

# E-Cigarettes and Smoking Cessation

## A primer for oncology clinicians

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**BACKGROUND:** Electronic cigarettes (e-cigarettes) are a psychosocial phenomenon of the 21st century with serious implications to public and individual health. The significant increase of their popularity and use has raised concerns in the healthcare community regarding their potential benefits and harm, particularly their use as a smoking cessation methodology.

**OBJECTIVES:** Current knowledge is presented about e-cigarettes, including the clinical implications of their use, and associated controversies are analyzed. In addition, practice recommendations and communication guidance are provided.

**METHODS:** An integrative review was performed.

**FINDINGS:** The long-term effect of e-cigarettes on individual and public health is unknown. Evidence from short-term studies, although limited, shows that e-cigarette use is less harmful than smoking. However, the evidence does not support the use of e-cigarettes as a smoking cessation methodology. Such recommendation remains a judgment call for the clinician based on each individual case.

### KEYWORDS

electronic cigarette; e-cigarettes; smoking cessation; nicotine; harm reduction

### DIGITAL OBJECT IDENTIFIER

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**P****ATIENTS WITH CANCER WHO CONTINUE SMOKING CIGARETTES** after their diagnosis have an increased risk of negative health outcomes, such as complications from therapy, relapse, reduced quality of life, increased risk of death, and increased risk of new malignancies (Daniels et al., 2009; Gajdos et al., 2012; Underwood et al., 2012; Warren, Kasza, Reid, Cummings, & Marshal, 2013). The science has shown a causative association between smoking and adenocarcinoma of the lung, hepatocellular carcinoma, and colorectal cancer (U.S. Department of Health and Human Services [USDHHS], 2014). Compared to nonsmokers, smokers' risk of death from all cancers is almost three times higher (Jha et al., 2013).

Most people with cancer who continue smoking after diagnosis understand the significance of smoking cessation, and most wish to quit. Many have tried to quit using different methods, including pharmacologic and psychological therapies (Duffy, Louzon, & Gritz, 2012; Park et al., 2012). Among adult cancer survivors who were regular smokers at diagnosis, 65% continued smoking after treatment completion (Jha et al., 2013).

The use of electronic cigarettes (e-cigarettes) is increasing among patients with cancer who smoke regularly. Many patients with cancer use e-cigarettes as a substitute for cigarettes or in addition to cigarettes. These patients report using e-cigarettes to manage nicotine cravings, reduce daily cigarette consumption, and to quit smoking (Borderud, Lin, Burkhalter, Sheffer, & Ostroff, 2014).

The tobacco industry dominates the e-cigarette market and promotes them as a healthier alternative to smoking and as a cessation method (Grana, Ling, Benowitz, & Glantz, 2014). The U.S. Food and Drug Administration (FDA) does not regulate or offer guidelines for e-cigarette manufacturing, marketing, or sales. In addition, information on e-cigarette safety and efficacy as a smoking cessation method is lacking. The current article attempts to answer whether e-cigarettes are efficacious as a strategy for smoking cessation in general and for patients with cancer in particular. The authors present what is known about e-cigarettes, point to what is still unknown, and offer clinicians an overview of the topic, practice recommendations, and communication strategies with patients who smoke cigarettes, use e-cigarettes, or are considering their use.

### Background

E-cigarettes entered the U.S. and European markets in 2007 (Grana, Benowitz, & Glantz, 2014). E-cigarettes are battery-powered devices that