

COMMENTARY**Transitions of care for advanced cancer in post-acute and long-term care****Olivia Burke MD¹ | Stacie K. Levine MD² | Nabil Mir MD³ |
Lauren J. Gleason MD, MPH, AGSF²**¹Ohio's Hospice, Dayton, Ohio, USA²Section of Geriatrics & Palliative Medicine, Department of Medicine, University of Chicago, Chicago, Illinois, USA³Section of Hematology/Oncology, Department of Medicine, University of Chicago, Chicago, Illinois, USA**Correspondence**

Nabil Mir, Section of Hematology/Oncology, Department of Medicine, The University of Chicago, Chicago, IL, USA.

Email: nabil.mir@uchospitals.edu**Funding information**

Conquer Cancer Foundation - Endowed Young Investigator Award in Geriatric Oncology, Grant/Award Number: 2022YIA-0188919328; Health Resources and Services Administration, Grant/Award Numbers: K01HP39479, U1QHP28728

KEYWORDS: cancer, nursing home, oncology, transitions of care**BACKGROUND**

Cancer, a disease of aging, is present in up to 15% of post-acute and long-term care (PALTC) admissions (defined here as subacute rehabilitation [SAR] and long-term care [LTC]).¹ Nearly 30% of patients with advanced cancer who are admitted to PALTC facilities will require significant cancer treatment coordination.² As the evidence base for treating cancer in older adults continues to build,³ there remain growing concerns for disparities in the management and treatment of cancer for those in PALTC compared to community-dwelling older adults, particularly in relation to transitions of care (TOC). These challenges include systematic issues (cross-system communication, staff education, medication reconciliation, or access), and resident-level factors (social support, cognitive impairment, frailty, and tolerability of complex oncology regimens). Any breakdown in these issues threatens the attainment of high-quality cancer care in an already vulnerable patient population. This commentary will use the case of a comorbid older female with

multiple myeloma and pathologic fracture, who begins a standard multi-drug regimen to explore the barriers and potential solutions of TOC in a PALTC environment.

CASE VIGNETTE

Ms. J is a 74-year-old female with obesity, hypertension, heart failure with reduced ejection fraction, and cognitive impairment. She transferred to SAR after urgent surgical repair of a pathologic fracture. During her hospitalization, she was diagnosed with multiple myeloma. Before her admission, she lived with her daughter, who assisted Ms. J in most of her care, including her activities of daily living (ADLs).

Shortly after admission to the facility, Ms. J experienced multiple disruptions with care continuity. After discussing with the patient and her daughter, the inpatient oncology team recommended a known tolerable regimen for vulnerable patients with multiple myeloma, consisting of weekly daratumumab infusions and three weekly cycles of lenalidomide and dexamethasone tablets. Unfortunately, the lenalidomide, which was supplied by the hospital at discharge, was misplaced during her transfer to the

Nabil Mir and Lauren J. Gleason are co-senior authors.

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial](https://creativecommons.org/licenses/by-nc/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.

© 2023 The Authors. *Journal of the American Geriatrics Society* published by Wiley Periodicals LLC on behalf of The American Geriatrics Society.

PALTC facility. The facility staff had difficulty obtaining a replacement prescription for her. In addition, the time commitment of near-weekly infusions and radiation treatments made it exceedingly difficult for her to attend her daily physical therapy sessions. Furthermore, her family was unable to transport her to frequent appointments. After meeting her rehabilitation goals, she transitioned to LTC, as she required assistance with ADLs that her family could not provide at home. Ms. J continued to follow-up with the outpatient oncology and orthopedic teams and was ultimately discharged to her daughter's care after the completion of her cancer-directed therapy.

SYSTEMATIC BARRIERS

Systematic barriers can limit high-quality care delivery for PALTC residents with cancer. We summarize these barriers in Figure 1 and provide potential solutions, outlined below.

Discharging facility barriers

As older adults transition from acute care to PALTC, poor communication and a lack of access to specialty medications, such as oral anti-cancer agents, contribute to disparities in care.⁴ The discharging hospital team may have unrealistic knowledge of and expectations about, available PALTC services and their ability to obtain follow-up labs, imaging, and transportation for treatment. Most hospitals and PALTCs do not share electronic medical record systems, nor do they have standardized hand-off forms. Incomplete documentation may lead to adverse drug events due to differences in available formulations, drug discontinuations or substitutions, changes to dosing, or incorrect cessation.⁴

One potential solution includes the proposed changes to payment mechanisms, such as the Medicare Shared Savings Program.⁵ Novel reimbursement mechanisms that reward care continuity can encourage improved coordination among healthcare settings by providing financial incentives to medical professionals and healthcare systems. Oncology practices could implement similar models and consider additional support through cancer-specific community health workers to ensure continuity. Furthermore, linking electronic medical records across care settings would be advantageous.

PALTC facility barriers

PALTC staff are frequently unfamiliar with current standards of cancer care, including how best to provide

patient-centered services throughout the admission. Studies from Norway cite lack of awareness of the PALTC nurse's role in cancer care and staffs' fear and resistance to cancer treatment as potential barriers that this population can experience.⁶ This includes difficulty with symptom control (partly due to limited pain management skills) and ineffective resident care (due to staff shortages, a lack of skilled symptom control, or conflict within the healthcare team).⁶

Inconsistencies also exist between the oncologists' treatment plan and its feasibility within the PALTC setting. As many as 20% of PALTC residents with cancer receive targeted agents and radiation, as these treatments are not typically limited by compromised physical function.⁷ Most chemotherapy, immunotherapy, and radiation treatments are not provided in PALTC, as they are not covered by Medicare Part A.⁸ Even with the potential cost-savings associated with shifting oncologic care delivery to patients' homes⁹ PALTC facilities may not have the staffing, training, or technical capacity to provide infusions. PALTC staff, residents, or their caregivers may not have a full understanding of the medication indications, anticipated benefits, or awareness of side effects. Patients requiring non-formulary specialty medications depend on discharging facilities or their families to provide them with sufficient initial doses and refills, which can often delay combination treatment initiation for drugs that are part of multimodal therapy. These conflicts could be subverted by incentivizing interprofessional geriatric oncology training that addresses common oncologic treatments and symptoms, palliative or end-of-life care, and team-based communication.

Lastly, lack of transportation is often cited as a barrier to accessing medical care,¹⁰ and plays a role in residents' decisions whether or not to pursue or continue cancer treatment.¹¹ Radiotherapy, for example, is often frequent, with some residents requiring it daily for a week or more. PALTC facilities often do not have the resources or the time to maintain this schedule. Treatment limited by transportation constraints might be partially unburdened by broadening eligibility for cancer society-funded transportation services, such as the American Cancer Society's Road to Recovery and paratransit services for disabled persons.¹² Developing and studying novel patient-centered treatment paradigms could also address these barriers,¹³ but are often not the goal of clinical trials today.

RESIDENT-LEVEL BARRIERS

Patients with advanced cancer experience many personal barriers during transitions to PALTC facilities;



FIGURE 1 Barriers and solutions to cancer care transitions in post acute and long term care.

46% do not have a concrete plan for cancer-directed therapies or for end-of-life care.² One study evaluated outcomes in patients with advanced malignancy discharged to PALTC versus home with skilled services; residents were older and had more comorbidities than the discharge home cohort. Patients with newly

diagnosed cancer discharged to PALTC were less likely to have cancer treatment (29% vs. 50%) or hospice care (53% vs. 66%) initiated.⁷ Previously treated patients were also less likely to have treatment continued in PALTC than those discharged home (42% vs. 74%).⁷

Differences in treatment decisions by oncologists may also be due to negative perceptions about survival expectancy in older adults,¹⁴ concerns for their ability to maintain and improve physical functioning, or the risk of treatment toxicity outweighing their benefit given frailty status.¹⁵ If tolerable options such as hormone, targeted, or palliative radiation therapy are available for residents, it is imperative that all parties have a clear understanding of the goals of treatment, the treatability of the cancer, and the estimated tolerability of that regimen. When determining treatment candidacy, it is helpful to complete a comprehensive geriatric assessment (CGA) to evaluate cognitive, functional, and psychosocial capacity. This is routinely performed by the interprofessional PALTC team but is rarely accessible to outpatient oncologists. The CGA data obtained at the PALTC facility should be shared with the oncologist in order to improve how they gauge tolerability and the possible need to adapt the treatment plan to minimize the risks of under- and overtreatment.¹⁶ CGAs can also help identify drivers of frailty that can be monitored and mitigated within PALTC facilities.

Lastly, roughly a third of PALTC residents who initiate treatment are married or partnered,² which likely leaves the majority without reliable social support to aid decision-making. Early identification of a substitute decision maker is necessary to achieve patient-centered decisions for cancer management.

CONCLUSIONS

As cancer medicine continues to grow and become more complex, so do the care needs of this vulnerable and growing population of older adults. Trust in our medical institutions to ensure basic transitional care competencies, enhanced coordination between PALTC and cancer subspecialties through comprehensive record-keeping, and collaboration with residents and their families will help close the gaps in quality of care faced by this population. Incentivizing geriatric oncology training for PALTC teams could allow residents to receive some of their treatments, improve adherence, and avoid the need for frequent transportation and interruptions to physical rehabilitation. Evolving reimbursement structures with financial incentives for medical providers who provide high-quality services across healthcare settings could also help improve continuity of care. Opportunities such as telehealth videoconferences,¹⁷ structured communication tools, and linking electronic medical records can also move us closer to an inclusive and Age-Friendly Health System.

AUTHOR CONTRIBUTIONS

Lauren J. Gleason, Nabil Mir, Olivia Burke, Stacie K. Levine provided the concept and design. Olivia Burke, Nabil Mir, Lauren J. Gleason drafted the manuscript. Stacie K. Levine, Lauren J. Gleason provided critical revision of the manuscript.

ACKNOWLEDGMENTS

We would like to thank Waqaas Akmal Butt for assistance with Figure 1 creation.

FUNDING INFORMATION

This article was funded in part by the Health Resources and Services Administration, Geriatric Workforce Enhancement Program, Grant Number U1QHP28728 and Geriatric Academic Career Awards K01HP39479 to Lauren J. Gleason. This article was also funded in part by the Conquer Cancer - Endowed Young Investigator Award in Geriatric Oncology in honor of Dr. Arti Hurria 2022YIA-0188919328 to Nabil Mir.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

SPONSOR'S ROLE

None of the sponsors played a role in the preparation of the paper.

REFERENCES

1. Rodin MB. Cancer patients admitted to nursing homes: what do we know? *J Am Med Dir Assoc.* 2008;9(3):149-156.
2. Singh S, Molina E, Meyer E, Min S-J, Fischer S. Post-acute care outcomes and functional status changes of adults with new cancer discharged to skilled nursing facilities. *J Am Med Dir Assoc.* 2022;23(11):1854-1860.
3. Thake M, Lowry A. A systematic review of trends in the selective exclusion of older participant from randomised clinical trials. *Arch Gerontol Geriatr.* 2017;72:99-102.
4. Boockvar K, Fishman E, Kyriacou CK, Monias A, Gavi S, Cortes T. Adverse events due to discontinuations in drug use and dose changes in patients transferred between acute and long-term care facilities. *Arch Intern Med.* 2004;164(5):545-550.
5. Berwick DM. Making good on ACOs' promise--the final rule for the Medicare shared savings program. *N Engl J Med.* 2011;365(19):1753-1756.
6. Filteau C, Simeone A, Ravot C, Dayde D, Falandry C. Cultural and ethical barriers to cancer treatment in nursing homes and educational strategies: a scoping review. *Cancers (Basel).* 2021;13(14):3514.
7. Singh S, Eguchi M, Min SJ, Fischer S. Outcomes of patients with cancer discharged to a skilled nursing facility after acute care hospitalization. *JNCCN.* 2020;18(7):856-865.
8. General Explanation of the Major Categories for Skilled Nursing Facility (SNF) Consolidated Billing. Medicare: SNF Consolidated Billing. 2015. [CMS.gov](https://www.cms.gov/). <https://www.cms.gov/>

- Medicare/Billing/SNFConsolidatedBilling/Downloads/2015-General-Explanation.pdf
9. Kuntz G, Tozer JM, Snegosky J, Fox J, Neumann K. Michigan oncology medical home demonstration project: first-year results. *J Oncol Pract*. 2014;10(5):294-297.
 10. Syed ST, Gerber BS, Sharp LK. Traveling towards disease: transportation barriers to health care access. *J Community Health*. 2013;38(5):976-993.
 11. Etmnani-Ghasrodashti R, Kan C, Mozaffarian L. Investigating the role of transportation barriers in cancer Patients' decision making regarding the treatment process. *Transp Res Rec*. 2021; 2675(6):175-187.
 12. Knudsen KE, Wiatrek DE, Greenwald J, McComb K, Sharpe K. The American Cancer Society and patient navigation: past and future perspectives. *Cancer*. 2022;128(Suppl 13):2673-2677.
 13. Li BT, Daly B, Gospodarowicz M, et al. Reimagining patient-centric cancer clinical trials: a multi-stakeholder international coalition. *Nat Med*. 2022;28(4):620-626.
 14. Hamel MB, Phillips RS, Teno JM, et al. Seriously ill hospitalized adults: do we spend less on older patients? *J Am Geriatr Soc*. 1996;44(9):1043-1048.
 15. Jordhøy MS, Saltvedt I, Fayers P, HaKvard J, Ahlner-Elmqvist M, Kaasa S. Which cancer patients die in nursing homes? Quality of life, medical and sociodemographic characteristics. *Palliat Med*. 2003;17(5):433-444.
 16. Mohile SG, Dale W, Somerfield MR, et al. Practical assessment and Management of Vulnerabilities in older patients receiving chemotherapy: ASCO guideline for geriatric oncology. *J Clin Oncol*. 2018;36(22):2326-2347.
 17. Bellantoni J, Clark E, Wilson J, et al. Implementation of a telehealth videoconference to improve hospital-to-skilled nursing care transitions: preliminary data. *J Am Geriatr Soc*. 2022;70(6): 1828-1837.

How to cite this article: Burke O, Levine SK, Mir N, Gleason LJ. Transitions of care for advanced cancer in post-acute and long-term care. *J Am Geriatr Soc*. 2023;1-5. doi:[10.1111/jgs.18291](https://doi.org/10.1111/jgs.18291)