

Practical recommendations of the Russian Society of Clinical Oncology for the provision of cancer care in the context of the COVID-19 pandemic

These recommendations are temporary in nature and are due to the need for cancer care in a pandemic and the maximum protection of patients and medical personnel.

Educational activities

It is necessary to conduct training sessions with medical personnel in recognizing the symptoms of coronavirus infection, a list of actions in various situations associated with the COVID-19 pandemic, and providing staff and patients with training materials for the prevention and self-diagnosis of infection.

Organization of medical care in a specialized oncological institution

- At each entrance to the institution, a control post is needed to find out the reasons for coming to the institution, remote temperature measurement to identify patients and employees with hyperthermia. All persons with a temperature above 37.0 ° C are recommended to return home and call a doctor. The organization of such a post is desirable outside the premises of the institution, in a temporarily erected structure (for example, in a tent or under a canopy), especially since the approach of the warm season makes this possible in many regions of our country.
- The ban on visiting the institution to all unauthorized persons, including Patient visits by visitors. It is possible to transfer the necessary funds to stay in the hospital.
- Organization of work with the condition of installing a physical barrier in the premises (in registries, nursing posts, medical rooms) or observing a distance barrier of 1.5 meters (in waiting areas for patients, in day hospitals). For inpatients, a single stay in the room or dividing the room with fences is desirable to create a semi-private zone.
- To equip the working rooms of the medical staff and the wards of patients with disinfectant dispensers, to ensure regular disinfection of all premises of the institution.
- It is recommended to minimize the use of air conditioning systems such as split systems, which impair natural air recirculation.
- Limit the movement of patients in the hospital between the departments of the hospital and prevent them from leaving the building. Arrange meals for patients in the wards.

Minimization of visits to cancer patients during a pandemic

Due to the change in the order of movement of the population, the introduction of a quarantine regime or self-isolation, many international cancer communities that have faced a pandemic in their countries publish recommendations on changes in the treatment of cancer patients for this period.

Cancer patients at risk of severe course of COVID-19:

- patients over 65 years old;
- patients with concomitant chronic diseases of the cardiopulmonary system;
- patients receiving chemotherapy;
- obese patients (BMI > 40);
- patients receiving immunosuppressive therapy;
- patients with decompensated conditions, for example, diabetes mellitus.

Particularly at high risk are patients with **non-small cell lung cancer over the age of 60 years** [2].

It is necessary to reduce the number of visits to cancer hospitals. In this regard, it is proposed to subdivide patients into three categories:

1. **Patients who need immediate treatment for cancer or continued treatment** because the risks of progression or death from the underlying disease are higher than the risk of SARS-CoV-2 infection.
2. **Patients who can delay the start of therapy** (for example, patients who have already received several lines of palliative chemotherapy for the progression of the cancer process and do not have symptoms of the disease).
3. **Patients under observation without signs of illness and / or progression** , in whom visits should be canceled in the next 2-3 months and / or carried out remotely.

Only patients of the first group are allowed to visit hospitals during a pandemic . In all other cases, counseling using Internet technology or telephone is recommended.

All consultations and preparation for hospitalization are carried out remotely using video and teleconferencing.

In a medical institution, a strict separation of patient flows between outpatient inpatient departments is mandatory.

For outpatients observed in the clinic, it is recommended:

- Transfer to a later date of all diagnostic procedures to monitor the effectiveness of therapy in the absence of obvious signs of progression or urgent situations.
- Using modern technologies for remote patient consultation, radiological images, morphological preparations, etc. etc. in order to discuss all emerging issues.

For patients with suspected or confirmed diagnosis of COVID-19

In case of suspicion or confirmation of the diagnosis of COVID-19 in a patient suffering from cancer, follow the guidelines of the Ministry of Health of the Russian Federation “Prevention, diagnosis and treatment of new coronavirus infection COVID-19”.

Patients with COVID-19 are at risk of severe disease during antitumor treatment, therefore it is necessary only in case of a threatening condition due to tumor progression. In all other cases, it is advisable to postpone antitumor treatment until COVID-19 is approved.

Treatment approaches

An individual approach to each clinical case is recommended , a change in treatment tactics should not significantly worsen the prognosis of the course of the underlying disease. In some cases, the rejection of adjuvant chemotherapy for early breast cancer or the postponement of its timing may have a more beneficial effect on the prognosis than its conduct in a pandemic.

For patients requiring antitumor treatment, the tactics of the latter is determined taking into account the minimization of complications that increase the risk of joining a viral infection.

Surgery

It is recommended that the number of extensive surgical interventions requiring subsequent patient placement on mechanical ventilation be minimized.

In more complex operations in patients with cancer of the lung, stomach, esophagus, pancreas, colorectal cancer, etc., it is advisable to conduct preoperative therapy (chemotherapy, hormone therapy, chemoradiotherapy) for the duration of the pandemic, followed by surgical treatment.

Drug treatment

Most well-known international professional communities (ASCO, ESMO, NCCN) give general recommendations on changing treatment tactics for cancer patients, the purpose of which is to minimize social contacts and visits to medical institutions [4, 5, 6]:

- refusal to conduct obviously toxic chemotherapy, especially in patients with concomitant diseases and who are at risk for the severe course of COVID-19;
- when choosing a therapy, give preference to drugs without potential pulmonary toxicity (for example, replacing bleomycin with ifosfamide for a germ cell tumor, use of sunitinib for neuroendocrine tumors instead of everolimus);
- transfer to observation or to maintenance therapy when remission is achieved, provided that the reduction in the number of treatment courses does not lead to a deterioration of long-term results;
- transfer of patients from intravenous regimens to oral treatment regimens, if this does not worsen the course of the oncological process;
- in some cases, it is possible to transfer the next course for 2 weeks, increase the intervals between courses of treatment;
- refusal (where possible) from weekly treatment in favor of a 2-3-week;
- the decision to cancel and / or modify the treatment regimen **should take into account the indications, risks and expected benefits**, it is advisable to formalize the decisions made by the decision of the oncological consultation or the medical commission;
- should strive to minimize the number and list of diagnostic procedures and tests performed during the drug treatment to assess the effect and toxicity, especially in patients with its absence (control of blood tests only before the next course, examination to evaluate the effectiveness of therapy no more than 1 time at 8-10 weeks, refusal from audiometry, echocardiography, coagulogram, etc. in the absence of signs of corresponding toxicity);
- transferring patients for treatment to another medical facility that does not have COVID-19 outbreaks;
- the issuance of tablet preparations for a longer period, for example, for 2-3 months (by decision of the medical commission);
- expanding indications for the prophylactic administration of G-CSF for patients with a risk of febrile neutropenia of more than 10%, considering the appointment of prophylactic antibiotic therapy. When prescribing G-CSF, preference should be given to pegylated filgrastim, which is administered once after a course of myelotoxic therapy;
- providing the patient with instructions for the occurrence of side effects, indicating drugs and modes of their use to stop adverse events; the patient must be provided with a telephone number and / or email address to contact the attending physician, if necessary, with the recommendation of immediate telephone contact with the attending physician or, if it is not possible, an ambulance doctor in case of deterioration of health.

At the moment, there are no absolute contraindications for carrying out a particular method of medicinal antitumor treatment, as well as clear recommendations regarding the sequence of their implementation, **therefore, each specific clinical case must be considered individually**.

Currently, there are no indications for the use of antiviral and other drugs with potential antiviral activity for prophylactic purposes in cancer patients.

Radiation therapy

Radiation therapy is a highly specific treatment method that requires special skills that cannot be acquired in a short time. The personnel of the radiotherapy department are in contact with a large number of incoming patients, the risk of infection is high, and the lack of personnel protection measures jeopardizes the functioning of the department. It is necessary to limit as much as possible personal contacts of employees, and some of them should be transferred to work in conditions of remote access.

In order to minimize transmission, you must:

- to differentiate between the flows of patients of a day hospital and a round-the-clock hospital (for example, incoming patients are treated in the morning, after which routine cleaning and disinfection of the rooms is carried out and patients of a round-the-clock hospital are invited to treatment);
- limit the number of persons accompanying the patient;
- strictly observe the sanitary and epidemiological rules and norms (preliminary, current and final cleaning in waiting areas, in canyons for apparatuses and in the control room, mandatory disinfection of the treatment table and fixing devices after each patient);
- to minimize the number of patients in the waiting area, appoint treatment visits according to the schedule, if possible, maintain a distance of 1.5 m between patients in the waiting area;
- if possible, allocate a separate apparatus for radiation therapy to patients of childhood and adolescence.

When planning radiation therapy in a pandemic, its goals and potential effectiveness should be clearly understood. Patients who undergo radiation therapy with a radical goal should receive it in terms that do not worsen the prognosis of the course of the disease. In patients undergoing adjuvant radiation therapy, in addition to previous surgical or complex treatment, its contribution to improving long-term results should be evaluated. If radiation therapy reduces the frequency of locoregional relapses without affecting the overall life expectancy, then its cancellation can be discussed. Palliative radiation therapy should be recommended only if the patient had previously used other methods to control the symptoms of the disease.

When planning radiation therapy, preference should be given to protocols with hypofractionation, if this technique does not worsen the results of treatment. Prolonged treatment for several weeks increases the risk of illness for the patient, which can lead to a break in treatment and adversely affect its results. Simultaneous chemoradiotherapy during a pandemic also increases the risk of infection with the development of serious complications [7], so you should abandon it or prefer a sequential version of chemoradiation treatment, for example, in patients with lung cancer. Specific recommendations on hypofractionation options for various locations of the tumor and on situations where rejection is possible are indicated by various expert groups [7, 8].

During the COVID-19 pandemic, the use of active breathing control techniques should be avoided due to the high risk of airborne infection to minimize the use of devices requiring disinfection. It is recommended to use a technique with a breath holding on a deep breath.

Prevention of infection in a medical institution and personnel protection

For the purpose of timely diagnosis of coronavirus infection, when planning hospitalizations and admission of patients to the hospital, a thorough clarification of complaints and anamnestic data is necessary to identify possible contacts with patients / infected SARS-CoV-2. It is advisable to minimize the time spent by patients in the hospital in cases where this is possible, due to chemotherapy in the hospital mode of one day. In many countries (USA, Saudi Arabia, Korea, China), patients are tested for SARS-CoV-2 before being admitted to the oncology hospital, which excludes hospitalization of already infected patients in the clinic. Hospitalized patients must be provided with personal protective equipment (disposable medical masks) during their stay in the hospital.

Patients who are planning the next course of treatment should be advised that preliminary blood tests be performed on an outpatient basis, followed by telephone contact with the attending physician to assess blood

counts and the possibility of taking the next course, as well as to determine the absence / presence of symptoms of coronavirus infection. If there is cytopenia in the blood test that does not allow the planned course of chemotherapy to be carried out, the patient should be recommended to perform a second analysis and transfer of hospitalization for one week.

All medical personnel should be provided with medical masks, goggles, disposable seals, and disinfectants.

It is advisable to set up a **quarantine zone** in the institution where patients who come into contact with patients COVID-19 will be transferred. In the quarantine zone, patients should be in a single (if possible) ward with limited external contacts and a ban on movement within the institution. Patients with confirmed coronavirus infection must be transferred to an infectious diseases hospital; patients with no symptoms of coronavirus infection and a negative test for SARS-CoV-2 are discharged from quarantine after 2 weeks with the possibility of continuing the planned treatment.

All medical personnel working in the quarantine zone should be provided with N95 medical respirators, goggles or a protective shield, a disposable disposable overalls or a dressing gown with a cap, replaceable shoe covers, gloves. Each room should have a disinfectant dispenser. All patients in the quarantine zone must be provided with medical masks.

If possible, personnel who are not directly involved in medical activities should be transferred to remote work.

By decision of the administration, staff can work on a shift basis for shifts of 14 days (formed teams of staff should include doctors, nurses and paramedics). This will allow in case of infection with COVID-19 one of the members of the brigade to send the entire brigade for self-isolation, patients to the quarantine zone, and after disinfection, continue work in the department with the forces of another brigade that did not come into contact with the ill colleague.

Literature:

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Useful sources of information on the COVID-19 pandemic:

- covid19.rosminzdrav.ru
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- www.who.int/en/emergencies/diseases/novel-coronavirus-2019/advice-for-public

- www.nccn.org/covid-19/
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