

## COVID-19: Increased mortality in cancer patients

Richard Béliveau

*Translated from Le Journal de Montréal, May 9th, 2020*

*One study reports that cancer patients are up to 6 times more likely to develop severe complications and die from Covid-19.*

As research has shown in recent weeks, Covid-19 is a particularly dangerous disease for patients with co-morbidities at the time of infection, especially obesity, type 2 diabetes and hypertension.

The metabolic disturbances and chronic inflammation which are associated with these pathologies aggravate the severity of the disease by disrupting the immune response directed against the virus, in particular by causing an exaggerated production, a molecular storm of inflammatory cytokines which then leads to rapid degradation of basic physiological functions.

### CANCER PATIENTS AT RISK

A recent study in China indicates that cancer is another comorbidity that can greatly influence the severity of coronavirus infection (1). By comparing the health status and mortality rate of approximately 600 people hospitalized for Covid-19, the researchers noted that cancer patients at the time of infection had a 3-fold risk of mortality higher than those of the same age, but who were not cancerous. Cancer patients were also at higher risk of developing serious complications from the infection, such as being admitted to intensive care and needing mechanical ventilator support. This increased risk of complications and mortality was particularly significant for people with hematological (leukemia, lymphoma, myeloma) and lung cancers, especially when these cancers were metastatic (6-fold increase in the risk of mortality).

### A GREAT VULNERABILITY

Several factors may explain the greater vulnerability of cancer patients to Covid-19. Firstly, the efficiency of the immune system can be seriously diminished by cancer, particularly in the case of hematological cancers which directly attack the immune cells and reduce the natural defenses. Researchers have observed that the majority of patients with leukemia, lymphoma or myeloma were immunosuppressed and that their clinical condition deteriorated very quickly following the infection.



For non-hematologic tumors, called solid tumors, it is lung cancer that is most commonly associated with an increased risk of complications from Covid-19, possibly due to a decrease in lung function which worsens the severity of the respiratory infection. Second, it should be mentioned that certain treatments can decrease the efficiency of the immune system and at the same time reduce the ability to fight infection. For example, patients who had been treated with immunotherapy or surgery within 40 days of infection showed an increased risk of developing severe complications, being admitted to intensive care, and dying from Covid-19 compared to those who had not undergone treatment. Third, the study reports that cancer patients are 10 times more likely to be infected with coronavirus while in hospital than non-cancer patients.

Overall, these data show how cancer patients represent a population vulnerable to Covid-19. The implementation of very strict preventive measures is therefore absolutely necessary to protect these very high risk patients.

(1) Dai M et coll. Patients with cancer appear more vulnerable to SARS-COV-2: a multi-center study during the COVID-19 outbreak. *Cancer Discov.* 2020, (Online ahead of print, April 28)