: 0-100; Better indicated by higher values)												
2 (Retsch-Bogart 2009, Wainwright 2011)	randomis ed trials	no serious risk of bias	no serious inconsisten cy	no serious indirectne ss	serious[1]	none	156	164	-	MD 2.44 higher (0.35 lower to 5.23 higher)	MODE RATE	IMPORT ANT
Quality of life: CFQ-R digestion (follow-up 28 days; range of scores: 0-100; Better indicated by higher values)												
2 (Retsch-Bogart 2009, Wainwright 2011)	randomis ed trials	no serious risk of bias	no serious inconsisten cy	no serious indirectne ss	no serious imprecisio n	none	156	165	-	MD 0.45 lower (3.53 lower to 2.63 higher)	HIGH	IMPORT ANT
Quality of life: CFQ-R eating (follow-up 28 days; range of scores: 0-100; Better indicated by higher values)												
2 (Retsch-Bogart 2009, Wainwright 2011)	randomis ed trials	no serious risk of bias	very serious[2]	no serious indirectne ss	serious[1]	none	156	165	-	MD 4.99 higher (1.47 lower to 711.46higher)	VERY LOW	IMPORT ANT
Quality of life: CFQ-R emotional functioning (follow-up 28 days; range of scores: 0-100; Better indicated by higher values)												
2 (Retsch-Bogart 2009, Wainwright 2011)	randomis ed trials	no serious risk of bias	very serious[2]	no serious indirectne ss	serious[1]	none	156	164	-	MD 2.36 higher (3.13 lower to 7.84 higher)	VERY LOW	IMPORT ANT
Quality of life: CFQ-R health perceptions (follow-up 28 days; range of scores: 0-100; Better indicated by higher values)												
2 (Retsch-Bogart 2009, Wainwright 2011)	randomis ed trials	no serious risk of bias	very serious[2]	no serious indirectne ss	serious[1]	none	134	138	-	MD 6.82higher (0.75 to 12.89 higher)	VERY LOW	IMPORT ANT

Quality assessment							No of patients		Effect		Qualit y	Importa nce
No of studies	Design	Risk of bias	Inconsiste ncy	Indirectn ess	Imprecisi on	Other considerat ions	Aztre onam lysine	Plac ebo	Relati ve (95% CI)	Absolute	Qualit y	Importa nce
Quality of life: CFQ-R physical functioning (follow-up 28 days; range of scores: 0-100; Better indicated by higher values)												
2 (Retsch-Bogart 2009, Wainwright 2011)	randomis ed trials	no serious risk of bias	very serious[2]	no serious indirectne ss	serious[1]	none	156	164	-	MD 5.60 higher (0.96 lower to 12.15 higher)	VERY LOW	IMPORT ANT
Quality of life: CFQ-R respiratory symptoms (follow-up 28 days; range of scores: 0-100; Better indicated by higher values)												
2 (Retsch-Bogart 2009, Wainwright 2011)	randomis ed trials	no serious risk of bias	very serious[2]	no serious indirectne ss	serious[1]	none	156	165	-	MD 4.81 higher (4.60 lower to 14.21 higher)	VERY LOW	IMPORT ANT
Quality of life: CFQ-R role/school (follow-up 28 days; range of scores: 0-100; Better indicated by higher values)												
2 (Retsch-Bogart 2009, Wainwright 2011)	randomis ed trials	no serious risk of bias	very serious[2]	no serious indirectne ss	serious[1]	none	133	139	-	MD 2.97 higher (3.20lower to 9.13 higher)	VERY LOW	IMPORT ANT
Quality of life: CFQ-R social functioning (follow-up 28 days; range of scores: 0-100; Better indicated by higher values)												
2 (Retsch-Bogart 2009, Wainwright 2011)	randomis ed trials	no serious risk of bias	No serious inconsisten cy	no serious indirectne ss	serious[1]	none	155	164	-	MD 3.54 higher (0.78 to 6.31 higher)	MODE RATE	IMPORT ANT
Quality of life: CFQ-R treatment burden (follow-up 28 days; range of scores: 0-100; Better indicated by higher values)												
2 (Retsch-Bogart 2009, Wainwright 2011)	randomis ed trials	no serious risk of bias	very serious[2]	no serious indirectne ss	very serious[3]	none	156	165	-	MD 0.36 lower (7.42 lower to 6.69 higher)	VERY LOW	IMPORT ANT
Quality of life: CFQ-R vitality (follow-up 28 days; range of scores: 0-100; Better indicated by higher values)												
2 (Retsch-Bogart 2009,	randomis ed trials	no serious	serious[2]	no serious	serious[1]	none	134	138	-	MD 5.46 higher (0.16 to 10.76 higher)	LOW	IMPORT ANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Aztreonam lysine	Placebo	Relative (95% CI)	Absolute		
Wainwright 2011)		risk of bias		indirectness								
Quality of life: CFQ-R weight (follow-up 28 days; range of scores: 0-100; Better indicated by higher values)												
2 (Retsch-Bogart 2009, Wainwright 2011)	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[1]	none	133	139	-	MD 2.58 higher (2.83 lower to 7.98 higher)	MODERATE	IMPORTANT
Minor adverse events: chest discomfort (follow-up 28 days)												
1 (Retsch-Bogart 2009)	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[4]	none	5/80 (6.3%)	4/84 (4.8%)	RR 1.31 (0.37 to 4.71)	15 more per 1000 (from 30 fewer to 177 more)	LOW	IMPORTANT
Minor adverse events: cough (follow-up 28 days)												
3 (McCoy 2009, Retsch-Bogart 2009, Wainwright 2011)	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[4]	none	106/291 (36.4%)	82/241 (34%)	RR 1.09 (0.87 to 1.38)	31 more per 1000 (from 44 fewer to 129 more)	LOW	IMPORTANT
								34.2%		31 more per 1000 (from 44 fewer to 130 more)		
Minor adverse events: headache (follow-up 28 days)												
2 (Retsch-Bogart 2009, Wainwright 2011)	randomised trials	no serious risk of bias	serious[6]	no serious indirectness	very serious[4]	none	19/156 (12.2%)	20/165 (12.1%)	RR 0.94 (0.34 to 2.61)	7 fewer per 1000 (from 80 fewer to 195 more)	VERY LOW	IMPORTANT
								12.1%		7 fewer per 1000 (from 80		

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Aztreonam lysine	Placebo	Relative (95% CI)	Absolute		
										fewer to 195 more)		
Major adverse events: dyspnoea (follow-up 28 days)												
1 (Retsch-Bogart 2009)	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[4]	none	5/80 (6.3%)	8/84 (9.5%)	RR 0.66 (0.22 to 1.92)	32 fewer per 1000 (from 74 fewer to 88 more)	LOW	IMPORTANT
Major adverse events: haemoptysis (follow-up 28 days)												
2 (McCoy 2009, Retsch-Bogart 2009)	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[4]	none	18/215 (8.4%)	15/160 (9.4%)	RR 0.86 (0.44 to 1.7)	13 fewer per 1000 (from 53 fewer to 66 more)	LOW	IMPORTANT
								9.4%		13 fewer per 1000 (from 53 fewer to 66 more)		
Mortality (follow-up 28 days)												
1 (McCoy 2009)	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	Not calculable	none	0/135 (0%)	0/76 (0%)	-	-	HIGH	IMPORTANT
Emergence of resistant organisms: persistent isolation of *S aureus* (follow-up 42 days)												
1 (Retsch-Bogart 2009)	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[5]	none	2/74 (2.7%)	5/81 (6.2%)	RR 0.44 (0.09 to 2.19)	35 fewer per 1000 (from 56 fewer to 73 more)	MODERATE	IMPORTANT
Emergence of resistant organisms : persistent isolation of *B cepacia* (follow-up 42 days)												

Quality assessment							No of patients		Effect		Qualit y	Importa nce
No of studies	Design	Risk of bias	Inconsiste ncy	Indirectn ess	Imprecisi on	Other considerat ions	Aztre onam lysine	Plac ebo	Relati ve (95% CI)	Absolute		
1 (Retsch-Bogart 2009)	randomis ed trials	no serious risk of bias	no serious inconsisten cy	no serious indirectne ss	Not calculable	none	0/74 (0%)	0/81 (0%)	-		HIGH	IMPORT ANT
Emergence of resistant organisms: persistent isolation of _S maltophilia_ (follow-up 42 days)												
1 (Retsch-Bogart 2009)	randomis ed trials	no serious risk of bias	no serious inconsisten cy	no serious indirectne ss	very serious[4]	none	2/74 (2.7%)	0/81 (0%)	RR 5.47 (0.27 to 112.0 4)	-	LOW	IMPORT ANT
Emergence of resistant organisms: persistent isolation of _A xilosidans_ (follow-up 42 days)												
1 (Retsch-Bogart 2009)	randomis ed trials	no serious risk of bias	no serious inconsisten cy	no serious indirectne ss	very serious[4]	none	1/74 (1.4%)	2/81 (2.5 %)	RR 0.55 (0.05 to 5.91)	11 fewer per 1000 (from 23 fewer to 121 more)	LOW	IMPORT ANT

Abbreviations: CFQ-R: cystic fibrosis questionnaire revised; CI: confidence interval; FEV_1: forced expiratory volume in 1 second; MD: mean difference; RR: risk ratio
1 The quality of the evidence was downgraded by 1 as the 95% CI crossed 1 clinical MID
2 The quality of the evidence was downgraded by 1 or by 2 due to the moderate of high heterogeneity in the different CFQ-R domains (eating I2=79%; emotional functioning I2=80%; health perceptions I2=62%; respiratory symptoms I2=85%; role/ school I2=73%; treatment burden I2=79%; vitality I2=40%)
3 The quality of the evidence was downgraded by 2 as the 95% CI crossed 2 clinical MIDs
4 The quality of the evidence was downgraded by 2 as the 95% CI crossed 2 default MIDs
5 The quality of the evidence was downgraded by 1 as the 95% CI crossed 1 default MID
6 The quality of the evidence was downgraded by 2 due to high heterogeneity (I2=62%)