

World Journal of *Clinical Cases*

World J Clin Cases 2021 September 6; 9(25): 7292-7613



EDITORIAL

- 7292 Radiation oncology practice during COVID-19 pandemic in developing countries
Abuhijla F, Abuhijlih R, Mohamad I

OPINION REVIEW

- 7297 Complete mesocolic excision and central vascular ligation in colorectal cancer in the era of minimally invasive surgery
Franceschilli M, Di Carlo S, Vinci D, Sensi B, Siragusa L, Bellato V, Caronna R, Rossi P, Cavallaro G, Guida A, Sibio S
- 7306 Fecal diversion in complex anal fistulas: Is there a way to avoid it?
Garg P, Yagnik VD, Dawka S

MINIREVIEWS

- 7311 Regulatory roles of extracellular vesicles in immune responses against *Mycobacterium tuberculosis* infection
Yan Z, Wang H, Mu L, Hu ZD, Zheng WQ
- 7319 Aortic stenosis and Heyde's syndrome: A comprehensive review
Lourdusamy D, Mupparaju VK, Sharif NF, Ibebuogu UN

ORIGINAL ARTICLE**Retrospective Study**

- 7330 Key determinants of misdiagnosis of tracheobronchial tuberculosis among senile patients in contemporary clinical practice: A retrospective analysis
Tang F, Lin LJ, Guo SL, Ye W, Zha XK, Cheng Y, Wu YF, Wang YM, Lyu XM, Fan XY, Lyu LP
- 7340 Long-term outcome of pancreatic function following oncological surgery in children: Institutional experience and review of the literature
Bolasco G, Capriati T, Grimaldi C, Monti L, De Pasquale MD, Patera IP, Spada M, Maggiore G, Diamanti A
- 7350 Efficacy of arbidol in COVID-19 patients: A retrospective study
Wei S, Xu S, Pan YH
- 7358 Characteristic analysis of clinical coronary heart disease and coronary artery disease concerning young and middle-aged male patients
Peng KG, Yu HL
- 7365 Quantitative analysis of early diabetic retinopathy based on optical coherence tomography angiography biological image
Shi Y, Lin PY, Ruan YM, Lin CF, Hua SS, Li B

- 7372 Mucin 1 and interleukin-11 protein expression and inflammatory reactions in the intestinal mucosa of necrotizing enterocolitis children after surgery

Pan HX, Zhang CS, Lin CH, Chen MM, Zhang XZ, Yu N

Observational Study

- 7381 Research on the prognosis of different types of microvessels in bladder transitional cell carcinoma

Wang HB, Qin Y, Yang JY

- 7391 Is burnout a mediating factor between sharps injury and work-related factors or musculoskeletal pain?

Chen YH, Tsai CF, Yeh CJ, Jong GP

- 7405 Role of international normalized ratio in nonpulmonary sepsis screening: An observational study

Zhang J, Du HM, Cheng MX, He FM, Niu BL

Randomized Controlled Trial

- 7417 Clinical effectiveness of adding probiotics to a low FODMAP diet: Randomized double-blind placebo-controlled study

Turan B, Bengi G, Cehreli R, Akpınar H, Soytürk M

SYSTEMATIC REVIEWS

- 7433 Association between COVID-19 and anxiety during social isolation: A systematic review

Santos ERRD, Silva de Paula JL, Tardieux FM, Costa-e-Silva VN, Lal A, Leite AFB

CASE REPORT

- 7445 Avascular necrosis of the first metatarsal head in a young female adult: A case report and review of literature

Siu RWH, Liu JHP, Man GCW, Ong MTY, Yung PSH

- 7453 Successful treatment of solitary bladder plasmacytoma: A case report

Cao JD, Lin PH, Cai DF, Liang JH

- 7459 Pseudomyxoma peritonei originating from intestinal duplication: A case report and review of the literature

Han XD, Zhou N, Lu YY, Xu HB, Guo J, Liang L

- 7468 Agranulocytosis following injection of inactivated Japanese encephalitis vaccine (Vero cell): A case report

Wang L, Zhang X, Liu YT

- 7472 Importance of clinical suspicion and multidisciplinary management for early diagnosis of a cardiac laminopathy patient: A case report

Santobuono VE, Guaricci AI, Carulli E, Bozza N, Pepe M, Ranauro A, Ranieri C, Carella MC, Loizzi F, Resta N, Favale S, Forleo C

- 7478 First case of forearm crisscross injury in children: A case report

Jiang YK, Wang YB, Peng CG, Qu J, Wu DK

- 7484** Octreotide-induced acute life-threatening gallstones after vicarious contrast medium excretion: A case report
Han ZH, He ZM, Chen WH, Wang CY, Wang Q
- 7490** Acute deep venous thrombosis induced by May-Thurner syndrome after spondylolisthesis surgery: A case report and review of literature
Yue L, Fu HY, Sun HL
- 7498** Successful treatment of refractory lung adenocarcinoma harboring a germline *BRCA2* mutation with olaparib: A case report
Zhang L, Wang J, Cui LZ, Wang K, Yuan MM, Chen RR, Zhang LJ
- 7504** Effective treatment of polyneuropathy, organomegaly, endocrinopathy, M-protein, and skin changes syndrome with congestive heart failure: A case report
Fu LY, Zhang HB
- 7512** Awake craniotomy for auditory brainstem implant in patients with neurofibromatosis type 2: Four case reports
Wang DX, Wang S, Jian MY, Han RQ
- 7520** Coexistence of tuberculosis and squamous cell carcinoma in the right main bronchus: A case report
Jiang H, Li YQ
- 7527** Is simultaneous presence of IgG4-positive plasma cells and giant-cell hepatitis a coincidence in autoimmune hepatitis? A case report
Tan YW, Wang JM, Chen L
- 7535** Surgical treatment of delayed cervical infection and incomplete quadriplegia with fish-bone ingestion: A case report
Li SY, Miao Y, Cheng L, Wang YF, Li ZQ, Liu YB, Zou TM, Shen J
- 7542** Neonatal biliary atresia combined with preduodenal portal vein: A case report
Xiang XL, Cai P, Zhao JG, Zhao HW, Jiang YL, Zhu ML, Wang Q, Zhang RY, Zhu ZW, Chen JL, Gu ZC, Zhu J
- 7551** Hemorrhagic transformation after acute ischemic stroke caused by polycythemia vera: Report of two case
Cao YY, Cao J, Bi ZJ, Xu SB, Liu CC
- 7558** Treatment of lower part of glenoid fractures through a novel axillary approach: A case report
Jia X, Zhou FL, Zhu YH, Jin DJ, Liu WX, Yang ZC, Liu RP
- 7564** Trigger finger at the wrist caused by an intramuscular lipoma within the carpal tunnel: A case report
Huang C, Jin HJ, Song DB, Zhu Z, Tian H, Li ZH, Qu WR, Li R
- 7572** Thrombolysis and embolectomy in treatment of acute stroke as a bridge to open-heart resection of giant cardiac myxoma: A case report
Chang WS, Li N, Liu H, Yin JJ, Zhang HQ
- 7579** Breast adenoid cystic carcinoma arising in microglandular adenosis: A case report and review of literature
An JK, Woo JJ, Kim EK, Kwak HY

- 7588** Diagnosis and management of ophthalmic zoster sine herpete accompanied by cervical spine disc protrusion: A case report
Yun G, Kim E, Baik J, Do W, Jung YH, You CM
- 7593** Hemorrhagic pericardial effusion following treatment with infliximab: A case report and literature review
Li H, Xing H, Hu C, Sun BY, Wang S, Li WY, Qu B
- 7600** Wernicke's encephalopathy in a rectal cancer patient with atypical radiological features: A case report
Nie T, He JL
- 7605** Total hip revision with custom-made spacer and prosthesis: A case report
Liu YB, Pan H, Chen L, Ye HN, Wu CC, Wu P, Chen L

ABOUT COVER

Editorial Board Member of *World Journal of Clinical Cases*, Lan Sun, MD, PhD, Chief Physician, Professor, Department of Oncology, The People's Hospital of Bishan District, Chongqing 402760, China. sunlan6203@163.com

AIMS AND SCOPE

The primary aim of *World Journal of Clinical Cases* (*WJCC*, *World J Clin Cases*) is to provide scholars and readers from various fields of clinical medicine with a platform to publish high-quality clinical research articles and communicate their research findings online.

WJCC mainly publishes articles reporting research results and findings obtained in the field of clinical medicine and covering a wide range of topics, including case control studies, retrospective cohort studies, retrospective studies, clinical trials studies, observational studies, prospective studies, randomized controlled trials, randomized clinical trials, systematic reviews, meta-analysis, and case reports.

INDEXING/ABSTRACTING

The *WJCC* is now indexed in Science Citation Index Expanded (also known as SciSearch®), Journal Citation Reports/Science Edition, Scopus, PubMed, and PubMed Central. The 2021 Edition of Journal Citation Reports® cites the 2020 impact factor (IF) for *WJCC* as 1.337; IF without journal self cites: 1.301; 5-year IF: 1.742; Journal Citation Indicator: 0.33; Ranking: 119 among 169 journals in medicine, general and internal; and Quartile category: Q3. The *WJCC*'s CiteScore for 2020 is 0.8 and Scopus CiteScore rank 2020: General Medicine is 493/793.

RESPONSIBLE EDITORS FOR THIS ISSUE

Production Editor: Yan-Xia Xing; Production Department Director: Xiang Li; Editorial Office Director: Jin-Lai Wang.

NAME OF JOURNAL

World Journal of Clinical Cases

ISSN

ISSN 2307-8960 (online)

LAUNCH DATE

April 16, 2013

FREQUENCY

Thrice Monthly

EDITORS-IN-CHIEF

Dennis A Bloomfield, Sandro Vento, Bao-Gan Peng

EDITORIAL BOARD MEMBERS

<https://www.wjgnet.com/2307-8960/editorialboard.htm>

PUBLICATION DATE

September 6, 2021

COPYRIGHT

© 2021 Baishideng Publishing Group Inc

INSTRUCTIONS TO AUTHORS

<https://www.wjgnet.com/bpg/gerinfo/204>

GUIDELINES FOR ETHICS DOCUMENTS

<https://www.wjgnet.com/bpg/GerInfo/287>

GUIDELINES FOR NON-NATIVE SPEAKERS OF ENGLISH

<https://www.wjgnet.com/bpg/gerinfo/240>

PUBLICATION ETHICS

<https://www.wjgnet.com/bpg/GerInfo/288>

PUBLICATION MISCONDUCT

<https://www.wjgnet.com/bpg/gerinfo/208>

ARTICLE PROCESSING CHARGE

<https://www.wjgnet.com/bpg/gerinfo/242>

STEPS FOR SUBMITTING MANUSCRIPTS

<https://www.wjgnet.com/bpg/GerInfo/239>

ONLINE SUBMISSION

<https://www.f6publishing.com>

Radiation oncology practice during COVID-19 pandemic in developing countries

Fawzi Abuhijla, Ramiz Abuhijlih, Issa Mohamad

ORCID number: Fawzi Abuhijla 0000-0002-7264-6789; Ramiz Abuhijlih 0000-0001-5397-6267; Issa Mohamad 0000-0003-0153-9131.

Author contributions: Abuhijla F designed the overall concept, discussion and outline of the manuscript; Abuhijlih R and Mohamad I contributed to the discussion and design of the manuscript; Abuhijla F, Abuhijlih R and Mohamad I contributed to the writing and editing of the manuscript and review of the literature.

Conflict-of-interest statement: The authors have no any conflicts of interest.

Open-Access: This article is an open-access article that was selected by an in-house editor and fully peer-reviewed by external reviewers. It is distributed in accordance with the Creative Commons Attribution NonCommercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>

Manuscript source: Invited

Fawzi Abuhijla, Ramiz Abuhijlih, Issa Mohamad, Department of Radiation Oncology, King Hussein Cancer Center, Amman 11941, Jordan

Corresponding author: Fawzi Abuhijla, MD, MSc, Assistant Professor, Department of Radiation Oncology, King Hussein Cancer Center, Queen Rania St. PO Box 1269, Amman 11941, Jordan. fhijle@khcc.jo

Abstract

Radiation therapy (RT) is considered one of the cornerstone modalities of treatment for different cancer types. The preparation and delivery of RT requires a number of staff members from different disciplines within the radiation oncology department. Since the emergence of the corona virus disease 2019 (COVID-19) pandemic, RT, similar to other cancer care modalities, has been adapted to minimize patient and staff exposure without compromising the oncological outcomes. This was reflected in the dramatic practice changes that occurred in the past year to address the lockdown restrictions and fulfill the infection control requirements. RT practices differ across regions based on financial and training levels, and developing countries with limited resources have struggled to maintain radiation treatment services at a level equivalent to that in developed countries while following pandemic control guidelines. The response during the COVID-19 pandemic varied between developing countries according to the infection rate and RT technological capabilities. In this editorial, we review recently published articles addressing radiotherapy practice reports during the COVID-19 pandemic in developing countries.

Key Words: Radiotherapy; COVID-19, Developing countries; Radiation therapy; Pandemic; Low income countries

©The Author(s) 2021. Published by Baishideng Publishing Group Inc. All rights reserved.

Core Tip: This editorial discusses the impact of corona virus disease 2019 (COVID-19) pandemic on radiation oncology practice in developing countries. The challenges and measures taken to mitigate COVID19 and its ramifications.

Citation: Abuhijla F, Abuhijlih R, Mohamad I. Radiation oncology practice during COVID-19

manuscript

Specialty type: Oncology**Country/Territory of origin:** Jordan**Peer-review report's scientific quality classification**

Grade A (Excellent): 0

Grade B (Very good): B

Grade C (Good): C

Grade D (Fair): 0

Grade E (Poor): 0

Received: March 17, 2021**Peer-review started:** March 17, 2021**First decision:** May 5, 2021**Revised:** May 12, 2021**Accepted:** August 5, 2021**Article in press:** August 5, 2021**Published online:** September 6, 2021**P-Reviewer:** Kawabata H, Sun Y**S-Editor:** Ma YJ**L-Editor:** A**P-Editor:** Ma YJpandemic in developing countries. *World J Clin Cases* 2021; 9(25): 7292-7296**URL:** <https://www.wjgnet.com/2307-8960/full/v9/i25/7292.htm>**DOI:** <https://dx.doi.org/10.12998/wjcc.v9.i25.7292>

INTRODUCTION

The estimated increase in new cancer cases will be more than 24 million in 2030, and this problem is a growing challenge for healthcare systems, especially in low- and middle-income countries[1]. Radiation therapy (RT) is an integral part of multidisciplinary cancer care, and approximately half of all cancer patients will receive radiotherapy during the course of their treatment, whether it is with curative or palliative intent[2,3]. Nevertheless, accessing radiation services is dependent on the availability of these facilities, along with demographic and logistical factors; for instance, in low-income countries, more than 90% of the residents do not have access to radiation treatment[4].

In early 2020, severe acute respiratory syndrome coronavirus 2 infections started to spread uncontrollably. In March 2020, the World Health Organization announced that the corona virus disease 2019 (COVID-19) outbreak was a pandemic; since then, many countries in the world have been forced to implement partial and complete lockdowns that have lasted for months. Variations in the status of the pandemic and governmental actions coupled with insufficient resources could result in a greater impact and worse poorer outcomes, leading to a higher risk to the safety of health care providers in developing countries that could aggravate the crisis[5].

PRACTICE ADAPTATION TO COVID-19

During this time, hospitals worldwide were experiencing an increased number of patients and a lack of medical supplies. Elective surgeries and interventions were postponed due to hospital crowding and the fear of infection. Elective cancer procedures were cancelled or postponed as well, which resulted in delays in cancer diagnosis and treatment and psychological distress on the part of the patients and their families.

RT has changed dramatically during the past year, and these changes were implemented to cope with lockdown restrictions and to fulfill infection control requirements[6]. Developing countries have struggled to maintain radiation treatment services at a level equivalent to that in developed countries while following pandemic control guidelines[7]. In China, during COVID-19 pandemic outbreak; lock down resulted in treatment interruptions in more than 50% of patients who were on active chemoradiation[8].

Changes to RT practices depended on regional factors such as financial and training levels. The implemented modifications included postponing elective radiation treatment, utilizing hypofractionated regimens and encouraging online (remote) access to radiotherapy planning and quality control systems to decrease direct physical contact[9].

The financial burden of cancer care has always been a main concern in low- and middle-income countries, as their healthcare systems already face diverse problems due to the poor infrastructure, lack of funding and absence of effective administrative and strategic planning. The consequences of the COVID-19 pandemic exacerbated these financial problems[10].

The response to the COVID-19 pandemic varied among developing countries according to the infection rate in the region and the RT technological capabilities in the country. The presence of a strong information technology (IT) infrastructure enabled the developed world to switch smoothly to online and remote workflows. In developing countries, the situation was the opposite: a lack of financial and IT support led to a poor response to the pandemic and a failure to quickly adapt practices to the current situation. Developing countries are facing multiple financial and social complications as a result of the pandemic, and prioritizing COVID-19 patients has led to the cancelation and postponement of treatment for many cancer patients. Some countries are affected by war and lack health care systems. All these challenges should be addressed in developing countries. Future planning and international support will be crucial to help developing countries overcome this pandemic.

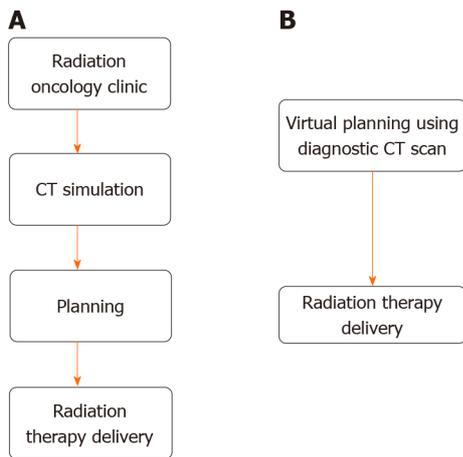


Figure 1 Steps for routine radiation therapy emergency (A), alternative steps for radiation therapy emergency (B) during corona virus disease 2019. CT: Computed tomography.

During the COVID-19 pandemic, most cancer centers around the world have adopted alternative oncological guidelines to adapt to the circumstances, including using a hypofractionated RT regimen or shifting the RT start date. However, hypofractionated regimens usually require careful planning and delivery, as they involve giving a higher dose with a lower number of fractions, which means that the impact of target inaccuracy could have a worse effect on tumor control and increase the risk of damage to adjacent organs. In addition, a delay in RT can sometimes result in poor outcomes. This leads us to question prior to implementing a new practice whether a delay or change is oncologically justifiable[11].

One major change that has occurred in response to the pandemic is the shift towards telemedicine and the development of a virtual clinic workflow for RT. Reducing hospital visits and minimizing contact were not the only advantages of virtual clinics; virtual clinics also provide more flexibility during discussions with patient and family members and eliminate the need for waiting rooms. However, for exams and investigations, the patient still has to present to the clinic in person. Proper planning to make the clinical visit worthwhile should be performed[12,13].

In life-threatening situations such as those involving bleeding and spinal cord compression, in which RT needs to be delivered urgently, the use of a hypofractionated regimen is preferable to achieve a more rapid response; the use of these regimens also adheres to the protocols in place during the COVID-19 pandemic[14]. It may also be possible to omit computed tomography (CT) simulations and to use diagnostic CT as an alternative fast track to RT during emergencies[15], this will help to minimize exposure and short preparation time as shown in Figure 1.

A recent systematic review published by Donkor *et al*[16] addressed the approaches used to mitigate the impact of COVID-19 on radiotherapy centers in low- and middle-income countries. Eleven studies were included in review, and the methods used to cope with COVID-19 in RT departments were as follows: forming COVID-19 response multidisciplinary teams; increasing the use of telemedicine; modifying the layout of waiting areas; reducing staff; isolating patients suspected of having COVID-19; and adopting triage systems.

LIGHT AT THE END OF THE TUNNEL

COVID-19 vaccines are now available, and the number of infections is expected to decrease; as a result, quarantine measures are expected to be eased. Regardless of whether the general public is willing to be vaccinated, cancer patients should be prioritized for vaccination once it becomes available due higher morbidity and mortality among COVID-19 patients with cancer[17,18]. Unfortunately, access to the vaccine is not equal, and wealthy, developed countries are currently receiving the vaccines that are being produced. Unequal access will slow recovery in developing countries and add to the current challenges.

CONCLUSION

Adapted guidelines and protocols should be implemented at the national and institutional levels in RT units in developing countries to cope with the rapid changes in RT practices and to enable them to continue to serve patients. Collecting and sharing data is crucial to building a better understanding. More vaccination campaigns should be implemented in developing countries to minimize the burden of the pandemic on cancer care in general and more specifically on RT.

REFERENCES

- 1 **Jaffray DA**, Knaul FM, Atun R, Adams C, Barton MB, Baumann M, Lievens Y, Lui TY, Rodin DL, Rosenblatt E, Torode J, Van Dyk J, Vikram B, Gospodarowicz M. Global Task Force on Radiotherapy for Cancer Control. *Lancet Oncol* 2015; **16**: 1144-1146 [PMID: 26419349 DOI: 10.1016/S1470-2045(15)00285-5]
- 2 **Atun R**, Jaffray DA, Barton MB, Bray F, Baumann M, Vikram B, Hanna TP, Knaul FM, Lievens Y, Lui TY, Milosevic M, O'Sullivan B, Rodin DL, Rosenblatt E, Van Dyk J, Yap ML, Zubizarreta E, Gospodarowicz M. Expanding global access to radiotherapy. *Lancet Oncol* 2015; **16**: 1153-1186 [PMID: 26419354 DOI: 10.1016/S1470-2045(15)00222-3]
- 3 **Hanna TP**, Shafiq J. Estimating the population benefit of radiotherapy: using demand models to estimate achievable cancer outcomes. *Clin Oncol (R Coll Radiol)* 2015; **27**: 99-106 [PMID: 25466333 DOI: 10.1016/j.clon.2014.10.011]
- 4 **Zubizarreta EH**, Fidarova E, Healy B, Rosenblatt E. Need for radiotherapy in low and middle income countries – the silent crisis continues. *Clin Oncol (R Coll Radiol)* 2015; **27**: 107-114 [PMID: 25455407 DOI: 10.1016/j.clon.2014.10.006]
- 5 **Abu Hammad O**, Alnazzawi A, Borzangy SS, Abu-Hammad A, Fayad M, Saadaledin S, Abu-Hammad S, Dar Odeh N. Factors Influencing Global Variations in COVID-19 Cases and Fatalities; A Review. *Healthcare (Basel)* 2020; **8** [PMID: 32708986 DOI: 10.3390/healthcare8030216]
- 6 **Gostin LO**, Wiley LF. Governmental Public Health Powers During the COVID-19 Pandemic: Stay-at-home Orders, Business Closures, and Travel Restrictions. *JAMA* 2020; **323**: 2137-2138 [PMID: 32239184 DOI: 10.1001/jama.2020.5460]
- 7 **Baskar R**, Itahana K. Radiation therapy and cancer control in developing countries: Can we save more lives? *Int J Med Sci* 2017; **14**: 13-17 [PMID: 28138304 DOI: 10.7150/ijms.17288]
- 8 **Xie C**, Wang X, Liu H, Bao Z, Yu J, Zhong Y, Chua MLK. Outcomes in Radiotherapy-Treated Patients With Cancer During the COVID-19 Outbreak in Wuhan, China. *JAMA Oncol* 2020; **6**: 1457-1459 [PMID: 32729893 DOI: 10.1001/jamaoncol.2020.2783]
- 9 **Mohindra P**, Buckey CR, Chen S, Sio TT, Rong Y. Radiation therapy considerations during the COVID-19 Pandemic: Literature review and expert opinions. *J Appl Clin Med Phys* 2020; **21**: 6-12 [PMID: 32324950 DOI: 10.1002/acm2.12898]
- 10 **Kugbey N**, Ohene-Oti N, Vanderpuye V. COVID-19 and its ramifications for cancer patients in low-resource settings: Ghana as a case study. *Ecancermedicalscience* 2020; **14**: ed99 [PMID: 32346393 DOI: 10.3332/ecancer.2020.ed99]
- 11 **Nagar H**, Formenti SC. Cancer and COVID-19 - potentially deleterious effects of delaying radiotherapy. *Nat Rev Clin Oncol* 2020; **17**: 332-334 [PMID: 32341524 DOI: 10.1038/s41571-020-0375-1]
- 12 **Gutkin PM**, Prionas ND, Minnici MO, Allen E 3rd, Balazy KE, Rahimy E, Chang DT, Horst KC. Telemedicine in Radiation Oncology: Is It Here to Stay? *Int J Radiat Oncol Biol Phys* 2020; **108**: 416-420 [PMID: 32890524 DOI: 10.1016/j.ijrobp.2020.06.047]
- 13 **Maroongroge S**, Smith B, Bloom ES, Ning MS, Wang C, Das P, Koong AC, McAleer MF, Woodhouse KD. Telemedicine for Radiation Oncology in a Post-COVID World. *Int J Radiat Oncol Biol Phys* 2020; **108**: 407-410 [PMID: 32890522 DOI: 10.1016/j.ijrobp.2020.06.040]
- 14 **Yerramilli D**, Xu AJ, Gillespie EF, Shepherd AF, Beal K, Gomez D, Yamada J, Tsai CJ, Yang TJ. Palliative Radiation Therapy for Oncologic Emergencies in the Setting of COVID-19: Approaches to Balancing Risks and Benefits. *Adv Radiat Oncol* 2020; **5**: 589-594 [PMID: 32363243 DOI: 10.1016/j.adro.2020.04.001]
- 15 **Nierer L**, Walter F, Niyazi M, Shpani R, Landry G, Marschner S, von Bestenbostel R, Dinkel D, Essenbach G, Reiner M, Belka C, Corradini S. Radiotherapy in oncological emergencies: fast-track treatment planning. *Radiat Oncol* 2020; **15**: 215 [PMID: 32912293 DOI: 10.1186/s13014-020-01657-6]
- 16 **Donkor A**, Atuwu-Ampoh VD, Opie C, Yakanu F, Lombe D, Khader J. Novel coronavirus mitigation measures implemented by radiotherapy centres in low and middle-income countries: a systematic review. *Rep Pract Oncol Radiother* 2021; **26**: 303-315 [PMID: 34211781 DOI: 10.5603/RPOR.a2021.0032]
- 17 **Ribas A**, Sengupta R, Locke T, Zaidi SK, Campbell KM, Carethers JM, Jaffee EM, Wherry EJ, Soria JC, D'Souza G; AACR COVID-19 and Cancer Task Force. Priority COVID-19 Vaccination for Patients with Cancer while Vaccine Supply Is Limited. *Cancer Discov* 2021; **11**: 233-236 [PMID: 33355178 DOI: 10.1158/2159-8290.CD-20-1817]

- 18 **Zhang H**, Wang L, Chen Y, Wu Q, Chen G, Shen X, Wang Q, Yan Y, Yu Y, Zhong Y, Wang X, Chua MLK, Xie C. Outcomes of novel coronavirus disease 2019 (COVID-19) infection in 107 patients with cancer from Wuhan, China. *Cancer* 2020; **126**: 4023-4031 [PMID: [32573776](#) DOI: [10.1002/cncr.33042](#)]



Published by **Baishideng Publishing Group Inc**
7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA
Telephone: +1-925-3991568
E-mail: bpgoffice@wjgnet.com
Help Desk: <https://www.f6publishing.com/helpdesk>
<https://www.wjgnet.com>

