

Canadian Oncology Nursing Journal

Revue canadienne de soins infirmiers en oncologie

Volume 30, Issue 4 • Fall 2020
eISSN: 2368-8076



Canadian Association of Nurses in Oncology
Association canadienne des infirmières en oncologie

Pan-Canadian Oncology Symptom Triage and Remote Support (COSTaRS) practice guides — What's changed in Version 2020?

by Dawn Stacey, Meg Carley and Jennifer Newton

ABSTRACT

The pan-Canadian Oncology Symptom Triage and Remote Support (COSTaRS) practice guides present evidence on symptom management in user-friendly formats and using plain language. The aim of this work is to summarize changes to the practice guides based on new evidence including management specific to immune checkpoint inhibitors (ICIs). A systematic review of literature was conducted to identify clinical practice guidelines and systematic reviews. For version 2020, there is new evidence from 86 sources (range 2–16; mean 9 per guide), including 14 specific to ICIs, and we removed 21 outdated sources. The 15 COSTaRS practice guides were updated and 2 new guides created for mouth dryness and skin rash. The National Cancer Institute's common terminology criteria for adverse events (NCI-CTCAE) grading was added to the assessment results. "Review self-care strategies" was changed to "Review 3 or more self-care strategies". There were changes based on new evidence and ensuring consistency across practice guides. The 2020 update was validated by oncology nurses from across Canada.

The pan-Canadian Oncology Symptom Triage and Remote Support (COSTaRS) practice guides are evidence-informed tools for nurses and other healthcare professionals to provide quality, safe, and consistent cancer symptom management. The guides are written in plain language to make it easier to communicate with patients experiencing cancer

treatment-related symptoms. Initially published in 2012 for chemotherapy and radiation therapy related symptoms, they have been updated regularly (2013, 2016) (Stacey et al., 2017). The latest 2020 update added evidence for managing symptoms related to immune checkpoint inhibitors (ICIs). Adding evidence on immune checkpoint inhibitor therapy was identified as a high priority at the 2017 COSTaRS priority setting meeting (Jibb et al., 2019). Immune checkpoint inhibitors are increasingly being used as a cancer treatment and patients experiencing immune-related adverse events (irAE) require special considerations. The purpose of this article is to summarize the changes made to the 15 revised COSTaRS practice guides since the last update in 2016.

METHODS

The search for new evidence continued to the end of 2019. First, we conducted a systematic search of bibliographic databases in May 2018 to identify clinical practice guidelines and systematic reviews focused on one or more of the symptoms included in the COSTaRS practice guides. We also looked for similar evidence sources on irAE. The searched included five electronic databases (e.g., Medline, Embase, CINAHL, PsycINFO, and the Cochrane Database of Systematic Reviews). Given that most clinical practice guidelines are published on organization websites, web searches of known organizations that produced guidelines (e.g., Cancer Care Ontario, Oncology Nursing Society Putting Evidence into Practice Symptom Interventions, National Comprehensive Cancer Network [NCCN]) continued through 2019. The citations identified were screened by two reviewers (MC, VS) and data were extracted from relevant clinical practice guidelines/systematic reviews using a standardized form based on categories from the practice guides (e.g., definition, assessment, triage, medications, self-care). The updated COSTaRS practice guides were circulated to the Pan-Canadian COSTaRS Group to validate the changes.

For this update, we also created a working group with expertise in caring for patients on ICIs. Their first task was to determine the feasibility of integrating irAEs into the original COSTaRS practice guides or if new ICI-focused practice guides were required. Given patients report on symptoms generally and not specific to their cancer treatment, our goal, if possible, was to integrate evidence for ICIs into COSTaRS practice guides. First, we identified the evidence on symptom management for immune-related diarrhea. We revised the diarrhea practice guide and added a special indicator (→) and grey shading for assessment criteria specific to patients on ICIs. In the triage ratings for the assessment criteria, we were able to indicate the more intense severity ratings for immune-related

AUTHOR NOTES



Dawn Stacey, RN, PhD, CON(C), Research Chair in Knowledge Translation to Patients Member, Royal Society of Canada's College Professor, School of Nursing, University of Ottawa Cross-Appointment, School of Epidemiology and Public Health, and Senior Scientist, Ottawa Hospital Research Institute, Centre for Practice Changing Research, 501 Smyth Road, Room L1280, Ottawa, ON K1H 8L6, T: 613-737-8899 ext. 73817



Meg Carley, BSc, Research Coordinator, Ottawa Hospital Research Institute, Centre for Practice Changing Research, 501 Smyth Road, Ottawa, ON K1H 8L6, T: 613-737-8899



Jennifer Newton, RN, BScN, MEd, The Ottawa Hospital, 501 Smyth Rd, Ottawa, ON K1H 8L6 Ottawa, ON, T: 613-737-8899

For the COSTaRS Team

Contact Author: Dawn Stacey RN, PhD, CON(C), FAAN, FCAHS, Professor, School of Nursing, University of Ottawa, Senior Scientist, Ottawa Hospital Research Institute, 451 Smyth Road, Ottawa, ON K1H 8M5
613-562-5800 ext 8419

dstacey@uottawa.ca

DOI: 10.5737/23688076304269276

diarrhea. The draft was reviewed by the expert working group members. They agreed it was feasible to integrate and indicated it was better for nurses to see at a glance the similarities and differences in triage for patients experiencing cancer symptoms related to ICIs. Adding evidence on ICIs required creating one new symptom guide for skin rash. For patients on ICIs, a more in-depth assessment is required for signs of cardiovascular toxicity, endocrine toxicity, gastrointestinal toxicity, hematologic toxicity, hepatic toxicity, musculoskeletal toxicity, neurotoxicity, ocular toxicity, pulmonary toxicity, renal toxicity, and skin toxicity. For each toxicity, there are examples of signs/symptoms to be assessed.

RESULTS

Of the 557 citations, we identified 86 new sources (clinical practice guidelines, systematic reviews) focused on the cancer treatment-related symptoms (see Figure 1). The 15 COSTaRS practice guides were updated with new evidence from clinical practice guidelines and systematic reviews and two new practice guides were created for skin reaction and dry mouth (xerostomia). Although we were asked to add symptom guides for dysphasia and cognitive changes, it was not possible given the lack of clinical practice guidelines or systematic reviews on these symptoms. There was a mean of nine new sources per practice guide, ranging from two (e.g., sleep changes) to sixteen (e.g., skin rash), including 14 focused on symptoms

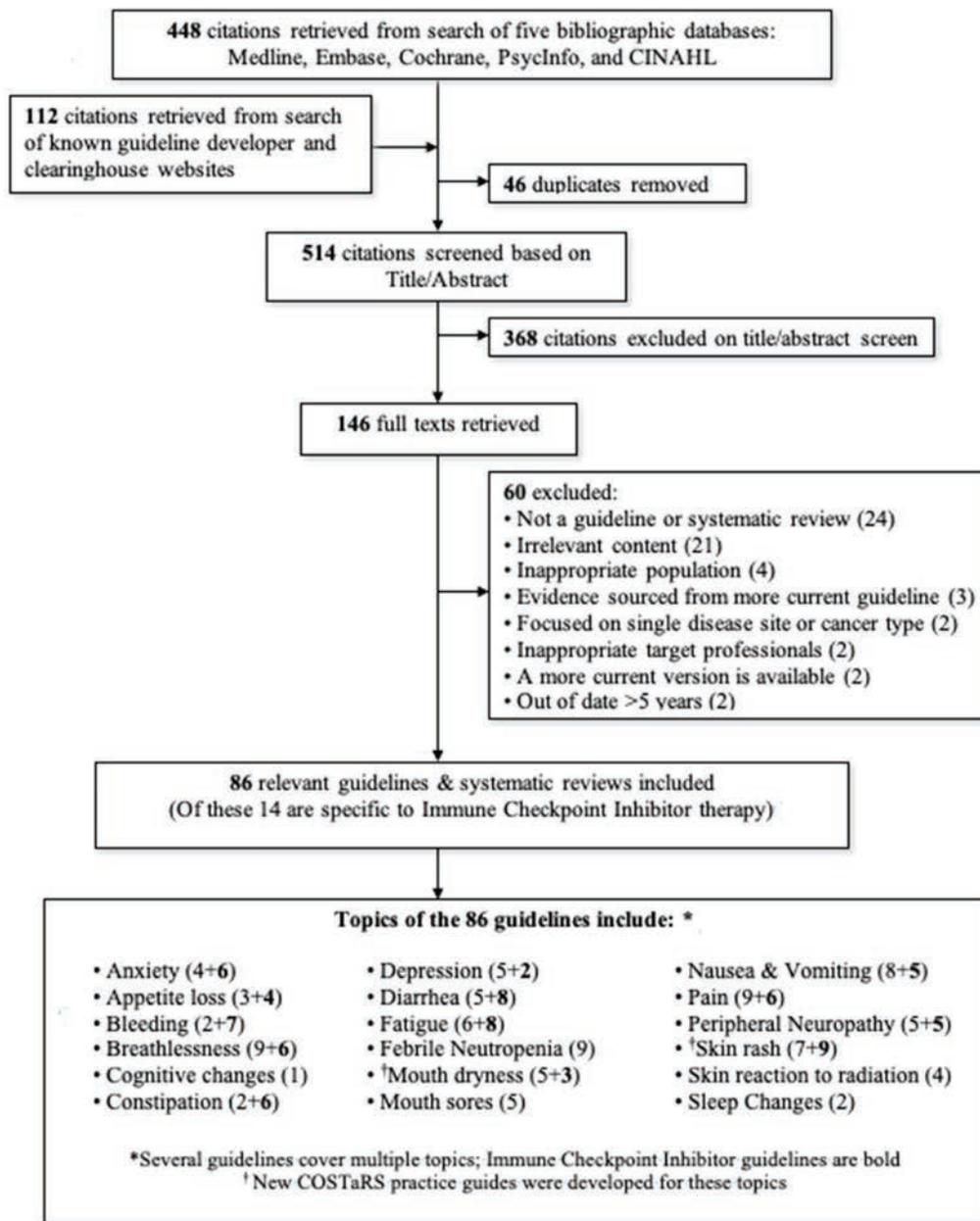


Figure 1: Flow of citations through screening process for COSTaRS Evidence Update 2020

specific to ICIs. For this update we also removed 21 outdated sources; defined as greater than seven years old.

There were nine overarching changes across all practice guides (see Table 1). First, evidence from ICIs was added. Second, wording specific to telephone calls was removed (e.g., ‘advised to call back’ changed to ‘advised to notify’) given COSTaRS practice guides are also used for in-person encounters. Third, in response to members of the COSTaRS team asking how severity assessment correlated with the NCI-CTCAE grading, the NCI-CTCAE grading has been added

as superscript to applicable responses to assessment questions. Fourth, the assessment item on feeling worried about the ‘symptom’ was changed from 0 to 10 rating to ‘no/some’ rated as mild and ‘yes/very’ rated as moderate severity. Fifth, the heading “Review self-care strategies” was changed to “Review 3 or more self-care strategies” to indicate that not all self-care strategies must be reviewed. This change was made because in a recent quality improvement project evaluating nurses’ symptom management, few nurses reviewed any self-care strategies (Stacey et al., 2020). There was agreement

continued on page 276...

Section of guide	Changes for ANXIETY	Status
Assess severity	Added: spiritual/religious concerns; on steroids to the list of risk factors for anxiety	NEW
	If on immunotherapy : Do you have signs of hyperthyroidism?	NEW
Review medications	Changed Benzodiazepines from expert opinion to likely effective	Update
	Added footnote: Benzodiazepines are intended for short term use...	Update
Self-Care	Added: If your concerns are spiritual or religious in nature, have you tried spiritual counselling, meaning-focused meditation, prayer...	NEW
References	10 new evidence sources; 0 outdated sources removed	NEW
Section of guide	Changes for APPETITE LOSS	Status
Assess severity	If on immunotherapy : Do you have signs of endocrine toxicity or renal toxicity?	NEW
Review medications	Added: Omega 3 fatty acids (EPA, Fish Oil) (expert opinion); Prokinetics (metoclopramide, domperidone) for early satiety (expert opinion)	NEW
	Added footnote: Megestrol has potential for serious side effects...	NEW
Self-Care	Added: Sitting upright for 30-60 min helps digestion ; If food odours bother you, have you tried eating foods that are cold, with less odour, or avoiding being in the kitchen...? Do you have beliefs about certain foods (e.g., cultural...) or pre-existing diet (e.g., diabetes) that may affect your eating habits? Do you have a diary to track your food, fluid intake and weight? If your food intake has been very low for a long time, are you slowly increasing your intake... (to prevent refeeding syndrome)?	NEW
References	7 new evidence sources; 1 outdated source removed	NEW
Section of guide	Changes for BLEEDING	Status
Definition	Added: wound or ulcer to the list of factors that cause bleeding	Update
Assess severity	Added: Examples for amounts of blood loss: Minor (e.g., 1 tsp) and time frame for problems with blood clotting (e.g., >10-15 min)	Update
	If on immunotherapy : Bruising or bleeding more easily than normal? Do you have any blood: In your nose and mouth? Do you have signs of hematological adverse effects? Results of your last liver function blood test?	NEW
	Added: NSAIDs and herbal to examples increasing risk of bleeding	Update
Review medications	Changed evidence for Mesna: downgraded effective to likely effective	Update
	Added: Tranexamic acid (likely effective); Pantoprazole IV for GI bleeding (expert opinion); Octreotide IV for GI bleeding (expert opinion)	NEW
	If on immunotherapy for immune-mediated adverse events: Corticosteroids for hepatitis, hemophilia, hemolytic uremic syndrome (expert opinion); Factor replacement for hemophilia (expert opinion); Eculizumab for hemolytic uremic syndrome (expert opinion)	NEW
Self-Care	Removed: What is your goal for managing the bleeding	Remove
References	9 new evidence sources; 1 outdated source removed	NEW

continued...

Section of guide	Changes for BREATHLESSNESS/ DYSPNEA	Status
Assess severity	Added: new assessment items relevant for cancer treatment-related cardiotoxicity (♥ symbol). (F Kelly et al. 2017). <ul style="list-style-type: none"> • new cough or wheezing • chest pain goes away with: Rest or Medication • gained or lost weight in the last week • raised the head of bed or increased number of pillows to sleep • swelling in hands, ankles, feet, legs or stomach • have a fast heartbeat that does not slow down when you rest 	NEW
	Added: Do you know your last red blood cell count? Do you have new pale skin or bluish colour in your nail beds?	NEW
	If on immunotherapy : Do you have signs of pneumonitis or cardiovascular toxicity?	NEW
Review medications	Added: Non-invasive ventilation (likely effective) Bronchodilators (expert opinion)	NEW
	Clarified: supplemental oxygen is intended for hypoxic patients only.	Update
	Added: medications for cardiology: diuretics (effective); nitrates (benefits balanced with harms)	NEW
	If on immunotherapy : medications for pneumonitis: corticosteroids, infliximab, mycophenolate mofetil, or cyclophosphamide	NEW
Self-Care	Added: Use of a humidifier? Are you trying to conserve your energy? When breathing is stable, have you tried 15-30 min of physical activity (e.g., walking) at least twice a week? If you smoke, have you tried to stop?	NEW
	Added: Self-care items (for cardiology): a) Do you weigh yourself daily? B) Have you tried limiting your salt intake to under 1/2 tsp. (< 2000 mg) per day? C) Are you trying to drink fluids, 6-8 glasses per day? D) If you drink >1-2 alcohol drinks/day, have you tried to reduce to 1 drink/day?	NEW
References	15 new evidence sources; 2 outdated sources removed	NEW
Section of guide	Changes for CONSTIPATION	Status
Assess severity	Added: Do you have loss of bladder or bowel control, numbness in your fingers, toes or buttocks, feel unsteady on feet, or difficulty walking? Do you have a fever > 38° C? Are you feeling dehydrated?	NEW
	If on immunotherapy : Do you have signs of hypothyroidism or autonomic neuropathy	NEW
Review medications	Removed Docusate sodium (Colace®) due to lack of evidence	Remove
	Added: Sorbitol (expert opinion); Amidotrizoate if laxative resistant /advanced ca (likely effective)	NEW
Self-Care	Added: Are you trying to use the toilet 30-60 minutes after meals? Are you trying to limit your intake of caffeine or alcohol?	NEW
References	8 new evidence sources; 0 outdated sources removed	NEW
Section of guide	Changes for DEPRESSION	Status
Assess severity	Added: Are you currently receiving professional care for depression? Spiritual/religious concerns?	NEW
	Added: If on immunotherapy : Do you have signs of hyperthyroidism?	NEW
Review medications	Added: SNRIs (effective); psychostimulants (effective); other antidepressants (effective)	NEW
Self-Care	Added: creative therapies (e.g., art, dance, music)? If spiritual/religious concerns, have you tried spiritual counselling? Are you agreeable to a referral to mental health professional?	NEW
References	7 new evidence sources; 0 outdated sources removed	NEW

continued...

Section of guide	Changes for DIARRHEA	Status
Assess severity	Added: Any recent travel or contact with others with diarrhea? Do you have any rectal or ostomy skin breakdown?	NEW
	Added: For patients on immunotherapy and triaged higher: Bowel movements/day above normal? Ostomy: increase in output above normal? Diarrhea overnight or new incontinence? Blood or mucus in stool? Pain in abdomen, cramping, bloating?	NEW
	Added: for patients on immunotherapy : New severe fatigue, headache, rash, cough, nausea, breathlessness, weight loss, vision changes, eye pain, muscle weakness, joint pains, or mood changes	NEW
Review medications	Changed: First line treatment to the medication Loperamide	Update
	Added: for patients on immunotherapy : Loperamide for moderate diarrhea (expert opinion); Corticosteroids/prednisone, Infliximab, Vedolizumab or Budesonide for severe diarrhea (expert opinion); Corticosteroid cream if rectal skin irritated (expert opinion)	NEW
	New Footnote: For radiation induced diarrhea... oral antibiotics are generally not recommended	Update
Self-Care	Added: Cleanse perianal skin with warm water (+/- mild soap) after each stool. Moisture barrier cream if not on radiation therapy. Hydrocolloid dressings may be used as a physical barrier to protect skin. Have you spoken to a dietitian? Have you tried strategies to help with coping: carefully plan all outings, carry a change of clothes, know the location of restrooms, use absorbent undergarments.	NEW
	Removed: Were you taking probiotics with lactobacillus to prevent diarrhea? due to inconsistent evidence	Remove
References	13 new evidence sources; 4 outdated sources removed	NEW
Section of guide	Changes for FATIGUE	Status
Assess severity	Added: Do you have a fever > 38° C? Do you know the results of your last hemoglobin (Hgb) blood test? Have you lost or gained weight in the last 4 weeks without trying?	NEW
	Added: For those on immunotherapy : Do you have signs of endocrine toxicity, pneumonitis, cardiovascular toxicity, hepatic toxicity, myositis hemolytic uremic syndrome	NEW
Review medications	Added: Methylphenidate (expert opinion); Corticosteroids (benefits balanced with harms).	NEW
	Added Footnotes: Methylphenidate maybe considered after ruling out other causes; Corticosteroids offer short-lived benefit; long-term use is associated with significant toxicities	??
Self-Care	Added: Do you have a diary to track your fatigue patterns...? Ensure light exposure soon after waking? Have you tried home-based bright white light therapy?	NEW
References	14 new evidence sources; 0 outdated sources removed	NEW
Section of guide	Changes for FEBRILE NEUTROPENIA	Status
Definition	Revised: An absolute neutrophil count (ANC) < 500 cells/mcl OR an ANC < 1000 cells/mcl and a predicted decline to 500 cells/mcl or less over the next 48 hours AND a single oral temperature of ≥38.3° C (101 °F) or a temperature of ≥38.0° C (100.4 °F) for ≥1 hour.	Update
Assess severity	Added: What was date of your last chemotherapy or immunotherapy ? Have you been recently taking any antibiotics? Do you have an oral temperature of ≥38.0° C: Yes for <1 hour for Moderate and Yes for ≥1 hour for severe; Do you have any other symptoms?	NEW
Triage patient	New: Moderate triage was added for patients with an oral temperature of ≥38.0° for less than 1 hour, and/or having other concurrent symptoms, and/or very worried. New triage instruction: → If ≥38.0° for <1 hour, advise to notify if still ≥38.0 after 1 hour has elapsed.	NEW
Review medications	Added: “for at risk patients” for G(M)-CSF (effective). Footnote: G-CSF for patients with a >20% risk of developing febrile neutropenia.	Update
	Added: “for high risk patients” for Antibiotics to prevent infection (effective). Footnote: Prophylactic antibiotic patients with an expected duration of neutropenia for >7 days.	Update
	Added: Antifungals to prevent infection for at-risk patients (effective). Footnote: Antifungal prophylaxis should be reserved for patients with an expected duration of neutropenia for >7 days.	NEW
	Added: Antivirals for select at-risk patients (effective); Footnote: select patients are at risk for certain viral infections...	NEW
Self-Care	Added: If taking temperature, avoid rectal temperature measurements; and/or using alcohol-based sanitizer; Are you trying to drink fluids, 6-8 glasses/day to stay hydrated? Constipation and straining during bowel movements can cause trauma to rectal tissue; Have you spoken to a clinician about getting an annual flu shot and other vaccines (with inactivated vaccine)?	NEW
References	9 new evidence sources; 1 outdated source removed	NEW

continued...

Section of guide	Changes for MOUTH SORES/STOMATITIS	Status
Assess severity	Added: Do you have a fever > 38° C? Are you able to eat? Response: Yes, soft food for Moderate; Are you feeling dehydrated?	NEW
Review medications	Added: morphine mouth wash;	NEW
	Added: topical anesthetics (lidocaine) (expert opinion); transdermal fentanyl (expert opinion); Mucosal coating agents for pain (expert opinion); Saliva substitutes (expert opinion); Topical steroids for mouth sores from targeted therapies (expert Opinion); Nystatin for oral candida (expert opinion)	NEW
	Added footnotes: Some benzydamine HCl formulations contain alcohol; 'Magic' Mouthwash not recommended for practice; Local anesthetics for short term pain relief can make it hard to swallow/increased choking.	NEW
Self-Care	Added: If on pain medicine, have you tried taking before meals for pain relief while eating? If eating is difficult, have you spoken with a dietitian or considered meal supplements?	NEW
References	5 new evidence sources; 4 outdated sources removed	NEW
Section of guide	Changes for NAUSEA & VOMITING	Status
Assess severity	Changed ESAS cut-off scores for Nausea from 1-3=Mild and 4-10 = Moderate to 1-3=Mild, 4-6=Moderate, and 7-10 = Severe	Update
	Added: What is the amount of vomit? Have you lost weight in the last 1-2 weeks without trying? Taking medicines that can cause nausea/vomiting?	NEW
	Added: for those on immunotherapy : Do you have signs of endocrine toxicity; autonomic neuropathy; aseptic meningitis; hepatic toxicity; GI toxicity; hemolytic uremic syndrome	NEW
Review medications	Added: Olanzapine (effective); Netupitant/palonosetron (effective); progestins (likely effective); Cyclizine (expert opinion), dimenhydrinate (expert opinion); methotrimeprazine (expert opinion)	NEW
	Added footnotes: Triple Drug is intended for high emetic risk; Patients are at increased risk of opioid overdose and serious side effects when taking gabapentin with an opioid	Update
	Removed footnote: Metopimazine is not recommended for practice	Remove
Self-Care	Added: Are you avoiding tobacco and alcohol? If vomiting, have you been keeping track of the number of episodes per 24 hours?	NEW
	Removed: Are you wearing loose clothing?	Remove
References	13 new evidence sources; 3 outdated sources removed	NEW
Section of guide	Changes for PAIN	Status
Assess severity	Added: Do you know what may be causing the pain (surgery, injury, illness, pre-existing pain or arthritis, spinal cord compression)? Are you able to easily distract yourself from the pain? Do you have loss of bladder or bowel control, numbness in your fingers, toes or buttocks, feel unsteady on feet, or difficulty walking? Do you feel confused, very sleepy, hallucinate, or muscle spasms? Do you have (risk factors for opioid misuse)?	NEW
	Changed: Best/worst pain rating to Rate worst pain and pain 2hr after medicine?	Update
	If on immunotherapy : Do you have signs of musculoskeletal toxicities, hepatic toxicity, endocrine toxicity, or ocular toxicity?	NEW
Review medications	Added: Nefopam (likely effective); Tapentadol (effective); Transmucosal fentanyl (effective)	NEW
	Added for Chronic pain: Transdermal buprenorphine, transdermal fentanyl, systemic anesthetics (effective); Cannabinoids (likely effective)	NEW
	Added for refractory pain: Ketamine (balanced benefits/harms)	NEW
	Added for immunotherapy r/t pain: Prednisone (expert opinion)	NEW
	Removed: docusate sodium for prophylactic constipation treatment.	Remove
	Added footnotes: Use NSAIDS with caution due to risk of renal, GI, or cardiac toxicities, thrombocytopenia, or bleeding disorder; Use opioids with caution in patients with kidney or liver dysfunction.; Avoid tricyclic antidepressants in the elderly.	NEW
Self-Care	Added: heat/cold, TENS, hypnosis, mindfulness-based stress reduction	NEW
References	15 new evidence sources; 4 outdated sources removed	NEW

continued...

Section of guide	Changes for PERIPHERAL NEUROPATHY	Status
Definition	Added: Other causes of peripheral neuropathy include surgical trauma, treatment with immune checkpoint inhibitors, and spine radiation	NEW
Assess severity	Added: Tell me about the neuropathy (location...)	NEW
	If on immunotherapy : Pain in lower back or thighs; New rapid onset of weakness in arms or legs; Constipation or urinary problems; Neuropathy interferes with daily activities; Do you have: difficulty walking, vision changes, breathlessness, swallowing/speaking problems, sweating changes?	NEW
Review medications	Added: Gabapentin and opioid combination (likely effective); Corticosteroids (expert opinion); Tapentadol and methadone (expert opinion)	NEW
	Added footnote: Tricyclic Antidepressants should be avoided in elderly	NEW
Self-Care	Added: Neuropathy in hands: Do you wear gloves when cooking, using the oven, or doing dishes? Are you avoiding exposing your fingers and toes to very cold temperatures? For urinary issues, do you try to empty bladder at same time every day, bladder re-training exercises, and drink adequate fluids? Massage, yoga, deep breathing, meditation, or guided imagery; Have you spoken with a clinician or pharmacist or dietitian about the peripheral neuropathy?	NEW
References	10 new evidence sources; 2 outdated sources removed	NEW
Section of guide	Changes for SKIN REACTION TO RADIATION THERAPY	Status
Assess severity	Added: Size of skin reaction(s)? Do you feel itchy at the skin reaction area? Is there any odour from the skin reaction area?	NEW
	Changed: Response options for bleeding? from Mild=No, Moderate= Yes, some, Severe=Yes, gross changed to Mild=No and Severe= Yes	NEW
Review medications	Changed: Low-dose corticosteroid cream (likely effective); Silver Sulfadiazine (Flamazine) if infection is confirmed; Dressing changes to Hydrocolloid & hydrogel Dressings	Update
	Added: Infection: Topical antibiotics (expert opinion); Moist desquamation: silicone dressings (expert opinion)	NEW
	Added footnotes: Low-dose corticosteroid cream should be used sparingly. Silver sulfadiazine should not be used if allergy to sulfa, history of severe renal or hepatic disease or during pregnancy. Hydrocolloid & hydrogel dressings are not advised for infected wounds and wounds with heavy exudate, or applied directly prior to treatment	NEW
Self-Care	Added: Not rubbing/scratching your skin	NEW
References	4 new evidence sources; 1 outdated source removed	NEW
Section of guide	Changes for SLEEP PROBLEMS CHANGES	Status
Review medications	Added: Non-benzodiazepine Hypnotics (expert opinion); Tricyclic Antidepressants (expert opinion); Neuroleptics (expert opinion); Herbal supplements (Melatonin, Kava, Valerian) (expert opinion); Melatonin (expert opinion) Antipsychotics (expert opinion)	NEW
	Changed Benzodiazepines to expert opinion	Update
	Added footnotes: Tricyclic Antidepressants should be avoided in the elderly; Antipsychotics are a last option	NEW
Self-Care	Added: Do you spend at least four hours awake before bedtime? Do you have a comfortable sleep environment? Suggest to remove bedroom clock and avoid computer screens. Do you know what to avoid? Suggest: limiting caffeine after noon, limit smoking/alcohol, spicy/heavy meals, excessive fluids...	NEW
References	2 new evidence sources; 0 outdated sources removed	NEW
Section	Changes for EXAMPLE GENERAL ASSESSMENT	Status
Symptom(s)	Added: Mouth dryness/Xerostomia and Skin Rash	NEW
General assessment	Added: Immune Checkpoint Inhibitor Therapy; Other systemic therapy; and Surgery	NEW

among members of the quality improvement team that it would be reasonable for nurses to focus on discussing at least three self-care strategies to help patients manage their symptom(s). Other minor overall changes were used to update the assessment instrument for ESAS-r (Watanabe et al., 2011), ensured consistent use of assessment questions across practice guides (e.g., dehydration), reorganized medications by strength of evidence (unless a stepped approach is used), and added bold to key words in the self-care strategies.

The changes for specific practice guides are summarized in Table 1. The full list of changes with rationale is available on the COSTaRS website (<https://ktcanada.ohri.ca/costars>). A major change to breathlessness was the addition of evidence from cardiotoxicity clinical practice guides (Kelly et al., 2017).

Cardiotoxicity is becoming a more recognized problem for oncology patients and breathlessness is the most common symptom that overlaps with cancer treatment-related symptoms. The revised breathlessness practice guide has some extra assessment questions, as well as medications and self-care strategies for managing cardiotoxicity-related breathlessness. These changes are indicated with a heart symbol (♥). Other practice guides with more changes were diarrhea, febrile neutropenia, constipation, and pain. For diarrhea, most changes were specific to managing patients receiving ICIs. Changes to managing febrile neutropenia were focused on revising the definition and assessment to triage severity based on length of time for the fever. As well, additional medications for febrile neutropenia prevention (antibiotics, antifungals, antivirals) were added with foot notes. For constipation and pain, assessment items were added for spinal cord compression. And for pain, assessment now includes opioid toxicity (e.g., confusion, hallucinations, muscle spasms).

For medications, there were some new medications added with the most added for mouth sores and pain. Some now have stronger evidence to support their use (e.g., from expert opinion to likely effective for Benzodiazepines for anxiety; low-dose corticosteroid cream for radiation skin reaction) and some were downgraded (e.g., Mesna from effective to likely effective for bleeding). According to the updated evidence, we

should no longer be using docusate sodium (Colace) for constipation (lack of evidence) and probiotics with lactobacillus for diarrhea (inconsistent evidence). Finally, new medications were added for managing chronic pain.

CONCLUSIONS

In summary, these evidence-informed practice guides are user-friendly tools for nurses and other healthcare professionals to use when providing cancer symptom management. The practice guides are available in English or French at: www.cano-acio.ca/triage-remote-protocols and www.ktcanada.ohri.ca/costars. An online training program and video are also available at www.ktcanada.ohri.ca/costars. Our COSTaRS network has over 100 members who receive updates on COSTaRS and new research. To become a member of the network, please send your request to decisionaid@ohri.ca.

FUNDING

Updating of the COSTaRS symptom practice guides was completed with funding from the Canadian Institutes of Health Research (Funding Reference Number: 152607) as part of a study focused on establishing COSTaRS research priorities and funding from the University Research Chair in Knowledge Translation to Patients held by Dawn Stacey.

ACKNOWLEDGEMENTS

We would like to thank John (Junqiang Zhao) for his help in extracting data and revising the practice guides and Victoria Suwalska for her help with creating new practice guides. Members of the immunotherapy working group (Jennifer Anderson, Chyanne Dey, Carolyn Fifield, Pam Ginex, Leah Jodoin, Karey McCann, Kristie Morydz, Jennifer Newton, Cindy Railton) and the COSTaRS team involved in the 2020 update include Dawn Stacey, Julie Baisley, Meg Carley, Kim Chapman, Andra Davis, Doris Howell, Barb Hues, Lindsay Jibb, Lynne Jolicoeur, Craig Kuziemsky, Luisa Luciani Castiglia, Claire Ludwig, Gail Macartney, Lorraine Martelli, Katie Nicol, Komal Patel, Amanda Ross-White, Brenda Sabo, Anne Syme, Joy Tarasuk, Tracy Truant, and Linda Watson.

REFERENCES

- Jibb, L. A., Stacey, D., Carley, M., Davis, A., Graham, I. D., Green, E., ... Truant, T. (2019). Research priorities for the pan-Canadian Oncology Symptom Triage and Remote Support practice guides: A modified nominal group consensus. *Curr Oncol*, 26(3), 173–182. <https://doi.org/10.3747/co.26.4247>
- Kelly, F., Carroll, S. L., Carley, M., Dent, S., Shorr, R., Hu, J., ... Stacey, D. (2017). Symptom practice guide for telephone assessment of patients with cancer treatment-related cardiotoxic dyspnea: Adaptation and evaluation of acceptability. *Cardiooncology*, 3, 7. <https://doi.org/10.1186/s40959-017-0026-6>
- Stacey, D., Carley, M., & for the Pan-Canadian Oncology Symptom Triage and Remote Support Group. (2017). The pan-Canadian Oncology Symptom Triage and Remote Support (COSTaRS) - practice guides for symptom management in adults with cancer. *Canadian Oncology Nursing Journal*, 27(1), 92–98.
- Stacey, D., Ludwig, C., Jolicoeur, L., Carley, M., Balchin, K., Jibb, L., ... Martelli, L. (2020). Quality of telephone-based cancer symptom management by nurses: A quality improvement project. *Supportive Care in Cancer*. <https://doi.org/10.1007/s00520-020-05551-5>
- Watanabe, S. M., Nikolaichuk, C., Beaumont, C., Johnson, L., Myers, J., & Strasser, F. (2011). A multicenter study comparing two numerical versions of the Edmonton Symptom Assessment System in palliative care patients. *Journal of Pain and Symptom Management*, 41(2), 456–468. <https://doi.org/10.1016/j.jpainsymman.2010.04.020>