Time to talk about planetary health and cancer care

The 46th Annual Scientific Meeting of the Clinical Oncology Society of Australia (COSA) was held on Nov 12–14, 2019, in Adelaide, SA, Australia. Amid sessions on the meeting's themes of urological cancers, age and gender issues, and digital health, was one that discussed the interface between cancer and environmental and political change. As many communities across Australia were dealing with an unprecedented week of bush fires, the decision to set aside time to discuss cancer care in the context of the environment comes at a watershed moment. The fires brought to the fore a debate on what is thought to be a major cause of the drought conditions that have precipitated the worsening bush fire season—climate change.

Although some appear to question the link between climate change and the bush fires, it cannot be denied that the health of the planet affects that of human beings. Australia should be lauded for reducing greenhouse gas emissions by championing renewable energy; however, it is also the third biggest exporter of fossil fuels, as measured by CO_2 potential, which is likely to have consequences on global and national scales. A reluctance to acknowledge the potential effects of climate change on human health on a global scale will hinder progress to mitigate such consequences.

Designating climate change as a public health issue, the 2019 report of *The Lancet* Countdown on health and climate change, published in November, 2019, suggests that a child born today will live in a world that is more than 4°C warmer than that in the pre-industrial age, with health consequences evident throughout life. Air pollution is a major player, with effects on vital organs, such as the lung, beginning in adolescence and continuing into adulthood. In addition to the general global deterioration in air quality, isolated events, such as the bush fires, can have an immediate and direct effect on air pollution. Another potential interaction between climate change and cancer is the effect of increased UV radiation on the prevalence of cancer of the skin and eye. Furthermore, with climate change potentially leading to proposed changes in food production and human diet (for example, as explored in the EAT–*Lancet* Commission), resultant changes in the human microbiome resulting from changing diet might also affect disease outcomes, given the recognised effect of the microbiome on responses to anticancer treatment such as immunotherapy. In addition to the known long-term health consequences, the destruction caused by increasing climate change-related emergencies will have an acute effect on health and health services.

Oncology is particularly susceptible to disruption caused by events related to climate change because of the need for long-term treatments requiring multiple trips to specialist care at tertiary hospitals; unique and highly specialised medicines, equipment, and training; the susceptibility of patients with cancer to other health issues; and existing comorbidities of the patients. Road closures, destruction of infrastructure, and population displacement due to natural disasters can lead to an array of consequences resulting in patient harm. Delays in the delivery of essential medical supplies (eg, cancer drugs or time-sensitive deliveries of radioactive isotopes for cancer imaging or treatment), a shortage of specialist staff to provide services or perform operations in hospitals or clinics, and reduced access to clinics for the patients themselves are just some of the disruptions to vital oncology services that patients might experience. This issue is true whether for small island nations devastated by a category 5 hurricane—compounding the challenge of the growing cancer burden in these regions—or a city cloaked in thick smoke from a nearby forest fire. In 2017, flooding from a tropical storm forced the MD Anderson Cancer Center (Houston, TX, USA) to cancel hospital appointments due to impassable nearby roads and flooded buildings. Forward planning helped to minimise the disruption caused by weather conditions in this case, but such emergency plans are not always available in cancer centres with fewer resources. With the incidence of climate-related emergencies likely to increase over time, patients with cancer are likely to feel the effects.

The consequences of many years of inaction on climate change are now rapidly taking their toll on the environment and on human health worldwide. Solutions are needed in place of indecision. It is time to talk about planetary health and its effect on patient care in various medical disciplines, such as oncology. Discussion at oncology conferences, following in the footsteps of COSA, is a good start. Until we recognise we have a problem, we cannot hope to begin to find solutions. ■ *The Lancet Oncology*

Rich Carey/Shutterstock.com

For more on **COSA 2019** see http://cosa2019.org/

Fore more on the **Australian bush fires** see https://www.reuters.com/article/us-australia-bushfires/lack-of-forecast-rains-to-prolong-australian-bushfires-threat-idUSKBN1XO01C

For **discussion of climate change and the bush fires** see https://www.smh.com.au/politics/federal/raving-inner-city-lunatics-michael-mccormack-dismisses-link-between-climate-change-and-bushfires-20191111-p539ap.html

For more on **renewable energy in Australia** https://www.theguardian.com/australia-news/2019/oct/24/australias-emissions-to-start-falling-thanks-to-renewables-boom-researchers-say

For more on **Australian fossil fuel exports** https://www.abc.net.au/news/science/2019-08-19/australia-co2-exports-third-highest-worldwide/11420654

For ***The Lancet* Countdown on health and climate change** see **Review** *Lancet* 2019; published online Nov 13. https://doi.org/10.1016/S0140-6736(19)32596-6

For the **EAT–*Lancet* Commission** see **Commission** *Lancet* 2019; **393:** 447–92

For more on the **effects of microbiota on cancer immunotherapy response** see *Science* 2015; **350:** 1079–84

For the **Series on cancer care in small island nations** see http://www.thelancet.com/series/small-island-nations

For more on **planning for emergency cancer center situations at MD Anderson** see https://www.mdanderson.org/publications/conquest/how-hospital-prepared-for-the-worst.h36-1591413.html