

# Basal cell carcinoma locally advanced or metastatic soNIDEGib

ID: 3410 v.2 Endorsed

Check for clinical trials in this patient group. Link to [Australian Clinical Trials](#) website

This protocol is based on limited evidence; refer to the evidence section of this protocol for more information.

The anticancer drug(s) in this protocol may have been included in the ADDIKD guideline. Dose recommendations in kidney dysfunction have yet to be updated to align with the ADDIKD guideline. Recommendations will be updated once the individual protocol has been evaluated by the reference committee. For further information refer to the ADDIKD guideline. To assist with calculations, use the [eviQ Estimated Glomerular Filtration Rate \(eGFR\) calculator](#).

## International Consensus Guideline for Anticancer Drug Dosing in Kidney Dysfunction (ADDIKD)

2022

[Click here](#)



### Related pages:

- [Basal cell carcinoma locally advanced or metastatic vismodegib](#)

## Treatment schedule - Overview

| Drug      | Dose              | Route |
|-----------|-------------------|-------|
| soNIDEGib | 200 mg ONCE a day | PO    |

Note: Intermittent scheduling have been used and appear broadly equivalent in vismodegib and considered a class effect <sup>1</sup>

### Continuous until disease progression or unacceptable toxicity

**Drug status:** Sonidegib is [PBS authority](#).

Sonidegib is unique in its documentation requirements for reimbursement. Further details and forms are found at the [Department of Human Services](#)

**Cost:** ~ \$7,110 per month

## Treatment schedule - Detail

*The supportive therapies (e.g. antiemetics, premedications, etc.), infusion times, diluents, volumes and routes of administration, if included, are listed as defaults. They may vary between institutions and can be substituted to reflect individual institutional policy.*

*Antiemetics if included in the treatment schedule are based upon recommendations from national and international guidelines. These are **defaults only** and may be substituted to reflect individual institutional policy. [Select here for recommended doses of alternative antiemetics.](#)*

| Continuous treatment |             |  |
|----------------------|-------------|--|
| soNIDEGib            | 200 mg (PO) | ONCE a day at least one hour before, or at least two hours after a meal. Swallow capsules whole with a glass of water. |

Note: Intermittent scheduling have been used and appear broadly equivalent <sup>1</sup>

## Indications and patient population

### Indications

- Locally advanced basal cell carcinoma where surgery and radiation therapy are not appropriate
- Metastatic basal cell carcinoma

### Contraindications

- Women who are pregnant or breastfeeding
- Women of child-bearing potential, unless two reliable methods of contraception are used during treatment and for 24 months after the last dose
- Men whose partners are of child-bearing potential, unless two reliable methods of contraception are used during treatment and for 6 months after the last dose

## Clinical information

|  |   |
|--|---|
| <b>Caution with oral anti-cancer drugs</b>   | Select links for information on the safe prescribing, dispensing and administration of orally administered anti-cancer drugs.<br>Read more about the <a href="#">COSA guidelines</a> and <a href="#">oral anti-cancer therapy</a>   |
| <b>Emetogenicity minimal or low</b>          | No routine prophylaxis required. If patients experience nausea and/or vomiting, consider using the low emetogenic risk regimen.<br>Read more about <a href="#">preventing anti-cancer therapy induced nausea and vomiting</a>   |
| <b>Musculoskeletal adverse effects</b>       | Muscle spasms, pain, cramps or weakness may be caused by this treatment. Patients should be advised to promptly report any new unexplained muscle pain, tenderness or weakness during this treatment.<br>Patients with predisposed neuromuscular disorders or on combination therapy with other medications may have an increase risk of muscle toxicity and should be monitored closely.   |
| <b>Blood tests</b>                           | FBC, EUC, eGFR, LFTs and CK at baseline and repeat monthly during treatment or as clinically indicated.   |
| <b>Hepatitis B screening and prophylaxis</b> | Routine screening for HBsAg and anti-HBc is NOT usually recommended for patients receiving this treatment.<br>Read more about <a href="#">hepatitis B screening and prophylaxis in cancer patients requiring cytotoxic and/or immunosuppressive therapy</a>   |
| <b>Vaccinations</b>                          | The safety of having vaccinations whilst on this treatment is unknown and is therefore not recommended.   |
| <b>Fertility, pregnancy and lactation</b>    | Cancer treatment can have harmful effects on fertility and this should be discussed with all patients of reproductive potential prior to commencing treatment. This treatment may cause severe congenital disabilities or death to an unborn baby when taken during pregnancy. A pregnancy test should be performed prior to the initiation of treatment and monthly during treatment in females of reproductive potential if sexually active. Females of reproductive potential are advised to use two reliable methods of contraception whilst on therapy and after treatment finishes. Male patients should use a condom with spermicide (if available), regardless of vasectomy status, when having sexual intercourse with a woman of childbearing potential during therapy and after treatment finishes. Effective contraception methods and adequate contraception timeframe should be discussed with all patients of reproductive potential. Possibility of infant risk should be discussed with breastfeeding patients.<br>Read more about the <a href="#">effect of cancer treatment on fertility</a> |

## Dose modifications

Evidence for dose modifications is limited, and the recommendations made on eviQ are intended as a guide only. They are generally conservative with an emphasis on safety. Any dose modification should be based on clinical judgement, and the individual patient's situation including but not limited to treatment intent (curative vs palliative), the anti-cancer regimen (single versus combination therapy versus chemotherapy versus immunotherapy), biology of the cancer (site, size, mutations, metastases), other treatment related side effects, additional co-morbidities, performance status and patient preferences. Suggested dose modifications are based on clinical trial findings, product information, published guidelines and reference committee consensus. The dose reduction applies to each individual dose and not to the total number of days or duration of treatment cycle unless stated otherwise. Non-haematological gradings are based on [Common Terminology Criteria for Adverse Events \(CTCAE\)](#) unless otherwise specified. Renal and hepatic dose modifications have been standardised where possible. For more information see dosing considerations & disclaimer.

The dose recommendations in kidney dysfunction (i.e. renal impairment) displayed may not reflect those in the ADDIKD guideline and have been included for historical reference only. Recommendations will be updated once the individual protocol has been evaluated by the reference committee, with this version of the protocol then being archived. Clinicians are expected to refer to the ADDIKD guideline prior to prescribing in kidney dysfunction.

[International Consensus Guideline for Anticancer Drug Dosing in Kidney Dysfunction \(ADDIKD\)](#).

### Creatine phosphokinase (CK) elevation and musculoskeletal adverse effects

- For all suspected adverse effects monitor CK levels and muscle symptoms weekly until resolution to baseline, and then CK levels monthly thereafter
- If serum creatinine is elevated, check renal function regularly and ensure that patients are well hydrated

|  |   |
|--|---|
| Grade 1  | No dose modifications necessary   |
| Grade 2 <u>without</u> renal impairment            | Delay until resolution to baseline, and resume treatment at the same dose level.<br><br>If symptoms reoccur, withhold treatment until resolution to baseline and recommence at 200 mg daily on alternate days. If symptoms persist consider discontinuing treatment.  |
| Grade 3 or greater <u>without</u> renal impairment | Delay until resolution to baseline, and resume treatment at 200 mg daily on alternate days.<br><br>CK levels should be measured weekly for 2 months after recommencement of sonidegib and monthly thereafter.   |
| Grade 2 or greater <u>with</u> renal impairment    | Withhold treatment and ensure patient is well hydrated.<br><br>Monitor CK and serum creatinine weekly until resolution to baseline.<br><br>Once resolution to baseline consider either recommencing treatment at 200 mg daily on alternate days whilst monitoring CK levels weekly for 2 months and monthly thereafter; or otherwise discontinue treatment permanently. |

### Renal Impairment

No dose modification necessary. Very limited data is available in patients with renal impairment, these patients should be monitored carefully for adverse effects.

### Hepatic impairment

No dose modifications is necessary in patients with hepatic impairment.

## Interactions

The drug interactions shown below are not an exhaustive list. For a more comprehensive list and for detailed information on specific drug interactions and clinical management, please refer to the specific drug product information and the following key resources:

- [MIMS - interactions tab](#) (includes link to a CYP-450 table) (login required)

- [Australian Medicines Handbook \(AMH\) – interactions tab](#) (login required)
- [Micromedex Drug Interactions](#) (login required)
- [Cancer Drug Interactions](#)
- [Cytochrome P450 Drug Interactions](#)

For more information see [References & Disclaimer](#).

| <b>Sonidegib</b>  |  |   |
|---|--|---|
|   | <b>Interaction</b>   | <b>Clinical management</b>  |
| <b>CYP3A4 inhibitors (e.g. amiodarone, aprepitant, azole-antifungals, ritonavir, lapatinib, nilotinib, sorafenib, macrolides, ciclosporin, grapefruit juice etc.)</b> | Increased toxicity of sonidegib possible due to reduced clearance  | Avoid combination or monitor for sonidegib toxicity   |
| <b>CYP3A4 inducers (e.g. carbamazepine, phenytoin, phenobarbitone, rifampicin, St John's wort, dexamethasone etc.)</b>  | Reduced efficacy of sonidegib possible due to increased clearance  | <p>Avoid combination or monitor for decreased clinical response to sonidegib.</p> <p>If a strong CYP3A inducer must be used concomitantly, consider increasing the dose of sonidegib by 200 mg increments to a maximum daily dose of 800 mg.</p> <p>Upon discontinuation of the strong inducer, the dose of sonidegib used prior to initiation should be resumed.</p> |
| <b>CYP2C9, CYP2B6, and breast cancer resistance protein (BCRP) substrates (e.g. warfarin, phenytoin, methadone, sulfasalazine, or methotrexate etc.)</b>              | Increased toxicity of these drugs (in vitro) possibly due to competitive inhibition of CYP2C9, CYP2B6, and breast cancer resistance protein (BCRP) by sonidegib.       | Monitor patients closely for adverse drug reactions, especially those with a narrow therapeutic range (e.g. warfarin and phenytoin)   |
| <b>Agents that may increase musculoskeletal adverse effects (e.g. HMG-CoA reductase inhibitors).</b>  | Increased risk of developing musculoskeletal adverse events due to overlapping toxicities.   | Monitor patients closely and consider dose adjustment if muscle symptoms develop  |
| <b>Proton pump inhibitors (e.g. esomeprazole)</b>   | <p>The AUC of sonidegib was reduced by 32% when combined with esomeprazole.</p> <p>The effects of this interaction upon clinical efficacy has not been determined.</p> | Monitor for decreased clinical response when used in combination  |

| General   |  |   |
|---|--|---|
|   | Interaction  | Clinical management   |
| <b>Warfarin</b>   | Anti-cancer drugs may alter the anticoagulant effect of warfarin.  | Monitor INR regularly and adjust warfarin dosage as appropriate; consider alternative anticoagulant.  |
| <b>Direct oral anticoagulants (DOACs) e.g. apixaban, rivaroxaban, dabigatran</b>  | Interaction with both CYP3A4 and P-gp inhibitors /inducers.<br><br>DOAC and anti-cancer drug levels may both be altered, possibly leading to loss of efficacy or toxicity (i.e. increased bleeding). | Apixaban: avoid concurrent use with strong CYP3A4 and P-gp inhibitors. If treating VTE, avoid use with strong CYP3A4 and P-gp inducers.<br><br>Rivaroxaban: avoid concurrent use with strong CYP3A4 and P-gp inhibitors.<br><br>Dabigatran: avoid combination with strong P-gp inducers and inhibitors.<br><br>If concurrent use is unavoidable, monitor closely for efficacy/toxicity of both drugs. |
| <b>Digoxin</b>  | Anti-cancer drugs can damage the lining of the intestine; affecting the absorption of digoxin.   | Monitor digoxin serum levels; adjust digoxin dosage as appropriate.   |
| <b>Antiepileptics</b>   | Both altered antiepileptic and anti-cancer drug levels may occur, possibly leading to loss of efficacy or toxicity.  | Where concurrent use of an enzyme-inducing antiepileptic cannot be avoided, monitor antiepileptic serum levels for toxicity, as well as seizure frequency for efficacy; adjust dosage as appropriate. Also monitor closely for efficacy of the anti-cancer therapy.   |
| <b>Antiplatelet agents and NSAIDs</b>   | Increased risk of bleeding due to treatment related thrombocytopenia.  | Avoid or minimise combination. If combination deemed essential, (e.g. low dose aspirin for ischaemic heart disease) monitor for signs of bleeding.  |
| <b>Serotonergic drugs, including selective serotonin reuptake inhibitors (SSRIs e.g. paroxetine) and serotonin noradrenaline reuptake inhibitors (SNRIs e.g. venlafaxine)</b> | Increased risk of serotonin syndrome with concurrent use of 5-HT3 receptor antagonists (e.g. palonosetron, ondansetron, granisetron, tropisetron, dolasetron, etc.)                                  | Avoid combination. If combination is clinically warranted, monitor for signs and symptoms of serotonin syndrome (e.g. confusion, agitation, tachycardia, hyperreflexia). For more information link to <a href="#">TGA Medicines Safety Update</a>   |
| <b>Vaccines</b>   | Diminished response to vaccines and increased risk of infection with live vaccines.  | Live vaccines (e.g. BCG, MMR, zoster and varicella) are contraindicated in patients on immunosuppressive therapy. Use with caution in patients on non-immunosuppressive therapy. For more information; refer to the recommended schedule of vaccination for cancer patients, as outlined in the <a href="#">Australian Immunisation Handbook</a>  |

## Administration

*eviQ provides safe and effective instructions on how to administer cancer treatments. However, eviQ does not provide every treatment delivery option, and is unable to provide a comprehensive list of cancer treatment agents and their required IV line giving set/filter. There may be alternative methods of treatment administration, and alternative supportive treatments that are also appropriate. Please refer to the individual*

## Administration

### This is a continuous oral treatment

[Safe handling and waste management](#) (reproductive risk only)

[Safe administration](#)

[General patient assessment](#) prior to each day of treatment.

### Pre treatment medication

Administer antiemetics if required

## ⌚ Treatment - Time out

### Sonidegib

- administer orally ONCE a day
- to be swallowed whole with a glass of water; do not break, crush or chew
- to be taken on an empty stomach, one hour before or two hours after food.

**Note:** missed doses should only be taken if within 6 hours, if more than 6 hours wait until the next dose is due. If vomiting occurs after dose, administer the next dose at the next scheduled time.

Continue [safe handling](#) precautions (reproductive risk only) for 7 days after completion of drug(s).

## Discharge information

### Sonidegib capsules

- Sonidegib capsules with written instructions on how to take them.

### Patient information

- Ensure patient receives patient information sheet.

## Side effects

*The side effects listed below are not a complete list of all possible side effects for this treatment. Side effects are categorised into the approximate onset of presentation and should only be used as a guide.*

### Immediate (onset hours to days)

|                                   |   |
|-----------------------------------|---|
| <b>Nausea and vomiting</b>        | Read more about <a href="#">prevention of treatment induced nausea and vomiting</a> |
| <b>Taste and smell alteration</b> | Read more about <a href="#">taste and smell changes</a>                             |

### Early (onset days to weeks)

|                               |   |
|-------------------------------|---|
| <b>Arthralgia and myalgia</b> | Generalised joint pain or and/or stiffness and muscle aches, often worse upon waking or after long periods of inactivity. Can improve with movement. May be mild or severe, intermittent or constant and accompanied by inflammation.<br>Read more about <a href="#">arthralgia and myalgia</a> |
| <b>Diarrhoea</b>              | Read more about <a href="#">treatment induced diarrhoea</a>   |
| <b>Fatigue</b>                | Read more about <a href="#">fatigue</a>   |
| <b>Muscle spasms</b>          | Spasms, cramping and pain in the muscle can occur causing severe discomfort   |

| Late (onset weeks to months)   |   |
|--------------------------------|---|
| <b>Anaemia</b>                 | Abnormally low levels of red blood cells (RBCs) or haemoglobin in the blood.<br>Read more about <a href="#">anaemia</a>   |
| <b>Alopecia</b>                | Hair loss may occur from all parts of the body. Patients can also experience mild to moderate discomfort of the hair follicles, and rarely pain as the hair is falling out.<br>Read more about <a href="#">alopecia</a> and <a href="#">scalp cooling</a> |
| <b>Anorexia</b>                | Loss of appetite accompanied by decreased food intake.<br>Read more about <a href="#">anorexia</a>  |
| <b>Menstrual abnormalities</b> | Irregular, spotting, increased, decreased or loss of uterine bleeding.  |

## Evidence

A search of the literature did not find strong evidence to support the use of sonidegib in the treatment of basal cell carcinoma. The expert reference panel supported publication of the protocol on the basis of the information summarised below. The committee was most strongly influenced by the phase II, double blinded, multicentre, international trial (BOLT) where patients were randomised to receive 200 mg or 800 mg sonidegib daily. 230 patients were randomised, 79 in the 200 mg group and 151 in the 800 mg group. The primary outcome was objective response using modified RECIST criteria. In the 200 mg group 18 of 42 patients with locally advanced disease achieved an objective response by central review and 2 of 13 patients with metastatic disease achieved an objective response. In the 800 mg group 35 of 93 patients with locally advanced disease achieved an objective response as did 4 of 23 patients with metastatic disease. Fewer adverse events leading to dose interruptions, dose reductions or treatment discontinuation occurred in patients in the 200 mg group than in the 800 mg group.<sup>2</sup>

| Source                | Study & year published       | Supports use | Is the dose and regimen consistent with the protocol? | Comments                             |
|-----------------------|------------------------------|--------------|---|--------------------------------------|
| <b>Phase II trial</b> | Lear et al 2018 <sup>2</sup> | <b>Yes</b>   | Yes   |                                      |
| Guidelines            | Date published/revised       | Supports Use | Is the dose and regimen consistent with the protocol? | Comments                             |
| <b>NCCN</b>           | v.1 2018                     | <b>Yes</b>   | Yes   | Doses as per BOLT trial <sup>2</sup> |
| <b>CCO</b>            | -                            | N/A          | -   | -                                    |
| <b>ESMO</b>           | -                            | N/A          | -   | -                                    |

## Efficacy

A summary of the evidence supporting the effect of this protocol is below:<sup>2</sup>

| Outcome                                 | 200 mg dose arm n=79  | 800 mg dose Control arm n=151   |
|---|---|---|
| <b>No. of patients</b>                  | 66 patients with LABCC<br>13 patients with metastatic BCC                       | 128 patients with LABCC<br>23 patients with metastatic BCC                      |
| <b>Overall survival</b>                 | 2 years OS 93.2% for LABCC<br>2 year OS 69.3% for mBCC                          | 2 year OS 90.7% for LABCC<br>2 year OS 69.1% for mBCC                           |
| <b>Median survival</b>                  | Not reached for LABCC or mBCC   | Not reached for LABCC<br>Median OS 36.7 months in mBCC                          |
| <b>Median Progression free survival</b> | 22.1 months by central review in LABCC<br>13.1 months by central review in mBCC | 28.0 months by central review in LABCC<br>11.1 months by central review in mBCC |

| Outcome   | 200 mg dose arm n=79  | 800 mg dose Control arm n=151                               |
|---|---|---|
| <b>Response rate (complete+partial)</b>             | 56.1% by central review in LABCC<br>7.7% in metastatic BCC              | 45.3% by central review in LABCC<br>17.4% in metastatic BCC |
| <b>Disease control rate Response+Stable disease</b> | 90.9% for LABCC<br>92.3% for metastatic BCC                             | 91.3% for mBCC  |
| <b>Median duration of response</b>                  | 26.1 months by central review in LABCC<br>24.0 months in metastatic BCC | 23.7 months by central review in LABCC                      |

## Toxicity

A summary of the toxicities in the 200 mg treatment arm are included in the table below. The most clinically significant toxicities for this treatment are muscle spasms and alopecia.<sup>2</sup>

| Toxicity (all grades) <sup>2</sup> | Incidence of event |
|------------------------------------|--------------------|
| <b>Muscle spasms</b>               | 54%                |
| <b>Alopecia</b>                    | 49%                |
| <b>Dysgeusia (altered taste)</b>   | 44%                |
| <b>Nausea</b>                      | 39%                |
| <b>Diarrhoea</b>                   | 32%                |
| <b>Weight decreased</b>            | 30%                |
| <b>CK increased</b>                | 30%                |
| <b>Fatigue</b>                     | 30%                |
| <b>Appetite decreased</b>          | 23%                |
| <b>Myalgia</b>                     | 19%                |
| <b>Vomiting</b>                    | 11%                |

## References

- 1 Dreno, B., R. Kunstfeld, A. Hauschild, et al. 2017. "Two intermittent vismodegib dosing regimens in patients with multiple basal-cell carcinomas (MIKIE): a randomised, regimen-controlled, double-blind, phase 2 trial." *Lancet Oncol* 18(3):404-412.
- 2 Lear, J. T., M. R. Migden, K. D. Lewis, et al. 2018. "Long-term efficacy and safety of sonidegib in patients with locally advanced and metastatic basal cell carcinoma: 30-month analysis of the randomized phase 2 BOLT study." *J Eur Acad Dermatol Venereol* 32(3):372-381.

## History

### Version 2

| Date              | Summary of changes  |
|-------------------|---|
| <b>10/09/2020</b> | Patient information title updated- 'locally advanced or metastatic' added. Version number changed to V.2.     |
| <b>12/03/2021</b> | Protocol reviewed electronically by Medical Oncology reference committee. No changes. Next review in 4 years. |
| <b>21/12/2021</b> | Changed antiemetic clinical information block to minimal or low, to align with new categories. See ID 7       |



| Date | Summary of changes   |
|------|--|
|      | Prevention of anti-cancer therapy induced nausea and vomiting (AINV) v5. |

### Version 1

| Date       | Summary of changes  |
|------------|---|
| 15/06/2018 | New protocol taken to Medical Oncology Reference Committee meeting  |
| 19/12/2018 | Protocol approved and published on eviQ. Review protocol in 1 year.   |
| 31/05/2019 | Protocol reviewed electronically by Medical Oncology Reference Committee. No changes. Next review in 2 years. |

The information contained in this protocol is based on the highest level of available evidence and consensus of the eviQ reference committee regarding their views of currently accepted approaches to treatment. Any clinician (medical oncologist, haematologist, radiation oncologist, medical physicist, radiation therapist, pharmacist or nurse) seeking to apply or consult this protocol is expected to use independent clinical judgement in the context of individual clinical circumstances to determine any patient's care or treatment. While eviQ endeavours to link to reliable sources that provide accurate information, eviQ and the Cancer Institute NSW do not endorse or accept responsibility for the accuracy, currency, reliability or correctness of the content of linked external information sources. Use is subject to eviQ's disclaimer available at [www.eviQ.org.au](http://www.eviQ.org.au)

**First approved:** 19 December 2018

**Last reviewed:** 12 March 2021

**Review due:** 30 June 2025

***The currency of this information is guaranteed only up until the date of printing, for any updates please check:***

<https://www.eviq.org.au/p/3410>

02 Mar 2024

# Patient information - Basal cell carcinoma locally advanced or metastatic - Sonidegib

Patient's name:

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## Your treatment

The treatment schedule below explains how the drug for this treatment are given.

### Sonidegib

This treatment is continuous. Intermittent scheduling may be used. Your doctor will advise you how long to take the treatment for.

| Day        | Treatment                                 | How it is given   |
|------------|---|---|
| Continuous | <b>Sonidegib</b> ( <i>SOE-ni-DEG-ib</i> ) | Take orally ONCE a day on an empty stomach at least one hour before, or at least two hours after a meal.<br><br>Swallow capsules whole with a glass of water, do not break, crush or chew.<br><br>If you forget to take a capsule it can be taken within 6 hours after the missed dose. If more than 6 hours then take your tablet when next time it is due. Do not take an extra dose. |

## When to get help

### Emergency contact details

Ask your doctor or nurse from your treating team when you should get help and who to contact if you have a problem

Daytime: .....

Night/weekend: .....

Other instructions: .....

.....

.....

## Other information about your treatment

### Treatment delays

There may be times when your treatment is delayed. This can happen if your doctor thinks you are likely to have severe side effects, if you get severe side effects, if your blood counts are affected and causing delays in treatment, or if you are finding it hard to cope with the treatment. Your doctor will explain if you need any delays to your treatment and the reason why.

### Blood tests and monitoring

You may need to have blood tests while you are receiving this treatment. Your doctor or nurse will tell you when to have these blood tests.

## Other medications given during this treatment

- **Anti-sickness (anti-nausea) medication:** you may be given some anti-sickness medication. Make sure you take this medication as your doctor or nurse tells you, even if you don't feel sick. This can help to prevent the sickness starting.

## Side effects

Cancer treatments can cause damage to normal cells in your body, which can cause side effects. Everyone gets different side effects, and some people will have more problems than others.

The table below shows some of the side effects you may get with this treatment. You are unlikely to get all of those listed and you may also get some side effects that have not been listed.

Tell your doctor or nurse about any side effects that worry you. Follow the instructions below and those given to you by your doctor or nurse.

| Immediate (onset hours to days) |   |
|---------------------------------|---|
| <b>Nausea and vomiting</b>      | <ul style="list-style-type: none"><li>• You may feel sick (nausea) or be sick (vomit).</li><li>• Take your anti-sickness medication as directed even if you don't feel sick.</li><li>• Drink plenty of fluids (unless you are fluid restricted).</li><li>• Eat small meals more frequently.</li><li>• Try food that does not require much preparation.</li><li>• Try bland foods like dry biscuits or toast.</li><li>• Gentle exercise may help with nausea.</li><li>• Ask your doctor or nurse for eviQ patient information - <a href="#">Nausea and vomiting during cancer treatment</a>.</li><li>• <b>Tell your doctor or nurse immediately, or go to the nearest hospital Emergency Department if you have uncontrolled vomiting or feel dizzy or light-headed.</b></li></ul> |
| <b>Taste and smell changes</b>  | <ul style="list-style-type: none"><li>• You may find that food loses its taste or tastes different.</li><li>• These changes are likely to go away with time.</li><li>• Do your mouth care regularly.</li><li>• Chew on sugar-free gum or eat sugar-free mints.</li><li>• Add flavour to your food with sauces and herbs.</li><li>• Ask your doctor or nurse for eviQ patient information - <a href="#">Taste and smell changes during cancer treatment</a>.</li></ul>   |

| Early (onset days to weeks)                   |  |
|---|--|
| <b>Joint and muscle pain and stiffness</b>    | <ul style="list-style-type: none"> <li>You may get muscle, joint or general body pain and stiffness.</li> <li>Applying a heat pack to affected areas may help.</li> <li>Talk to your doctor or nurse about other ways to manage these symptoms. You may need medication to help with any pain.</li> </ul>  |
| <b>Diarrhoea</b>                              | <ul style="list-style-type: none"> <li>You may get bowel motions (stools, poo) that are more frequent or more liquid.</li> <li>You may also get bloating, cramping or pain.</li> <li>Take your antidiarrhoeal medication as directed by your doctor.</li> <li>Drink plenty of fluids (unless you are fluid restricted).</li> <li>Eat and drink small amounts more often.</li> <li>Avoid spicy foods, dairy products, high fibre foods, and coffee.</li> <li>Ask your doctor or nurse for eviQ patient information - <a href="#">Diarrhoea during cancer treatment</a>.</li> <li><b>Tell your doctor or nurse immediately, or go to your nearest hospital Emergency Department if your diarrhoea is not controlled, you have 4 or more loose bowel motions per day, and if you feel dizzy or light-headed.</b></li> </ul> |
| <b>Tiredness and lack of energy (fatigue)</b> | <ul style="list-style-type: none"> <li>You may feel very tired, have no energy, sleep a lot, and not be able to do normal activities or things you enjoy.</li> <li>Do not drive or operate machinery if you are feeling tired.</li> <li>Nap for short periods (only 1 hour at a time)</li> <li>Prioritise your tasks to ensure the best use of your energy.</li> <li>Eat a well balanced diet and drink plenty of fluids (unless you are fluid restricted).</li> <li>Try some gentle exercise daily.</li> <li>Allow your friends and family to help.</li> <li><b>Tell your doctor or nurse if you get any of the symptoms listed above.</b></li> </ul>   |
| <b>Muscle spasms and cramps</b>               | <ul style="list-style-type: none"> <li>You may get muscle spasms and cramps, usually in the hands, calves and thighs.</li> <li>Tell your doctor or nurse if you get any of these symptoms. Your doctor may prescribe you medication for this.</li> </ul>   |

| Late (onset weeks to months)         |  |
|--------------------------------------|--|
| <b>Low red blood cells (anaemia)</b> | <ul style="list-style-type: none"> <li>You may feel dizzy, light-headed, tired and appear more pale than usual.</li> <li>Tell your doctor or nurse if you have any of these signs or symptoms. You might need a blood transfusion.</li> <li><b>Tell your doctor or nurse immediately, or go to the nearest hospital Emergency Department if you have any chest pain, trouble breathing, or feel like your heart is racing.</b></li> </ul>  |
| <b>Hair loss (alopecia)</b>          | <ul style="list-style-type: none"> <li>Your hair may start to fall out from your head and body.</li> <li>Hair loss usually starts 2 to 3 weeks after your first treatment.</li> <li>You may become completely bald and your scalp might feel tender.</li> <li>Use a gentle shampoo and a soft brush.</li> <li>Take care with hair products like hairspray, hair dye, bleaches and perms.</li> <li>Protect your scalp from the cold with a hat, scarf or wig.</li> <li>Protect your scalp from the sun with a hat or sunscreen of SPF 50 or higher.</li> <li>Moisturise your scalp to prevent itching.</li> <li>Ask your doctor or nurse about the <a href="#">Look Good Feel Better</a> program</li> </ul> |
| <b>Appetite loss (anorexia)</b>      | <ul style="list-style-type: none"> <li>You may not feel like eating.</li> <li>Try to avoid drinking fluids at meal times.</li> <li>Try to eat small meals or snacks regularly throughout the day.</li> <li>Try to eat food that is high in protein and calories.</li> <li>If you are worried about how much food you can eat, or if you are losing weight, ask to speak to a dietitian.</li> </ul>   |
| <b>Changes to your period</b>        | <p>You may experience</p> <ul style="list-style-type: none"> <li>increased, decreased or loss of bleeding</li> <li>irregular bleeding or spotting</li> <li>a delay in the return of your period after stopping treatment</li> </ul>  |

## General advice for people having cancer treatment

### Blood clot risk

- Cancer and anticancer drugs can increase the risk of a blood clot (thrombosis).
- Tell your doctor if you have a family history of blood clots.
- A blood clot can cause pain, redness, swelling in your arms or legs, shortness of breath or chest pain.
- If you have any of these symptoms go to your nearest hospital Emergency Department.

### Medications and vaccinations

- Before you start treatment, tell your doctor about any medications you are taking, including vitamins or herbal supplements.
- Don't stop or start any medications during treatment without talking to your doctor and pharmacist first.
- Paracetamol is safe to take if you have a headache or other mild aches and pains. It is recommended that you avoid taking aspirin, ibuprofen and other anti-inflammatory type medications for pain while you are having treatment. However, if these medications have been prescribed by your doctor, do not stop taking them without speaking with your doctor.
- Vaccinations such as flu and tetanus vaccines are safe to receive while having treatment. Do not have any live vaccines during your treatment or for 6 months after it finishes. If you are unsure, check with your doctor before you have any vaccinations.
- People you live with should be fully vaccinated, including having live vaccines according to the current vaccination schedule. Extra care needs to be taken with hand washing and careful disposal of soiled nappies for infants who have recently received the rotavirus vaccine.

### Other medical and dental treatment

- If you go to hospital or any other medical appointment (including dental appointments), always tell the person treating you that you are receiving anticancer drugs.
- Before you have any dental treatment, talk to your doctor.

### Diet

- While you are receiving this treatment it is important that you try to maintain a healthy diet.
- Grapefruit and grapefruit juice can interact with your medication and should be avoided while you are on this treatment.
- Speak to your doctor or nurse about whether drinking alcohol is safe with your treatment.
- If you have any concerns about recent weight loss or weight gain or questions about your diet, ask to speak to a dietitian.

### Fertility

- Some cancer treatments can reduce your fertility. This can make it difficult or impossible to get pregnant or father a child.
- Talk to your doctor or nurse before you start any treatment. Depending on your situation there may be fertility sparing options available to you and/or your partner, discuss these with your doctor or nurse.

### Pregnancy and breastfeeding

- Some cancer treatments can be dangerous to unborn babies. Talk to your doctor or nurse if you think there is any chance that you could be pregnant.
- Do not try to get pregnant or father a child during this treatment. Contraception should be used during treatment and after stopping treatment. Ask your doctor or nurse about what type of contraception you should use.
- If you are planning pregnancy/fatherhood after completing this treatment, talk to your doctor. Some doctors advise waiting between 6 months and 2 years after treatment.
- Do not breastfeed if you are on this treatment, as anti-cancer medications can also pass into breast milk.

### Sex life and sexuality

- The desire to have sex may decrease as a result of this treatment or its side effects.
- Your emotions and the way you feel about yourself may also be affected by this treatment.
- It may help to discuss your concerns with your partner and doctor or nurse.

### Quitting smoking

- It is never too late to quit smoking. Quitting smoking is one of the best things you can do to help your treatment work better.
- There are many effective tools to improve your chances of quitting.
- Talk to your treating team for more information and referral to a smoking cessation support service.

### Staying active

- Research shows that exercise, no matter how small, has many benefits for people during and after cancer treatment.
- Talk to your doctor before starting an exercise program. Your doctor can advise whether you need a modified exercise program.

For more information about cancer treatment, side effects and side effect management see our [Patient and carers section](#).

## Where to get more information

### Telephone support

- Call Cancer Council 13 11 20 for cancer information and support

### General cancer information and support

- Australian Rare Cancer (ARC) Portal – [arcportal.org.au/](http://arcportal.org.au/)
- Beyond Blue – [beyondblue.org.au](http://beyondblue.org.au)
- Cancer Australia – [canceraustralia.gov.au](http://canceraustralia.gov.au)
- Cancer Council Australia – [cancer.org.au](http://cancer.org.au)
- Cancer Voices Australia – [cancervoicesaustralia.org](http://cancervoicesaustralia.org)
- CanTeen – [canteen.org.au](http://canteen.org.au)
- Carers Australia – [carersaustralia.com.au](http://carersaustralia.com.au)
- Carer Help - [carerhelp.com.au](http://carerhelp.com.au)
- CHILL Cancer related hair loss - [scalpcooling.org](http://scalpcooling.org)
- eviQ Cancer Treatments Online – [eviq.org.au](http://eviq.org.au)
- LGBTQI+ People and Cancer - [cancercouncil.com.au/cancer-information/lgbtqi](http://cancercouncil.com.au/cancer-information/lgbtqi)
- Look Good Feel Better – [lgbf.org.au](http://lgbf.org.au)
- Patient Information – [patients.cancer.nsw.gov.au](http://patients.cancer.nsw.gov.au)
- Radiation Oncology Targeting Cancer – [targetingcancer.com.au](http://targetingcancer.com.au)

- Redkite – [redkite.org.au](http://redkite.org.au)
- Return Unwanted Medicines – [returnmed.com.au](http://returnmed.com.au)
- Staying active during cancer treatment – [patients.cancer.nsw.gov.au/coping-with-cancer/physical-wellbeing/staying-active](http://patients.cancer.nsw.gov.au/coping-with-cancer/physical-wellbeing/staying-active)

### Quit smoking information and support

Quitting smoking is helpful even after you have been diagnosed with cancer. The following resources provide useful information and support to help you quit smoking. Talk to your treating team about any other questions you may have.

- Call Quitline on 13 QUIT (13 78 48)
- iCanQuit – [iCanQuit.com.au](http://iCanQuit.com.au)
- Patient Information – [patients.cancer.nsw.gov.au/coping-with-cancer/physical-wellbeing/quitting-smoking](http://patients.cancer.nsw.gov.au/coping-with-cancer/physical-wellbeing/quitting-smoking)
- Quitnow – [quitnow.gov.au](http://quitnow.gov.au)

#### Additional notes:

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This document is a guide only and cannot cover every possible situation. The health professionals caring for you should always consider your individual situation when making decisions about your care. Contact your cancer clinic staff or doctor if you have any questions or concerns about your treatment, or you are having problems coping with side effects. While eviQ endeavours to link to reliable sources that provide accurate information, eviQ and the Cancer Institute NSW do not endorse or accept responsibility for the accuracy, currency, reliability or correctness of the content of linked external information sources. Use of this document is subject to eviQ's disclaimer available at [www.eviq.org.au](http://www.eviq.org.au)

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