



# Perspective of palliative care in radiation-oncology

Kwok Ying Chan<sup>1</sup>^, Harinder Gill<sup>2</sup>^, Cho Wing Li<sup>1</sup>, Ho Yan Au<sup>1</sup>, Chi Yan Wong<sup>1</sup>, Man Lui Chan<sup>3</sup>

<sup>1</sup>Palliative Medical Unit, Grantham Hospital, Hong Kong, China; <sup>2</sup>Department of Medicine, The University of Hong Kong, Hong Kong, China;

<sup>3</sup>Department of Psychiatry, The Chinese University of Hong Kong, Hong Kong, China

*Correspondence to:* Kwok Ying Chan, MD, MRCP, FHKCP. Palliative Medical Unit, Grantham Hospital, 125 Wong Chuk Hang Road, Aberdeen, Hong Kong, China. Email: cky842@yahoo.com.hk.

*Comment on:* Chen JJ, Shin KY, Hong PJ, *et al.* Longitudinal symptoms and temporal trends in palliative care, palliative radiotherapy, and anti-cancer treatment near end of life among patients with metastatic cancer. *Ann Palliat Med* 2022. [Epub ahead of print]. doi: 10.21037/apm-22-301.

Submitted Jul 12, 2022. Accepted for publication Jul 27, 2022.

doi: 10.21037/apm-22-842

**View this article at:** <https://dx.doi.org/10.21037/apm-22-842>

According to World Health Organization (WHO), palliative care (PC) could improve the symptom and psychosocial aspects of patients with advanced medical illness (1). Early PC had been shown to improve symptom burden, quality of life and other clinical outcomes in advanced cancer patients (2-4).

However, PC may not be well developed or integrated in some of other specialties. From literatures, about 40% of patients with advanced malignancies receive palliative radiotherapy (RT) (5,6). In fact, a number of patients considered for palliative RT have concomitant significant symptom burden. For example, approximately 10–15% of patients on palliative RT have concurrent depression/anxiety (7,8). As radiation oncologists are usually the ones referring patients to PC, thus it is seldom the ones coordinating the multidisciplinary care for palliative patients. Most radiation oncology (RO) clinics do not have formalized or dedicated palliative RT programs, that might not have the resources and infrastructure to deliver timely multi-disciplinary supportive and PC. In this context, the lack of structured PC program in RO field is due to number of reasons e.g., structural inequities, service model and training. However, according to a recent survey, most radiation oncologists thought that they should be able to provide some basic/general PC for these patients, in the presence of high complexity of advanced cancer patients with significant symptom burden and psychosocial problems (9).

In order to further develop PC service, one may adapt

the general versus specialty PC integration model (10) for their own specialties including neurology and renal (11-13). It is also known that this model is more sustainable for PC development in terms of manpower and skill transfer. One improvement program with specialty PC integration showed that appropriate referral to team members has been associated with improved symptom burden including fatigue, depression, anxiety, drowsiness, and well-being among patients followed up in a palliative RT clinic (14). In this context, the radiation oncologists, just like other medical specialists, could provide general PC in the first place and then refer their RO patients to a specialty PC with more complex needs. Radiation oncologists could also provide education to PC team regarding indications for and misconceptions of palliative RT.

Based on previous literatures, the radiation oncologists could deliver general PC through consultation, making referrals to supportive services, management of symptom burden, and regular follow-up, along with delivery of radiation therapy. It was noted that about one-third of all consultations were for palliative intent RT, and 50% of RT treatments (palliative intent) were either in localized or metastatic diseases (15,16). Around 80% of RT consultations included multidisciplinary care including symptom control, care coordination, goals of care, and psychosocial support (16). In addition, the patients might sometimes be depressed or anxious during the course of RT and thus require supportive care to their moods in addition to symptom management (17).

^ ORCID: Kwok Ying Chan, 0000-0002-2521-297X; Harinder Gill, 0000-0002-9551-4893.

Though more often the RO programs would provide educational activities for their trainees, the content is usually not comprehensive. One study assessed the state of PC educational curriculum in residency programs in the United States by doing a survey involving more than 50 program directors of RO programs (18). Majority of them (>90%) perceived that PC was the most important competency, however only 67% RO programs had such formal training activities. Moreover, there were only few curricula focused on management of drowsiness, spiritual related issues and advanced care planning, though these programs usually had fixed duration of time (e.g., 2 or more hours) allocated to management of pain, nausea and vomiting. Most of the education on palliative RO was dedicated mainly to brain, brain and spine. The survey results of the education program showed there was disparity as one-third of the RO programs did not have integrated didactics. Moreover, some of these RO programs did not have structured curricula. One of the limitations was that the survey only involved perspective of the program directors.

In another study for resident perspective, they revealed that the amount of time for PC education in the curriculum is just minimal (19). In general, about 80% of residents felt that their PC training as not at all or minimally adequate. The study results showed that majority of RO residents thought that their training to be inadequate in terms of teaching hours and materials. RO residency training appeared to give more opportunities to educate how radiation oncologists should approach to handle patients near end of life (EOL) (20). RO residents were more likely than attendings as to list the influence of peers and mentors so that this could help their practice during their EOL care. Apart from formal curriculum and guidelines, these results revealed that RO residents placed more value in the clinical experience of the faculty. This information could be useful for the further development of the educational material which consists of more important clinical components for the training purpose of these residents.

In this issue of *Annals of Palliative Medicine*, Chen and colleagues reported longitudinal relationships between specialty PC and palliative RT, temporal distribution of symptoms, and predictors of earlier specialty PC (21). The study focused on the ways to determine how specialty PC and palliative RT consultations and symptom burden changed over time, along with studying the predictors of earlier referral to PC service in metastatic cancer patients. By dividing the total period (from diagnosis of metastatic disease to death) into 4 quartiles, about 26% and 46% of

palliative RT consultations while 14% and 47% specialty PC visits occurred in last 3<sup>rd</sup> and 4<sup>th</sup> quartiles respectively. The study also showed that pain was a significant predictor for PC but patients with  $\geq 2$  chemotherapy was unlikely to have earlier PC. The most common reasons for PC visit were pain and goals of care. In general, about 73% of patients were referred to hospice including use of home care service.

This study has several advantages, as it addresses the gaps of inadequate knowledge of the longitudinal relationships between specialty PC and palliative RT, the symptom burden of those patients in RO and most importantly, showed the predictors that can identify patients to have earlier PC referral. The authors highlighted the relatively lower occurrence of earlier PC in RO, which, on the other hand, gave us an opportunity to improve multidisciplinary PC through educational initiatives in patients undergoing palliative RT. In fact, the radiation oncologists usually encounter their patients early in the disease course, more often in the outpatient setting, thus the relatively earlier occurrence of palliative RT consultations would definitely have a unique chance for radiation oncologists to not only improve their symptom burden with use of palliative RT, but also to work closely with specialty PC via multidisciplinary team approach. Integrating of PC into RO is very important as they have more opportunities to see their patients and thus could provide more streamlined coordination and gives timely referral of patients to specialty PC.

However, the study found that the PC visits occurred late in the last quarter of life from metastatic diagnosis to death. The authors speculated that misconceptions on the purpose of PC and the timing for referral, thus might have led to a delay to specialty PC for patients who received multiple prior palliative chemotherapy regimens at EOL. It is recommended that two or more lines of palliative chemotherapy could be a trigger for early specialty PC referral as to facilitate advance care planning discussions which could reduce use of some of unnecessary EOL treatments e.g., chemotherapy (2). Much work still has been done to improve the timing for early PC. This includes the ways of early PC integration, training and skills that could suit to the specialist and relevant staff.

Another limitation is lack of blood cancer patients in this study. Patients with hematologic malignancies (HM) were not included as they are not commonly treated with palliative RT (2). Those with HM who receive palliative RT are usually patients with a different disease trajectory from

that of advanced solid cancer, e.g., follicular or cutaneous T cell lymphomas. Thus, it is reasonable to have another similar study for patients with HM. Moreover, the study samples were relatively young. This might be a potential reason for late PC referral as related to their acceptance. It is noted that the study center is a tertiary academic institution and thus some patients are referred to the study center in a later stage.

As our population is ageing and the demand of advanced cancer patients, according to the PC needs of WHO, is great (around 70%) (1), there is an urge to develop their own PC skills (e.g., symptom control, goals of care discussion) in the field of RO. More research on the benefits of early PC for this group of patients are highly warranted, although several hurdles might be encountered (22).

### Acknowledgments

*Funding:* None.

### Footnote

*Provenance and Peer Review:* This article was commissioned by the editorial office, *Annals of Palliative Medicine*. The article did not undergo external peer review.

*Conflicts of Interest:* All authors have completed the ICMJE uniform disclosure form (available at <https://apm.amegroups.com/article/view/10.21037/apm-22-842/coif>). KYC serves as an unpaid editorial board member of *Annals of Palliative Medicine* from February 2022 to January 2024. The other authors have no conflicts of interest to declare.

*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

*Open Access Statement:* This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

### References

1. Sepúlveda C, Marlin A, Yoshida T, et al. Palliative Care: the World Health Organization's global perspective. *J Pain Symptom Manage* 2002;24:91-6.
2. Chan KY, Gill H, Chan TSY, et al. Early integrated palliative care for haematology cancer patients-the impact on symptom burden in Hong Kong. *Ann Palliat Med* 2021;10:6316-24.
3. Temel JS, Greer JA, Muzikansky A, et al. Early palliative care for patients with metastatic non-small-cell lung cancer. *N Engl J Med* 2010;363:733-42.
4. Zimmermann C, Swami N, Krzyzanowska M, et al. Early palliative care for patients with advanced cancer: a cluster-randomised controlled trial. *Lancet* 2014;383:1721-30.
5. Murphy JD, Nelson LM, Chang DT, et al. Patterns of care in palliative radiotherapy: a population-based study. *J Oncol Pract* 2013;9:e220-7.
6. Lam TC, Tseng Y. Defining the radiation oncologist's role in palliative care and radiotherapy. *Ann Palliat Med* 2019;8:246-63.
7. Martin EJ, Rich SE, Jones JA, et al. Communication skill frameworks: applications in radiation oncology. *Ann Palliat Med* 2019;8:293-304.
8. Lutz ST. Palliative radiotherapy: history, recent advances, and future directions. *Ann Palliat Med* 2019;8:240-5.
9. Wei RL, Mattes MD, Yu J, et al. Attitudes of radiation oncologists toward palliative and supportive care in the United States: Report on national membership survey by the American Society for Radiation Oncology (ASTRO). *Pract Radiat Oncol* 2017;7:113-9.
10. Quill TE, Abernethy AP. Generalist plus specialist palliative care--creating a more sustainable model. *N Engl J Med* 2013;368:1173-5.
11. Jordan SR, Kluger B, Ayele R, et al. Optimizing future planning in Parkinson disease: suggestions for a comprehensive roadmap from patients and care partners. *Ann Palliat Med* 2020;9:S63-74.
12. Tarolli CG, Holloway RG. Palliative care and Parkinson's disease: outpatient needs and models of care over the disease trajectory. *Ann Palliat Med* 2020;9:S44-S51.
13. Chan KY, Yip T, Yap DY, et al. Enhanced Psychosocial Support for Caregiver Burden for Patients With Chronic Kidney Failure Choosing Not to Be Treated by Dialysis or Transplantation: A Pilot Randomized Controlled Trial. *Am J Kidney Dis* 2016;67:585-92.
14. Pituskin E, Fairchild A, Dutka J, et al. Multidisciplinary team contributions within a dedicated outpatient palliative

- radiotherapy clinic: a prospective descriptive study. *Int J Radiat Oncol Biol Phys* 2010;78:527-32.
15. Jaffray DA. Radiation Therapy for Cancer. *Cancer: Disease Control Priorities, Third Edition (Volume 3)*, U.S. National Library of Medicine, 1 Nov. 2015.
  16. Ioannides PJ, Wei RL. Radiation oncology resident education in palliative care. *Ann Palliat Med* 2019;8:305-11.
  17. Frick E, Tyroller M, Panzer M. Anxiety, depression and quality of life of cancer patients undergoing radiation therapy: a cross-sectional study in a community hospital outpatient centre. *Eur J Cancer Care (Engl)* 2007;16:130-6.
  18. Johnstone C. Palliative radiation oncology programs: design, build, succeed! *Ann Palliat Med* 2019;8:264-73.
  19. Krishnan M, Racsá M, Jones J, et al. Radiation oncology resident palliative education. *Pract Radiat Oncol* 2017;7:e439-48.
  20. Lloyd S, Dosoretz AP, Yu JB, et al. Academic and Resident Radiation Oncologists' Attitudes and Intentions Regarding Radiation Therapy near the End of Life. *Am J Clin Oncol* 2016;39:85-9.
  21. Chen JJ, Shin KY, Hong PJ, et al. Longitudinal symptoms and temporal trends in palliative care, palliative radiotherapy, and anti-cancer treatment near end of life among patients with metastatic cancer. *Ann Palliat Med* 2022. [Epub ahead of print]. doi: 10.21037/apm-22-301.
  22. Chan KY, Gill HSH, Yap DYH. Addressing inequity in access to palliative care for patients with non-malignant or benign haematological diseases. *Lancet Haematol* 2022;9:e473-4.

**Cite this article as:** Chan KY, Gill H, Li CW, Au HY, Wong CY, Chan ML. Perspective of palliative care in radiation-oncology. *Ann Palliat Med* 2022;11(8):2558-2561. doi: 10.21037/apm-22-842