

Remote Symptom Practice Guides for Adults on Cancer Treatments

Of the Pan-Canadian Oncology Symptom Triage and Remote Support (COSTaRS) Team

Pocket Guide

January 2020

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Overview and Practice Guide Development

Management of cancer treatment-related symptoms is an important safety issue given that symptoms can become life-threatening and often occur when patients are at home. Over 50% of cancer nurses in Canada provide remote support, primarily by telephone.[1,2] Despite that higher quality telephone services require use of symptom practice guides to minimize risk, access to symptom practice guides and their use is variable.[1,2] With funding from the Canadian Partnership Against Cancer, in 2008 we established a pan-Canadian Steering Committee with representation from eight provinces to develop practice guides for specific common symptoms.

The practice guides were developed using a systematic process guided by CAN-IMPLEMENT©:[3-5]

1. We convened a pan-Canadian Oncology Symptom Triage and Remote Support (COSTaRS) Steering Committee including researchers, an information systems researcher, library scientist, advanced practice nurses, and nurse leaders.
2. We conducted a systematic review for *each symptom* to identify clinical practice guideline(s) published in the previous 5 years. Two identified guidelines (fatigue, anxiety/depression) were developed by pan-Canadian panels using rigorous processes.[6,7] Guidelines are syntheses of the best available evidence and are designed to support decision making in practice and health policy.[8] However, identified clinical practice guidelines were not adequate for remote symptom support.
3. We developed 13 symptom practice guides based on the available clinical practice guidelines (median 3 guidelines per practice guide; range 1 to 7). In total, we identified > 40 practice guidelines and their quality was appraised using the AGREE instrument (range 8% to 87%).[9] Higher rigour scores indicate higher confidence that potential biases in guideline development were addressed, and recommendations are valid (both internally and externally) and feasible for practice.[10] Principles for developing the symptom practice guides included:
    - □ Meeting the criteria on the AGREE rigour sub-scale items (e.g. explicit recommendations, linked to evidence, based on systematic review, reviewed by experts).
    - □ Adding relevant questions from the valid and reliable Edmonton Symptom Assessment System (ESAS); a widely used screening instrument for routinely identifying symptoms in cancer patients seen in Canadian programs.[11,12]
    - □ Enhancing usability for remote symptom support and with the potential to integrate into an electronic health record.
    - □ Using plain language to facilitate communication between nurses using the practice guides and patients/families (Flesch–Kincaid Grade Level 6.4).

    Each symptom practice guide has five recommendations for the nurse: a) assess symptom severity; b) triage patient for symptom management based on highest severity; c) review medications being used for the symptom; d) review self-care strategies (presented using motivational interviewing techniques):[13] and e) summarize and document the plan agreed upon with the patient.
4. We tested the practice guide usability with cancer nurses and revealed that they: are easy to read; provide just the right amount of information; use appropriate terms; are likely to fit with clinical work flow; and have excellent self-care strategies.
5. We circulated the 13 practice guides for review by cancer experts across Canada. They validated the content of the practice guides and identified the need for local adaptation to integrate the practice guides with their current approaches for handling remote symptom assessments.
6. In March 2013, practice guides were updated with evidence from systematic reviews to identify guidelines published up until the end of December 2012. We circulated the 13 updated practice guides for review by the COSTaRS committee members.
7. In January 2016, with funding from the Canadian Cancer Society (#703679), the 13 symptom practice guides were updated with evidence from systematic reviews to identify guidelines published up to August 2015. As well, new practice guides for pain and sleep changes were added. AGREE Rigour Scores for source guidelines were removed given inconsistent reporting.

Evidence ratings were changed to indicate how well the medications work (e.g. effective, likely effective, or expert opinion). The 15 practice guides were reviewed by the current COSTaRS committee members and a summary of changes for the 2016 update are available at http://www.canadianoncologynursingjournal.com/index.php/conj/article/view/764.

8. In January 2020, the 15 symptom practice guides were updated with evidence using systematic review methods described previously and new practice guides for Mouth Dryness/Xerostomia and Skin Rash were added. At the COSTaRS priority setting meeting in 2017, adding evidence for patients receiving Immune Checkpoint Inhibitor therapy into the practice guides was identified as high priority given the increased use of immunotherapy and the special considerations required for managing treatment related symptoms. Key assessment and self-care items for patients receiving immunotherapy were added. End-users asked how severity assessment correlated with the NCI-CTCAE grading that they use in their assessments, clinical documentation and communications with physicians therefore NCI-CTCAE grading has been linked to applicable assessment questions in the practice guides.

In summary, we have developed 17 user-friendly remote symptom practice guides based on a synthesis of the best available evidence, validated the practice guides with oncology nurses, and used plain language to facilitate use with patients. Now they are available to be used in routine remote support practices.

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Example General Assessment Form

Practice Guides for the Remote Assessment, Triage, and Self-care of Symptoms in Adults Undergoing Cancer Treatment

Date and time of encounter _____ Type of encounter (phone/in-person)_____

Type of Cancer(s) _____ Primary Oncologist _____

Other practitioners (most responsible) _____

1. Which symptom(s)

Anxiety	Depression	Mouth sores/Stomatitis	Skin Reaction to radiation
Appetite Loss	Diarrhea	Nausea & Vomiting	Sleep changes
Bleeding	Fatigue/Tiredness	Pain	Other
Breathlessness	Febrile Neutropenia	Peripheral Neuropathy	
Constipation	Mouth dryness/Xerostomia	Skin Rash	

2. Tell me about your symptom(s) (Supporting Evidence: Expert Consensus)

(PQRST- Provoking factors, Quality, Radiating, Relieving factors, Severity, Other symptoms, Timing, Triggers, Location)

3. Conduct general symptom assessment (Supporting Evidence: Expert Consensus)

Receiving cancer treatment:

Radiation: Site of radiation

Chemotherapy: Name of Chemotherapy

Immune Checkpoint Inhibitor Therapy: Name of Immune Checkpoint Inhibitor

Other systemic therapy (e.g. antiestrogen, monoclonal antibodies, targeted therapies): Name of therapy:

Surgery:

Date of last treatment(s)

Length of time since symptom started?

New symptom?

Told symptom could occur?

Other symptoms?

Recent exposure to known virus/flu?

4. Assess current use of medications, herbs, natural health products (name, dose, current use)

Medication	Dose Prescribed	Taking as prescribed/Last dose if PRN
		Yes No /
		Yes No /

Are any medications new or are there recent changes?

5. See relevant symptom practice guide(s) for further assessment, triage and self-care.

Anxiety Practice Guide

Anxiety: an emotional or physiologic response to known or unknown causes that ranges from a normal reaction to extreme dysfunction. It may impact on decision making, adherence to treatment, functioning, or quality of life; nervousness; concern; feeling of worry; apprehension.[1-3]

1. Assess severity of the anxiety (Supporting evidence: 10 guidelines)[1-10]

Tell me what number from 0 to 10 best describes how anxious you are feeling (0= "no anxiety"; 10= "worst possible anxiety")[1,3,4,11]	1 – 3	4 - 6	7 - 10
Are you having panic attacks: periods/spells of sudden fear, discomfort, intense worry, uneasiness?[1-4]	No	Yes, some	Yes, many
Does your anxiety affect your daily activities?[1-4,12]	Not at all[G1]	Yes, some [G2]	Yes, a lot[G≥3]
Does your anxiety affect your sleep?[1-4]	Not at all	Yes, some	Yes, a lot
Do any of these apply to you?[1-4] female, waiting for test results, financial problems, history of anxiety or depression, younger age (<30), lack of social support, alcohol/ substance use/withdrawal, not exercising, dependent children, recurrent/advanced disease, on steroids, recently completed treatment	No	Yes, some	Yes, many
Do have any concerns that are making you feel more anxious: [1-4] life events, new information about cancer/treatment, spiritual/religious concerns?	No	Yes, some	
Do you have any other symptoms?[1-4] fatigue, breathlessness, pain, sleep changes	None	Some	Yes, many
➔ Do you have (signs of hyperthyroidism):[5-10] weight loss, heart pounding or racing, tremors, feeling overheated, diarrhea	No		Yes
Have you had recurring thoughts of dying, trying to kill yourself or harming yourself or others?[1,3,4]	No		Yes
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage patient for symptom management based on highest severity (Supporting evidence: 4 guidelines)[1-4]	Review self-care. Verify medications.	Review self-care. Verify medications. Advise to notify if symptom worsens, new symptoms occur, or no improvement in 1-2 days	If potential for harm, refer for further evaluation immediately
			If no, refer for non-urgent medical attention. Review self-care. Verify medications.
			Alert clinician if on immunotherapy

Legend: ➔ Immune Checkpoint Inhibitor therapy; NCI-CTCAE G1=Grade 1, G2=Grade 2, ≥G3=Grade 3 or higher

If patient has other symptoms, did you refer to the relevant practice guide(s)?

3. Review medications patient is using for anxiety, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 4 guidelines)[1-4]

Examples of medications for anxiety*	Notes (e.g. dose)	Evidence
Benzodiazepines - lorazepam (Ativan®), diazepam, (Valium®), alprazolam (Xanax®)[1-4]		Likely effective
SSRIs - fluoxetine (Prozac®), sertraline (Zoloft®), paroxetine (Paxil®), citalopram (Celexa®), fluvoxamine (Luvox®), escitalopram (Lexapro®)[1,3,4]		Expert opinion

*Use of medications should be based on severity of anxiety and potential for interaction with other medications.[1,4] Benzodiazepines are intended for short term use. Caution: may cause confusion, ataxia and falls in the elderly.[1,4]

4. Review 3 or more self-care strategies (Supporting evidence: 5 guidelines)[1-4,13]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	What is your goal for managing when you feel anxious?
2	**What helps** when you feel anxious? Reinforce as appropriate.
3	Have you shared your concerns and worries with your health provider?[2-4]
4	What are you doing for **physical activity** including yoga?[1-3]
5	Do you participate in any **support groups** and/or have **family/friends you can rely on** for support?[1-4]
6	Have you tried **relaxation therapy**, yoga, breathing techniques, listening to music, guided imagery?[1-4,13]
7	Have you tried **massage therapy** with or without aromatherapy?[1-3]
8	Have you tried a program such as **cognitive-behavioural therapy**, mindfulness-based stress reduction, or received personal counseling that provides more in-depth guidance on managing anxiety and problem solving?[1-4]
9	If your concerns are spiritual or religious in nature, have you tried spiritual counseling, meaning-focused meditation, prayer, worship, or other **spiritual activities**?[2,3]
10	Would **more information about your symptoms, cancer or your treatment** help to ease your worries? If yes, provide relevant information or suggest resources.[1-4]

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies and if appropriate, medication use
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not confident, 10=very confident)?
- Patient agrees to use medication to be consistent with prescribed regimen
- Referral (service & date):
- Patient agrees to seek medical attention; specify time frame:
- Advise to call back in 1-2 days if no improvement, symptom worsens, or new symptoms occur

References: 1) Howell 2015; 2) ONS 2017; 3) NCCN 2018; 4) Butow 2015; 5) Puzanov 2017; 6) Hryniewicki 2018; 7) BCCA 2017; 8) Brahmer 2018; 9) CCO 2018; 10) Haanen 2017; 11) Watanabe 2011; 12) NIH-NCI CTCAE 2017; 13) Bradt 2016 (see pages 40-48 for full references)

Appetite Loss Practice Guide

Anorexia: An involuntary loss of appetite;[1-3] being without hunger.

1. Assess severity of the appetite loss (Supporting evidence: 8 guidelines)[1-8]

Tell me what number from 0 to 10 best describes your appetite (0= "best appetite" and 10= "Worst possible lack of appetite")[2-4,9]	1-3	4-6	7-10
Are you worried about your lack of appetite?[1-4]	No/Some	Yes, very	
How much have you eaten in the past 24 hours (e.g. at each meal)?[2-4,10]	Less than normal[G1]	Much less than normal[G2]	Not eating at all[G≥3]
Have you lost weight in the last 4 weeks without trying?[1-4] Amount: Unsure	0-2.9%	3-9.9%	≥10%
How much fluid are you drinking per day?[2,3]	6-8 glasses	1-5 glasses	Sips
Are you feeling dehydrated, which can include feeling dizzy, a dry mouth, increased thirst, feeling faint, rapid heart rate, decreased amount of urine?[2-4,10]	No [G0]	Yes, some [G1]	Yes, a lot [G≥2]
Is there anything causing your lack of appetite:[1-4] recent surgery/treatment, new medication, other	No	Yes, some	Yes, many
Do you have any other symptoms?[1-4] sore mouth, early fullness, taste/smell changes, nausea/vomiting, swallowing problems, pain, constipation, diarrhea, fatigue, depression, breathlessness	None	Some	Yes, many
➔ Do you have (signs of endocrine toxicity):[5-8] fatigue, headache, eyes sensitive to light, confusion, dry skin, hair loss, puffy face, constipation, nausea, fever	No		Yes
➔ Do you have (signs of renal toxicity):[8] decreased urine, blood in urine, swelling of hands or legs	No		Yes
Does your poor appetite affect your daily activities?[1-4]	No	Yes, some	Yes, a lot
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage patient for symptom management based on highest severity (Supporting evidence: 2 guidelines)[2,3]	Review self-care. Verify medications.	Review self-care. Verify medications. Advise to notify if symptom worsens, new symptoms occur, or no improvement in 1-2 days.	If severe loss of appetite is stabilized, review self-care. If severe loss of appetite is new refer for medical attention immediately. Alert clinician if on immunotherapy.

Legend: ➔ Immune Checkpoint Inhibitor therapy; NCI-CTCAE G1=Grade 1, G2=Grade 2, ≥G3=Grade 3 or higher

If patient has other symptoms, did you refer to the relevant practice guide(s)?

3. Review medications patient is using for appetite loss, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 4 guidelines)[1-4]

Examples of medications for appetite*	Notes (e.g. dose)	Evidence
Megestrol (Megace®)[1-4]		Effective
Corticosteroids - dexamethasone (Decadron®), prednisone[1-4]		Effective
Omega 3 fatty acids (EPA, Fish Oil)[3,4]		Expert Opinion
Prokinetics (metoclopramide, domperidone) for early satiety and nausea[2-4]		Expert Opinion

* Megestrol has potential for serious side effects such as blood clot.[4] Corticosteroids offer short-lived benefit; long-term use is associated with significant toxicities.[1,3,4] Cannabis/Cannabinoids are not recommended.[1,3,4]

4. Review 3 or more self-care strategies (Supporting evidence: 4 guidelines)[1-4]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	What is your **goal** for improving your appetite?[2,3]
2	**What helps** when you feel like you are not hungry?[2,3] Reinforce as appropriate.
3	Are you trying to **eat 5-6 small meals**?[2-4] Sitting upright for 30-60 min helps digestion.[3]
4	If food odours bother you, have you tried **eating foods that are cold, with less odour**, or avoiding being in the kitchen during meal preparation?[3]
5	Are you trying to **eat more** when you **feel most hungry**?[3]
6	Are you trying to **eat foods that are higher in protein and calories**?[2-4]
7	Do you have **beliefs** about certain foods (e.g. cultural or think some foods cause cancer) or **pre-existing diet** (e.g. diabetes) that may affect your eating habits?[1-4]
8	Are you able to **obtain groceries and prepare meals** (access to food, financial resources)? If not, suggest buying convenience foods or asking friends/family for help.[2,3]
9	Are you drinking **higher energy and protein drinks** (Ensure, Glucerna)?[1-4]
10	Are you **staying** as **active** as possible?[2-4] (e.g. walking 15-20 minutes 1-2x/day; 30-60 minutes 3-5x/week)
11	Do you have a **diary** to track your food, fluid intake and weight?[2-4]
12	If your food intake has been very low for a long time, are you slowly increasing your intake over several days (to prevent refeeding syndrome)?[3,4]
13	Have you spoken with a dietitian?[1-4] If you are having taste changes, they can suggest ways to help lessen your symptoms.
14	Would **more information** about your symptoms help you to manage them better?[2,3] If yes, provide appropriate information or suggest resources.

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies and if appropriate, medication use
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not confident, 10=very confident)?
- Patient agrees to use medication to be consistent with prescribed regimen.
- Referral (service & date):
- Patient agrees to seek medical attention; specify time frame:
- Advise to call back in 1-2 days if no improvement, symptom worsens, or new symptoms occur

References: 1) ONS 2017; 2) CCO 2012; 3) BCCA 2014; 4) Arends 2017; 5) CCO 2018; 6) Haanen 2017; 7) NCCN 2018; 8) Puzanov 2017; 9) Watanabe 2011; 10) NIH-NCI CTCAE 2017 (see pages 40-48 for full references)

Bleeding Practice Guide

Bleeding: Loss of blood, bruising or petechiae that may be the result of a reduction in the quantity or functional quality of platelets, wound or ulcer, an alteration of clotting factors, a paraneoplastic syndrome, or a combination of these.[1]

1. Assess severity of the bleeding (Supporting evidence: 9 guidelines)[1-9]

Where are you bleeding from?[1,2]

How much blood loss?[1,2]	Minor (e.g. 1 tsp)	Some (e.g. 1 tbsp)	Gross (e.g. ¼ cup)
Are you worried about your bleeding[2]	No/Some	Yes, very	
Do you have any new bruises?[1]	No	Few	Generalized
➔ Bruising or bleeding more easily than normal?[3]	No		Yes
Have you had problems with blood clotting (e.g. >10-15min)?[1-6] Unsure	No		Yes
Do you have a fever > 38º C?[3-6,8,9] Unsure	No		Yes
Do you have any blood in your: stool or is it black/tarry?[1-9] urine?[1-3] vomit or does it look like coffee grounds?[1] phlegm/sputum when you cough?[1,2] nose and mouth?[3] other	No		Yes
If you are having menstrual periods has there been an increase bleeding?[1,2]	No	Yes, some	Yes, a lot
➔ Do you have (signs of hematological adverse effects): weak, pale, yellow skin/eyes[3-6]	No		Yes
Do you know what your last platelet count was?[1-3,5,7] Date: Unsure	≥ 100	20-99	< 20
➔ Results of your last liver function blood test?[3-8] AST/ALT:	≤ 3x ULN	>3-5x ULN	> 5x ULN
Total bilirubin:	≤1.5x ULN	1.5-3x ULN	> 3x ULN
Are you taking medicines that increase risk of bleeding?[2] (e.g., NSAIDs, acetylsaliscylic acid, warfarin, heparin, dalteparin, tinzaparin, apixaban enoxaparin, herbal). If warfarin: do you know your last INR blood count[1,2] Date: Unsure	No	Yes, acetylsalicylic acid	Yes, other blood thinners
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage patient for symptom management based on highest severity (Supporting evidence: 8 guidelines)[1,3-9]	Review self-care. Verify medications.	Review self-care. Verify medications. Advise to notify if symptom worsens, new symptoms occur, or no improvement in 12-24 hours.	Refer for medical attention immediately. Alert clinician if on immunotherapy.

Legend: ➔ Immune Checkpoint Inhibitor therapy

If patient has other symptoms, did you refer to the relevant practice guide(s)?

3. Review medications/treatment patient is using for bleeding, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 9 guidelines)[1,3-10]

Examples of medications for bleeding	Notes (e.g. dose)	Evidence
Platelet transfusion for thrombocytopenia[1,3-5,10]		Effective
Mesna oral or IV to prevent cystitis with bleeding[1,2]		Likely effective
Tranexamic acid (Cyklokapron®)[1]		Likely effective
Pantoprazole IV (Panto IV®) for GI bleeding[2]		Expert opinion
Octreotide IV (Sandostatin®) for GI bleeding[2]		Expert opinion
➔ Corticosteroids/prednisone[3-9]		Expert opinion
➔ Factor replacement for acquired hemophilia[3]		Expert opinion
➔ Eculizumab for hemolytic uremic syndrome[3]		Expert opinion

Legend: ➔ Immune Checkpoint Inhibitor therapy

4. Review 3 or more self-care strategies (Supporting evidence: 3 guidelines)[1-3]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	Are you trying to apply direct **pressure for 10-15 minutes** when the bleeding occurs?[1]
2	Are you trying to use **ice packs**?[1]
3	If you have a dressing, is there bleeding when it is changed? If yes, do you try to **minimize how often the dressing is done**, and use saline to help remove the dressing?[1]
4	Are you using any **special dressings** to control bleeding of a wound (e.g. non-stick gauze, medicated dressing, packing)?[1]
5	Have you spoken with a pharmacist or clinician about **medications** you are taking that **may affect bleeding**?[1-3]
6	Would **more information** about your symptoms help you to manage them better? If yes, provide appropriate information or suggest resources.[1]

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies and if appropriate, medication use
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not confident, 10=very confident)?
- Patient agrees to use medication to be consistent with prescribed regimen
- Referral (service & date):
- Patient agrees to seek medical attention; specify time frame:
- Advise to call back in 12-24 hours if no improvement, symptom worsens, or new symptoms occur

References: 1) ONS 2019; 2) CCNS 2014; 3) Brahmer 2018; 4) CCO 2018; 5) Puzanov 2017; 6) Hryniewicki 2018; 7) Haanen 2017; 8) NCCN 2018; 9) BCCA 2017; 10) Estcourt 2012 (see pages 40-48 for full references)

Breathlessness/Dyspnea Practice Guide

Breathlessness/Dyspnea: A subjective experience described as breathing discomfort of varying intensities (e.g. hard to breathe, feeling smothered, tightness in chest, unable to catch breath, panting, gasping.[1-3]

1. Assess severity of the breathlessness (Supporting evidence: 13 guidelines)[1-13]

What number from 0 to 10 best describes your shortness of breath (0= "no shortness of breath"; 10= "Worst possible shortness of breath"?[2,3,14]	1-3	4-6	7-10
Are you worried about your shortness of breath?[1-3]	No/Some	Yes, very	
Do you pause while talking every 5-15 seconds?[2,3]	No		Yes
Is your breathing noisy, rattily or congested?[2,3]	No		Yes
Do you have a new cough or wheezing?[3-5,7]	No	Yes (dry)	Yes (wet)
➔ Do you have (signs of pneumonitis): cough, wheezing, chest pain, fever, fatigue[1,8-13]	No		Yes
Do you wake suddenly short of breath?[2,3,5,7]	No		Yes
Do you have a fever > 38º C?[2,3] Unsure	No		Yes
Do you know your last red blood cell count?[3,15]	≥100[G1]	80-99[G2]	<80[G3]
Do you have new pale skin or bluish colour in your nail beds?[2,3]	No		Yes
Do you have chest pain?[2,3]	No		Yes
♥ Does it go away with rest or medication?[4]	Yes		No
What activity level are you short of breath?[2,3,5-7,15]	Moderate[G1]	Mild[G2]	At rest[G≥3]
Do you have any other symptoms?[1-4,7] Fatigue, Anxiety, Depression, Pain	No	Yes, some	Yes, many
♥ Have you gained or lost weight in the last week?[3-7] Unsure	No	≥4lbs in 2 days; 5lbs in 1 week	≥5lbs in 2 days
Have you raised the head of your bed or increased the number of pillows you need to sleep?[3-5,7]	No	Yes	Need to sleep in a chair
Do you have swelling in your hands, ankles, feet, legs or stomach?[3-5,7]	No	Yes, some	Yes, a lot
Do you have a fast heartbeat that does not slow down when you rest?[3-5,7]	No		Yes
➔Do you have (signs of cardiovascular toxicity): irregular heartbeat (e.g. too hard or too fast, skipping a beat, fluttering), fatigue[8,10,11]	No		Yes
Does your shortness of breath affect your daily activities?[3,4]	No	Yes, some	Yes, a lot
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage for symptom management based on highest severity (Supporting evidence: 9 guidelines)[2-4,8-13]	Review self-care. Verify medications.	Review self-care. Verify medications. Advise to notify if symptom worsens, new symptoms occur, or no improvement in 12-24 hours.	Refer for medical attention immediately. Alert clinician if on immunotherapy

Legend: ➔Immune Checkpoint Inhibitor therapy; ♥ Cardiology; NCI-CTCAE G1=Grade 1, G2=Grade 2, ≥G3=Grade 3+

If patient has other symptoms, did you refer to the relevant practice guide(s)?

3. Review medications for shortness of breath, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 14 guidelines)[1-6,8-13,16,17]

Examples of medications for shortness of breath*	Notes (e.g. dose)	Evidence
Immediate-release oral or parenteral opioids[1-3,5]		Effective
Non-invasive ventilation (CPAP mask)[1,2]		Likely effective
Oxygen for hypoxic patients[2,3]		Expert Opinion
Bronchodilators[3]		Expert Opinion
♥ Diuretics[3-6,16,17]		Effective
♥ Nitrates[16,17]		Benefits Balanced with Harm
➙ Corticosteroids, infliximab, mycophenolate mofetil, or cyclophosphamide for pneumonitis[8-13]		Expert Opinion

*Palliative oxygen is not recommended;[1,3,5,6,17]Other medications may be prescribed for heart failure[4-7,16-18]

4. Review 3 or more self-care strategies (Supporting evidence: 8 guidelines)[1-7,16]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	What is your comfort **goal** or acceptable level for this symptom?[1-3]
2	**What helps** when you are short of breath?[2,3] Reinforce as appropriate.
3	Have you tried a **fan, open window**, or humidifier to increase air flow to your face?[2,3]
4	Have you tried to **turn down the temperature** in your house?[1-3]
5	Are you trying to rest in **upright positions** that can help you breath?[1-3]
6	Are you trying different **relaxation** and **breathing exercises** (e.g. pursed lip breathing)?[1-3]
7	Are you trying to conserve your energy (e.g. balance activity with rest) or **use assistive devices** (e.g. wheelchair) to help with activities that cause your shortness of breath?[1-3]
8	When breathing is stable, have you tried **physical activity** (e.g. walking 15-30 min) at least twice a week?[2-4,7,16]
9	If you have difficulty eating, are you taking **nutrition supplements**[1]
10	♥ Do you weigh yourself daily (after waking & voiding, before dressing and eating)?[3-7]
11	♥ Have you tried **limiting your salt intake** to under 1/2 tsp (< 2000mg) per day?[4,6,7,16]
12	♥ Are you trying to **drink fluids, 6-8 glasses** per day?[4,6,7,16]
13	♥ If you drink >1-2 **alcohol** drinks/day, have you tried to **reduce to 1 drink/day**?[4,5,7,16]
14	If you smoke, have you tried to stop?[3-5,7,16]
15	Have you tried a program such as **cognitive behavioural therapy** (relaxation therapy, guided imagery) or **supportive counselling**?[1-3]
16	Would **more information about your symptoms** help you to manage them better? If yes, provide appropriate information or suggest resources.[1,2]

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies and if appropriate, medication use
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not confident, 10=very confident)?
- Patient agrees to use medication to be consistent with prescribed regimen.
- Referral (service & date):
- Patient agrees to seek medical attention; specify time frame:
- Advise to call back in 12-24 hours if no improvement, symptom worsens, or new symptoms occur

References: 1) ONS 2017; 2) CCO 2010; 3) BCCA 2014; 4) BC Guidelines 2015; 5) SIGN 2016; 6) ACCF/AHA 2013; 7) ESC 2016; 8) Brahmer 2018; 9) NCCN 2018; 10) Puzanov 2017; 11) Haanen 2017; 12) Hryniewicki; 13) CCO 2018; 14) Watanabe 2011; 15) NCI-CTCAE 2017; 16) CCS 2012; 17) NHF 2011; 18) ACC/AHA/HFSA 2016 (see pages 40-48 for full references)

Constipation Practice Guide

Constipation: A decrease in the frequency or passage of stool usually characterized by stools that are hard.[1-3]

1. Assess severity of the constipation (Supporting evidence: 9 guidelines)[1-9]

Are you worried about your constipation[2,3]	No/Some	Yes, very	
How many days has it been since you had a bowel movement (compared to normal)?[1-3]	≤ 2 days	≥3 days	≥3 days on meds
How would you describe your stools (colour, hardness, odour, amount, blood, straining)?[1-3]			Blood in stool
Do you have hemorrhoids?[2,3]	No	Yes	
Do you have any pain in your abdomen?[1-3]	No/Mild 0-3	Moderate 4-6	Severe 7-10
Do you have loss of bladder or bowel control, numbness in your fingers, toes or buttocks, feel unsteady on your feet, or difficulty walking?[1-3]	No		Yes
Does your abdomen feel bloated?[1-3] Unsure	No	Yes, some	Yes, a lot
Do you have lots of gas?[2,3]	No	Yes	
Does it feel like your rectum is not emptying after a bowel movement, or diarrhea (possible overflow around blocked stool)[1-3]	No	Yes	
Have you recently had abdominal surgery?[1,3]	No		Yes
Do you have a fever > 38º C?[3] Unsure	No		Yes
Are you feeling dehydrated, which can include feeling dizzy, a dry mouth, increased thirst, feeling faint, rapid heart rate, decreased amount of urine?[1-3]	No	Yes, some	Yes, a lot
Do you have any other symptoms?[1-3] Appetite loss, Nausea/vomiting	No	Yes, some	Yes, many
➔ Do you have (signs of hypothyroidism):[4-6,8,9] weight gain, fatigue, depression, feeling cold, headaches, deeper voice, hair loss	No		Yes
➔ Do you have (signs of autonomic neuropathy):[5] nausea, urinary problems, sweating changes	No		Yes
Are you taking medications that cause constipation?[1-3]	No	Yes	
Does your constipation affect your daily activities?[2,3,10]	No[G1]	Yes, some[G2]	Yes, a lot[G≥3]
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage patient for symptom management based on highest severity (Supporting evidence: 1 guideline)[3]	Review self-care. Verify medications.	Review self-care. Verify medications. Advise to notify if symptom worsens, new symptoms occur, or no improvement in 12-24 hours	Refer for medical attention immediately. Alert clinician if on immunotherapy

Legend: ➔ Immune Checkpoint Inhibitor therapy; NCI-CTCAE G1=Grade 1, G2=Grade 2, ≥G3=Grade 3 or higher

If patient has other symptoms, did you refer to the relevant practice guide(s)?

3. Review medications patient is using for constipation, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 3 guidelines)[1-3]

Examples of medications for constipation*	Notes (e.g. dose)	Evidence
Oral sennosides (Senokot®)[1-3]		Likely effective
Polyethylene glycol (PEG; RestoraLAX®, Lax-a-day®)[1-3]		Likely effective
Bisacodyl (Dulcolax®) and/or lactulose[2,3]		Expert Opinion
Suppositories** (Dulcolax®/bisacodyl, glycerin) or Enema[2,3]		Expert Opinion
Picosulfate sodium-magnesium oxide-citric acid[2]		Expert Opinion
Methylnaltrexone injection for opioid as cause[1-3]		Effective
Sorbitol[2,3]		Expert Opinion
Amidotrizoate (Gastrografin®) if laxative resistant/advanced cancer [1]		Likely effective

*If opioid-induced constipation, fentanyl and oxycodone+naloxone have less constipation;[1,3] Docusate sodium (Colace®) was removed due to lack of evidence for its efficacy; Avoid non-sterilized corn syrup (can be a source of infection) and castor oil (can cause severe cramping)[1] **Verify blood count before using suppositories.

4. Review 3 or more self-care strategies (Supporting evidence: 3 guidelines)[1-3]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	What is your **goal** for managing your constipation?[2,3]
2	**What helps** when you are constipated?[2,3] Reinforce as appropriate.
3	What is your normal **bowel routine**?[1-3] Reinforce as appropriate.
4	Are you trying to use the **toilet 30-60 minutes after meals**?[1-3]
5	Are you trying to **drink fluids, 6-8** glasses per day, especially warm or hot fluids?[1-3] Are you trying to limit your intake of caffeine or alcohol?[2,3]
6	Have you **slowly increased the fiber** in your diet to 25g/day? (Only appropriate if adequate fluid intake (1500ml/24 hrs) and physical activity)[2,3]
7	Do you eat **fruit that are laxatives**? (pitted dates, prunes, prune nectar, figs)[2,3]
8	Are you **staying as active** as possible? (e.g. walking 15-20 minutes 1-2x/day; 30-60 minutes 3-5x/week)[2,3]
9	Do you have easy access to a **private toilet** or bedside commode?[1-3] If possible, it is best to avoid a bedpan.[1]
10	If you have a low neutrophil count are you **avoiding rectal exams, suppositories, enemas**?[1-3]
11	Have you spoken with a clinician or pharmacist or dietitian about the constipation?[1-3]
12	Would **more information** about your symptoms help you to manage them better? If yes, provide appropriate information or suggest resources.[2,3]

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies and if appropriate, medication use
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not confident, 10=very confident)?
- Patient agrees to use medication to be consistent with prescribed regimen.
- Referral (service & date):
- Patient agrees to seek medical attention; specify time frame:
- Advise to call back in 12-24 hours if no improvement, symptom worsens, or new symptoms occur

References: 1) ONS 2017; 2) CCO 2012; 3) BCCA 2014; 4) Puzanov 2017; 5) Brahmer 2018; 6) Hryniewicki 2018; 7) NCCN 2018; 8) BCCA 2017; 9) CCO 2018; 10) Watanabe 2011; 11) NCI-CTCAE 2017 (see pages 40-48 for full references)

Depression Practice Guide

Depression: a range of feelings and emotions from normal sadness to chronic, depressed emotional affect, feelings of despair, irritable mood, hopelessness.[1,2]

1. Assess severity of the depression (Supporting evidence: 8 guidelines)[1-8]

Are you currently receiving professional care for depression?[4]

What number from 0 to 10 best describes how depressed you are feeling where 0="no depression" and 10="worst possible depression"[2-6,9]	1-3	4-6	7-10
Have you felt depressed or had a loss of pleasure for 2 weeks or longer?[1-5]	No	Yes, off/on	Yes, constant
Do you feel down or depressed most of the day?[4]	No	Yes, off/on	Yes, every day
Have you experienced any of the following for ≥ 2 weeks: feeling worthless, sleeping too little or too much, feeling guilty, weight gain or weight loss, unable to think or concentrate?[1-3,5]	No	Yes, some	Yes, a lot
Does feeling depressed affect your daily activities?[1-6,10]	No [G1]	Yes, some [G2]	Yes, a lot [G≥3]
Have you felt tired or fatigued?[1-3,5] (ESAS-r fatigue rating)	No, 1-3	Yes, 4-6	Yes, 7-10
Have you felt agitated (may include twitching or pacing), confused, or slowing down of your thoughts?[1-3,5]	No	Yes, some	Yes, often
Do any of these apply to you? younger age (< 30), female, lack of social support, prior depression, financial problems, prior abuse, alcohol/substance use/ withdrawal, dependent children, chronic/ advanced disease, recently completed treatment?[1-6]	None	Yes, some	Yes, a lot
Do have any concerns that are making you feel more depressed:[1-6] life events, new information about cancer/treatment, spiritual/ religious concerns?	No	Yes, some	
Do you have any other symptoms?[1-5] Fatigue, Pain, Sleep changes, Anxiety	None	Some	Yes, many
➞Do you have (signs of hyperthyroidism):[7,8] weight loss, heart pounding or racing, tremors, feeling overheated, diarrhea	No		Yes
Have you had recurring thoughts of dying, trying to kill yourself or harming yourself or others?[1-6]	No		Yes
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage patient for symptom management based on highest severity (Supporting evidence: 6 guidelines)[1-6]	Review self-care. Verify medications.	Review self-care. Verify medications. Advise to notify if symptom worsens, new symptoms occur, or no improvement in 1-2 days	If potential for harm, refer for further evaluation immediately If no, refer for non-urgent medical attention Review self-care. Verify medications. Alert clinician if on immunotherapy

Legend: ➞ Immune Checkpoint Inhibitor therapy; NCI-CTCAE G1=Grade 1, G2=Grade 2, ≥G3=Grade 3 or higher

If patient has other symptoms, did you refer to the relevant practice guide(s)?

3. Review medications patient is using for depression, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 5 guidelines)[1-3,5,6]

Examples of medications for depression*	Notes (e.g. dose)	Evidence
SSRIs - fluoxetine (Prozac®), sertraline (Zoloft®), paroxetine (Paxil®), citalopram (Celexa®), fluvoxamine (Luvox®), escitalopram (Lexapro®)[1-3,5,6]		Effective
Tricyclic antidepressants - amitriptyline (Elavil®), imipramine (Tofranil®), desipramine (Norpramin®), nortriptyline (Pamelor®), doxepin (Sinequan®)[1,2,5,6]		Effective
SNRIs - venlafaxine (Effexor XR®), duloxetine (Cymbalta®)[1]		Effective
Psychostimulants - methylphenidate (Ritalin®)[1,2]		Effective
Other antidepressants - bupropion (Wellbutrin®), trazodone (Mylan®), mirtazapine (Remeron®), Mianserina (Tolvon®)[1]		Effective

*Antidepressant medication is effective for major depression but use depends on side effect profiles of medications and the potential for interaction with other medications.[1-3,5,6]

4. Review 3 or more self-care strategies (Supporting evidence: 6 guidelines)[1-6]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	What is your **goal** for feeling less depressed?
2	**What helps** when you feel depressed? Reinforce as appropriate.
3	What are you doing for **physical activity**?[2-4,6]
4	Do you feel you have **enough help at home** and with getting to appointments/treatments (transportation, financial assistance, medications)?[2-4,6]
5	Do you take part in any **support groups** and/or have **family/friends** you can rely on for support?[1-6]
6	Have you tried **relaxation therapy** or guided imagery,[1-3,5] or **creative therapies** (e.g. art, dance, music)?[2,3]
7	Have you tried a program such as **cognitive-behavioural therapy**, mindfulness-based stress reduction or received personal or couple counseling that provides more in-depth guidance on managing depression?[1-6]
8	If your concerns are spiritual or religious in nature, have you tried spiritual counseling, meaning-focused meditation, prayer, worship, or other **spiritual activities**?[2]
9	Are you agreeable to a referral to a mental health professional for further help?[1-6]
10	Would more **information about your symptoms, cancer or your treatment** help to ease your worries? If yes, provide relevant information or suggest resources.[1-6]

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies and if appropriate, medication use
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not confident, 10=very confident)?
- Patient agrees to use medication to be consistent with prescribed regimen
- Referral (service & date):
- Patient agrees to seek medical attention; specify time frame:
- Advise to call back in 1-2 days if no improvement, symptom worsens, or new symptoms occur

References: 1) ONS 2019; 2) NCCN 2018; 3) Howell 2015; 4) CCO 2019; 5) Butow 2015; 6) Li 2016; 7) Puzanov 2017; 8) Hryniewicki 2018; 9) Watanabe 2011; 10) NIH-NCI CTCAE 2017 (see pages 40-48 for full references)

Diarrhea Practice Guide

Diarrhea: An abnormal increase in stool liquidity and frequency over baseline which may be accompanied by abdominal cramping.[1-5]

1. Assess severity of the diarrhea (Supporting evidence: 15 guidelines)[1-15]

Have you been tested for c-difficile?[1,2,4,7-12,14,15]

Tell me what number from 0 to 10 best describes your diarrhea (0="no diarrhea"; 10="worst possible diarrhea")[16]	1-3	4-6	7-10
Are you worried about your diarrhea?[2,3]	No/Some	Yes, very	
How many extra bowel movements are you having per day above normal for you?[1-3,5,11,14,17]	< 4[G1]	4-6[G2]	≥ 7[≥G3]
Ostomy: increase in output above normal?[2,3,5,11,17]	Small	Moderate	Large
➔ Bowel movements/day above normal?[6-10,12,15,17]		< 4[G1]	≥ 4[≥G2]
➔ Ostomy: increase in output above normal?[8]		Small	≥ Moderate
➔ Diarrhea overnight or new incontinence?[6-8,10,15]	No		Yes
How would you describe your stools (colour, hardness, odour, amount, oily, blood, mucus, straining)?[1-3,5,11]			Blood in stool
➔ Blood or mucus in stool?[6-10,12,15]	No		Yes
Do you have a fever > 38º C?[1-3,7-12,14,15] Unsure	No		Yes
Do you have pain in your abdomen or rectum with or without cramping or bloating?[1-3,11]	No	Yes, some	Yes, a lot
➔ Pain in abdomen, cramping, bloating?[6-10,12,13,15]	No		Yes
How much fluid are you drinking per day?[2]	6-8 glasses	1-5 glasses	Sips
Are you feeling dehydrated,[1-3,6-8,10,11,14] which can include feeling dizzy, a dry mouth, increased thirst, feeling faint, rapid heart rate, decreased amount of urine?	No	Yes, some	Yes, a lot
Does your diarrhea affect your daily activities?[3,5,6,8,9,11,15]	No	Yes, some	Yes, a lot
Do you have any other symptoms?[1-3,11] Appetite Loss, Fatigue, Nausea/vomiting, Mouth sores	No	Some	Yes, many
➔ New severe fatigue, headache, rash, cough, nausea, breathlessness, weight loss, vision changes, eye pain, muscle weakness, joint pains, or mood changes?[8-10]	No		Yes
Are you on medicines that increase risk of diarrhea (e.g. laxatives)?[2,3,11,14]	No	Yes	
Any recent travel or contact with others with diarrhea?[2,4,11]	No	Yes	
Do you have any rectal or ostomy skin breakdown?[2,3,11]	No	Yes	
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage patient for symptom management based on highest severity (Supporting evidence: 13 guidelines)[1-3,5-12,14,15]	Review self-care. Verify medications.	Review self-care. Verify medications. Advise to notify if symptom worsens, new symptoms occur, or no improvement in 12-24 hours.	Refer for medical attention immediately. Alert clinician if on immunotherapy.

Legend: ➔ Immune Checkpoint Inhibitor therapy; NCI-CTCAE G1=Grade 1, G2=Grade 2, ≥G3=Grade 3 or higher

If patient has other symptoms, did you refer to the relevant practice guide(s)?

3. Review medications patient is using for diarrhea, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 14 guidelines)[1-13,18]

Examples of medications for diarrhea*	Notes (e.g. dose)	Evidence
First line treatment: Loperamide (Imodium®)[1-5,11,14,18]		Likely effective
Octreotide (Sandostatin®) for chemo-induced[1-5,11,18]		Likely effective
Psyllium fibre for radiation-induced (Metamucil®)[1,4]		Likely effective
Atropine-diphenoxylate (Lomotil®)[2-4]		Expert opinion
Corticosteroid cream if rectal skin irritated[3]		Expert opinion
➔ Loperamide (Imodium®) for moderate diarrhea[6,7,9-13,15]		Expert opinion
➔ Corticosteroids/prednisone[6-13,15], Infliximab,[6-10,12,13,15] Vedolizumab[8-10,12] or Budesonide[10,11] for severe diarrhea		Expert opinion

➔ Immune Checkpoint Inhibitor. *For radiation induced diarrhea, sucralfate[1,18] and oral antibiotics are generally not recommended.[2]

4. Review 3 or more self-care strategies (Supporting evidence: 11 guidelines)[1-4,7-12,14]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	What is your **goal** for managing diarrhea?[3]
2	**What helps** when you have diarrhea?[2,3] Reinforce as appropriate.
3	Are you trying to **drink fluids, 6-8 glasses** per day?[1-4,7-11]
4	Are you trying to **replace electrolytes** (e.g. potassium and salt)?[1-4,7,10,11,14] Suggest: bananas, potatoes, sports drinks, oral rehydration (1/2 tsp salt, 6 tsp sugar, 4C water)
5	Do you know what **kinds of foods** to **eat**?[1-3,7,8,14] Suggest: applesauce, oatmeal, bananas, barley, cooked carrots, rice, white toast, plain pasta, well cooked eggs, skinned poultry, mashed potatoes, fruit without skin (high in soluble fiber, low in insoluble fiber)
6	Do you know **what to avoid**?[1-4,7,8,10-12,14] Suggest: greasy/fried and spicy foods, alcohol, <2-3 servings caffeine, excess fruit juice or sweetened fruit drinks, raw vegetables, whole grain bread, nuts, popcorn, skins, seeds, legumes, very hot or cold foods/fluids, sorbitol in sugar-free candy, lactose-containing products (milk, yoghurt, cheese).
7	Are you trying to **eat 5-6 small meals**?[1-3,11]
8	Have you spoken to a **dietitian**?[11,14]
9	Are you trying to keep **skin** around your **rectum** or **ostomy clean** to avoid skin breakdown (mild soap, sitz baths)?[2,3] Cleanse perianal skin with warm water (+/- mild soap) after each stool.[2] Moisture barrier cream if not on radiation therapy.[2,3] Hydrocolloid dressings may be used as a physical barrier to protect skin.[3]
10	Have you been keeping track of the **number of stools** you are having and are you aware of other problems you should be watching for?[2,11] (fever, dizziness)
11	Have you spoken with a clinician or pharmacist about **medications** you may be taking that **can cause or worsen your diarrhea**?[2,3,11,14]
12	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.[3]
13	Would **more information** about your symptoms help you to manage them better? If yes, provide appropriate information or suggest resources.

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies and if appropriate, medication use
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not confident, 10=very confident)?
- Patient agrees to use medication to be consistent with prescribed regimen.
- Referral (service & date):
- Patient agrees to seek medical attention; specify time frame:
- Advise to notify in 12-24 hours if no improvement, symptom worsens, or new symptoms occur

References: 1) ONS 2017; 2) BCCA 2014; 3) CCO 2012; 4) Schmidt-Hieber 2018; 5) Peterson 2015; 6) BCCA 2017; 7) CCO 2018; 8) Brahmer 2018; 9) NCCN 2018; 10) Haanen 2015; 12) Puzanov 2017; 13) ONS 2017; 14) Califano 2015; 15) Hryniewicki 2018; 16) Watanabe 2011; 17) NIH-NCI CTCAE 2017 18) Lalla 2014 (see pages 40-48 for full references)

Fatigue/Tiredness Practice Guide

Fatigue: a subjective feeling of tiredness or exhaustion prompted by cancer or cancer treatment that is disproportionate to the level of recent exertion, is not relieved by rest and interferes with usual daily activities.[1-6]

1. Assess severity of the fatigue/tiredness (Supporting evidence: 14 guidelines)[1-14]

What number from 0 to 10 best describes how tired you are feeling where 0= "no tiredness" and 10= "worst possible tiredness"[1-5,15]	1-3	4-6	7-10
Are you worried about your fatigue?[1,3-6]	No/Some	Yes, very	
Do you have shortness of breath at rest, sudden onset of severe fatigue, need to sit or rest too much, rapid heart rate, rapid blood loss, or pain in your chest?[1,2]	No		Yes
How would you describe the pattern of fatigue?[1,2,4-6]	On and off	Constant <2 wks	Constant ≥2 wks
Does your fatigue affect your daily activities?[1-6,16]	No [G1]	Yes, some [G2]	Yes, a lot [G≥3]
Do you have a fever > 38º C?[1-5] Unsure	No		Yes
Do you know the results of your last hemoglobin (Hgb) blood test?[1-5] Date: Unsure	<LLN-10.0g/dL	<10.0-8.0 g/dL	<8.0 g/dL
Have you lost or gained weight in the last 4 weeks without trying?[1,2,4,5] Amount: Unsure	0-2.9%	3-9.9%	≥10%
Do you have any other symptoms?[1-5] Anxiety, Pain, Appetite loss, Depression, Sleep changes, Poor fluid intake	No	Yes, some	Yes, many
➔ Do you have (signs of endocrine toxicity):[3,7-13] nausea, appetite loss, constipation, eyes sensitive to light, hair loss, dry skin, puffy face, confusion, headache	No		Yes
➔ Do you have (signs of pneumonitis):[7,9,11] cough, wheezing, breathlessness, chest pain, fever	No		Yes
➔ Do you have (signs of cardiovascular toxicity):[7,9] fast or skipped heartbeat, breathlessness	No		Yes
➔ Do you have (signs of hepatic toxicity):[11,14] yellow skin/eyes, dark urine, fever, nausea, abd pain	No		Yes
➔ Do you have (signs of myositis):[7] limb weakness, difficulty standing up, lifting arms, moving around	No		Yes
➔ Do you have (signs of hemolytic uremic syndrome):[7] blood in urine/stool or nose/mouth, less urine, new/unexplained bruises, abd pain, pale skin, vomiting, confusion/seizures, swelling	No		Yes
Do you have conditions that cause fatigue (cardiac, lung, liver, kidney, endocrine)[1-5] or drink excess alcohol?[1,2,4]	No	Yes	
Are you taking medicines that increase fatigue? (e.g., for pain, depression, nausea/vomiting, allergies)[1-5]	No	Yes	
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage patient for symptom management based on highest severity (Supporting evidence: 4 guidelines)[1,2,4,5]	Review self-care.	Review self-care. Advise to notify if symptom worsens, new symptoms occur, or no improvement in 1-2 days.	If stable, review self-care. If new, refer for non-urgent medical attention. Alert clinician if on immunotherapy

Legend: ➔ Immune Checkpoint Inhibitor therapy; NCI-CTCAE G1=Grade 1, G2=Grade 2, ≥G3=Grade 3 or higher

If patient has other symptoms, did you refer to the relevant practice guide(s)?

3. Review medications patient is using for fatigue, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 4 guidelines)[1,3-5]

Examples of medications for fatigue*	Notes (e.g. dose)	Evidence
Ginseng (American or Asian)[3,4]		Likely effective
Methylphenidate (Ritalin®)[1,4,5]		Expert opinion
Corticosteroids: dexamethasone (Decadron®), prednisone[1,3-5]		Benefits balanced with harms

*Use of pharmacological agents for cancer-related fatigue is experimental.[2] Methylphenidate may be considered with caution after ruling out other causes of fatigue.[4,5] Corticosteroids offer short-lived benefit; long-term use is associated with significant toxicities.[3-5]

4. Review 3 or more self-care strategies (Supporting evidence: 7 guidelines)[1-6,17]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	What is your **goal** for managing your fatigue?[1-3,5]
2	**What helps** when you feel fatigued/tired? Reinforce as appropriate.[1,2]
3	Do you understand **what cancer-related fatigue is**? Provide education about how it differs from normal fatigue, that it is expected with cancer treatment.[1-4,6]
4	Do you have a **diary to track** your **fatigue patterns** to help with planning activities?[2,4]
5	Are you trying to **save energy** for things that are important to you?[1-5]
6	What are you doing for **physical activity** including yoga?[1-5] Set goals based on current health status. Suggest starting with light activity and gradually increase to 20 min of endurance activities (e.g. walking, jogging, swimming) and resistance activities (e.g. light weights). Use caution for patients with some conditions (e.g. bone metastases).
7	Do you think you are **eating/drinking** enough to meet your body's energy needs? Staying hydrated and a balanced diet (e.g. vitamins, minerals) can help fatigue.[1-5]
8	Have you tried **activities** like reading, games, music, garden, experiences in nature?[1,2,4,17]
9	Do you take part in any **support groups** or have **family/friends you can rely on**?[1-5]
10	Have you tried activities to make you more **relaxed** (e.g. relaxation therapy, deep breathing, guided imagery)[1,4] or **massage** with or without aromatherapy?[3]
11	Have you done any of the following to **improve** the quality of your **sleep**?[1-4] Ensure light exposure soon after waking; avoid long/late afternoon naps; limit time in bed to actual sleep; go to bed when sleepy; use bed for sleep and sexual activity only; have routine schedule for bedtime and getting up; avoid caffeine and stimulating activity in the evening; relax for 1 hour before going to bed; establish a bedtime routine.
12	Have you tried a program such as **cognitive behavioural therapy** or mindfulness-based stress reduction to manage your fatigue?[2-5]
13	Have you tried home-based bright white **light therapy**?[4]
14	If you need a **tailored plan**, have you spoken or would you like to speak with a health care professional to help guide you in managing your fatigue?[1-5] (e.g. rehabilitation specialist)
15	Would **more information** about your symptoms help you to manage them better? If yes, provide relevant information or suggest resources.[1-6]

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not confident, 10=very confident)?
- Referral (service & date):
- Patient agrees to seek medical attention; specify time frame:
- Advise to call back in 1-2 days if no improvement, symptom worsens, or new symptoms occur

References: 2) Howell 2015; 3) ONS 2017; 4) NCCN 2018; 5) AHS 2017; 6) Bennett 2016; 7) Brahmer 2018; 8) NCCN 2018; 9) Puzanov 2017; 10) Haanen 2017; 11) CCO 2018; 12) Hryniewicki 2018; 13) BCCA 2017; 14) BCCA 2017; 15) Watanabe 2011; 16) NIH-NCI CTCAE 2017 17) Bradt 2016 (see pages 40-48 for full references).

Febrile Neutropenia Practice Guide

Febrile neutropenia: An absolute neutrophil count (ANC) < 500 cells/mcl (equivalent to < 0.5 x 10^9/L) OR an ANC < 1000 cells/mcl (< 1.0 x 10^9/L) and a predicted decline to 500 cells/mcl or less over the next 48 hours AND a single oral temperature of ≥38.3º C (101 ºF) or a temperature of ≥38.0º C (100.4 ºF) for ≥1 hour.[1-11]

1. Assess severity of the fever and neutropenia (Supporting evidence: 15 guidelines)[1-15]

If receiving chemotherapy or immunotherapy, what was the date of your last treatment?[2,5-7,9,10,13,15]

Have you been recently taking antibiotics?[2,3,5-7,9,10] If Yes, for <48 hours or ≥48 hours

What is your temperature in the last 24 hours?[1-15] Current: Previous temperatures:

Have you taken any acetaminophen (Tylenol®) or ibuprofen (Advil®),[6,7,10] if yes, how much and when?

Do you have an oral temperature of ≥38.0ºC (100.4 ºF)?[1-15]	No	Yes for <1 hour	Yes for ≥1 hour
Last known neutrophil count[1-16] Date: Unsure	>1000 cells/mcl		Fever plus ≤500 cells/mcl or 1000 cells/mcl with expected drop[G3]
Do you have any other symptoms? Bleeding, Breathlessness, Constipation, Diarrhea, Fatigue, Mouth sores, Mouth dryness, Nausea, Vomiting, Skin reaction to radiation	None	Some	Yes, many
Are you worried about your fever?[7]	No/Some	Yes, very	
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage patient for symptom management based on highest severity (Supporting evidence: 15 guidelines)[1-15]	Review self-care. Advise to notify if symptom worsens or new symptoms occur in 12-24 hours[2,6,12]	Review self-care. Advise to notify if symptom worsens or new symptoms occur in 12-24 hours[2,6,12] If ≥38.0º for <1 hour, advise to notify if still ≥38.0 after 1 hour.	Refer for medical attention immediately. Febrile neutropenia **treatment with antibiotics** should be initiated **within 1 hour** of presentation.[2-7,9,12-14] Collect laboratory data to locate potential site or cause of infection prior to starting antibiotics.[1-5,7,9,12-14]

Legend: NCI-CTCAE G3=Grade 3

Note: For consistency across symptom practice guides a temperature of 38.0º C is used.

3. Review medications patient is using for preventing febrile neutropenia or decreasing fever, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 9 guidelines)[1-3,6,10,11,13-15]

Examples of medications*	Notes (e.g. dose)	Evidence
G(M)-CSF for at-risk patients[1-3,6,10,11,13,15]		Effective
Antibiotics to prevent infection for high-risk patients[2,10,11,14,15]		Effective
Antifungals to prevent infection for at-risk patients[2,10,11,14]		Effective
Antivirals for select at-risk patients[1,2,11,14]		Effective

*Use of over the counter medications to lower fever in cancer patients (e.g., acetaminophen) is controversial and should not be used to mask a fever of unknown origin;[7,10] G-CSF is generally recommended for patients with >20% risk of developing febrile neutropenia;[1,3,11,15] Prophylactic antibiotic use should be limited to high risk patients with an expected duration of neutropenia for >7 days as it may promote antibiotic resistance.[2,10,11,14,15] Antifungal prophylaxis should be reserved for a targeted group of high-risk patients with an expected duration of neutropenia for >7 days.[2,10,11,14] Antiviral prophylaxis is recommended for select patients at risk for certain viral infections or reactivation of viral infection.[1,2,11,14]

4. Review 3 or more self-care strategies (Supporting evidence: 13 guidelines)[1-3,5-14]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	If temperature not ≥38.0º C, are you **checking** your body **temperature** with a thermometer by mouth?[3,8,10] Avoid rectal temperature measurements.[2,7]
2	Are you **washing your hands** frequently and/or using alcohol-based sanitizer?[1,10,11,14]
3	Are you trying to **drink fluids**, 6-8 glasses per day to stay hydrated?[1,3,5-7,9-11,14]
4	Are you **avoiding enemas, suppositories**, **tampons**, and **invasive procedures**?[1,2,5,7,10] Constipation and straining during bowel movements can cause trauma to rectal tissue.[10]
5	Are you trying to **avoid crowds and people who might be sick**?[1,10]
6	Are you **eating** well **cooked foods** and/or **well cleaned uncooked** raw fruits and vegetables?[1,10,11]
7	Are you **brushing your teeth with a soft toothbrush** at least twice a day?[1,10] Floss daily if it is your normal routine and tolerated.
8	Are you taking **daily showers** or baths?[1,10]
9	Are you **checking your mouth and your skin** for potential sites of infection (e.g. access devices, rectal area) and keeping these areas clean and dry?[1-3,5,7,10,13]
10	Have you spoken to a clinician about getting an annual flu shot and other vaccines (with inactivated vaccine)?[1,2,10,11,14] All visitors and household members should **be up-to-date with vaccines** (e.g. influenza, measles, mumps, rubella, and varicella).
11	Would **more information** about your symptoms help you to manage them better? If yes, provide appropriate information or suggest resources.[2,3,7-10,12]

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not confident, 10=very confident)?
- Patient agrees to seek medical attention; specify time frame:
- Advise to call back in 12-24 hours if no improvement, symptom worsens, or new symptoms occur

References: 1) Freifeld 2011; 2) NCCN 2018; 3) Klastersky 2016; 4) Tam 2011; 5) AHS 2014; 6) CCMB 2017; 7) CCNS 2014; 8) Krzyzanowska 2016; 9) Taplitz 2018; 10) BCCA 2014; 11) ONS 2017; 12) NICE 2012; 13) NICaN 2015; 14) Flowers 2013; 15) Neumann 2013; 16) NIH-NCI CTCAE 2017 (see pages 40-48 for full references).

Mouth Dryness/Xerostomia Practice Guide

Xerostomia: abnormal dryness in the oral cavity due to a reduction and/or thickening of saliva produced; the subjective experience of dry mouth secondary to salivary gland hypofunction; may be acute or chronic.[1-3]

1. Assess severity of the dry mouth (Supporting evidence: 5 guidelines)[1-5]

What number from 0 to 10 best describes your dry mouth where 0= "no dry mouth" and 10= "worst possible dry mouth"?[1,2,6]	1-3	4-6	7-10
Are you worried about your dry mouth?[1-3]	No/Some	Yes, very	
Is your saliva thick or less saliva than normal?[1,2,7]	No/A bit [G1]	Somewhat [G2]	Yes, a lot [G≥3]
Is your mouth painful?[1,2]	No/Mild 0-3	Moderate 4-6	Severe 7-10
Do you see any redness, white patches, cracks, or blisters in your mouth?[1-3]	No		Yes
Do you have a fever >38°C?[1,2] Unsure	No		Yes
Is your mouth bleeding?[2]	No	Yes, with eating or oral hygiene	Yes, spontaneously
Are you able to eat?[1-3,7]	Yes[G1]	Yes, soft food[G2]	No[G≥3]
How much fluid are you drinking per day?[1,2,4]	6-8 glasses	1-5 glasses	Sips/Unable to swallow
Are you feeling dehydrated, which can include feeling dizzy, a dry mouth, increased thirst, feeling faint, rapid heart rate, decreased amount of urine?[1,2,4]	No	Yes, some	Yes, a lot
➔ Do you have (signs of diabetic ketoacidosis):[8] increased thirst, frequent urination, fruity breath odour stomach pain, weakness, fast heart rate vomiting, confusion, dry skin?	No		Yes
➔ Do you have (signs of uveitis): dry eyes, eye pain, eye redness, blurred/double vision?[9,10]	No		Yes
Does your dry mouth affect your ability to speak?[1-3]	No	Yes	
Are you having taste changes?[1-3]	No	Yes	
Have you lost weight in the last 1-2 weeks without trying?[1,2] Amount: Unsure	0-2.9%	3-9.9%	≥10%
Do you have trouble breathing?[1,2] If yes, see breathlessness guide	No		Yes
Are you taking any medications that can cause dry mouth?[1-3,5] (e.g. anticholinergics, antiemetics)	No	Yes	
Does your dry mouth affect your daily activities?[1,2]	No	Yes, some	Yes, a lot
Are you feeling worried?[1,2] If yes, see Anxiety guide.	No	Yes, some	Yes, often
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage patient for symptom management based on highest severity **(Supporting evidence: 1 guidelines)**[1]	Review self-care. Verify medications.	Review self-care. Verify medications. Advise to notify if symptom worsens, new symptoms occur, or no improvement in 12-24 hours.	Refer for medical attention immediately. Alert clinician if on immunotherapy

Legend: ➔ Immune Checkpoint Inhibitor therapy; NCI-CTCAE G1=Grade 1, G2=Grade 2, ≥G3=Grade 3 or higher

If patient has other symptoms, did you refer to the relevant practice guide(s)?

3. Review medications patient is using for dry mouth, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 5 guidelines)[1-5]

Examples of medications for dry mouth	Notes (e.g. dose)	Evidence
Pilocarpine (Salagen®) saliva stimulant[3]		Expert opinion
Anetholtrithion (Sialor®) salivary stimulant[1,5]		Expert opinion
Saliva substitutes (Biotene®, Moi-Stir®)[1-5]		Expert opinion
Oral medications for pain[1,2]		Expert opinion

4. Review 3 or more self-care strategies (Supporting evidence: 5 guidelines)[1-5]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	What is your **goal** for managing your dry mouth[1,2]
2	**What helps** when you have a dry mouth?[1,2] Reinforce as appropriate.
3	Are you trying to **drink 6-8 glasses** of clear fluids per day?[1-5]
4	Are you **avoiding foods and drinks that are highly acidic, caffeinated, sugary, salty, spicy**, or very **hot** (temperature)?[1-3,5]
5	If you have difficulty swallowing, are you trying to **eat a soft diet**?[1,2] Suggest: oatmeal, bananas, applesauce, cooked carrots, rice, pasta, eggs, mashed potatoes, cooked or canned fruit without skin, soft cheese, creamed soups, puddings/milkshakes. Add extra moisture to foods using sauce, dressing, gravy, broth, or butter/margarine.
6	Are you keeping your **mouth cool and moist** with fresh, cold foods? Suggest sugar-free popsicles, frozen grapes, cold water, ice cubes, or lightly acidic fruit (e.g. cucumber, apples, tomato).[1,2,4]
7	Are you trying to **brush your teeth** at least twice a day using a soft toothbrush and fluoride toothpaste?[1-5] Floss daily if it is your normal routine and tolerated.
8	If you wear dentures, are you removing before brushing your teeth, cleaning them with toothpaste, and leaving them off for long periods of time (e.g. overnight)?[1,2,4,5]
9	Are you trying to use a **bland rinse 4 times/day**?[1-5] For 1 cup warm water, add table salt (2.5 ml (1/2 tsp.)), baking soda (1/2 tsp.) or both (1/4 tsp. each). Swish in your mouth for at least 30 seconds and spit out. Prepare daily.
10	Are you **chewing on sugar-free gum** or sucking on hard candy to help create saliva?[1-5] Xylitol gum or lozenges can also be used, up to 6 grams a day.[2]
11	Are you trying to **avoid tobacco and alcohol**, including alcohol-based mouthwashes?[1,2,4,5]
12	Are you using **moisturizers** to protect your lips?[1,2,4,5]
13	Are you using **saliva substitutes** (gel, mouthwash, spray)?[1-5] If so, how long have you been using them, and do they help? Discourage use of glycerin-based swab sticks.
14	Are you using a **cool humidifier** or bedside vaporizer to help reduce the dryness?[1]
15	Have you considered trying **acupuncture** therapy to help stimulate saliva production?[1-3]
16	Would **more information** about your symptoms help you to manage them better? If yes, provide relevant information or suggest resources.

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies and if appropriate, medication use
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not confident, 10=very confident)?
- Patient agrees to use medication to be consistent with prescribed regimen.
- Referral (service & date):
- Patient agrees to seek medical attention; specify time frame:
- Advise to call back in 12-24 hours if no improvement, symptom worsens, or new symptoms occur

References: 1) BCCA 2014; 2) CCO 2012; 3) AAOM 2016; 4) NICaN 2015; 5) Peterson 2015; 6) Watanabe 2011; 7) NIH-NCI 2017; 8) NCCN 2018; 9) Puzanov 2017; 10) Brahmer 2018 (see pages 40-48 for full references)

Mouth Sores/Stomatitis Practice Guide

Mouth sores/Stomatitis/Oral Mucositis: An inflammatory and potentially ulcerative process of the mucous membranes, that can result in severe discomfort that can impair patients' ability to eat, swallow, and talk, and is accompanied by a risk for life-threatening bacteremia and sepsis.[1-5]

1. Assess severity of the mouth sores (Supporting evidence: 6 guidelines)[1-6]

What number from 0 to 10 best describes your mouth sores where 0= "no mouth sores" and 10= "worst possible mouth sores"?[2,3,7]	1-3	4-6	7-10
Are you worried about your mouth sores[2,3]	No/Some	Yes, very	
How many sores/ulcers/blisters do you have?[1-6]	0-4	>4	Coalescing/ Merging/Joining
Do the sores in your mouth bleed?[1-3,6]	No	Yes, with eating or oral hygiene	Yes, spontaneously
Are the sores painful?[1-5,8]	No/Mild[G1] 0-3	Moderate[G2] 4-6	Severe[G≥3] 7-10
Do you see any redness or white patchy areas in your mouth?[1-6]	No	Yes, some	Yes, a lot
Do you have a fever > 38º C?[1-3] Unsure	No		Yes
Do you have a dry mouth?[2,3,5]	No	Yes	
Are you able to eat?[1-5] If no, can you open and close your mouth?[2]	Yes	Yes, soft food	No
Are you feeling dehydrated, which can include feeling dizzy, a dry mouth, increased thirst, feeling faint, rapid heart rate, decreased amount of urine, dark urine?[1-3,5]	No	Yes, some	Yes, a lot
How much fluid are you drinking per day?[1-3,5]	6-8 glasses	1-5 glasses	Sips/Unable to swallow
Have you lost weight in the last 1-2 weeks without trying?[1-3] Amount: Unsure	0-2.9%	3-9.9%	≥10%
Are you having trouble breathing?[2,3]	No	Yes, some	Yes, a lot
Does your mouth sore(s) affect your daily activities?[2,3]	No	Yes, some	Yes, a lot
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage patient for symptom management based on highest severity (Supporting evidence: 6 guidelines)[1-6]	Review self-care. Verify medications.	Review self-care. Verify medications. Advise to notify if symptom worsens, new symptoms occur, or no improvement in 12-24 hours.	Refer for medical attention immediately.

Legend: NCI-CTCAE G1=Grade 1, G2=Grade 2, ≥G3=Grade 3 or higher

If patient has other symptoms, did you refer to the relevant practice guide(s)?

3. Review medications patient is using for mouth sores, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 7 guidelines)[1-6,9]

Examples of medications for mouth sores	Notes (e.g. dose)	Evidence
Benzydamine hydrogen chloride (Tantum® mouth rinse)[1,3,5,6]		Likely effective
Oral medications[2-5], morphine mouth wash,[9] topical anesthetics (lidocaine),[2-4] transdermal fentanyl[4,9] for pain		Expert opinion
0.5% Doxepin mouth rinse for pain[4,9]		Expert opinion
Mucosal coating agents for pain (Gelclair®)[2-6]		Expert opinion
Saliva substitutes (Biotene®, Moi-Stir®, Caphosol®)[2-6]		Expert opinion
Topical steroids for mouth sores from targeted therapies[4,5]		Expert opinion
Nystatin for oral candida[2,5,6]		Expert opinion

* Some benzydamine HCl formulations contain alcohol and can cause stinging.[5] Chlorhexidine mouth rinse and sucralfate are not recommended for treatment.[1-6,9] "Magic" Mouthwash (mixed medication mouthwash) is not recommended for practice.[1] Local anesthetics for short term pain relief can make it hard to swallow; if used patients should be advised about increased risk of choking when eating.[1,3]

4. Review 3 or more self-care strategies (Supporting evidence: 7 guidelines)[1-6,9]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	What is your **goal** for managing your mouth sores?[2,3]
2	**What helps** when you have mouth sores?[2,3] Reinforce as appropriate.
3	Are you trying to use a **bland rinse 4 times/day** (more often if mouth sores)?[1-6,9] For 1 cup warm water, add table salt (2.5 ml (1/2 tsp.)), baking soda (1/2 tsp.) or both (1/4 tsp. each). Swish in your mouth for at least 30 seconds and spit out.[1,2,4] Prepare daily.
4	Are you trying to **brush your teeth** at least twice a day using a soft toothbrush (use soft foam toothette in salt/soda water if sores)?[1-6,9] Floss daily if it is your normal routine and tolerated.
5	Do you **rinse your toothbrush** in hot water before using and allow to air dry?[1-3]
6	If you wear dentures and mouth sensitive, do you use **dentures** only at **mealtimes**?[1-4,6]
7	Are you using **moisturizers** to protect your lips?[1-6]
8	Are you sucking on lactobacillus lozenges[1] or zinc lozenges[2,4] to prevent mouth sores?
9	Are you trying to **avoid tobacco and alcohol**, including alcohol-based mouthwashes?[1-6]
10	Are you trying to **drink 6-8 glasses** of fluids per day?[1-6]
11	Are you trying to **eat a soft diet**?[1-4,6] Suggest: oatmeal, bananas, applesauce, cooked carrots, rice, pasta, eggs, mashed potatoes, cooked or canned fruit without skin, soft cheese, creamed soups, puddings/milkshakes
12	If on **pain medicine**, have you tried taking it **before meals** for relief while eating?[1-4]
13	Are you **avoiding foods/drinks that are acidic, salty, spicy**, or very hot?[1-4,6]
14	If eating is difficult, have you **spoken with a dietitian** or tried meal supplements?[1-3,5,6]
15	During chemotherapy, are you taking ice water**, ice chips**, ice lollipops for 30 min?[1-4,6,9]
16	Would **more information** about your symptoms help you to manage them better?[2,4,6] If yes, provide appropriate information or suggest resources.

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies and if appropriate, medication use
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not confident, 10=very confident)?
- Patient agrees to use medication to be consistent with prescribed regimen.
- Referral (service & date):
- Patient agrees to seek medical attention; specify time frame:
- Advise to call back in 12-24 hours if no improvement, symptom worsens, or new symptoms occur

References: 1) ONS 2017; 2. CCO 2012; 3) BCCA 2014; 4) Peterson 2015; 5) NICaN 2015; 6) Califano 2015; 7) Watanabe 2011; 8) NIH-NCI CTCAE 2017; 9) Lalla 2014 (see pages 40-48 for full references)

Nausea & Vomiting Practice Guide

Nausea: A subjective perception that emesis may occur. Feeling of queasiness.[1] Vomiting: A forceful expulsion of stomach contents through the mouth and may include retching/dry heaves (gastric and esophageal movement without vomiting).[1]

1. Assess severity of nausea/vomiting (Supporting evidence: 10 guidelines)[1-10]

What number from 0 to 10 best describes how you are feeling 0="No nausea" and 10="Worst possible nausea"[1,2,11]	1-3	4-6	7-10
Are you worried about your nausea/vomiting?[1-3,5]	No/Some	Yes, very	
If vomiting: How many times per day?[1-3,5,12]	≤1 G1	2-5 G2	≥6 G≥3
What is the amount of vomit?[1-3]	Small	Modest	Large
Is there any blood or look like coffee grounds?[1-3]	No		Yes
Have you been able to eat within last 24 hours?[1-3]	Yes	No	
Have you lost weight in the last 1-2 weeks without trying?[1-3]	0-2.9%	3-9.9%	≥10%
How much fluid are you drinking per day?[1-4]	6-8 glasses	1 to 5 glasses	Sips
Are you feeling dehydrated, which can include feeling dizzy, a dry mouth, increased thirst, feeling faint, rapid heart rate, decreased amount of urine?[1-4]	No	Yes, some	Yes, a lot
Do you have any abdominal pain?[1-3]	No/Mild 0-3	Moderate 4-6	Severe 7-10
Does your nausea/vomiting affect your daily activities?[1,2,4]	No	Yes, some	Yes, a lot
Are you taking medicines that can cause nausea/ vomiting?[1-5] (e.g. opioids, antidepressants, antibiotics, warfarin)	No	Yes	
Do you have any other symptoms?[1-5] Pain, Fever, Constipation, Diarrhea, Anxiety, Headache	No	Yes, some	Yes, many
➔ Do you have (signs of endocrine toxicity):[6-9] fatigue, appetite loss, constipation, eyes sensitive to light, hair loss, dry skin, puffy face, confusion, headache	No		Yes
➔ Do you have (signs of autonomic neuropathy):[6,7,10] constipation, urinary problems, sweating changes	No		Yes
➔ Do you have (signs of aseptic meningitis):[6,7,10] headache, eyes sensitive to light, neck stiffness	No		Yes
➔ Do you have (signs of hepatic toxicity):[6,8] dark urine, yellow skin/eyes, fever, fatigue, abd pain	No		Yes
➔ Do you have (signs of GI toxicity):[6,10] abd pain, blood or mucus in stool, fever, weight loss	No		Yes
➔ Do you have (signs of hemolytic uremic syndrome):[6] blood in urine/stool or nose/mouth, less urine, new/unexplained bruises, abd pain, pale skin, fatigue, confusion/seizures, swelling	No		Yes
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage patient for symptom management based on highest severity (Supporting evidence: 3 guidelines)[1-3]	Review self-care. Verify medications.	Review self-care. Verify medications. Advise to notify if symptom worsens, new symptoms occur, or no improvement in 12-24 hours.	Refer for medical attention immediately. Alert clinician if on immunotherapy

Legend: ➔ Immune Checkpoint Inhibitor therapy; NCI-CTCAE G1=Grade 1, G2=Grade 2, ≥G3=Grade 3 or higher

If patient has other symptoms, did you refer to the relevant practice guide(s)?

3. Review medications patient is using for nausea/vomiting, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 8 guidelines)[1-5,13-15]

Examples of medications for nausea/vomiting*	Notes (e.g. dose)	Evidence
5-HT_3: ondansetron (Zofran®), granisetron (Kytril®), dolasetron (Anszemet®)[1-5,13,14]		Effective
Olanzapine (Zyprexa®)[2,4,5,13,14]		Effective
Fosaprepitant (Emend® IV), aprepitant (Emend®)[1,4,5,13,14]		Effective
Triple drug: dexamethasone, 5 HT_3 (palonosetron), neurokinin 1 receptor antagonist (netupitant) for high emetic risk[4,5,13,14]		Effective
Cannabis/Cannabinoids[2,4,13,15]		Effective
Netupitant/palonosetron (NEPA) (Akynzeo®)[4,5,13,14]		Effective
Dexamethasone (Decadron®) alone or in combination[1-5,13,14]		Likely effective
Gabapentin (Neurontin®)[13]		Likely effective
Progestins[13]		Likely effective
Lorazepam (Ativan®)[1-5,13,14], haloperidol (Haldol®)[1-4]		Expert opinion
Metoclopramide (Maxeran®)[1-5,14], prochlorperazine (Stemetil®)[1,14]		Expert opinion
Other: Cyclizine,[3,5] dimenhydrinate[1,2], methotrimeprazine[1]		Expert opinion

*Patients are at increased risk of opioid overdose and serious side effects when taking gabapentin with an opioid.[16] Rectal administration should be avoided if neutropenic.

4. Review 3 or more self-care strategies (Supporting evidence: 6 guidelines)[1-5,13]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	What is your **goal** for managing your nausea and vomiting?[4,13]
2	**What helps** when you have nausea/vomiting?[1,2] Reinforce as appropriate.
3	Are you trying to **drink 6-8** glasses clear fluids per day?[1,2,4]
4	Have you tried **relaxation techniques** (e.g. guided imagery, music therapy, progressive muscle relaxation, and/or hypnosis)?[1,2,4,5,13]
5	Are you taking fast-acting **anti-emetics before meals** so they are effective during/after meals?[1,2]
6	If vomiting, are you **limiting food and drink until vomiting stops**? After 30-60 min without vomiting, sip clear fluids. When clear fluids stay down, add dry starchy foods (crackers, dry toast, dry cereal, pretzels). If starchy foods stay down, add protein rich foods (e.g. eggs, chicken).[1,2]
7	If nausea are you trying to: Eat **5-6 small meals**?[1-4] Eat **foods that reduce your nausea** and are your "comfort foods" cold or room temperature?[1,2,4] Avoid greasy/fried, highly salty, spicy, and foods with strong odors? Avoid tobacco and alcohol?[1,4,5]
8	Are you **sitting upright or reclining** with head raised for 30-60 minutes after meals?[1,2]
9	If vomiting, are you trying to use a **bland rinse 4 times/day**?[2] For 1 cup warm water, add table salt (2.5 ml (1/2 tsp.)), baking soda (1/2 tsp.) or both (1/4 tsp. each). Swish in your mouth for at least 30 seconds and spit out. Prepare daily.
10	Have you tried **acupuncture** or **acupressure** to help with your nausea/vomiting?[1,2,4]
11	Have you spoken with a dietitian?[1,2,4]
12	Would **more information** about your symptoms help you to manage them better?[1-3] If yes, provide appropriate information or suggest resources.

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies and if appropriate, medication use
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not confident, 10=very confident)?
- Patient agrees to use medication to be consistent with prescribed regimen.
- Referral (service & date):
- Patient agrees to seek medical attention; specify time frame:
- Advise to call back in 12-24 hours if no improvement, symptom worsens, or new symptoms occur

References: 1) BCCA 2014; 2) CCO 2019; 3) NICaN 2015; 4) NCCN 2019; 5) Roila 2019; 6) Brahmer 2018; 7) NCCN 2018; 8) CCO 2018; 9) Puzanov 2017; 10) Haanen 2017; 11) Watanabe 2011; 12) NIH-NCI CTCAE 2017; 13) ONS 2017; 14) Hesketh 2017; 15) Smith 2015; 16) Health Canada 2019 (see pages 40-48 for full references)

Pain Practice Guide

Pain: subjective sensory or emotional discomfort associated with actual or potential tissue damage or described in terms of such damage.[1-5] Types of pain are classified as nociceptive or neuropathic. Nociceptive pain arises from stimulation of pain receptors within the tissue, which has been damaged or involved in an inflammatory process;[1,2,5,6] divided into a) somatic pain in skin, muscle and bone described as aching, stabbing, throbbing, and/or pressure and; b) visceral pain in organs or viscera described as gnawing, cramping, aching, or sharp.[1,2] Neuropathic pain from nerve damage is described as burning, tingling, shooting, or pins/needles.[1,2,5,6]

1. Assess the pain and severity (Supporting evidence: 15 guidelines)[1-15]

Tell me about the pain (location, onset, radiating, what does it feel like, what makes it better or worse)[1-9]

Do you know what may be causing the pain (surgery, injury, illness, pre-existing pain/arthritis, spinal cord compression)?[1,2,4-6,9]

What number from 0 to 10 best describes your level of pain where 0="No pain" and 10="Worst possible pain"[1,2,5-8,16]	0 – 3	4 – 6	7 - 10
Rating of worst pain and pain 2hr after medicine?[1,2,6,7]	0 - 3	4 – 6	7 - 10
Are you able to easily distract yourself from the pain?[6]	Yes, often	Yes, sometimes	No, never
Are you worried about your pain?[1,2,5,6,8,9]	No/Some	Yes, very	
Was the pain onset sudden?[1-3,5-8]	No	Yes	Yes
Is the pain from a new location?[1,2,5,6,8]	No	Yes	Yes
Do you have loss of bladder or bowel control, numbness in your fingers, toes or buttocks, feel unsteady on your feet, or difficulty walking?[1]	No		Yes
Do you feel confused, very sleepy, hallucinate, or have muscle spasms?[1,2,6]	No		Yes
Does your pain interfere with your daily activities?[1,2,5-8,17]	No[G1]	Yes, some[G2]	Yes, a lot[G≥3]
Does your pain interfere with your mood?[1,2,5,6]	No	Yes	
Are you able to get pain relief from your medicines?[1,2,5,6]	Yes, relief	Yes, some	No
Do the pain medicines restrict your daily activities?[1,2,6]	No	Yes, some	Yes, a lot
Do you have (risk factors for opioid misuse):[2,5,6] past alcohol or drug misuse, psychiatric disorder, younger age, legal problems, past sexual abuse, poor financial and/or social support, current heavy smoker?	No	Yes	
Do you have other symptoms:[1,2,4-6,9] Constipation, Nausea/ Vomiting, Depression, Fatigue, Sleep changes, Itchiness, Peripheral neuropathy	No	Yes, some	Yes, many
➔ Do you have (signs of musculoskeletal toxicities):[10-14] joint pain/swelling, stiffness after inactivity, muscle weakness, movement/heat improves pain	No		Yes
➔ Do you have (signs of hepatic toxicity):[10,11,13] right side abdominal pain, fatigue, yellow skin/eyes, dark urine, fever, nausea	No		Yes
➔ Do you have (signs of endocrine toxicity):[10,11,13,14] abdominal pain, nausea, fatigue, appetite loss, constipation, eyes sensitive to light, hair loss, dry skin, puffy face, confusion	No		Yes
➔ Do you have (signs of ocular toxicity):[10-12] pain with eye movement, vision changes, eyes sensitive to light, eyelid swelling	No		Yes
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage patient for symptom management based on highest severity (Supporting evidence: 4 guidelines)[1,2,5,6]	Review self-care. Review medications.	Review self-care. Review medications. Advise to notify if symptom worsens, new symptoms occur, or no improvement in 1-2 days.	Refer for medical attention immediately. Alert clinician if on immunotherapy

Legend: ➔ Immune Checkpoint Inhibitor therapy; NCI-CTCAE G1=Grade 1, G2=Grade 2, ≥G3=Grade 3 or higher

If patient has other symptoms, did you refer to the relevant practice guide(s)?

3. Review medications patient is using for pain, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 14 guidelines)[1-14]

Examples of medications for pain*	Notes (e.g. dose)	Evidence
1 Non-opioid:[1-3,6,8-14] acetaminophen (Tylenol®), NSAIDs, COX-2 inhibitors, nefopam (Acupan®)		Likely effective
2 Weak opioid:[2,3,6,8,9] codeine, tramadol, tapentadol		Effective
3 Strong opioid:[1,2,6,8,9] morphine, oxycodone, fentanyl, hydromorphone		Effective
Breakthrough pain:[1,2,5-8] extra dose of immediate-release oral opioids or transmucosal fentanyl		Effective
Chronic pain:[2,9] Transdermal buprenorphine, transdermal fentanyl, systemic anesthetics (e.g. mexiletine)		Effective
Chronic pain:[2,9] Cannabis/Cannabinoids		Likely effective
Refractory pain:[4,8] Ketamine		Benefits balanced with harm
Neuropathic pain:[1-3,6,8,9] Antidepressant or anticonvulsant		Likely effective
➔ Prednisone for immunotherapy-related pain[10-15]		Expert opinion
Constipation prophylaxis:[1,2,6,8] stimulant (sennosides or bisocodyl) plus osmotic laxative (lactulose or PEG)		Likely effective/ expert opinion

*Use NSAIDS with caution due to risk of renal, GI, or cardiac toxicities, thrombocytopenia, or bleeding disorder.[2,6] Avoid use of long-acting opioids during severe acute pain.[1,2,6,8] Use opioids with caution in patients with kidney or liver dysfunction.[1,2,6,8] Avoid tricyclic antidepressants in the elderly.[6]

4. Review 3 or more self-care strategies (Supporting evidence: 9 guidelines)[1-3,5-9,18]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	What is your **goal** for pain relief (e.g., target on scale of 0 to 10)?[1,2,6,7]
2	Do you have family or a friend **helping you manage** your pain?[1,2,6]
3	Do you understand the plan for **taking routine and breakthrough medicines** for pain? If no, educate about pain and pain management.[1,2,5,6,8,9]
4	Do you have any **concerns about taking pain medicines**? If yes, explore and educate.[1-3,5]
5	Are you tracking **your pain** level when taking medicine and 1-2 hr. after?[1,5]
6	**What helps** when you have pain? Reinforce as appropriate.[1,2,6,8]
7	Have you tried **massage** (+/- aromatherapy), **physio, acupuncture**, heat/cold, or transcutaneous electrical nerve stimulation?[1,2,6]
8	Are you doing any **light physical activity** (walk, swim, cycle, stretch)?[1,2,6]
9	Are you using **activities to help you cope** with pain (e.g. listening to music, breathing exercises, activities for distraction, relaxation, mindfulness-based stress reduction, guided imagery, hypnosis)?[1-3,6,18]
10	If taking opioids, are you using **medicines to prevent constipation**?[1,2,6,8]
11	If you have other symptoms, are they under control?[2]

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies and if appropriate, medication use
- Patient agrees to use medication to be consistent with prescribed regimen
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not, 10=very)?
- Referral (service & date):
- Patient agrees to seek medical attention; specify time frame:
- Advise to call back in 1-2 days if no improvement, symptom worsens, or new symptoms occur

References: 1) BCCA 2014; 2) NCCN 2019; 3) ONS Acute Pain 2019; 4) ONS Refractory/Intractable Pain 2019; 5) Daeninck 2016; 6) CCO 2018; 7) ONS Breakthrough Pain 2019; 8) Yamaguchi 2013; 9) ONS Chronic Pain 2019;10) Brahmer 2018; 11) NCCN 2018; 12) Puzanov 2017; 13) CCO 2018; 14) Haanen 2017; 15) Hryniewicki 2018; 16) Watanabe 2011; 17) NIH-NCI CTCAE 2017; 18) Bradt 2016 (see pages 40-48 for full references)

Peripheral Neuropathy Practice Guide

Neuropathy: Numbness, tingling, burning, pins and needles, tremor, balance disturbances, pain in hands, feet, legs or arms. The end result of peripheral, motor, sensory, and autonomic neuron damage caused by neurotoxic chemotherapy agents that inactivate the components required to maintain the metabolic needs of the axon.[1-4] Other causes of peripheral neuropathy include surgical trauma, treatment with immune checkpoint inhibitors, and radiation involving the spine.[1,3]

1. Assess severity of the neuropathy (Supporting evidence: 10 guidelines)[1-10]

If receiving chemotherapy, what was the date of your last treatment?

Tell me about the neuropathy (location, onset, radiating, what does it feel like, what makes it better or worse)[1,3]

What number from 0 to 10 best describes your neuropathy where 0="No neuropathy" and 10="Worst possible neuropathy"[1,3,11]	1-3	4-6	7-10
Are you worried about your neuropathy?[6,9]	No/Some	Yes, very	
Do you have pain in your (neuropathy location)?[1-4]	No/Mild 0-3	Moderate 4-6	Severe 7-10
➙ Pain in lower back or thighs[6,9]	No 0	Mild 1-3	> Moderate 4-10
Do you have new weakness in your arms or legs?[1,2]	No	Yes, some	Yes, a lot
➙ Rapid onset of weakness in arms or legs[5-7,9]	No		Yes
Have you noticed problems with your balance or how you walk or climb stairs?[1,2,5] If yes, how much?	No/Mild	Yes, some	Yes, a lot
Are you constipated?[1]	No/Mild	Yes, some	Yes, a lot
Do you have difficulty emptying your bladder of urine?[1]	No/Mild	Yes, some	Yes, a lot
➙ Constipation or urinary problems[6]	No		Yes
Does your neuropathy/numbness/tingling affect your daily activities? (e.g. buttoning clothing, writing, holding coffee cup)?[1,12]	No [G1]	Yes, some [G2]	Yes, a lot [G≥3]
➙ Neuropathy interferes with daily activities[5-10,12]	No [G1]		Yes [G≥2]
➙ Do you have: difficulty walking, vision changes, breathlessness, swallowing or speaking problems, nausea, sweating changes?[5-10]	No		Yes
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage patient for symptom management based on highest severity (Supporting evidence: 8 guidelines)[1,3,5-10]	Review self-care. Verify medications.	Review self-care. Verify medications. Advise to notify if symptom worsens, new symptoms occur, or no improvement in 1-2 days.	Refer for medical attention immediately. Alert clinician if on immunotherapy

Legend: ➙ Immune Checkpoint Inhibitor therapy; NCI-CTCAE G1=Grade 1, G2=Grade 2, ≥G3=Grade 3 or higher

If patient has other symptoms, did you refer to the relevant practice guide(s)?

3. Review medications patient is using for neuropathy, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 11 guidelines)[1-10,13]

Examples of medications for neuropathy*	Notes (e.g. dose)	Evidence
Duloxetine[2-4,6,8,9,13]		Likely effective
Gabapentin (Neurontin®) and opioid combination[2,3]		Likely effective
Corticosteroids - prednisone/methylprednisolone[1,3,5-10]		Expert opinion
Anti-convulsants gabapentin, pregabalin (Lyrica®)[1,3,4,6,8,9,13]		Expert opinion
Tricyclic anti-depressants: amitriptyline (Elavil®), nortriptyline (Pamelor®), duloxetine (Cymbalta®), venlafaxine (Effexor®), bupropion (Wellbutrin®, Zyban®)[1,3,4,13]		Expert opinion
Opioids – fentanyl, morphine (Statex®), hydromorphone (Dilaudid®), codeine, oxycodone (OxyContin®), tapentadol (Nucynta®), methadone (Dolophine®)[1,3]		Expert Opinion
Topical – lidocaine patch 5%[1,3]		Expert Opinion

*Opioids combined with anticonvulsants or anti-depressants increase CNS adverse events requiring careful titration. Avoid tricyclic antidepressants in the elderly.[4] Carnitine/L-carnitine and human leukemia inhibitory factor are not recommended for practice.[2,13]

4. Review 3 or more self-care strategies (Supporting evidence: 3 guidelines)[1-3]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	What is your **goal** in managing the neuropathy?[1,3]
2	**What helps** with managing your neuropathy?[1] Reinforce as appropriate.
3	Do you **look at your hands and feet** every day for **sores/blisters** that you may not feel?[1]
4	**Neuropathy in feet:** Do you have **footwear that fits** you properly?[1,2]
5	**Neuropathy in hands:** Do you **wear gloves** when cooking, using oven, or doing dishes?[1,2]
6	In your home: Are the walkways clear of clutter?[1] Do you have a **skid-free shower** or using bath mats in your tub?[1,2] Have you **removed throw rugs** that may be a tripping hazard?[1,2]
7	When **walking on uneven ground**, do you try to **look at the ground** to help make up for the loss of sensation in your legs or feet?[1]
8	If any neuropathy, to **avoid burns**: Have you **lowered the temperature** of your hot water heater?[1,2] Do you use a thermometer to ensure shower or tub water is <120ºF/49ºC?[1,2]
9	Are you **avoiding** exposing your fingers and toes to **very cold temperatures**?[1]
10	Do you try to **dangle your legs before you stand up** to avoid feeling dizzy?[1]
11	For **constipatio**n, do you try eat a **high-fiber diet** and drink adequate **fluids**?[1,3]
12	For urinary issues do you try to empty bladder at same time every day, bladder re-training exercises, and drink adequate fluids?[1]
13	Have you tried **acupuncture**, massage, yoga, relaxation therapy, or guided imagery?[1,3]
14	Have you spoken with a **physiotherapist** about: A walker, cane, or splint to help with balance and improve walking, physical training plan or transcutaneous electrical nerve stimulation?[1-3]
15	Have you spoken with an **occupational therapist** about using loafer-style shoes or Velcro shoe laces, adaptive equipment (e.g. larger handles on eating utensils)?[1]
16	Have you spoken with a clinician or pharmacist or dietitian about the peripheral neuropathy?[1,3]
17	Would **more information** about your symptoms help you to manage them better?[1] If yes, provide appropriate information or suggest resources.

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies and if appropriate, medication use
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not confident, 10=very confident)?
- Patient agrees to use medication to be consistent with prescribed regimen.
- Referral (service & date):
- Patient agrees to seek medical attention; specify time frame:
- Advise to call back in 1-2 days if no improvement, symptom worsens, or new symptoms occur

References: 1) BCCA 2014; 2) ONS 2019; 3) NCCN 2019; 4) CCO 2018; 5) BCCA 2017; 6) Brahmer 2018; 7) CCO 2018; 8) Haanen 2017; 9) NCCN 2018; 10) Puzanov 2017; 11) Watanabe 2011; 12) NIH-NCI CTCAE 2017; 13) Hershman 2014. (see pages 40-48 for full references).

Skin Rash Practice Guide

Skin rash/alteration: A change in the colour, texture or integrity of the skin.[1-11]
This practice guide is intended for any rash except for skin changes from radiation reaction. If the rash is in the radiation therapy area, refer to the Skin Reaction to Radiation practice guide.

1. Assess severity of the skin rash (Supporting evidence: 15 guidelines)[1-15]

Tell me about the skin rash (e.g. location, onset, what does it look like)[1]

What number from 0 to 10 best describes your skin rash where 0="No skin rash" and 10="Worst possible skin rash"[1,16]	1-3	4-6	7-10
Are you worried about your skin rash?[1,15]	No/Some	Yes, very	
Is the skin rash on one small part of your body (localized) or does it cover other areas (generalized)?[1,3,6,7,12,17]	<10% BSA[G1]	10-30% BSA[G2]	>30% BSA[≥3]
➔Is the skin rash localized or generalized[2,4,5,8,9,11,13,14]		<10% BSA[G1]	>10% BSA[G≥2]
Do you have any open wounds or blisters?[1-8,11,12]	No		Yes
Is the rash moist or weeping?[1,12]	No/Dry		Yes
Do you have pain or feel burning at the skin rash area?[1-3,6,7,11,13,15]	No/Mild 0-3	Moderate 4-6	Severe 7-10
Is the rash itchy?[1-8,10-14]	No	Yes	
Does the affected area feel tight or swollen?[1,2,4,5,11-13]	No	Yes	
Have you experienced a rash like this before?[3,9]	No/controlled with treatment		Yes, did not respond to treatment
Does your skin rash affect your daily activities?[1-13,15]	No	Yes, some	Yes, a lot
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage patient for symptom management based on highest severity (Supporting evidence: 14 guidelines)[1-14]	Review self-care. Verify medications.	Review self-care. Verify medications. Advise to notify if symptom worsens, new symptoms occur, or no improvement in 12-24 hours.	Refer for medical attention immediately. Alert clinician if on immunotherapy.

Legend: ➔ Immune Checkpoint Inhibitor therapy; BSA=Body surface area; NCI-CTCAE G1=Grade 1, G2=Grade 2, ≥G3=Grade 3 or higher

If patient has other symptoms, did you refer to the relevant practice guide(s)?

3. Review medications patient is using for skin rash, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 16 guidelines)[1-15,18]

Examples of medications for skin rash	Notes (e.g. dose)	Evidence
Topical corticosteroids (hydrocortisone, betamethasone, clobetasol propionate)[1-15]		Expert opinion
Antihistamines or antipruritics (hydroxyzine diphenhydramine, cetirizine, loratidine)[2-11,13-15,18]		Expert opinion
Oral corticosteroids (prednisone, methylprednisolone)[2-9,11-15,18]		Expert opinion
Antibiotics for infection,[1,3,4,7,10,12,15] or prophylaxis[3,6,14,18]		Likely effective
Prophylaxis: Vitamin K cream[3,6,15]		Expert opinion

* Low-dose corticosteroid cream should be used sparingly.[2,3,10]

4. Review 3 or more self-care strategies (Supporting evidence: 12 guidelines)[1,3-11,14,15]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	What is your **goal** for managing your skin rash?[1]
2	**What helps** when you have a skin rash?[1] Reinforce as appropriate.
3	Are you **avoiding sun** and protecting your skin with sunscreen and clothes?[1,3-11,14,15]
4	Are you **avoiding skin irritants** (e.g. alcohol or perfume based creams, clothes washed in scented laundry soap)?[1,3,5-7,9,11,15]
5	Are you using **moisturizing cream** on your skin (e.g. urea-based) daily?[1,3-8,10,14]
6	If itchy, are you using oatmeal baths?[4,15]
7	Are you trying to take **warm showers** using mild **non-scented soap**? Avoid hot water and bathing too long.[1,3,6,7,10,14]
8	Are you trying to use a **cool compress** for itchy skin?[4,7,15]
9	Would **more information** about your symptoms help you to manage them better? If yes, provide appropriate information or suggest resources.

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies and if appropriate, medication use
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not confident, 10=very confident)?
- Patient agrees to use medication to be consistent with prescribed regimen
- Patient agrees to seek medical attention; specify time frame:
- Advise to call back in 12-24 hours if no improvement, symptom worsens, or new symptoms occur[1]

References: 1) BCCA 2016; 2) NCCN 2018; 3) Pinto 2016; 4) CCO 2018; 5) Haanen 2017; 6) Gravalos 2019; 7) Chu 2017; 8) Hryniewicki 2018; 9) Brahmer 2018; 10) Califano 2015; 11) Belum 2016; 12) NICaN 2015; 13) Puzanov 2017; 14) BCCA 2017; 15) Brown 2016; 16) Watanabe 2011; 17) NIH-NCI CTCAE 2017; 18) ONS 2017 (see pages 40-48 for full references).

Skin Reaction to Radiation Practice Guide

Skin reaction/alteration: A change in the colour, texture or integrity of the skin.[1,2]

1. Assess severity of the skin reaction to radiation (Supporting evidence: 4 guidelines)[1-4]

Site of skin reaction(s):[3] Size of skin reaction(s):[3]

What number from 0 to 10 best describes your skin reaction where 0="No skin reaction" and 10="Worst possible skin reaction"[2,3,5]	1-3	4-6	7-10
Are you worried about your skin reaction?[2]	No/Some	Yes, very	
Is your skin red?[2-4]	None	Faint/dull	Tender/bright, necrotic
Is your skin peeling/flaking?[2-4,6]	No/Dry[G1]	Patchy, moist[G2]	Generalized, moist[G3]
Do you have any swelling around the skin reaction area?[2-4]	No	Yes, some	Yes, pitting edema
Do you have pain at the skin reaction area?[2-4]	No/Mild 0-3	Moderate 4-6	Severe 7-10
Do you feel itchy at the skin reaction area?[1-4,6]	No/Mild [G1]	Yes, often [G2]	Yes, constant [G3]
Do you have any open, draining wounds?[2-4]	No		Yes
Is there any odour from the skin reaction area?[2,3]	No		Yes, strong/foul
Do you have any bleeding?[2,3]	No		Yes, from minor trauma
Do you have a fever > 38º C?[2-4] Unsure	No		Yes
Have you started a new medication?[2,3]	No	Yes	
Does your skin reaction affect your daily activities?[2,3]	No	Yes, some	Yes, a lot
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage patient for symptom management based on highest severity (Supporting evidence: 2 guidelines)[3,4]	Review self-care. Verify medications.	Review self-care. Verify medications. Advise to notify if symptom worsens, new symptoms occur, or no improvement in 12-24 hours.	Refer for medical attention immediately.

Legend: NCI-CTCAE G1=Grade 1, G2=Grade 2, ≥G3=Grade 3 or higher

If patient has other symptoms, did you refer to the relevant practice guide(s)?

3. Review medications patient is using for skin reaction, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 3 guidelines)[2-4]

Examples of medications for skin reaction to radiation therapy*	Notes (e.g. dose)	Evidence
Prevention: Calendula ointment[2]		Likely effective
Pruritus: Low-dose corticosteroid cream[2-4]		Likely effective
Infection: Silver Sulfadiazine (Flamazine)[2,3]		Likely effective
Open areas: Hydrocolloid & hydrogel Dressings[3,4]		Expert opinion
Moist desquamation: Silicone Dressings[3]		Expert opinion
Infection: Topical antibiotics[2]		Expert opinion

*Insufficient evidence to support or refute other topical agents for prevention of skin reaction (i.e., sucralfate cream, ascorbic acid, chamomile cream, almond ointment, polymer adhesive skin sealant). Low-dose corticosteroid cream should be used sparingly.[2-4,7] Silver sulfadiazine should not be used if allergy to sulfa, history of severe renal or hepatic disease or during pregnancy.[3] Hydrocolloid & hydrogel dressings are not advised for infected wounds and wounds with heavy exudate,[3] or applied directly prior to treatment.[4] Emerging evidence for proteolytic enzymes for treatment of skin reaction from radiation.[1] Trolamine (Biafine®) and aloe vera are not recommended for radiation skin reaction.[2]

4. Review 3 or more self-care strategies (Supporting evidence: 4 guidelines)[1-4]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	What is your **goal** for managing your skin reaction?[3]
2	**What helps** when you have a skin reaction?[3] Reinforce as appropriate.
3	Are you trying to take **lukewarm/tepid showers** or **baths** using mild non-perfumed soap, and patting dry (no rubbing)?[1-4,7]
4	Are you trying to use **non-scented,** lanolin-free, water-based **creams** on intact skin?[3,4]
5	Are you **wearing loose clothes**?[2,3]
6	Are you **avoiding using petroleum jelly**, alcohol, and perfumed products?[3,4]
7	Are you using **non-metallic deodorant**?[1-3]
8	Are you trying to use an **electric razor** instead of a wet razor for shaving? Stop **shaving** if area becomes irritated.[2-4]
9	Are you **avoiding waxing** or other hair removal creams?[3]
10	Are you **avoiding** skin **creams** or gels in the **treatment area before treatment**?[2,4]
11	Are you **avoiding wet swim wear** in the treatment area?[2,3]
12	Are you **avoiding temperature extremes** (e.g. ice pack or heating pad) to the reaction area? Are you trying to **protect** the treatment area from the **sun and the cold**?[2-4]
13	If the reaction area is itchy, are you trying to use warm or room temperature **normal saline compresses up to 4 times a day**?[3]
14	Are you **avoiding trauma to the treatment area** by not using tape or Band-aids, not rubbing or scratching your skin, and opting to wear loose fitting clothing?[2-4]
15	Would **more information** about your symptoms help you to manage them better? If yes, provide appropriate information or suggest resources.

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies and if appropriate, medication use
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not confident, 10=very confident)?
- Patient agrees to use medication to be consistent with prescribed regimen.
- Patient agrees to seek medical attention; specify time frame:
- Advise to call back in 12-24 hours if no improvement, symptom worsens, or new symptoms occur

References: 1) Chan 2014; 2) ONS 2017; 3) BCCA 2017; 4) Pinto 2016; 5) NICaN 2015; 6) Watanabe 2011; 7) NIH-NCI CTCAE 2017 (see pages 40-48 for full references).

Sleep Changes Practice Guide

Sleep changes: actual or perceived changes in night sleep resulting in daytime impairment.[1-3]

1. Assess severity of the sleep changes (Supporting evidence: 3 guidelines)[1-3]

What number from 0 to 10 best describes how much your sleep changes affect your daytime activities at home and work where 0="No problems" and 10="Worst possible problems"[1-3]	1-3	4-6	7-10
Are you worried about your sleep changes?[1-3]	No/Some	Yes, very	
Do you have difficulty falling asleep?[1-3]	<3 nights/week	3+ nights/week	Takes ≥30 min every night
Do you have difficulty staying asleep?[1-3]	<3 nights/week	3+ nights/week	Takes ≥30 min every night to go to sleep again
Do you have early morning waking when not desired?[1-3]	<3 nights/week	3+ nights/week	
How long have these sleep changes been present?[1-3] Describe the sleep pattern change.[1-3]	Less than 1 month	More than 1 month	
Did the onset of this problem occur with another issue?[1-3] Describe.	No	Yes	
Are you taking any medicines that affect sleep (e.g. opiates, steroids, sedatives, etc.)[1,3]	No	Yes	
Do you have other sleep disorders (e.g., loud snoring, choking/gasping, sleep apnea, restless movement, restless legs)?[1-3]	No		Yes
Do you have other symptoms: [1-3] fatigue, pain, nausea, anxiety, depression, hot flashes	None	Some	Yes, many
	1 **Mild** (Green)	2 **Moderate** (Yellow)	3 **Severe** (Red)
2. Triage patient for symptom management based on highest severity (Supporting evidence: 3 guideline)[1-3]	Review self-care. Verify medications.	Review self-care. Verify medications. Advise to notify if symptom worsens, new symptoms occur, or no improvement in 2-3 days.	Review self-care (If ≥30 minutes see 4.16). Verify medication use, if appropriate. For other sleep disorders, refer to sleep disorder clinic.

If patient has other symptoms, did you refer to the relevant practice guide(s)?

3. Review medications patient is using for sleep changes, including prescribed, over the counter, and/or herbal supplements (Supporting evidence: 2 guidelines)[1,3]

Examples of Medications for sleep changes*	Notes (e.g. dose)	Evidence
Benzodiazepines - lorazepam (Ativan®), diazepam, (Valium®), alprazolam (Xanax®)[1,3]		Expert opinion
Non-benzodiazepine Hypnotics - Zolpidem (Ambien®)[1,3]		Expert opinion
Tricyclic Antidepressants - Amitriptyline (Elavil®)[3]		Expert opinion
Neuroleptics - Chlorpromazine (Thorazine®, Ormazine®)[3]		Expert opinion
Herbal supplements (Melatonin, Kava, Valerian)[3]		Expert opinion
Melatonin receptor agonists - Ramelteon (Rozerem®)[3]		Expert opinion
Antipsychotics - Quetiapine (Seroquel®)[3]		Expert opinion

*Medications for sleep changes should be short term (7-10 days) and depends on side effect profiles of the medicine and the potential for interaction with other current medications; need to balance benefits with harms.[1,3] Tricyclic antidepressants should be avoided in the elderly.[3] Antipsychotics are a last option.[3]

4. Review 3 or more self-care strategies (Supporting evidence: 3 guidelines)[1-3]

A. Ask patient what strategies are already being used
B. Suggest strategies and provide education
C. Ask patient what strategies they are willing to try

1	What is your **goal** for sleeping (is it realistic e.g. 6 -10 hours sleep/night)?[1,3]
2	**What helps** when you have problems sleeping?[1,3] Reinforce as appropriate.
3	Have you kept a **sleep diary**?[1-3]
4	Do you try to go to sleep and **wake at the same time** each day?[1-3]
5	Do you get **exposed to light** soon after waking?[1,2]
6	Do you try to **clear your head early evening** (problem solve, write down plan)?[1,2]
7	Do you have a **90-minute buffer zone** before bedtime (e.g., read, watch TV, crossword puzzle, relax, listen to music, yoga, deep breathing, meditation, guided imagery)?[1-3]
8	Do you **go to bed when you are sleepy**?[1-3] If you **can't fall asleep** within 20-30 minutes, do you **get out of bed** and return when sleepy?[1-3]
9	Do you limit the use of the **bedroom for sleep and/or sex**?[1-3]
10	Do you **restrict napping** in the daytime?[1-3] If needed, limit to one nap (20-30 minutes) and spend at least four hours awake before bedtime.[2]
11	Do you have a **comfortable sleep environment**? Suggest removing bedroom clock and avoid computer screens. If noisy or too bright, use **ear plugs or eye masks**.[1-3]
12	Do you understand the **effect of some medications on sleep**? Provide education.[1,3]
13	If you have **other symptoms**, are they under control?[3]
14	Are you **exercising** regularly?[1-3]
15	Do you know **what to avoid**? Suggest: limiting caffeine after noon, limit smoking or alcohol, spicy or heavy meals, excessive fluids, intense activities close to bedtime.[1-3]
16	Have you tried a program like **cognitive-behavioural therapy** or received personal counseling that provides more in-depth guidance on managing sleep changes?[1-3]
17	Would **more information** about your symptoms help you to manage them better? If yes, provide appropriate information or suggest resources.

5. Summarize and document plan agreed upon with patient

- No change, continue with self-care strategies and if appropriate, medication use
- Patient agrees to try self-care items #: How confident are you that you can try what you agreed to do (0=not confident, 10=very confident)?
- Patient agrees to use medication to be consistent with prescribed regimen.
- Referral (service & date):
- Patient agrees to seek medical attention; specify time frame:
- Advise to call back in 2-3 days if no improvement, symptom worsens, or new symptoms occur

References: 1) Howell 2012; 2) ONS 2017; 3. BCCA 2014; 4) Watanabe 2011 (see pages 40-48 for full references).

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