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## COVID-19 Rapid Letter

## Breakthrough of COVID-19 using radiotherapy treatment modalities ☆

P. Venkatraman <sup>a,\*</sup>, J. Joshua Sahay <sup>b</sup>, T. Maidili <sup>c</sup>, Rajisha Rajan <sup>c</sup>, S. Pooja <sup>c</sup><sup>a</sup> Department of Medical Physics, Bharathidasan University, Tiruchirappalli; <sup>b</sup> Department of Radiotherapy and Radiation Medicine, Banaras Hindu University; and <sup>c</sup> Department of Medical Physics, Bharathiar University, Coimbatore, India

## To the Editor

The novel type of coronavirus disease 2019 (COVID-19) challenges the treatment and protection of the public and the health care staff around the world. In this paper, alternative approach to fight back the novel COVID-19 virus. In this critical situation, radiation therapy will help to eradicate the virus completely and will not allow virus to reoccur. In protection point of view, the use of Ultra Violet radiation or gamma radiation for sanitation purpose, sterilize the health care staff cloths, fruits, and food etc., is another alternative methodology for sanitation.

The novel type of pneumonia started on December 2019 present at Wuhan, China, it is confirmed to be caused by a novel coronavirus (2019n-CoV) [1]. The first case reported to the World Health Organization (WHO) country office in china. The coronavirus name was later termed Coronavirus Disease 2019 (COVID-19). In month of December 2019 of the breakthrough, there were 16,500 confirmed cases, 360 fatalities and over 20,000 suspected cases in China, with vast majority of cases in Wuhan. However, the COVID-19 has spread internationally, it is breaking out in many countries and also various continents. The quick spread of the coronavirus had caused more than 118,000 cases and 4,291 deaths in 114 countries in March 11, 2020 [2–4]. The World Health Organization (WHO) declared that the epidemic of COVID-19 had become a “global pandemic”. According to the World Health Organization (WHO) Coronavirus Disease 2019 (COVID-19) fact 2020, it is the current leading cause of death, the Cumulative number of confirmed cases 550,033 Number of newly confirmed cases reported in the past 14 days 408,758 Cumulative number of deaths among confirmed cases 25,861 on 28 March 2020 [5].

Radiotherapy is a one of the treatments for cancer patients, it usually involves daily treatment deliveries over days to weeks. It has wide variety of treatment techniques which offers quality of life for the patients. In the same way use of radiation in the present scenario for the treatment of corona virus is a provoking idea to manage the disease outbreak. Radiation may play a major role increasing the overall survival of the patients and to control the disease. As we know radiation can control the growth malignant tumor to a greater extent by cell killing mechanism [6]. Our idea is to implement the radiation for de-activating the COVID-19 cells in terms of delivering some minimum dose (in terms of Gray) to the patient. COVID-19 virus mainly affects the respiratory system resulting in difficulty in breathing and it is contained in lungs. So, the patient can be diagnosed with some suitable imaging modality which can be further used for the treatment planning procedures. Based on the patient condition and the stage treatment plan can be created and executed.

This may control the outbreak of the diseases. As for now the disease is spreading in a very large range, so it's necessary to cut the chain of spread in a wilder way. Idea we proposed has an ability to control the growth of cells in four to five, which will reduce the risk of death rate. This will be an utmost alternative approach to fight back the novel COVID-19 virus. The use of Ultra Violet radiation or gamma radiation for sanitation purpose, sterilize the health care staff cloths, fruits, and food etc., is another alternative methodology for sanitation. In this critical situation, radiation therapy will help to eradicate the virus completely and will not allow virus to reoccur.

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\* Corresponding author at: Department of Medical Physics, Bharathidasan University, Tiruchirappalli, India.

E-mail addresses: [venkat00108@buc.edu.in](mailto:venkat00108@buc.edu.in), [venkat00108@gmail.com](mailto:venkat00108@gmail.com) (P. Venkatraman).

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