

Vuka! Let's unite towards a TB-free world!

9th SA
TB
Conference
8 - 11 June 2026



Rethinking Sputum Quality: Diagnostic Yield of “Salivary” Specimens Collected After Forced Cough Effort for TB Nucleic Acid Amplification Testing

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Background



- TB leading infectious cause of death
- Diagnosis relies on sputum
- Salivary samples often rejected
- Unclear if still relevant in NAAT era

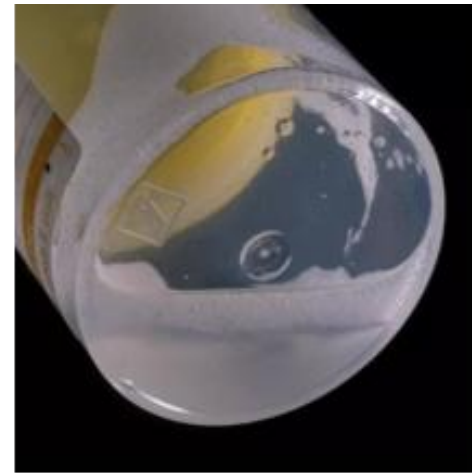
Aim

To compare the diagnostic yield of salivary versus mucoid sputum specimens using nucleic acid amplification testing (NAAT)



Mucoid

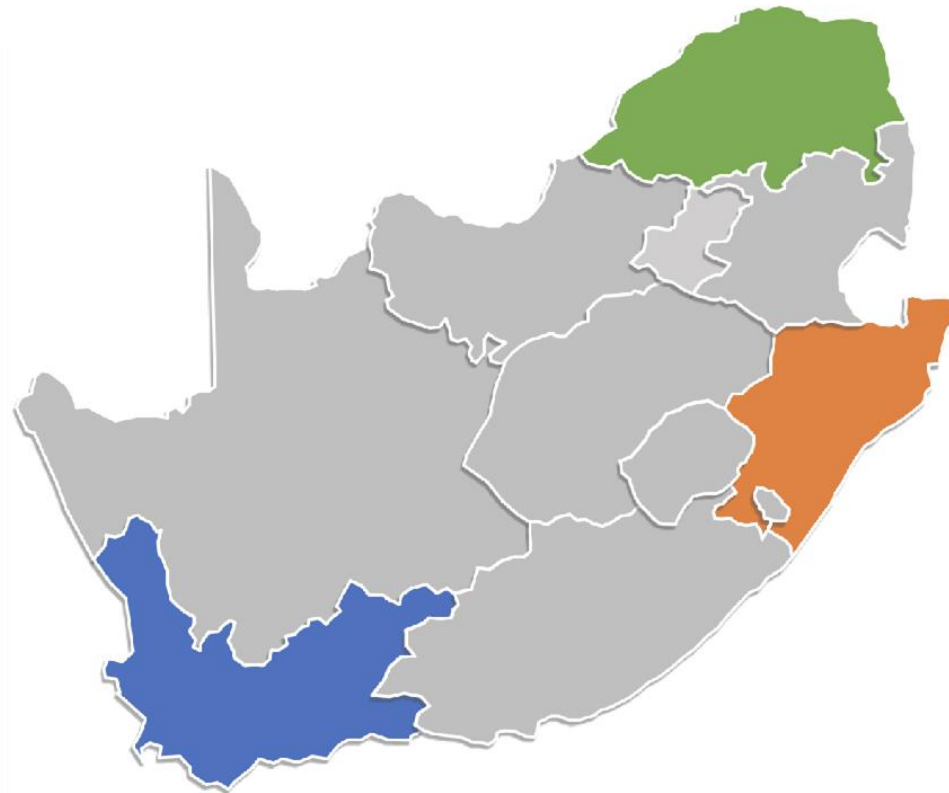
Versus



Salivary

Methods

Targeted Universal TB testing (TUTT)



➤ **Limpopo**
Perinatal HIV Research Unit

➤ **KwaZulu-Natal**
Africa Health Research
Institute

➤ **Western Cape**
Desmond Tutu TB Centre



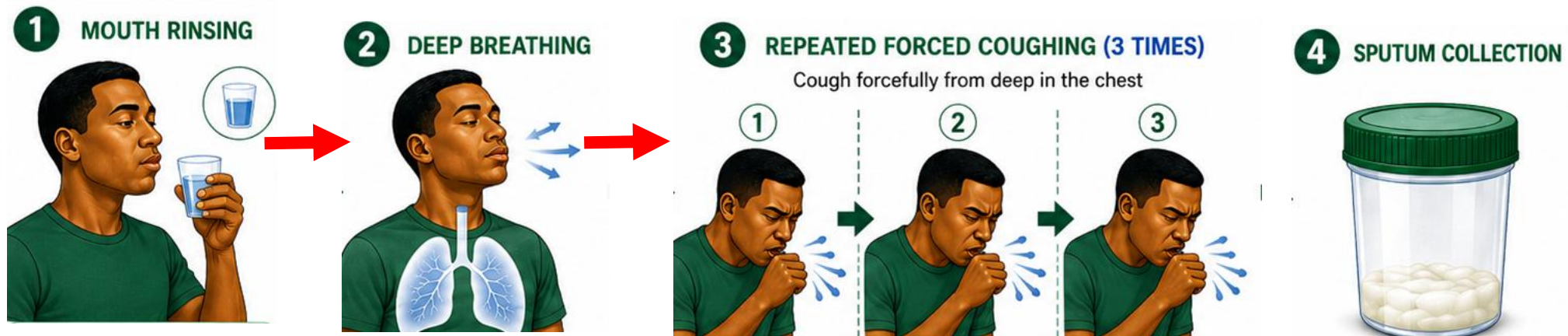
10 Clinics



**High risk
individuals**

Methods

Extended Spot Sputum Collection Method



one-quarter mucoid

Half mucoid

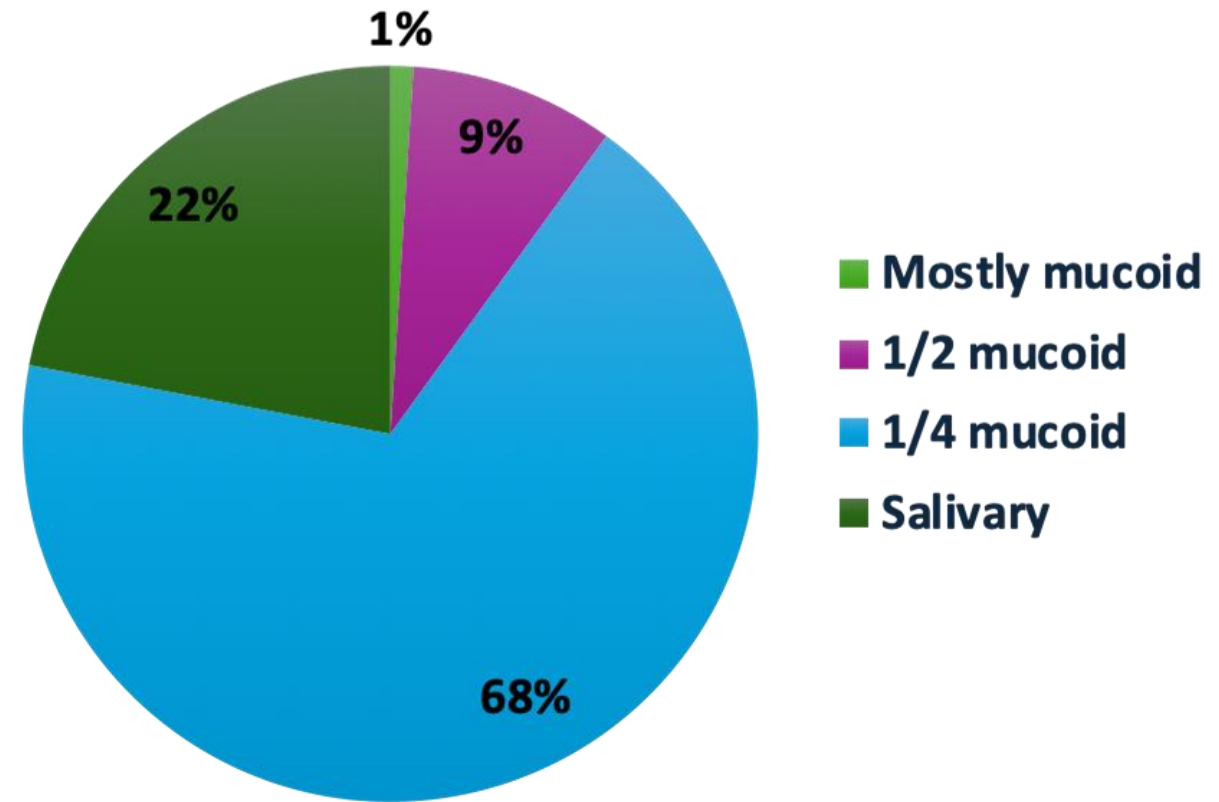
Mostly mucoid



Xpert MTB/RIF Ultra
Cepheid
BD MAX™ MDR TB
Cobas MTB/RIF Ultra

Results

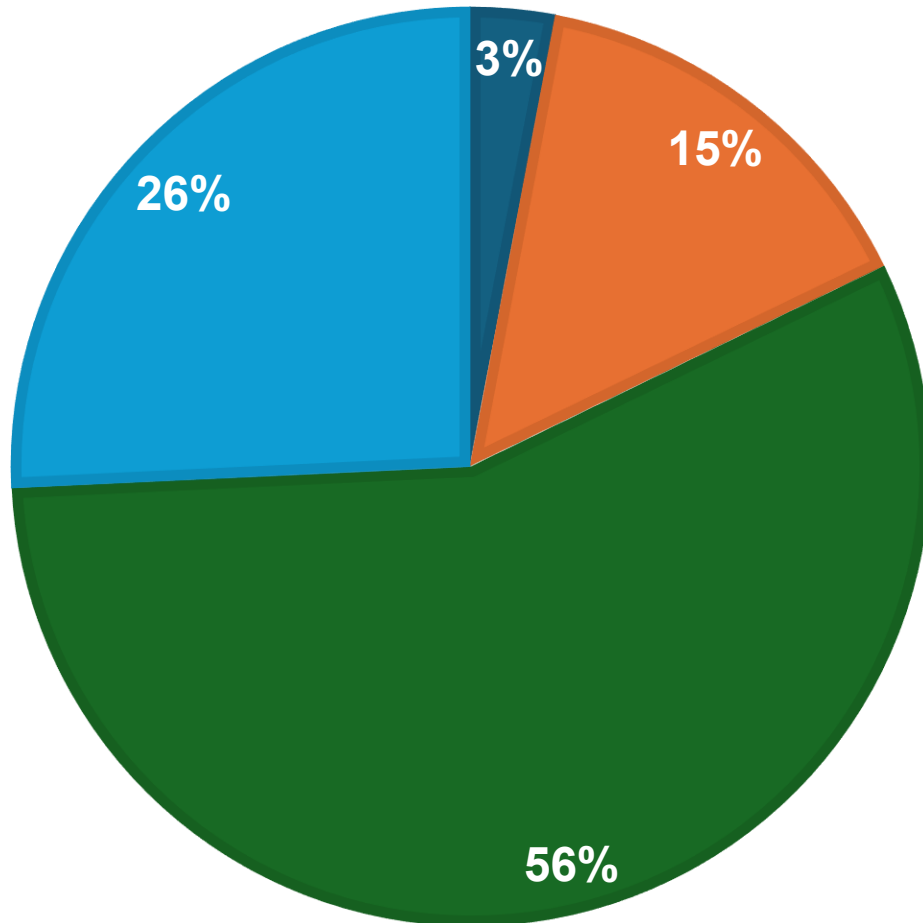
Outcome/characteristics	Findings	
Participants who had specimens graded	56%	
Key characteristics		
Median Age	39 years	
Sex	Female = 71%	Male = 29%
People living with HIV	78%	
	ART	92%
	Median CD4	480 cells/ μ L
Symptom status	Majority were asymptomatic	



Results – Specimen distribution

Visual grading of specimens positive for *Mtb* (n=198)

■ Mostly mucoid ■ 1/2 mucoid ■ 1/4 mucoid ■ Salivary

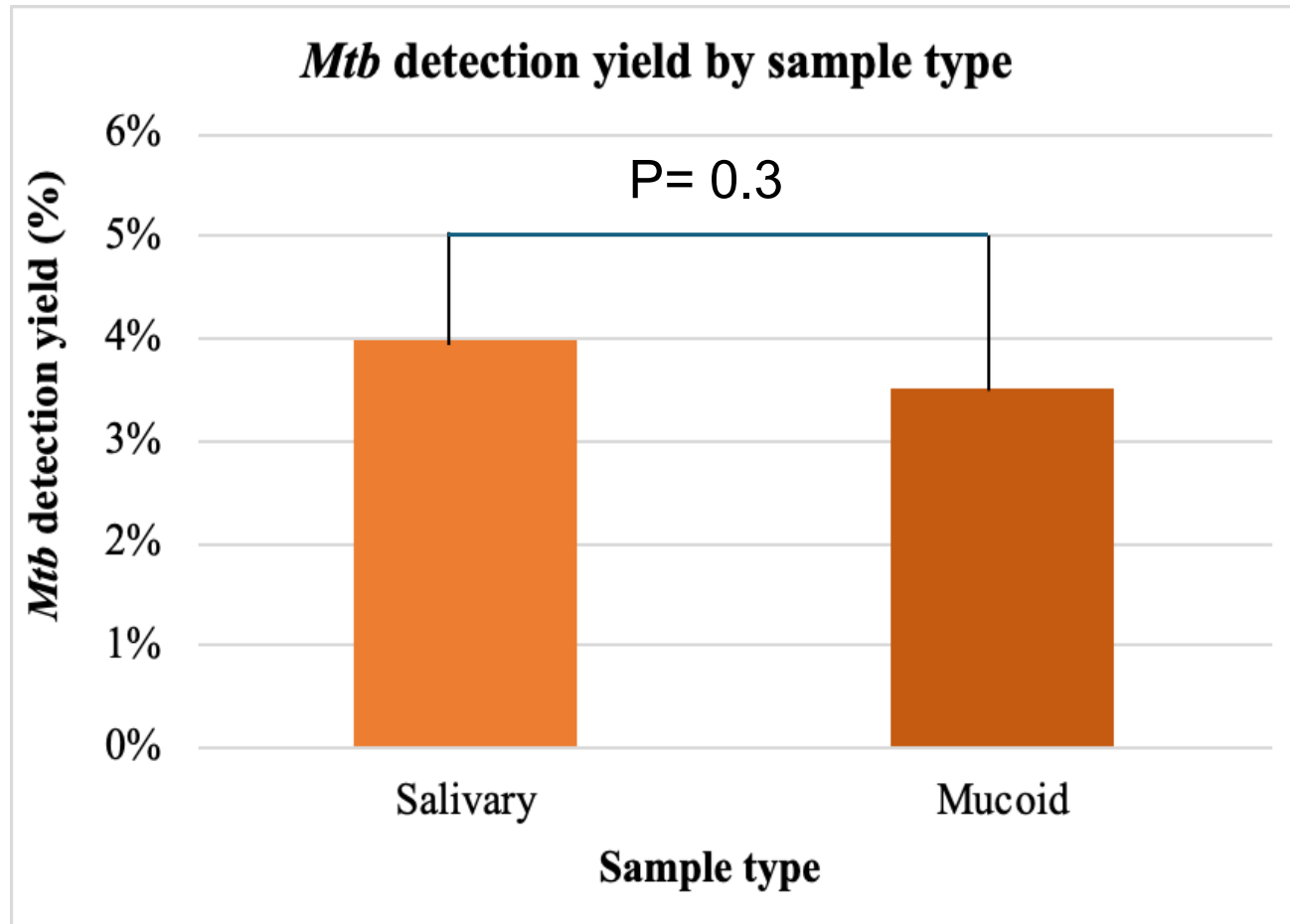


Salivary



Mucoid

Results



- Diagnostic yield was similar
- One quarter of all TB diagnoses came from salivary specimens

Interpretation



- Most participants produced mucoid sputum specimens
- Mucoid specimens were more frequent in PLWH.
- 26% of all TB-positive results came from salivary specimens
- Extended spot specimens increases diagnostic access
- Salivary specimens should not be excluded

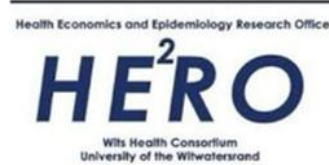
Conclusion

- Sputum grading did not reliably predict MTB positivity.
- Salivary specimens should not be routinely rejected.
- Muroid sputum showed slightly higher MTB yield
- Rejecting salivary specimens may reduce case detection unnecessarily

Acknowledgement



Gates Foundation



BETTER TOGETHER.



TUTTPlus Presentations at the 9th SA TB Conference



Abstract Nr	Titles of other presentations and Poster
118	Evaluation of the role of tongue swabs to optimize TUTT implementation - An observational study (TUTTPlus) - Kwa Zulu Natal Data
263	Pooling sputum specimens of people at high risk of TB reduces costs of Xpert Ultra TB testing: Results from the TUTTPlus study in South Africa.
287	Beyond Sputum: Perceptions of Emerging TB Diagnostics in South Africa through the TUTTPlus study
289	Laboratory- confirmed TB in outpatients at high risk for TB: with and without diabetes mellitus in the TUTTPlus Study
295	Rethinking Sputum Quality: Diagnostic Yield of “Salivary” Specimens Collected After Forced Cough Effort for TB Nucleic Acid Amplification Testing
307	Clinic referral cards, contact tracing investigations for tuberculosis screening in South Africa – A TUTTPlus Substudy - Poster
308	Pooling sputum specimens of people at high-risk of TB reduces testing burden without compromising diagnostic concordance. The TUTTPlus Study
342	Evaluation of the role of tongue swabs to optimize TUTT implementation - an observational study (TUTTPlus) - Overall