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Medication management - Supportive care medications in older adults with cancer

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Abstract

Purpose of review

This review raises awareness regarding the lack of data available for healthcare professionals caring for older adults with cancer when using supportive care medications.

Recent findings

Guidelines for supportive cancer care lack concrete recommendations on the appropriate use of medications in older adults with cancer. Some guidelines, such as the NCCN Older Adult Oncology guideline, contains vital information for prescribers to consider when choosing a supportive care medication. Information at present in most guidelines is generally vague, identifying areas where caution is required in older adults, without specific details.

Summary

Research is needed to assess the efficacy and safety of supportive cancer care medications in older adults.

Keywords

Polypharmacy, supportive care, medication management, geriatric, oncology

Introduction

Medication management in older adults can be challenging, due to multiple comorbidities, potential for complex polypharmacy and ageing-related changes in pharmacokinetics and pharmacodynamics (1). The addition of systemic anticancer therapy, as well as supportive care medications can further complicate this (2). Supportive care medications are essential in cancer care as prophylactic agents to prevent adverse effects, and in the treatment of therapy-related toxicity or symptoms of cancer itself (3). However, their addition increases the drug burden and exposes patients to potentially inappropriate prescribing.

Tools commonly used to identify potentially inappropriate medications in the older adult (4, 5)are not always appropriate in supportive cancer care. The American Geriatrics Society Beer's Criteria specifically states that it is not intended for use in the hospice setting or in end-of-life care (5). There are tools developed specifically for patients with established frailty and a limited life expectancy, such as STOPPFrail (6), or the OncPal deprescribing guideline (7) in the context of palliative cancer patients with <6 months prognosis. Therefore, to optimise symptom control, older adults with cancer can be exposed to medications that would typically be deemed inappropriate in the general older adult population, for example atypical antipsychotics for cancer related nausea/anorexia (8). The risk-benefit ratio of these medications can often lack clarity, due to a dearth of data on their safety and efficacy in older adults, and present significant challenges to healthcare professionals caring for them (9). While atypical antipsychotics can, for example, introduce excessive anticholinergic burden, orthostatic hypotension, and cardiovascular risks (10), their potential benefit from a quality of life and symptom control perspective may be deemed necessary by oncology and palliative care professionals.

Given the challenges of supportive cancer care, and the associated risks in older adults who may have established frailty and complex comorbidity, specific guidance on optimal pharmacotherapy is essential. The aim of this review is to assess supportive care guidelines that have been published since July 2023, for specific guidance relating to the pharmacological management of the supportive care needs of older adults.

Medication Review in Older Adults with Cancer

Guidelines for conducting medication reviews (11) and current practices in clinical pharmacy in geriatric oncology settings (12) have been outlined previously. Much of the literature assessing medication-related outcomes for older adults with cancer focus on optimisation of medications for chronic conditions, drug-drug interactions, and ensuring optimal immunisation strategies (13, 14). There is a paucity of literature assessing supportive care medication optimisation in older adults with cancer, primarily due to a lack of data.

Typically, the selection process for supportive cancer care is determined by a guideline that will be informed by the published literature and configured by an expert taskforce. This, generally, results in a straightforward medication review process, where the supportive care medications are included in drug-drug interaction checks and then prescribed in line with the guideline recommendations.

Using supportive care medications in older adults is a greater challenge, as they may be more likely to experience adverse effects due to the presence of frailty and complex comorbidities (15), and due to ageing-related changes in pharmacokinetics, which will change how their body processes a medication, and pharmacodynamics, which may increase their sensitivity to a medication (1).

Therefore, older adults with cancer, who have established frailty and complex comorbidity may benefit from a review of the appropriateness of supportive care therapy. This must be balanced against the risk of under-utilising supportive care medications as prophylaxis agents in systemic anticancer therapy (SACT), and to treat both SACT toxicity and the symptoms of cancer. We reviewed supportive care guidelines published since July 2023 to ascertain if they contain general and medication-specific guidance on the medication management of supportive cancer care.

Recently Published Clinical Guidelines

Guidelines published since July 2023 are assessed below to identify specific recommendations for older adults with cancer (defined as aged ≥65 years) (Table 1). Guidelines were assessed focusing on two primary parameters: 1) the presence of generalised guidance for medication management in older adults with cancer, and 2) the presence of medication-specific guidance, such as dose adjustments, or additional monitoring.

We reviewed guidelines published by the Multinational Association of Supportive Care in Cancer (MASCC), the European Society of Medical Oncology (ESMO), the National Comprehensive Cancer Network (NCCN) in the United States, the American Society of Clinical Oncology (ASCO) in the United States, eviQ in Australia, and Cancer Care Ontario (CCO) in Canada.

The aggregate work of these organisations in recent times includes comprehensive clinical guidelines to aid healthcare professionals caring for cancer patients across a broad range of supportive care needs: bone health (MASCC/ASCO (16, 17), eviQ (18)), cancer associated thrombosis (NCCN (19)), chemotherapy induced nausea and vomiting (MASCC/ESMO (20-27), NCCN (28), ASCO (29)), dermatological toxicities of radiotherapy (eviQ (30)), exercise (CCO (31)), fatigue (NCCN (32)), haematological toxicities (NCCN (33, 34), eviQ (35, 36)), clinically assisted hydration (MASCC (37)), immune-related adverse events (NCCN (38), eviQ (39)), infection (NCCN (40),eviQ (41, 42)), insomnia (ESMO (43)) mucosal care (MASCC (44-48), eviQ (49, 50)), neurotoxicity (eviQ (51)), nephrotoxicity (eviQ (52-54)), pain management (NCCN (55)), palliative care (NCCN (56), ASCO (57)), psycho-oncology (NCCN (58), ASCO (29)), respiratory toxicity (eviQ (59)), smoking cessation (NCCN (60)), survivorship (NCCN (61), eviQ (62), MASCC (63), MASCC/ASCO (64) CCO (65, 66)), and vaccination (ASCO (67)).

There was a broad range of guidance offered across organisations. MASCC produced 18 supportive care guidelines on six topics in this period. Seven of these (39%) had general guidance related to older adults with cancer. Three guidelines (17%) had medication-specific recommendations for older adults with cancer. ESMO produced seven supportive care guidelines on two topics in this period. Three (43%) had general guidance related to older adults with cancer. Two (28%) had medication-specific recommendations for older adults with cancer. NCCN produced twelve supportive care guidelines in this period, with ten guidelines (83%) containing general guidance related to older adults with cancer. Ten guidelines (83%) also had medication-specific recommendations for older adults with cancer. ASCO produced six supportive care guidelines in this period, with four guideline (67%) containing general guidance and one guideline (17%) containing medication-specific recommendations for older adults with cancer. eviQ produced 15 supportive care guidelines on nine topics in this period. Five (33%) had general guidance related to older adults with cancer, and three guidelines (20%) had medication-specific recommendations for older adults with cancer. CCO produced three supportive care guidelines on two topics in this period. One (33%) had general guidance related to older adults with cancer, whereas none of the guidelines had medication-specific recommendations for older adults with cancer.

In addition to guidelines on specific supportive care needs of older adults with cancer, it is important to highlight and emphasise the NCCN Older Adult Oncology Guideline** (68) that contains a section on potentially problematic commonly used supportive care medications in older adults with cancer. This guideline should be an integral resource for all healthcare professionals caring for older adults with cancer. Walsh et al*(1), have also published a review paper, that outlines ageing-related considerations for supportive cancer care, that outlines pharmacokinetic and pharmacodynamic considerations for prescribers when choosing a supportive care medication for an older adult with cancer.

General recommendations commonly made in supportive care guidelines

The general recommendations made in supportive care guidelines vary across organisations and guideline type. Supportive care guidelines published since July 2023, that contain general and medication-specific recommendations for older adults with cancer are summarised below, and in Table 1.

Bone Health

MASCC, in conjunction with the International Society for Oral Oncology (ISOO) produced a clinical practice statement on prevention of medication-related osteonecrosis of the jaw in primary breast cancer patients, using bone-modifying agents in the adjuvant setting (16). They identify that as patients age, the risk for medication-related osteonecrosis of the jaw is higher with invasive interventions.

Cancer-associated thrombosis

NCCN produced guidance on cancer associated venous thromboembolic disease (19). Limited evidence exists concerning the safety and efficacy of LMWHs in special populations, such as patients >70 years of age, and patients with cancer.

Chemotherapy-induced nausea and vomiting

The MASCC/ESMO joint guideline (21), as well as NCCN guidance (28), on CINV highlights that for highly emetogenic chemotherapy younger patients have a higher risk than older patients In moderately emetogenic regimens a triplet antiemetic prophylaxis (with a 5-HT_3 receptor antagonist, $Neurokinin_1$ receptor antagonist, and corticosteroid) demonstrates a significant impact in young women without superior efficacy in other situations (male and older female) (22, 26). Younger patients may be more susceptible to anticipatory nausea and/or vomiting, because they generally receive more aggressive anticancer agents and, overall, have poorer emesis control than older patients.

Fatigue

NCCN guidelines on cancer-related fatigue identify fatigue as a major cause of functional dependence for patients with cancer, especially among older adults (32). This recommends that for pharmacological interventions, side effects, drug interactions, and medication misuse, healthcare professionals should consult with the NCCN Guidelines for Older Adult Oncology** (68). Polypharmacy (ie, use of ≥5 medications) and potentially inappropriate medication use is common among older adults with cancer. It may be appropriate to adjust the dose of medications to treat fatigue.

Haematological toxicity

NCCN guidelines on the use of haematopoietic growth factors note an important patient-specific risk factor for febrile neutropenia development is age (>65 years). In addition to this, features associated with poor outcome in febrile neutropenia include age >65 years (34).

Cancer-related pain

NCCN guidelines on adult cancer pain note that in moderate/severe pain consider slower, and lower dose titration in patients who are frail or older (55). Increasing age is a risk factor for under treatment of pain.

Survivorship

Joint guidance from MASCC and ASCO signpost the ASCO guidelines on Practical Assessment and Management of Vulnerabilities in Older Patients (71) in managing older adults who meet the definition of cancer survivors. NCCN guidelines on cancer survivorship (61) note survivors of breast cancer, aged ≥65 years, were less likely to receive an influenza vaccination than matched non-cancer controls. Older survivors, those who received a higher cumulative anthracycline dose (cumulative doxorubicin dose of 250 mg/m2 or equivalent), those with underlying CVD or risk factors, and those who had a low-normal (50%–54%) baseline ejection fraction are at increased risk for the development of heart failure.

Table 1: Supportive care guidelines with general and medication-specific recommendations for older adults with cancer published since July 2023.

Organisation	MASCC		ESMO		NCCN		ASCO		eviQ		CCO	
Category	General	Medication-specific	General	Medication-specific	General	Medication-specific	General	Medication-specific	General	Medication-specific	General	Medication-specific
Bone Health (16-18)	Yes	Yes	-	-	-	-	-	-	No	No	-	-
Cancer-Associated Thrombosis (19)	-	-	-	-	Yes	Yes	-	-	-	-	-	-
Nausea and Vomiting (20-29)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	-	-	-	-
Dermatological (30)	-	-	-	-	-	-	-	-	Yes	No	-	-
Exercise (31)	-	-	-	-	-	-	-	-	-	-	No	No
Fatigue (32)	-	-	-	-	Yes	Yes	-	-	-	-	-	-
Haematological (33-36)	-	-	-	-	Yes	Yes	-	-	Yes	No	-	-
Hydration (37)	Yes	No	-	-	-	-	-	-	-	-	-	-
Immune-related ADE (38, 39)	-	-	-	-	No	Yes	-	-	No	Yes	-	-
Infection (40-42)	-	-	-	-	No	No	-	-	No	No	-	-
Insomnia (43)	-	-	No	No	-	-	-	-	-	-	-	-
Mucosal Care (44-50)	No	No	-	-	-	-	-	-	Yes	No	-	-
Neurotoxicity (51)	-	-	-	-	-	-	-	-	No	No	-	-
Nephrotoxicity (52-54)	-	-	-	-	-	-	-	-	No	Yes	-	-
Pain (55)	-	-	-	-	Yes	Yes	-	-	-	-	-	-

Palliative care specific guidelines (56, 57)	-	-	-	-	Yes	Yes	No	No	-	-	-	-
Psychological (29, 58)	-	-	-	-	Yes	Yes	Yes	No	-	-	-	-
Respiratory Toxicity (59)	-	-	-	-	-	-	-	-	No	Yes	-	-
Smoking Cessation (60)	-	-	-	-	Yes	No	-	-	-	-	-	-
Survivorship (61-66)	Yes	No	-	-	Yes	Yes	Yes	No	No	No	Yes	No
Vaccination (67)	-	-	-	-	-	-	No	Yes	-	-	-	-

Medication-specific recommendations made in supportive care guidelines

Supportive care guidelines offer differing levels of recommendations for medications in older adults with cancer. This ranges from specific guidance on dose scheduling, to broader recommendations regarding using certain medications with caution in older or frail adults with cancer. The medication-specific recommendations made in supportive care guidelines are outlined in Table 2.

Table 2: Medications and medication classes with recommendations for older adults in supportive care guidelines.

Medication	Indication	Recommendation
Allogenic conditioning regimen	Hematopoietic Cell Transplantation	• The choice among a myeloablative (MA), non-myeloablative (NMA), or reduced intensity conditioning (RIC) regimen is a nuanced decision that should be made by the transplant team at the time of patient evaluation or upon review of pre-transplant organ testing, frailty/geriatric assessment, or other evaluation. (33) • Conditioning regimen intensity depends on several factors including patient age (chronologic and physiologic). (33) • RIC/NMA regimens may be preferred for patients who are older or unfit. (33) • Selected patients who are older with limited comorbidities and good functional status can safely receive HCT with a relatively low risk of NRM. (33)
Alteplase	Cancer Associated Thrombosis	• Altepase 50 mg may be appropriate for patients aged >75 years, with recent surgery (within 1 month), or with high risk of bleed. (19)
Antidepressants	Cancer-related pain	*Tricyclic Antidepressants:* • Use with caution in older adults due to increased risk for falls, confusion, and anticholinergic adverse effects. (58)
	Depression or anxiety in cancer survivorship	• Starting doses for older adults, those with renal or hepatic compromise, drug-sensitive survivors, or those with low BMI may be half the usual starting dose for all medications. (61)
Antiemetics	Prophylaxis	*Olanzapine:* • Mild sedation is a frequent adverse event of olanzapine but can be troublesome in older patients. Therefore, some studies have used a 5-mg daily dose. If sedation is a concern, a starting daily dose of 5 mg and/or administration at bedtime is an option. (20, 28) • Central nervous system (CNS) depression; use olanzapine with caution or consider a lower dose in patients at risk for falls (eg, those who are older, debilitated, frail) or at risk for orthostatic hypotension. (28) • Olanzapine should be used with caution in those who are older (see boxed warning/label indication regarding death in patients with dementia-related psychosis and additional warnings and precautions about type II diabetes and hyperglycaemia). (28)
	Opioid induced nausea	• Chronic use of prochlorperazine, metoclopramide or haloperidol may be associated with development of tardive dyskinesia, especially in patients who are older and frail. Consider alternative agent. (28)
Antipsychotics	Distress management	• In dementia-related psychosis, which may occur in older adult patients, antipsychotics increase the risk of death, which is noted in a black box warning. (58)

Medication	Indication	Recommendation
Benzodiazepines	Distress management	• Benzodiazepines have notable risks including confusion, ataxia leading to falls and motor vehicle crashes, and addiction. Such sequelae are magnified in older adults and in patients who are frail. For these reasons, benzodiazepine use should not be undertaken lightly, and dose reduction should be considered to minimize memory difficulties, sedation, and tolerance. (58)
	Anticipatory nausea/vomiting	• CNS depression: use caution in patients at risk for falls (eg, those who are older, debilitated, frail) or in patients at risk for dependence. (28) • The usual starting dose of lorazepam is 0.5mg orally for treatment of anxiety in patients who are older, those with debilitating disease, and those with advanced liver disease. (28) • Note that older patients are especially sensitive to the effects of benzodiazepines. The dose should be gradually reduced when decreasing or discontinuing lorazepam therapy. (28)
	Insomnia	• For insomnia, benzodiazepines should be avoided in patients who are older and those with cognitive impairment, because these agents have been shown to cause decreased cognitive performance. (56)
Benzodiazepine receptor antagonists	Insomnia	• Use with caution in patients who are older or frail. (56)
Bisphosphonates	Prevention of medication-related osteonecrosis of the jaw	• Older age is identified as a common risk factor for elective dento-alveolar surgery in patients on bisphosphonates. (16)
Buprenorphine	Cancer-related pain	• May cause less cognitive impairment and has been safely used in older adults. (55)
Cannabinoids	Chemotherapy induced nausea and vomiting	• CNS depression: use caution in patients at risk for falls (eg, those who are older, debilitated, frail). (28) • May stimulate appetite. To minimize adverse effects, consider starting with lower doses (especially in those who are older or are marijuana-naïve) and titrate to effect. (28) • Lower doses of dronabinol are recommended in those who are older. (28)
	Cancer-related anorexia	• Cannabinoid administration in patients who are older may induce delirium. (56)
Cisplatin	Neurotoxicity	• Older age is a risk factor for cisplatin-induced nephrotoxicity. (52)
COVID-19 Vaccine	Immunization	• Older age adversely affects vaccine immunogenicity. (67)
Dalteparin	Cancer Associated Thrombosis	• Dalteparin reduced the incidence of symptomatic VTE, fatal PE, sudden death, or asymptomatic proximal DVT in both patients with obesity (2.8% vs. 4.3% with placebo; RR, 0.64; 95% CI, 0.32–1.28) and patients >75 years of age (4.2% vs. 8.0% with placebo; RR, 0.52; 95% CI, 0.31–0.87). (19)
Doxepin	Sleep maintenance	• Use with caution in patients who are older or frail. (56)
EGFR Inhibitors	Pulmonary toxicity	• Older age is a risk factor for interstitial lung disease associated with EGFR inhibitors. (59)

Medication	Indication	Recommendation
Fondaparinux	Cancer Associated Thrombosis	• Use with caution in patients with moderate renal insufficiency (CrCl 30–50 mL/min), weight <50 kg, or age >75 years. (19)
Gabapentanoids	Cancer-related pain	• Slower titration is needed for those who are older or medically frail. (55)
GCSF	Prophylaxis against bone marrow suppression	• In patients with intermediate risk (10-20%) of febrile neutropenia consider gCSF in patients aged >65 years receiving full chemotherapy dose intensity. (34)
Gemcitabine	Pulmonary toxicity	• Older age is a risk factor for pulmonary toxicity associated with gemcitabine, including interstitial lung disease, radiation recall pneumonitis, pleural effusions, and bronchospasms. (59)
Haloperidol	Chemotherapy induced nausea and vomiting	• CNS depression: use caution in patients at risk for falls (eg, those who are older, debilitated, frail). (28)
Hepatitis B Vaccine	Immunization	• Seroconversion rates with revaccination in the first year after auto- and allo-HSCT have ranged from 64% to 100% and are lower among older individuals and those with GVHD. (67)
Hormonal treatment	Hot flushes in cancer survivors	• Oestrogen alone in older postmenopausal individuals with prior hysterectomy is associated with an increased risk of stroke and decreased risk of hip fracture, with no effect on coronary heart disease or breast cancer incidence. (61) • Oestrogen plus progestin in older postmenopausal individuals with a uterus is associated with a decreased risk of colorectal cancer and hip fracture, and an increased risk of stroke, pulmonary embolism, and invasive breast cancer. (61)
Human Papilloma Virus	Immunization	• Whether older already-HPV–infected individuals will have a reduced risk of HPV-associated cancers from post-transplant vaccination is currently unknown and an area for study. (67)
Influenza Vaccine	Immunization	• Some evidence suggests that the high-dose IIV3 vaccine may provide better protection than standard-dose IIV3 in individuals 65 years or older. (40) • Patients aged 65 years and older should receive one of the preferentially recommended high-dose or adjuvanted vaccine formulations (high-dose Quadrivalent vaccine, Quadrivalent recombinant flu vaccine, and Quadrivalent adjuvanted flu vaccine) licensed for patients in this age group. (67) • The high-dose IIV has demonstrated safety and superior immunogenicity in adults aged 65 years and younger with cancer (67)
Levophornol	Cancer-related pain	• For certain populations (eg, patients who are older), levorphanol may offer similar benefits to methadone but with lessened prescribing complexities and adverse effects.(55)
Levothyroxine	Immune-related hypothyroidism	• Levothyroxine dose can be reduced by 10% to avoid hyperthyroidism in patient populations that may be sensitive to thyroid supplementation (ie, older adults or patients with comorbidities). (38)

Medication	Indication	Recommendation
		• If thyroid hormone replacement therapy is needed, consider risk factors including cardiac disease and age >65 years for thyroid hormone replacement doses. (39)
Melphalan	HCT	• Lower dose melphalan can be considered for amyloidosis, older age, high HCT-CI, low KPS, and chronic kidney disease. (33) • Adjustments for age and renal function are not standardized. (33)
Metoclopramide	Chemotherapy induced nausea and vomiting	• Use caution in patients at risk for falls (eg, those who are older, debilitated, frail). (28)
Methotrexate	Pulmonary toxicity	• Older age is a risk factor for pulmonary toxicity associated with methotrexate, including interstitial lung disease, pleural effusions, bronchospasms, and opportunistic infections (*Pneumocystis jirovecii*). (59)
Mirtazapine	Refractory insomnia	• Better tolerated than other sedating antidepressants in patients who are older or frail. (56)
MGF	Prophylaxis against bone marrow suppression	• Risk factors/possible indications for therapeutic MGF include age >65 years. (34)
Paracetamol/Acetaminophen	Cancer-related pain	• For chronic administration or use in older adults, consider limiting the maximum daily dose to 3 g/day or less due to concerns for hepatic toxicity. (55)
Phenothiazines	Chemotherapy induced nausea and vomiting	• CNS depression: use caution in patients at risk for falls (eg, those who are older, debilitated, frail). (28)
Pneumococcal Vaccine	Immunization	• Pneumococcal vaccine (PPSV-23/PCV-13) is recommended for all adults aged ≥65 years and those at any age with immunocompromising conditions. (40)
Psychostimulants	Cancer-related fatigue	• Optimal dosing and schedule have not been established for use of psychostimulants in older adults and patients with cancer. (32) • Use of psychostimulants in older adults should be treated with caution, as older adults may need a lower dosage than younger adults. (32)
Respiratory Synctal Virus	Immunization	• Patients aged 60 years and older with cancer are eligible to receive the respiratory syncytial virus (RSV) vaccine. (67)
Scopolamine	Chemotherapy induced nausea and vomiting	• CNS depression: use caution in patients at risk for falls (eg, those who are older, debilitated, frail). (28)
Tocilizumab	Immune-related cytokine release syndrome (CRS)	• For prolonged CRS (longer than 3 days) in patients or those with significant symptoms, comorbidities, and/or are older, 1 dose of tocilizumab 8 mg/kg IV over 1 hour (not to exceed 800mg) can be considered. (38)

Medication	Indication	Recommendation
Tramadol	Cancer-related pain	• For immediate release preparations the manufacturer recommends a maximum daily dose of 300 mg/day in older adults, to reduce the risk of seizures. (55)
Warfarin	Cancer Associated Thrombosis	• Initial dose 5 mg (consider lower dose for patients: age >75 years, CYP2C9 inhibitors, poor oral intake, liver disease). (19)

Discussion

Despite clear consensus among leading oncology organisations that older adults require consideration for comprehensive geriatric assessment and that their needs are consistently unmet, guidelines for medication management of supportive care issues in cancer patients are broadly inconsistent in making tailored recommendations for older adults with cancer. We reviewed international guidelines published by major oncology organisations in North America, Europe, Australia, and found the consistency of age-specific advice to be sparse in places. Some guidelines give broad general guidance for the supportive care needs of older adults with cancer, others give detailed recommendations specific to medications commonly used in the management of supportive care issues that arise in older adults with cancer. Very few guidelines provide both, which can potentially lead to suboptimal care for this patient population.

We believe that the introduction of a specific segment for special patient populations, such as older adults with frailty, as a standard in supportive care guidelines would act as a forcing mechanism for guideline authors to consider the impact of their recommendations on special populations and would improve service delivery, in line with current older adult oncology guidelines. We encourage authors of guidelines to consult organisations such as the International Society of Geriatric Oncology (SIOG) and the Cancer in Ageing Research Group (CARG) as they develop and update guidelines to ensure older adults are adequately represented in the recommendations.

This review also outlines the need for research focused on the supportive care needs of older adults with cancer. Many guidelines highlight increasing age as a risk factor for adverse effects of SACT or cancer-related symptoms, yet do not offer guidance on how to manage these issues in this population. The potential to introduce prescribing cascades, additional PIM and add to an older adult's medication burden, without adequately addressing their supportive care needs is a seemingly obvious risk and should be a research priority for healthcare professionals caring for patients with cancer.

Conclusion

We believe that the expansion of guidelines, such as the NCCN Older Adult Oncology**(68) guidance, is needed. In addition to this, deprescribing, medication management and supportive care pharmacotherapy consensus guidelines in older adults with cancer are lacking and would be a welcome addition to the literature to help guide clinical practice. In the interim, services that care for the supportive needs of patients with cancer, in the surgical, radiation, medical/clinical oncology setting, and in the palliative care setting, should utilise the expertise of clinical pharmacist with experience in geriatric oncology, where possible, and where this expertise is lacking, should encourage and support the educational needs of clinical pharmacists in their departments to assist in the optimal management of these patients.

Key points

- Supportive care medications have the capacity to be inappropriate in older adults with cancer.
- There is a dearth of information to help select optimal medications in current clinical practice guidelines.
- Further research on supportive care use in older adults with cancer and medication optimisation is needed.

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** National Comprehensive Cancer Network. Older Adult Oncology. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®); 2024.

This guideline has a table of medications commonly used for supportive care that are of concern in older patients. It identifies clinical situations where a supportive care medication may be more likely to cause adverse effects, recommendations on the use of these medications in older adults and alternative therapeutic options.

* Walsh DJ, O'Driscoll M, Sahm LJ, Meagher AM, Doblas P, McGowan E, et al. Ageing-related considerations for medication used in supportive care in cancer. Journal of Geriatric Oncology. 2024:101760.

This review paper outlines pharmacokinetic and pharmacodynamic considerations for healthcare professionals when using supportive care medications in older adults with cancer.

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