

Validation of a novel in vitro breast cancer chemoresistance platform in neoadjuvant setting

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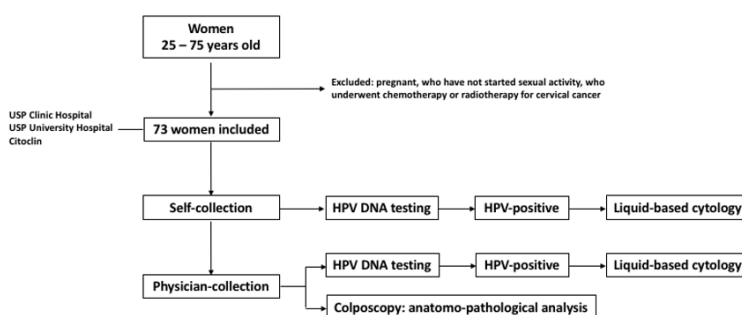
Introduction

In Brazil, the Pap testing-based cervical cancer screening programs are available for the population through the public health system, however, many women do not attend the programs and also are not reached by them. Therefore, the adoption of alternative methods to complement the traditional cervical cancer screening already available is needed. Different studies have demonstrated that self-sampling in combination with HPV DNA testing has similar accuracy compared to the professional-based collection, can increase screening adherence in populations under-screened, and is a promising strategy for expanding screening coverage.

We developed a Brazilian self-collector of cervicovaginal samples, SelfCervix[®], able to collect enough cells to perform HPV DNA testing, liquid-based cytology, and analysis of several sexually transmitted diseases. Our study aims to evaluate the accuracy of self-sampling using a new device for detecting HPV-DNA in a Brazilian population.

Methods

- Woman aged 25-65 years who were indicated to perform the regular screening for cervical cancer at 3 hospitals in Brazil, between March and October 2016;
- Women who provided informed consent were allocated to self-sampling followed by a physician-sampling with a vaginal swab;
- Samples were used for HPV-DNA testing and liquid-based cytology analysis;
- Samples positive for HPV-DNA and with a diagnosis of atypical cells of undetermined significance or more (ASCUS+) were referred for colposcopy;
- Study design is shown:

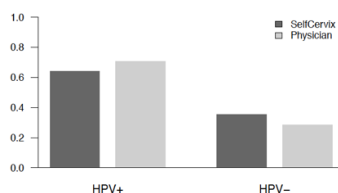


Results

- ✓ 73 women were included in the study;
- ✓ Before the colposcopic examination with the physician, the SelfCervix[®] and verbal instructions explaining how to carry out the cervical self-sampling were provided to each patient. Schematic drawing:



- ✓ HPV-DNA detection rate of self-sampling was similar to physician-collection (64.4% vs 71.2%, $p = 0.1$);



- ✓ In 9 (12.3%) women discrepancies in HPV-DNA testing occurred between self-sampling and physician-collection;
- ✓ The self-sampling presented 87% of accuracy for HPV-DNA detection and cellular alterations analysis in liquid-based cytology compared to physician-collection.

Conclusions

The SelfCervix[®] is not inferior in HPV-DNA detection rate compared with physician-collection. These findings suggest that the new self-collector in combination with HPV testing might be an option to reach under-screened populations and increase the coverage of cervical cancer screening in Brazil.

Contact