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**Abstract:**

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Title

Comments on the publication by Yerramilli et al titled “Palliative Radiotherapy for Oncologic emergencies in the setting of COVID-19: Approaches to Balancing Risks and Benefits.”

Authors

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Conflicts of interest

The authors have no conflicts of interest to disclose.
To the Editors,

This timely paper provides guidance on short course palliative radiotherapy (RT) for common indications (e.g. brain metastases, cord compression, tumor bleeding, airway obstruction, and bone metastases) during the COVID-19 pandemic. The increased risk of cancer patients contracting COVID-19 infection and their higher risk of morbidity and mortality are strong motivators for using the shortest most effective palliative RT regimens.

We recommend 8-Gy single fraction RT as the first choice to palliate tumor bleeding during COVID-19. Yerramilli et al recommend against 10 Gy in 1 fraction due to late gastrointestinal (GI) toxicity, and recommend 4 Gy x5 or 3.7 Gy x4 twice daily. Onsrud et al observed late GI toxicity in patients with bleeding gynecological malignancies treated with two or three 10 Gy fractions; however, no late GI toxicity was observed following a single 10 Gy fraction. Other studies have reported bleeding control rates approaching 90% in multiple disease sites including GI, gynecological, genitourinary, head and neck, extremity and lung cancer following a single fraction of 8 Gy. A single 8 Gy is also widely adopted in some countries, including Canada and the Netherlands, as the preferred approach to palliate bleeding tumors in the pre-COVID-19 era.

Another versatile palliative RT schedule is the 0-7-21 regimen, in which a single fraction of 6 or 8 Gy is delivered on day 0, day 7, and a third time two weeks later if needed, however ensuring the final fraction is off-cord and brainstem to reduce toxicity risk. This protocol has been studied in multiple contexts and is effective for both symptom palliation and local tumor control. In head and neck cancers, Nguyen et al found symptom response in over 80% of patients with 31% having a complete clinical response. Similar responses were reported in gynecologic cancers and nodular melanoma. A frequent strategy using 0-7-21 is to reassess the patient prior to each fraction; symptoms are often adequately palliated following one or two 8 Gy fractions. 0-7-21 allows for shared decision-making with the patient, assessment of response to guide decision making, reduced visits, and a chance for sustained safe, local control, as long as tolerances to organs at risk are respected. In the COVID-19 era, this schedule also allows flexibility regarding treatment days, and ensures that a higher biologically effective dose has been delivered if the course needs to be stopped early (compared to one or two fractions of other palliative regimens).


