Table 2 *Actinotignum* related urinary tract infections and colonization

Type of urinary tract infection	Underlying diseases of the genito-urinary tract	Polymicrobial infection	Treatment	Outcome[a]
Cystitis/urethritis (n=11)	BPH, neurogenic bladder with intermittent self-catheterization, vaginal hysterectomy, prostate cancer, invasive bladder cancer, cervical cancer, Renal cell carcinoma s/p nephrectomy	6/11 (55%)	**Monotherapy** β-lactam antibiotics (n=4) - 1 patient treated with IV antibiotics - 3 patients with oral antibiotics Duration 3-10 days Quinolones (n=3) Duration 3-10 days (data available for 2 patients) Sulfonamide (n=1) Duration: 7 days **Combination therapy** Two β-lactam antibiotics (n=2) - oral cephalosporin followed by penicillin for 14 days - IV cephalosporin followed by oral penicillin for 10 days Macrolide and oral cephalosporin (n=1) Duration: 7 days	Favorable no recurrence
Pyelonephritis (n=4)	**Nephrolithiasis (staghorn calculi), neurogenic bladder requiring self-catheterization/indwelling suprapubic/Foley catheter, horseshoe kidney,** metastatic prostate cancer, cystectomy with ileal conduit formation	3/4 (75%)	IV β-lactam antibiotics and metronidazole for 28 days (n=1) ≥ 1 IV β-lactam antibiotics (2-14 days) followed by transition to oral sulfonamide (10-18 days) (n=2) Oral β-lactam antibiotic for 30 days (n=1)	Favorable no recurrence Nephrostomy tube placement for decompression at time of infection (1 case) Stone extraction after finishing treatment (1 case)
Urinary tract infection complicated by bacteremia (n=3)	BPH, uterine/bladder prolapse, neurogenic bladder with chronic Foley	2/3(67%)	IV β-lactam antibiotic for 14 days (n=2) Oral Quinolone for 14 days (n=1)	Favorable with complete resolution and no recurrence 1 patient presented with septic shock
Positive cultures during elective urological procedure (n=5)[a]	Hydronephrosis, nephrolithiasis, traumatic bladder/ureteral injury with colo-vesical/recto-urethral fistula, invasive high-grade renal papillary carcinoma, invasive bladder cancer, cystectomy with ileal conduit formation	4/5 (80%)	Oral β-lactam antibiotics (n=4) Duration: 5-14 days (data available for 2 patient) IV β-lactam antibiotics (n=1) Duration: 3 days	Recurrent UTIs with other organisms
Asymptomatic bacteriuria (n=6)	Stress incontinence, nephrolithiasis, **neurogenic bladder requiring self-catheterization**	2/6 (33%)	Oral sulfonamide for 7 days for polymicrobial urine culture (n=1)	Repeat culture did not grow *Actinotignum spp*

[a] recurrence of *Actinotignum* infection
[b] Also had nephrostomy tube placement for decompression
[c] exchange of nephrostomy tube, suprapubic catheter, ureteral stent and percutaneous nephrolithotomy

Table 3 *Actinotignum* related infections (other than UTI)

Infection Syndrome	Clinical Presentation	Polymicrobial Infection	Treatment	Outcome
Bacteremia (n=6)	3 cases of UTIs (1 with septic shock) 1 case of tubo-ovarian abscess 1 case of diabetic foot ulcer 1 presented with massive CVA	4/6 (67%)	IV β-lactam antibiotics for 14 days (n=2) IV carbapenem for 14 days followed by oral β-lactam antibiotics for 70 days (also had *actinomyces* infection) (n=1) Oral quinolone for 14 days (n=1) Oral metronidazole for 14 days (n=1)	Complete resolution (5 cases) Recurrence of UTI from different organism (1 case) 1 death (patient presented with massive CVA and was transitioned to comfort care)
Abscess (n=12)	SSTI (7 cases) Surgical site (2 cases) Intraabdominal: (3 cases): - Urinary fistula in setting of prostate cancer - Iatrogenic bladder wall rupture - Infected hematoma after C section	10/12 (83%)	IV antibiotics only (n=3): 10-14 days Combination of IV then transition to oral Abx (n=3): - Total duration: 7-30 days - Received 4-7 days of IV Abx prior to transition PO antibiotics only (n=5): 10-14 days Abx: TMP/SMX, levofloxacin, metronidazole, amoxicillin, azithromycin	All patients underwent drainage Complete resolution in all cases
Bone/joint (n=10)	All cases of osteomyelitis - Ischium/pubic symphysis (2 cases) - Lower extremity (tibia, metatarsal, distal phalanx): (6 cases) - Right shoulder (1 case) - Hardware associated (1 case)	10/10 (100%)	Complete amputation (n=6): - None Abx: 1 case - Treatment for residual SSTI (4 case): 5-14 days of PO Abx - 5 weeks for IV antibiotics for OM: 1 case Debridement (n=2) Debridement partial hardware removal (n=1) - 6 weeks IV antibiotics (1 case) - 6 weeks of IV Abx followed by PO amoxicillin for 6 weeks for *actinomyces* (2 case) No debridement (n=1) - pubic symphysis osteomyelitis: IV carbapenem for 6 weeks, followed by oral suppression	1 patient transitioned to IV Abx after 5 days of PO. Required debridement followed by 14 days of IV antibiotics. 1 patient with ankle hardware associated osteomyelitis: drainage after 12 weeks of therapy and screw removal -> underwent removal of retained hardware and retreatment with 6 weeks of IV and 4 weeks of PO Abx Finished IV therapy but unable to tolerate PO suppression due to side effects.

BSI: Blood stream infection, SSTI: Skin and of tissue infection, PO: per oral, Abx: Antibiotics, TMP/SMX: trimethoprim/sulfamethoxazole

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2148. Performance of the BioFire FilmArray Gastrointestinal Panel in a Clinical Setting of Infectious Diarrhea

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Background. Infectious diarrhea remains as one of the leading causes of morbidity and mortality worldwide among all age groups. Conventional methods for diagnosis are time consuming and expensive. The BioFire FilmArray gastrointestinal panel (FA-GIP) tests for 22 enteric pathogens, provides results in a few hours and improves healthcare costs. The impact on antibiotic stewardship is unknown.

Methods. We conducted a retrospective cohort, multi-center study to evaluate FA-GIP clinical performance in hospitalized patients with acute diarrhea. Patients from 3 hospitals from the Christus Muguerza health group were included between January 2017 and August 2018. The FA-GIP was ordered by the treating physician and was not influenced by the study. Duration of antibiotic therapy, length of hospital stay, and therapy modification were assessed. The comparison group consisted of patients with acute diarrhea in which no FA-GIP was ordered.

Results. Data from 130 patients with FA-GIP and 107 patients with conventional methods were collected. Pathogens were detected by FA-GIP in 72.3% of the cases. The median of duration of antibiotic therapy in FA-GIP group was 5 days (IQR 0–8) vs. 3 days (IQR 0–6) in conventional methods group, ($P < 0.05$). The mean length of stay was 3.3(SD ± 2.4) in FA-GIP group vs. 1.9 (SD ± 1.0) in the control group ($P < 0.05$). Patients in FA-GIP group had more days with diarrhea, lower hemoglobin levels, and higher creatinine levels at admission (Table 1). The most frequent pathogens detected were enteropathogenic *Escherichia coli* in 24.4%, norovirus in 19.1%, *Clostridium difficile* in 17.0% and *Campylobacter jejuni* in 15.9% (Table 2). Therapy modification after FA-GIP results was made in 51.1% of the patients with a detected pathogen, and in 42.8% of patients with no pathogen detected in FA-GIP the antibiotic was stopped.

Conclusion. Patients in the FA-GIP group had a more complex clinical scenario upon admission, they also had a longer duration of antibiotic therapies and longer length of stay. Although antibiotic therapy was positively influenced by the FA-GIP result, and no pathogen detection leads to withdrawal of unnecessary antibiotics.

Table 2. Frequency of pathogens detected by FA-GIP

n=143	n	%
Adenovirus	2	1.1
Astrovirus	1	16.0
Campylobacter jejuni	15	17.0
Clostridium difficile	16	2.1
Cryptosporidium	2	3.2
Cyclospora Cayetanensis	3	1.1
E coli O157	1	12.8
EAEC	12	9.6
EIEC	9	24.5
EPEC	23	10.6
ETEC	10	3.2
Giardia lamblia	3	19.1
Norovirus	18	7.4
Rotavirus	7	10.6
Salmonella	10	2.1
Sapovirus	2	3.2
Shigella	3	4.3
STEC	4	2.1
Vibrio cholerae	2	1.1

EAEC: enteroaggregative *E. coli*, enteroinvasive *E. coli*, EPEC: enteropathogenic *E. coli*, ETEC: enterotoxigenic *E. coli*. STEC: Shiga toxin-producing *E coli*.

Table 1. Clinical characteristics of hospitalized patients with diarrhea

	FA-GIP n=130	No FA-GIP n=107	p value
Age, mean (SD)	43.8 (±19.5)	40.0 (±17.7)	0.12
Men, n (%)	61 (46.9)	42 (39.3)	0.23
BMI, median (IQR)	25.3 (22.5-29.4)	26.0 (23.0-30.0)	0.08
Charlson Index, mean (SD)	0.8 (± 1.8)	0.6 (± 0.9)	0.27
LOS, media (SD)	**3.3 (± 2.4)**	**1.9 (± 1.0)**	**<0.05**
ICU admission, n (%)	7 (5.4)	3 (2.8)	0.32
qSOFA ≥ 2 pts., n(%)	9 (6.9)	3 (2.8)	0.15
Symptoms			
Abdominal pain, n (%)	79 (60.8)	79 (73.8)	<0.05
Fever, n (%)	45 (34.6)	35 (32.7)	0.75
Nausea/vomitting, n (%)	55 (42.3)	72 (67.3)	<0.05
Hematochezia, n (%)	17 (13.1)	5 (4.7)	<0.05
No. stools, median (IQR)	7.0 (4.0-10.0)	6.5 (4.0-12.0)	0.93
No. days with diarrhea, median (IQR)	**3.0 (1.0-5.0)**	**1.0 (1.0-2.0)**	**<0.05**
Pre-hospitalization antibiotic therapy, n(%)	33 (25.4)	16 (15.0)	0.08
Antibiotic therapy days, median (IQR)	**5.0 (0.0-8.0)**	**3.0 (0.0-6.0)**	**<0.05**
C-reactive protein, mean (SD)	65.1 (± 75.7)	91.9 (± 94.7)	0.38
Hemoglobin gr/dL, mean (SD)	**13.7 (± 2.2)**	**14.6 (± 1.9)**	**<0.05**
Leukocytes, mean (SD)	9,939 (± 4,036)	10,791 (± 4,265)	0.19
Creatinin, mean (SD)	**1.1 (± 0.9)**	**0.9 (± 0.6)**	**<0.05**
LDH, mean (SD)	359.5 (± 130.5)	343.4 (± 63.1)	0.84

FA-GIP: FilmArray Gastrointestinal panel, ICU: intensive care unit, IQR: interquartile range, LDH: lactate dehydrogenase, LOS: length of stay, SD: standard deviation

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2149. Performance of a Gradient Diffusion Method (Etest®) on Mueller–Hinton Agar with Sheep Blood for *Aerococcus urinae* Antimicrobial Susceptibility Testing

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