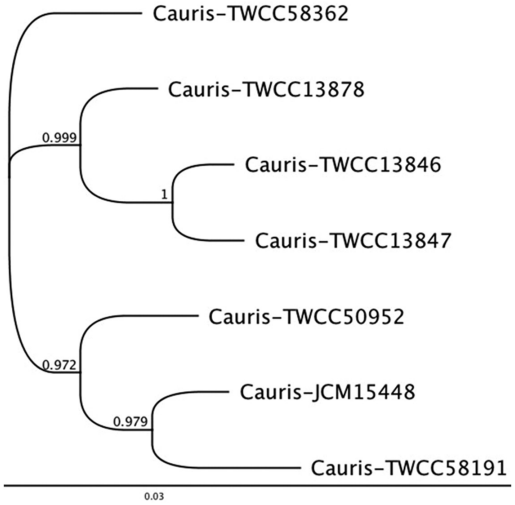
Figure 2. Phylogenic tree of SNVs (only Japanese strains)



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

2052. Performance of the Biofire Filmarray Meningitis/Encephalitis Panel in Cryptococcal Meningitis Diagnosis

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Background. Diagnosing meningitis and encephalitis is challenging in the immunosuppressed population. Cerebrospinal fluid (CSF) culture is the gold standard diagnostic test for cryptococcal meningitis (CM), but is time intensive and requires a high index of suspicion. The BioFire FilmArray Meningitis/Encephalitis (ME) panel offers an option for rapid diagnostic testing. Recent studies suggest similar performance of the ME panel compared with CSF culture in the initial diagnosis and relapse of CM. We investigated the performance of the ME panel in the diagnosis of cryptococcal disease in patients presenting with meningitis.

Methods. A retrospective observational study was performed at an 800 bed regional medical center between June 1, 2016 and March 1, 2018. Laboratory results for all patients admitted with CSF or serum cryptococcal testing were reviewed. We abstracted the results from 14 distinct hospitalizations involving 12 patients (Figure 1) with CM who had an ME panel and CSF culture. Diagnostic performance was determined by comparison of ME panel to CSF culture.

Results. The ME panel demonstrated a 71.43% (95% CI: 29.04–96.33) sensitivity and 100% (95% CI: 59.04–100) specificity for diagnosing CM for the population described in Table 1. ME panel detected all four patients with an initial diagnosis of CM and one of three patients with culture positive relapse.

Conclusion. Our findings suggest that a negative cryptococcal result on the ME panel should not be used to rule out cryptococcal disease, particularly in patients with a previous diagnosis of CM. Additional testing may increase cost, but until larger studies validate the use of rapid diagnostics, fungal culture remains the gold standard for the diagnosis of CM and should not be eliminated from routine evaluation.

Demographics		
Male, % (no.)	86	[12/14]
Age (years), mean	44	
HIV, % (no.)	86	[12/14]
CD4 cell count/μL, median [IQR]	58	[26-121]
History of CM, % (no.)	71	[10/14]
Relapse, % (no.)	30	[3/10]
IRIS, % (no.)	70	[7/10]
CSF results		
WBC count/μL, median [IQR]	52.5	[6-179]
Opening pressure cmH_2O, mean (n=12)[1]	21	

[1] Two patients with no recorded opening pressure.

Table 1. ME and culture results of 14 CSF cryptococcal antigen positive specimens.

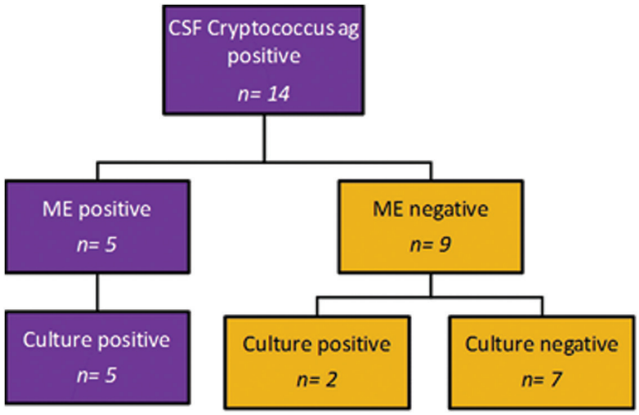

Figure 1: Demographics and description of CSF specimens.

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

2053. Tissue-Based Molecular Diagnostics: A Sensitive and Specific Way for the Identification of Invasive Fungal Infections in the Combat-Related Setting

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Background. Combat-associated invasive fungal infections (IFI) of the deep skin and soft tissue are an infectious disease. Reliance on conventional techniques to diagnose IFIs has limitations as culture is insensitive and time-delayed and histopathology cannot provide a species-level or even a genus-level identification (ID). Molecular-based methods are rapid, provide species-level ID, and have been studied to a limited extent in the trauma setting although they may prove overly sensitive as soil (thereby fungal) contamination is common. In this study, we examined the performance characteristics of a panfungal PCR for the diagnosis of IFI among subjects injured in Afghanistan operations.

Methods. Formalin-fixed paraffin-embedded (FFPE) tissue samples obtained during debridement from IFI cases with angioinvasion (AI) and controls (combat-injured with negative histopathology) were evaluated with a panfungal PCR targeting the internal transcribed spacer (ITS 1 and ITS 2) of the fungal genome.

Results. We assessed 41 injury sites where culture, histopathology, and FFPE specimens were available contemporaneously. Fungus was cultured from 32 sites (78%) with the order Mucorales represented in 18 sites (44%, five sites with *Saksenaea* spp.), and *Aspergillus* spp. in six (15%) sites. Using PCR, a fungus was identified from 33 sites (81%) with order Mucorales identified from 28 sites (68%, 20 with *Saksenaea* spp.) and *Aspergillus* spp. from five (12%) sites. When compared with the gold standard (histopathology), the sensitivity, negative, and positive predictive value were 83, 94, and 98%, respectively. Specificity was calculated to be 99.2% based upon the identification of one false-positive among 118 controls.

Conclusion. Concerns about PCR being overly sensitive for the diagnosis of trauma-related IFI are not upheld. The PCR-based method was sensitive, specific, and had a high negative predictive value for the diagnosis of AI IFI. Re-demonstrated is the inability of culture to identify fungi of the order Mucorales and the need for antifungal coverage targeting fungi of the order Mucorales and Aspergillus in AI IFI. As *Saksenaea* is the dominant fungus identified in this setting, study of the virulence characteristics and antifungal susceptibility is warranted.

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

2054. Physician Responses to Positive Rapid Diagnostic Tests for Candida Fungemia in the Absence of Concomitant Positive Blood Cultures

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