The official French guidelines to protect patients with cancer against SARS-CoV-2 infection

On request of the French Health Ministry, the French High Council for Public health (Haut Conseil de Santé Publique [HCSP]) entrusted a representative group of French medical oncologists and radiation oncologists, working across academic and private practice, with the task of preparing guidelines to protect patients with cancer against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection, while maintaining the possibility of cancer treatment.

After finalisation of the guidelines on March 10, 2020, the coordinator of the group (BY) was interviewed by HCSP on March 11, 2020. The guidelines were adopted and published by HCSP on March 14, 2020. The preparation of these guidelines is justified by data[1] suggesting patients with cancer are at high risk of respiratory complications related to SARS-CoV-2 infection. The susceptibility of patients with cancer to influenza was described[2] before the emergence of SARS-CoV-2. For patients with cancer infected with influenza, the risk of hospital admission for respiratory distress is four times higher, and the risk of death ten times higher than patients without cancer. This exacerbation seems to be particularly marked in those with neutropenia or lymphopenia, a feature commonly seen in patients with cancer treated with multiple therapies.[2]

A Comment[1] from Wenhua Liang and colleagues, published in *The Lancet Oncology*, on the situation in China suggests that patients with cancer are at higher risk of infection with SARS-CoV-2 than the general population (1% of patients with COVID-19 in the study had cancer, whereas the incidence of cancer in the Chinese population is 0·29%), which could be related to the closer medical follow-up of these patients. More concerning is the increased risk of severe respiratory complications requiring time in the intensive care unit in patients with cancer, as compared with patients without cancer (39% *vs* 8%, respectively; p=0·0003). A covariate significantly associated with this risk was a history of chemotherapy or surgery in the month preceding infection (odds ratio 5·34, 95% CI 1·80–16·18; p=0·0026), a factor that includes the majority of patients with cancer. Finally, patients with cancer deteriorated more rapidly than those without cancer (median time to severe events 13 days *vs* 43 days; p<0·0001; hazard ratio 3·56, 95% CI 1·65–7·69).

The following guidelines apply to adult patients with solid tumours only, and should be considered complementary to the standard rules adopted by the French health authorities for the general population.

First, some prevention measures can be implemented in oncology departments. The basic principle is for patients with cancer and oncology or radiotherapy departments to avoid—as much as possible—any contact with people with coronavirus disease 2019 (COVID-19). Oncology and radiotherapy departments should ideally remain COVID-19-free sanctuaries. The admission of patients with COVID-19 in oncology or radiotherapy departments should be avoided. If, despite this principle, such patients were admitted to hospital in oncology or radiotherapy departments, they should be isolated from other patients with cancer and referred to departments specialised in the fight against COVID-19 as quickly as possible.

Given the susceptibility of patients with cancer to SARS-CoV-2 infection, their presence at hospitals should be minimised. Any measures that would enable management of patients with cancer at home should be encouraged. This includes telemedicine and phone calls to replace safety visits, as well as replacement of intravenous drugs with oral drugs (eg, chemotherapy and hormone therapies) where possible, along with infrastructure and logistics to allow home administration of intravenous and subcutaneous anticancer agents. Adjustment of dosing schedules of chemotherapy or radiotherapy treatments can be considered to reduce the frequency of hospital admissions (eg, every 3 weeks, rather than weekly administration, of the same regimens or hypofractionated radiotherapy). Moreover, some patients with slowly evolving metastatic cancers could be given temporary breaks in their treatment at the discretion of the referring oncologist, with disease assessment extended to every 2–3 months, to avoid hospital admissions.

Despite these measures, some patients with cancer will have to be admitted to hospital for systemic treatment or radiotherapy. The caregivers are advised to organise

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daily phone calls to patients with cancer planned to be admitted the following day, to ensure these patients do not present any symptoms compatible with COVID-19 before being admitted to oncology or radiotherapy wards. Patients with cancer who have symptoms of COVID-19 should be referred to departments specialised in the fight against COVID-19. To protect patients with cancer, open-space chemotherapy outpatient centres should integrate separation measures (eg, minimum space between seats, mobile walls, wearing of masks by patients and staff).

Patients with cancer who do not have COVID-19, or who have recovered, can continue treatment, with the aforementioned adjustments to limit their presence at the hospital. If access to hospital cancer care is reduced because of requisition of facilities for management of patients with COVID-19, or if the likelihood of viral infection and life-threatening complications were deemed too high, a selection of patients to be admitted to hospital for cancer treatment, prioritised by type of care or treatment, might be required. The prioritisation in the management of patients will integrate the essence of curative or non-curative intent therapeutic strategy, age of patients, life expectancy, time since diagnosis (eg, early setting recently diagnosed or first-line treatment, or late setting in patients who have been treated with multiple lines of chemotherapy), and symptoms. The following priority order is proposed (but remains at the discretion of the patient's clinician and team): (1) patients with cancers managed with curative intent treatments (favouring those patients aged ≤60 years or life expectancy ≥5 years, or both); (2) patients with cancers managed with non-curative intent treatments, and aged 60 years or younger, or life expectancy of 5 years or more, or both, and in first-line of the therapeutic strategy (early setting); and (3) other patients with cancers managed with non-curative intent treatments, favouring those whose cancerous lesions extend or whose symptoms might jeopardise their lives quickly in the case of treatment discontinuation. Patients with cancer who need to be hospitalised for supportive care (eg, pain management, bacterial infection, or palliative care before death) could be referred to non-specialised cancer departments, or home care.

In summary, patients with cancer are at high risk of severe and urgent clinical complications and patients with cancer with COVID-19 should discontinue their systemic anticancer treatments until complete resolution of symptoms (at clinician discretion). If hospital admission is deemed necessary, the patient should be admitted to departments involved in the fight against COVID-19 so that oncology and radiotherapy departments remain COVID-19-free sanctuaries. For patients with cancer without COVID-19, hospital admission for in-patient cancer care should be minimised, and management at home favoured. In a situation where available care facilities are scarce, prioritisation should involve the patients managed with curative-intent therapeutic strategies, and those with a life expectancy of 5 years or more, acknowledging that final decisions lie with the referring clinicians. Patients with cancer should be closely monitored owing to their susceptibility to SARS-CoV-2 infection.

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1 Liang W, Guan W, Chen R, et al. Cancer patients in SARS-CoV-2 infection: a nationwide analysis in China. *Lancet Oncol* 2020; **21:** 335–37.
2 Bitterman R, Eliakim-Raz N, Vinograd I, Zalmanovici Trestioreanu A, Leibovici L, Paul M. Influenza vaccines in immunosuppressed adults with cancer. *Cochrane Database Syst Rev* 2018; **2**: CD008983.