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**Access to individualized oncology care for older patients in complex healthcare networks:
the skilled nurse option**

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General context of geriatric oncology

Nearly 50% of cancers are diagnosed in patients aged 70 years or older.¹ The potential adverse consequences of cancer treatment in this population are of great concern, particularly in terms of cognitive and functional impairments.^{2,3} If treatment choice should not be based on chronological age,^{1,4-7} older patients do not always benefit from a fine-tuned adaptation of their treatment beyond this sole criterion. Although oncologists often overestimate the ability of older patients to receive chemotherapy, a significant proportion of them may also be under-treated.⁸ This could result in a loss of opportunities or, conversely, in excessively invasive treatments for questionable results. International oncologic societies recommend performing a geriatric assessment upstream in order to limit such risks.⁴

Older patients are spread out in the healthcare system and most health professionals working in oncology units are not trained in geriatrics.⁹ While some centers have set up specialized geriatric oncology units, this is not possible everywhere. As recently highlighted by the World Health Organization², we need to explore innovative organizations to provide more personalized care for older people in all settings. At the same time, given demographic trends, we have to deal with limited healthcare resources. Nurses with geriatric training could support geriatric care and counteract ageism in settings such as 'organ-based' oncology units.¹⁰ In addition, nurses are in a better position to implement patient-centered care due to their proximity to patients. As a result, nurses can collect their patients' wishes and advocate in their place during decision making.¹⁰ While advanced practice nurses and nurse practitioners are common in the United States, advances in nursing education and skills are recent in most other countries. In France, national

legislation now allows the proposal of accredited nursing education programs. However, this branch is not yet well-developed.

In order to expand access to geriatric assessment beyond specialized units, we explored the option of a Mobile Geriatric Oncology Unit relying on skilled nurses' expertise.

Materials and Methods

Design and participants

In this quasi-experimental study, we followed a pragmatic approach to ensure a better external validity of our results. All patients aged 65 or over (inpatient or outpatient) with cancer were eligible, regardless of their location or who consented to the evaluation. This organizational initiative was approved by the institutional review board and was conducted in accordance with the ethical standards of the Helsinki Declaration.

Intervention

The Mobile Geriatric Oncology Unit is an extension of the Geriatric Oncology Unit at the University Hospital and includes three part-time nurses who are available two half-days a week for this initiative. The nurses benefit from both a geriatric and oncologic practical training for two years. They learned to differentiate the possible trajectories of aging, to use geriatric assessment tools, and to master the particularities of the main oncology treatments. The evaluation takes place on referring physicians' (e.g. urologist) request. This activity was promoted through an initial visit to all private and public oncology units in the region and

through communication from the regional oncology network. Most of the time, the nurses take advantage of the first oncologist consultation to conduct their evaluation. They can also meet the patient in a medical unit or in a long-term care facility. Based on their assessment, the nurses discuss possible treatment alternatives with the patient. Finally, they present their evaluation and their own conclusion in terms of personalized care propositions to the oncologist who decides the best treatment option. The final decision is validated by the multidisciplinary tumor board (MTB) (see use case in Box 1).

Measures

The nurses collect sociodemographic and clinical data, as well as administer the G8 Questionnaire.³ They also carry out a ‘first line’ comprehensive geriatric assessment (CGA) as recommended by oncologic societies and the scientific community.^{1,4-7} The following questionnaires/scales are completed: Activities of Daily Living scale (ADL), Instrumental ADL (IADL), Mini-Nutritional Assessment (MNA), and Mini-Mental State Examination (MMSE) if the referring physician and/or the nurse suspect a cognitive impairment.

First results of our nurse-led initiative in real care setting

In 2018, 185 persons (mean 84 years old, 51% women) were evaluated. For most patients (96%), it was their first geriatric evaluation. Evaluations took place in the main regional hospital for 66% of them and in rural city (< 10,000 inhabitants) hospital centers for 34%. The evaluations were conducted during a consultation (66%), in medicine units (29%), in nursing homes (2%), or in rehabilitation units (2%). The reasons for the patients’ evaluation were mainly to personalize

the treatment (75%), to discuss the relevance of performing complementary investigations (15%), and to discuss the relevance of pursuing a specific therapy (9%).

In Table 1, we present the nurse's assessment results. Among the participants, 30% presented with weight loss in the last three months (mean 6.7 kg, SD = 5.0). The mean MNA scoring was 21.6 (a score between seventeen and 23.5 reflects a risk of malnutrition). The ADL showed a mean score of 4.7 out of six and the IADL showed a mean score of 5.1 out of eight. It implies that participants had relatively preserved autonomy for their basic activities but had lost performance in several of their Instrumental Activities of Daily Living (e.g., a score of five could mean: travel only with assistance, difficulties in handling money, and not using the telephone). The average score of 10.0 on the G8 questionnaire reflects a relatively preserved health status.

The suspected or established cancer localizations were digestive organs (19%), breast (17%), prostate (15%), skin (10% of which 44% was melanoma), bladder or ureter (10%), kidney (8%), endometrium or uterine cervix (7%), ovarian (3%), ear-nose and throat (3%), hematologic (2%), and pulmonary tract (1%). After the evaluation and according to the patients' preferences, the following care alternatives were proposed to the oncologist by the nurses: chemotherapy (21%), surgery (19%), any combination therapy (12%), hormonotherapy (9%), additional investigations (8%), radiotherapy (6%), palliative care (5%), active surveillance (3%), targeted therapy (2%), radiofrequency (2%), immunotherapy (2%), and no conclusion for 11% percent. The treatment option delivered to the patient was in accordance with the nurse's proposal to the oncologist for 62% of the patients. For 10% of them, the provided care did not fit the proposition because it was in favor of a less invasive alternative.

Concerning the feasibility of this organization (impact on the care network), the evaluation took on average 60.0 minutes per patient (range 20-110). The mean transportation time to evaluate the patients was 28.4 minutes ($n = 113$; $SD = 38.1$). The nurses worked in close collaboration with 76 different referring physicians from all kind of specialties and each physician requested the nurses' intervention for 2.4 patients on average during the year.

Discussion

Main results

This first real-life approach to the potential role that nurses can play in improving access to geriatric care beyond dedicated hospital units is encouraging. The nurses were indeed repeatedly solicited by the doctors, mostly before any therapeutic decisions were taken, which means that referring physicians were well aware of their potential contribution. They were solicited to evaluate patients with a profile that met the expected target: presenting a high risk of autonomy-loss (slightly low NMA, IADL) but no major deficiency in ADL. This population is the most likely to benefit from a personalization of care. Additionally, the nurses were able to conduct the CGA outside the geriatric units for all patients and in rural areas for more than one third. The potential negative consequences of cancer treatment are more worrying for patients living in rural areas.¹¹ Moreover, nurses' propositions in terms of treatment options were considered as relevant for almost two thirds of them. For some of them, a less invasive alternative was finally chosen, which could support the idea that nurses were trying to counter ageism and under-treatment. Finally, they were able to integrate a complex healthcare network as they closely

cooperated with as many as 76 different physicians. These results show that this organization is feasible and can potentially meet the main challenges of implementing the CGA in oncology practice (e.g. timely access to geriatric expertise).⁹

Previous comparable works

Nurses are increasingly being called upon to address the growing demands for proximity to patients and personalized care.¹⁰ Nurses can advocate on behalf of patients who have been excluded from cancer treatments because of the excessive value placed on the age criterion.¹⁰ Several studies evaluated geriatrician-led CGA initiatives with encouraging results regarding the potential impact on the treatment decision and chemotherapy tolerance.^{8,12,13} However, one of them had disappointing feasibility results:¹² of 168 eligible patients, 71% were not referred for assessment. The authors pointed out the limited geriatric resources and that this assessment could be alternatively based on nurses. In another study involving a nurse-led assessment,⁸ the evaluation prompted the use of more personalized treatment options for some patients. However, nurses were not involved in the collection of the patient's wishes and the therapeutic decision-making process. To our knowledge, our initiative is the first to use such a high degree of delegation of care.

Limitations

This first initiative had some limitations. Although the geriatric assessment should primarily focus on physical function and nutritional status⁵, it could be enriched by other assessment domains such as fall risk or depression. In addition, a minimal cognitive assessment could be systematically offered to all patients. While we were able to optimize travel time (113 travels to

evaluate 183 patients), there is still room for organizational improvement. Moreover, evaluation time remains an obstacle for some institutions/organizations. Finally, we are not in a position to determine the impact of nurses' intervention on the final decision (e.g. have the patient's wishes been better taken into account?).

Lessons learnt and perspectives

While our results warrant further research, this study provides valuable feedback on the potential role that nurses can play in improving access to care beyond the hospital's specialized units.

Nurses could play a major role in the continuity of care in the unfavorable context of Geriatric Oncology (e.g. multiplicity of actors). They could, for example, secure transitions from hospital care to ambulatory care. We currently offer older patients undergoing ambulatory chemotherapy a weekly remote telephone follow-up led by oncology nurses.

Conflict of interest and disclosures

None

Author contributions

A.P. and L.B: conceptualisation, methodology, original draft preparation, and supervision of the study. G.B, C.B, F.N, and C.L: conceptualization, data acquisition and original draft review. All authors have approved the final article.

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References

1. Cesari M, Colloca G, Cerullo F, Ferrini A, Testa AC, Foti E, et al. Onco-geriatric approach for the management of older patients with cancer. *J Am Med Dir Assoc* 2011;**12**:153-9. <https://doi.org/10.1016/j.jamda.2010.06.008>.
2. Beard JR, Officer A, de Carvalho IA, Sadana R, Pot AM, Michel JP, et al. The World report on ageing and health: a policy framework for healthy ageing. *Lancet* 2016;**387**:2145-54. [https://doi.org/10.1016/S0140-6736\(15\)00516-4](https://doi.org/10.1016/S0140-6736(15)00516-4).
3. Hamaker ME, Jonker JM, de Rooij SE, Vos AG, Smorenburg CH, van Munster BC. . Frailty screening methods for predicting outcome of a comprehensive geriatric assessment in elderly patients with cancer: A systematic review. *Lancet Oncol* 2012;**13**: e437ee444. [https://doi.org/10.1016/S1470-2045\(12\)70259-0](https://doi.org/10.1016/S1470-2045(12)70259-0).
4. Wildiers H, Heeren P, Puts M, Topinkova E, Janssen-Heijnen ML, Extermann M, et al. International Society of Geriatric Oncology consensus on geriatric assessment in older patients with cancer. *J Clin Oncol* 2014;**32**:2595-03. <https://doi.org/10.1200/JCO.2013.54.8347>.
5. Bruijnen CP, van Harten-Krouwel DG, Koldenhof JJ, Emmelot-Vonk MH, Witteveen PO. Predictive value of each geriatric assessment domain for older patients with cancer: A systematic review. *J Geriatr Oncol* 2019 ;pii:S1879-4068(18)30427-2. <https://doi.org/10.1016/j.jgo.2019.02.010>.
6. Mohile SG, Dale W, Somerfield MR, Schonberg MA, Boyd CM, Burhenn PS, et al. Practical Assessment and Management of Vulnerabilities in Older Patients Receiving Chemotherapy: ASCO Guideline for Geriatric Oncology. *J Clin Oncol* 2018;**36**:2326-2347. <https://doi.org/10.1200/JCO.2018.78.8687>.

7. Hamaker ME, Te Molder M, Thielen N, van Munster BC, Schiphorst AH, van Huis LH. The effect of a geriatric evaluation on treatment decisions and outcome for older cancer patients - A systematic review. *J Geriatr Oncol* 2018;**9**:430-440.
<https://doi.org/10.1016/j.jgo.2018.03.014>.
8. Decoster L, Kenis C, Van Puyvelde K, Flamaing J, Conings G, De Grève J, et al. The influence of clinical assessment (including age) and geriatric assessment on treatment decisions in older patients with cancer. *J Geriatr Oncol* 2013;**4**:235-41.
<https://doi.org/10.1016/j.jgo.2013.04.010>.
9. Sattar S, Alibhai SM, Wildiers H, Puts MT. How to implement a geriatric assessment in your clinical practice. *Oncologist* 2014;**19**:1056-68.
<https://doi.org/10.1634/theoncologist.2014-0180>.
10. Morgan B, Tarbi E. The Role of the Advanced Practice Nurse in Geriatric Oncology Care. *Semin Oncol Nurs* 2016;**32**:33-43. <https://doi.org/10.1016/j.soncn.2015.11.005>.
11. Loberiza FR Jr, Cannon AJ, Weisenburger DD, Vose JM, Moehr MJ, Bast MA, et al. Survival disparities in patients with lymphoma according to place of residence and treatment provider: a population-based study. *J Clin Oncol* 2009;**27**:5376-82.
<https://doi.org/10.1200/JCO.2009.22.0038>.
12. Horgan AM, Leighl NB, Coate L, Liu G, Palepu P, Knox JJ, et al. Impact and feasibility of a comprehensive geriatric assessment in the oncology setting: a pilot study. *Am J Clin Oncol* 2012;**35**:322-8. <https://doi.org/10.1097/COC.0b013e318210f9ce>.
13. Kalsi T, Babic-Illman G, Ross PJ, Maisey NR, Hughes S, Fields P, et al. The impact of comprehensive geriatric assessment interventions on tolerance to chemotherapy in older people. *Br J Cancer* 2015;**112**:1435-4. <https://doi.org/10.1038/bjc.2015.120>.

Box 1

Pathway description.

An 84-year-old man is diagnosed with bladder cancer. He needs help with several complex daily living tasks (e.g. laundry). However, he is able to handle most of his activities. The referring urologist would like to consider the possibility of treatment in light of the patient's intrinsic capacity.

- (i) At his request, the patient benefits from an evaluation by the skilled nurse in his local hospital.
 - (ii) The nurse discusses his or hers conclusion with an oncologist in terms of personalized care propositions.
 - (iii) A multidisciplinary tumor board takes place the following week, led by the referring physician, and a decision is made according to patient preferences and the oncologist's propositions.
-

Table 1

Characteristics of the evaluated patients (n = 183).

Characteristics (n if not 183)	% or mean (n or <i>SD</i>)
Gender (female)	51.4 (94)
Age (yrs.)	84.0 (6.7)
Weight (kg) (n = 155)	66.7 (14.1)
BMI (kg/m ²) (n = 153)	24.9 (5.0)
Weight loss in the last 3 months (yes) (n = 101)	30.0 (55)
Weight loss in the last 3 months (kg, if yes) (n = 101)	6.7 (5.0)
Mini Nutritional Assessment score (MNA) (n = 122)	21.6 (4.8)
Activity of Daily Living (ADL) score (n = 162)	4.7 (1.7)
Instrumental Activity of Daily Living (IADL) score (n = 141)	5.1 (2.3)
Mini Mental State Evaluation (MMSE) score (n = 17)	21.4 (5.4)
G8 questionnaire (n = 180)	10.0 (3.1)

^a Abbreviations: *SD*, standard deviation; BMI, body mass index; MMSE, Mini Mental State Evaluation; ADL, Activity of Daily Living; IADL, Instrumental Activity of Daily Living; G8 questionnaire, Geriatric 8 health status screening tool; MNA, Mini-Nutritional Assessment.

^b Note. MMSE range from 0 to 30, the higher the score, the greater the global cognition; ADL range from 0 to 6, the higher the score, the greater the functional independence in daily life (e.g. walking or dressing); IADL range from 0 to 8, the higher the score, the greater the functional independence for instrumental activities of daily life (e.g. driving); G8 questionnaire range from 0 to 17, the higher the score, the better the health status; MNA range from 0 to 30 and distinguishing three nutritional statuses: malnourished (less than 17 points), at risk of malnutrition (17 to 23.5), or normal nutritional status (24 to 30).