

Neuroendocrine advanced octreotide (sandostatin LAR)

ID: 706 v.4 Endorsed

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

For patients with progressive disease, consider referral to or discussion with a centre experienced in NET management.

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:

- [Neuroendocrine advanced lanreotide \(somatuline autogel\) 90 mg SUPERSEDED](#)
- [Neuroendocrine advanced lanreotide \(somatuline autogel\)](#)
- [Neuroendocrine advanced telotristat ethyl](#)

- [WHO 2019 classification of tumours of the digestive system](#)

Treatment schedule - Overview

Cycle 1 and further cycles

Drug	Dose	Route	Day
Octreotide LAR (long-acting formulation)	30 mg *	IM	1

* For symptomatic patients, additional administration of short acting octreotide is recommended for treatment of breakthrough symptoms.

Frequency: 28 days

Cycles: Continuous as clinically indicated and/or until disease progression or unacceptable toxicity

Drug status: Octreotide LAR is [PBS authority](#)

Cost: ~ \$840 per cycle

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

Cycle 1 and further cycles

Day 1		
Octreotide LAR	30 mg (IM)	inject intramuscularly every 28 days*

* For symptomatic patients, additional administration of short acting octreotide is recommended for treatment of breakthrough symptoms.

Frequency: 28 days

Cycles: Continuous as clinically indicated and/or until disease progression or unacceptable toxicity

Indications and patient population

Indications:

- Symptomatic control of carcinoid syndrome
- To prolong progression-free survival of patients with well-differentiated, advanced neuroendocrine tumours of the midgut or suspected midgut origin.

Cautions:

- Insulinoma - possible increase in severity and duration of hypoglycaemia (consider treatment in consultation with NET specialist multidisciplinary team)
- History of gallstones
- History of thyroid dysfunction
- Diabetes
- Pre existing cardiac disease.

Clinical information

Functional imaging	<p>Short acting somatostatin analogues used for symptom control do not need to be stopped prior to somatostatin scintigraphy or PET/CT with somatostatin analogues. In patients receiving long-acting preparations, somatostatin receptor imaging should be scheduled shortly before the next injection.</p> <p>Somatostatin analogues affect biodistribution of the Gallium-68-DOTOTATE, leading to greater avidity/uptake in tumoural sites than normal tissues. Careful review of co-registered CT and use of consistent PET window thresholds is recommended to avoid misinterpretation as progression.</p> <p>Read more about the ENETS: NETs imaging guidelines.</p>
Carcinoid syndrome	<p>Neuroendocrine tumours may be associated with carcinoid syndrome.</p> <p>Read more about the management of carcinoid syndrome in the COSA and NCCN guidelines.</p>
Glucose regulation	<p>Somatostatin analogues (e.g. octreotide, lanreotide) affect glucose regulation.</p> <p>Monitoring of glucose tolerance and BSLs as required is recommended.</p> <p>Patients on hypoglycaemic medications may require a dose adjustment and should be closely observed during the introduction and withdrawal of octreotide/lanreotide.</p>
Gallstones	<p>Development of gallstones has been reported in patients on somatostatin analogues (e.g. octreotide, lanreotide).</p> <p>Consider ultrasonography examination of the gallbladder in patients on long term somatostatin analogues therapy.</p>
Thyroid dysfunction	<p>Somatostatin analogues (e.g. octreotide and lanreotide) have been associated with a decrease in thyroid function. Thyroid function tests are recommended where clinically indicated.</p>

Vitamin B12	Reduced vitamin B12 levels and abnormal Schilling's tests have been observed in some patients receiving octreotide therapy. Monitoring of vitamin B12 levels as clinically indicated.
Blood tests	BSL and TFTs as clinically indicated.

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 \(ADDIKD\)](#).

Renal impairment

No dose modification necessary

Hepatic impairment

No dose modification necessary

Interactions

Drug interactions in eviQ protocols are under review and being updated to align with current literature. Further site-wide updates and changes will occur in due course. References & Disclaimer

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](#)

Octreotide		
	Interaction	Clinical management
Cyclosporin	Reduced efficacy of cyclosporin due to reduced intestinal absorption caused by octreotide	Monitor cyclosporin levels and clinical state; dose increase (possibly doubling) may be needed
Bromocriptine	Increased bioavailability of bromocriptine possible; mechanism unknown	Monitor for increased effect/toxicity of bromocriptine (e.g. psychiatric symptoms); consider dose reduction if necessary
Insulin/Oral antidiabetic drugs	Reduced insulin requirements/altered glucose tolerance and glycaemic control due to octreotide's hormonal effects	Monitor glucose tolerance and blood glucose levels, adjusting dosages if required
Drugs that may prolong the QTc interval (e.g. azole antifungals, tricyclic antidepressants, antiarrhythmics etc.)	Additive effect with octreotide; may lead to torsades de pointes and cardiac arrest	Avoid combination or minimise additional risk factors (e.g. correct electrolyte imbalances) and monitor ECG for signs of cardiac arrhythmia
Drugs metabolised by CYP3A4 (e.g. atorvastatin, benzodiazepines, calcineurin inhibitors, clarithromycin, dihydroergotamine, simvastatin etc.)	Increased effect/toxicity of these drugs possible due to suppression of growth hormone by octreotide causing reduced activity of CYP3A4, resulting in reduced clearance	Caution advised if combination used; monitor for increased effect/toxicity of interacting drugs with low therapeutic index (e.

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 product information monographs via the [TGA](#) website for further information.

Day 1

General patient assessment prior to each day of treatment.

🕒 Treatment - Time out

Octreotide LAR (intramuscular only):

Long acting Octreotide (Sandostatin LAR®) is indicated for intragluteal injection only.

- prepare octreotide as per manufacturer's instructions immediately prior to administration
- administer slowly, deep into the right or left gluteus, alternate sites.
- if a blood vessel is penetrated or the needle blocks, attach a new needle of the same diameter (1.1 mm, 19 gauge).

Octreotide short acting (subcutaneous only)

Short acting octreotide (Sandostatin®) is indicated for subcutaneous injection only.

- prior to administration allow ampoule to reach room temperature before injection
- administer via subcutaneous injection and rotate injection sites.

Discharge information

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)	
Nausea and vomiting	Read more about prevention of treatment induced nausea and vomiting
Flatulence	
Headache	
Injection-site reaction	Inflammation of or damage to the tissue surrounding the area where a drug was injected. Subcutaneous nodules at injection site are not uncommon.

Early (onset days to weeks)	
Diarrhoea	Diarrhoea due to pancreatic enzyme insufficiency is common. Determination of faecal elastase to establish the diagnosis is recommended, followed by pancreatic enzyme replacement. Use of supportive medication such as loperamide is recommended if no specific reason can be identified. Read more about treatment induced diarrhoea
Constipation	
Abdominal pain	Dull ache, cramping or sharp pains are common with some anti-cancer drugs. These are caused by either increased or decreased gastrointestinal motility and can be associated with diarrhoea or constipation.
Hyperglycaemia	High blood sugar, an excess of glucose in the blood stream.
Bradycardia	An abnormally slow heart rate of 60 beats per minute or less can occur with this treatment. Assess baseline cardiac status and history and monitor those with pre-existing cardiac disease.

Late (onset weeks to months)	
Hypothyroidism	
Cholelithiasis (gallstones)	Cholelithiasis (gallstones) and biliary colic have been associated with somatostatin analogues. Patients on long term treatment should have an ultrasound of their gallbladder every 6 to 12 months.
Vitamin deficiencies	Vitamin B12 and/or fat soluble vitamins (A, D, E, K) deficiencies have been reported in patients with long term somatostatin analogues use. This should be monitored and replaced as required. Expert dietitian input is recommended. Read more about nutritional issues in patients with GEP NETs .

Evidence

A search of the literature did not find strong evidence to support the use of octreotide in the treatment of neuroendocrine tumours. The expert reference panel supported publication of the protocol on the basis of the information summarised below.

Current guidelines recommend dose optimisation in patients whose symptoms are inadequately controlled whilst on treatment. High-dose treatment with octreotide LAR (>30 mg/month) has shown to improve treatment outcomes without a significant change in safety and tolerability.¹

Source	Study & year published	Supports use	Is the dose and regimen consistent with the protocol?	Comments
Phase III trials	Wolin et al 2017 ²	Yes	No	Antiproliferative Lanreotide LAR 120 mg q4w

Source	Study & year published	Supports use	Is the dose and regimen consistent with the protocol?	Comments
	Caplin et al 2014 ³	Yes	No	Antiproliferative Lanreotide LAR 120 mg q4w
	Rinke et al 2009 ⁴	Yes	Yes	Antiproliferative
Phase II trials	Rubin et al 1999 ⁵	Yes	Yes	Symptom control
Observational studies	Chadha et al 2009 ⁶	Yes	No	Antiproliferative Octreotide LAR 40-90 mg q4w
Guidelines	Date published/ revised	Supports use	Is the dose and regimen consistent with the protocol?	Comments
ESMO	Jul 2020	Yes	No doses stated	Antiproliferative and symptom control
NCCN	V.2 Jul 2020	Yes	No doses stated	Antiproliferative and symptom control
BCCA	Feb 2019	Yes	Yes	Antiproliferative and symptom control
ENETS	Mar 2017	Yes	Yes	Antiproliferative and symptom control
CCO	Aug 2016	Yes	Yes	Antiproliferative and symptom control
COSA	Nov 2014	Yes	No doses stated	Antiproliferative and symptom control

Efficacy

A summary of the evidence supporting the effect of this protocol is below:

Outcome	Study	No. of patients	Control arm	Effect
Complete/partial treatment success	Rubin et al 1999 ⁵	79	-	SC*: 58.3% 10 mg LAR: 66.7% 20 mg LAR: 71.4% 30 mg LAR: 61.9%
Stable disease	Rinke et al 2009 ⁴	85	Placebo	66.7% vs 37.2%
Median PFS	Wolin et al 2017 ²	101	-	38.5 months; 95% CI 30.9 to 59.4
	Caplin et al 2014 ³	204	Placebo	Not reached; HR=0.47; 95% CI 0.30 to 0.73

*subcutaneous octreotide

Toxicity

Therapy was tolerated in all four treatment groups and summarised in the table below.⁵

Table 3. Number of Patients With Treatment-Related Adverse Events of Any Severity by Treatment Group

Adverse Event	SC Octreotide (n = 26)	Octreotide LAR		
		10 mg (n = 22)	20 mg (n = 20)	30 mg (n = 25)
Application site disorder	1	0	1	1
Asthenia	0	1	0	0
Fever	0	1	0	0
Hypothyroidism	0	0	1	0
Abdominal pain	1	0	0	0
Flatulence	1	0	0	1
Nausea	1	1	1	0
Steatorrhea	0	0	0	1
Cholelithiasis	2	1	1	1
Rash	0	0	2	0
Taste perversion	0	1	0	0
Renal calculus	0	0	0	1

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References

- 1 Ludlam, W. H. and L. Anthony. 2011. "Safety review: dose optimization of somatostatin analogs in patients with acromegaly and neuroendocrine tumors." *Adv Ther* 28(10):825-841.
- 2 Wolin E.M. P.M., M. Pawel, J.B. Cwikla, et al. 2017. "Final progression-free survival (PFS) analyses for lanreotide autogel/depot 120 mg in metastatic enteropancreatic neuroendocrine tumors (NETs): The CLARINET extension study." *J Clin Oncol* 35(15):4089-4089.
- 3 Caplin, M. E., M. Pavel, J. B. Cwikla, et al. 2014. "Lanreotide in metastatic enteropancreatic neuroendocrine tumors." *N Engl J Med* 371(3):224-233.
- 4 Rinke, A., H. H. Muller, C. Schade-Brittinger, et al. 2009. "Placebo-controlled, double-blind, prospective, randomized study on the effect of octreotide LAR in the control of tumor growth in patients with metastatic neuroendocrine midgut tumors: a report from the PROMID Study Group." *J Clin Oncol* 27(28):4656-4663.
- 5 Rubin, J., J. Ajani, W. Schirmer, et al. 1999. "Octreotide acetate long-acting formulation versus open-label subcutaneous octreotide acetate in malignant carcinoid syndrome." *J Clin Oncol* 17(2):600-606.
- 6 Chadha, M. K., J. Lombardo, T. Mashtare, et al. 2009. "High-dose octreotide acetate for management of gastroenteropancreatic neuroendocrine tumors." *Anticancer Res* 29(10):4127-4130.

History

Version 4

Date	Summary of changes
05/11/2020	Protocol reviewed at Medical Oncology Reference Committee meeting 23/10/2020. Related pages updated to WHO 2019 classification of tumours of the digestive system. Indications updated based on WHO 2019 classification. Cautions updated to include consider treatment in consultation with NET specialist multidisciplinary team for insulinoma. Functional imaging in clinical information section updated. Carcinoid syndrome added. Vaccination removed. Evidence and efficacy sections updated to include CLARINET OLE 2017 study. ESMO and ENETS guidelines added to evidence section. Version increased to V.4. Next review in 2 years.
10/02/2021	ID 3636 Neuroendocrine advanced telotristat added as a related page.

Date	Summary of changes
20/10/2022	Protocol reviewed electronically by Medical Oncology Reference Committee. No changes. Next review 4 years.

Version 3

Date	Summary of changes
23/07/2010	New protocol taken to Medical Oncology Reference Committee meeting.
03/09/2010	Approved and published on eviQ.
23/10/2013	Protocol reviewed at Medical Oncology Reference Committee meeting 13/09/2013. The term 'carcinoid' replaced with 'neuroendocrine tumours' and indications updated to include anti-proliferative effects and WHO 2010 classification for NETs. Treatment schedule - Default dose changed to octreotide LAR 30 mg. Evidence updated with limited evidence table added. Next review 1 year.
27/03/2015	Protocol reviewed by email survey. No changes. Next review in 2 years.
10/11/2016	The following change made post Medical Oncology Reference Committee meeting held on 21 October 2016: link to AGITG and ANZCTR added.
31/05/2017	Transferred to new eviQ website. Version number changed to V.3.
16/02/2018	Protocol reviewed electronically by Medical Oncology Reference Committee. PBS information added. 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

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<https://www.eviq.org.au/p/706>

15 Jul 2023

Patient's name:

Your treatment

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

Octreotide is a hormone drug that is used to treat and control symptoms such as diarrhoea or flushing in people with neuroendocrine tumours.

Octreotide		
Your doctor will advise you of how often you will have this treatment and the number of treatments you will have.		
Treatment	How it is given	How long it takes
Octreotide (<i>ok-tree-oh-tide</i>)	By injection under your skin or into your muscle	About 5 minutes

- There are two types of octreotide injections, a short acting injection and a long acting injection (Sandostatin LAR[®]).
- Short acting octreotide is given by a subcutaneous injection under your skin. You may start your treatment with the short acting injection which is given 2 to 3 times a day depending on your symptoms. Short acting octreotide is given by a subcutaneous injection under your skin. The injection sites should be rotated regularly.
- If you do not experience any side effects with the short acting octreotide, your doctor may start you on the long acting octreotide (Sandostatin LAR[®]) which is given once every 4 weeks. You should continue with your short acting octreotide injections for about 2 weeks after your first injection of the long acting octreotide (Sandostatin LAR[®]). Long acting octreotide (Sandostatin LAR[®]) is given by an injection into your muscle. The preferred site for the injection is into your buttock.
- Octreotide injections should be stored in the refrigerator (not the freezer).

When to get help

This treatment can sometimes cause serious problems. It is important to get medical help immediately if you become unwell.

<p>IMMEDIATELY go to your nearest hospital Emergency Department, or contact your doctor or nurse if you have any of the following at any time:</p>	<p>Emergency contact details</p> <p>Ask your doctor or nurse from your treating team who to contact if you have a problem</p>
<ul style="list-style-type: none"> • a temperature of 38°C or higher • chills, sweats, shivers or shakes • shortness of breath • uncontrolled vomiting or diarrhoea • pain, tingling or discomfort in your chest or arms • you become unwell. 	<p>Daytime:.....</p> <p>Night/weekend:.....</p> <p>Other instructions:.....</p> <p>.....</p> <p>.....</p> <p>.....</p>

During your treatment immediately tell the doctor or nurse looking after you if you get any of the following problems:

- pain, stinging, swelling or redness around the injection site
- a skin rash, itching, feeling short of breath, wheezing, fever, shivers, or feeling dizzy or unwell in any way (allergic reaction).

Other information about your treatment

Changes to your dose or treatment delays

Sometimes a treatment may be started at a lower dose or the dose needs to be changed during treatment. There may also 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. This is called a dose reduction, dose change or treatment delay. Your doctor will explain if you need any changes or 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.

Blood sugar levels

If you have diabetes you should monitor your blood sugar levels closely. Your diabetic medication may need to be adjusted because of the effects of lanreotide. Speak to your doctor or diabetes advisor.

Tell your doctor or nurse immediately if you have symptoms of low blood sugar (sweating, dizziness and increased heart rate) or symptoms of high blood sugar (tiredness, blurred vision, thirst and the need to urinate more often than normal).

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)

Nausea and vomiting	<ul style="list-style-type: none">• You may feel sick (nausea) or be sick (vomit).• Take your anti-sickness medication as directed even if you don't feel sick.• Drink plenty of fluids (unless you are fluid restricted).• Eat small meals more frequently.• Try food that does not require much preparation.• Try bland foods like dry biscuits or toast.• Gentle exercise may help with nausea.• Ask your doctor or nurse for eviQ patient information - Nausea and vomiting during cancer treatment.• 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.
Passing wind (flatulence)	<ul style="list-style-type: none">• You may need to pass wind more often than usual.• You may also feel bloated.• Drinking peppermint tea or peppermint water may be helpful.• Avoid spicy foods.• Ensure that you open your bowels regularly.
Headache	<ul style="list-style-type: none">• You can take paracetamol if you have a headache.• Tell your doctor or nurse immediately, or go to the nearest hospital Emergency Department if you get a very bad headache that is not helped by pain medication.
Injection-site reaction	<ul style="list-style-type: none">• At the injection site you may get pain, redness, swelling, bruising or rash.• Reactions can occur more than 24 hours after the injection.• These symptoms are usually not serious.• Tell your doctor or nurse immediately if you notice any redness or pain during or after treatment.

Early (onset days to weeks)	
Diarrhoea	<ul style="list-style-type: none"> You may get bowel motions (stools, poo) that are more frequent or more liquid. You may also get bloating, cramping or pain. Take your antidiarrhoeal medication as directed by your doctor. Drink plenty of fluids (unless you are fluid restricted). Eat and drink small amounts more often. Avoid spicy foods, dairy products, high fibre foods, and coffee. Ask your doctor or nurse for eviQ patient information - Diarrhoea during cancer treatment. 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.
Constipation	<ul style="list-style-type: none"> You may have bowel motions (stools, poo) that are less frequent, harder, smaller, painful or difficult to pass. You may also get: <ul style="list-style-type: none"> bloating, cramping or pain a loss of appetite nausea or vomiting. Drink plenty of fluids (unless you are fluid restricted). Eat plenty of fibre-containing foods such as fruit, vegetables and bran. Take laxatives as directed by your doctor. Try some gentle exercise daily. Tell your doctor or nurse if you have not opened your bowels for more than 3 days.
Stomach pain	<ul style="list-style-type: none"> You may get: <ul style="list-style-type: none"> dull aches cramping or pain bloating or flatulence (gas). Tell your doctor or nurse immediately, or go to the nearest hospital Emergency Department if you have stomach pain that you are unable to control.
High blood sugar level (hyperglycaemia)	<ul style="list-style-type: none"> You may feel thirsty and need to urinate more often than normal. You may get repeated infections, especially thrush. If you are a diabetic you will need to have your blood sugar levels checked more often. You may also need to have your diabetes medication increased. Tell your doctor or nurse if you get any of the signs or symptoms listed above.
Slow heart rate (bradycardia)	<ul style="list-style-type: none"> You may get: <ul style="list-style-type: none"> a slow heart rate dizziness shortness of breath fainting. Tell your doctor if you have a history of heart problems or high blood pressure. Before or during treatment, you may be asked to have a test to see how well your heart is working. Tell your doctor or nurse immediately, or go to the nearest hospital Emergency Department if you get any of the symptoms listed above.

Late (onset weeks to months)	
Slow thyroid gland (hypothyroidism)	<ul style="list-style-type: none"> • You may: <ul style="list-style-type: none"> ◦ fatigue and low energy levels ◦ depression ◦ slow heart rate ◦ unexplained weight gain ◦ intolerance to cold temperatures ◦ fatigued and aching muscles ◦ dry, coarse skin ◦ puffy face ◦ hair loss ◦ constipation ◦ problems with concentration • You will have regular blood tests to check how well your thyroid is working • Tell your doctor or nurse if you get any of the symptoms listed above.
Gallstones	<ul style="list-style-type: none"> • You may get: <ul style="list-style-type: none"> ◦ right-sided stomach (abdominal) pain or tenderness ◦ upper back pain ◦ bloating, nausea or vomiting. • Tell your doctor or nurse as soon as possible if you get any of the symptoms listed above.
Vitamin deficiencies	<p>You may get:</p> <ul style="list-style-type: none"> • bone pain • muscle weakness, muscle aches, or muscle cramps • fatigued • mood changes • night blindness • lightheaded • pale skin • a fast heartbeat • shortness of breath • easy bruising • unexpected bleeding • Tell your doctor or nurse immediately if you notice any of the above symptoms.

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.
- Vaccinations such as flu and tetanus vaccines are safe to receive while you are having treatment. If you are unsure, check with your doctor before you have any vaccinations.

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.
- 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 on 13 11 20 for cancer information and support

Neuroendocrine tumour information

- NeuroEndocrine Cancer Australia – neuroendocrine.org.au

General cancer information and support

- Australian Rare Cancer (ARC) Portal – arcportal.org.au/
- Beyondblue – beyondblue.org.au
- Cancer Australia – canceraustralia.gov.au
- Cancer Council Australia – cancer.org.au
- Cancer Voices Australia – cancervoicesaustralia.org
- CanTeen – canteen.org.au
- Carers Australia – carersaustralia.com.au
- CHILL Cancer related hair loss - scalpcooling.org
- eviQ Cancer Treatments Online – eviQ.org.au
- LGBTQI+ People and Cancer - cancercouncil.com.au/cancer-information/lgbtqi

- Look Good Feel Better – lgfb.org.au
- Patient Information – patients.cancer.nsw.gov.au
- Radiation Oncology Targeting Cancer – targetingcancer.com.au
- Redkite – redkite.org.au
- Return Unwanted Medicines – returnmed.com.au
- Staying active during cancer treatment – 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
- Patient Information - patients.cancer.nsw.gov.au/coping-with-cancer/physical-wellbeing/quitting-smoking
- Quitnow – quitnow.gov.au

Additional notes:

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

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