

P1198 **Evaluation of CrAg lateral flow immunoassay for diagnosis of cryptococcal meningitis patients**

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**Background:** Please copy and paste the corresponding text here

Cryptococcal meningitis causes approximately 624,700 deaths annually<sup>1</sup>. Traditional cryptococcal diagnostics including microscopy, culture, detection of cryptococcal antigen (CrAg) in body fluids using latex agglutination (LA) or enzyme immunoassay (EIA) methods have some problems including poor sensitivity, requiring a large quantity of specimen, requiring refrigeration and technical expertise and so on<sup>2,3</sup>. Point-of-care tests (POCTs) such as Lateral flow immunoassay (LFA) can be used for diagnosis of cryptococcal infection in remote care centers in low-resource countries. The LFA is stable, rapid and has little requirement on technical skill and laboratory infrastructure. To investigate the diagnostic performance of CrAg LFA, different assays and products (FungiXpert and IMMY) are used to detect the same cerebrospinal fluids (CSF) with statistical analysis of detection results.

**Materials/methods:** Please copy and paste the corresponding text here

The experiment was done in Shanghai Huashan Hospital, 147 CSF samples with symptoms of suspected Cryptococcal meningitis were detected with FungiXpert and IMMY respectively according to the instructions of FungiXpert and IMMY at hospital.

**Results:** Please copy and paste the corresponding text here

All 147 CSF samples were detected, in which 124 samples were positive, 23 samples were negative. The test results of different assays are shown in the following table. The sensitivity of smear, culture, LA, FungiXpert CrAg LFA, IMMY CrAg LFA were 51.61%, 40.32%, 99.19%, 99.19%, 99.19%, respectively. The specificity of smear, culture, LA, FungiXpert CrAg LFA, IMMY CrAg LFA were 100%, 100%, 60.87%, 100%, 82.61% respectively.

Experiment results	Smear	Culture	LA	FungiXpert CrAg LFA	IMMY CrAg LFA
True Positive	64	50	123	123	123
True Negative	23	23	14	23	19
Sensitivity	51.61%	40.32%	99.19%	99.19%	99.19%
Specificity	100%	100%	60.87%	100%	82.61%

**Conclusions:** Please copy and paste the corresponding text here

The results demonstrated that the diagnostic performance of LFA was the best. LA and LFA have a high sensitivity, but the specificity of LA was only 60.87%. Therefore, LFA is a good method for CSF detection. In addition, the specificity of FungiXpert was higher than that of IMMY, the FungiXpert CrAg LFA maybe more accurate.