Climate Change and Oncology Nursing: A Call to Action

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Climate change is a public health crisis that amplifies exposure to known carcinogens, leading to increased cases of cancer and other diseases. This clear link is a powerful reason for all oncology nurses concerned with cancer prevention and treatment to be involved in climate change solutions. The purpose of this review is to bring awareness to the consequences climate change has on the incidence and mortality of cancer, how it affects people living with cancer, and how oncology nurses can help mitigate these suboptimal outcomes.

AT A GLANCE

- Effects of climate change have led to increased exposure to air pollution, ultraviolet rays, and environmental toxins; these environmental factors increase the risk of cancer.
- Nurses have a professional responsibility to promote and protect health, which includes considering the environmental impact of practice.
- Oncology nurses play an essential role in educating patients on environmental health, identifying sustainable healthcare practices, and acting as environmental stewards and advocates.

KEYWORDS
oncology; nursing; climate change; sustainability; environmental health

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Climate change, the long-term alteration of temperature and typical weather patterns, is brought about by the accumulation of greenhouse gases in the atmosphere. It is irrefutable that these gases largely come from burning fossil fuels (U.S. Environmental Protection Agency [EPA], n.d.). Climate change is a public health crisis amplifying exposure to known carcinogens, leading to increased cases of cancer and other diseases (Hiatt & Beyeler, 2020). This clear link provides a powerful justification for why all oncology nurses concerned with cancer prevention and treatment should be involved in climate change solutions. This review will shed light on the consequences climate change has on the incidence and mortality of cancer, how it affects people living with cancer, and how oncology nurses can help mitigate these suboptimal outcomes.

Climate Change

Climate change occurs from greenhouse gas emissions, which leads to the warming of the earth. The consequences of global warming include rising sea levels, catastrophic weather events, droughts, heat waves, wildfires, and flooding, all of which are occurring with increasing frequency and severity (Haines & Ebi, 2019; EPA, 2019). Subsequently, people are exposed to more air pollution, ultraviolet (UV) rays, and environmental toxins; these are familiar environmental factors that increase the risk of cancer (Man et al., 2018). In addition, global warming threatens food and water security, results in more vector-carried infectious diseases, and increases the likelihood of natural disasters (Salas et al., 2020). According to an article by Carlson et al. (2021) that has not yet been peer reviewed, with increasing environmental degradation from climate change and the movement of more human settlement into previous wilderness areas, the likelihood for the transmission of viral diseases from wild animals to humans increases, leading to future possible pandemic outbreaks.

Transportation, energy production, manufacturing, businesses and homes, and food production are major causes of greenhouse gases (EPA, 2019). The healthcare industry is the second leading energy-intensive business in the United States (Eckelman & Sherman, 2016). Contributing factors include pharmaceutical production, energy expenditure, medical waste, food waste, and anesthetic gases commonly used in surgery, which can be thousands of times more potent than carbon dioxide (Nogueira et al., 2020). As cancer incidence grows, with an estimated 1.9 million new cancer cases predicted in 2021, the demand for cancer care will increase (American Cancer Society, 2021). The influx of people into a high-waste system will continue to exacerbate the negative effects of the changing climate if no action is taken.