

# Smoking and cancer outcomes

## Factsheet for health professionals

1. In people with cancer, smoking increases the risk of overall mortality, cancer-specific mortality and second primary cancers.<sup>1</sup>
2. Across multiple types of cancers, smoking cessation can improve survival compared with continued smoking.<sup>2</sup>
3. Help your patients quit smoking even after a cancer diagnosis by offering referral to Quitline (13 7848) and facilitating access to pharmacotherapy, if clinically appropriate.

### Key facts and figures

Tobacco use is the single leading cause of preventable death and disease in Australia.<sup>3</sup> In 2019, 11% of Australians aged 14 and over smoked tobacco daily.<sup>4</sup>

Tobacco use is the leading modifiable risk factor for cancer and was responsible for one-fifth of the cancer burden in Australia in 2018.<sup>5</sup>

At the time of cancer diagnosis, 20–30% of people self-report current smoking.<sup>2</sup>

Compared with never smokers, people with cancer who smoke have a 51% increased risk of overall mortality and a 61% increased risk of cancer-related mortality.<sup>1</sup>

Most people who smoke want to quit and have already tried to quit.<sup>4</sup> The motivation and interest to quit may increase following a cancer diagnosis.<sup>6</sup> There is evidence that brief advice from a health professional prompts a person who smokes to make a quit attempt.<sup>7</sup>

## What is the link between smoking and cancer outcomes?

Continued smoking after a cancer diagnosis has an adverse impact on health outcomes in people living with cancer and cancer survivors. Current smoking in people with cancer increases their risk of overall mortality, cancer-related mortality as well as second primary cancer. In addition, people with cancer who smoke are at a higher risk of recurrence, have poorer response to treatment and increased treatment-related toxicity.<sup>1</sup>

## How does smoking lead to reduced response to cancer treatment?

While many studies have shown the biological mechanisms by which smoking causes cancer, fewer studies have evaluated the effect of smoking on existing cancer cells. What is known though is that smoking affects cancer cell signalling, which leads to cell proliferation, and decreased response to chemotherapy and radiotherapy.<sup>8</sup>

## What is the impact of smoking cessation on people with cancer?

Compared with continued smoking, smoking cessation after a cancer diagnosis significantly reduced all-cause mortality, with a median reduction of 45%. This benefit has been consistently shown across different cancer sites and types of treatment.<sup>2,9</sup>

The magnitude of effect of smoking cessation compared with continued smoking after cancer diagnosis on overall mortality is substantial and may even be comparable with the effect size of some cancer therapies.<sup>1</sup>

**A person with cancer who currently smokes can improve their prognosis by stopping smoking at any time.<sup>1</sup>**

## Where does smoking cessation fit within cancer care?

Smoking cessation should be a part of the continuum of cancer care, from symptom finding through to diagnosis and follow-up. Many peak international and Australian cancer organisations call for smoking cessation treatment to be offered as a standard part of cancer care.<sup>2, 10-12</sup>

Smoking cessation should be perceived as an effect modifier of treatment outcomes.<sup>9</sup> Therefore, smoking cessation treatment is a priority in cancer care. It is never too late for people with cancer to stop smoking and experience health benefits.<sup>10</sup>

## How can I best support my patients to stop smoking?

You can support your patients to stop smoking by using the Ask, Advise, Help (AAH) model. The AAH model promotes cessation and connects people who smoke with evidence-based tobacco dependence treatment (a combination of multi-session behavioural intervention through Quitline and pharmacotherapy, if clinically appropriate).

This can be delivered in a few minutes via the following steps:

- **Ask** all patients about their smoking status and document this in their medical record
- **Advise** all patients who smoke to quit in a clear, non-confrontational, personalised way, and advise of the most effective way to quit
- **Help** all patients who smoke to quit by offering an opt-out referral for behavioural intervention through Quitline (13 7848) and by facilitating access to pharmacotherapy, if clinically appropriate.

## What is the Quitline and how can it help my patients?

- **Quitline (13 7848)** is a confidential, evidence-based telephone counselling service. Professional Quitline counsellors deliver counselling over multiple sessions to help people plan, make and sustain a quit attempt.
- **Aboriginal Quitline** is also available to support Aboriginal and/or Torres Strait Islander people who smoke.
- Making a proactive referral to Quitline increases the likelihood of patients enrolling in treatment.<sup>13</sup> Refer your patients: [quitcentre.org.au/referral-form](https://quitcentre.org.au/referral-form)
- Quitline also provides information and advice to health professionals about smoking cessation.

## Where can I find more information?

- Quit has developed online training and a range of resources. Access these at: [quitcentre.org.au](https://quitcentre.org.au)
- For more information about the link between smoking and cancer, visit:  
[www.tobaccoinaustralia.org.au/chapter-3-health-effects/3-3-smoking-and-cancer](https://www.tobaccoinaustralia.org.au/chapter-3-health-effects/3-3-smoking-and-cancer)
- For information and updates about tobacco use, follow Quit Centre on [Twitter](#) or [LinkedIn](#).

## References

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