

How Is Morocco Reacting to COVID-19 Crisis in Anticancer Centers?

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Abstract

The world is facing the pandemic linked to COVID-19 virus infection that has rapidly spread worldwide, and severe complications have been reported to occur in around a third of patients. To date, there is no approved vaccine or specific therapy against COVID-19, but many trials are ongoing with some of them showing promising results. It has been shown recently that patients with cancer are at high risk of infection and they are more susceptible to develop severe events such as the necessity of invasive ventilation and death. Therefore, this crisis presents a real challenge for health systems especially in low- and middle-income countries where the health systems are already fragile such as African countries. In this article, we describe the epidemiological situation of the infection in Morocco and the different challenges in cancer centers in the era of COVID-19, in addition to various strategies that have been implemented to prevent and control the infection spread in oncological units in order to ensure the continuation of adequate cancer care.

Keywords

Cancer, COVID-19, Africa, Morocco, challenges

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The COVID-19 infection has spread across the world and became one of the most life-threatening pandemics of the century. This crisis had a huge impact on health systems, and this impact was expected to be higher in African countries including Morocco because of the fragile health system due to pre-existing lacks in equipment such as the reduced number of beds in hospitals in general and in intensive care units in particular, in addition to the insufficient number of medical staff (comparing to global Moroccan population) and the shortage in ventilators and material of protection such as face masks.¹

Moroccan government and health authorities have shown effective early management in addressing the crisis by a number of early measures that contributed efficiently in limiting the spread of the virus. The first detected case in Morocco has been reported on March 2, 2020, which was imported from Italy. Then Morocco has declared the closing of all borders on March 15 and closing all schools, universities, and mosques in addition to prohibiting all gatherings on March 16.² The state of

emergency in the country and curfew was declared from March 20, 2020, and wearing the face masks became mandatory from April 7. Morocco has launched the largest field hospital in Africa, which was completed in 2 weeks, with a capacity of more than 700 beds, and has prepared new intensive care units with the capacity of more than new 1500 beds in addition to local production of more than 5 million masks per day. Health authorities also are ramping up the testing capacity for COVID-1 by increasing the number of laboratories across the country

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from 3 to 24 by the end of May and reaching 17 500 tests daily for a total Moroccan population counting 36 millions.

On June 9, 2020, 8437 infected patients have been reported in Morocco with a total number of 7493 recoveries corresponding to a recovery rate of 88.81% and a total of 210 deaths which corresponds to a fatality rate of 2.49%. Additionally, more than 90% of cases in Morocco were reported to be asymptomatic or with mild symptoms.³

Regarding the impact on patients with cancer, the situation was and still very challenging in this context. The main goal in Morocco was to keep the anticancer centers COVID-free to continue providing cancer care adequately. Liang et al have reported that patients with cancer might have a higher risk of COVID-19 than patients without cancer.⁴ They have also shown that patients with cancer presented a higher risk of severe events such as admission in intensive care unit requiring invasive ventilation and death in comparison with individuals without cancer, especially if they received chemotherapy or underwent surgery in the past month.⁴

Based on these findings, particular attention should be paid toward this vulnerable population who should be treated in this particular context. The main challenge is to continue ensuring a high quality of care in accordance with scientific recommendations and also ensuring the maximum safety and protection for patients, their families, and also for the medical staff.

Many recommendations for the management of patients with cancer in the era of COVID-19 have been established in different countries and by different scientific societies such as ESMO, NCCN, and many others. In Morocco, recommendations adapted to our context were elaborated by several national scientific societies.⁵⁻⁷ In our oncology department at Hassan II University Hospital in Fes, Morocco, we established strategies in concordance with national and international recommendations to optimize cancer care by offering options to lighten the burden on the health system when resources must be shifted to coronavirus care. These strategies don't aim to change the standards of care, but they provide adapted alternatives to the current context, especially that the impact of the infectious crisis is much less significant than what was reported in Europe, the United States, or Asia.

From early March, a special unit for the management of the crisis was created in the oncology department including oncologists, nurses, and administrative staff with the establishment of clear procedures for suspected cases. Special trainings of all health care providers in oncology units were provided about the infection, the ways of protection, and the new circuits of patients (Table 1).

The access to oncology hospital was significantly reduced, and all patients must be triage negative in order to be admitted. A first triage is made by calling patients the day before their admission and asking them if they have any symptoms such as fever, cough, or dyspnea or if they were in contact with infected or suspected individuals. A second triage is at the entrance of hospital for all patients and professionals by taking their temperature and redirection to special unit if suspicious cases were reported.

We are aware of the possibility of being infected but asymptomatic, which is a real limit of the triage. But it was not possible to test all patients and comes every time they come to the hospital. Therefore, negative testing was not required before starting therapy for asymptomatic patients, but we tried to limit and monitor the points of entry to the facility by requiring wearing facemasks before entering the buildings and providing supplies for hygiene including alcohol-based hand rub and tissues in addition to physical barriers in reception areas and waiting rooms to limit the close contact with potentially infectious patients. However, for patients who are planned for admission in surgery rooms, they must test negative. A total of 24 600 tests were performed, by the end of May, for patients in Hassan II University Hospital (including cancer and noncancer patients).

Separate circuits for patients receiving treatment were established including special radiology unit for patients with cancer. Special phone numbers have also been implemented in order to receive calls from patients asking about their visits and rescheduling examinations.

Additionally, general measures were adopted including wearing face masks for all medical staff and patients and making available the hydroalcoholic solutions. For outpatients, we opted for the postponement of simple routine follow-ups, with a large switch to telemedicine. We also limited consultations to the management of acute problems and to patients who are already under treatment and to new patients who must start an active treatment in a curative situation with a proven high benefit. If lower or unclear absolute benefit, we consider other alternatives or stop treatment. We also adopted a larger use of growth factors and limited the use of corticosteroids (Table 1).

Regarding cancer screening, we have breast cancer and cervical cancer, which remain real public health problems in Morocco, and normally, there is an established program of screening for these most frequent cancers among Moroccan women. In 2018, Morocco has reported 52 783 new cases, and breast cancer was the most incident representing 19.2% of all cancers in both sexes and 36.9% among women, followed by cervical cancer (12.3%).⁸ In our institution, around 2500 new cases were reported last year, with breast cancer representing 28% of female cancers and cervical cancer representing 7%.

However, in this context of the pandemic, routine screenings were postponed from mid-March because we couldn't expect the evolution of the infectious disease. The fear is that these deadly cancers could go undetected if screening appointments are not soon rescheduled and that after the crisis we will have more patients diagnosed at an advanced stage in our country where we already diagnose more than half of patients with stage III and IV of the disease. We also expect a big pressure will occur in screening centers and radiology departments after this infectious wave.

In a metastatic setting where the intent is not curative, the decision is discussed on a case-by-case basis, taking into account the patient's age and comorbidities and the benefit/risk ratio expected from the treatment. If the benefit is high compared to toxicities and complications, we start or maintain the

Table 1. Specific Changes in Moroccan Oncology Centers as a Consequence of COVID-19.

General measures
<p>Creation of special unit for the management of the crisis including oncologists, nurses, and administrative staff.</p> <p>Establishment of clear procedures for suspected cases.</p> <p>Special training for all health care providers in oncology units.</p> <p>Reduction of the number of health care providers to limit the spread of the virus.</p> <p>Wearing facemask for all professionals and all patients.</p> <p>Limitation and monitoring the points of entry to hospital</p> <p>Triage: temperature measurement for all patients and health workers.</p> <p>Provision of alcohol-based hand rub.</p> <p>Disinfection of reception areas and consultation rooms.</p> <p>Separate circuits for patients with cancer.</p> <p>Implementation of the special phone numbers to receive calls from patients asking about their visits and rescheduling examinations.</p> <p>Limiting accompanying family members to only 1 person if needed, as for patients with disabilities.</p> <p>Postponement of all routine follow-up of patients who have completed their treatment.</p> <p>Transition to telemedicine/web based-consultation.</p> <p>Wider use of growth factors and limited use of corticosteroids.</p> <p>Postponing of screening consultations, particularly for breast and cervical cancer.</p>
Curative setting
<p>High absolute benefit of treatment: start treatment.</p> <p>Lower absolute benefits: consider alternatives or stop.</p> <p>Reduce heavy procedures requiring admission to ICU.</p> <p>Adapt strategies depending on access to surgery room (curative++).</p>
Metastatic setting
<p>Discussion on a case-by-case basis, taking into account the patient's age and comorbidities and the benefit/risk ratio expected from the treatment.</p> <p>Prioritizing treatment for disease with oncogenic addiction (anti-EGFR, anti-Her2, anti-ALK, etc) and immune checkpoint inhibitors given the important benefit in terms of survival.</p> <p>Favor the use of oral treatments as much as possible.</p> <p>Consider therapeutic breaks for indolent and stable disease.</p>
Palliative care
<p>Prioritizing the relief of severe distress and the management of severe acute complications of cancer</p> <p>Management of symptoms by telephone consultations</p> <p>Arrangement of home care services for patients with high palliative care needs</p>

treatments, such as for cancers with oncogenic drivers such as Her2-positive breast cancer or lung cancer with EGFR mutation or ALK rearrangement where there is a high level of evidence about the efficacy of treatments with a significant improvement in survival. We also maintained treatment by immune checkpoint inhibitors with respect to doses and intervals. In this metastatic setting, we also favored the use of oral treatments whenever possible such as capecitabine instead of 5-fluorouracil and oral navelbine and we considered therapeutic breaks in stable indolent disease (Table 1).

For patients with only supportive care, we tried to keep them at home as much as possible with necessary care. Regarding inward patients, we proceed by limiting the number of caregivers to those who are absolutely essential for patient care, to minimize the exposure of everyone involved, and also by limiting the members accompanying patients to 1 person only if needed, as for patients with disabilities.

With all these adaptations, the total access to the oncology hospital was reduced by 35%, and the number of patients was

reduced by an average of 27%. Otherwise, because of the lockdown and the difficulty of traveling between cities, the Ministry of Health has granted the transfer of patients with cancer to hospitals to receive their treatments. Regarding the costs of cancer treatments, they were already free of charge for patients without health care insurance, and screening to treatments related to COVID-19 are also freely offered for all patients.

All the measures taken in our institution were adopted in all cancer centers across the country since there is a central committee for the management of the crisis with the same goal of keeping cancer centers COVID-free. Overall, by following these recommendations, the management of patients with cancer was well codified in different centers, but each institution has to adapt its own management depending on the number of cases and the resources at its local level, but we consider that they are globally beneficial for cancer management in Morocco.

To date, we did not report any infection case among patients with cancer or health care providers in the oncology unit at

Hassan II University Hospital. We consider that the situation has been well managed by all the early adopted measures, but there is a real fear about the negative impact of this crisis on cancer care in Morocco because of the delays in diagnosis and logistical difficulties to access to hospitals causing some deviations in the protocols of treatments. Additionally, there was an important switch on health resources to manage the COVID-19 crisis at the expense of investing in cancer drugs. These deviations may affect the outcomes of patients with cancer in intermediate and long terms.⁹

In the future and after assessment of the impacts of this pandemic, it is very likely that many aspects of working in cancer care will permanently change. Therefore, balancing the risk of coronavirus infection for patients with cancer with the need to continue providing adequate treatments is a daily challenge for all cancer care workers worldwide with different degrees depending on the amplitude of the pandemic in each country and institution.

Authors' Note

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