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## LETTER TO THE EDITOR

# Assessing the Accuracy of Self-Specimen Collection in HPV Testing: Implications for Clinical Laboratory Practice

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### LETTER TO THE EDITOR

We are writing to submit a scholarly letter on the inaccurate self-specimen collection in HPV testing, especially with regard to clinical laboratory practice. Using the recent study "Comparable detection of HPV using real-time PCR in paired cervical samples and concentrated first-stream urine collected with Colli-Pee device" as a basis for discussion, the purpose of this letter is to shed light on the potential limitations and implications associated with self-collected specimens. In the previously described study [1], 240 women's self-collected first-stream urine samples using the Colli-Pee device and same-day cervical swabs obtained from clinicians were compared for HPV detection. With a Cohen's kappa value of 0.87, the results revealed a high concordance rate of 96.7% (198 concordant-negative, 34 concordant-positive). This suggests that overall, the two collection methods have a high degree of agreement.

It is imperative to draw attention to the possibility of false-positive and false-negative results in the Colli-Pee urine samples, since they can provide difficulties in clinical laboratory settings. With the Colli-Pee urine samples, four of the 240 women who were tested showed false-negative findings, meaning there was a 1.98% risk of getting an incorrect negative result. In a similar vein, four cases showed false-positive outcomes, which increased the likelihood of receiving an incorrect positive result by 10.53%. Both the false-negative rate and

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the false-positive rate must be taken into account in order to get the total inaccuracy rate.
The number of false-negative results (4 cases) divided by the total number of samples examined (240 women) and multiplied by 100 yields the false-negative rate:
1.67% is the false-negative rate (4/240) * 100.
The false-positive rate is computed by multiplying by 100 and dividing the number of false-positive results (4 instances) by the total number of women tested in the samples.
1.67% is the false-positive rate (4/240) * 100.
The sum of the false-positive and false-negative rates yields the overall inaccuracy rate:
Total error rate is equal to the sum of the false-positive and false-negative rates, or 1.67% + 1.67% = 3.34%.
Consequently, the Colli-Pee urine specimen's overall error rate in this investigation is 3.34%.
These results highlight the necessity of a thorough evaluation of the precision and dependability of self-collected specimens in clinical laboratory practice, such as urine-based HPV detection. Self-specimen collection has benefits for appropriate non-invasive HPV screening; nevertheless, the possibility of false-positive and false-negative test findings casts doubt on the validity of these techniques.
Clinical laboratories must be aware of the limits of self-specimen collection in order to accurately give HPV test findings. The possible effects of false-positive and false-negative results on patient management, counseling, and treatment decisions must be carefully considered by laboratory experts. Additionally, initiatives should be taken to increase the accuracy of testing from self-collected specimens, maybe by developing improved procedures or utilizing new technology.
Finally, based on the results of the present study, our scientific letter clarifies the imprecision of self-specimen collection in HPV testing, with a special emphasis on the Colli-Pee urine specimen. Through examining the constraints and consequences of self-collected specimens, our aim is to make a valuable contribution to the current discourse on enhancing the precision and dependability of clinical laboratory procedures concerning HPV.

**Declaration of Interest:**
None.

**References:**

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