



## PUBLICATION SUMMARY

# Better Accuracy, Fewer Procedures: Multicentric Validation of the Mia Comprehensive Cervical Cancer Test in Mexico

## Introduction

This multicenter clinical study conducted across Mexico evaluated the Mia by XytoTest® self-collection kit and the Proofer 7-Type HPV mRNA E6/E7 Test, which, along with the cobas® HPV DNA test, make up the Mia Comprehensive Cervical Cancer Test. Researchers compared the combined mRNA + DNA testing approach with a standard 14-type HPV DNA test using self-collected vaginal samples from women referred for colposcopy after abnormal Pap smear results.

## Key Insights

- 50% fewer unnecessary colposcopies compared with HPV DNA testing alone.
- Twice the predictive accuracy (PPV 13.2% vs 6.0%) for identifying true CIN3+ lesions.
- Equal sensitivity (93.3%) and significantly higher specificity (77% vs 46%).
- High patient acceptance: 93% confident self-sampling; 91% would do it again.
- Supports both in-office and future at-home testing, improving access to care

## Study Design & Population:

Participants: 418 Mexican women (ages 25–65) referred for colposcopy following abnormal Pap cytology (ASC-US+).

Sampling: Self-collected vaginal samples using the Mia by XytoTest® device.

Tests Compared: 14-type HPV DNA vs 7-type HPV mRNA E6/E7.

Endpoint: Detection of histologically confirmed CIN3+.

## Performance Results:

Measure	14-Type HPV DNA Test	Proofer 7-Type HPV mRNA Test	Result
Sensitivity (CIN3+)	93.3%	93.3%	Both detect true precancer equally well.
Specificity	45.8%	77.0%	Fewer false positives.
Positive Predictive Value (PPV)	6.0%	13.2%	≈ 2× better predictive accuracy.
Colposcopies per CIN3+ case	16.6%	7.6%	≈ 50% fewer unnecessary procedures.

## Patient Acceptance:

93% felt confident performing self-sampling.

85% found the process easy.

74% reported little or no discomfort.

91% said they would repeat the test at home.

These findings confirm the feasibility, comfort, and reliability of self-sampling paired with mRNA analysis for cervical cancer prevention programs and diagnostic evaluation.

## Conclusion

The Mia™ Comprehensive Cervical Cancer Test, combining the Proofer 7-Type HPV mRNA Test, cobas® HPV DNA Test, and Mia by XytoTest® kit, demonstrates equal sensitivity, higher specificity, and 2× greater predictive accuracy than HPV DNA testing alone.

By reducing unnecessary colposcopies by half and enabling patient-friendly self-sampling, Mia enhances both clinical efficiency and patient participation—making screening more accurate, accessible, and compassionate.

## Citation

Aranda Flores CE et al. Enhancing Cervical Cancer Screening with 7-Type HPV mRNA E6/E7 Testing on Self-Collected Samples: Multicentric Insights from Mexico. *Cancers*. 2024; 16(13): 2485. <https://doi.org/10.3390/cancers16132485>