

Interpretation of BBM Test Results



5

Minimum thresholds for BBMs:

Minimum acceptable BBM thresholds in patient care determine how the test should be used



Interpretation of BBM test results are dependent on the accuracy of each individual test (i.e., triage vs. confirmation)



Tests with a high PPV that have been validated in real world clinical settings may be an acceptable diagnostic tool for confirming AD pathology



Interpretation of BBM test results for these high accuracy tests will vary depending on the pre-test likelihood (e.g., age, family history, etc.) of a patient having AD pathology

BBMs as a triaging tool:

As a triaging tool, BBM tests with a high NPV and moderate PPV may be sufficient to “rule out” AD pathology



Triaging using a BBM test with high NPV and moderate PPV:

- Negative test results can be used to definitively rule out AD pathology and patient should undergo further evaluation for other causes of their cognitive symptoms



- A positive result should be treated with caution and is not necessarily evidence that the patient has AD pathology. Clinicians must clearly communicate implications of potential outcomes to patients prior to undergoing testing. In this circumstance, further evaluation will be needed to make a definitive diagnosis.



- Tests eligible for triaging should meet the following criteria

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BBMs as a confirmatory tool:

As a confirmatory tool, BBM tests with high NPV and high PPV may be sufficient to confirm AD pathology



Confirmation using a BBM test with high NPV and high PPV:

- A positive test indicates a higher risk for having amyloid plaques in patients with higher suspicion of AD pathology but may not provide a definitive diagnosis of AD pathology:
 - If *higher suspicion* of AD pathology and blood test is positive, patient is likely to have AD pathology; further evaluation is required
 - If *lower suspicion* of AD pathology and blood test is positive, further evaluation is required



- A negative test is likely to rule out AD pathology in patients with lower AD pathology suspicion but may not provide a definitive diagnosis of AD pathology:
 - If *higher suspicion* of AD pathology and blood test is positive, patient is likely to have AD pathology; further evaluation is required
 - If *lower suspicion* of AD pathology and blood test is negative the patient is unlikely to have AD pathology; further evaluation is required



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5

Minimum thresholds for BBMs:

Minimum acceptable performance of BBM tests for triaging or confirmation of amyloid pathology



- Tests eligible for triaging and confirmation should meet the following criteria:

Prevalence of amyloid pathology	Confirmatory CSF or BBM Test	Higher Specificity BBM Triaging Test	Lower Specificity BBM Triaging Test
	90% Sensitivity 90% Specificity	90% Sensitivity 85% Specificity	90% Sensitivity 75% Specificity
High - 80%	PPV 97% NPV 69%	PPV 96% NPV 68%	PPV 94% NPV 65%
Intermediate - 50%	PPV 90% NPV 90%	PPV 86% NPV 89%	PPV 78% NPV 88%
Low - 20%	PPV 69% NPV 97%	PPV 60% NPV 97%	PPV 47% NPV 97%

