



Bacterial vs viral etiology of fever: a prospective study to estimate a host score's potential to support ED physicians' etiologic accuracy

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Objective:

A host-protein score (BV) combining the circulating levels of TRAIL, IP-10 and CRP was developed for distinguishing bacterial from viral infection. BV's potential to impact decision making at the emergency department (ED) was assessed by comparing BV to physician's etiologic suspicion.

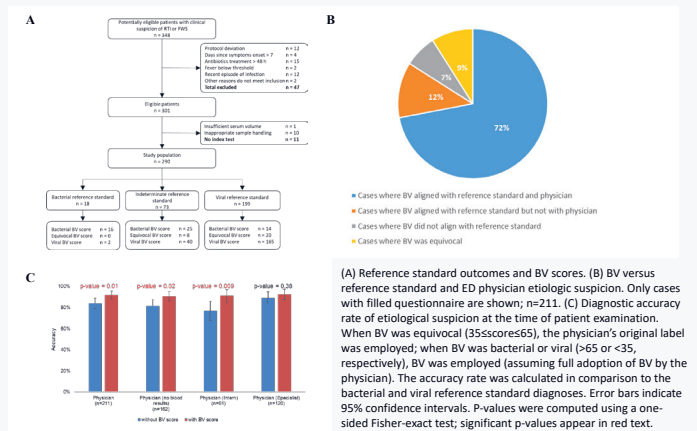
Study design:

Rosetta study participants, aged 3 months to 18 years with febrile respiratory tract infection or fever without source, were prospectively recruited in a tertiary care pediatric ED. The main eligibility criteria were symptoms for less than 7 days and immunocompetence. ED physician's initial etiologic suspicion (bacterial/viral/I don't know) and degree of confidence (low/medium/high) were recorded in a questionnaire. The etiologic reference standard was based on the diagnoses (bacterial/viral/indeterminate) of 3 pediatric specialists who were provided with all available patient data. BV was interpreted based on pre-defined score thresholds (viral/bacterial/equivocal). ED physicians and pediatric specialists were blinded to BV results. To assess BV's potential to impact the physician's etiologic accuracy, BV results and physician etiologic suspicion were compared to reference standard.

Results:

Among 348 patients recruited, 290 met eligibility criteria and had requisite serum sample (Figure 1A). Median age was 1.3 years (interquartile range 1.7), 37.5% were female. 211 patients had questionnaires filled. BV matched physician's label and reference standard in 72% of the cases (151/211; Figure 1B); of these, 52% (78/151) were labeled by the physician with low/medium confidence, i.e., BV could reinforce the physician's suspicion. In 12% of the cases (26/211) BV aligned with the reference standard but not with the physician's suspicion, and therefore could correct the physician's etiologic diagnosis. Overall, BV could potentially correct physician diagnosis and reduce error >2-fold, from 16.1% to 8.1% (Figure 1C).

Figure 1. Assessing the potential impact of BV on ED physician's etiologic accuracy.



Conclusion:

BV has potential to aid the diagnostic process. Future studies are warranted to assess the real-world impact of BV on ED practice.

Poster max size is 45" T x 91" H, artwork will be scaled to max height or width if supplied artwork isn't already 45"x 91". Final poster size is listed below.

SHOW NAME	IDWEEK 2022	SHOW #	11818-22	DATES	10/20 - 10/22	VENUE	WALTER E. WASHINGTON CONVENTION CENTER
DESIGNER	TICKET	SUBSTRATE		ADDITIONAL REQUIREMENTS			
TBD	Clalit - Poster Graphics 528	<input type="checkbox"/> FOAMCORE	<input type="checkbox"/> 1/8"	<input type="checkbox"/> WHITE	<input type="checkbox"/> DETACHABLE ARROW	<input type="checkbox"/> ECO BASE	
PANEL SIZE	QUANTITY	<input type="checkbox"/> ULTRA/GATOR BOARD	<input type="checkbox"/> 3/16"	<input type="checkbox"/> BLACK	<input type="checkbox"/> REMO TAPE	<input type="checkbox"/> VELCRO	
45" x 80.35"	<input checked="" type="checkbox"/> SS <input type="checkbox"/> DS	<input type="checkbox"/> PVC	<input type="checkbox"/> 1/4"	<input type="checkbox"/> CLEAR	<input type="checkbox"/> EASEL BACK	<input type="checkbox"/> DIE CUT	
GRAPHIC FILE NAME	REVISION # / DATE	<input type="checkbox"/> ACRYLIC	<input type="checkbox"/> 1/2"	<input type="checkbox"/> MILK	<input type="checkbox"/> POLE POCKETS	<input type="checkbox"/> GROMMETS	
Clalit - Poster Graphics 528 PRINT	TBD	<input type="checkbox"/> VINYL BANNER		<input type="checkbox"/> BRONZE	POLE POCKET PLACEMENT GROMMET PLACEMENT		
STRUCTURE METAL SYSTEM	SEG BEADING AMOUNT	<input type="checkbox"/> MESH BANNER		<input type="checkbox"/> DRY ERASE			
N/A	N/A	<input type="checkbox"/> PHOTOTEX		<input type="checkbox"/> OTHER	ADDITIONAL SPECIAL INSTRUCTIONS		
GRAPHIC PLACEMENT LOCATION	WORK ORDER #	<input type="checkbox"/> WALK & WALL			INCLUDE POSTER NUMBER ON THE BACK OF THE POSTER		
Poster Number #528	TBD	<input type="checkbox"/> BOOTH ID SIGN					
INSTALL	DISMANTLE	<input checked="" type="checkbox"/> OTHER (NOTE BELOW)					
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