

# IMPACT OF COVID-19 IN RADIATION ONCOLOGY PRACTICE IN THE PHILIPPINES: A Situational analysis

## INTRODUCTION

In March 11, 2020, the World Health Organization (WHO) announced the novel coronavirus 2019 (COVID-19) pandemic with the exponential increase of the number of cases across the globe. With the increasing number of local transmission, the entire region of Luzon was placed under an enhanced community quarantine (ECQ). COVID-19 imposes a challenge in any radiation facility on how to balance implementation of acceptable policies to reduce the transmission of COVID-19 while optimizing effective radiation treatment of cancer patients. It is crucial to evaluate how extensive the impact of this contagion in the operations of a radiation oncology facility of a developing country in order to plan and mitigate the risk considering there is limited resources. This study aims to present the overall operational impact and situational analysis of COVID-19 in radiation oncology facility in the Philippines.

## METHODOLOGY

This is a cross sectional study conducted last April 13, 2020 using survey questionnaire participated by 19 radiotherapy facilities in the Philippines.

## RESULTS

A total of 19 radiotherapy facilities/cancer centers participated in the study. 47% are from the region of Luzon, followed by National Capital Region (NCR)(26%), Visayas(15%) and Mindanao(10%). There are 23 external beam radiotherapy machines (Linear Accelerators/Cobalt teletherapy), 18 computed tomography (CT) simulators and six High Dose Rate (HDR)- Brachytherapy machines from all participating centers.

Based on the survey questionnaire response, All of the domains of the 19 radiotherapy facilities were affected by COVID-19. The highest impact was on manpower (doctors/professional staff) (100%), followed by clinical (referrals, treatment delays/interruptions) (95%), economic or financial (95%), patients census and triaging (89%), resources/supplies (personal protective equipment (PPE) and other equipment/maintenance(89%), and communication (check-ups/follow-ups)(58%), as the least area affected.

Clinical referrals were decreased due to the closure of the Out-patient departments/clinics of referring physicians. As an effect, there were decrease in number of patients undergoing radiotherapy to almost half the usual numbers, resulting to decrease net income of the facilities and creating a financial/economic impact. Approximately 1,059,000 USD was the profit loss due to the decrease in the number of patients undergoing radiotherapy with the highest financial impact in NCR based on the profit difference before and during COVID-19 pandemic and ECQ.

In order to address the impact of COVID-19, all 19 radiotherapy facilities in the Philippines created certain precautionary measures and policies to ensure safe and effective radiation treatment of cancer patients. These includes strict implementation of handwashing, disinfection of treatment areas before and after patient handling, daily disinfection of waiting areas, planning rooms and consultation areas, social and physical distancing (at least 1-meter apart), screening and triaging of patients. Surgical mask/N95 (surgical or N95 masks) and other personal protective equipment(PPE) were use in all facilities for both staff and patients.

Brachytherapy capable facilities are also operational with adapted COVID-19 precautionary measures in order to protect both the patients and staff without compromising the quality and benefit of treatment. Among radiotherapy facilities that are within cancer centers with chemotherapy units, all are still providing chemotherapy with similar COVID-19 precautionary measures.

Triaging and prioritization of patients were adapted by participating radiotherapy facilities in order to protect their patients, staff and the public from the possible transmission of COVID-19. Cases for radiotherapy classified as priority are emergency/urgent cases which includes brain metastasis, superior vena cava syndrome, spinal cord compression and bleeding tumors, as well as, head and neck and gynecologic malignancies. Usual cases delayed to avoid or lessen exposure/risk to COVID-19 and to avoid crowding of their facilities include low risk adjuvant cases, breast cancer, prostate cancer and medically managed and controlled bone metastasis.

## CONCLUSION

The radiation oncology practice in the Philippines continues to evolve in order to ensure safe, effective and quality radiotherapy for all patients while minimizing the risk of exposure to COVID-19 for both the immunocompromised patients, hardworking professional staff and the general public. Despite the several impact of COVID-19 among radiotherapy facilities in the Philippines in all aspects (clinical, manpower, finan-

cial/economic, resources and communication), radiation oncology centers continue to address the threats of COVID-19 to their patients and staff through implementation of COVID-19 precautionary measures and policies in order to prepare and to adapt to the new normal in radiation oncology practice.

## **Country or Int. Organization**

Philippines

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