ASSOCIATION OF COMMUNITY
CANCER CENTERS

Practical Application of Geriatric Assessment:

A How-To Guide for the Multidisciplinary Care Team

ACCC
Association of Community Cancer Centers

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Thank you to Pfizer Oncology for their collaboration and support in developing this resource.

INTRODUCTION

Older adults are more likely to be diagnosed with cancer than any other age group. Because the underlying health status of older adults with cancer is generally heterogeneous, comprehensive geriatric assessments (CGAs) are helpful for uncovering age-related vulnerabilities.[1] CGAs are diagnostic tools and batteries that provide multidimensional, multidisciplinary evaluations of multiple health domains, including functional status, cognition, medical comorbidities, medication management, psychological health, and nutritional status. When used to evaluate an older adult with cancer prior to initiating therapy, CGAs can help oncologists differentiate between fit and frail patients and tailor their treatment accordingly.

Healthcare providers use CGAs to inform treatment decision-making,[1] predict morbidity and mortality,[2] guide supportive care interventions,[3] improve patient and caregiver satisfaction,[3] reduce treatment-related toxicity,[4] improve quality of life,[5] and reduce healthcare use.[5] Studies have demonstrated the feasibility of using CGAs both in academic and community oncology practice settings.[6,7] But despite guideline recommendations for routinely using CGAs when caring for older adults, many oncology providers do not use them, citing limits on their practice's time, resources, and knowledge.[8]

Such objections can be easily dismissed, given the versatility of the formats these evaluations can take and how they can be administered. The task of conducting geriatric assessments does not have to fall to one healthcare team member. Rather, it can be a multidisciplinary effort taken on by oncologists, geriatricians, advanced practitioners, nurses, physical therapists, occupational therapists, dieticians, social workers, pharmacists, (neuro)psychologists, and/or patient care technicians.

These tools can also take the form of self-assessments. Patient-reported assessments may be completed prior to clinic visits or in waiting rooms, captured via pencil-and-paper or electronically. Practices may also choose to complete assessments with patients via phone or video prior to an in-person clinic visit, or they can email patients assessments before a visit and ask patients to email it back or present it in person. The tools and batteries used for assessment can be tailored to local resources and administrated during the same visit.

Some practices may choose to complete assessments over time, administering them during several office visits.

In addition, it is understood that not all patients require a comprehensive assessment. Geriatric screening tools (e.g., Geriatric 8, Vulnerable Elders Survey-13) are available to select older adults who would benefit the most from a more comprehensive assessment to ensure provider time and resources are well-spent.[9]

The Association of Community Cancer Centers (ACCC)—in collaboration with The Gerontological Society of America (GSA), the Oncology Nursing Society (ONS), and the International Society of Geriatric Oncology (SIOG)—has developed a series of resources to enhance care for older adults with cancer, available at accc-cancer.org/geriatric:

- **Six-part webinar series:** Watch expert presentations on topics relevant to caring for older adults with cancer, including "What Every Team Member Needs to Know About Geriatric Assessment."
- **Effective practices publication:** Read the comprehensive, "Multidisciplinary Approaches to Caring for Older Adults with Cancer" for a convenient summary of how to ensure quality geriatric oncology care is implemented in a thoughtful, proactive, cost-effective way.
- **Gap assessment:** Assess your cancer program's alignment with the key attributes and guidelines of a successful geriatric-focused healthcare program. Receive a score along with recommendations to enhance care delivery for older adults in your own institution.
- **Resource library:** Select from more than 100 tools and resources specific to older adults with cancer for use in your program.

This guide offers practical solutions to implementing a comprehensive approach to geriatric screening and assessment without having to invest in significant resources. **The key to successful implementation of CGAs is to start with something simple and feasible, then expand from there.**

1 SCREENING

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RELEVANCE

Most oncologists rely on Karnofsky or ECOG Performance Status tools for assessing their older patients' fitness for therapy. Using a validated screening geriatric assessment tool can help identify vulnerable patients who may benefit from a more comprehensive assessment with a CGA, or from a referral to a geriatrician for further evaluation. Using these screening tools can start appropriate discussions regarding a patient's fitness for treatment and can improve communication among patients, caregivers, and medical care team members. The screening tools below are comprised of short questionnaires that can be completed by patients in a few minutes, and they have been validated specifically for older adults in the oncology setting.

FEATURED TOOL/STRATEGY

Geriatric 8 or "G-8"

The Geriatric 8 or "G-8" is an easy-to-use tool (see Figure 1) that can quickly assess whether a patient should be referred for a full geriatric assessment.[10,11] Validated in adults with cancer age 70 and older, the G-8 is a series of eight questions that patients can answer in less than five minutes. Both clinical and non-clinical staff can be trained to administer the G-8, or patients may take a self-administered version.[12] The screening questions on the G-8 determine a patient's food intake, mobility status, presence of dementia or depression (if not previously documented), and the patient's view of their own health status relative to others in the same age group. Items such as weight loss, medications, BMI, and age can be obtained from the medical record, or patients can report this data themselves. This tool should be performed at baseline and then periodically throughout the course of patient management to determine potential changes in status.

FIGURE 1 DOWNLOAD

Geriatric Assessment: G–8

Patient Name: _____ **Date:** _____

Patient ID: _____

Scoring for the G-8 ranges from 0 (poor health status) to 17 (good health status).
Experts suggest that patients with a score of 14 or lower undergo further evaluation.

Total score (0-17)
Interpretation
0-14 = presence of a geriatric risk profile
>14 = absence of a geriatric risk profile

ITEM	POSSIBLE ANSWERS	SCORE
1. Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing, or swallowing difficulties?	0 = severe reduction in food intake 1 = moderate reduction in food intake 2 = normal food intake	
2. Weight loss during the last 3 months?	0 = weight loss >3kg 1 = does not know 2 = weight loss between 1 and 3 kg 3 = no weight loss	
3. Mobility	0 = bed or chair bound 1 = able to get out of bed/chair but does not go out 2 = goes out	
4. Neuropsychological Problems	0 = severe dementia or depression 1 = mild dementia or depression 2 = no psychological problems	
5. Body Mass Index (weight in kg/height in m)²	0 = BMI <19 1 = 19 ≤BMI < 21 2 = 21 ≤BMI < 23 3 = BMI > 23	
6. Takes more than 3 medications per day	0 = yes 1 = no	
7. In comparison with other people of the same age, how does the patient consider his/her health status?	0 = not as good 0.5 = does not know 1.0 = as good 2.0 = better	
8. Age	0 = >85 1 = 80-85 2 = <80	

There are online versions of the G-8 in which you can enter patient data and receive a score and interpretation of your results. Scoring for the G-8 ranges from 0 (poor health status) to 17 (good health status). Experts suggest that patients with a score of 14 or lower undergo further evaluation.

ADDITIONAL/ALTERNATIVE TOOLS

Shortened G-8

The shortened G-8 is a modified version of the full G-8 that contains six items: weight loss in the past six months, neuropsychological problems, drug use, patient health status, performance status, and history of heart failure or coronary artery disease.[13]

Vulnerable Elders Survey-13 (VES-13)

The VES-13 (see Figure 2) is a patient self-reported survey comprised of 13 questions that evaluate self-rated health and ability to perform everyday tasks. The VES-13 identifies older adults at higher risk for functional decline and death,[14] and it predicts poor survival, low quality of life, and increased healthcare utilization in older adults with cancer.[15] Scores range from zero (least vulnerable) to 10 (most vulnerable), with scores >3 indicative of a positive screen.

The G-8 and the VES-13 are the most widely studied tools for identifying frailty in older patients with cancer or detecting the need for a referral to a specialized team for comprehensive geriatric assessment. However, alternative tools are also available:

Korean Cancer Study Group Geriatric Score (KG-7)

The KG-7 is a validated seven-item tool that is particularly suitable for high-burden clinics in which there are limited resources.[16] With a cut-off of five points or less, the tool is highly sensitive. In a study of the tool's effectiveness, for patients with advanced cancer in whom first-line palliative chemotherapy was planned, performance on the KG-7 was comparable to performance on the G-8. Higher KG-7 scores also predict longer survival. Additional validation of this tool in patients at other stages in treatment are needed before it can be widely accepted.

FIGURE 2 DOWNLOAD

Vulnerable Elders Survey-13 (VES–13)

Patient Name: _____ **Date:** _____

Patient ID: _____

In general, compared to other people your age, would you say that your health is:

- ☐ Poor
- ☐ Fair
- ☐ Good
- ☐ Very Good
- ☐ Excellent

How much difficult, on average, do you have with the following physical activities?	**NO DIFFICULTY**	**A LITTLE DIFFICULTY**	**SOME DIFFICULTY**	**A LOT OF DIFFICULTY**	**UNABLE TO DO**
1. Stooping, crouching or kneeling?	☐	☐	☐	☐	☐
2. Lifting or carrying objects as heavy as 10 pounds?	☐	☐	☐	☐	☐
3. Reaching or extending arms above shoulder level?	☐	☐	☐	☐	☐
4. Writing or handling and grasping small objects?	☐	☐	☐	☐	☐
5. Walking a quarter of a mile?	☐	☐	☐	☐	☐
6. Heavy household such as scrubbing floors or washing windows?	☐	☐	☐	☐	☐

Because of your health or physical condition, do you have any difficulty:	**YES**	**NO**	**DON'T DO**
7. Shopping for personal items?	☐	☐	☐
8. Managing money (like keeping track of expenses or paying bills)?	☐	☐	☐
9. Walking across the room? USE OF CANE OR WALKER IS OKAY?	☐	☐	☐
10. Do you get help with walking?	☐	☐	
11. Doing light housework (like washing dishes, straightening up, or light cleaning?	☐	☐	☐
12. Bathing or showering?	☐	☐	☐
13. Is your health the reason for not bathing or showering?	☐	☐	

Groningen Frailty Indicator (GFI)

This is a 15-item questionnaire that screens for loss of function in activities of daily living (ADLs) and instrumental activities of daily living (IADLs). It is unique because it includes psychosocial components.[17] Scores range from zero (not frail) to 15 (very frail). In a study comparing the GFI to the G-8, a score of 3 or more is generally recommended as the cut-off to indicate referral for a CGA.[18] The GFI has been used in older patients with cancer,[19-21] but additional validation is needed in this population.

Gait Speed (GS)

In clinics in which an objective measure is feasible and preferred over a questionnaire, gait speed (GS) can be an appropriate tool. In one trial of older cancer patients, there was high sensitivity/specificity for detecting an impairment on at least one of the six domains of a CGA.[22] In breast cancer patients, GS and VES-13 identification of frailty are similar.[23] Gait speed has also been proven to identify frailty and predict outcomes in patients with blood cancers.[24]

Senior Adult Oncology Program Questionnaires (SAOP, SAOP2, and SAOP3)

These one-page, self-administered questionnaires incorporate a nurse-administered memory assessment[25] developed specifically for use in an oncology population. SAOP questionnaires are composed of items that sample several geriatric domains or syndromes, including social support, depression, ADL, IADL, falls, nutrition, polypharmacy, and memory. The main difference among the three generations of the SAOP screening tool is the extent of memory assessment. While the SAOP3 includes the Mini-Cog©, the SAOP and SAOP2 use the Mini Mental Status items.[25,26]

In addition to indicating the need for a CGA, the SAOP screening tool can also indicate a need for specific services, such as social work, psychological support, and physical therapy.[9] The SAOP2 or SAOP3 are easy to administer, requiring little additional nursing time to do the brief memory assessment. It has been incorporated into busy oncology clinics, including community clinics in underserved populations.[27] For oncology practices with limited resources and a lack of nearby geriatric specialists, the SAOP method of identifying needed services may be preferable.

TAKING ACTION

The above screening tools can easily be incorporated into a busy oncology practice. When patient vulnerabilities are uncovered in a screening, cancer programs should be able to either offer or refer patients to appropriate interventions. The results of screening assessments can have direct bearing on a patient's treatment options.

Consider the following when reviewing the results of screening assessments:

- Patients who are found to have abnormal scores indicating vulnerability should be further assessed with a CGA or referred to a geriatrician for full evaluation. A CGA can be completed by medical personnel who are not geriatricians to identify domains that require further attention and warrant referral to various services (e.g., social workers, physical therapy, nutrition, etc.).
- The results of screening assessments should be considered when determining a patient's treatment approach, as vulnerable patients are more likely to experience poor treatment tolerance.
- Abnormal scores in screening assessments may indicate the presence of other co-morbidities that can directly affect life expectancy, which should be weighed carefully when determining treatment approach.
- Consider using chemotherapy toxicity prediction tools (e.g., CRASH and CARG) in vulnerable patients to understand the risk of chemotherapy-related toxicity when formulating a patient's treatment approach (See Figure 3).

FIGURE 3

ACCESS ONLINE

Cancer and Aging Research Group Chemo-Toxicity Calculator

Access this interactive tool online to calculate your patient's risk score.

ITEM	SELECT		
Gender	☐ Male	☐ Female	
Patient's Age	_____		
Patient's Height	_____		
Patient's Weight	_____		
Cancer Type	☐ Gastrointestinal	☐ Genitourinary	☐ Other
Dosage	☐ Standard Dose	☐ Dose Reduced	
Number of Chemotherapy Agents	☐ Poly-Chemo Therapy	☐ Mono-Chemo Therapy	
Hemoglobin	_____		
How is your hearing (with a hearing aid, if needed)?	☐ Excellent ☐ Poor	☐ Good ☐ Totally Deaf	☐ Fair
Number of falls in the past 6 months	☐ One or more	☐ None	
Can you take your own medicines?	☐ Without help (in the right doses at the right time) ☐ With some help (able to take medicine if someone prepares it for you and/or reminds you to take it) ☐ Completely unable to take your medicine		
Does your health limit you in walking one block?	☐ Limited a lot	☐ Limited a little	☐ Not limited at all
During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?	☐ All of the time ☐ A little of the time	☐ Most of the time ☐ None of the time	☐ Some of the time
Serum Creatinine	_____		

SAMPLE RESULTS

Patient Total Risk Score: 16 • Patient Toxicity Risk: 94%

Using the predictive model for treatment-related toxicity in older adults, this patient has a 94% risk of grade 3-5 toxicity.

The following resources provide additional information on screening tools, guidelines for conducting a full comprehensive geriatric assessment, and recommended interventions for any detected abnormality:

1. NCCN Guidelines® for Older Adult Oncology[28]
2. American Society of Clinical Oncology Guideline for Geriatric Oncology[25]
3. SIOG Clinical Practice Guidelines[29]
4. The Chemotherapy Risk Assessment Scale for High-Age Patients (CRASH) score[30]
5. Cancer and Aging Research Group (CARG) Geriatric Assessment Tool[31]

REFERENCES

References for this section can be found on pages 32 and 33.

2 FUNCTIONAL STATUS

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RELEVANCE

Older adults are at high risk for experiencing a decline in functional status, and the risk is higher if they have an impairment prior to starting treatment. Therefore, monitoring functional status during cancer treatment is crucial to assess toxicity and facilitate ongoing discussion regarding the benefits vs. risks of cancer treatment. Dependency in performing the activities of daily living (ADLs) and the instrumental activities of daily living (IADLs) and a lack of independent mobility are all associated with treatment-related toxicity,[3] functional decline,[32] catastrophic disability,[33] and even death in patients with cancer.

Patient functional status is most often assessed by patient-reported answers to questions any member of the clinical care team (medical assistant, advanced practice provider, nursing staff, or physician) can ask. Answers can be easily captured prior to a visit by having patients complete a questionnaire either on paper, with an electronic device, or when the patient is in the waiting room. Monitoring should be performed regularly during clinic visits, especially when there is a change in clinical status or plan of care. Multiple members of the healthcare team—including the oncologist, advanced practitioner, nurse, medical assistant, geriatrician, palliative care physician, therapist, or primary care provider—can monitor for functional status.

FEATURED TOOLS/STRATEGIES

The tools and strategies described here can evaluate a patient's functional status with self-reported measures as well as objective physical performance measures. Both are critical to patient evaluation and care.

Activities of Daily Living (ADL)

The ADL is a short tool (see Figure 4) that was developed for older patients in long-term care in 1970.[34] Today, the tool is used in all types of healthcare settings and can be either self-administered or part of patient interviews with nurses, nurse practitioners, or physicians. If a person is found to be dependent in one or more of the evaluated areas, providers should discuss the identified limitation further and suggest potential interventions (e.g., home health, caregiver support, physical therapy). A strength of the ADL is its brevity and ability to stimulate important conversations among providers, patients, and caregivers about the patient's ability to perform self-care tasks. The ADL can be administered every six months or annually for patients who are trending toward dependency; it may be useful to re-administer it more frequently for some patients.

Instrumental Activities of Daily Living (IADL)

The IADL (see Figure 5), which assesses the tasks necessary for living independently in the community, was developed for hospitalized patients and published in 1969.[35] This short tool takes only minutes to complete, and it can be self-administered or incorporated into patient interviews in all types of healthcare settings except long-term care. Its strengths include its brevity and that it can be administered by any member of the healthcare team.

Some limitations of the IADL are that its scoring reflects traditional gender roles in terms of food preparation, housekeeping, and laundry (e.g., a male patient may select "dependent on" or "requires assistance" with housekeeping even if he is able to do so if required).[36] It can also be technologically outdated. The item assessing the ability to "use the telephone" reflects technology that had required remembering phone numbers. The IADL can be administered at multiple intervals over time, with the frequency depending on the clinical scenario, and what internal resources allow. Often, if a patient is receiving active cancer treatment, the recommendation is to administer this tool at each treatment visit or monthly, as abilities can change quickly depending on side effects, financial toxicity, and the availability of caregiver support.

FIGURE 4

DOWNLOAD

Katz Index of Independence in Activities of Daily Living

Patient Name: _____ **Date:** _____

Patient ID: _____

Activities Points (1 or 0)	**Independence**: (1 Point) **NO** supervision, direction or personal assistance.	**Dependence**: (0 Points) **WITH** supervision, direction, personal assistance or total care.
BATHING Points: _____	**(1 POINT)** Bathes self completely or needs help in bathing only a single part of the body such as the back, genital area or disabled extremity.	**(0 POINTS)** Needs help with bathing more than one part of the body, getting in or out of the tub or shower. Requires total bathing.
DRESSING Points: _____	**(1 POINT)** Get clothes from closets and drawers and puts on clothes and outer garments complete with fasteners. May have help tying shoes.	**(0 POINTS)** Needs help with dressing self or needs to be completely dressed.
TOILETING Points: _____	**(1 POINT)** Goes to toilet, gets on and off, arranges clothes, cleans genital area without help.	**(0 POINTS)** Needs help transferring to the toilet, cleaning self or uses bedpan or commode.
TRANSFERRING Points: _____	**(1 POINT)** Moves in and out of bed or chair unassisted. Mechanical transfer aids are acceptable.	**(0 POINTS)** Needs help in moving from bed to chair or requires a complete transfer.
CONTINENCE Points: _____	**(1 POINT)** Exercises complete self control over urination and defecation.	**(0 POINTS)** Is partially or totally incontinent of bowel or bladder.
FEEDING Points: _____	**(1 POINT)** Gets food from plate into mouth without help. Preparation of food may be done by another person.	**(0 POINTS)** Needs partial or total help with feeding or requires parenteral feeding.

TOTAL
Points: _____

SCORING: 6 = High *(patient independents)*
0 = Low *(patient very dependent)*

Source: *try this:* Best Practices in Nursing Care to Older Adults, The Hartford Institute for Geriatric Nursing, New York University, College of Nursing, www.hartfordign.org.

FIGURE 5

DOWNLOAD

Lawton - Brody Instrumental Activities of Daily Living Scale (IADL)

Patient Name: _____ **Date:** _____

Patient ID: _____

Scoring: *For each category, circle the item description that most closely resembles the client's highest functional level (either 0 or 1).*

A. Ability to Use Telephone
1. Operates telephone on own initiative–looks up and dials numbers, etc. **1**
2. Dials a few well-known numbers **1**
3. Answers telephone but does not dial **1**
4. Does not use telephone at all **0**

B. Shopping
1. Takes care of all shopping needs independently **1**
2. Shops independently for small purchases **0**
3. Needs to be accompanied on any shopping trips **0**
4. Completely unable to shop **0**

C. Food Preparation
1. Plans, prepares and serves adequate meals independently **1**
2. Prepares adequate meals if supplied with ingredients **0**
3. Heats, serves and prepares meals, or prepares meals, or prepares meals but does not maintain adequate diet **0**
4. Needs to have meals prepared and served **0**

D. Housekeeping
1. Maintains house alone or with occasional assistance (e.g. heavy work domestic help) **1**
2. Performs light daily tasks such as dish washing, bed making **1**
3. Performs light daily tasks but cannot maintain acceptable level of cleanliness **1**
4. Needs help with all home maintenance tasks **1**
5. Does not participate in any housekeeping tasks **0**

E. Laundry
1. Does personal laundry completely **1**
2. Launders small items–rinses stockings, etc. **1**
3. All laundry must be done by others **0**

F. Mode of Transportation
1. Travels independently on public transportation or drives own car **1**
2. Arranges own travel via taxi, but does not otherwise use public transportation **1**
3. Travels on public transportation when accompanied by another **1**
4. Travel limited to taxi or automobile with assistance or another **0**
5. Does not travel at all **0**

G. Responsibility for Own Medication
1. Is responsible for taking medication in correct dosages at correct time **1**
2. Takes responsibility if medication is prepared in advance in separate dosage **0**
3. Is not capable of dispensing own medication **0**

H. Ability to Handle Finances
1. Manages financial matters independently (budgets, writes checks, pays rent, bills, goes to bank), collects and keeps track of income **1**
2. Manages day-to-day purchases, but needs help with banking, major purchases, etc. **1**
3. Incapable of handling money **0**

TOTAL
Points: _____

SCORING: A summary score ranges from 0 *(low function, dependent)* to 8 *(high function, independent)* for women and 0 through 5 for men to avoid potential gender bias.

Source: *try this:* Best Practices in Nursing Care to Older Adults, The Hartford Institute for Geriatric Nursing, New York University, College of Nursing, www.hartfordign.org.

Assessing for Falls

Several mobility activities that can indicate a fall risk include asking patients about their ability to walk a quarter mile, climb a flight of stairs, and lift/carry 10 lbs. Difficulty in any of these activities may indicate pending or worsening disability. Patients should be assessed for falls at each visit. Providers can assess the occurrence of prior falls by asking patients whether a fall has occurred within the past six months and past year. Providers should also document the severity and context of any falls, i.e., if an emergency department trip occurred, or if the patient fell during a rock climbing trip. When patients have a history of falls or are at risk for falls, providers may focus on safety at home and in the community. Patients who are found to be at risk for falls should undergo additional screening with the Timed Up and Go test (TUG).[37]

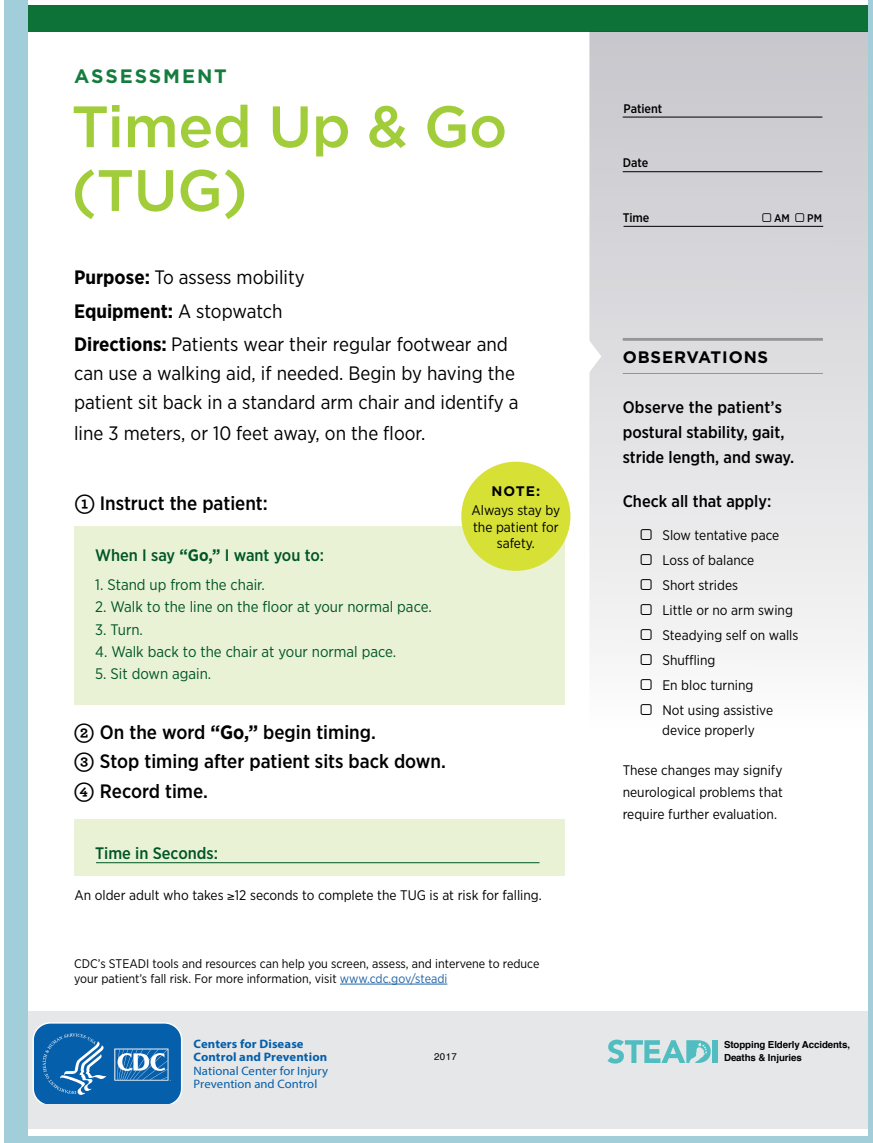
Objective Functional Status: Timed Up and Go (TUG)

Proven to correlate with the occurrence of falls, TUG (see Figure 6) gives clinicians the opportunity to observe a patient's postural stability, gait, stride length, and sway.[38] This objective measure can avoid the potential inaccuracies that may result when patients estimate their own physical abilities in interviews. One strength of this test is that it is easy to administer and any member of the care team can do so. One limitation is that TUG is only an objective measurement, and narrative surrounding a patient's physical ability is not recorded.

The TUG test requires a patient to rise from a chair, walk ten feet forward, and return to the chair. It is used to screen for risk of falls and lower extremity weakness. The time taken to complete the task is measured in seconds, and the time to completion can be compared at each visit. If a patient takes more than 12 seconds to walk ten feet and back, the risk of a fall is higher, and the patient should be referred to physical therapy or other interventional strategies.

ADL, IADL, and TUG are quick tools that can provide information above and beyond the Eastern Cooperative Oncology Group Performance Status (ECOG PS). An objective measurement of strength and balance with either TUG or the Short

FIGURE 6 DOWNLOAD



ASSESSMENT

Timed Up & Go (TUG)

Patient _____

Date _____

Time _____ ☐ AM ☐ PM

Purpose: To assess mobility

Equipment: A stopwatch

Directions: Patients wear their regular footwear and can use a walking aid, if needed. Begin by having the patient sit back in a standard arm chair and identify a line 3 meters, or 10 feet away, on the floor.

NOTE: Always stay by the patient for safety.

① Instruct the patient:

When I say "Go," I want you to:

1. Stand up from the chair.
2. Walk to the line on the floor at your normal pace.
3. Turn.
4. Walk back to the chair at your normal pace.
5. Sit down again.

② On the word "Go," begin timing.
③ Stop timing after patient sits back down.
④ Record time.

Time in Seconds: _____

An older adult who takes ≥12 seconds to complete the TUG is at risk for falling.

CDC's STEADI tools and resources can help you screen, assess, and intervene to reduce your patient's fall risk. For more information, visit www.cdc.gov/steadi

OBSERVATIONS

Observe the patient's postural stability, gait, stride length, and sway.

Check all that apply:

- ☐ Slow tentative pace
- ☐ Loss of balance
- ☐ Short strides
- ☐ Little or no arm swing
- ☐ Steadying self on walls
- ☐ Shuffling
- ☐ En bloc turning
- ☐ Not using assistive device properly

These changes may signify neurological problems that require further evaluation.

CDC Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

2017

STEADI Stopping Elderly Accidents, Deaths & Injuries

Physical Performance Battery (see below) requires staff training, but these measurements are easily implemented in busy oncology practices. These tools can be used to screen all patients over age 65 or when a fall has been detected in a patient's history.

Functional Assessment Survey

This functional assessment survey (see Figure 7) encompasses a combination of 12 ADL, IADL, and mobility activities. Responses are tabulated, and a higher score reflects a higher disability.

ADDITIONAL/ALTERNATIVE TOOLS

Several additional tools are available to assess the functional status of older adults with cancer if the above strategies do not work for you.

Handgrip Strength

This is an alternative measure of global function that requires the use of a dynamometer.[39] Grip strength may be indicative of pain or other conditions that can affect hand function. The diagnostic application of grip strength requires consideration of the patient's overall clinical status as well as the cost associated with the purchase of a dynamometer.

Short Physical Performance Battery (SPPB)

SPPB assesses lower extremity function using measures of balance (ability to stand with feet in different positions), mobility (gait speed), and strength (chair stand). Clinically, the results of SPPB predict impairments in activities of daily living, falls, and mobility.[40,41]

Karnofsky Performance Status (100-point scale)[42] and Eastern Cooperative Oncology Group (ECOG) Performance Status (6-point scale)[43]

Both are widely used in varied oncology care settings. These tools are inexpensive and easily implemented, although they can be limited by subjective interpretation and poor reliability and validity.[44]

FIGURE 7 DOWNLOAD

Functional Activities – Functional Status

Patient Name: _____ **Date:** _____

Patient ID: _____

I am now going to ask you about several activities that people do from day to day.
For each question, please respond with one of the following three choices: No help, With help, Unable to do.

At the present time, do you need help from another person:

	NO HELP	WITH HELP	UNABLE TO DO
1. To bathe (wash and dry your whole body)?	☐	☐	☐
2. To walk around your home or apartment?	☐	☐	☐
3. To dress (like putting on a shirt or shoes, buttoning and zipping)?	☐	☐	☐
4. To get in and out of a chair?	☐	☐	☐
5. To walk a quarter of a mile (about 2 or 3 blocks)?	☐	☐	☐
6. To walk up a flight of stairs	☐	☐	☐
7. To lift or carry something as heavy as 10 pounds, for examples a heavy bag of groceries or a sack of potatoes?	☐	☐	☐
8. To shop (go to the store)?	☐	☐	☐
9. To do housework, such as washing the dishes, taking out the trash, or washing/cleaning the floor?	☐	☐	☐
10. To prepare a meal?	☐	☐	☐
11. To take your medications?	☐	☐	☐
12. To manage your finances, such as paying the bills?	☐	☐	☐
13. To eat (like holding a fork, cutting food, or drinking from a glass)?	☐	☐	☐

Medical Outcomes Study (MOS) Physical Functioning Scale (PF-10)

The MOS is a 10-item scale used to assess the relationship between health and physical activities, such as self-care, walking, climbing hills and stairs, bending, lifting, and performing other moderate and vigorous activities.[45] The MOS Physical Functioning Scale is advantageous, given its low administration burden on staff and patients.

TAKING ACTION

When providers uncover impairments in a patient's functional status, they may perform further evaluations—including history, physical examination, laboratory tests, and imaging—to detect underlying causes. Keep in mind that impairment is often multifactorial and may not be easily reversible. Providers should therefore focus on improving, maintaining, and preventing further decline in a patient's functional status. Subsequent actions depend largely on local resources, available expertise, and clinical context. For example, if a patient has a short life expectancy, it is important to consider patient and caregiver burden when providing recommendations.

In high-resource settings, providers may be able to give referrals to occupational, physical, and/or recreational therapists, who may be able to perform a more comprehensive assessment of functional status. Occupational therapists focus on evaluating how one performs activities and how to adapt to the environment. They can also recommend and provide orientation to assistive devices to maintain independence.

Physical therapists focus on body function and structure with the goal of improving mobility. Recreational therapists use recreation and activity-based interventions to meet the needs of patients. If a therapist uncovers falls and gait abnormalities, they may refer patients to a gait and balance clinic to evaluate any underlying impairments. The clinic may also provide additional guidance and referrals to the appropriate services.

In settings in which these resources are unavailable, the healthcare team may employ several other strategies. These may include: in-visit exercise counselling by the clinician or other team members, depending on their expertise; educational materials on physical activity and exercise; and referrals to local services (e.g., senior fitness and exercise programs).

Regardless of setting, monitoring a patient's functional status over time can give providers valuable information that can guide next steps in patient management. Given that most assessments can be administered by any healthcare member, implementing them should not be overly burdensome in any practice.

REFERENCES

References for this section can be found on page 33.

3 COGNITION

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RELEVANCE

Mild cognitive impairment (MCI) increases with age, affecting up to 25 percent of adults age 80 and older.[46] The prevalence of dementia in adults age 71 and older is nearly 14 percent.[47] Up to 30 percent of patients have been found to have cognitive impairment prior to cancer treatment, and 35 percent continue to have cognitive issues post-treatment.[48] Most alarmingly, up to 70 percent of patients with cancer have been found to have measurable cognitive impairment during treatment.[49]

Importantly, declines in cognition often lead to a loss of independent function that can affect a patient's ability to provide self-care during and after cancer treatment. Screening for MCI and dementia in the oncology setting can help proactively identify patients in need of additional support. NCCN guidelines recommend evaluating patient cognition if impaired cognition would affect treatment, if there is concern about a patient's decision-making ability, or if the provider or caregivers have concerns about a patient's cognition.[28]

It's important to recognize that patients with cognitive deficits may still be fully capable of making their own treatment decisions. The presence of mild dementia does not exclude patients from being able to decide among treatment options. Medical decision-making ability is present if a patient is able to understand what their current situation is, what treatment is being proposed, can use reason to make a choice among care options, and can communicate their choice consistently.[28,50,51] Providers should perform an assessment of cognitive function for patients at baseline and periodically throughout treatment to monitor for changes over time.

FEATURED TOOL/STRATEGY

Mini-Cog©

The Mini-Cog© is a brief screening tool (see Figure 8) used to detect MCI or dementia in patients. It consists of a three-item recall and a clock drawing. The Mini-Cog© typically takes approximately three minutes to administer.[52,53]

The Mini-Cog© should be administered at the initial visit, at routine visits, and when the patient or caregiver suspects cognitive impairment. An alternative set of three words can be used for the Three-Item Recall and are recommended for repeated administration of the tool.[52]

All patients age 65 and older should be evaluated with this tool at the initial visit and subsequent routine visits. The administration of the Mini-Cog© is not limited to doctors and nurses; it can be administered by any member of the healthcare team who has been trained to do so and can administer and score both components of the tool. This tool is helpful for screening for clinically important cognitive impairment.[53] It is NOT a diagnostic test. It requires only a brief administration time (<3 minutes), and it is available in multiple languages. One limitation is that the clock drawing may be a challenge for those with less exposure to analog clocks, with less experience drawing or writing, or with a low education level.

ADDITIONAL/ALTERNATIVE TOOLS

While the Mini-Cog© tool may adequately meet your needs in this area, there are alternative tools available that can also effectively evaluate patient cognitive function.

Mini-Mental State Examination (MMSE)

The MMSE is a widely used screening test that can detect cognitive impairment in adults. It takes a trained clinician approximately 5-10 minutes to administer. The MMSE assesses orientation, short-term memory (retention and recall), attention, and language. It is commonly used to screen for Alzheimer's disease and is available in multiple languages. The test is available for a fee, which limits its widespread use.

FIGURE 8

DOWNLOAD

Mini-Cog©

Instructions for Administration & Scoring

ID: _____ Date: _____

Step 1: Three Word Registration

Look directly at person and say, "Please listen carefully. I am going to say three words that I want you to repeat back to me now and try to remember. The words are [select a list of words from the versions below]. Please say them for me now." If the person is unable to repeat the words after three attempts, move on to Step 2 (clock drawing).

The following and other word lists have been used in one or more clinical studies.[1-3] For repeated administrations, use of an alternative word list is recommended.

Version 1	Version 2	Version 3	Version 4	Version 5	Version 6
Banana	Leader	Village	River	Captain	Daughter
Sunrise	Season	Kitchen	Nation	Garden	Heaven
Chair	Table	Baby	Finger	Picture	Mountain

Step 2: Clock Drawing

Say: "Next, I want you to draw a clock for me. First, put in all of the numbers where they go." When that is completed, say: "Now, set the hands to 10 past 11."

Use preprinted circle (see next page) for this exercise. Repeat instructions as needed as this is not a memory test. Move to Step 3 if the clock is not complete within three minutes.

Step 3: Three Word Recall

Ask the person to recall the three words you stated in Step 1. Say: "What were the three words I asked you to remember?" Record the word list version number and the person's answers below.

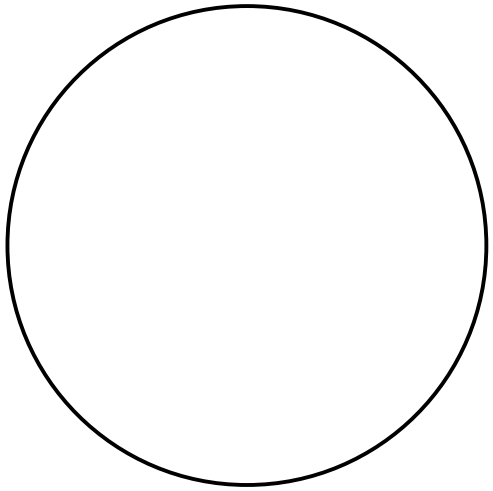
Word List Version: _____ Person's Answers: _____ _____ _____

Scoring

Word Recall: _____ (0-3 points)	1 point for each word spontaneously recalled without cueing.
Clock Draw: _____ (0 or 2 points)	Normal clock = 2 points. A normal clock has all numbers placed in the correct sequence and approximately correct position (e.g., 12, 3, 6 and 9 are in anchor positions) with no missing or duplicate numbers. Hands are pointing to the 11 and 2 (11:10). Hand length is not scored. Inability or refusal to draw a clock (abnormal) = 0 points.
Total Score: _____ (0-5 points)	Total score = Word Recall score + Clock Draw score. A cut point of <3 on the Mini-Cog™ has been validated for dementia screening, but many individuals with clinically meaningful cognitive impairment will score higher. When greater sensitivity is desired, a cut point of <4 is recommended as it may indicate a need for further evaluation of cognitive status.

Clock Drawing

ID:_____ Date:_____



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Blessed Orientation Memory Concentration (BOMC)

The BOMC is a short cognitive screening tool for patients age 55 and older, although it can also be used in younger patients. Family members, caregivers, and healthcare professionals can all use this tool to screen for dementia or cognitive disability. The BOMC is available in multiple languages, is validated for oncology patients, and can be completed in less than five minutes.[54]

Montreal Cognitive Assessment (MoCA)

The MoCA is a brief screening test that assesses for dementia. It includes 30 questions, is available in multiple languages, and takes approximately 10-15 minutes to complete. The MoCA assesses several different types of cognitive abilities, including orientation, short-term memory, executive function, language, abstraction, attending, and animal naming. It also includes a clock-drawing test.

Clock Drawing Test

The clock-drawing test is a simple screening tool used to identify signs of cognitive impairment. It is often combined with other screening tests, such as the Mini-Cog©, but it is useful even by itself. The test involves providing patients with a blank piece of paper and asking them to draw a clock that represents 10 minutes after 11 o'clock. The benefits of this test are its simplicity and ease of use in a clinical setting.

TAKING ACTION

The Mini-Cog© is a screening tool and cannot be used to diagnose dementia or any other cause of cognitive impairment. A normal score of 3-5 indicates a lower likelihood of dementia, but it does not rule out some degree of cognitive impairment. Results from the assessment should be coupled with the clinician's overall suspicion of the presence of cognitive impairment based on a thorough history, physical exam, and input from relevant caregivers.

If cognitive impairment is suspected, healthcare workers should undertake a more formal stepwise assessment to exclude possible underlying causes of cognitive impairment—such as delirium or depression—and thus further distinguish the cause of the impairment. A comprehensive investigation for potential underlying reversible causes of cognitive deficit should be completed.

Testing should include—but not be limited to—a serum B12 level, B1, Folate level, complete Thyroid Function Tests, Rapid Plasma Regain (RPR), consideration of head imaging, and a complete medication review. Additional testing may include a more in-depth tool such as the MoCA or MMSE, psychosocial evaluation, and consideration for formal neuropsychiatric testing. Patients may be referred to a geriatrician, neurologist, or licensed clinical social worker.

Providers should consider the following actions if a cognitive deficit is confirmed:

- Treat for underlying, reversible causes of impairment
- Perform a comprehensive de-prescribing program for all nonessential medications
- Conduct a home safety evaluation
- Provide caregiver education
- Discuss dementia medications
- Check for overall medication adherence
- Have frequent advance care planning discussions

Clinicians should be aware of the limitations of screening tests for cognitive deficit and the availability of additional testing and resources that may be necessary if cognitive impairment is suspected.

REFERENCES

References for this section can be found on pages 33 and 34.

4 COMORBIDITIES

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RELEVANCE

In addition to being associated with an increased risk of cancer, advanced age is often accompanied by certain age-related health problems and chronic illnesses that can have adverse effects on independent living, rates of disability, and quality of life.[55] Previous research in community cancer centers has shown a significant prevalence of comorbid conditions among older patients with cancer, with 69 percent to 92 percent of patients reporting at least one comorbid condition.[56] Other studies have found that the most prevalent comorbid conditions (distinct from geriatric syndromes and disability) include hypertension, cardiovascular disease, diabetes, and arthritis.[57]

Comorbidities have been shown to be an important prognostic factor for patients with cancer, and they can pose a major clinical challenge to the care of older adults with cancer.[58] In the context of oncology, comorbidities have been found to increase the risk of adverse outcomes, including death, institutionalization, healthcare utilization, decreased health-related quality of life, and higher rates of adverse events from treatments and interventions (e.g., surgical complications or chemotherapy toxicities).[59]

The National Comprehensive Cancer Network (NCCN) guidelines for Older Adult Oncology suggest that comorbidities may affect treatment decisions in several ways.[28] For one, cancer treatment may interact with comorbid conditions to impact functional status or worsen the comorbidity, which, given frequent concurrent polypharmacy, includes possible drug-drug interactions. Furthermore, comorbidities may increase the risks posed by several conditions and disease processes due to the cancer treatment itself. These conditions may include anemia, cognitive impairment, and chronic conditions such as diabetes.

Comorbidities also have the potential to affect life expectancy independent of a patient's cancer, which ultimately can influence the potential benefit (or lack thereof) of cancer treatments and patient preferences for treatment. Several methods of assessing comorbidities suggested by the NCCN guidelines are detailed below.

FEATURED TOOL/STRATEGY

Review of Systems

In the clinical setting, conducting a routine history and physical while generating a "problem list" and current treatment list is frequently the only method used to assess comorbidities. Distinct from a routine history/physical, the Review of Systems (ROS) is an inventory of body systems gathered through a series of questions to identify signs or symptoms of a comorbidity that a patient may be experiencing or has experienced. Both routine histories/physicals and ROS can be used to identify comorbidities and uncover the impact of comorbid conditions on the present health status of a patient, and they are both a part of routine clinical care. With adequate training, staff other than physicians and nurses can complete ROS evaluations.

Although the history/physical and ROS are routine evaluations well-grounded in clinical practice, their thoroughness varies by provider. These strategies lack a systematic approach to specifically assessing comorbid conditions and their severity, making it difficult to compare them in available literature on the comorbidities discovered.

FIGURE 9

DOWNLOAD

Older Americans Resource & Services

Patient Name: _____ **Date:** _____

Patient ID: _____

Your Health

Instructions: *We would like to ask you a few questions about any health problems you might have. Do you have any of the following illnesses at the present time? Please fill in the appropriate box (yes or no). If you fill in 'yes,' please tell us how much the illness interferes with your activities: Not at All, Somewhat, or A Great Deal. Fill in the appropriate box.*

			If you have the illness, how much does it interfere with your activities?		
	NO	YES	NOT AT ALL	SOMEWHAT	A GREAT DEAL
1. Other cancers or leukemia	☐	☐ ▸	☐	☐	☐
2. Arthritis or rheumatism	☐	☐ ▸	☐	☐	☐
3. Glaucoma	☐	☐ ▸	☐	☐	☐
4. Emphysema or chronic bronchitis	☐	☐ ▸	☐	☐	☐
5. High blood pressure	☐	☐ ▸	☐	☐	☐
6. Heart disease	☐	☐ ▸	☐	☐	☐
7. Circulation trouble in arms or legs	☐	☐ ▸	☐	☐	☐
8. Diabetes	☐	☐ ▸	☐	☐	☐
9. Stomach or intestinal disorder	☐	☐ ▸	☐	☐	☐
10. Osteoporosis	☐	☐ ▸	☐	☐	☐
11. Chronic liver or kidney disease	☐	☐ ▸	☐	☐	☐
12. Stroke	☐	☐ ▸	☐	☐	☐
13. Depression	☐	☐ ▸	☐	☐	☐

14. How is your eyesight *(with glasses or contacts)?*

☐ Excellent ☐ Good ☐ Fair ☐ Poor ☐ Totally blind

If Fair, Poor or Totally blind, how much does it interfere with your activities?

NOT AT ALL **SOMEWHAT** **A GREAT DEAL**

☐ ☐ ☐

15. How is your hearing *(with a hearing aid, if needed)?*

☐ Excellent ☐ Good ☐ Fair ☐ Poor ☐ Totally deaf

If Fair, Poor or Totally deaf, how much does it interfere with your activities?

NOT AT ALL **SOMEWHAT** **A GREAT DEAL**

☐ ☐ ☐

Older Americans Resource and Services (OARS) Physical Health Section

Older Americans Resources and Services (OARS)

The Older Americans Resources and Services (OARS) subscale (see Figure 9) is a patient self-reported measure that assesses the presence of 15 specific conditions and the degree to which each condition interferes with a patient's activities.[60] OARS is commonly used in comprehensive geriatric assessments of older patients with cancer, and its findings of higher comorbidities have been found to correlate with reduced overall survival.[61]

Healthcare professionals who are planning to use OARS' multidimensional functional assessment technology should first view a training tape and read a user manual to ensure consistent and reliable data collection. The strength of OARS is that it is designed to be completed by the patient, thus reducing potential burden on administration staff. OARS is straightforward and takes on average only two minutes for patients to complete. However, it is not as comprehensive as other tools, in that it assesses for only 15 specific conditions and does not explicitly measure the severity of each condition other than its impact on function.[62]

ADDITIONAL/ALTERNATIVE TOOLS

There is no single best way to gauge the presence of comorbid conditions. While comorbidity scales are frequently used in research settings, their use is far more limited in routine oncology practice. Yet these validated tools provide a more systematic description of the severity of a comorbidity than what is typically included in a routine history and physical.

For higher-resourced programs or in clinical situations in which there are specific concerns regarding comorbid conditions, providers should perform the Cumulative Illness Rating Scale – Geriatric (CIRS-G) in addition to other assessments.

Cumulative Illness Rating Scale - Geriatric (CIRS-G)

A comprehensive approach to recording all comorbidities, the CIRS-G (See Figure 10) categorizes comorbidities according to the organ system affected and rates the severity of each comorbidity on a scale of 0 to 4.[63] The score calculator used by the CIRS-G typically includes 13-14 organ system subdivisions. Results can be summarized as a total score, mean score, number of involved categories, or number of severe categories. Studies of older adults with cancer have shown the CIRS-G comorbidity assessment to be an independent predictor of mortality and progression-free survival.[64] Interactive, online tools and apps can enhance the ease of use of the CIRS-G, shortening the time required to conduct the test and automatically calculating scores to aid in real-time interpretation.

The strengths of the CIRS-G are that it provides a comprehensive assessment of all potential comorbid conditions, and it has been shown to indicate in a wider range of variability in older adults with cancer. Limitations include the potential capture of comorbid diseases that may be less relevant to a treatment decision, the need to teach care team members how to administer the tool, the necessity of being familiar with the scoring manual to accurately assess the severity of comorbid conditions, and the additional provider time (1-10 minutes) necessary to complete the comprehensive scale.

Charlson Comorbidity Index (CCI)

The CCI is one of the first systematic measures of comorbidity developed, and it remains one of the most common approaches to comorbidity assessment in research.[64] The CCI was created based on a study of hospitalized patients. Depending on the conditions the patients had and their mortality rates, different conditions were given specific weights. The CCI assesses 19 conditions weighted from 1 to 6 in severity. Although the CCI was originally developed to be used retrospectively, it serves as the basis of a patient self-reported form that can be completed online. Because it assesses a limited number of comorbid conditions, is based on a study of patients without cancer, and is used primarily for research purposes rather than in standard clinical encounters, the CCI has multiple limitations.

FIGURE 10

ACCESS ONLINE

Cumulative Illness Rating Scale – Geriatric (CIRS-G)

Scoring: *This example is based on Miller et al. Cumulative Illness Rating Scale-Geriatric: Miller et al., Psychiatry Res, 41,237-48, 1992.*

ORGAN SYSTEM	SCORING
Heart	**Level 0:** No problem affecting that system.
➤ Vascular	**Level 1:** Current mild problem or past significant problem.
Hematopoietic	**Level 2:** Moderate disability or morbidity and/or requires first-line therapy.
Respiratory	**Level 3:** Severe problem and/or constant and significant disability and/or hard-to-control chronic problems.
Eyes, Ears, Nose, Throat & Larynx	**Level 4:** Extremely severe problem and/or immediate treatment required and/or organ failure and/or severe functional impairment.
Upper GI	
Lower GI	
Liver	
Renal	
Genitourinary	
Musculoskeletal/Integument	
Neurological	
Endocrine/Metabolic & Breast	
Psychiatric	
Rating Malignancies	
Unlisted Diseases	

Access this interactive tool online to see scoring for each organ system.

VASCULAR SCORE EXAMPLE

Level 0: No problem.

Level 1: Hypertension compensated with salt restriction and weight loss/serum cholesterol > 200 mg/dl. Serum cholesterol above normal*.

Level 2: Daily anti-hypertensive med/one symptom of aterscleroticdisease (angina, claudication, bruit, amaurosis fugax, absent pedal pulses) / aortic aneurysm < 4 cm.

Level 3: Two or more symptoms of atherosclerosis.

Level 4: Previous surgery for vascular problem/aortic aneurysm > 4 cm.

ADDITIONAL CONSIDERATIONS

Hypertension: Defined as a persistently elevated diastolic pressure > 90 mmHg. When managed drug free – '1,' requiring single daily anti-hypertensive – '2,' requiring two or more drugs for control or with evidence of left ventricular hypertrophy – '3.'

Peripheral Atherosclerotic Disease: Evidence of at least one physical symptom or imaging evidence (e.g., angiogram) merits a '2,' two or more symptoms a '3' and if bypass graft surgery was required or is currently indicated a '4' is merited.

Intercranial vascular event: For consistency, CNS vascular events are listed under neurology.

Hyperlipidemia: In the original CIRS-G, cholesterol > 200 mg was rated '1.' Given recent literature, we changed to above normal. We suggest a similar rating for triglycerides.

Hematopoietic Cell Transplantation Comorbidity Index (HCT-CI)

The HCT-CI is a cancer-specific comorbidity index of 17 conditions based on 2-year non-relapse mortality.[65] The HCT-CI provides information with regard to overall patient mortality as well as the non-relapse mortality risk a patient is likely to experience after hematopoietic cell transplantation. The HCT-CI together with the degree of severity of a patient's blood cancer could be used to stratify outcomes of patients age 60 years or older who were treated with a minimally toxic nonmyeloablative conditioning regimen and allogeneic HCT.[66] Recently, a combined HCT-CI/age index was designed and validated that takes into account the burden of comorbidities as well as increasing age in risk assessment.[67]

TAKING ACTION

Providers should perform an initial assessment of a patient's comorbidities at the first visit. The assessment should include a history/physical, ROS, and OARS for all older adults with cancer. In high-resource settings, or when there are specific concerns regarding comorbid conditions, the assessment should also incorporate the CIRS-G.

Although the history/physical and ROS should be completed for all clinical care, providers evaluating older patients with cancer should also take specific note of any comorbid conditions and their related medication lists. The self-reported OARS measure should ideally be completed prior to an office visit. It can be either mailed to the patient in advance or handed to the patient and/or caregiver in the waiting room, after which it can be reviewed by the clinical team during the appointment. Patients with three or more comorbid conditions or with any comorbidity that interferes with everyday activities are at increased risk of mortality.[61] CIRS-G results should be reviewed for any severe or life-threatening comorbid conditions and as a total score.

Histories/physicals and ROS should be repeated at each patient visit, with attention paid to specific comorbid conditions as appropriate (e.g., worsening of pre-existing diabetes as a result of treatment). The OARS and/or CIRS-G should only be repeated if there is a suspected new comorbidity, or at certain decision points in clinical care.

Experts in geriatric oncology have proposed that oncology providers adapt established guidelines from the American Geriatric Society (AGS) when framing their approach to treating older patients with comorbidities/multimorbidities.[68] The AGS guidelines are summarized below.

Assess Patient Preferences

- What outcomes are the most important to the patient: Freedom from symptoms? Maintaining independence? Longevity? Does any single outcome take priority?
- Which cancer treatment (if any) best aligns with patient goals? What intensity of treatment best aligns with those goals?

Interpret and Apply the Available Evidence

- Were multi-morbid patients included in the study population for the proposed cancer therapy?
- Is the benefit/harm ratio of a proposed intervention likely to be less favorable for multi-morbid patients? Is it known how the intervention will affect the patient's other chronic conditions?
- Is the reported outcome of the intervention consistent with the patient's goals?

Estimate Prognosis

- In older adults, prognosis goes beyond estimating overall life expectancy to considering outcomes and important personal milestones in a patient's life.[69] There are several methods for estimating prognosis, including clinician judgement, age-based life expectancy, published studies, and prognostic indices. Prognostic indices are validated tools that use select characteristics (such as functional status and comorbidities) from a particular population to calculate a prognostic estimate. As endorsed by the NCCN guidelines, ePrognosis is a useful collection of tools to estimate the general mortality risk in older adults.

  The University of California San Francisco developed the ePrognosis tool to give clinicians access to published geriatric prognostic indices they can use to obtain evidence-based information on a patient's prognosis.[70] Intended to serve as a rough guide to inform clinicians of possible mortality outcomes, ePrognosis makes available clinical calculators that clinicians can use to determine a patient's anticipated life expectancy (independent of cancer). The ePrognosis calculators require clinical providers to enter various relevant information, including patient age, sex, and ability to perform independent activities of daily living. This can help providers better gauge how multi-morbidity may impact the overall survival of a specific patient.

Consider Treatment Feasibility

- Will the cancer treatment contribute to polypharmacy or limit treatment adherence?
- Will the cancer treatment lead to interactions with treatments for other conditions?

Optimize Therapies and Care Plans

- Would the patient benefit from a comprehensive geriatric assessment or care coordination?
- How can interprofessional team members or caregivers help optimize the treatment plan?

REFERENCES

References for this section can be found on page 34.

5 PHARMACY AND MEDICATION MANAGEMENT

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RELEVANCE

"Polypharmacy" is a phenomenon common in older adults with cancer, and it can be defined several ways. The most common and basic definition of polypharmacy is the use of five or more medications by one patient, including prescription medications, over-the-counter medications, vitamins, and supplemental agents. Although it is easy to screen for polypharmacy by using this simple definition, doing so outside of the context of patient and medication histories may not yield meaningful information about the risk or appropriateness of each medication being taken.

Additional indications of polypharmacy include taking a drug with no indication or efficacy, taking drugs that are duplicated therapeutically, or taking a medication inappropriate for a patient's needs. Using these definitions to screen for polypharmacy is much more difficult in clinical practice but can be more meaningful, as they necessitate a clinical review of all of the patient's medications.

Polypharmacy can have serious consequences, including increased risk of adverse drug reactions, drug-drug interactions, functional decline, nonadherence, increased risk of geriatric syndromes (e.g., falls, frailty, delirium, cognitive impairment), and increased risk of healthcare utilization, including hospitalizations and emergency room visits.[71,72]

FEATURED TOOL/STRATEGY

Medication Review

While a comprehensive medication review may take some time during a clinical encounter, pharmacists, physicians, or advanced care practitioners should conduct one for each patient whenever possible to ensure the completion of a critical analysis of all medications.

Taking a medication history and reviewing and reconciling the list of a patient's current medications is the first step toward comprehensive medication management. If possible, ask patients to bring all of their medication bottles to their office appointments in a bag. This allows providers to conduct the most comprehensive review. If a patient is unable to bring in their medications, ask them to furnish a current medication list.

Once providers have obtained a comprehensive list of a patient's medications, they should collect the following information for each prescribed drug, over-the-counter medicine, vitamin, and supplemental agent furnished by the patient and/or their caregivers:

- Drug name
- Drug indication
- Drug dose/strength
- Route of administration (oral, intravenous, topical, subcutaneous injection, rectal, vaginal, aural, or ophthalmologic)
- Frequency (e.g., once daily or once every 28 days)
- Duration (e.g., X10 days) This is often important for antibiotic treatments.
- Adverse events the patient attributes to the medication
- Adherence (i.e., how often a dose is missed and why the patient is unable to adhere to the treatment plan)
- Allergies to medications and the reactions that occurred
- When last/most recent dose was taken/administered

The National Comprehensive Cancer Network (NCCN) Older Adult Oncology Guidelines[28] recommend that providers review and reconcile all a patient's prescription drugs, over-the-counter drugs, vitamins, and supplemental agents at each office visit. At a minimum, medication reconciliations should be performed at a patient's initial visit and when a patient is prescribed a high-risk medication (e.g., medications on the Beers Criteria® list, chemotherapy agents).

Providers should also assess patient adherence to recommended drug regimens at the initiation of a treatment, when there is a change in oncologic therapy, when there is a transition of care, or when there is any change in comorbid disease state management or clinical condition.[28] Comprehensive medication reviews should include ensuring that all medications have an indication and are dosed according to the patient's age as well as their renal and hepatic function. Providers should consider de-prescribing any medication that they determine to be nonessential or that poses a risk that exceeds a potential benefit.

De-prescribing is the planned process of reducing a dose or discontinuing a medication. Since some medications are associated with adverse drug withdrawal events if stopped abruptly, providers should consult with a pharmacist or de-prescribing guidelines to determine whether a medication needs to be tapered or can be abruptly discontinued.

ADDITIONAL/ALTERNATIVE TOOLS

The American Geriatrics Society (AGS) Beers Criteria®, the Medication Appropriateness Index, the Screening Tool for Older People's Prescriptions (STOPP), and the Screening tool to Alert Doctors to the Right Treatment (START) are alternative methods of assessing the appropriateness of medication use in older adults.[73]

AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults

These criteria are used to identify potentially inappropriate medication use. They consist of a compendium of medications to potentially avoid or consider with caution because they often present an unfavorable balance of benefits and harms for older people. AGS Beers Criteria® can be downloaded as a PDF or are available through an online tool that contains a search feature that providers can use to easily look for specific medications. Beers Criteria® are also available as a mobile app.

Ideally, this tool should be a part of each medication reconciliation process and be administered by a pharmacist, physician, or advanced practice provider.

Though not an exhaustive catalogue of inappropriate treatments, the five lists included in the AGS Beers Criteria® describe specific medications with evidence suggesting they should be:

- Avoided by most older people (outside of hospice and palliative care settings)
- Avoided by older people with specific health conditions
- Avoided in combination with other treatments because of the risk for harmful drug-drug interactions
- Used with caution because of the potential for harmful side effects
- Dosed differently or avoided among people with reduced kidney function, which impacts how the body processes medicine[73]

Beers Criteria® are updated approximately every three years, so always ensure you are using the most recent version. The strength of the recommendations made by this tool and the quality of supporting evidence for those recommendations are ranked as high, moderate, or low to support clinical judgements, as many do not have randomized clinical trial data to support a recommendation. Beers Criteria® do not account for each person's complex medical situation, so be careful not to interpret these findings as requiring strict enforcement. The AGS Beers Criteria® are meant to be used as a resource for healthcare providers, not as a replacement for their experience and knowledge.

The Medication Appropriateness Index

This index is an implicit tool that determines medication appropriateness by asking 10 questions about each medication.[74]

1. Is there an indication for the medication?
2. Is the medication effective for the condition?
3. Is the dosage correct?
4. Are the directions correct?
5. Are the directions practical?
6. Are there clinically significant drug-drug interactions?
7. Are there clinically significant drug-disease interactions?
8. Is there unnecessary duplication with other medications?
9. Is the duration of therapy acceptable?
10. Is this medication the least expensive alternative compared with others of equal utility?

The Screening Tool for Older People's Prescriptions (STOPP) and the Screening Tool to Alert Doctors to the Right Treatment (START)

STOPP/START criteria are validated for patients older than age 65, and they enable providers to identify potential inappropriate medication use in which the risks posed by the therapy outweigh the benefits.[75] The STOPP criteria are arranged according to physiological system and are accompanied by an explanation of why the prescription is potentially inappropriate (overprescribing). The START criteria include medications arranged according to physiological system that should be considered for people with certain conditions to address under-prescribing. This tool is similar to the Beers Criteria®, but it is not updated as frequently, and is based on medications used in the UK. Ideally, it should be used as part of each medication reconciliation process. As with the Beers Criteria®, since each person's situation is unique, the STOPP/START criteria should not be the final word in determining a medication's appropriateness for an individual.

Strategies to Guide Dosing Recommendations in Organ Dysfunction

Age-related changes happen to all organ systems over time and this impacts drug dosing. Given that renal function declines with age, it is important that such a decline be taken into account when determining appropriate dosage for cancer drugs in older adults.

Renal function declines approximately 1 mL/year past 40 years of age, and that decline can be exacerbated by comorbidities (e.g., hypertension, diabetes, vascular disease, etc.). Clinicians should make dose adjustments based on renal function for drugs that have a significant component of renal excretion or their active metabolites.

Renal Function

- Renal function can be calculated by many formulae, but the most commonly used is the Cockcroft-Gault (CG) equation (which is incorporated into many EHRs), as most drug dosing is based on the CG equation. Estimated glomerular filtration rates (eGFR) may also be provided within the EHR, and some medications may be dosed based on this equation. The eGFR may be similar to the CG estimate of renal function, but it has also been known to overestimate renal function. Dose modifications for renal dysfunction are included in drug package inserts and guidelines, but it is important to note which formula for renal equations is used for a dosing recommendation.[76,77]

Hepatic Function

- Although there is no specific formula for dose adjustment in the case of hepatic dysfunction, it can also be a factor when determining drug dosing.[77] For drugs with hepatic metabolism, dose adjustments should be made with any elevation of bilirubin. There are drugs that cause hepatic toxicity. If this occurs, stopping the medication should be considered. The potential for adverse drug events and interactions increase when the drug metabolism involves the P450 system. A medication review looking for potential drug interactions should be performed before starting any cancer therapy.

Cardiac Function

- When prescribing cardiotoxic medications, there are some strategies you can take to minimize risk.[77] Ejection fraction (EF) as a marker of current cardiac contractility is commonly used to determine the safety of cardiotoxic medications. Typically, patients must have an EF of 45% to 50% or higher by echocardiography or multi-gated acquisition scan. The ability of a specific EF to predict anticancer agent cardiotoxicity tolerability is unclear, and criteria percentages have largely been based on historical precedent. ECG eligibility criteria focus on QTc interval, frequently with a baseline interval of 450 milliseconds.

TAKING ACTION

Ideally, medication reconciliation should be conducted by a pharmacist, physician, or advanced practice provider who can conduct a clinical evaluation of indication, dose, efficacy, therapeutic duplication, drug-condition interactions, drug-drug interactions, prescribing cascades (i.e., when a medication is prescribed to treat the side effects of a previously prescribed medication), adverse reactions, and adherence. The skills of pharmacists are very valuable here, as they are trained to take detailed medication histories, are experts in medication therapy management, and can give drug information to providers. If a pharmacist is unavailable to perform a medication reconciliation, a medical assistant or nurse should review the patient's medications with them. Providers should document the findings of medication reconciliations in the electronic health record or patient chart and make the patient's prescribing provider aware of those findings.

That provider should then:

- Ensure all medications have a documented indication (e.g., the patient has a diagnosis of GERD for a PPI), are dosed according to renal or hepatic function, provide efficacy for the condition prescribed for, and do not cause any adverse events or exacerbate other co-morbid conditions.
- Attempt to avoid prescribing high-risk medications or any medications that could interact with other medications or disease states.
- Attempt to reduce polypharmacy and inappropriate medication use by de-prescribing medications when possible.
- Address any deficiencies or omissions in prescribing.
- Simplify the medication regimen, if possible.
- Ensure the patient can afford all recommended medications (prescribed and over the counter).

Providers should encourage their patients to communicate to them any change in their medication regimen, no matter how small. Medication regimens should be simplified whenever possible to optimize safety and encourage patient adherence. If providers detect nonadherence, giving patients medication calendars or pillboxes may be helpful.

REFERENCES

References for this section can be found on pages 34 – 35.

6 PSYCHOLOGICAL HEALTH

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RELEVANCE

Older adults with cancer are at high risk for developing psychological challenges, including depression (30%), anxiety (17%),[78] and psychological distress (41%)[79] at any time throughout the cancer care continuum. The psychological challenges posed by living with cancer can impact treatment delivery and adherence,[80] quality of life,[81] and even survival.[80,82] Factors such as social isolation, pre-existing psychiatric disorders, and substance use may also impact a patient's psychological health.

To better understand the subgroups of adults with cancer most likely to experience psychological challenges, providers should conduct a social history of each patient at each clinic visit. This history should highlight potential concerns related to substance use; social support; neglect; emotional, physical, and sexual[83-85] and other factors known to influence the psychological health of older adults.[86,87]

Several tools are available to assess a full spectrum of psychosocial issues, most of which are self-reported by patients. Patient-reported tools have several advantages, including low administration burden on both staff and patients. These tools encourage patient participation and allow providers and their patients to co-create a plan to manage concerns at the same visit at which patients are given the evaluation.[88] Objective and lengthier psychological screening instruments are also available for assessing patients at higher risk. Which screening tool you routinely incorporate into your clinical practice should be guided by provider comfort with the tool and available resources.

FEATURED TOOL/STRATEGY

The following methods will ensure capture of the key areas of assessment related to older adults within the psychological health domain (depression, anxiety, and abuse). The Patient Health Questionnaire-9 (PHQ-9) and the Generalized Anxiety Disorder-7 (GAD-7) are two widely used tools for gauging psychological health and have been validated for use in older patients with cancer.

Patient Health Questionnaire (PHQ-9)

The PHQ-9 is a 9-item self-report (see Figure 11) that is a reliable and valid measure of depression among older adults.[89] The questionnaire's 4-point response set goes from 0 (not at all) to 3 (nearly every day). The nine items progress from indicating "little interest or pleasure in doing things" to "feeling bad about yourself or that you are a failure," to having "thoughts that you would be better off dead." A tenth question asks, "If you checked off any problem, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?" The response options for this last question range from "not at all difficult" to "extremely difficult."[90] Patients who score an eight or higher on the PHQ-9 are likely to be experiencing depression.

Generalized Anxiety Disorder-7 (GAD-7)

The GAD-7 is a 7-item self-report (see Figure 12) that is a reliable and valid measure of anxiety among older adults. The response set for the GAD-7 ranges from 0 (not at all) to 3 (nearly every day). As with the PHQ-9, there is one additional question that asks patients, "If you checked off any problem, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?" Answer options to this question range from "not at all difficult" to "extremely difficult."[91] When patients score a five or higher, they are likely to be experiencing anxiety.[92]

FIGURE 11

DOWNLOAD

PHQ-9 – Psychological Health Questionnaire

Patient Name: _____ **Date:** _____

Over the last 2 weeks, how often have you been bothered by the following problems?

	NOT AT ALL	SEVERAL DAYS	MORE THAN HALF THE DAYS	NEARLY EVERY DAY
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed or hopeless	0	1	2	3
3. Trouble falling or staying asleep or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

TOTAL
Points: _____

SCORING: Add columns and total the numbers.
Read page 2 for proposed treatment action.

If you check off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

☐ **Not difficult at all** ☐ **Somewhat difficult** ☐ **Very difficult** ☐ **Extremely difficult**

PHQ-9 SCORE	SEVERITY	PROPOSED TREATMENT ACTION
0 – 5	None	None
6 – 10	Mild	Watchful waiting, repeating at follow-up
11 – 15	Moderate	Consider CBT and pharmacotherapy
	Moderately Severe	Immediate initiation of pharmacotherapy and CBT
16 – 21	Severe	Initiation of pharmacotherapy and CBT. Consider specialist referral to psychiatrist

FIGURE 12

DOWNLOAD

GAD-7 – Psychological Health Questionnaire

Patient Name: _____ **Date:** _____

Over the last 2 weeks, how often have you been bothered by the following problems?

	NOT AT ALL	SEVERAL DAYS	MORE THAN HALF THE DAYS	NEARLY EVERY DAY
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worry	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

TOTAL
Points: _____

SCORING: Add columns and total the numbers.
Read below for proposed treatment action.

If you check off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

☐ **Not difficult at all** ☐ **Somewhat difficult** ☐ **Very difficult** ☐ **Extremely difficult**

GAD-7 SCORE	SEVERITY	PROPOSED TREATMENT ACTION
0 – 5	None	None
6 – 10	Mild	Watchful waiting, repeating at follow-up
11 – 15	Moderate	Consider CBT and pharmacotherapy
	Moderately Severe	Immediate initiation of pharmacotherapy and CBT
16 – 21	Severe	Initiation of pharmacotherapy and CBT. Consider specialist referral to psychiatrist

Screening for Elder Abuse

Elder abuse is defined by the National Center on Elder Abuse as, "intentional or neglectful acts by a caregiver or 'trusted' individual that leads to, or may lead to, harm of a vulnerable elder."[93] Including screening questions for elder abuse in patient interviews is highly recommended, and CMS requires providers to ask such questions at least once a year of each patient age 65 and older.[94] Currently, there is no gold standard tool for screening for elder abuse, although you may obtain a subjective measurement by incorporating specific questions into patient interviews. These questions should address physical abuse, emotional or psychological abuse, neglect (active or passive), sexual abuse, abandonment, financial or material exploitation, and unwarranted domination. Some potential questions to ask during this screening are listed below. Patients should be asked these questions alone (i.e., without their caregivers present) during the patient interview. Physicians can designate any member of the cancer care team to administer this interview. The questions asked may include:

- Do you feel safe at home/where you live? (Ask this question at a minimum.)
- Who prepares your food? Does someone help you take your medications?
- Does anyone at home hurt you? Do they scold or threaten you?
- Does anyone touch you without your consent? Do they make you do things you don't want to do?
- Does anyone take anything that is yours without asking?
- Has anyone had you sign documents that you did not understand? Who takes care of your finances?
- Are you afraid of anyone at home?
- Are you alone a lot? Has anyone ever failed to help you take care of yourself when you needed help?[85]

Physical exams[95] may reveal objective evidence of physical abuse. This may include bruising (more than usual, both new and old bruises), burns in unusual locations or larger than 5 cm., dehydration and fecal impaction, intraoral soft tissue injuries, subconjunctival or vitreous ophthalmic hemorrhage, and unexplained fractures.

ADDITIONAL/ALTERNATIVE TOOLS

If the above tools are not practical for your purposes, several alternative tools are described below. Ideally, providers should select one tool from each category to implement in their practice.

Depression and Suicide Screening Tools

- **PHQ-2, 4:** These 2- or 4-item self-reports are reliable and valid measures for screening for depression in older adults. The 4-question screen includes suicidal ideation.[94]

- **Geriatric Depression Scale –15, –30:** These 15- or 30-item self-reports—specifically developed for older adults—are reliable and valid measures. They each require yes/no responses, and their cut-off scores are 5 and 10, respectively.[96,97]

- **Patient Interview:** Rather than a tool, the patient interview is an informal, effective strategy for assessing for depression, depending on the level of training of the professional conducting the interview.

- **Suicide Risk Screener (The p4):** This tool consists of four questions to screen for potential risk of suicide.

- **NCCN Distress Thermometer and Problem Checklist:** The Distress Thermometer (DT) is a one-item reliable and valid screener for distress that uses an 11-point Likert scale (0 = no distress, 10 = extreme distress) based on a diagram of a thermometer. The Problem Checklist is a list of potential problems that people with cancer often experience. The recommended cut-off score for the DT varies based on staff resources, often leading to referral to social work, chaplaincy, or nutrition, to name a few.

Anxiety Screening Tools

- **Generalized Anxiety Disorder-2 (GAD-2):** A shorter version of the GAD-7, this two-item self-report is also a reliable and valid measure for screening for anxiety among older adults, though the simplification may reduce the chance of a positive screen. A patient who scores a 2 or higher should be referred for further assessment.[92]

- **Brief Symptom Inventory-18 (BSI® 18):** A shortened form of the longer BSI® instrument, this tool gathers patient-reported data to measure overall psychological distress, depression, anxiety, and somatization. The BSI® 18 is reliable and valid among adults across the life span and in people with cancer. One limitation is the cost of the screen, which is approximately $1.50 per use.

Substance Use/Abuse Screening Tools

These tools are used to determine the dangerous use of alcohol, illicit drugs, and prescription medications. The National Institute on Drug Abuse reports that 65% of people age 65 and older say they engage in high-risk drinking, defined as exceeding daily guidelines at least weekly in the past year. An increase in illicit drug use has accompanied the aging of the baby-boomers.[98] Substance abuse can take the form of older adults taking medications inappropriately due to forgetfulness or cognitive decline. The following tests can be useful for screening for substance abuse.

- **Alcohol Use Disorder Test (AUDIT):** This ten-item self-report is a reliable and valid measure for assessing risky and harmful alcohol use. Patients who score 8 to 15 are drinking at a risky or hazardous level; patients who score 16 to 19 are drinking at a high-risk or harmful level; and patients who score 20 or more are engaging in high-risk activity that will cause definite harm.[99]

- **Alcohol Use Disorder Test - C (AUDIT-C):** This three-item self-report is composed of the first three questions in the full AUDIT. If older adults score 3 or higher, they should complete the entire AUDIT.[99]

- **Drug Abuse Screening Test (DAST):** This ten-item self-report is a reliable and valid measure for identifying illicit drug use and misuse of prescription medications. As any illicit drug use is problematic, a score of 1 or higher requires further attention.[100]

- **National Institute of Drug Abuse (NIDA):** This short screening question (How many times in the past year have you used illicit drugs or used a prescription medication for nonmedical reasons [i.e., because of the feeling it caused or experience you had?]) can be asked of patients in the patient interview to assess illicit drug use or misuse of prescribed medication. A response of yes is scored as 1. Any score 1 or higher should refer the patient to a full screen with the DAST.[101]

TAKING ACTION

Once the relevant patient information has been collected and action is deemed warranted, multidisciplinary care teams should decide on the next course of action, taking care to maximize available resources to best meet the needs of the patient. This process begins with the care team, or a point person, discussing the information uncovered about the patient with the patient and any caregivers. It is imperative that the patient is at the center of any discussion and proposed actions to address identified issues.

It is essential that care team members treat patients with substance abuse, depression, and other psychological health issues with respect, objectivity, and empathy. By using a strengths/asset approach (i.e., being aware that patients possess strengths and assets that can be incorporated into an action plan), team members can best determine if patients already possess the resources and support that can help them with possible depression or substance abuse issues. Enhancing patient independence by ensuring they are involved in their care is key. This requires giving patients the tools they need to help themselves, which makes it vital for the care team to be able to access information about the resources that can help patients address their challenges.

Identify a few members of the multidisciplinary cancer care team who should be familiar with an array of in-house and local community resources in reference to depression, substance abuse, elder abuse, and other issues, and be able to provide patients appropriate information and referrals. For findings of abuse and neglect, referrals to the local state or county agency that handles elder abuse and neglect is required by law. To determine which resources are available in your area, go to **ncea.acl.gov/Resources/State.aspx** and select your state.

State-specific Area Agencies on Aging (AAA) provide tools and services to older adults that your team should be aware of. AAAs are funded by the state to meet the needs and concerns of all older adults, regardless of any diagnosis. Services include providing help to keep an older adult at home, providing Meals-on-Wheels, and furnishing homemaker assistance. AAAs are also connected to other agencies, including Adult Protective Services.

If you have information that makes you believe a patient is a risk to themselves or others, particularly in relation to substance use, suicidal ideation, anxiety, or depression, closely monitor that patient. Identify in-house expertise, community resources, and appropriate referrals to professionals who specialize in anxiety, depression, suicide, and other risk factors based on individual assessment outcomes. Have appropriate members of the cancer care team establish procedures to monitor and regularly check in with patients identified as at-risk to ensure these patients do not fall off your radar. Designate a point person for each at-risk patient to ensure appropriate coordination of services.

All patients who are screened as being a suicide risk should be flagged for a full suicide assessment. Identify individuals in your organization who are trained to mitigate this risk. Information about your practice's processes for addressing suicide risk should be made available at all times. Staff responsible for flagging patients at risk for suicide should initiate a conversation with the patient's attending physician about the medications that patient is on and how to dispense them safely. At-risk patients come from a wide variety of backgrounds and circumstances. To determine who can best advocate for an at-risk individual, involve caregivers and family members in conversations, and seek answers to the following:

- Is this person socially isolated? If so, is this the case by choice or by circumstance?
- Does this person demonstrate a failure to thrive or a disinterest in routines that were kept prior to diagnosis?
- Does this person present as engaged, practical, and future-seeking, or as disengaged?
- Does religion and/or spirituality play a positive role in this patient's life?

Based on the answers to these questions, solicit the help of trained social workers and/or psychologists in collaboration with your team. To promote awareness of suicide risk in your practice, make suicide prevention resources highly visible to your patients and staff. The Substance Abuse and Mental Health Services Administration is a good source of national resources. Post the National Suicide Prevention Hotline and state-specific hotlines in highly trafficked areas in your practice.

Practice-Wide Solutions

- **Cultivate Staff Knowledge.** If a practice lacks in-house expertise to address these issues, it can be cultivated with office training or by consulting with nonprofit organizations that can provide free or low-cost continuing education to cancer center staff, such as through the American Cancer Society.

- **Provide information about external resources.** Senior centers can provide patients with a wealth of resources, including delivered meals, educational activities, employment information, and volunteer opportunities. The Department of Health and Human Services lists some of these resources by state.

- **Cancer support groups** can help reduce patient anxiety and depression by filling patients' need for companionship, solidarity, and education. Know where your local groups meet and the availability of transportation, if needed. Some groups meet virtually, making them accessible to patients who may struggle with transportation. The CancerCare website makes available extensive support group resources online, and information about additional services (e.g., ride assistance, lodging, etc.) can be found at the American Cancer Society website. Many cancer advocacy organizations also provide aggregated lists of online resources available for specific tumor types that care team members can share with patients.

For state-specific information on how to report suspected elder maltreatment, including self-neglect, the following resources are available:

- National Adult Protective Services Association: napsa-now.org
- Eldercare Locator: 1-800-677-1116, eldercare.acl.gov/Public/Index.aspx
- National Center on Elder Abuse: ncea.acl.gov

By assembling an array of reliable, supportive tools for at-risk patients and their caregivers, you can provide a scaffolding of support services that intersect with patients' cancer treatment. The collective skills of the entire multidisciplinary cancer care team can bring a holistic approach to cancer treatment. Team members who recognize that comorbid and intersectional issues often arise in cancer care, and who are empowered to offer appropriate resources and give referrals, can help patients access what they need to help themselves.

REFERENCES

References for this section can be found on pages 35 and 36.

7 NUTRITION

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RELEVANCE

The elderly are more susceptible to malnutrition due to the nature of the aging process and its role in skeletal muscle loss. Such loss can cause a decrease in strength, performance status, and loss of smooth muscle, reducing the functionality of multiple organs.[102,103] Malnutrition is prevalent in more than 80 percent of older patients with cancer, most of whom exhibit signs of malnutrition at their initial oncology visit.[104] Malnutrition in older adults with cancer is associated with delays in cancer treatment, increased risk of cachexia, and aging-related decline in both hunger and thirst.[105] Malnutrition is also associated with increased mortality and poor chemotherapy tolerance.[106,107] Malnourished patients older than age 70 are at increased risk of death.[108] The risk of malnutrition increases with multiple factors that can affect the elderly more so than other populations, including food insecurity, increased prevalence of chronic disease, and decreased mobility.[109]

Although malnutrition is widespread in the elderly, it is often underdiagnosed.[110] Screening for malnutrition is the first step in identifying patients who are malnourished and those who are at risk for malnutrition. Taking action to prevent malnutrition can occur in the primary, secondary, and tertiary care settings. Primary prevention involves recognizing risk factors; secondary prevention involves active screening using the tools described below; and tertiary prevention refers to the impact of malnutrition on survival and quality of life.[105]

FEATURED TOOL/STRATEGY

Weight Change/Body Mass Index

Unintended weight loss is a well-validated indicator of malnutrition.[111] Even modest involuntary weight loss of <5% is associated with decreased survival and treatment response in elderly patients with cancer.[112] Malnutrition can occur at any body mass index (BMI). Individuals with a BMI of less than 18.5 are considered underweight. Elderly patients with a BMI <23 are at increased risk of mortality.[113,114]

Patients should be weighed at every visit, and weight should be compared to previous visits to assess for significant weight loss. Significant weight loss is defined as:[111]

Percentage Loss	Time Frame
≥2%	1 week
≥5%	1 month
≥7.5%	3 months
≥10%	6 months

To calculate Body Mass Index:

- Formula: weight (lb) / [height (in)]^2 x 703
- Calculation: [weight (lb) / height (in) / height (in)] x 703 [115]

The standard weight status categories associated with BMI for adults are:

BMI	Weight Status
Below 18.5	Underweight
18.5 – 24.9	Normal or Healthy Weight
25.0 – 29.9	Overweight
30.0 and Above	Obese

FIGURE 13

DOWNLOAD

Mini Nutritional Assessment

MNA®

Nestlé Nutrition Institute

Last name: First name:

Sex: Age: Weight, kg: Height, cm: Date:

Complete the screen by filling in the boxes with the appropriate numbers. Total the numbers for the final screening score.

Screening

A Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties?
0 = severe decrease in food intake
1 = moderate decrease in food intake
2 = no decrease in food intake ☐

B Weight loss during the last 3 months
0 = weight loss greater than 3 kg (6.6 lbs)
1 = does not know
2 = weight loss between 1 and 3 kg (2.2 and 6.6 lbs)
3 = no weight loss ☐

C Mobility
0 = bed or chair bound
1 = able to get out of bed / chair but does not go out
2 = goes out ☐

D Has suffered psychological stress or acute disease in the past 3 months?
0 = yes 2 = no ☐

E Neuropsychological problems
0 = severe dementia or depression
1 = mild dementia
2 = no psychological problems ☐

F1 Body Mass Index (BMI) (weight in kg) / (height in m)² ☐
0 = BMI less than 19
1 = BMI 19 to less than 21
2 = BMI 21 to less than 23
3 = BMI 23 or greater ☐

IF BMI IS NOT AVAILABLE, REPLACE QUESTION F1 WITH QUESTION F2.
DO NOT ANSWER QUESTION F2 IF QUESTION F1 IS ALREADY COMPLETED.

F2 Calf circumference (CC) in cm
0 = CC less than 31
3 = CC 31 or greater ☐

Screening score ☐☐
(max. 14 points)

12-14 points: ☐ Normal nutritional status
8-11 points: ☐ At risk of malnutrition
0-7 points: ☐ Malnourished

Save Print Reset

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Mini Nutritional Assessment® (MNA®)

The MNA is a validated tool (see Figure 13) for identifying malnutrition and risk of malnutrition in the elderly. The MNA® is completed by clinicians when they are with patients, while the Self-MNA® can be completed by patients or caregivers. The tool consists of six questions and is easy to complete. The current tool replaced the original 18-question version when it was validated to be as effective as the original MNA®, which is now often referred to as the "full MNA®."

More than 20 years of research supports the use of the MNA® for geriatric patients age 65 and older. The MNA® should be administered to all patients at higher risk for malnutrition at least every three months and prior to any change in treatment. The tool requires actual patient weight, height, and calculated body mass index (BMI), in addition to several questions to be asked of the patient or caregiver.

You can access the MNA® and detailed instructions for its use at mna-elderly.com/mna_forms.html. The Self-MNA® is a good alternative to the MNA® for facilities with limited staff resources. It can be completed and scored by the patient or caregiver.

ADDITIONAL/ALTERNATIVE TOOLS

Besides monitoring weight change and administering the MNA®, there are additional ways to screen a patient's nutritional status. Each have their pros and cons.

Patient-Generated Subjective Global Assessment (PG-SGA)

The PG-SGA is a 17-question, oncology-specific scale that includes both screening and assessment criteria.[116] It is completed by the patient, and it includes questions about changes in weight and dietary intake, GI disturbances, and functional capacity.[117] The advantage of the PG-SGA is that it includes symptoms, but it can be more time-consuming than other scales.

Short Nutritional Assessment Questionnaire (SNAQ)

The SNAQ is a short, simple 4-item appetite assessment tool that predicts weight loss in both community-dwelling and facility residents. It mainly examines appetite- and anorexia-related weight loss.[117] This questionnaire is not specific to the elderly, although there is a 65+ version that requires mid-upper arm circumference.

Geriatric Nutritional Risk Index (GNRI)

The GNRI is a simple calculation consisting of height, weight, and albumin. Albumin is a systemic indicator of disease that, along with a patient's weight, can account for both acute and chronic nutritional issues.[118] One disadvantage of the GNRI is that it requires lab work.

Malnutrition Screening Tool (MST)

The MST is a short and easy-to-perform screening tool that assesses appetite and weight loss with two questions.[116, 119] The Academy of Nutrition and Dietetics recommends that the MST be used to screen adults for malnutrition regardless of age, medical history, or setting.[120] However, due to the simplicity of the tool, there can be a high rate of false positives.

TAKING ACTION

Cancer programs should have an intervention plan in place for patients who are found to be malnourished or at risk for malnutrition, and they should be able to refer patients to a registered dietitian nutritionist (RDN). RDNs are professionals who can provide medical nutrition therapy to help improve treatment tolerance, reduce treatment interruptions, decrease weight, stop lean body mass loss, increase quality of life, decrease unplanned hospitalizations, reduce lengths of hospital stay, and improve survival.[121]

For facilities without access to an RDN, you can locate a list of these professionals online at eatright.org/find-an-expert. If there is no RDN available in your area, consider the following:

- Provide nutrition education materials to all patients in treatment, such as Eating Hints: Before, During, and After Cancer Treatment by the National Cancer Institute, Nutrition for the Person With Cancer During Treatment by the American Cancer Society, and Eat Right to Fight Cancer by the Oncology Nutrition Dietetic Practice Group.

- Educate patients how to manage nutrition-related symptoms that impact their oral intake.

- Know how to instruct patients on how to increase their intake of high-calorie and high-protein foods.

- If fatigue, shortness of breath, significant weight loss, and/or inability to increase high-calorie foods are preventing a patient from gaining weight, recommend that they start an oral nutrition supplement. The European Society for Clinical Nutrition and Metabolism (ESPEN) Guidelines recommend oral nutrition supplements that provide at least 400 kcal/day, including 30 g or more of protein/day.[122] Assess patients' acceptance of and compliance with the oral nutrition supplements at subsequent visits.

- Recommend physical exercise or rehabilitation for patients with malnutrition and/or a decline in functional status.

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References for this section can be found on page 36.

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