Characteristics	Cancer	Non cancer	P-value
Biliary drainage	87 (86.1)	24 (43.6)	<0.0001
-Endoscopic	64/87 (73.6)	21/24 (87.5)	0.18
-Radiologic	37/87 (42.5)	3/24 (12.5)	0.008
-More than one session	25/87 (28.7)	2/24 (8.3)	<0.0001
Drainage timing, days (mean ± SD)	3.6 (2.5)	3.4 (2.4)	0.87
Antibiotic treatment duration, days (mean, ± SD)	13.6 (9.9)	11.3 (8.6)	0.17
Outcome			
-Favourable outcome*	52 (51.5)	47 (85.5)	<0.0001
-Death at day 28 following acute cholangitis	22 (21.3)	1 (1.8)	0.0007
-Fever relapse before 28 days	17 (16.8)	3 (5.5)	0.047
-Liver abscess	5 (5.0)	1 (1.8)	0.43

SD: Standard Deviation

*= patient alive, afebrile and with no liver abscess and no need for a second drainage at day 28.

Table 3: Management and outcomes of the patients

Disclosures. **All authors:** No reported disclosures.

1493. Creation and External Validation of a Clinical Prediction Rule for Diarrheal Etiology Using Natural Language Processing

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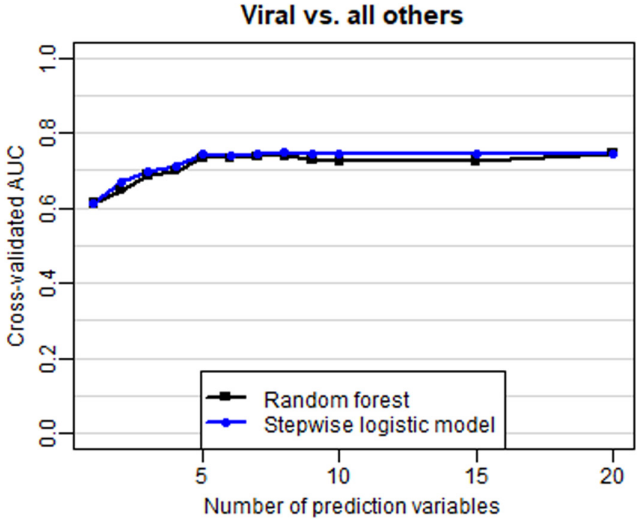
Background. Infectious diarrheal illness is a significant contributor to healthcare costs in the US pediatric population. New multi-pathogen PCR-based panels have shown increased sensitivity over previous methods; however, they are costly and clinical utility may be limited in many cases. Clinical Prediction Rules (CPRs) may help optimize the appropriate use of these tests. Furthermore, Natural Language Processing (NLP) is an emerging tool to extract clinical history for decision support. Here, we examine NLP for the validation of a CPR for pediatric diarrhea.

Methods. Using data from a prospective clinical trial at 5 US pediatric hospitals, 961 diarrheal cases were assessed for etiology and relevant clinical variables. Of 65 variables collected in that study, 42 were excluded in our models based on a scarcity of documentation in reviewed clinical charts. The remaining 23 variables were ranked by random forest (RF) variable importance and utilized in both an RF and stepwise logistic regression (LR) model for viral-only etiology. We investigated whether NLP could accurately extract data from clinical notes comparable to study questionnaires. We used the eHOST abstraction software to abstract 6 clinical variables from patient charts that were useful in our CPR. These data will be used to train an NLP algorithm to extract the same variables from additional charts, and be combined with data from 2 other variables coded in the EMR to externally validate our model.

Results. Both RF and LR models achieved cross-validated area under the receiver operating characteristic curves of 0.74 using the top 5 variables (season, age, bloody diarrhea, vomiting/nausea, and fever), which did not improve significantly with the addition of more variables. Of 270 charts abstracted for NLP training, there were 41 occurrences of bloody diarrhea annotated, 339 occurrences of vomiting, and 145 occurrences of fever. Inter-annotator agreement over 9 training sets ranged between 0.63 and 0.83.

Conclusion. We have constructed a parsimonious CPR involving only 5 inputs for the prediction of a viral-only etiology for pediatric diarrheal illness using prospectively collected data. With the training of an NLP algorithm for automated chart abstraction we will validate the CPR. NLP could allow a CPR to run without manual data entry to improve care.



Disclosures. **All authors:** No reported disclosures.

1494. Clinical Factors Associated with a Positive *C. difficile* PCR Test

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Background. *C. difficile* infection (CDI) remains a significant cause of morbidity and mortality. The most appropriate clinical scenario for CDI testing is unclear. The IDSA/SHEA guideline recommends testing patients with unexplained new-onset ≥3 stools in 24 hours. This study sought to evaluate clinical factors associated with a positive *C. difficile* PCR test.

Methods. We conducted a retrospective cohort study of adults (age >18 years old) admitted to the University of Colorado Hospital for whom a *C. difficile* PCR, either as a standalone test or part of the Biofire® Filmarray® Gastrointestinal Panel (GI Panel), was ordered between October 1, 2015 and August 31, 2017. Data collected included time since admission to test order, hospital length of stay, history of CDI, antibiotic use in the past 90 days, clinical presentation in the 24 hours preceding test order (fever, leukocytosis, number of stools), and laxative or antibiotic administration within 24 hours of test order. Multivariate logistic regression was used to evaluate the association of the above variables with having a positive *C. difficile* PCR test. If multiple tests were ordered during a single hospital encounter, only the first test was included in our analysis.

Results. 3,070 tests were performed; of these, 72% were ordered in the first 72 hours of admission. Overall, 19% of tests were positive. After adjusting for clinical variables, patients with a prior history of *C. difficile* or who had received antibiotics in the past 24 hours were significantly more likely to have a positive test [OR 2.2 95% CI (1.54, 3.18) $P < 0.0001$] and [OR 16 95% CI (8.22, 31.41) $P < 0.0001$], respectively. Patients who used laxatives were significantly less likely to have a positive test [OR 0.75 95% CI (0.61, 0.91) $P = 0.004$]. The number of stools and presence of fever or leukocytosis were not significantly associated with a positive test.

Conclusion. Prior history of *C. difficile* and antibiotics use was highly associated with a positive *C. difficile* test, while laxatives use was associated with a negative test. The number of stools was not significantly associated with a positive *C. difficile* test, suggesting this may be less important clinical factor than previously believed; however, restricting testing in patients receiving laxatives is likely warranted.

Disclosures. **All authors:** No reported disclosures.

1495. Fluoroquinolone as an Alternative Regimen for *Klebsiella pneumoniae* Liver Abscess

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Background. *Klebsiella pneumoniae* liver abscess (KPLA) is an endemic disease in East Asia. KPLA is usually caused by hypervirulent strains that are susceptible to all kinds of antibiotics except ampicillin. Patients with KPLA are commonly treated with β-lactams and need prolonged duration of intravenous therapy. Fluoroquinolone has high oral bioavailability and has the potential to shorten the duration of intravenous therapy, but studies regarding fluoroquinolone use in KPLA are limited. We aimed to compare the outcomes of patients with KPLA treated with β-lactams and fluoroquinolone.

Methods. Consecutive patients with KPLA in a tertiary medical center of Taiwan between 2011 and 2018 were enrolled retrospectively. Clinical characteristics and treatment outcomes were compared between cases treated with β-lactams and fluoroquinolones. Logistic regression was performed to identify risk factors of prolonged hospitalization (defined as > 30 days). Capsular genotypes and presence of *rmpA* or *rmpA2* genes were analyzed among *K. pneumoniae* strains collected after July 2012. Hypervirulent strains were defined as those had *rmpA* or *rmpA2* genes.

Results. A total of 330 KPLA patients identified, and the in-hospital mortality was 0.9% (n = 3). Nearly all *K. pneumoniae* strains were hypervirulent strains (97.1%). Capsular type K1 (n = 176) and K2 (n = 63) were the most common capsular types. Most patients received β-lactams (n = 296, 89.7%), and only 34 (10.3%) patients received fluoroquinolones as the main antibiotics (levofloxacin = 17; moxifloxacin = 10; ciprofloxacin = 7). The duration of intravenous antibiotics use in fluoroquinolones group was shorter than β-lactams group (20.12 ± 9.21 vs. 26.81 ± 16.10, P = 0.001). Prolonged hospitalization was more common in β-lactams group than fluoroquinolones group (32.1% vs. 11.8%, P = 0.014). The in-hospital mortality, duration of antibiotic use, and recurrence rate were similar between the two groups. Fluoroquinolones was independent protective factor for prolonged hospitalization (hazard ratio, 0.28; P = 0.026).

Conclusion. Fluoroquinolone is able to shorten the duration of intravenous antibiotic use and beneficial in prolonged hospitalization in patients with KPLA.

Disclosures. **All authors:** No reported disclosures.