



Self-Sampling and HPV Screening in Europe Position Paper

The World Health Organization launched a global strategy to accelerate the elimination of cervical cancer in 2020. A key target is a cervical cancer screening uptake level of 70% by 2030.¹ In February 2021, the European Commission published Europe's Beating Cancer Plan.² This set out recommendations for cervical cancer elimination across the European Union with a more ambitious goal: offering screening to 90% of the eligible population by 2025.

Europe's Beating Cancer Plan called for improvements in three key areas related to screening – access, quality and diagnostics – and for new guidelines and quality assurance schemes for cervical cancer screening. The European Cancer Organisation believes that self-sampling offers a significant opportunity to increase participation in cervical cancer screening and that it should be given a prominent role in achieving cervical cancer elimination. This approach could be especially helpful in increasing screening uptake following the disruption to programmes caused by the Covid-19 pandemic.^{3,4} Even pre-Covid, cervical cancer screening coverage of the eligible population was well below the 2025 target, ranging from about 25% to 80% across European Union countries.²

Human papillomavirus (HPV) testing is now strongly recommended by WHO⁵ as an effective means of secondary prevention of

cervical cancer for women and people with a cervix. HPV testing is replacing cytology as the primary screening test because it more effectively identifies who is at higher risk of developing cervical cancer. If a high-risk HPV type is detected, the same sample can then be tested for cell changes that might develop into cervical cancer.

It is now possible to offer women and people with a cervix the opportunity to collect the HPV sample themselves, a process known as self-sampling.⁶ Users receive a kit, either provided at a clinic or delivered to their homes. Self-sampling for HPV has been found to be as sensitive as clinician-sampling where tests detect the presence of HPV DNA by polymerase chain reaction (PCR).⁷

Self-sampling may be particularly suitable for those who find it difficult to access standard screening facilities, perhaps because they live in countries with less screening provision or in remote areas or have a disability, or where there are cultural barriers or previous traumatic experiences. Those who are sheltering because of Covid-19 can more safely screen at home. HPV self-sampling has been found to be acceptable to transgender men.⁸

If a high-risk HPV type is detected, management decisions may be made which include obtaining a cervical sample for



cytology triage, retesting after an interval, and 'see and treat' at colposcopy.

The level of confidence in the effectiveness of self-sampling has improved significantly since the last edition of the European guidelines for quality assurance in cervical cancer screening were published in 2015.⁹ These guidelines concluded that, 'due to the lower sensitivity of HPV testing on self-collected versus clinician-collected samples and because of the heterogeneity in results between studies, self-sampling should not be the primary option for women participating in cervical cancer screening'. However, the guidelines also stated: 'The clinical accuracy of HPV testing on self-collected samples for cervical screening is sufficient, however, to conduct organized, population-based pilot programmes for women who have not attended screening despite a personal invitation and a personal reminder.' It is the evidence from pilot studies around the world that has changed the consensus on self-sampling.⁷

A recent systematic review¹⁰ found general agreement that self-sampling is a highly acceptable method for HPV testing across a wide range of participant demographics, including vulnerable and under-screened populations. Users generally preferred self-sampling over clinician sampling, citing ease of use, privacy, convenience and physical and emotional comfort (including decreased embarrassment, anxiety, and pain) as major reasons for their preference. Most found the home to be a very acceptable and convenient setting for self-sampling.

The systematic review found some evidence of concern among users about the reliability of self-sampling and about not being able to talk to a clinician. However, this could be mitigated by counselling before the invitation to self-sample, clear instructions, and the availability of clinical staff when needed, either at a clinic or remotely by phone. It is also important that self-sampling programmes address the potential risks of lower rates of follow-up by patients or increased patient anxiety following a positive result.¹¹

The evidence from self-sampling trials is encouraging. A trial in Belgium of women aged 25-64 who had not been screened for cervical cancer for at least three years found that over three-quarters of those invited to self-sample completed the screen compared to one half of those offered a 'traditional' cytology test.¹²

A large study in the USA found that mailing self-sampling kits to under-screened women increased screening uptake compared with usual care alone, with no significant differences in pre-cancer detection or treatment.¹³ The authors concluded that the results support the feasibility of mailing kits to women who are overdue for screening as an outreach strategy to increase screening uptake.

Other studies in Hong Kong,¹⁴ Brunei,¹⁵ and Canada¹⁶ have produced similar results. A large trial, involving 31,000 participants, has recently started in London with self-sampling kits being sent to those 15 months overdue for a traditional screening test and who live in areas where cervical cancer screening



attendance is particularly low.¹⁷ This is seen as the first step towards the introduction of self-sampling at home across England.

In the Netherlands, self-sampling has been offered as an alternative to a clinician-examination since November 2020. Preliminary data suggest that while the number of tests collected by clinicians has remained low, the volume of self-screened samples has doubled and overall screening participation has largely recovered to pre-pandemic levels.³

There have been concerns that infrastructure issues – such as laboratory capacity and shortages of reagents – may limit a rapid expansion of self-testing in the short-term.³ However, self-sampling is clearly an attractive¹⁸ technology which, with the right support, could help to increase screening significantly and improve cervical cancer prevention.

Recommendations

1. Self-sampling should form a central component of national cervical cancer screening programmes. Self-sampling should also be utilised to support the recovery from Covid-19.
2. Endorsement of HPV self-sampling by the European Commission's guidelines on cervical cancer screening. There should also be guidance on effective delivery.
3. Research should continue into the best methods of delivering effective self-sampling with high levels of uptake as part of cervical cancer screening programmes.

The benefits of self-sampling:

- Increases access to screening, especially for those:
 - With mobility challenges
 - Living in remote areas
 - Facing cultural or other barriers to accessing other forms of screening.
- Users of self-sampling have cited the ease of use, privacy, convenience and physical and emotional comfort (including decreased embarrassment, anxiety, and pain) as major reasons for their preference.
- Self-sampling has been found to be as accurate as clinician-sampling where tests are based on a process known as polymerase chain reaction (PCR).
- A trial in Belgium found an increase in response rate to self-sampling screening invitation over 'traditional' cytology tests. Other studies have also demonstrated positive results.



This paper has been produced jointly by the European Cancer Organisation's [HPV Action Network](#) and the [Special Network on the Impact of Covid-19 on Cancer](#). It was compiled via a number of processes of outreach and consultation with European Cancer Organisation's [Member Societies](#), [Patient Advisory Committee](#) and [Community 365](#), in particular with participants in the HPV Action Network and the Special Network on the Impact of Covid-19 on Cancer, and in line with the European Cancer Organisation's [decision-making process](#).

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