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Recommendations for early detection of cancer during covid-19 pandemic in 2021

Recomendações para detecção precoce de câncer durante a pandemia de covid-19 em 2021

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With the Coronavirus disease (COVID-19) pandemic, elective care, including cancer screening, was interrupted in most countries in order to prioritize urgent care and reduce the risk of disseminating the new Coronavirus (SARS-CoV-2) in health care services. [1,2]

In 2020, the Brazilian National Cancer Institute (INCA) published a technical note in March that detailed those early detection actions that could be postponed and those that should not be deferred during the pandemic, and another note in July putting forth some guidance and the conditions necessary to support the resumption of screening.[3,4] In early 2021, with the identification of a new B.1.1.7 variant of SARS-CoV-2, the advent of vaccination, and the growing concern about the impact on oncologic morbidity and mortality,[5] it becomes essential to provide more elements to assist managers and primary care providers regarding when and how to proceed with early detection of cancer.

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In general, the objective should be to streamline the decision-making process, as well as optimize and undertake the most effective actions for the early detection of cancer as possible, while constantly monitoring the pandemic situation at the local level. Screening actions during the pandemic demand a rigorous analysis of the risks and benefits involved, consideration of the epidemiological scenario (the incidence of and mortality due to COVID-19), and the response capacity of the health care network (availability of tests to confirm the infection and hospital and intensive care beds). The risk of delaying cancer screening and the risk of contamination with the new coronavirus and developing COVID-19, and prognostic factors related to more serious outcomes should be analyzed at the patient level.[4]

In cancer screening efforts, it is essential to ensure adherence to the current guidelines, especially with regard to the recommendations of the target population and periodicity.[6,7] For cervical cancer, the recommendation is a cytopathological exam every three years, in women between 25 and 64 years old, who have had two prior negative annual exams.[6] For breast cancer the recommendation is biennial screening mammography from age 50 to 69.[7] There is an explicit recommendation against screening mammography at intervals shorter than every two years or outside this target population; thus it is not merely a matter of prioritizing the age group or the maximum periodicity between exams.[7] Carrying out cervical and breast cancer screening disregarding these recommendations carries more risks than benefits, especially during the pandemic period.[8] The same applies to cancers commonly screened in clinical practice, but for which there is no recommendation for screening due to the absence of conclusive proof of benefits or for which the adverse effects of routine testing of asymptomatic individuals predominate.[3] These recommendations are especially relevant considering that in Brazil, even for breast and cervical cancers, opportunistic screening with shorter than recommended intervals predominates, in addition to being extremely common outside the recommended age range.[8, 9]

It is essential to insure the safety of patients and health professionals by following prevention and protective measures protocols. In addition to the criteria already listed[4], the performance of diagnostic investigation must be optimized, avoiding unnecessary returns to the primary care team and trips to the clinic by patients solely for scheduling exams. Individuals with abnormal screening test results prior to the

pandemic need to be actively tracked down and prioritized for further diagnostic investigation.[4]

In the context of different stages of spread of the new coronavirus, different strategies for the early detection of breast cancer and cervical cancer can be implemented. Therefore, considering the estimate of the basic reproduction number (R0), which indicates how many other people an infected individual can transmit the disease to, it is possible to establish which screening actions should be prioritized:[10]

Phase 1 - uncontrolled epidemic spread of the virus (R0> 2): treatment of people with diagnostic confirmation of cancer; follow-up, diagnostic confirmation and treatment of women with a highly suspicious or positive pre- or peri-pandemic screening test, such as BI-RADS 4 or 5 on mammography reports and high-grade cervical lesions on Pap smears.

Phase 2 - controlled epidemic spread (R0 ≥ 1 and ≤2): screening restricted to women in the target population who have never been screened or have not been screened for breast and cervical cancer for more than two or more than three years, respectively; screening for cervical cancer in women living with HIV/AIDS; follow-up, diagnostic confirmation, and treatment of all women with a positive pre- or peri-pandemic screening test;

Phase 3 - elimination of the local epidemic (R0 <1): return to pre-pandemic recommendations.

The main constraint inherent in this strategy, however, is the capacity of health care systems to make testing for the new coronavirus available on a large scale. Consequently, other local indicators should be considered, particularly the occupancy rate of available ICU beds, which should not exceed 95% in phases 2 and 3. With regard to breast cancer, it is important to remember that old screening recommendations pertaining to clinical breast examination and earlier mammography screening in women at higher risk are no longer in effect.[7]

In cases where the presence of signs or symptoms are suggestive of cancer, in all phases of the pandemic, a health professional or service should be consulted immediately and such individuals should be given priority over consultations for screening purposes, both in primary care setting, and for referral to other levels of care in order to carry out complementary diagnostic tests to achieve an early diagnosis.[4]

Ideally space should be reserved in the primary care consultation schedule to meet spontaneous demand for cases with suspicious signs and symptoms for the purpose of initial diagnostic investigation.

While there is conclusive evidence of benefits of screening for few types of cancer, for early diagnosis of suspected cases the strategies must cover a greater number of neoplasms. The following signs and symptoms are more predictive of some of the cancer topographies with the highest incidence and/or mortality and can be used both in awareness-raising campaigns with the population to seek care, as well as for prioritizing medical assessments and referral for diagnostic investigation: [11]

- Breast cancer: any breast lump in women over age 50; breast lump in women over 30, that persist for more than one menstrual cycle; breast nodule of hardened and fixed consistency or that has been increasing in size in adult women of any age; unilateral bloody papillary discharge; eczematous lesion of the areola skin that does not respond to topical treatments; men over age 50 with palpable unilateral tumor; presence of axillary lymphadenopathy; progressive increase in breast size with the presence of edema signs, such as orange peel skin; retraction in the skin of the breast; change in the shape of the nipple;[7]
- Cervical cancer: excessive and/or bloody vaginal discharge outside the menstrual period, pain and/or bleeding after intercourse or exertion;
- Lung cancer: cough, shortness of breath, hemoptysis, chest pain, loss of appetite, weight loss, current or previous history of smoking, history of persistent or recurrent lung infections, digital clubbing, supraclavicular lymphadenopathy or persistent cervical lymphadenopathy;
- Colorectal Cancer: weight loss, abdominal pain, changes in bowel habits, rectal bleeding, abdominal or rectal mass, anemia;
- Gastric Cancer: nausea, vomiting, hematemesis, dysphagia, reflux, dyspepsia resistant to treatment, upper abdominal pain, weight loss, anemia;
- Esophageal Cancer: dysphagia, weight loss accompanied by upper abdominal pain or reflux or dyspepsia;
- Câncer de esôfago: disfagia, perda de peso acompanhada de dor abdominal alta ou refluxo ou dispepsia;

- Cancers of the lip and oral cavity: red or whitish plaques on the tongue, gums, palate and buccal mucosa or any lesion that does not heal within 15 days, persistent hoarseness, difficulty chewing and swallowing, difficulty speaking, facial asymmetry, persistent nodule in the neck;
- Prostate cancer: nicturia, urinary frequency, hesitation, urgency, retention, erectile dysfunction, visible hematuria;
- Non-melanoma skin cancer: spots or nodules, itching, burning, peeling, bleeding, lesions that do not heal in four weeks.
- Melanoma: skin lesions that have changed in size, are irregularly shape, irregularly colored, largest dimension ≥ 7 mm, inflammation, secretion, changes in tactile sensation;
- Skin cancer (Non-melanoma): spots or nodules, itching, burning, peeling, bleeding, lesions that do not heal in four weeks.

For the referral process to work properly, it is necessary to have clarity on which secondary services are capable of carrying out the diagnostic investigation conclusively. It is also recommended that there be coordination of this diagnostic investigation process in order to identify individuals who are lost to follow-up. It should be noted that this is not intended to be an exhaustive list of all the signs and symptoms that may be encountered in individuals with cancer, and that criteria for suspecting cancer in children and adolescents or less prevalent cancers in the adult population have not been included.

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