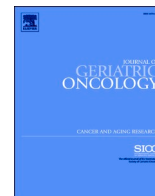




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Point-counterpoint series

## Achieving harmony in oncological geriatric assessment – Should we agree on a best set of tools?<sup>☆</sup>

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### 1. Introduction

Geriatric assessment, where we systematically evaluate multiple domains of an older patient's individual health status in order to understand prognosis, treatment risks, frailty and resilience, is a core tool in geriatric oncology [1]. Most of the evidence base in geriatric oncology is built around the powerful characteristics of geriatric assessment. Geriatric assessment is useful both in clinical practice and in research and provides us with a much-needed basis for discussing patient preferences and making individualized treatment decisions.

As much as we all love geriatric assessment, there is an ongoing debate about whether the tools used in the assessment in oncology should be standardized once and for all. Standardization has many advantages, and one is comparability of results across different tumors, cultures, and countries – and therefore an improved generalizability. In this viewpoint, however, we argue *against* a rigid standardization of tools, both in clinical practice and in research. We believe it will be impossible to achieve consensus on a dataset and, given the impact this would have on existing geriatric oncology care pathways, a wide implementation of such a dataset is unlikely. Above all, due to the fact the scores for the individual patient need to be interpreted in a context to have meaning, we find that standardization of assessment tools is unnecessary. We will further discuss our point of view in this paper.

### 2. Geriatric assessment tools in clinical practice

The implementation of geriatric assessment into clinical oncology practice has been slow, despite the fact that its benefits for older patients with cancer are well-documented [2]. By contrast, geriatric medicine itself is independently established in many countries, with the comprehensive geriatric assessment at its core. Both the organization of geriatric oncology care and the use of assessment tools differ among countries and institutions, based on local guidelines, history, culture, resources, and validation status. A standardization of a specific set of oncological geriatric assessment tools could mean that a separate set of tools is used in geriatric oncology than in other geriatric care pathways. We believe it is unlikely that established geriatric departments will be willing or motivated to adopt such recommendations, and ultimately, rather than facilitating a wider implementation of geriatric oncology, standardization will hamper this process.

Geriatric assessment within geriatric medicine uses their tools as one component of a much more extensive evaluation of the patient, aimed at acquiring a comprehensive overview of the patient's medical, functional, psychosocial and environmental issues, reserves and resources, as well as goals and preferences. Although some tools are more widely used, geriatric medicine has never felt the need to establish a definitive and exclusive list of tools to be used by all. However, when geriatric assessment was adopted by other fields, such as oncology, the tools themselves were elevated to such an extent that their scores seemed to replace the overall assessment.

<sup>☆</sup> This statement is CON agreeing on a best set of tools.

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On group level, studies have demonstrated that scores on specific assessment tools have predictive value for various adverse outcomes in oncology. However, on an individual level they have much less meaning if we do not interpret them within the context of the patient. For example, the same summary score on a cognitive test may be normal in one older patient with low education, while it indicates dementia in a highly educated patient. Such interpretation is also necessary for other geriatric domains. An older person, for whom traditional role patterns meant their partner always took on all instrumental activities of daily living (IADL) in their household, may score very poorly on an IADL questionnaire, while still functioning at his normal level. Furthermore, a poor score on a mobility test will have different implications in an 80-year-old who suffered a childhood accident that damaged her joints, to which she has adapted so that she is fully functional and independent, compared to a patient of the same age who has experienced slowly declining gait speed over the last years. For polypharmacy, a simple count of drugs does not suffice in understanding the patient's situation: a patient with polypharmacy due to cardiovascular risk management and osteoporosis prevention is not comparable to a patient taking an equal number of drugs to treat psychiatric disease or pain. Absence of polypharmacy could also have opposing implications: it could mean that a patient is fit with limited comorbidity, or it could mean that a patient is living with severe frailty and medications have been discontinued due to a short life expectancy.

Over time, tools may evolve because of changes in the society. One example is activities of daily living, where traditional scales ask about the ability to write a letter, while newer scales may ask about the ability to send a text message or write an email. Assessment methods of various domains may change over time with the development of electronic and online tools to evaluate and monitor patients. Standardizing and fixing specific tools makes geriatric assessment less dynamic, and we risk that some tools will become outdated over time.

A standardized set of geriatric assessment tools may also lead to the assumption that there is a magic number, cut-off, or test that will automatically tell you how to treat the patient. In the early years of geriatric oncology, various 'go-go, slow-go, no-go' algorithms were suggested, with the underlying idea that geriatric assessment (preferably in the form of a single short screening tool) could be the one-size-fits-all-method for classifying all older patients with cancer with ensuing treatment recommendation. We now know that it is not that simple. The actual test scores are of limited value, and their use should not lead to omission of clinical judgment and the exploration of patient preferences in clinical decision-making. Furthermore, for each domain, the consequence may vary according to different tumor types and treatment options in oncology. One example is comorbidity – different comorbidities may be relevant in various treatment types (e.g., neuropathy may be relevant for certain types of chemotherapy but may not be an issue when considering surgery). These nuances further impede the possibility of a one-size-fits-all-algorithm.

Additionally, it will be close to impossible to achieve consensus on which set of assessment tools to use. As the best tool will depend on the setting, the patient, and the validation of that tool in a specific population, there is no way to select one specific tool as the superior option for a specific geriatric domain. While the commonly used mini-mental state examination (MMSE) is quite sensitive to detect Alzheimer's dementia, it performs poorly for vascular cognitive impairment, for which the Montreal Cognitive Assessment may be better. The usefulness of a tool increases as the interpreter becomes familiar with it, and experts are likely to promote the tests they commonly use. Thus, with experts favoring their usual practice and without the possibility of choosing tools based on prior research evidence, consensus is a challenge. For similar reasons, past attempts at achieving consensus regarding a specific dataset have not been successful.

In summary, both the benefit and feasibility of standardizing geriatric assessment tools in clinical practice are highly questionable.

### 3. Geriatric assessment tools in research

In research, there are strong arguments for harmonizing geriatric assessment tools in order to ensure external validity of results and building a common database. As much as this may be beneficial from a methodological perspective, from a practical perspective a less strict approach would be preferable. For example, in multicenter clinical trials, feasibility increases if the participating centers can build on existing local practices. Insisting that they alter their current practices to suit the requirements of the trial may impede a center's participation. Furthermore, as various centers have already created their own quality databases for older patients with cancer, such data would become obsolete or less valuable if a universal set of tools were adopted that were not included in those databases. Another argument against choosing specific geriatric assessment tools is the experience we have from MMSE [3]. This scale is a well-established cognitive test, but some years ago, MMSE was copyrighted, leading to high costs associated with its use. This hampers widespread use in research, particularly in low-income countries. For other tools, such as the geriatric-8 screening tool, limitations have been demonstrated when applying the tool in a new context [4].

We understand that the heterogeneity that currently exists in geriatric oncology research, with each study using their own set of tools to assess a varying number of geriatric domains, is also an important impediment to increasing our knowledge in geriatric oncology. It makes it difficult to compare studies or perform meta-analyses. However, instead of focusing on harmonizing tools, we believe the geriatric oncology community should strive for consensus on domains and reporting of assessment results, leaving the responsibility of the assessment methodology to the individual oncology teams.

This is also the approach we have chosen for GerOnTe – a multinational research project funded by the European Commission H2020 program ([www.geronteproject.eu](http://www.geronteproject.eu)). In the first phase of the GerOnTe project, a new care pathway was developed for older patients with multimorbidity and lung, colorectal, prostate, or breast cancer. The pathway includes a baseline geriatric assessment for all patients, performed by a geriatrician. In the second phase, this care pathway will be tested in three countries with varying pre-existing practices of geriatric oncology activity and with significant differences in how these activities are organized, sometimes even within the same institution. We considered it unlikely and unnecessary to have all participating centers agree on a single set of assessment tools. Instead, for each geriatric domain, we have asked the geriatrician to rate the level of impairment as none, mild, moderate, or severe, based on their clinical judgment. This way, we not only utilize the expertise and experience of the geriatrician in assessing geriatric domains with their own tool set, but we also have a standardized rating that can be used in analyses and reports.

To further improve harmonization, it would be helpful to standardize an evidence-based minimal set of *domains* that should be included in all geriatric assessment studies in geriatric oncology [5]. For such a consensus discussion, there is a lot of underlying evidence. Various studies have assessed which geriatric domains are associated with poor outcomes as well as which domains are amenable for interventions aimed at optimizing a patient's health status and support system [6–8]. Based on this evidence, the following domains should be the minimum that are included in geriatric assessment: [1] functioning, including (instrumental) activities of daily living and mobility, [2] falls, [3] comorbidity, [4] mood, [5] cognition, and [6] nutrition [6]. In addition, an assessment of social support is fundamental to plan a safe treatment trajectory.

**In conclusion**, standardizing geriatric assessment tools in the geriatric oncology community for clinical practice as well as research is not feasible, not necessary, and not helpful. Focus should be on harmonizing which domains are assessed and how they are reported in a standardized fashion. We encourage the International Society of Geriatric Oncology to take on this challenge.

**COI and Author Contribution**

SR, NS, and MEH have no conflicts of interest to declare. SR, NS, and MEH contributed to study concepts. SR, NS, and MEH contributed to manuscript preparation, manuscript editing, and manuscript review.

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