



## Oncology Care at October 10 Hospital During the Covid-19 Pandemic

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### Abstract

**Introduction:** The care of cancer patients demands many medical resources, which many times coincide with those necessary for the care of COVID-19 patients, this implies a challenge for the medical personnel who assist them.

**Objective:** to determine some of the demographic, medical and nursing care variables received during the time of the research, and to compare it with a similar period of the previous year.

**Material and Methods:** A descriptive study was carried out in 516 patients who were undergoing cancer-specific treatment during the period between August and December 2020. clinical histories, patient record sheets seen in consultation, treatment sheets and Nursing records of treated patients.

**Results:** In 2020, 2302 consultations were carried out in the study period, 257 (21.5%) were made to female patients and male 259 (23.2%) with a similar trend to the previous year in terms of gender distribution. Nursing actions in the study period were also reduced, limiting themselves only to monthly planned treatments.

**Conclusions:** Although the number of consultations and treatments provided during the study period is well below what was done in the previous year, it was tried to show that it was due to the prevailing epidemiological situation in the world and did not respond to a poor management of processes for patient care in the oncology service.

**Keywords:** Cancer; Coronavirus; COVID-19; SARS-Cov-2; Cancer Patients

### Abbreviations

SARS-Cov-2: Severe Acute Respiratory Syndrome Coronavirus 2; WHO: World Health Organization; ESMO: European Society for Medical Oncology; ASCO: American Society of Clinical Oncology; NCCN: National Comprehensive Cancer Network; ICU: Intensive Care Units; PAHO: Pan American Health Organization

### Introduction

December of the year 2019 culminated with the news of the appearance of a high number of patients diagnosed with pneumonia of unknown origin, in Wuhan, Hubei province in China.

After ruling out other etiological agents, it was concluded that it was a new virus belonging to the Coronaviridae family [1]. It was subsequently designated as SARS-Cov-2, (severe acute respiratory syndrome coronavirus 2) and officially by the World Health Organization (WHO) as Coronavirus disease 2019 (COVID-19). caused by it [2].

On March 11, 2020, the WHO declared COVID-19 a pandemic [3]. A total of 189 countries have reported cases of COVID-19, 82,799,685 cases have been confirmed and 1,806,298 have died as of December 30, 2020, for a mortality rate of 2.18% [4,5]. According

to data from the Health authorities in Cuba, the first diagnosed case was on March 11, 2020, data that would be confirmed by the WHO two days later [6].

Until December 30, 2020, 11,863 positive cases and 146 deaths had been reported in Cuba for a case fatality rate of less than 0.89%, which placed Cuba in 122nd place worldwide for this indicator [4].

Caring for cancer patients requires many medical resources, which often coincide with those needed to care for COVID-19 patients, which poses a challenge for the medical staff who care for them [7]. Cancer patients are within the vulnerable population, since they have a 0.79% probability of being diagnosed with COVID-19, unlike the general population whose probability is 0.37% (OR2 - 31.95%; CI1 - 89-3.02), therefore it is an associated risk factor for severe outcomes in patients with COVID-19 infection [6].

Since the documentary review did not find rigorous scientific evidence on the behavior of COVID-19 in the cancer population, it is possible that patients undergoing immunosuppressive cancer treatment may have a greater susceptibility to it and a higher incidence of associated complications, such as and as occurs in other respiratory viral infections such as the flu.

Until now there is little evidence that the virus worsens the tumor pathology itself, however, in cancer patients it could be associated with a more severe clinical picture, the severity of which could be increased if other factors are associated such as advanced age or the presence of other comorbidities. Cytotoxic drugs, support treatments - such as steroids - and cancer itself, have a great impact on the immune system of people, making them more vulnerable to infection and limiting the body's ability to fight.

In contrast, immunotherapy was designed to boost the immune response, which led to fears of inducing a cytokine storm in patients exposed to COVID-19. It is also known that surgery causes the immune response to be suppressed for weeks and even months after the operation. This increased risk of complications requires strict adherence to prevention protocols and extreme caution. The recommendations made to avoid contagion to the general population must be followed particularly strictly for cancer patients [7,8].

The European Society for Medical Oncology (ESMO), the American Society of Clinical Oncology (ASCO) and the National Comprehensive Cancer Network (NCCN), the main organizations responsible for establishing treatment protocols in oncology, reached a consensus on general recommendations for the management of cancers. patients diagnosed with cancer in the context of the SARS Cov2/COVID-19 pandemic and base them on 6 fundamental axes [9]:

- Preparation, which ranges from the general care of the cancer patient, staff preparation, disinfection and cleaning of the hospital environment, patient programming.
- Treatment decisions, assess which surgeries to perform and which to postpone, changes in treatment administration routes, modification or suspension of chemotherapy, adjustments in radiotherapy planning.
- Ethical considerations, aspects as sensitive as the destination of resources and palliative care will be analyzed.
- Hospital management of oncology patients, behavior in the face of a decrease in the number of hospital beds, in the Intensive Care Units (ICU), the reassignment of hospitals.
- Well-being of the health team, the emotional and physical well-being of the staff requires proactive attention, reassignment of tasks to immunocompromised staff.
- Perspective, urging study and personal development, analysis of global impact, assuming new dynamics of life.

Clinical-Surgical Hospital "October 10" was one of the institutions reassigned in Havana to care for suspected cases of COVID-19, which led to the redistribution of its services to other institutions in the territory. The Medical Oncology Service was relocated to the "Miguel Enríquez" Surgical Clinical Hospital, where outpatient chemotherapy and elective surgery remained the main therapeutic modality. The main locations of the patients treated corresponded to prostate, breast, head and neck injuries, which corresponds to what is reported in the Statistical Yearbook of Health for the incidence of cancer according to sex and main locations [10].

In this scientific article, the objective is to determine some of the demographic variables, of the medical and nursing care received during the time of the investigation, and to compare it with a similar period of the previous year.

The period of the study was determined to be between August and December of the year 2020, since the most reliable primary data is available and statistically the month of August marked a difference in terms of the trend that accumulated from previous months. The knowledge that the results of this research can provide will serve for a better functioning of the medical oncology service.

**Materials and Methods**

A descriptive study was carried out in patients diagnosed with an oncological disease, treated with oncospecific therapy during the period between August and December 2020.

**Universe and sample**

The universe was made up of 1032 patients diagnosed with an oncological disease, treated by the Medical Oncology service of the Clinical-Surgical Hospital October 10. The sample consisted of 516 (50%) patients who were undergoing oncospecific treatment during the study period and who met the following inclusion and exclusion criteria.

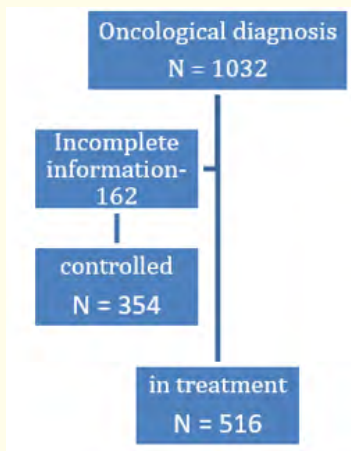


Figure a

**Inclusion criteria**

- Clinical and histological diagnosis of an oncological disease.
- Under oncospecific treatment at the time of the study.

**Exclusion criteria**

- Incomplete information.
- Controlled disease patients.

Study variables: sex, number of consultations and number of treatments completed by Nursing.

Description of the most important techniques and procedures:

As sources of information, the medical records, record sheets of patients seen in consultation, outpatient treatment forms and Nursing records of treated patients were reviewed, during the period determined in the general design of the study.

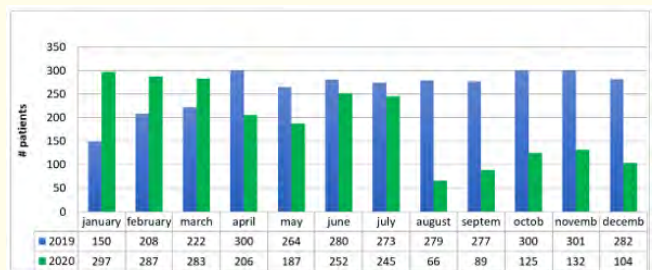
The researcher in charge was responsible for filling out the documentation throughout the study, with the maximum quality and fidelity of the information.

With the collected information, a database was created in the SPSS system (version 21.0) for the registration and analysis of the data of each included individual. This article is not available in any database.

For data processing, the statistical package SPSS version 21.0 was used. For the description of the quantitative variables, absolute numbers and percentages were used. The results are presented in tables and graphs.

**Results and Discussion**

The year 2020 began with 287 patients treated above the accumulated for the first quarter of the year, when it is related to the same period of the year 2019 (Graph 1). The month of August of the year 2020 was the month of least attention to patients, only 66 consultations were given in the service, for the same period in 2019 it represents a significant decrease.

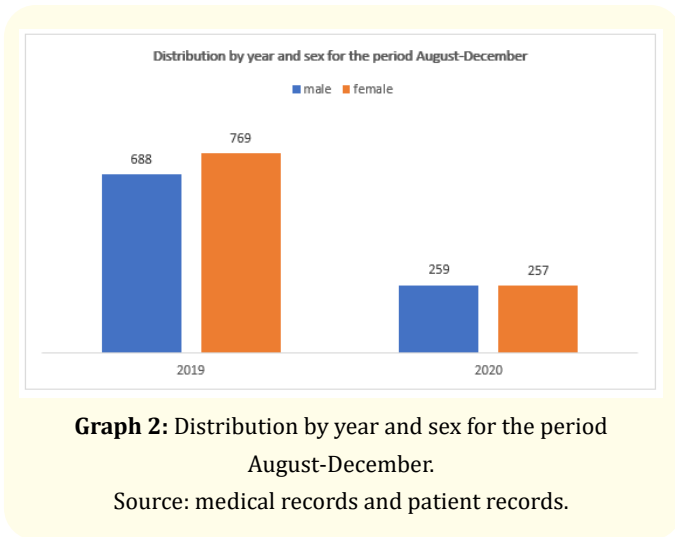


Graph 1: Monthly list of patients treated in 2019 and 2020.

Source: medical records and patient records.

In 2019, a total of 3,175 patients were consulted in the service. From August to December of that year, in terms of distribution by sex, the female with 769 (46.3%) patients, surpasses the male with 688 (45.3%) consultations, with an insignificant difference between the two. In 2020, 2302 consultations were carried out in the study period, 257 (21.5%) were made to female patients and 259 (23.2%) male patients with a similar trend to the previous year in terms of distribution by sex (Graph 2).

The work presented refers to the casuistry of patients with an oncological disease, treated by the medical oncology service of the “October 10” Clinical-Surgical Teaching Hospital, during the year 2020, with emphasis on the period from August to December 2020. this year. Regarding the monthly distribution of cases, it is appropriate to highlight that this was homogeneous during the first half of the year, with an increase in the first quarter of consultations compared to 2019.



**Graph 2:** Distribution by year and sex for the period August-December.

Source: medical records and patient records.

The care work in the Medical Oncology service was affected by the appearance of the new disease caused by SARS Cov2/COVID-19 and the corresponding restructuring of the services in the hospital, which forced the adaptation of care to patients. cancer patients according to established protocols and new working conditions.

Outpatient care for patients for diagnosis and treatment notably influenced the decrease in the number of consultations and treatments administered. As of the month of August in which the study began, the casuistry decreased for four consecutive months, representing 23.6% fewer consultations offered.

This downward trend does not correspond to the accumulated figure for the same period in 2019.

Nursing actions during the study period were also reduced, being limited only to monthly planned treatments, as can be seen below (Table 1). The 450 Nursing actions in 2020 represent only 31.2% for the same period in 2019.

In this case, the decrease is related to the period in which the second peak of the epidemic occurred in the country and the implementation of more restrictive measures to the movement of people and the improvement of the strategies implemented by the health authorities, where it was treated to limit consultations only to newly diagnosed patients and those with ongoing systemic treatment.

Month	2019	%	2020	%
August	279	19.3	66	14.6
September	277	19.2	89	19.7
October	300	20.8	125	27.7
November	301	20.9	122	27.1
December	282	19.5	48	10.6
Total	1439	100%	450	100%

**Table 1:** Nursing compliance by years for the period August-December.

Source: medical records and patient records.

Follow-up consultations for controlled patients with the disease were transferred to the telemedicine modality and through social networks. All of the above taking into account the considerations for the reorganization of oncology services during the COVID-19 pandemic, guided by the Pan American Health Organization (PAHO) [11].

A considerable number of patients who, due to their area of residence, receive care at the “October 10” Clinical-Surgical Teaching Hospital, were taken on by other health institutions in Havana, which is why the number of new cases in the year was lower. In the period covered by this study, only 5 new patients started treatment in the service, the rest correspond to patients

who were already in treatment or who required the use of a new line of chemotherapy.

In the current series, the male-female ratio (1.1:1.0) showed a small difference in favor of the male sex, with a notable decrease compared to the same period of the previous year in terms of the number of patients seen, but similar behavior in relation to the sexes. Therefore, we can conclude that the SARS Cov2/ COVID-19 epidemic did not change the incidence of oncological diseases, there was only a decrease in the number and frequency of consultations offered to patients. This phenomenon is explained by the regulations established by the health authorities to limit the number of consultations to less than 50%, the regulation of the number of tests with diagnostic value for oncological diseases, and the considerable decrease in elective diagnostic surgeries, and definitive. Cuba was not the exception in terms of the negative impact on the care of cancer patients.

The interruption in cancer screening programs and delays in diagnosis have caused around 3,500 deaths in the United Kingdom from breast, colorectal, lung and esophageal cancer, which could have been treated and even cured, if the doctors had kept working, health services in their usual way, it is estimated that around 60,000 years of life have been lost due to this cause, according to the study published by The Lancet in 2020 [12]. In a predictive study model in which the number of surgeries canceled or postponed by 71 countries in a period of 12 weeks, oncological surgeries occupied between 23.4% and 77.1%, with the countries of the European continent being the lowest ranked, similar behavior occurred in Cuba, where this study places the country in the range of 10-19% suspensions [31].

Nursing activity, being dependent on the performance of medical indications, also showed a decrease in the number of procedures to be carried out.

For patients in whom it was possible to change the parenteral treatment scheme to oral chemotherapy, it made it easier not to have to attend the hospital regularly and therefore not to depend on qualified personnel for its administration.

It is important to note that only a limited number of patients were able to change the route of administration of the treatment, since the availability of oral medications in the country is very

limited. The treatment schemes were adequate to reduce their number in terms of the number of cycles to receive and increase the frequency of days between each cycle, all of this taking into account the clinical stage of the patient and the intention of treatment.

A phenomenon similar to the one described above for treatments is reflected in an online survey carried out in April 2020 in the Netherlands, in which 2,664 subjects participated and where one in five patients indicated that their treatment had been adjusted, postponed or cancelled.

Treatments for patients undergoing chemotherapy and immunotherapy were adjusted by 30% and 32%, respectively [14]. Support treatments for patients were indicated to be assumed by Primary Health Care.

During this study period, no serious adverse reactions to treatment that required emergency nursing intervention were reported.

In this period, only 5 new patients started intravenous treatment, so most of the nursing actions correspond to the same patients in different months according to their planned treatment.

It is important to highlight the work of the nursing staff in this stage of the pandemic in terms of epidemiological surveillance and compliance with biosafety standards.

At the time of writing this report, we do not have reports that any of the patients treated in the Oncology service during the study period have been infected with COVID-19.

## Conclusion

In 2020, oncology services and health services in general, made a drastic change to the way in which they were developed, but always taking care of the Hippocratic principle of "first do no harm".

The standard of treatment and protocols were reviewed to ensure that the benefit of cancer patients was not outweighed by the additional risk that exposure to COVID-19 represents for them, which makes them more vulnerable to infection and with a higher probability of death. if they get infected.

Given this scenario, maintaining the vitality of the medical oncology service at the Clinical Surgical Hospital "October 10"

was a challenge for the medical and nursing staff, but even more so for the patients. Although the number of consultations and treatments provided during the study period is well below what was done in the previous year, it was tried to show that it was due to the prevailing epidemiological situation in the world and did not respond to bad driving, of the processes for patient care in the oncology service. With which it is concluded that the SARS Cov2/COVID-19 pandemic did not behave as a risk factor for the development of cancer in the short term and if as an aggravating factor for patients already sick and under treatment, according to the scientific evidence available to date.

### Conflict of Interest

Declare if any financial interest or any conflict of interest exists.

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