



# TOBACCO FREE FUTURES

guidelines

## **Disclaimer**

Every effort has been made to ensure the links in this document are up to date; however, we cannot guarantee they will work. Some links will give error messages because of the security settings on the source files. These files are accessible to AHS staff only. AHS staff can access the documents by copying and pasting the link into their browsers.

## **Copyright**

Copyright ©2014. Alberta Health Services. All rights reserved. Alberta Health Services cannot guarantee the validity of the information contained in these guidelines. No part of this document may be reproduced, modified or redistributed in any form without the prior written permission of Alberta Health Services.



## CHAPTER 22

# Specific Populations: Adults with Cancer



# INTRODUCTION

This chapter is intended to assist all health care providers to identify and provide brief tobacco intervention with adult cancer patients in Alberta. A cancer diagnosis offers opportunities for tobacco use screening and cessation intervention with health benefits cutting across cancer type and stage of prognosis.

In 2013, the Alberta Government published *Changing Our Future: Alberta's Cancer Plan to 2030*, which identifies the need for integrated prevention strategies to reduce the risk of cancer and strengthen health promotion interventions across the continuum of care.<sup>1</sup> While Alberta has made clinical and policy advancements to inform tobacco cessation activities in health care settings, tobacco screening and treatment support has not been a systematic part of routine care within CancerControl Alberta (CCA) services.<sup>2,3</sup> Recognizing the importance of tobacco cessation for their patient population, CCA has developed a clinical practice guideline, *Tobacco Screening and Treatment for Adult Cancer Patients* to support tobacco cessation as a provincial standard of care.<sup>4</sup>

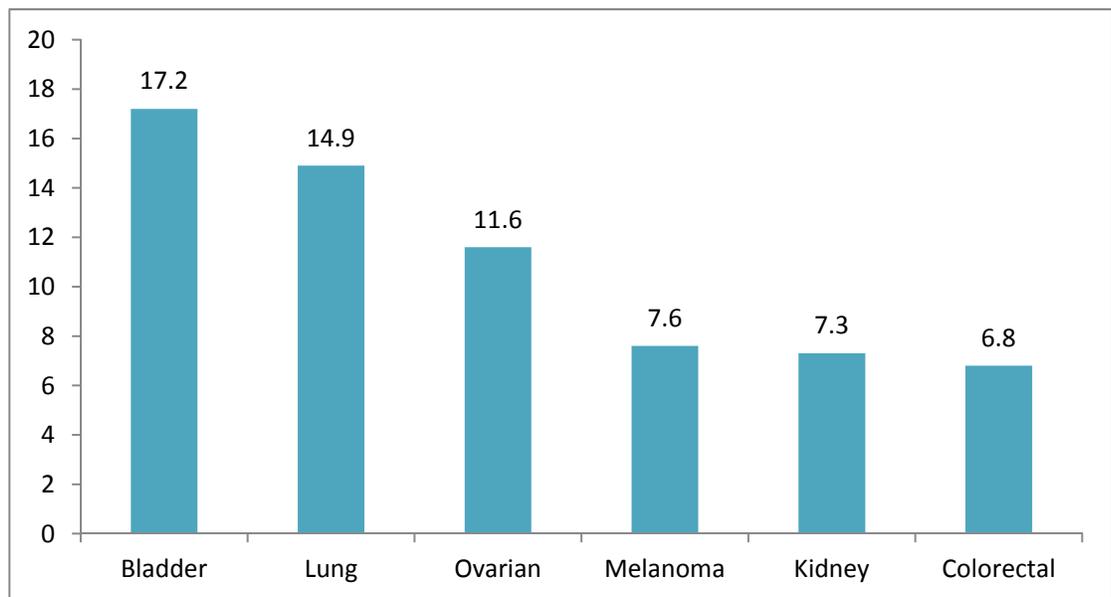
To review the *Tobacco Screening and Treatment for Adult Cancer Patients* guideline, visit:

<http://www.albertahealthservices.ca/assets/info/hp/cancer/if-hp-cancer-guide-supp001-tobacco-cessation.pdf>

## Prevalence of tobacco use in cancer patients and survivors

In Canada, smoking is responsible for an estimated 30% of all cancer deaths and more than 85% of all lung cancer cases, with strong associations to other cancer types, including those of the mouth (oral), esophagus, stomach, pancreas, colon, bladder, breast and kidneys.<sup>5</sup>

Figure 22.1: Percentage of Cancer Patients Still Smoking 9 Years After Diagnosis<sup>8</sup>



Source: Adapted from: American Association for Cancer Research, U.S. Cancer Patients Still Smoking Nine Years After Diagnosis. Available at [http://mb.cision.com/Public/3069/9622656/bee578341521c87e\\_org.jpg](http://mb.cision.com/Public/3069/9622656/bee578341521c87e_org.jpg)

Data from the 2011-2014 Canadian Community Healthy Survey (CCHS) show that 1 in 5 current cancer patients (20.1%) reported daily or occasional smoking.<sup>6</sup> Comparable rates have been observed in the United States where rates of rates of continued smoking among cancer patients range from 7% to 60% depending on tumor site.<sup>7</sup>

Among cancer survivors, estimates suggest that between 15% and 33% continue to smoke, with the highest smoking rates reported in younger survivors and survivors of bladder, lung and ovarian cancer (Figure 22.1).<sup>8</sup> Data further suggest that smoking rates remain higher in the first year of diagnosis with cessation increasing in the year's following.<sup>9</sup>

Evidence has shown that cancer patients who continued to smoke experience higher rates of all-cause and cancer-specific mortality, higher cancer treatment complications, reduced radiation and chemotherapy efficacy, increased risk of cancer recurrence, increased risk of a second primary malignancy and reduced quality of life (Table 22.1).<sup>5, 10, 11</sup> The 2014 U.S. Surgeon's General Report specifically reports that the relative risk of cancer-specific mortality and all-cause mortality among cancer patients who smoke is 60% and 50% greater, respectively, compared to patients who have never smoked, suggesting that tobacco cessation at diagnosis is critical to improving the prognosis of adult patients with cancer.<sup>5</sup>

<b>SURGERY</b>	<b>RADIATION</b>	<b>CHEMOTHERAPY</b>
<ul style="list-style-type: none"> <li>• increased complications from general anesthesia</li> <li>• increased risk of severe pulmonary complications</li> <li>• poor wound healing, including:               <ul style="list-style-type: none"> <li>◦ decreased capillary blood flow</li> <li>◦ increased vasoconstriction</li> <li>◦ increased risk of infection</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• decreased treatment efficacy</li> <li>• increased risk of toxicity and side effects, including:               <ul style="list-style-type: none"> <li>◦ xerostomia (dry mouth)</li> <li>◦ oral mucositis</li> <li>◦ loss of taste</li> <li>◦ pneumonitis</li> <li>◦ soft-tissue and bone necrosis</li> <li>◦ poor voice quality</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• potential increase of side effects, including:               <ul style="list-style-type: none"> <li>◦ immune suppression</li> <li>◦ weight loss</li> <li>◦ fatigue</li> <li>◦ pulmonary and cardiac toxicity</li> </ul> </li> <li>• increased incidence of infection</li> <li>• altered pharmacology of some medications</li> </ul>

Source: Adapted From American Society of Clinical Oncology Tobacco Cessation Guide for Oncology Providers

## CHEMOTHERAPY

Tobacco smoke can interfere with the pharmacokinetic mechanisms of several chemotherapy drugs due to increased hepatic metabolism secondary to smoking potentially causing an altered pharmacologic response.<sup>12,13</sup> Tobacco smoke increases the amount of drug binding protein (AAG) resulting in induction of cytochrome-450 enzymes (primarily CYP1A2) and uridine 5'-diphospho-lucuronosyltransferase (UGT) isoenzymes which metabolize several chemotherapy drugs. Nicotine replacement therapy does not impact CYP1A2 activity or reduce cancer drug efficacy.

Smoking tobacco may alter the metabolism of some chemotherapy agents making them less effective.<sup>13,14</sup>

Erlotinib, a drug commonly used in the treatment of non-small cell lung and pancreatic cancers, is primarily metabolized by CYPs 3A4 and 1A2. The polycyclic aromatic hydrocarbons (PAH), released by the incomplete combustion of smoked tobacco, cause induction of several CYP enzymes, including 1A2, resulting in more rapid metabolism and decreased systemic exposure to the drug.<sup>13</sup> Patients who currently smoked had a 23.5% increase in drug clearance versus those who used to smoke or never smoked.<sup>12</sup> Prescribing information advises consideration of smoking history in dosing as it has been shown to be a predictor of treatment outcomes with erlotinib.<sup>13</sup> Dosing consideration should also be given to patients exposed to second-hand smoke.<sup>14</sup>

Irinotecan is a first-line therapy for colon and rectal cancer, which is converted to the active and inactive metabolites by isoenzymes. While not definitive, a study of cancer patients treated with irinotecan found those who smoked experienced 40% lower systemic exposure to the active metabolite SN-38, 18% faster clearance and less neutropenia (6% in those who smoke versus 38% in non-smokers) compared to non-smokers.<sup>15</sup> The personalization of irinotecan therapy by increasing dosing in patients who smoke has been proposed.<sup>13</sup>

## Readiness to quit

Studies suggest cancer patients are highly motivated to quit smoking following their diagnosis, particularly those with lung, head or neck cancers.<sup>16,17</sup> Among a group of newly diagnosed head and neck cancer patients who smoked, 62% reported plans to quit within the following three months and 38% had made quit several quit attempts in previous years.<sup>16</sup>

Quit rates of a cohort of patients who smoke and were diagnosed with cancer found that quit rates were higher among cancer patients at two and four years after diagnosis (31.3% and 43%, respectively) compared to people who smoked but were not diagnosed with cancer (19% and 33.9%, respectively).<sup>8</sup> Results were similar by cancer site and stage.<sup>8</sup>

“Relapse is not so much a failure of motivation but is more tied to the reality of their nicotine addiction and their sometimes poor preparation for attempting to quit.”<sup>11</sup>

Despite high initial cessation motivation and quit attempts after a cancer diagnosis, high relapse rates have been reported. A longitudinal study examining smoking behaviours following surgical treatment among lung, head and neck cancer patients who smoked the week before surgery reported a 60% relapse rate at 12 months following their surgery compared to 13% of patients who were abstinent pre-surgery.<sup>15</sup> Low quitting self-efficacy, higher depression proneness, and greater fears about cancer recurrence were among the reason cited for relapse, suggesting the need for ongoing tobacco screening and treatment support.<sup>15</sup>



## Family and social support

Families and other social support systems are an influential context in which tobacco cessation occurs with studies correlating family members' supportive or undermining behaviours with quit success across cancer and non-cancer populations. Studies looking at patients with lung and head, and neck cancers have found that exposure to smoking at home, as well as spousal and peer smoking is associated with decreased rates of cessation<sup>18,19</sup> with exposure to smoking across all three environments, resulting in the lowest chances of cessation.<sup>19</sup>

The opportunity to offer broader family-based cessation support has thus been proposed.<sup>20</sup> A study looking at smoking behaviours among family members of newly diagnosed lung cancer patients found that 71% stated an increased motivation following the diagnosis.<sup>16</sup> Cancer patient-caregiver dyads in which one or both individuals continue to smoke following diagnosis have also reported worse mental quality of life than non-smoking dyads.<sup>21</sup>

While research in non-cancer populations cannot conclusively determine if the involvement of family is a critical 'active ingredient' in tobacco cessation interventions<sup>20</sup>, oncology practitioners have a unique opportunity to utilize the contact they may have with patients' family or support system and involve them in cessation interventions.<sup>20</sup>

**See Chapter 2: "The Effects of Tobacco Exposure" for more information on the impact of second-hand smoke.**

## TOBACCO TREATMENT RECOMMENDATIONS

Cessation interventions by health care providers have been shown to increase smoking abstinence rates among cancer patients.<sup>22</sup> Despite growing support from oncologic organizations,<sup>23,24</sup> treatment for tobacco dependence is not a routine part of cancer care with oncology professionals citing similar barriers to those of other health care providers (e.g., time constraints, lack of confidence, concerns about patient resistance to treatment, lack of training, etc.)<sup>25,26</sup>

Acknowledging the clinical implication of tobacco use on cancer outcomes and treatment efficacy, the American Association for Cancer Research published a policy statement highlighting the importance of documenting tobacco use among cancer patients and the need for counseling for this population.<sup>24</sup> In 2015 the National Comprehensive Cancer Network (NCCN) similarly published clinical practice guidelines for smoking cessation which provide recommendations to address smoking in cancer patients along with behavioral and pharmacologic cessation interventions.<sup>23</sup>

While the 5A's approach, as outlined in Chapter 7 ("Brief Intervention"), is considered clinical best practice for tobacco cessation for both cancer patient and non-cancer patient populations, the abbreviated 'Ask-Advise-Refer' (AAR) model has shown evidence of feasibility and success where time constraints, lack of expertise or resources make it hard for clinicians to deliver a more intensive intervention.<sup>27,28</sup> It is this model that has been adopted by Cancer Control Alberta (CCA) as a provincial standard of care to treat tobacco use and dependence. The intervention concludes with a referral to available cessation support services for more intensive tobacco treatment and counselling. Please reference Figure 22.2 for the CCA Algorithm for the Screening and Treatment of Tobacco Use.

Available evidence with cancer patients suggests that tobacco screening with physician-delivered advice is more effective than no advice<sup>29</sup> and that initiating tobacco screening and intervention at the time of diagnosis and/or during the preoperative period is a best practice regardless of cancer type or level of intervention.<sup>8,23,24</sup>

## Intensive cessation support

The U.S. Department of Health and Human Services clinical practice guideline for treating tobacco use and dependence indicates that there is a dose dependent response to quit success and intensity of treatment, including behavioural counselling.<sup>27</sup>

Several studies to date have tested the efficacy of more intensive tobacco treatment delivered by a nurse in a hospital setting with telephone follow-up for clients with cancer. Results demonstrated higher quit rates in the intervention group versus the usual care control group, although results varied from study to study.<sup>30</sup> A recent population-based analysis among US patients diagnosed with cancer found that 51.7% of those who were actively smoking reported being counseled to quit smoking by a health professional.<sup>31</sup>

Unique opportunities are presented when implementing intensive tobacco counselling for cancer patients, which may require modifying currently recommended strategies used with the general population.<sup>32,33</sup> While intensive intervention may be carried out as part of a routine clinical visit, patients cancer treatment schedules and treatment intensity may shorten the timeframe to create and implement a quit plan and/or make it difficult for patients to participate in structured programs as a result of fatigue or treatment-related side effects.<sup>32</sup>

**See Chapter 8: “Intensive Cessation Counselling” for a more in-depth discussion of how to approach intensive counselling for patients/clients at different stages of change.**

## Pharmacological interventions

Similar to the general population, first-line pharmacotherapy for tobacco cessation with cancer patients include all forms of nicotine replacement therapy (NRT), bupropion and varenicline.<sup>23</sup> Compared to placebo, varenicline is the most effective monotherapy for successful long-term smoking cessation.<sup>27</sup>

A 2013 meta-analysis comparing smoking cessation interventions with usual care in cancer patients found that the combined use of pharmacological (NRT and varenicline) and behavioural therapy were most effective at improving quit rates.<sup>34</sup> For more details, refer to Table 22.2.

Electronic smoking/vaping devices should not be promoted or prescribed as a tobacco cessation aid. Health Canada has concluded there is insufficient evidence to recommend e-cigarettes/vaping products to help people quit or reduce their tobacco use and they have not been fully evaluated for safety and quality.

**Refer to Chapter 9 (“Pharmacotherapy”) for more detailed discussion and prescribing considerations of these medications.**

Cancer patients who continue to smoke after diagnosis are often highly addicted to nicotine and may need combination pharmacotherapies to support their quit attempts.<sup>35</sup>



**Table 22.2: Cessation pharmacotherapy and considerations for cancer patients**

DRUG	CONSIDERATIONS FOR ONCOLOGY
Nicotine Replacement Therapy	<ul style="list-style-type: none"> <li>• Oral products, including gum, lozenge, spray and inhaler may be irritating to the oral mucosa; therefore, they may not be appropriate for use for individuals               <ul style="list-style-type: none"> <li>◦ with oral cancer</li> <li>◦ with head and neck cancer who are undergoing radiation</li> <li>◦ who receive chemotherapy with a high incidence of stomatitis<sup>30</sup></li> </ul> </li> <li>• Some forms of NRT may be contraindicated in the immediate pre and/or post-operative period in patients who undergo tissue reconstruction where revascularization is a concern. These cases should be discussed on an individual basis with the surgeon and healthcare team. In such cases, non-nicotine treatments for smoking cessation are alternate options (e.g. varenicline, bupropion).<sup>32</sup></li> </ul>
Bupropion	<ul style="list-style-type: none"> <li>• For cancer patients with depression symptoms, bupropion increases abstinence rates, lowers withdrawal and increases quality of life.<sup>33</sup></li> <li>• Bupropion is contraindicated for patients with CNS tumour or any patient at increased risk of seizure.<sup>34</sup></li> <li>• In the general population, this option reduces the appetite increase and weight gain that is associated with smoking cessation. This may negatively impact cancer patients who may be struggling with nutrition and weight loss related to their treatments.<sup>30</sup></li> <li>• There is evidence that bupropion may have a large effect on the metabolism of tamoxifen by inhibiting conversion to active metabolites and decreasing effectiveness.<sup>35</sup></li> </ul>
Varenicline	<ul style="list-style-type: none"> <li>• No reported studies of interactions between varenicline and commonly used lung cancer therapies.<sup>10</sup></li> <li>• Varenicline should be used cautiously in patients with a history of seizures or conditions that lower seizure threshold.<sup>36</sup></li> <li>• A small study tested the effectiveness of varenicline and behavioural support in a cohort of cancer patients; nausea was reported as the most common side effect, similar to rates reported within the general population.<sup>37</sup></li> <li>• Dosage and appropriateness of use may need to be considered for cancer patients who are experiencing nausea as a side effect of cancer treatments.<sup>30</sup></li> <li>• Standard product warnings include close monitoring for neuropsychiatric symptoms and consideration of use of nicotine replacement therapy as a treatment option.<sup>36</sup></li> <li>• Varenicline is tolerated in cancer patients, but given the psychological and medical vulnerability of this population it may be preferable to use along with intensive behavioural counselling.<sup>37</sup></li> </ul>

In Chapter 9 (“Pharmacotherapy”), the concept of routine depression screening to address potential safety concerns related to use of the non-nicotine pharmacotherapy options was introduced. Evidence suggests that cancer-related distress is experienced by at least 35%-45% of those affected by cancer.<sup>36</sup> Consistent with the Best Practice Guideline for the Management of Cancer-Related Distress in Adults,<sup>36</sup> CCA has implemented Screening for Distress as a provincially standardized intervention that uses the Putting Patients First (PPF) Form, a new self-report tool that patients independently complete at key time points throughout their journey.

Distress is defined as “a multifactorial, unpleasant, emotional experience of a psychological, social and/or spiritual nature that can interfere with the ability to cope effectively with cancer, its physical symptoms and its treatment.”<sup>38</sup>

When reviewing the PPF form with patients who have identified tobacco use, health care providers should keep in mind that the tool screens for five of the seven DSM-5 signs and symptoms of nicotine withdrawal including: irritability (frustration or anger), anxiety, difficulty concentrating, sleep disturbances, and depressed mood.<sup>36,37</sup> Within CCA, the use of the PPF provides a key opportunity to integrate tobacco screening and treatment as part of routine patient-centred care.

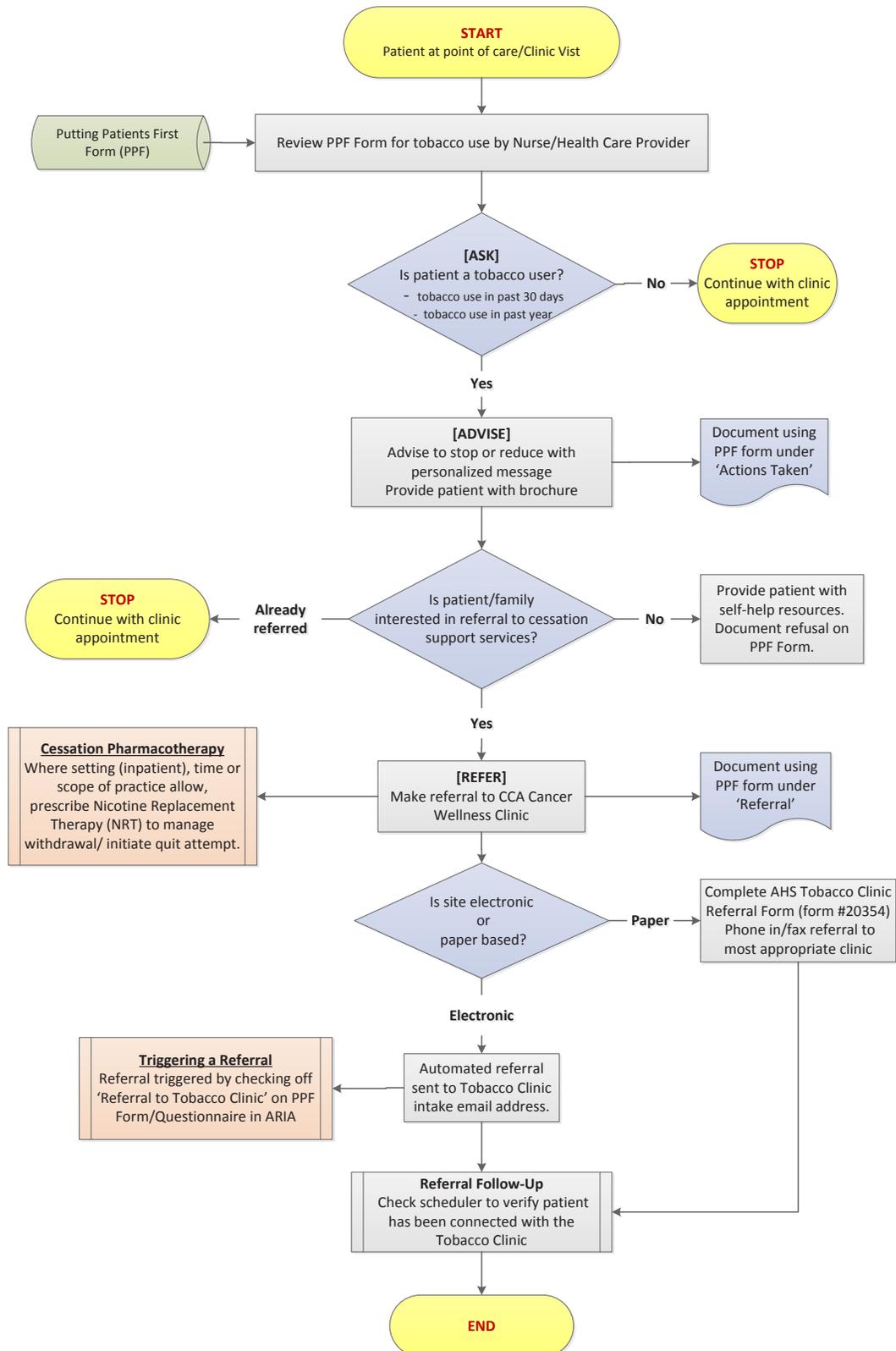
## Conclusions

Tobacco use is linked to more than 2500 new cancer cases per year in Alberta, reduces the effectiveness of cancer treatment and reduces overall survival rates from cancer. Screening for and treating tobacco use at the time of diagnosis and periodically throughout the cancer journey is becoming a gold standard for quality cancer care.

Similar to the general population, supporting cancer patients who use tobacco with a combination of pharmacotherapy and intensive counselling is the most effective cessation treatment. With the implementation of the AAR model within CCA, oncology clinicians are urged to screen all patients for tobacco use, provide tailored advice to quit and facilitate a referral to specialized treatment programs and resources.

The brief intervention model outlined in Chapter 7 (“Brief Intervention”) has been abbreviated for use with adults who are receiving treatment for a cancer diagnosis and is presented in Figure 22.2. Table 22.3 then outlines some of the considerations for implementing the model in cancer care settings.

**Figure 22.2: Tobacco Free Futures:  
Algorithm for the Identification and Treatment of Tobacco Use**



**Table 22.3: Treatment Model: Considerations for Adults with Cancer**

	MODEL COMPONENT	CONSIDERATIONS
ASK	<p><b>ASK</b> all patients if they have used tobacco in the last 30 days and in the last year.</p> <p><b>ASK</b> accompanying family members about their tobacco use.</p>	<ul style="list-style-type: none"> <li>• At minimum, identification of tobacco use should occur at the first oncology visit at a CCA facility via the PPF Form with follow-up screening/assessment at critical time points (pre/post chemotherapy, radiation and/or transfer of care).</li> <li>• Since tobacco use status may change throughout the cancer journey, some guidelines suggest more frequent screening (i.e., at every visit).</li> <li>• Even though many cancer patients report that they have quit right before diagnosis, relapse is very common so it's important to assess tobacco use at each encounter.</li> <li>• When possible family members/caregivers who attend appointments with patients should also be asked about their tobacco use. Cancer patients who smoke often have social circles that smoke and live with others who smoke. As well as being a teachable moment with regards to their own tobacco use, family members don't always understand the impact of their tobacco use on the patient in relation to exposure to second-hand smoke, as well as providing a trigger for relapse.</li> <li>• It is not unusual for cancer patients to be reluctant to disclose their tobacco use because of perceived stigma and feelings of shame and guilt associated with continued use.<sup>9</sup> Studies have demonstrated that even those who self-report not smoking may have tobacco use confirmed on positive biochemical testing.</li> <li>• Health care providers should approach patients with sensitivity when asking about and discussing tobacco use.</li> <li>• Let patients know that you will be asking about tobacco use at future visits.</li> <li>• Documentation can occur electronically in the PPF questionnaire or on the paper version of the form and attached to the patient's chart.</li> </ul>



Table 22.3: Continued		
	MODEL COMPONENT	CONSIDERATIONS
ADVISE	<p><b>ADVISE</b> patients and/or family members to quit and/or remain tobacco-free with a personalized message.</p> <p><b>ADVISE</b> patients and/or family members of Alberta Health Services (AHS) Tobacco and Smoke Free Environments Policy, as appropriate.</p>	<ul style="list-style-type: none"> <li>• Advice to quit should be clear, supportive and personalized, with unequivocal messages about the benefits of quitting for cancer treatment outcomes.</li> <li>• Be supportive and tactful in advice to quit without admonishing or making the patient feel criticized. Be sensitive to the stigma of tobacco use after a cancer diagnosis and recognize that cancer patients are already blaming themselves for their diagnosis especially, if it is tobacco-related.</li> <li>• Provide brief advice about how continued tobacco use during cancer treatment can negatively affect outcomes related to surgery, radiation and chemotherapy.</li> <li>• Use positive messaging and recognize that quitting smoking is one thing that cancer patients can do to exert control over their health at a time when that sense of control will be very challenged.</li> <li>• Cancer patients diagnosed with a lower staged disease are at a higher risk of continued smoking.</li> <li>• Acknowledge barriers to quitting while providing encouragement, where time allows.</li> <li>• Advise all patients and family members that tobacco use is restricted on all AHS properties in accordance with the <i>Tobacco and Smoke Free Environments</i> policy. This is especially important if patients are admitted or having lengthy outpatient treatments.</li> <li>• The PPF Form is the primary tool to document the ADVISE.</li> </ul>
REFER	<p><b>REFER</b> to specialized treatment services for pharmacological and behavioural support</p> <p><b>PROVIDE</b> pharmacotherapy at point of care, as appropriate or as scope of role enables.</p>	<ul style="list-style-type: none"> <li>• Refer to ongoing supports such as the CCA <i>Cancer Wellness Clinic</i> and/or AlbertaQuits services (using appropriate referral process). Referrals completed by health professionals are more effective than asking a client/patient to self-refer.</li> <li>• Even though NRTs are considered over-the-counter products, providing a written prescription often facilitates follow-through by patients and allows for costs to be covered under some benefit plans.</li> <li>• The PPF Form is the primary tool to document referral decisions.</li> </ul>

**See Appendices:**

- Appendix 22 (a) Additional Resources for Health Care Providers who Support Adults with Cancer
- Appendix 22 (b) Brief Intervention Scripts
- Appendix 22 (c) Alberta Health Services Putting Patients First Form

## REFERENCES

1. Government of Alberta. (2013). *Changing Our Future: Alberta's Cancer Plan to 2030*. Edmonton, AB: Author.
2. Alberta Health Services. (2014). *Tobacco Free Futures Guidelines*. Edmonton, AB: Author.
3. Alberta Health Services. (2011). *Tobacco and Smoke Free Environment Policy*. Edmonton, AB: Author.
4. Alberta Health Services, CancerControl Alberta. (2016). *Clinical practice guideline: Tobacco screening and treatment*. Available at: <http://www.albertahealthservices.ca/assets/info/hp/cancer/if-hp-cancer-guide-supp001-tobacco-cessation.pdf>. Accessed January 10, 2017
5. United States Department of Health and Human Services. (2014). *The health consequences of smoking—50 years of progress: A report of the Surgeon General*, Rockville, MD: Author
6. Liu, J., Chadder, J., Fung, S., Lockwood, G., Math, M, Rahal, R. et al. (2016). Smoking behaviours of current cancer patients in Canada. *Current Oncology*, 23(3), 201–203.
7. McBride, C.M., & Ostroff, J.S. (2003). Teachable moments for promoting smoking cessation: The context of cancer care and survivorship. *Cancer Control*, 10(4), 325–333.
8. Westmaas, J.L., Newton, C.C., Stevens, V. L., Flanders, W.D., Gapstur, S.M., & Jacobs, E.J. (2015). Does a recent cancer diagnosis predict smoking cessation? An analysis from a large prospective US cohort. *Journal of Clinical Oncology*, 33(15), 1647–1652.
9. Bellizzi, K.M., Rowland, J.H., Jeffery, D.D., & McNeel, T. (2005). Health behaviors of cancer survivors: Examining opportunities for cancer control intervention. *Journal of Clinical Oncology*, 23(34), 8884–8893.
10. American Society of Clinical Oncology. (2012). *Tobacco cessation guide for oncology providers*. Alexandria, VA: Author.
11. Warren, G.W., Sobus, S., Gritz, E.R. (2014). The biological and clinical effects of smoking by patients with cancer and strategies to implement evidence-based tobacco cessation support. *Lancet Oncology*, 15, e568–580
12. O'Malley, M., King, A.N., Conte, M., Ellingrod, V.L., & Ramnath, N. (2014). Effects of cigarette smoking on metabolism and effectiveness of systemic therapy for lung cancer. *Journal of Thoracic Oncology*, 9(7), 917–926.
13. Petros, W.P., Younis, I.R., Ford, J.N., & Weed, S.A. (2012). Effects of tobacco smoking & nicotine on cancer treatment. *Pharmacotherapy*, 32(10), 920–931.
14. Logan, H.L., Fillingim, R.B., Bartoshuk, L.M., Sandow, P., Tomar, S.L., Werning, J.W., & Mendenhall, W. M. (2010). Smoking status and pain level among head and neck cancer patients. *Journal of Pain*, 11(6), 528–534.
15. Simmons, V.N., Litvin, E.B., Jacobsen, P.B., Patel, R.D., McCaffrey, J.C., Oliver, J.A., et al. (2013). Predictors of smoking relapse in patients with thoracic cancer or head and neck cancer. *Cancer*, 119, 1420–1427.
16. Butler, K.M., Rayens, M.K., Zhang, M., & Hahn, E.J. (2011). Motivation to quit smoking among relatives of lung cancer patients. *Public Health Nurse*, 28(1), 43–50.
17. Park, E.R., Japuntich, S.J., Rigotti, N.A., et al. (2012). A snapshot of smokers after lung and colorectal cancer diagnosis. *Cancer*, 118, 3153–3164
18. Eng, L., Su, J., Qiu, X., Palepu, P.R., Hon, H., & Fadhel, E. (2014). Second-hand smoke as a predictor of smoking cessation among lung cancer survivors. *Journal of Clinical Oncology*, 32, 564–570.

19. Kashigar, A., Habbous, S., Eng, L., Irish, B., Bissada, E., Irish, J., et al. (2013). Social environment, secondary smoking exposure, and smoking cessation among head and neck cancer patients. *Cancer*, 119(15), 2701–2709.
20. Hubbard, G., Gorely, T., Polsen, R., Forbat, L. (2016). A systematic review and narrative summary of family-based smoking cessation interventions to help adults quit smoking. *BMC Family Practice*, 17: 73
21. Weaver, K. E., Rowland, J. H., Augustson, E., & Atienza, A. A. (2011). Smoking concordance in lung and colorectal cancer patient-caregiver dyads and quality of life. *Cancer Epidemiology, Biomarkers & Prevention*, 20(2), 239–248.
22. Park, E.R., Japuntich, S., Temel, J., Lanuti, M., Pandiscio, J., Hilgenberg, J., et al. (2011). A smoking cessation intervention for thoracic surgery and oncology clinics: A pilot trial. *Journal of Thoracic Oncology*, 6(6), 1059–1065.
23. National Comprehensive Cancer Network (NCCN). (2015). *NCCN Clinical practice guidelines in oncology. Smoking cessation* (Version 1). Fort Washington, PA: Author
24. Toll, B.A., Brandon, T.H., Gritz, E.R., Warren, G.W., & Herbst, R.S. (2013). Assessing tobacco use by cancer patients and facilitating cessation: An American Association for Cancer Research policy statement. *Clinical Cancer Research*, 19(8), 1941–1948.
25. Simmons VN, Litvin EB, Unrod M, Brandon TH (2012). Oncology healthcare providers' implementation of the 5 A's model of brief intervention for smoking cessation: Patients' perceptions. *Patient Education and Counseling*, 86(3), 414–419.
26. Warren GW, Marshall JR, Cummings M.(2013) Practice Patterns and Perceptions of Thoracic Oncology Providers on Tobacco Use and Cessation in Cancer Patients. *Journal of Thoracic Oncology*, 8(5): 543–548.
27. Fiore, M.C., Jaén, C.R, Baker, T.B. (2008). *Treating tobacco use and dependence: 2008 update: Clinical practice guideline*. Rockville, MD: Diane Publishing Co.
28. Schroeder, S,A. (2005). What to do with a patient who smokes. *Journal of the American Medical Association*, 27;294(4), 482–487 PubMed ID 16046655
29. Karam-Hage, M., Cinciripini, P.M., Gritz, E.R. (2012). Tobacco Use and Cessation for Cancer Survivors: An Overview for Clinicians. *CA Cancer Journal, Clinical*, 64(4): 272–290
30. Gritz, E.R., Toll, B.A., & Warren, G.W. (2014). Tobacco Use in the Oncology Setting: Advancing Clinical Practice and Research. *Cancer Epidemiology Biomarkers & Prevention*, 23(1), 3–9.
31. Ramaswamy, A.T., Toll, B.A., Chagpar, A.B., Judson, B.L. (2016). Smoking, cessation, and cessation counseling in patients with cancer: A population-based analysis. *Cancer*, 122(8):1247–1253
32. Duffy, S.A., Louzon, S.A., & Gritz, E.R. (2012). Why do cancer patients smoke and what can providers do about it? *Community Oncology*, 9(11), 344–352.
33. Gritz, E.R., Fingeret, M.C., Vidrine, D.J., Lazev, A.B., Mehta, N.V., & Reece, G.P. (2006). Successes and failures of the teachable moment: Smoking cessation in cancer patients. *Cancer*, 106, 17–27.
34. Nayan, S., Gupta, M.K., Strychowsky, J.E., Sommer, D.D. (2013). Smoking cessation interventions and cessation rates in the oncology population: an updated systematic review and meta-analysis. *Otolaryngology Head & Neck Surgery*, 149(2):200–211
35. Lally, R.M., Chalmers, K.I., Johnson, J., Kojima, M., Endo, E., Suzuki, S., et al. (2008). Smoking behavior and patient education practices of oncology nurses in six countries. *European Journal of Oncology Nursing*, 12(4), 372–379.

36. Howell, D., Keller-Olaman, S., Oliver, T., Hack, T., Broadfield, L., Biggs, K. et al. (2010). A Pan-Canadian Practice Guideline: Screening, Assessment and Care of Psychosocial Distress (Depression, Anxiety) in Adults with Cancer. Toronto, ON: Canadian Partnership Against Cancer (Cancer Journey Action Group) and the Canadian Association of Psychosocial Oncology.
37. American Psychiatric Association (APA). (2013). Diagnostic and statistical manual of mental disorders. (5th ed.). Washington, DC: Author.



## APPENDICES

Appendix 22 (a) Additional Resources for Health Care Providers who Support Adults with Cancer

Appendix 22 (b) Sample Brief Intervention Scripts

Appendix 22 (c) Alberta Health Services Putting Patients First Form

## Appendix 22 (a) Additional Resources for Health Care Providers who Support Adults with Cancer

- **American Society of Clinical Oncology (ASCO):** World's leading professional organization representing oncology physicians of all oncology subspecialties who care for people with cancer. Website includes a repository of oncology practice guidelines, clinical tools and resources. Tobacco specific resources for oncology providers are available. ([www.asco.org/practice-research/tobacco-cessation-and-control-resources](http://www.asco.org/practice-research/tobacco-cessation-and-control-resources))
- **CAN-ADAPTT:** A website for smoking cessation knowledge exchange, networking and clinical guidelines. ([www.nicotinedependenceclinic.com](http://www.nicotinedependenceclinic.com))
- **Canadian Partnership Against Cancer (CPAC):** Partnership of cancer control partners from across Canada working toward a shared goal of a future in which fewer Canadians get and die from cancer and those living with the disease have an improved quality of life. Current initiatives include integration of tobacco control and cancer control. ([www.partnershipagainstcancer.ca](http://www.partnershipagainstcancer.ca))
- **Cancer.Net:** ASCO's patient information website. Provides information on the impact of tobacco use during cancer treatment and stopping tobacco use after a cancer diagnosis. ([www.cancer.net/navigating-cancer-care/prevention-and-healthy-living/tobacco-use](http://www.cancer.net/navigating-cancer-care/prevention-and-healthy-living/tobacco-use))
- **Centre for Addictions and Mental (CAMH) – TEACH:** Ontario knowledge translation initiative to build interprofessional capacity in evidence-based tobacco dependence treatment. Provides links to course schedules, online offering (courses and webinars), as well as archived events. ([www.nicotinedependenceclinic.com/English/teach/](http://www.nicotinedependenceclinic.com/English/teach/))
- **National Comprehensive Cancer Network (NCCN):** Is an alliance of 26 world- leading cancer centres that are dedicated to patient care, research and education. NCCN has recently published clinical practice guidelines for *Smoking Cessation*. ([www.nccn.org](http://www.nccn.org))
- **National Cancer Institute (NCI):** U.S. principal agency for cancer research and training. Website hosts a comprehensive database of *PDQ® Cancer Information Summaries* - patient and health professional education series on a variety of subjects, including *Smoking in Cancer Care*. ([www.cancer.gov/publications/pdq/information-summaries/supportive-care](http://www.cancer.gov/publications/pdq/information-summaries/supportive-care))
- **American Association for Cancer Research (AACR):** U.S. based organization working to prevent and cure cancer through research, education, communication and collaboration. Includes a policy statement on *Assessing Tobacco Use by Cancer Patients and Facilitating Cessation*. ([www.aacr.org](http://www.aacr.org))
- **U.S. Department of Health and Human Services (USDHHS):** Repository for documents, including the U.S. Tobacco Treatment Guidelines, as well as *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*. ([www.hhs.gov](http://www.hhs.gov) or [www.surgeongeneral.gov/library/reports/index.html](http://www.surgeongeneral.gov/library/reports/index.html))

## Appendix 22 (b) Sample Brief Intervention Scripts

PATIENT RESPONSE	HEALTH PROFESSIONAL RESPONSE	RATIONALE
<p>“What’s the point in quitting now? The harm has already been done.”</p>	<ul style="list-style-type: none"> <li>• “I understand why you might feel this way, but it is never too late to quit. I know it’s hard, but stopping your tobacco use can improve the effectiveness of your chemotherapy and radiation treatments and may protect you from getting a second primary cancer. I can refer you to the Cancer Wellness Clinic for help with quitting.”</li> <li>• Provide family/patient with available information resources.</li> </ul>	<p>Addresses the myth that the damage is done and focuses on the current benefits of quitting.</p>
<p>“My life is too stressful to quit smoking right now.”</p>	<ul style="list-style-type: none"> <li>• “This is a very stressful time for you and although smoking gives you the feeling of relieving stress, it actually puts more stress on your body. The staff at the Cancer Wellness Clinic can help you find new ways to deal with stress. You can contact them directly or I can refer you.”</li> <li>• Provide family/patient with available information resources.</li> </ul>	<p>Acknowledges the patient’s feelings, clarifies the myth that smoking relieves stress and provides assurance that help is available to help deal with the stress of the diagnosis and quitting tobacco.</p>
<p>“I’ve cut down, but I don’t think I can quit completely.”</p>	<ul style="list-style-type: none"> <li>• “It is great that you have cut down, but using any tobacco may reduce the benefit/effectiveness of your treatment. The Cancer Wellness Clinic can work with you to develop a plan to quit completely.” You can contact them directly or I can refer you.”</li> <li>• Provide family/patient with available information resources.</li> </ul>	<p>Provides positive reinforcement for efforts to date, but encourages continuing toward cessation. Reinforces the fact that support is available.</p>
<p>“Now is not a good time to talk about my smoking.”</p>	<ul style="list-style-type: none"> <li>• “I understand that this is a very difficult time for you and that smoking may be your last concern. But, as your doctor (member of oncology team), I want to help you stay as healthy as possible and get the most out of your treatment. Stopping smoking will do that. If you aren’t ready right now, I can tell you how to contact the Cancer Wellness Clinic when you are ready. We can also discuss it further at your next appointment.”</li> <li>• Provide family/patient with available information resources.</li> </ul>	<p>Acknowledges the patient’s feelings, but reinforces the importance of tobacco cessation to support cancer treatment plan. Supports patient autonomy, but leaves offer of support open.</p>

**Appendix 22 (b) Sample Brief Intervention Scripts (continued)**

PATIENT RESPONSE	HEALTH PROFESSIONAL RESPONSE	RATIONALE
<p>“The last thing I need right now is a lecture about my smoking.” OR                      “I wish people would stop nagging me about my smoking.”</p>	<ul style="list-style-type: none"> <li>• “I can understand that it feels like nagging, but as your physician (member of oncology team) I want to help you stay as healthy as possible and benefit the most from your treatment. Quitting is one of the most important things you can do. If you aren’t ready right now, I can tell you how to contact the Cancer Wellness Clinic when you are ready.”</li> <li>• Provide family/patient with available information resources.</li> </ul>	<p>Reinforces a non-judgmental approach and reinforces the importance of tobacco cessation for cancer treatment.</p>
<p>“I’ve tried quitting before and it’s just too hard.”</p>	<ul style="list-style-type: none"> <li>• “I know that quitting takes a lot of effort and it may take (have taken) a few tries to be successful. Quitting is one of the most important things you can do to maximize the effectiveness of your cancer treatment. I can refer you to the Cancer Wellness Clinic or you can call them when you are ready.”</li> <li>• Provide family/patient with available information resources.</li> </ul>	<p>Acknowledges that quitting is difficult, but stresses the importance of stopping tobacco use and the help that is available.</p>
<p>“I actually really like smoking/using tobacco products.”</p>	<ul style="list-style-type: none"> <li>• “I can appreciate that the decision to quit is a big one, but as your physician (member of oncology team) I want to help you stay as healthy as possible and benefit the most from your cancer treatment. Quitting is one of the most important things you can do. I can refer you to the Cancer Wellness Clinic or you can call them when you are ready.”</li> <li>• Provide family/patient with available information resources.</li> </ul>	<p>Reinforces the importance of quitting for improved health and cancer treatment outcomes.</p>

Appendix 22 (c) Alberta Health Services Putting Patients First Form (page 1)



Affix patient label within this box

**Talking about What Matters to You - Putting Patients First**

Your answers will help us understand how you have felt since your last visit, and how you feel today. Knowing this will help us care for you. If you cannot or do not wish to fill out this form for any reason please let us know.

**Note:** Please make sure to fill out both sides of the form

A member of your healthcare team will go over the form with you and talk to you about what concerns you the most today. If we are not able to talk about all of your concerns today, we will decide the next steps together.

Date (yyyy-Mon-dd)	Completed by	
	<input type="checkbox"/> Patient	<input type="checkbox"/> Family <input type="checkbox"/> Assisted by family/health professional
Please answer the yes/no questions:		
1. Have you been to Emergency and/or been admitted to hospital since your last visit?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. Have your medications changed since your last visit? (e.g. stopped, started, dose change)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3. Have you had a fall since your last visit?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
4. Would you like information on Goals of Care or advance care planning (green sleeve)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5. Are you receiving home care services?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
6. Have you used tobacco in the past year?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
In the past 30 days?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Please <b>circle</b> the number that best describes how you feel <b>now</b>		
0 means you do not have that symptom, 10 means it is at its worst		
No pain	0 1 2 3 4 5 6 7 8 9 10	Worst possible pain
No tiredness (Tiredness=lack of energy)	0 1 2 3 4 5 6 7 8 9 10	Worst possible tiredness
No drowsiness (Drowsiness=feeling sleepy)	0 1 2 3 4 5 6 7 8 9 10	Worst possible drowsiness
No nausea	0 1 2 3 4 5 6 7 8 9 10	Worst possible nausea
No lack of appetite	0 1 2 3 4 5 6 7 8 9 10	Worst possible lack of appetite
No shortness of breath	0 1 2 3 4 5 6 7 8 9 10	Worst possible shortness of breath
No depression (Depression=feeling sad)	0 1 2 3 4 5 6 7 8 9 10	Worst possible depression
No anxiety (Anxiety=feeling nervous)	0 1 2 3 4 5 6 7 8 9 10	Worst possible anxiety
Best well-being (Well-being=how you feel overall)	0 1 2 3 4 5 6 7 8 9 10	Worst possible well-being
No _____ Other problem (e.g. constipation)	0 1 2 3 4 5 6 7 8 9 10	Worst possible _____

