

European Federation for Colposcopy (EFC) and European Society of Gynaecological Oncology (ESGO) joint considerations about human papillomavirus (HPV) vaccination, screening programs, colposcopy, and surgery during and after the COVID-19 pandemic

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INTRODUCTION

The COVID-19 pandemic caused by SARS-CoV-2 has radically changed global healthcare. On May 13, 2020, all countries of the European Region reported their COVID-19 status, with 1757814 confirmed cases and 157923 confirmed deaths.¹ Each country has initiated measures to reduce the impact on healthcare systems and to mitigate the transmission of SARS-CoV-2. Suspension or postponement of all non-urgent diagnostic procedures and interventions were among the first adopted strategies to reduce the workload on healthcare facilities, while procedures for urgent or oncological cases have been maintained. Measures such as “social distancing”, defined as keeping distance between individuals outside of their home, and “lockdown”, defined as restricting the movement of the population except for necessity, work, and health circumstances, have been adopted extensively.

Cancer prevention and early diagnosis are of special relevance but may be postponed or suspended in the crisis due to changes in the structures of the medical institutions. Regarding cervical cancer prevention, including vaccination, screening programs, colposcopy, and outpatient surgery of the lower genital tract as well as follow-up, several societies provided guidance to advise clinicians and service providers on the triage of patients who needed a prompt evaluation in a colposcopy clinic from patients whose care could be safely postponed.^{2–6} Those recommendations could be applied in all countries in which screening programs and elective surgery were suspended.

However, as most countries are experiencing a slowing in the number of new infections, it is crucial to consider how the resumption of suspended activities should be managed in the upcoming months. The

decision to allow the resumption of postponable activities represents a balance between patient care, local COVID-19 trend, and health systems' capacity. After COVID-19 control, European and national public health authorities should maintain sufficient resources in the future to sustain vaccination and cervical cancer screening activities to achieve the WHO goal to eliminate cervical cancer.⁷

The objectives of this joint advice from the European Federation for Colposcopy (EFC) and the European Society of Gynaecological Oncology (ESGO) are to suggest actions regarding the continuity of vaccination and screening programs, as well as the management of lower genital tract preinvasive and invasive diseases, and to propose organizational aspects that could be implemented.

MANAGEMENT OF VACCINATION AND SCREENING PROGRAMS DURING AND AFTER THE COVID-19 PANDEMIC

The decision to suspend, continue, or resume vaccination and screening programs should be made based on cervical cancer epidemiology, the transmission scenario of COVID-19, the corresponding mitigation measures in place, and health and immunization system resources. The appropriateness of the chosen option should be periodically and critically reassessed as the COVID-19 situation evolves in the specific country.⁸ Even if epidemiological and organizational aspects may vary from country to country, and it is challenging to define unique management strategies, the following options can be proposed:

- ▶ Human papillomavirus (HPV) vaccination and cervical cancer screening may continue in countries with no cases or sporadic cases of



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COVID-19. However, when health professionals involved in primary/secondary prevention of cervical cancer are engaged in COVID-19 preparation and response measures, HPV vaccination and screening activities may be halted.

- ▶ Vaccination and screening programs should be delayed in countries with clusters of cases and/or community transmission of COVID-19 as long as national or regional authorities in charge of COVID-19 control judge that mobility of the girls/women of the target population and healthcare givers must be restricted to minimize SARS-CoV-2 transmission.
- ▶ Careful planning is needed to handle the backlogs accumulated due to the COVID-19 measures to minimize drops in mid- and long-term population coverage. Measures should be taken to complete the vaccination schedule for girls or young women who have already started HPV vaccination, assuring an interval less than 12–15 months from the first dose.⁹

Management of Screen-Positive Women

During the suspension period, patients who have been scheduled but not screened should be regularly updated by each screening center. In countries that have adopted the high-risk HPV test as the primary screening test for cervical cancer and continue or resume cervical cancer screening, efforts should be made to collect HPV samples simultaneously with liquid-based cytology, to reduce patient contact with healthcare facilities.

Women from countries that suspended cervical cancer screening but are waiting for a screening test result should be adequately managed. In particular, liquid-based cytology should be examined as usual in patients with a positive high-risk HPV test result. Also, high-risk HPV positive women from whom HPV sample was collected in containers which are not allowing for cytological processing should be recalled for cervical cytology specimen.

In case of positive triage results, the time within which the colposcopic evaluation should be scheduled is determined by the result of the screening and triage result.¹⁰ More specifically, patients with “squamous cell carcinoma,” “atypical glandular cells, favor neoplastic (AGC-FN),” “endocervical adenocarcinoma in situ,” or “adenocarcinoma” should be evaluated as soon as possible, within 4 weeks from the results. In case of “high-grade squamous intraepithelial lesion (HSIL),” “atypical squamous cells that cannot exclude HSIL (ASC-H),” or “atypical glandular cells not otherwise specified (AGS-NOS),” patients should undergo colposcopy within 1 to 3 months from the results. Colposcopies in patients with “positive high-risk HPV test with normal cervical cytology,” “low-grade squamous intraepithelial lesion (LSIL),” or “atypical squamous cells of undetermined significance (ASC-US) with a positive high-risk HPV test” could be postponed for up to 6–12 months, in the absence of clinical symptoms and after an overall clinical evaluation of the patient's specific risk.

Management of Preinvasive and Invasive Lesions of the Lower Genital Tract

In case of suspension of elective diagnostic and therapeutic procedures, the timing of the management of abnormal histopathological results is dictated by the risk of progression of preinvasive lesions. Those patients may need a further diagnostic procedure or outpatient surgical treatment (cervical excision procedure, vaginal

excision, or vulvar excision) or a complete assessment to plan the staging and treatment for invasive cancer.

Contact within 2 weeks should be guaranteed for patients with a histopathologic diagnosis of invasive disease from cervical, vaginal, or vulvar biopsy. Moreover, patients with symptoms suspicious for lower genital tract cancers should also be evaluated within 2 weeks.

Patients with a histopathological diagnosis¹¹ of high-grade cervical (CIN2–3), vaginal (VAIN2–3), or vulvar (VIN2-3 or differentiated VIN) intraepithelial lesion should undergo proper surgical treatment within 3 months from diagnosis. If a conservative approach could be offered to patients with CIN2, VAIN2, or VIN2, the first scheduled appointment could be at 6 months.

A histopathological diagnosis of a low-grade intraepithelial lesion¹¹ from a cervical, vaginal, or vulvar biopsy/excision allows one to postpone the contact up to 12 months.

The execution of the test of cure (ie, first follow-up evaluation) after treatment for high-grade disease should not be delayed. In particular, tests that are not to be postponed as follow-up after treatment for high-grade disease at 6 months from treatment are: high-risk HPV test or high-risk HPV test and cervical cytology in the case of CIN2-3 or VAIN2-3, and vulvoscopy in the case of VIN2-3 or differentiated VIN.

The decision to resume elective diagnostic and surgical procedures for lower genital tract pathologies should take into account several aspects related to the COVID-19 pandemic that could affect patient care for a prolonged period.¹² First, before the local health authority could authorize the resumption of activities, there should be a sustained reduction in the rate of new COVID-19 cases for at least 14 days in the specific country or geographical region of interest.¹² Health facilities should have an adequate amount of personal protective equipment (PPE), proportionate to the expected number of procedures. A COVID-19 testing program for staff and patient safety should be promoted, using the most appropriate available tests according to local health authority indications, and defining the timing and frequency of testing. If no tests are available, prevention techniques such as access control and social distancing in common areas are mandatory.¹²

ORGANIZATIONAL ASPECTS

Due the fact that not every institution and center may be involved in the reorganization during the COVID-19 pandemic, the possibilities of decentralization of the various prevention procedures should be discussed. In this context, core teams should be predefined to ensure the ability to perform prevention strategies with an adequate quality.

Virtual consultations

Screening centers and colposcopy clinics should implement virtual consultations and dedicated helplines. The primary aims are to answer questions and alleviate fears of women for whom the scheduled contact (eg, colposcopy/follow-up) has been postponed and to reduce face-to-face consultations.⁴

HPV Self-Sampling

HPV self-sampling is defined as the process where a woman uses a kit to collect a vaginal sample to determine whether she has an HPV infection or not; the sample is then sent for analysis to a laboratory.

HPV self-sampling is gaining interest. Indeed, it is as accurate as an HPV test on samples taken by clinicians, when a validated PCR is used, and is more effective at reaching women not participating in regular screening than routine strategies (invitation or reminder letters) or standard of care.¹³ It is also considered an alternative for routine primary screening (eg, in the Netherlands).¹⁴ Considering that HPV self-sampling does not require traveling, its implementation could be promoted during the COVID-19 pandemic allowing reduction of transmission of the SARS-CoV-2 virus. However, follow-up of women with a HPV-positive self-sample must be assured.

Telecolposcopy or digital colposcopy

Telecolposcopy or digital colposcopy represents the merging between traditional colposcopy and new digital imaging technologies and allows the collection and transmission of digital colposcopy images and videos.¹⁵ Digital colposcopy can be performed in real-time with communication between the colposcopist and the telecolposcopist, or the images/videos could be reviewed at a later time. It represents a promising initiative during the COVID-19 pandemic since the possibility of performing the examinations in different settings and sharing the colposcopic images with few reference centers (hub-spoke model) avoids the concentration of patients and ensures a homogeneous high-level diagnostic management.

PPE and Technical Considerations

A telephone screening for COVID-19 symptoms or assessment of suspicious contact with COVID-19 patients should be routinely performed. The possible status of self-isolation for a suspected infection, or a positive test result, should be offered to all women needing a colposcopy referral. Women presenting symptoms of COVID-19 or with confirmed COVID-19 should delay colposcopy or treatments until their symptoms resolve or they test negative for SARS-CoV-2, unless there is a strong suspicion of invasive pathology. In that case, evaluation should not be deferred, patients should wear a surgical mask, and all team members should wear appropriate PPE (sterile fluid-repellant surgical gloves, an underlying pair of gloves, eye protection, FFP3 mask, surgical cap, and gown).² Asymptomatic women without COVID-19 test results should wear a surgical mask, and staff should wear appropriate PPE (sterile fluid-repellant surgical gloves, eye protection, FFP2 mask, surgical cap, and gown).

Women with negative COVID-19 tests should be managed according to the standard local protocols for infection prevention and safety in the workplace. Outpatient management and local anesthesia should be preferred.

The main risk for healthcare professionals during the treatment of lower genital tract pathologies is represented by the risk of aerosol exposure during surgical procedures, even if current evidence indicates a low risk of COVID-19 presence in the lower genital tract.^{2,4} Nevertheless, a high-efficiency filter smoke evacuation system directly connected to the speculum or electrosurgical handpiece is mandatory to remove surgical smoke. Electrosurgical instruments should be set at a low power level, if possible, and not used for long continuous periods, to reduce the amount of surgical smoke. Clinicians should try to achieve hemostasis without electrosurgical instruments. Large loop excision of the transformation

zone (LLETZ) should be preferred over CO₂ laser since it causes less dispersal of vaporized particles.⁴ The use of disposable instruments is preferable. Video colposcopy should be preferred over binocular view, and the colposcope should be coated with a disposable transparent cover protecting the anterior lens.

Education and Information

During this period of global suspension of activities, the attention to continuing education, professional updating, and scientific activities should not be overlooked. Advanced video communication tools and new educational formats (eg, webinar) should be extensively adopted by scientific societies and by the staff employed in training, in order to ensure practical and up-to-date training and a necessary progression of knowledge. Furthermore, patients should be informed systematically to prevent misunderstanding and to preserve patient compliance during the COVID-19 pandemic.

CONCLUSIONS

In conclusion, the COVID-19 pandemic is affecting healthcare facilities all across Europe and around the world. While aware that the current priority is the management of the COVID-19 health emergency, an adequate level of care must, however, be provided to patients with lower genital tract pathologies in which therapy cannot be postponed. Moreover, in order to not reduce the public health benefits of organized vaccination and screening programs, the resumption of these activities must be carefully planned for months to come, ensuring the safety of both patients and healthcare professionals.

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