



Smoking and Cancer

What Healthcare Professionals Need to Know

Smoking Causes Cancer

One out of every three cancer deaths in the U.S. is related to cigarette smoking. Smoking causes 12 types of cancer, including cancers of the lung, larynx, oral cavity and pharynx, esophagus, pancreas, bladder, stomach, liver, colon and rectum, kidney and renal pelvis, cervix, and acute myeloid leukemia (AML). Additionally, secondhand smoke exposure causes lung cancer.

Research shows that, in both patients with cancer and cancer survivors, smoking:

- Increases the risk of death, including death from cancer.
- Increases the risk for development of additional primary cancers which are smoking-related.
- May increase risk of cancer recurrence.
- May result in poorer treatment response and increased treatment-related toxicity.

Smoking Cessation Protects Against Cancer

Smoking cessation is one of the most important actions people who smoke can take to improve their health and reduce their risk for cancer. This is true for all people who smoke, regardless of age or smoking duration and intensity. For patients with cancer, studies suggest that quitting smoking can significantly reduce mortality and improve their prognosis.

Smoking cessation protects against cancer and benefits both patients with cancer and cancer survivors. Healthcare professionals, particularly those in oncology care, should treat patients' tobacco use and dependence.



Benefits of Smoking Cessation

- ▶ Reduces the risk of 12 different types of cancer, including lung, larynx, oral cavity and pharynx, esophagus, pancreas, bladder, stomach, colon and rectum, liver, cervix, kidney, and acute myeloid leukemia (AML).
- ▶ After cessation, the risk of developing cancer (compared to continued smoking) drops over time:
 - 5 to 10 years after quitting: added risk* of cancers of the larynx, oral cavity, and pharynx drops by half.
 - 10 years after quitting: risk of cancers of the bladder, esophagus, and kidney decreases.
 - 10 to 15 years after quitting: added risk* of lung cancer drops by half.
 - 20 years after quitting: risk of cancers of the larynx, oral cavity, pharynx, and pancreas drops to close to that of someone who does not smoke.
 - 20 years after quitting: added risk* of cervical cancer drops by about half.

*The added risk of cancer above that of the general population which is linked to smoking.

Benefits of Smoking Cessation for Patients With Cancer

- ▶ Improves the prognosis of patients with cancer.
- ▶ May improve all-cause mortality in patients with cancer.

Clinical Interventions Work

Tobacco use and dependence is a chronic, relapsing condition that often requires repeated intervention and long-term support. Quitting can be hard, but evidence-based treatments (listed below) improve success.

- **Behavioral Counseling:** Counseling can be in person (one-on-one or in a group) or over a telephone quitline. Text messaging and web-based interventions also help people quit smoking.
- **Medication:** Seven medications are approved by the U.S. Food and Drug Administration (FDA) for smoking cessation (see text box).
- **Combining Treatments:** Counseling and medication are effective on their own, but using them together can more than double the chances of quitting. Combining long-acting NRT (patch) with short-acting NRT (e.g., gum, lozenge) also increases the chances of quitting.

FDA-Approved Medications

- ▶ **Nicotine Replacement Therapy (NRT)** reduces nicotine withdrawal symptoms and is available over the counter (patch, gum, and lozenge) and by prescription (inhaler and nasal spray).
- ▶ **Varenicline** is a nicotine receptor partial agonist available only by prescription. It reduces nicotine withdrawal symptoms (including craving) and reduces the rewarding effects of cigarettes by blocking nicotinic receptors.
- ▶ **Bupropion** is a dopamine and norepinephrine reuptake inhibitor with nicotine receptor antagonist properties. It reduces craving and other withdrawal symptoms and is available by prescription only.

The Entire Clinical Care Team Can Help

A team approach is the best way to treat tobacco use and dependence. Integrating treatment into the routine clinical workflow and engaging the entire healthcare team in treatment delivery can make a difference.



Advise Patients to Quit

- Talk to patients at every visit about their tobacco use. Even brief advice can influence a patient's decision to quit smoking.
- Advise patients that quitting is one of the most important things they can do to improve their health and prognosis.
- Remind patients that it is never too late to quit smoking. Quitting is beneficial at any age.
- Provide patients support, regardless of their readiness to quit.



Offer Patients Treatment

- Offer patients a combination of counseling and medications.



Refer Patients to Additional Support

- Refer patients to cessation resources and programs in your health system and community. You can also refer them to telephone quitlines (1-800-QUIT-NOW) and web- and text-based programs.



Follow Up With Patients

- Assess your patients' progress over time and provide additional support. It may take several attempts for them to quit smoking.
- Try new strategies, like new medications the patient hasn't tried, medication combinations, or new approaches to handling triggers.
- Provide ongoing support and encourage patients to keep trying and not give up.

Smoking Cessation Resources for Clinicians

- ▶ CDC resources: www.cdc.gov/TobaccoHCP; [Caring for Cancer Survivors Who Use Tobacco](http://www.cdc.gov/cancer/survivors/health-care-providers/tobacco-use.htm) available at www.cdc.gov/cancer/survivors/health-care-providers/tobacco-use.htm
- ▶ Million Hearts resources: [Tobacco Treatment Protocol](#), [Action Guide](#), and [Change Package](#) available at millionhearts.hhs.gov
- ▶ [Treating Tobacco Use and Dependence, Clinical Practice Guideline: 2008 Update](#) available at www.ahrq.gov
- ▶ U.S. Preventive Services Task Force: [Tobacco Smoking Cessation in Adults, Including Pregnant Women: Behavioral and Pharmacotherapy Interventions](#) available at www.uspreventiveservicestaskforce.org
- ▶ [National Comprehensive Cancer Network Guidelines for Smoking Cessation](#) available at www.nccn.org

