

Supplementary material

Supplementary Table 1. Characteristics of patients according to source control procedure performed

	Method of source control (radiological, surgical or no source control)								
	Surgical procedure (n 229)			Percutaneous drainage (n 59)			No source control procedure (n 128)		
	Count	%	Median	Count	Column N %	Median	Count	Column N %	Median
Gender									
Female	123	53.7%		34	57.6%		66	51.6%	
Male	106	46.3%		25	42.4%		62	48.4%	
Site of CABI			65.5 (56-76)			65.5 (45-76)			65.5 (56-76)
Non colonic	94	41.0%		36	61.0%		51	39.8%	
Colon	135	59.0%		23	39.0%		77	60.2%	
Collection present	92	42.60%		53	91.40%		87	68.50%	
Single collection	79	73.80%		44	83.00%		64	71.90%	
Multiple collections	28	26.20%		9	17.00%		25	28.10%	
Size of collection (cm)			6.2 (5-9)			7.9 (6-10)			4.6 (3-6)
Perforated viscus	143	72.60%		24	44.40%		64	52.90%	
Underlying pathology									
Diverticular disease	66	28.8%		11	18.6%		57	44.5%	
Cancer	20	8.7%		3	5.1%		7	5.5%	
Post-operative complication	38	16.6%		28	47.5%		25	19.5%	
Other	105	45.9%		17	28.8%		39	30.5%	
Antibiotic duration (days)			10.5 (7-17)			14 (10-24.5)			12 (8.5-19)

Supplementary Table 2. Antibiotic regimen used to treat cIAI

	Total	Surgical procedure	Percutaneous drainage	No source control
Primary IV antibiotic regimen*, n = 399				
Piperacillin-tazobactam (+/- aminoglycoside)	128/399 (32.1)	82/222 (36.9)	18/56 (32.1)	28/120 (23.3)
Piperacillin-tazobactam & metronidazole	18/399 (4.5)	15/222 (6.8)	1/56 (1.8)	2/120 (1.7)
Amoxicillin-clavulanic acid (+/- metronidazole)	102/399 (25.6)	42/222 (18.9)	18/56 (32.1)	42/120 (35.0)
Aminoglycoside & metronidazole (+/- β-lactam)	45/399 (11.3)	21/222 (9.5)	5/56 (8.9)	19/120 (15.8)
Carbapenem	26/399 (6.5)	17/222 (7.7)	4/56 (7.1)	5/120 (4.2)
Cefuroxime and metronidazole	20/399 (5.0)	9/222 (4.1)	3/56 (5.4)	8/120 (6.7)
Quinolone & metronidazole (+/- β-lactam +/- glycopeptide)	15/399 (3.8)	8/222 (3.6)	3/56 (5.4)	4/120 (3.3)
3rd generation cephalosporin & metronidazole	8/399 (2.0)	2/222 (0.9)	0/56 (0.0)	6/120 (5.0)
Other	37/399 (9.3)	26/222 (11.7)	4/56 (7.1)	6/120 (5.0)
Primary oral regimen*, n = 205				
Amoxicillin-clavulanic acid	121 /205 (59.0)	44/81 (54.3)	12/34 (35.3)	65/89 (73.0)
Amoxicillin-clavulanic acid & metronidazole	11/205 (5.4)	4/81 (4.9)	3/34 (8.8)	4/89 (4.5)
Amoxicillin & metronidazole	5/205 (2.4)	4/81 (4.9)	1/34 (2.9)	0/89 (0.0)
Oral cephalosporin & metronidazole	4/205 (2.0)	1/81 (1.2)	0/34 (0.0)	3/89 (3.4)
Quinolone & metronidazole (+/- β-lactam)	19/205 (9.3)	5/81 (6.2)	6/34 (17.6)	8/89 (9.0)
Doxycycline & metronidazole	10/205 (4.9)	2/81 (2.5)	3/34 (8.8)	5/89 (5.6)
Other	35/205 (17.1)	21/81 (25.9)	9/34 (26.5)	4/89 (4.5)

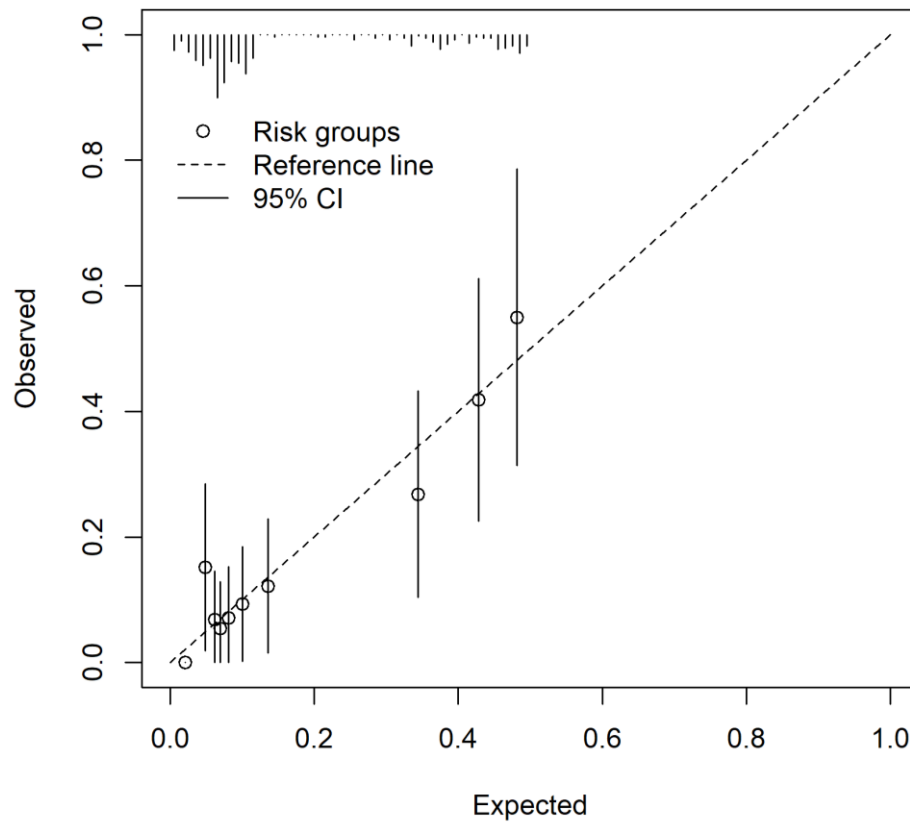
Supplementary Table 3. Univariable odds ratio for risk of relapse and risk of mortality

Predictor	Comparison	Relapse, OR (95% CI)	Mortality, OR (95% CI)
Age (years)	Intercept	-0.88 (0.45)	-7.07 (1.01)
	23.5-34.5	1.00	1.00
	34.5-55.5	0.84 (0.67, 1.05)	3.15 (2.08, 4.78)
	55.5-65.5	0.71 (0.45, 1.10)	9.59 (4.23, 21.73)
	65.5-75.5	0.63 (0.35, 1.14)	19.66 (6.69, 57.76)
	75.5-85.5	0.57 (0.27, 1.17)	40.29 (10.58, 153.49)
	85.5-95.5	0.51 (0.21, 1.21)	82.59 (16.72, 407.90)
Gender	Intercept	-1.74 (0.19)	-1.94 (0.20)
	Female	1.00	1.00
	Male	1.46 (0.88, 2.44)	0.69 (0.37, 1.29)
Underlying pathology	Intercept	-1.61 (0.23)	-2.32 (0.30)
	1-diverticular disease	1.00	1.00
	2- cancer	1.00 (0.35, 2.90)	4.36 (1.63, 11.62)
	3- post operative complication	1.62 (0.83, 3.14)	0.59 (0.20, 1.74)
	4 - Other	0.84 (0.44, 1.59)	1.51 (0.72, 3.20)
Site	Intercept	-1.60 (0.20)	-2.40 (0.27)
	0 – non-colonic cIAI	1.00	1.00
	1 – colonic cIAI	1.08 (0.65, 1.81)	1.74 (0.91, 3.31)
Perforated Viscus	Intercept	-1.40 (0.21)	-3.12 (0.42)
	0 – not present	1.00	1.00
	1 – present	0.75 (0.44, 1.30)	3.00 (1.21, 7.46)
Collections	Intercept	-2.18 (0.26)	-1.91 (0.23)
	0 – not present	1.00	1.00
	1 – present	2.51 (1.39, 4.54)	0.74 (0.40, 1.38)
Anastomotic Leak	Intercept	-1.67 (0.14)	-2.09 (0.17)
	0 – not present	1.00	1.00
	1 – present	2.21 (1.06, 4.58)	0.88 (0.30, 2.59)
Duration of antibiotics (days)	Intercept	-1.11 (0.19)	-1.38 (0.33)
	2- 5	1.00	1.00
	5 - 8	1.24 (1.08, 1.43)	0.82 (0.71, 0.96)
	8 - 12	1.61 (1.18, 2.18)	0.65 (0.47, 0.91)
	7- 17	2.24 (1.33, 3.77)	0.49 (0.28, 0.85)
	17 - 41	6.48 (1.93, 91.75)	0.19 (0.05, 0.69)
	41 -90	93.89 (4.95, 1782.1)	0.02 (0.00, 0.40)
Failure of initial management	Intercept	-2.51 (0.24)	-2.35 (0.22)
	0 – present	1.00	1.00
	1 – not present	7.39 (4.07, 13.41)	1.35 (0.67, 2.74)
Source control	Intercept	-1.83 (0.19)	-1.97 (0.20)
	0 - surgery	1.00	1.00
	1 – radiological drainage	2.97 (1.53, 5.78)	0.25 (0.06, 1.09)
	2 – no source control	1.31 (0.72, 2.38)	1.10 (0.58, 2.10)

Supplementary Table 4. Apparent performance measures for relapse and mortality models

Performance Measure	Relapse	Mortality
C statistic	0.78 (0.72, 0.84)	0.82 (0.77, 0.88)
E/O	1.00	1.00

Supplementary Figure 1. Calibration plot for relapse - imputed dataset 1



Supplementary Figure 2. Calibration plot for mortality - imputed dataset 1

