

EDITORIAL



# Tobacco cessation and the role of ESMO and medical oncologists: addressing the specific needs of cancer patients in times of the COVID-19 pandemic

## INTRODUCTION

Tobacco kills more than 8 million people every year.<sup>1</sup> There were an estimated 2.5 million cancer deaths attributable to smoking globally, representing 24.7% of all cancer-related deaths in 2019.<sup>2</sup> Smoking is the primary cause of lung cancer. Worldwide, ~80% of male lung cancer deaths and 50% of female lung cancer deaths are caused by smoking.<sup>3</sup> Tobacco use not only causes cancer but also can negatively impact cancer treatment toxicity and survival.<sup>4</sup>

The coronavirus disease 2019 (COVID-19) pandemic has worsened the situation of cancer patients: delays in diagnosis were common, screening programmes were interrupted, and treatment services were disrupted.<sup>5</sup> COVID-19-infected cancer patients have more severe symptoms and higher case fatality rates, particularly those who were receiving active treatment, compared to the general population.<sup>6</sup>

Tobacco smoking is associated with more severe illness and an increased risk of death in people who need hospital treatment for COVID-19.<sup>7</sup> Therefore, stopping smoking is beneficial both for being more resilient against COVID-19 infections and for reducing cancer risks and increasing survival.

The Charité World Health Summit Berlin 2021 hosted a high-level interprofessional and interdisciplinary panel discussion which addressed COVID-19 and smoking cessation from the angle of cancer prevention and control.<sup>8</sup> One key recommendation from the panel was to intensify efforts to increase tobacco users' access to tobacco cessation support as one of the actions to build back better and stronger essential health services from the COVID-19 pandemic to achieve Universal Health Coverage and health-related Sustainable Development Goals. One year later, the World Health Summit 2022 organized jointly with the World Health Organization (WHO) provided the platform where WHO Director General, Dr Tedros Adhanom Ghebreyesus, formally launched the Global Tobacco Cessation Consortium,<sup>9</sup> a group of partners in the private and public sectors to help people access essential cessation support and treatment to deal with tobacco dependence. This editorial takes on the key tobacco control-related messages from the World Health Summit 2021 and 2022 and emphasizes the essential role of clinicians including oncologists to support tobacco

cessation in patients with cancer. It also calls for more partners to join the Consortium to provide comprehensive cessation support to all who need it, acknowledging that robust cancer networks are strong platforms for change, understanding the persistent harms of the COVID-19 pandemic.

## THE URGENCY OF THE PROBLEM

The tobacco epidemic is one of the biggest public health threats the world has ever faced. Worldwide, there are 1.3 billion tobacco users and over 80% of them live in low- and middle-income countries.<sup>10</sup> In 2020, 22.3% of the global population used tobacco, including 36.7% of all men and 7.8% of women worldwide.<sup>10</sup>

Cancer is a leading cause of death worldwide, accounting for nearly 10 million deaths in 2020, or nearly one in six deaths overall.<sup>11</sup> The most common cancers are breast, lung, colon and rectum and prostate cancers. About one-third of deaths from cancer are due to tobacco use, high body mass index, alcohol consumption, low fruit and vegetable intake, and lack of physical activity.<sup>11</sup> Tobacco smoking causes most lung cancers and can cause cancer almost anywhere on the body. For example, tobacco use is a cofactor for cervical cancer in human papilloma virus-infected women.<sup>12</sup> Lung cancer mortality in women is still rising in countries such as in Latin America and Eastern Europe where women have taken up smoking later than men.<sup>11</sup> An estimated 24.7% of cancer-related deaths are attributable to tobacco smoking.<sup>2</sup>

A large percentage of tobacco users continue tobacco use even after a diagnosis of cancer, partially due to the low perceived danger of tobacco use. A systematic review of 16 longitudinal studies on tobacco use after a diagnosis of lung or head and neck cancer found that on average 42.2% of patients who were smoking at diagnosis continued to smoke after diagnosis.<sup>13</sup> Persistent smoking appears to be common in patients with a cancer for which there is limited evidence for carcinogenicity of tobacco smoking.<sup>13</sup> 10%-20% of people with a history of cancer smoke, with higher rates in subgroups of the patient population. Studies have found that cancer survivors who were younger, of lower educational attainment, and those diagnosed with a tobacco-related cancer, were more likely to report current tobacco use.<sup>14</sup>

Continued smoking after a diagnosis of cancer will negatively affect cancer treatment outcomes including

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survival, recurrence, cancer control, treatment toxicity, and quality of life.<sup>15</sup> Smoking is an independent risk associated with severe outcomes of COVID-19, including mortality.<sup>16</sup> COVID-19-infected cancer patients have more severe symptoms and higher case fatality rates compared to the general population. Therefore, the problem of continued tobacco use among cancer patients and survivors becomes ever more important and urgent during the COVID-19 pandemic.

## SOLUTIONS

A global public health problem requires a global response. The WHO Framework Convention on Tobacco Control (WHO FCTC), the first international public health treaty developed under the auspices of the WHO, provides a comprehensive approach to reduce the considerable health and economic burden caused by tobacco.<sup>17</sup> The WHO FCTC contains both demand and supply reduction tobacco-control measures to be implemented at the national, regional, and international levels, including Article 14 which demands reduction measures concerning tobacco dependence and cessation. To help make this a reality, in 2008 the WHO introduced MPOWER, a technical package of six proven tobacco-control measures contained in the WHO FCTC, to assist in the country-level implementation of effective interventions to reduce the demand for tobacco.<sup>18</sup> The MPOWER package includes the most effective policies that are proven to reduce the prevalence of tobacco use:

- Monitoring tobacco use and prevention policies;
- Protecting people from tobacco smoke;
- Offering help to quit tobacco use;
- Warning about the dangers of tobacco;
- Enforcing bans on tobacco advertising, promotion, and sponsorship; and
- Raising taxes on tobacco.

Policy ‘O’ (offering help to quit tobacco use) of the MPOWER corresponds to Article 14 of the WHO FCTC. If these policies are fully implemented and enforced, they will protect every country’s population from the illness and death that the tobacco epidemic will otherwise inevitably bring.

To assist the Parties to the WHO FCTC in fulfilling their obligation under Article 14, the Conference of Parties, at its fourth session, adopted the guidelines for implementation of the WHO FCTC Article 14.<sup>19</sup> The Article 14 guidelines recommend that the Parties should develop a national comprehensive tobacco cessation and treatment system to provide a variety of interventions for tobacco users to quit, which include brief tobacco cessation advice integrated into all health care systems, a national toll-free quit hotline, specialized tobacco dependence treatment services, effective tobacco cessation medications as well as novel tobacco cessation approaches such as mobile text messaging and internet-based behavioural support.

However, according to the latest WHO report on the global tobacco epidemic, in 2020 only 32% of the world’s population, corresponding to 26 countries, have access to

comprehensive tobacco cessation services.<sup>20</sup> Seventy-two countries offer national toll-free quit line services, 57 countries provide partial or full cost coverage for tobacco users to use nicotine replacement therapy, and 45 countries currently partially or fully reimburse their tobacco users for using bupropion and varenicline to quit tobacco.<sup>20</sup> One hundred and seven countries offer cessation support in some or most of their primary care facilities with partial or full cost coverage. Ninety-five countries provide cessation support in some or most of their hospitals with partial or full cost coverage.<sup>20</sup> However, there are 32 countries that provide no cessation support at all to their populations. The status of tobacco cessation support in the world indicates that every country needs to do more to improve tobacco users’ access to effective tobacco cessation interventions and treatment services. A country’s existing health care system should play a central role in promoting tobacco cessation and tobacco dependence treatment. Identifying and supporting tobacco users to quit should be every health professional’s business, including oncologists.

## THE ROLE OF ONCOLOGISTS AND THE ONCOLOGY SOCIETY IN TOBACCO CONTROL

The WHO has been promoting comprehensive national cancer control policies, plans, and programmes for decades.<sup>21</sup> Moreover, at the European Union level, efforts are being made to help ‘create a “Tobacco-Free Generation” where less than 5% of the population uses tobacco by 2040, compared to around 25% today’ as part of the ambition of Europe’s Beating Cancer Plan that was launched in February 2021.<sup>22</sup> In order to achieve this, the European Commission will, amongst other things, review key EU legislation on tobacco, including the Tobacco Products Directive and the Tobacco Taxation Directive.<sup>23</sup> The WHO and partners can together strengthen tobacco control as an essential element of any national cancer plan. The COVID-19 pandemic has been an acute reminder of the cost of inaction on tobacco use, particularly among cancer patients.

Oncologists and medical oncology societies can play a stronger role in tobacco control. They have the trust of the general population, the media, and opinion leaders, and their voices are heard across a vast range of social, economic, and political arenas. At the individual level, oncologists should be tobacco-free role models for the rest of the population. They should help educate the population on the dangers of tobacco and exposure to second-hand smoke. All oncologists in their daily cancer care setting should routinely ask cancer patients about tobacco use and support tobacco users to quit. At the community level, oncologists can initiate or support the implementation of tobacco-control policies: smoke-free environments; and banning tobacco advertising, promotion, and sponsorship. At the national and international levels, oncologists and medical oncology societies can join national and global tobacco-control efforts such as raising the tobacco tax, promoting full implementation of the WHO FCTC, and the development of national tobacco-control plans.

Medical oncology societies can show leadership and become a role model for other health professional organizations by embracing the Health Professional Code of Practice on Tobacco Control.<sup>24</sup> Surveys of oncologists revealed that <50% actively treat tobacco use or refer patients to tobacco cessation services and one of the major barriers to providing tobacco cessation support is a lack of education on tobacco cessation.<sup>25,26</sup> Therefore, among all recommended tobacco-control measures, inclusion of tobacco cessation in the oncologist's curricula is the one that medical oncology societies such as the European Society for Medical Oncology (ESMO) have prioritized and taken an immediate action on. ESMO has the role in defining standards in guiding the training of medical oncologists worldwide. The topic of tobacco cessation is included in the ESMO-ASCO Recommendations for a Global Curriculum in Medical Oncology.<sup>27</sup> If these recommendations are distributed worldwide to universities, training hospitals, and medical oncology societies, there is enormous potential for all cancer patients who use tobacco to routinely receive tobacco cessation support from well-trained oncologists.

Cancer prevention is included in ESMO's core mission. In 2008, ESMO published the 'ESMO position paper: The perspective and role of medical oncologists in cancer prevention',<sup>28</sup> noting that medical oncologists when treating their patients, should inform them about lifestyle and environmental factors, which include smoking, that can impact their health and recovery.

Annually, ESMO supports WHO's 'World No Tobacco Day'. In addition, ESMO is collaborating and supporting the development of the freely accessible 'World Cancer Report Updates' learning platform<sup>29</sup> of the International Agency for Research on Cancer (IARC). The IARC, as the WHO's specialized agency for cancer, has developed the platform to disseminate educational materials based on its 'World Cancer Report'. The platform provides webinars and other educational materials as a reliable resource for ESMO members for evidence-based data on the burden of cancer, its prevention, modifiable risk factors such as tobacco use, and public policy recommendations governments and health authorities can implement to save lives.

The IARC's European Code Against Cancer includes recommendations on not using tobacco and creating smoke-free environments. The Code serves as the basis for the Europe-wide 'Cancer Prevention Across Europe' campaign (PrEvCan),<sup>30</sup> led by the European Oncology Nursing Society, in key partnership with ESMO, and in collaboration with around 60 other international and national organizations. The campaign, launched at the ESMO Congress 2022, takes ESMO a step further into the field of prevention, building on its collaboration with IARC, to ensure that oncologists become knowledgeable in prevention and act as role models for their patients.

## CONCLUSION

One-fourth of global cancer-related deaths are attributable to tobacco smoking. 10%-20% of people with a history of

cancer smoke and a large percentage of them continue tobacco use even after a diagnosis of cancer. Tobacco use not only causes cancer but also negatively impacts cancer treatment and survival. The COVID-19 pandemic could further worsen the already high-risk situation of cancer patients who use tobacco. The Charité World Health Summit has taken the initiative to convene key decision makers to accelerate tobacco control and has highlighted the importance of integrating tobacco cessation into cancer treatment. Medical oncology societies together with the WHO and national health authorities need to intensify their efforts to implement comprehensive tobacco-control measures with the focus on scaling up proven tobacco cessation services for cancer patients. Oncologists can play a key role in tobacco control as tobacco-free role models. They should routinely identify their patients who use tobacco and support them to quit, addressing this specific need of cancer patients in times of the COVID-19 pandemic.

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## REFERENCES

- GBD 2016 Risk Factors Collaborators. Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet*. 2017;390:1345-1422.
- Safiri S, Nejadghaderi SA, Abdollahi M, et al. Global, regional, and national burden of cancers attributable to tobacco smoking in 204 countries and territories, 1990-2019. *Cancer Med*. 2022;11(13):2662-2678.
- American Cancer Society. Risks of tobacco, the cancer atlas; 2019. Available at: <https://canceratlas.cancer.org/risk-factors/risks-of-tobacco/#:~:text=49%25%20of%20lip%2C%20oral%20cavity,women%20are%20attributable%20to%20smoking>. Accessed October 15, 2022.
- Togawa K, Bhatti L, Tursan d'Espaignet E, et al. *WHO Tobacco Knowledge Summaries: Tobacco and Cancer Treatment Outcomes*. Geneva: World Health Organization; 2008.
- Riera R, Bagattini AM Pacheco RL, Pachito DV, Roitberg F, Ilbawi A. Delays and disruptions in cancer health care due to COVID-19 pandemic: systematic review. *JCO Glob Oncol*. 2021;7:311-323.
- Han S, Zhuang Q, Chiang J, et al. Impact of cancer diagnoses on the outcomes of patients with COVID-19: a systematic review and meta-analysis. *BMJ Open*. 2022;12:e044661.
- Baker J, Krishnan N, Abroms LC, Berg CJ. The impact of tobacco use on COVID-19 outcomes: a systematic review. *J Smok Cessat*. 2022;2022:5474397.
- World Health Summit 2021 Oct 24, Digital Session D 03-Tobacco Control in Times of the COVID-19 Pandemic. Available at: <https://www.conference.worldhealthsummit.org/Program/WHS2021> [Internet]. D 03 <https://www.youtube.com/watch?v=DxltEoFUao>.
- World Health Organization. WHO Director-General's remarks at the launch of WHO tobacco cessation consortium, World Health Summit - 17 October 2022. <https://www.who.int/director-general/speeches/detail/who-director-general-s-remarks-at-the-launch-of-who-tobacco-cessation-consortium--17-october-2022>. Accessed November 4, 2022.
- World Health Organization. Tobacco key facts. Available at: <https://www.who.int/news-room/fact-sheets/detail/tobacco>. Accessed October 15, 2022.
- World Health Organization. Cancer key facts. Available at: <https://www.who.int/news-room/fact-sheets/detail/cancer#:~:text=Cancer%20is%20a%20leading%20cause,and%20rectum%20and%20prostate%20cancers>. Accessed October 15, 2022.
- Sierra-Torres CH, Tying SK, Au WW. Risk contribution of sexual behavior and cigarette smoking to cervical neoplasia. *Int J Gynecol Cancer*. 2003;13(5):617-625.
- Burris JL, Studts JL, DeRosa AP, Ostroff JS. Systematic review of tobacco use after lung or head/neck cancer diagnosis: results and recommendations for future research. *Cancer Epidemiol Biomarkers Prev*. 2015;24(10):1450-1461.
- Burris JL, Borger TN, Shelton BJ, et al. Tobacco use and tobacco treatment referral response of patients with cancer: implementation outcomes at a National Cancer Institute-designated cancer center. *JCO Oncol Pract*. 2022;18(2):e261-e270.
- Perdyan A, Jassem J. Impact of tobacco smoking on outcomes of radiotherapy: a narrative review. *Curr Oncol*. 2022;29:2284-2300.
- Patanavanich R, Glantz SA. Smoking is associated with worse outcomes of COVID-19 particularly among younger adults: a systematic review and meta-analysis. *BMC Public Health*. 2021;21:1554.
- WHO Framework Convention on Tobacco Control & World Health Organization; 2003. Available at: <https://apps.who.int/iris/handle/10665/42811>.
- WHO Report on the Global Tobacco Epidemic, 2008: the MPOWER package. Geneva: World Health Organization; 2008.
- WHO Framework Convention on Tobacco Control Convention Secretariat & World Health Organization. Guidelines for implementation of Article 14. Available at: [https://fctc.who.int/docs/librariesprovider12/default-document-library/who-fctc-article-14.pdf?sfvrsn=9fdc75a\\_31&download=true](https://fctc.who.int/docs/librariesprovider12/default-document-library/who-fctc-article-14.pdf?sfvrsn=9fdc75a_31&download=true). Accessed October 15, 2022.
- World Health Organization. *WHO report on the global tobacco epidemic, 2021: addressing new and emerging products*. World Health Organization; 2021. Available at: <https://apps.who.int/iris/handle/10665/343287>. License: CC BY-NC-SA 3.0 IGO.

21. World Health Organization. National Cancer Control Programmes: Policies and Managerial Guidelines. 2nd ed. World Health Organization; 2002.
22. Europe's Beating Cancer Plan; 2021. Available at: [https://health.ec.europa.eu/system/files/2022-02/eu\\_cancer-plan\\_en\\_0.pdf](https://health.ec.europa.eu/system/files/2022-02/eu_cancer-plan_en_0.pdf). Accessed January 26, 2023.
23. Europe's Beating Cancer Plan: Implementation Roadmap; 2022. Available at: [https://health.ec.europa.eu/system/files/2022-01/2021-2025\\_cancer-roadmap1\\_en\\_0.pdf](https://health.ec.europa.eu/system/files/2022-01/2021-2025_cancer-roadmap1_en_0.pdf). Accessed January 26, 2023.
24. World Health Organization. The role of health professionals in tobacco control. Geneva: World Health Organization; 2005. Available at: [http://whqlibdoc.who.int/publications/2005/9241593202\\_eng.pdf](http://whqlibdoc.who.int/publications/2005/9241593202_eng.pdf). Accessed October 15, 2022.
25. Warren GW, Dibaj S, Hutson A, Cummings KM, Dresler C, Marshall JR. Identifying targeted strategies to improve smoking cessation support for cancer patients. *J Thorac Oncol*. 2015;10(11):1532-1537.
26. Warren GW, Marshall JR, Cummings KM, et al. Addressing tobacco use in patients with cancer: a survey of American Society of Clinical Oncology members. *J Oncol Pract*. 2013;9(5):258-262.
27. ESMO. Recommendations for a Global Curriculum in Medical Oncology [Internet]. Available at: <https://www.esmo.org/career-development/global-curriculum-in-medical-oncology>. Accessed March 1, 2023.
28. Baselga J, Senn HJ. European Society for Medical Oncology. The perspective and role of the medical oncologist in cancer prevention: a position paper by the European Society for Medical Oncology. *Ann Oncol*. 2008;19(6):1033-1035.
29. ESMO. World Cancer Report Updates Learning Platform [Internet]. Available at: <https://www.esmo.org/policy/cancerprevention/world-cancer-report-updates-learning-platform>. Accessed March 1, 2023.
30. The European Oncology Nursing Society. Welcome to PrEvCan – Cancer Prevention Across Europe. Available at: <https://cancernurse.eu/prevcan/>. Accessed January 26, 2023.