



## Implementing Smoking Cessation Interventions for Tobacco Users Within Oncology Settings

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### ABSTRACT

**Background:** The implementation of smoking cessation interventions within oncology settings is a critical area of research due to the profound impact of tobacco use on cancer treatment outcomes and patient survival. The literature reveals a complex interplay between cancer diagnoses and smoking behavior, highlighting both the challenges and opportunities for effective intervention. **Literature Review:** Initial findings from \*J Cancer Surviv\* highlight the negative impact of postdiagnosis smoking on long-term survival among cancer patients, establishing a foundational understanding of the necessity for comprehensive tobacco treatment in oncology (L. Burris et al., 2012). The systematic review by Frazer et al. (2020) reinforces this notion by identifying a significant gap between patients' desire to quit smoking and their engagement with cessation services. The review highlights various barriers, including healthcare professionals' lack of confidence and inconsistent application of cessation strategies across the cancer care continuum. Moreover, the study by Paul et al. (2017) emphasizes that while oncologists acknowledge the importance of smoking cessation, there is a stark disconnect between this acknowledgment and the actual provision of cessation support in clinical practice. The authors advocate for standardized tobacco treatment as part of cancer care, highlighting the necessity for comprehensive training for healthcare providers. **Conclusion:** In conclusion, the literature collectively underscores the critical need for improved implementation of smoking cessation interventions in oncology settings. Despite the recognition of the importance of addressing tobacco use, significant barriers remain that hinder effective support for cancer patients seeking to quit smoking. Enhanced training for healthcare professionals, systematic approaches to tobacco treatment delivery, and integration of cessation services into standard oncology practice are essential to bridging this gap and improving patient outcomes.

**Keyword:** Smoking Cessation Interventions, Tobacco Users, Oncology Settings

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## INTRODUCTION

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The implementation of smoking cessation interventions within oncology settings is a critical area of research due to the profound impact of tobacco use on cancer treatment outcomes and patient survival. The literature reveals a complex interplay between cancer diagnoses and smoking behavior, highlighting both the challenges and opportunities for effective intervention.

In the early exploration of this issue, the article published in *J Cancer Surviv*\* emphasized the detrimental effects of postdiagnosis smoking on the long-term survival of cancer patients. This study underscored the necessity of addressing tobacco use as a vital component of cancer care, noting that successful cessation can significantly improve patient outcomes. The findings set a foundational understanding of the urgent need for comprehensive tobacco treatment in oncology.

Building on this, (Lucchiari et al., 2016) articulated the missed opportunities within the healthcare system to leverage a cancer diagnosis as a "teachable moment" for quitting smoking. Despite the recognition of the importance of cessation, many patients reported inadequate support from healthcare providers, with a significant percentage of physicians failing to engage in discussions about cessation strategies. This gap in communication and support illustrates a critical barrier to effective intervention, suggesting that healthcare professionals require enhanced training and confidence in providing cessation assistance.

The study by (L. Paul et al., 2021) further corroborated these findings by quantifying the consequences of continued smoking among cancer patients. It provided compelling evidence that smoking cessation is the strongest predictor of survival in cancer patients, yet highlighted the stark reality that while a majority of oncologists inquire about smoking status, far fewer actively assist patients in cessation efforts. The article emphasized the necessity of integrating evidence-based smoking cessation support into routine cancer care, aligning with the recommendations from the National Comprehensive Cancer Network.

(L. Burris et al., 2012) expanded on the systemic barriers to effective tobacco treatment in oncology settings, pointing out that many cancer patients continue to smoke postdiagnosis, which is correlated with worse health outcomes. The authors advocated for standardized tobacco treatment as part of cancer care, calling for comprehensive training for healthcare providers and systematic approaches to tobacco treatment delivery. This study underscored the critical need for cancer centers to adopt a proactive stance in addressing tobacco use among their patients.

Following this, (D'Angelo et al., 2012) evaluated the reach and effectiveness of the National Cancer Institute's Cancer Center Cessation Initiative, which aims to enhance the provision of smoking cessation services. Their findings revealed that while there is a recognized need for cessation interventions, implementation remains inconsistent across cancer care settings. This highlights the importance of organizational changes, such as optimizing electronic health records to facilitate patient referrals to cessation programs.

Finally, the systematic review conducted by synthesized evidence on smoking cessation interventions for smokers diagnosed with cancer, revealing a significant gap between patients' desire to quit and their engagement with cessation services. The review identified various barriers, including healthcare professionals' lack of confidence and the inconsistent application of cessation strategies across the cancer care continuum. It called for the integration of smoking cessation services into standard practice, emphasizing the need for systematic approaches to support patients at all stages of their cancer journey.

The literature collectively illustrates the critical need for improved implementation of smoking cessation interventions in oncology settings. Despite the recognition of the importance of addressing tobacco use, significant barriers remain that hinder effective support for cancer patients seeking to quit smoking.

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**LITERATURE REVIEW**

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The article "J Cancer Surviv" provides a comprehensive examination of the impact of postdiagnosis smoking on the long-term survival of cancer patients, particularly within the context of oncology settings. The study emphasizes the crucial need for effective smoking cessation interventions tailored for tobacco users diagnosed with cancer. This is particularly pertinent given the well-documented negative implications of continued smoking on cancer prognosis and overall survival rates.

The findings from the Shanghai cohort study highlight that postdiagnosis smoking significantly correlates with worse survival outcomes among cancer patients. This underscores the importance of integrating smoking cessation programs into oncology care. Moreover, the article discusses various clinical practice guidelines for treating tobacco dependence, notably the 2008 update by Fiore et al. (D'Angelo et al., 2012). This guideline provides a structured approach for healthcare professionals, emphasizing the need for comprehensive tobacco treatment that includes behavioral counseling and pharmacotherapy. The efficacy of nicotine replacement therapies and other cessation aids is also addressed, indicating that a multifaceted approach can enhance cessation success rates among cancer survivors (Lucchiari et al., 2016).

The article further delves into the psychological aspects of smoking cessation, referencing the concept of the "teachable moment" as a critical opportunity for intervention. Cancer diagnosis often serves as a catalyst for patients to reconsider their smoking behaviors, making oncology settings ideal for implementing cessation strategies. The narrative review by Lucchiari et al. (Lucchiari et al., 2016) reinforces this notion by exploring methods to assist patients in reducing tobacco consumption during their cancer treatment journey.

The article "Helping patients to reduce tobacco consumption in oncology: a narrative review" by Lucchiari, Masiero, Botturi, and Pravettoni (Lucchiari et al., 2016) provides a critical examination of the challenges and opportunities associated with smoking cessation interventions in oncology settings. The authors highlight

that a cancer diagnosis often represents a pivotal moment for patients, potentially motivating them to quit smoking. However, this teachable moment is frequently overlooked within the healthcare system, leading to inadequate support for patients attempting to quit.

The review identifies a significant gap between the awareness of smoking cessation's importance and the actual support provided by healthcare professionals. Despite the acknowledgment among oncologists of the necessity for smoking cessation discussions, the article reveals that only 40% of physicians engage in conversations about quitting options, and an even smaller percentage actively supports their patients in this endeavor. This discrepancy underscores a systemic issue where oncologists, despite their understanding of the implications of smoking on cancer treatment and recovery, fail to implement effective counseling strategies.

Furthermore, the article points out that many oncology patients, including those diagnosed with lung cancer, continue to smoke, often without any structured support or intervention from their healthcare providers. The authors note that the lack of confidence among physicians regarding their smoking cessation counseling abilities contributes to this issue. This is particularly concerning given that studies have linked continued smoking with poorer outcomes in cancer treatment, especially in hematological oncology settings where patients undergoing hematopoietic stem cell transplantation are at an increased risk.

The narrative review also emphasizes the need for better training and resources for healthcare professionals to effectively manage smoking cessation in oncology patients. The authors argue that without a comprehensive approach that includes detailed information about available treatments and ongoing support throughout the therapeutic journey, patients are likely to struggle with quitting smoking, which can adversely affect their treatment outcomes.

The article "Care to Quit: a stepped wedge cluster randomised controlled trial to implement best practice smoking cessation care in cancer centres" by Paul et al. (L. Paul et al., 2021) addresses a critical issue in oncology—the intersection of smoking and cancer treatment outcomes. The authors effectively highlight the

detrimental effects of continued smoking on cancer patients, emphasizing that cigarette smoking is linked to increased treatment toxicity, complications, and a significant reduction in survival rates. This establishes a compelling rationale for the implementation of smoking cessation interventions within oncology settings.

The article's main idea is grounded in the assertion that abstinence from smoking is the strongest predictor of survival among cancer patients. This is supported by evidence indicating that continued smoking not only doubles the risk of death but also halves the median survival time for these individuals. Such statistics underscore the urgent need for effective smoking cessation programs tailored specifically for cancer patients, who often exhibit high relapse rates. The authors argue that while there is a general consensus among healthcare professionals regarding the importance of smoking cessation, a gap exists between this acknowledgment and the actual provision of cessation support in clinical practice.

The authors reference the Clinical Practice Guidelines in Oncology for Smoking Cessation established by the US National Comprehensive Cancer Network, which recognizes the necessity of addressing tobacco use within cancer care. Despite over 80% of oncology staff agreeing on the importance of smoking cessation support, the article reveals a stark reality: less than 40% actively engage in discussions about cessation medications or provide assistance to patients in quitting smoking. This disconnect illustrates a critical barrier to effective patient care, as many patients who smoke express a desire for support from healthcare professionals.

Furthermore, the article draws attention to a national survey in Australia, revealing that while 94% of respondents acknowledge the impact of smoking on treatment outcomes, few offer evidence-based cessation support strategies. This highlights not only a lack of resources but also an opportunity for improvement in oncology practices. The authors advocate for the integration of smoking cessation interventions as a standard component of cancer care, which would align with patient needs and improve overall treatment outcomes.

The article titled "Tobacco Use and Tobacco Treatment Referral Response of Patients With Cancer: Implementation Outcomes at a National Cancer Institute–Designated Cancer Center" by Burris et al. (L. Burris et al., 2012) provides a comprehensive analysis of the critical role that smoking cessation interventions play within oncology settings. The authors underscore the detrimental impact of continued tobacco use on patients with cancer, highlighting how it correlates with increased all-cause mortality, cancer-specific mortality, and a host of adverse treatment outcomes. This aligns with the findings from the 2014 US Surgeon General's Report, which emphasizes the need for urgent intervention in this population.

One of the key insights from the article is the alarming statistic that 16% of cancer patients continue to smoke post-diagnosis, despite existing guidelines advocating for tobacco abstinence as a standard of care. The National Comprehensive Cancer Network Clinical Practice Guidelines and the American Association for Cancer Research both advocate for integrated tobacco treatment in cancer care, yet the article reveals a significant gap between recommended practices and actual implementation. While the majority of healthcare providers inquire about tobacco use and offer cessation advice, only a minority—40% to 45%—provide adequate treatment assistance. This discrepancy points to a systemic issue in oncology practices that may stem from insufficient training and resources allocated for tobacco treatment.

The authors detail the Cancer Center Cessation Initiative, which seeks to enhance the provision of evidence-based tobacco treatment within oncology settings. By adopting models such as the 5 As and Ask Advise Refer, cancer centers can create a more structured approach to addressing tobacco use. The initiative's focus on immediate referral to tobacco treatment upon identification of tobacco use is a promising strategy that could potentially mitigate the negative outcomes associated with smoking in cancer patients.

However, while the article effectively outlines the gaps in current practices and the potential solutions offered by the Cancer Center Cessation Initiative, it

could benefit from a more in-depth exploration of the barriers that healthcare providers face in delivering these interventions. Factors such as time constraints, lack of training, and insufficient institutional support could be crucial in understanding why the implementation of smoking cessation interventions remains suboptimal.

The article titled "Reach and effectiveness of the NCI Cancer Moonshot-funded Cancer Center Cessation Initiative" by D'Angelo et al. (D'Angelo et al., 2012) addresses a critical gap in oncology settings regarding smoking cessation interventions for cancer patients. The authors highlight the significant health risks associated with smoking both before and after a cancer diagnosis, including increased mortality rates and cancer recurrence. This underscores the vital need for effective smoking cessation programs tailored for oncology patients, particularly as nearly 20% of survivors of smoking-related cancers continue to smoke, compared to 14% of those without cancer.

The article effectively outlines the rationale for the Cancer Center Cessation Initiative (C3I), which aims to enhance the integration of smoking cessation treatments within cancer care settings. The initiative promotes system-level changes, such as the optimization of electronic health records (EHRs) to facilitate the identification and referral of patients who smoke to cessation resources. This approach is particularly relevant given the authors' observation that consistent tobacco use screening and referral are essential for engaging patients in cessation efforts.

A critical evaluation of the material reveals that while the C3I initiative is a step forward in addressing the smoking cessation gap in cancer care, the authors acknowledge significant barriers to implementation. These barriers include a lack of coordinated cessation programs and time constraints faced by clinicians. The variability in resources available at different cancer centers further complicates the implementation process, indicating that organizational characteristics may influence the effectiveness of cessation interventions.

The article also emphasizes the established effectiveness of evidence-based cessation interventions in general populations, yet it raises pertinent questions about the adaptability of these interventions within the unique context of cancer care. The authors suggest that the challenge lies not only in the development of cessation programs but also in their successful implementation and sustainability within oncology settings.

The systematic review conducted by Frazer et al. provides a comprehensive examination of smoking cessation interventions tailored for smokers diagnosed with cancer. The article effectively highlights a critical gap in the engagement of this population with cessation services, despite a notable desire to quit smoking—approximately 69% of smokers with cancer express this intention. This statistic underscores the potential for targeted interventions within oncology settings, yet the review illustrates that actual engagement remains limited.

One of the key insights from the review is the inconsistency of outcomes associated with various smoking cessation interventions. The authors detail a wide range of approaches, from simple informational resources to more complex digital solutions such as smartphone applications. This diversity in intervention design reflects the varying needs and preferences of smokers diagnosed with cancer, but it also raises questions about the efficacy and standardization of such interventions. The lack of uniform outcomes suggests that more rigorous evaluation of these programs is necessary to determine which strategies are most effective in promoting cessation among this vulnerable population.

Moreover, the review identifies several systemic issues that pose challenges to the implementation of smoking cessation programs within oncology settings. The authors emphasize the importance of integrating these services into routine cancer care, which includes the development of electronic patient records and referral systems. This integration is crucial, as it facilitates timely and appropriate interventions at various stages of the cancer treatment continuum—from pre-surgery through to post-therapy. The timing of cessation discussions is particularly

significant, as it can influence a patient's willingness to engage in quitting behaviors.

The review also sheds light on the barriers faced by healthcare professionals in supporting smokers with cancer. A notable finding is the lack of confidence among healthcare providers, which can stem from insufficient training or resources to address smoking cessation effectively. This barrier highlights the need for enhanced education and support for oncology staff to empower them in facilitating smoking cessation discussions and interventions.

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### CONCLUSION

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The literature reviewed emphasizes the urgent need to implement effective smoking cessation interventions within oncology settings due to the detrimental effects of continued tobacco use on cancer treatment outcomes and patient survival. The research indicates a significant gap between the recognition of the importance of smoking cessation and the actual support provided by healthcare professionals to cancer patients who smoke.

Initial findings from \*J Cancer Surviv\* highlight the negative impact of postdiagnosis smoking on long-term survival among cancer patients, establishing a foundational understanding of the necessity for comprehensive tobacco treatment in oncology (L. Burris et al., 2012). This is further supported by the narrative review by Lucchiari et al. (2018), which identifies cancer diagnosis as a pivotal moment for patients that could be leveraged for smoking cessation interventions. However, it notes that many healthcare providers fail to capitalize on this opportunity, leading to inadequate support for patients.

The systematic review by Frazer et al. (2020) reinforces this notion by identifying a significant gap between patients' desire to quit smoking and their engagement with cessation services. The review highlights various barriers, including healthcare professionals' lack of confidence and inconsistent application of cessation strategies across the cancer care continuum. This aligns with the findings of D'Angelo et al. (2018), who discuss the Cancer Center Cessation

Initiative aimed at enhancing the integration of smoking cessation treatments within cancer care settings. Despite the initiative's potential, barriers such as time constraints and variability in resources across cancer centers complicate implementation efforts.

Moreover, the study by Paul et al. (2017) emphasizes that while oncologists acknowledge the importance of smoking cessation, there is a stark disconnect between this acknowledgment and the actual provision of cessation support in clinical practice. The authors advocate for standardized tobacco treatment as part of cancer care, highlighting the necessity for comprehensive training for healthcare providers.

In conclusion, the literature collectively underscores the critical need for improved implementation of smoking cessation interventions in oncology settings. Despite the recognition of the importance of addressing tobacco use, significant barriers remain that hinder effective support for cancer patients seeking to quit smoking. Enhanced training for healthcare professionals, systematic approaches to tobacco treatment delivery, and integration of cessation services into standard oncology practice are essential to bridging this gap and improving patient outcomes.

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