

# Evolution of Geriatric Assessment in Oncology

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## ASSOCIATED CONTENT



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Older adults differ from younger and middle-age adults in significant ways. Among these are an increasing heterogeneity of health status, a panoply of physiologic changes, increased prevalence of disease and tendency to have multiple and often interactive diseases, atypical presentations of common illnesses, increased importance of social support, increased rate of adverse events to medications and therapies, and often differing goals of therapy. How then do we best approach older adults with cancer who have this complex medical background? In the article that accompanies this commentary, Loh et al<sup>1</sup> lay out one such approach—the use of geriatric assessment—and offer practical suggestions about how oncologists can use this technology. In fact, given the demographic trends, one might say that all oncologists need to become geriatric oncologists.

Geriatricians for some time have used an assessment and management approach organized around the many domains that contribute to health and illness in older individuals. Geriatric assessment was initially applied in both clinic and hospital settings by geriatricians and multidisciplinary care teams who evaluated the domains of functional, nutritional, cognitive, psychosocial, and economic status; comorbidities; geriatric syndromes; and mood. Although these approaches were demonstrated to be effective,<sup>2</sup> they were time and resource consuming. Soon apparent was that applied in the traditional way, geriatric assessment was not likely to be practical for most oncology settings. Indeed, with seeking an alternative approach, as initially reported,

an older adult could fill out an instrument that contains questions related to each of these domains and bring it to the clinic for use by clinic personnel.<sup>3</sup> Subsequently, the questionnaire by Hurria et al<sup>4</sup> is specifically designed for this purpose and tested for feasibility and applicability in clinical trial settings. This information can be obtained in a relatively short amount of time from the patient and, thus, belies the claim that geriatric assessment is too time consuming. More recently, electronic versions of these assessments have been reported and are now becoming more generally available.<sup>5</sup> Algorithms have been developed to indicate for the oncologist steps to be taken if abnormalities are found in any of the domains of evaluation.<sup>6</sup>

A place for in-person evaluation by geriatricians and health care teams still exists, however, for the most complex older adults with cancer. Screening instruments can be used to determine which patients need a more comprehensive assessment carried out either within the oncology clinic or by referral to a geriatrician or geriatric oncology clinic. However, they are not useful for defining and directing treatment approaches that could ameliorate identified deficits because they do not provide enough detailed information.

Geriatric assessment has several goals: stratification and/or selection of patients for clinical research, selection of patients for particular treatment regimens, provision of information for determining prognosis, provision of information that could be useful in managing coexisting issues before or during cancer treatment, and help with



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such issues during the survivorship phase. Toxicity calculators and characterization of frailty also can be constructed from geriatric assessment.<sup>7,8</sup> The Holy Grail, however, is a demonstration that the performance of such an assessment and subsequent management of issues uncovered during it can improve outcomes for older patients with cancer. One randomized clinical trial of geriatric assessment versus usual care demonstrated positive outcomes in quality of life and lower toxicity. Initially, the findings were believed to be disappointing because survival was not improved<sup>9</sup>; however, in the definitive studies of geriatric assessment in the modern era, survival is not generally improved.<sup>2</sup> Many of the outcomes patients find important, such as a better quality of life, pain control, and functional status, are improved. A number of randomized controlled trials are now under way to characterize further the responses to therapy. I believe we must be circumspect in our expectations of these trials and remember that survival per se is by no means the only important outcome for older patients with cancer. However, with what we know currently, I believe that enough evidence supports the National Comprehensive Cancer Network and SIOG (International Society of Geriatric Oncology) recommendations to use geriatric assessment in the ways suggested by Loh et al.<sup>1</sup>

Can we improve the geriatric assessment? As currently performed, geriatric assessment provides excellent clinical information. When we evaluate cancer status, we go farther; we stage and biologically characterize the tumor itself (eg, tumor biomarkers, genetic markers). I believe that the next step for geriatric assessment is to stage the aging. We need to determine whether the inclusion of additional information, such as biomarkers of functional aging when added to the domains currently assessed, will allow us to characterize the underlying biology of the host as well as the cancer.<sup>10</sup>

I believe that we are on our way to improving the care for our older patients with cancer and answering the challenge posed by the recent Institute of Medicine report “A System in Crisis.”<sup>11</sup> The engagement of the next generation of geriatric oncologists represented by the Young SIOG authors gives me optimism that we can accomplish this mission. **JOP**

#### Author's Disclosures of Potential Conflicts of Interest

Disclosures provided by the authors are available with this article at [jop.ascopubs.org](http://jop.ascopubs.org).

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#### References

1. Loh KP, Soto-Perez-de-Celis E, Hsu T, et al. What every oncologist should know about geriatric assessment for older patients with cancer: Young International Society of Geriatric Oncology position paper. *J Oncol Pract* 14:85-94, 2018
2. Cohen HJ, Feussner JR, Weinberger M, et al: A controlled trial of inpatient and outpatient geriatric evaluation and management. *N Engl J Med* 346:905-912, 2002
3. Ingram SS, Seo PH, Martell RE, et al: Comprehensive assessment of the elderly cancer patient: The feasibility of self-report methodology. *J Clin Oncol* 20:770-775, 2002
4. Hurria A, Cirincione CT, Muss HB, et al: Implementing a geriatric assessment in cooperative group clinical cancer trials: CALGB 360401. *J Clin Oncol* 29:1290-1296, 2011
5. Hurria A, Akiba C, Kim J, et al: Reliability, validity, and feasibility of a computer-based geriatric assessment for older adults with cancer. *J Oncol Pract* 12:e1025-e1034, 2016
6. Mohile SG, Velarde C, Hurria A, et al: Geriatric assessment-guided care processes for older adults: A Delphi consensus of geriatric oncology experts. *J Natl Compr Canc Netw* 13:1120-1130, 2015
7. Hurria A, Mohile S, Gajra A, et al: Validation of a prediction tool for chemotherapy toxicity in older adults with cancer. *J Clin Oncol* 34:2366-2371, 2016
8. Cohen HJ, Smith D, Sun CL, et al: Frailty as determined by a comprehensive geriatric assessment-derived deficit-accumulation index in older patients with cancer who receive chemotherapy. *Cancer* 122:3865-3872, 2016
9. Corre R, Greillier L, Le Caër H, et al: Use of a comprehensive geriatric assessment for the management of elderly patients with advanced non-small-cell lung cancer: The phase III randomized ESOGIA-GFPC-GECP 08-02 study. *J Clin Oncol* 34:1476-1483, 2016
10. Hubbard JM, Cohen HJ, Muss HB: Incorporating biomarkers into cancer and aging research. *J Clin Oncol* 32:2611-2616, 2014
11. Hurria A, Naylor M, Cohen HJ: Improving the quality of cancer care in an aging population: Recommendations from an IOM report. *JAMA* 310:1795-1796, 2013

**AUTHOR'S DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST****Evolution of Geriatric Assessment in Oncology**

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