Smoking cessation in oncology

Cancer patients who continue to smoke tobacco after their diagnosis have poorer treatment outcomes regardless of whether the cancer is tobacco-related.[1]

Benefits of tobacco cessation and risks of continued use in cancer patients

Tobacco cessation leads to:[1]

- improved treatment outcomes
- reduced treatment side effects
- decreased risk of infection
- improved breathing and increased energy
- improved quality of life
- improved survival.

Continued tobacco use after diagnosis leads to:[1]

- higher complication rates from surgery and slower recovery
- higher treatment-related toxicity from chemotherapy and radiotherapy
- an increased risk of cancer recurrence
- an increased risk of other serious illnesses such as cardiovascular and respiratory disease
- reduced treatment effectiveness
- safety risks for patients with reduced consciousness or on oxygen
- an increased risk of developing a second primary cancer.

Additionally, there are drug interactions associated with smoking tobacco. Smoking induces CYP 1A2 and CYP 2B6 liver enzymes. As a result, smokers have a higher clearance of drugs metabolised by these enzymes. Erlotinib is an example of a drug cleared by CYP 1A2. Dose increases of affected drugs may be needed in patients who smoke, along with careful monitoring. Subsequent dose reduction will then be required if smoking is ceased.

It is never too late for a cancer patient to stop smoking. Pharmacotherapy combined with counselling support is the most effective treatment approach for smoking cessation.[2]

The 5As structure for smoking cessation[3]

The 5As approach is an evidence-based framework for structuring smoking cessation by identifying smokers and offering support to help them quit.[3]

Ask patients:

- whether they smoke
  (record their smoking status).

Assess smokers':

- readiness to change
  (record their stage of change)
- level of nicotine dependence.

Advise all smokers:

- to quit

  (do this in a clear and non-confrontational manner).

Assist those:

- who are ready to quit, or unsure, by providing
  - information
  - encouragement
  - recommended pharmacotherapy to nicotine-dependent smokers
  - a referral to Quitline (13 78 48) and iCanQuit (iCanQuit.com.au)
- who are not ready to quit by
  - discussing risks of smoking and benefits of quitting
  - advising that help is available when they are ready.

Arrange follow up:

- Congratulate successful quitters, discuss relapse prevention and offer ongoing encouragement.
- For those who have relapsed, explore the reasons for relapse, offer ongoing support and ask again at future consultations.
- For those attempting to quit, congratulate them, review their progress, encourage the use of pharmacotherapy and discuss relapse prevention OR refer to Quitline (13 78 48).

For more information, visit: eviQ.org.au

Smoking cessation in oncology

Pharmacotherapy for smoking cessation

Pharmacotherapy should be recommended to all nicotine-dependent smokers who express an interest in quitting, except where contraindicated.[3]

Three forms of pharmacotherapy are licensed and available in Australia to assist smoking cessation.

Nicotine replacement therapy (NRT)

NRT is available in Australia without a prescription as patches, inhalation cartridges, chewing gum, oral spray, oral film and lozenges.

Nicotine patches are available on the Pharmaceutical Benefits Scheme (PBS) for nicotine dependence. A general (restricted benefit) prescription is required.

There are no known clinically meaningful oncology drug interactions with NRT.

NRT should be used with caution in pregnant women and patients with unstable cardiovascular disease.

Recommended NRT dose:[4]

The choice of nicotine replacement dose is dependent on the patient's level of nicotine dependence. The choice of delivery vehicle is dependent on patient preference. Please refer to the individual Product Information of the chosen nicotine replacement vehicle for dosage instructions.

Varenicline (*Champix*®)

Varenicline is available on the PBS for nicotine dependence. An authority prescription is required.

There are no known clinically meaningful oncology drug interactions with varenicline to date.

Varenicline is not recommended for children or in pregnancy. Caution should be taken if prescribing to patients with significant psychological/psychiatric distress or in cardiovascular disease.

Varenicline should be initiated at least 7 days before the patient stops smoking.

Recommended varenicline dose:[4]

Initially 0.5 mg once daily for 3 days, then 0.5 mg twice daily for 4 days, then 1 mg twice daily for 11–23 weeks.

If patient suffers from intolerable nausea, consider dose reduction to 1 mg once daily.

In patients with severe renal impairment (creatinine clearance < 30 mL/minute) the dose of varenicline should be 0.5 mg once daily for 3 days, then 1 mg once daily, if tolerated.

Bupropion (*Zyban*®)

Bupropion is available on the PBS for nicotine dependence. An authority (streamlined) prescription is required.

Bupropion is contraindicated in patients at risk of seizure (e.g. stroke, brain metastases), within 14 days of MAOI treatment, and in those with closed-angle glaucoma.

Concurrent use should be avoided with cyclophosphamide, doxorubicin, dabrafenib, tamoxifen or metoclopramide.

Bupropion is not recommended in pregnancy, and caution should be taken if prescribed with other agents that lower the seizure threshold.

Bupropion should be initiated at least 7 days before the patient stops smoking.

Recommended bupropion dose:[4]

Initially 150 mg once daily in the morning for 3 days, then 150 mg twice daily (at least 8 hours apart) for 7–9 weeks.

In patients who are elderly, or have renal or mild hepatic impairment, the dose of bupropion should be 150 mg once daily in the morning for 7–9 weeks.

References

1. ASCO. Tobacco Cessation Guide For Oncology Providers. 2012
2. National Comprehensive Cancer Network Clinical Practice Guidelines in Oncology: Smoking Cessation. 2015
3. RACGP. Supporting smoking cessation: A guide for health professionals. 2014
4. AMH. Australian Medicines Handbook Pty Ltd. 2016