

# Determining the Current Situation of Geriatric Oncology in Turkey: A Survey of Medical Oncologists

<sup>1</sup>Baran AKAGÜNDÜZ<sup>a</sup>, <sup>2</sup>Deniz Can GÜVEN<sup>b</sup>, <sup>3</sup>Muhammed Mustafa ATCI<sup>c</sup>, <sup>4</sup>Ibrahim ÇİL<sup>d</sup>,  
<sup>5</sup>Cengiz KARAÇİN<sup>e</sup>, <sup>6</sup>Muhammet ÖZER<sup>f</sup>, <sup>7</sup>Saadettin KILIÇKAP<sup>b</sup>

<sup>a</sup>Department of Medical Oncology, Erzincan Binali Yıldırım University Faculty of Medicine, Erzincan, TURKEY

<sup>b</sup>Department of Medical Oncology, Hacettepe University Faculty of Medicine, Ankara, TURKEY

<sup>c</sup>Clinic of Medical Oncology, Prof. Dr Cemil Taşçıoğlu City Hospital, İstanbul, TURKEY

<sup>d</sup>Department of Medical Oncology, University of Health Sciences Ümraniye Training and Research Hospital, İstanbul, TURKEY

<sup>e</sup>Department of Medical Oncology, Recep Tayyip Erdoğan University Faculty of Medicine, Rize, TURKEY

<sup>f</sup>Department of Internal Medicine, Capital Health Regional Medical Center, Trenton, NJ, USA

**ABSTRACT Objective:** We aimed to capture a snapshot of the current situation in Turkey regarding the management of elderly cancer patients through an online survey of medical oncologists in Turkey. **Material and Methods:** An anonymized cross-sectional nationwide descriptive online survey was sent to the Turkish Society of Medical Oncology members by email in November 2020. Before closing the survey in December 2020, one reminder was sent. **Results:** The survey was completed by 133 medical oncologists from 41 centers with a 29% response rate. Routine use of geriatric evaluation was practiced by 18.2% of the medical oncologists in their daily practice. A geriatrician was available in the centers of 36.8% of the participants. The Eastern Cooperative Oncology Group performance status was the most commonly employed tool for investigating older cancer patients. Our survey determined that the presence of malnutrition, treatment adherence, comorbidities, and social support were the most commonly identified challenges while caring for geriatric cancer patients. Hearing problem was the most common reason, followed by dementia, regarding the communication with the elderly cancer patients. **Conclusion:** Our survey results revealed a very low rate of geriatric evaluation for systemic treatment planning in elderly patients. Moreover, medical oncologists encountered a high rate of communication problems and additional challenges in the care of geriatric cancer patients. These findings signify the need for geriatrics and oncology collaboration for the optimization of geriatric cancer care.

**Keywords:** Geriatrics; oncology; Turkey

The age of about 60% of newly diagnosed cancer patients is 70 years and above.<sup>1</sup> Recently, the rising life expectancy in the general population coupled with a disproportionate cancer burden among individuals aged 70 years and older have enthralled considerable interest in ensuring improved cancer treatment for the geriatric population.<sup>2</sup> Significant limitation persists regarding optimal cancer treatment for older patients. Unique challenges are witnessed in the management of geriatric cancer patients. A thorough examination of the older person's health status can aid in the assessment of risks and benefits of cancer treatment, affect the choice and intensity of treatment, and guide supportive care strategies.<sup>3</sup> The central domains of geriatric assessment (GA) include

physical and cognitive function assessment, comorbid medical problems, diet, medications, and psychological conditions.<sup>4</sup> Despite the recommendations of the International Society of Geriatric Oncology (SIOG) and the National Comprehensive Cancer Network (NCCN), time restrictions mostly impede the systematic implementation of the application of geriatric assessment in oncology practice.<sup>5,6</sup> To collect data without the time commitment and stress on patients and caregivers, cancer-specific geriatric evaluation tools have been designed.<sup>7</sup> Nevertheless, the implementation of geriatric evaluation in daily medical oncology practice remains elusive.

Epidemiological data reveal an increasing incidence of older adults in Turkey being diagnosed with

**Correspondence:** Baran AKAGÜNDÜZ

Department of Medical Oncology, Erzincan Binali Yıldırım University Faculty of Medicine, Erzincan, TURKEY/TÜRKİYE

**E-mail:** drbaran04@hotmail.com



Peer review under responsibility of Journal of Oncological Sciences.

**Received:** 25 Dec 2020

**Accepted:** 08 Feb 2021

**Available online:** 18 Mar 2021

2452-3364 / Copyright © 2021 by Turkish Society of Medical Oncology. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

cancer. Limited information is available regarding the perspectives and opinions of medical oncologists on geriatric oncology in Turkey. For this reason, we conducted this survey to elucidate the problems and decision mechanisms that medical oncology specialists encountered while making the treatment decision in older patients having cancer.

## MATERIAL AND METHODS

This study was an anonymized cross-sectional nationwide online survey. Based on a literature review and expert opinion, the survey encompassed 32 questions covering: characteristics of responders, clinical practice environment, patient population, the habit of using geriatric screening tools, challenges, and treatment decision-making factors in the management of older patients with cancer.

The reliability and understanding of the survey content were ensured by pretesting the survey among a sample of 20 medical oncologists.

An invitation to participate in the online survey was sent via email to the Turkish Society of Medical Oncology members in November 2020. Prior to closing the survey in December 2020, one remainder was sent.

The survey was accomplished by the participants employing Google Docs (Google, Mountain View, CA, USA). The survey could not be completed more than once as it was case sensitive.

This survey study was performed after receiving the approval of the Clinical Research Ethics Committee of Prof Dr. Cemil Taşçıoğlu City Hospital (no: 48670771-514.10/423 date: 17.11.2020). All the procedures in the report have adopted the ethical principles of the Institutional Research Committee, the 1964 Helsinki declaration, and subsequent amendments.

## STATISTICAL ANALYSIS

Qualitative variables were reported as numbers (*N*) and percentages. The Chi-square or Fisher's exact tests were adopted for comparison of categorical variables. All statistical analyses were conducted via SPSS version 22 statistical software (IBM Corporation, Somers, New York, USA).

## RESULTS

The survey was undertaken by a total of 133 medical oncologists, and the return rate was 29%. All geographical reasons and all practice settings were presented in the survey, albeit at different weights (Table 1). The center volumes and patient distributions according to age are detailed in (Table 2).

Results revealed that a geriatrician was present in 36.8% of the participants in their center (9/41 centers). When we asked the partakers working in a center with a geriatrician, "Do you refer patients older than 70 years to geriatrician in your daily practice?", 18.3% (n=9) of them answered yes. Among these participants, the clinical scenarios for geriatric consultation preference are outlined in (Table 3).

Seventy-six point seven percent of the study subjects opined that history and physical examination did not suffice the evaluation and treatment decisions of elderly cancer patients. The frailty assessment was

**TABLE 1:** Characteristics of the responders.

|   |                                | n  | %    |
|---|--------------------------------|----|------|
| Gender  | Male                           | 95 | 71.4 |
|   | Female                         | 38 | 28.6 |
| Work experience as medical oncology specialists | 0-5 years                      | 52 | 39.1 |
|   | 5-10 years                     | 35 | 26.3 |
|   | 10-15 years                    | 29 | 21.8 |
|   | 15-20 years                    | 7  | 5.3  |
|   | >20 years                      | 10 | 7.5  |
| Type of hospital                                | General hospital               | 18 | 13.5 |
|   | Teaching and research hospital | 51 | 38.3 |
|   | Private hospital               | 12 | 9.1  |
|   | University hospital            | 52 | 39.1 |

**TABLE 2:** The percentage of patients over 70-year-old visiting the outpatient clinics.

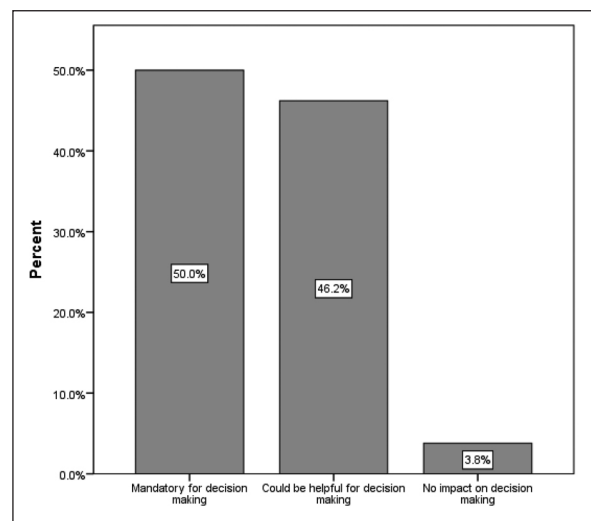
|  |       |    |      |
|--|-------|----|------|
| How many patients do you see in your daily practice? | 10-20 | 11 | 8.3  |
|  | 20-30 | 36 | 27.1 |
|  | 30-40 | 41 | 30.7 |
|  | 40-50 | 17 | 12.8 |
|  | >50   | 28 | 21.1 |
| How many percent of the patients >70 years?          | 10-20 | 33 | 24.8 |
|  | 20-30 | 56 | 42.1 |
|  | 30-40 | 30 | 22.6 |
|  | 40-50 | 12 | 9    |
|  | >50   | 2  | 1.5  |

**TABLE 3:** Questions about geriatric oncology practice and responses of participants.

|  |   |     |      |
|--|---|-----|------|
| Do you have geriatricians in the hospital?   | Yes                                       | 49  | 36.8 |
|  | No  | 84  | 63.2 |
| Do you refer patients >70 years to geriatrician in your daily practice?  | Yes                                       | 9   | 18.3 |
|  | No  | 40  | 81.7 |
| If yes; for whom do you place geriatric consultation?  | Fragil patients                           | 6   | 4.5  |
|  | All patients                              | 1   | 0.8  |
|  | Patients with comorbidities               | 2   | 1.5  |
| Do you believe that physical examination and anamnesis are enough to manage your >70 years patients?   | Yes                                       | 31  | 23.3 |
|  | No  | 102 | 76.7 |
| What do you think about frailty assessment while making treatment decisions in your >70 years patients?                                      | No impact on decision making              | 5   | 3.8  |
|  | Mandatory for decision making             | 66  | 50.0 |
|  | Could be helpful for decision making      | 61  | 45.8 |
| Do you use frailty screening tests while making treatment decisions in your >70 years patients?  | Yes                                       | 24  | 18.2 |
|  | No  | 108 | 81.8 |
| I am experiencing communication problems while managing my >70 years patients. ( please specify how likely you have experience this problem) | Undecided                                 | 12  | 9    |
|  | Agreed                                    | 86  | 64.7 |
|  | Disagreed                                 | 20  | 15   |
|  | Strongly agreed                           | 13  | 9.8  |
|  | Strongly disagreed                        | 2   | 1.5  |
| What is the most common factor that causing communication problem with your >70 years patients?  | Dementia                                  | 21  | 16.5 |
|  | Others                                    | 11  | 8.7  |
|  | Language barrier                          | 9   | 7.1  |
|  | Hearing problem                           | 86  | 67.7 |
| In which group of your >70 years patients you decrease the dose of the systemic treatment?   | Polypharmacy group                        | 3   | 2.3  |
|  | All patients                              | 27  | 20.3 |
|  | Patients with comorbidities               | 7   | 5.3  |
|  | Low performance                           | 96  | 72.2 |
| Do you know about g8 test?   | I know                                    | 68  | 51.1 |
|  | I know it but not using in daily practice | 55  | 41.4 |
|  | I know it and using in daily practice     | 10  | 7.5  |

considered as necessary, helpful, or unnecessary in 50%, 46%, and 3.8% of the participants, respectively, while making a treatment decision for elderly cancer patients (Figure 1).

Participants were enquired about their use of frailty screening tests. While 18.2% of them used frailty screening tests in their daily practice, 81.8% did not. Validated tool usage rates of participants are illustrated in Figure 2. Findings from this survey also demonstrated that the most commonly used tool for evaluating older cancer patients (94%) was the Eastern Cooperative Oncology Group performance status. Regarding the communication problems with the elderly patients in daily practice, 64.7% of the participants agreed, 9.8% strongly agreed, 9% neither

**FIGURE 1:** Relevance of frailty assessment according to medical oncologists.

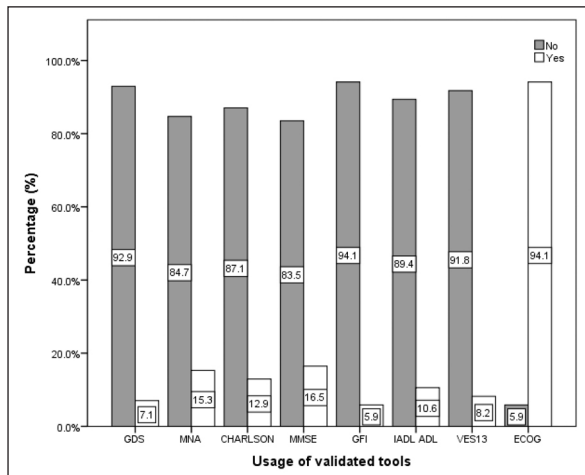


FIGURE 2: Validated tool usage rates of participants.

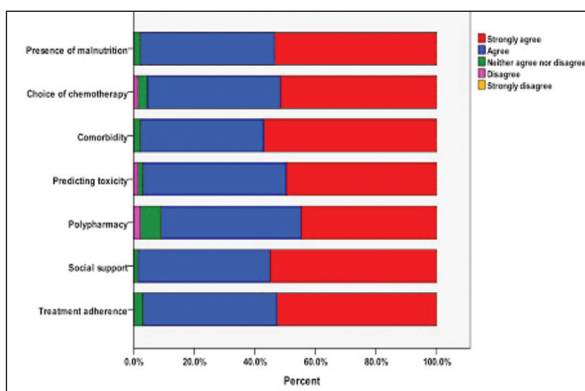


FIGURE 3: Challenging factors associated with treatment decisions in cancer patients aged 70 years and over.

agreed nor disagreed, while 15% disagreed, and 1.5% strongly disagreed with having communication problems. The most prevalent cause of communication problems was hearing problems (67.7%), followed by dementia (16.5%), language and dialect differences (7.1%), other problems (8.7%) (Table 3).

A total of 72.2% of the participants practiced routine dose reductions in geriatric cancer patients with poor performance status, while 5.3% preferred dose reductions in patients affected with comorbidities and 2.3% in patients with polypharmacy. Routine dose reduction was stated by 20.3% of the participants to all older patients.

Challenging factors encountered by the physicians during treatment decisions in patients with cancer aged 70 years and over were, presence of

malnutrition, choice of chemotherapy, comorbidity, predicting toxicity, polypharmacy, social support, treatment adherence. All items in this section of the questionnaire were substantially answered by the participants as “agree and strongly agree” (Figure 3).

The predominant patient factors that influenced treatment decisions included ECOG performance status, tumor type, survival expectancy, patient perspective, and preferences (Figure 4).

## DISCUSSION

Our survey was designed to determine the actual state of awareness and practice patterns for treating older cancer patients in Turkey. The response rate (29%) of our survey was satisfactory. A response rate of 12% was reported by a recent Spanish survey.<sup>8</sup> Though there are several published studies in the international literature on this topic, none addressed data from our country.<sup>6-12</sup> Turkey has witnessed an increasing proportion of geriatric cancer patients in recent years. More than 20% of the patients daily treated by the study participants belonged to the geriatric age group. Nevertheless, most of the study centers did not have a geriatrician in place, indicating a need for improved oncologist education in geriatric oncology to compensate for the unavailability of the geriatrician-oncologist collaboration.

The present study revealed a poor distribution of geriatricians among Turkey medical centers. Interest-

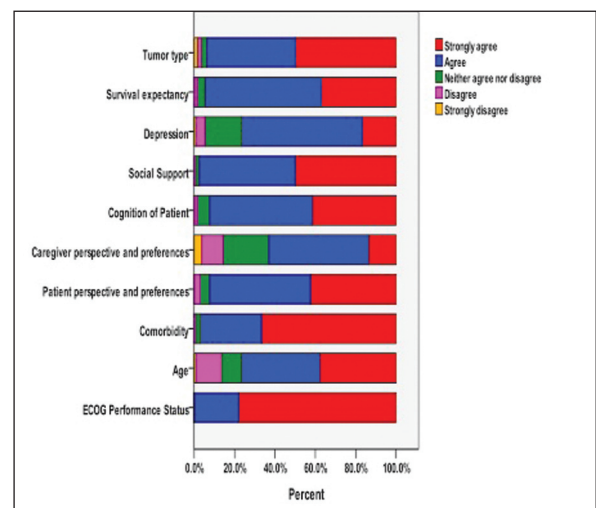


FIGURE 4: Factors considered important while making treatment decisions in patients with cancer aged 70 years and over.

ingly, there was a low rate of referral to geriatrician among the participants who work with a geriatrician. This situation manifested the reluctant attitude of the medical oncologists toward the multidisciplinary evaluation of elderly patients with geriatricians. Further studies exploring the underlying causes of the relative dearth of geriatrician and oncologist collaboration could be valuable.

The majority of the participants opined that assessment of frailty is mandatory or could help make treatment preferences in elderly patients with cancer, but frailty screening tests were conducted by only 18.2% of participants. The G8 is an eight-item screening tool consisting of seven factors adopted from the Mini Nutritional Assessment and the patient's age developed for older cancer patients.<sup>13</sup> G8 was used by 10% of the partakers in our survey in daily practice. We can hypothesize that time restriction or the lack of experience might hinder the use of validated tools or geriatric scales in their daily routine by the physicians; however, we were unable to investigate the reasons for not using the validated GA tools.

The patient factors affecting treatment decisions include ECOG performance status, tumor type, survival expectancy, patient perspective, and preferences. These results were in accordance with a previous Australian study.<sup>14</sup>

## CONCLUSION

In conclusion, this survey established the desire and need to integrate geriatric training into oncology train-

ing and evidence-based Turkish geriatric recommendations. We presume the necessity and benefit of the awareness regarding the frailty screening tests and geriatric scales among the medical oncologists in their daily practice. The present study also highlighted the benefits of involving geriatricians to evaluate elderly cancer patients with a multidisciplinary approach.

### Source of Finance

*During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.*

### Conflict of Interest

*No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.*

### Authorship Contributions

**Idea/Concept:** Baran Akagündüz, Muhammet Özer, Muhammed Mustafa Atcı; **Design:** Deniz Can Güven, Muhammed Mustafa Atcı, Muhammet Özer; **Control/Supervision:** Saadettin Kılıç, Muhammed Mustafa Atcı; **Data Collection and/or Processing:** Deniz Can Güven, Baran Akagündüz; **Analysis and/or Interpretation:** Baran Akagündüz, Muhammed Mustafa Atcı, Cengiz Karaçin; **Literature Review:** Baran Akagündüz, İbrahim Çil; **Writing the Article:** Baran Akagündüz, İbrahim Çil; **Critical Review:** Saadettin Kılıç, Muhammed Mustafa Atcı, Baran Akagündüz; **References and Fundings:** Baran Akagündüz, Saadettin Kılıç; **Materials:** Baran Akagündüz, Muhammed Mustafa Atcı, İbrahim Çil.

## REFERENCES

- Berger NA, Savvides P, Koroukian SM, et al. Cancer in the elderly. *Trans Am Clin Climatol Assoc.* 2006;117:147-155; discussion 155-156. [PubMed] [PMC]
- Noronha V, Talreja V, Joshi A, et al. Survey for geriatric assessment in practicing oncologists in India. *Cancer Res Stat Treat* 2019;2(2):232-236. [Link]
- Extermann M. Studies of comprehensive geriatric assessment in patients with cancer. *Cancer Control.* 2003;10(6):463-468. [Crossref] [PubMed]
- Owusu C, Koroukian SM, Schluchter M, Bakaki P, Berger NA. Screening older cancer patients for a Comprehensive Geriatric Assessment: A comparison of three instruments. *J Geriatr Oncol.* 2011;2(2):121-129. [Crossref] [PubMed] [PMC]
- Extermann M, Aapro M, Bernabei R, et al; Task Force on CGA of the International Society of Geriatric Oncology. Use of comprehensive geriatric assessment in older cancer patients: recommendations from the task force on CGA of the International Society of Geriatric Oncology (SIOG). *Crit Rev Oncol Hematol.* 2005;55(3):241-252. [PubMed]
- Gradishar WJ, Anderson BO, Abraham J, et al. Breast Cancer, Version 3.2020, NCCN Clinical Practice Guidelines in Oncology. *J Natl Compr Canc Netw.* 2020;18(4):452-478. [PubMed]
- Hamaker ME, Wildes TM, Rostoft S. Time to Stop Saying Geriatric Assessment Is Too Time Consuming. *J Clin Oncol.* 2017;35(25):2871-2874. [Crossref] [PubMed]

8. Gironés R, Morilla I, Guillen-Ponce C, et al; Spanish Working Group on Geriatric Oncology of the Spanish Society of Medical Oncology (SEOM). Geriatric oncology in Spain: survey results and analysis of the current situation. *Clin Transl Oncol*. 2018;20(8):1087-1092. [[Crossref](#)] [[PubMed](#)] [[PMC](#)]
9. Kurtz JE, Heitz D, Enderlin P, et al. Geriatric oncology, general practitioners and specialists: current opinions and unmet needs. *Crit Rev Oncol Hematol*. 2010;75(1):47-57. [[Crossref](#)] [[PubMed](#)]
10. Charbonnier C, Marilier S, Dabakuyo S, Cuffe A, Quipourt V, Manckoundia P. Assessment of the interest of the geriatric oncology consultation among French general practitioners. *J Geriatr Oncol*. 2016;7(1):47-52. [[Crossref](#)] [[PubMed](#)]
11. Jonker JM, Smorenburg CH, Schiphorst AH, van Rixtel B, Portielje JE, Hamaker ME. Geriatric oncology in the Netherlands: a survey of medical oncology specialists and oncology nursing specialists. *Eur J Cancer Care (Engl)*. 2014;23(6):803-810. [[Crossref](#)] [[PubMed](#)]
12. Monfardini S, Pasetto L, Jirillo A, Delai N; other participants. Taking care of older cancer patients: results of a survey addressed to the Chiefs of the Medical Oncology Divisions in Italy. *Crit Rev Oncol Hematol*. 2006;58(1):53-59. [[Crossref](#)] [[PubMed](#)]
13. 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(10):e437-e444. [[Crossref](#)]
14. To THM, Soo WK, Lane H, et al. Utilisation of geriatric assessment in oncology - a survey of Australian medical oncologists. *J Geriatr Oncol*. 2019;10(2):216-221. [[Crossref](#)] [[PubMed](#)]