

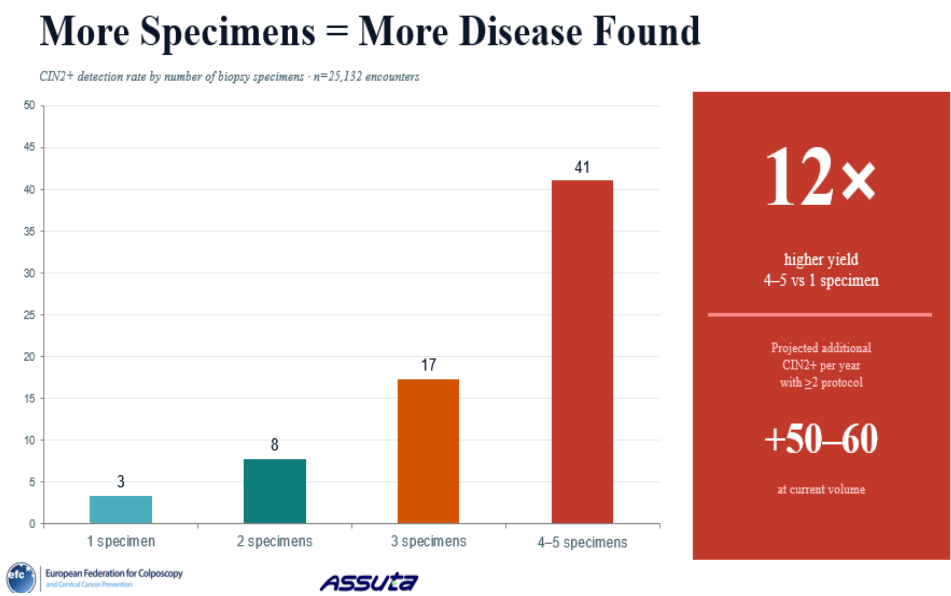
Six-Year Colposcopy program Trends in an Israeli HR-HPV Screening Era: 86% Volume Growth, Post-COVID Peak, and Referral-Pool Dilution - 47,331 Visits 2020 to 2026

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Introduction: Multiple biopsies at colposcopy improve CIN2+ detection, yet institutional variation in mean biopsy count reflects a modifiable quality gap that has not been well quantified in large real-world comparative datasets.

Methods: We performed a retrospective analysis of 25,133 colposcopic biopsy encounters at 2 Assuta centers. Center 1 (n=14,713; mean 1.59 specimens/encounter) and Center 2 (n=10,419; mean 1.18 specimens/encounter). CIN2+ was defined by SNOMED histopathology. Biopsy count was grouped as 1, 2, 3, 4-5, and >5 specimens. Site-adjusted odds ratios were estimated using multivariable logistic regression.

Results: A strong dose-response was observed: CIN2+ detection was 3.4% with 1 specimen, 7.8% with 2, 17.3% with 3, and 41.0% with 4-5 specimens. Two-or-more-specimen sampling occurred in 38.8% of encounters at Center 1 versus 16.4% at Center 2. After adjustment for HPV genotype, cytology, age, and visit type, Center 1 had 2.82-fold higher CIN2+ detection than Center 2 (95% CI 2.40-3.31). Standardizing protocol was estimated to yield 50-60 additional CIN2+ diagnoses annually.



Conclusions: A minimum two-biopsy protocol for colposcopic encounters with acetowhite abnormalities is the highest-yield quality-improvement intervention in this program. Surgeon-level mean biopsy count is a measurable, standardizable quality metric and should be incorporated into colposcopy governance and performance monitoring.

Evolution of a High-Volume Colposcopy Programme: Trends, Quality, and the 'Dilution' Effect (2020-2026)

