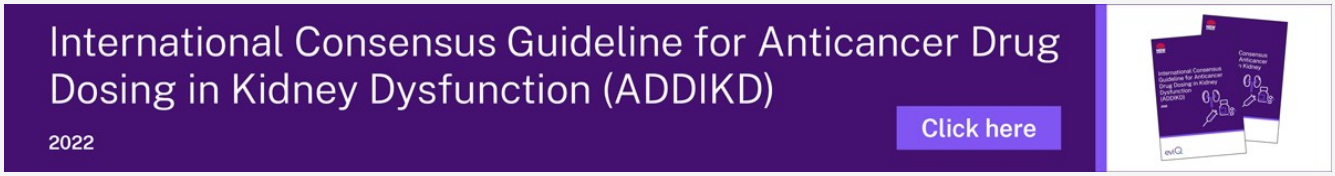
# Bladder/Urothelial small cell ciSplatin and etoposide

**ID: 1725** v.5 **Endorsed** Essential Medicine List

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

Check for clinical trials in this patient group. Link to Australian Clinical Trials website

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.




**Related pages:**

- Bladder/Urothelial small cell cARBOplatin and etoposide

## Treatment schedule - Overview

### Cycle 1 to 4

| Drug | Dose | Route | Day |
|---|---|---|---|
| ciSplatin | 75 mg/m$^2$ | IV infusion | 1 |
| Etoposide * | 120 mg/m$^2$ | IV infusion | 1 to 3 |

*Etopophos (etoposide phosphate) 113.6mg is equivalent to etoposide 100mg. Doses in this protocol are expressed as etoposide.

There is little evidence for etoposide dosing in this patient population, expert opinion agrees use of 120mg/m$^2$ in fit, healthy patients.

This regimen can be given concurrently with radiation therapy

**Frequency:** 21 days

**Cycles:** 4 to 6 unless disease progression or unacceptable toxicity

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**Drug status:** All drugs in this protocol are on the PBS general schedule

**Cost:** ~ $490

## 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.*

### Cycle 1 to 4

| Day 1 | | |
|---|---|---|
| Netupitant | 300 mg (PO) | 60 minutes before chemotherapy (fixed dose preparation with palonosetron) |
| Palonosetron | 0.5 mg (PO) | 60 minutes before chemotherapy (fixed dose preparation with netupitant) |
| Dexamethasone | 12 mg (PO) | 60 minutes before chemotherapy |
| ciSplatin | 75 mg/m$^2$ (IV infusion) | in 1000 mL sodium chloride 0.9% over 60 minutes |
| Etoposide | 120 mg/m$^2$ (IV infusion) | in 500 mL sodium chloride 0.9% over 30 to 60 minutes |
| **Day 2 and 3** | | |
| Dexamethasone | 8 mg (PO) | ONCE a day (or in divided doses) with or after food. |
| Etoposide | 120 mg/m$^2$ (IV infusion) | in 500 mL sodium chloride 0.9% over 30 to 60 minutes |
| **Day 4** | | |
| Dexamethasone | 8 mg (PO) | ONCE a day (or in divided doses) with or after food. |

- Etopophos (etoposide phosphate) 113.6mg is equivalent to etoposide 100mg. Doses in this protocol are expressed as etoposide.
- There is little evidence for etoposide dosing in this patient population, expert opinion agrees use of 120mg/m$^2$ in fit, healthy patients.

**Frequency:** 21 days

**Cycles:** 4 to 6 unless disease progression or unacceptable toxicity

## Indications and patient population

### Indications:

- small cell bladder cancer
  - ECOG/WHO performance status 0 to 1

### Exclusion:

- moderate/severe renal impairment (creatinine clearance less than 60 mL/min.).

### Cautions:

- pre existing neuropathies
- significant hearing impairment/tinnitus
- ECOG/WHO performance status 2

## Clinical information

| | |
|---|---|
| **Venous access required** | IV cannula (IVC) or central venous access device (CVAD) is required to administer this treatment.<br>Read more about central venous access device line selection |
| **Hypersensitivity/infusion related reaction** | High risk with etoposide. |

| | |
|---|---|
| **Emetogenicity HIGH** | Suggested default antiemetics have been added to the treatment schedule, and may be substituted to reflect institutional policy.<br>Ensure that patients also have sufficient antiemetics for breakthrough emesis:<br>Metoclopramide 10 mg three times a day when necessary (maximum of 30 mg/24 hours, up to 5 days) OR<br>Prochlorperazine 10 mg PO every 6 hours when necessary.<br>Read more about preventing anti-cancer therapy induced nausea and vomiting |
| **Etoposide conversion factor** | Note: Etopophos (etoposide phosphate) 113.6 mg is equivalent to etoposide 100 mg.<br>Doses in this protocol are expressed as etoposide. |
| **Hydration** | Hydration helps to prevent cisplatin-induced nephrotoxicity.<br>The default regimen is appropriate for patients with normal electrolytes, kidney function, fluid status etc. and should be adjusted according to individual requirements.<br>Read more about cisplatin hydration regimens |
| **Peripheral neuropathy** | Assess prior to each treatment. If a patient experiences grade 2 or greater peripheral neuropathy, a dose reduction, delay, or omission of treatment may be required; review by medical officer before commencing treatment.<br>Read more about peripheral neuropathy<br>Link to chemotherapy-induced peripheral neuropathy screening tool |
| **Ototoxicity** | Ototoxicity may occur with platinum-based therapy; patients should be monitored for signs and symptoms. Platinum compounds should be used with caution in patients with pre-existing conditions or risk factors.<br>Ototoxicity may become more severe in patients being treated with other drugs with nephrotoxic potential e.g. aminoglycosides.<br>An audiometry test should be performed if symptoms develop.<br>Read more about ototoxicity - tinnitus and hearing loss |
| **Blood tests** | FBC, EUC, LFTs, calcium and magnesium at baseline and prior to each cycle. |
| **Hepatitis B screening and prophylaxis** | Routine screening for HBsAg and anti-HBc is recommended prior to initiation of treatment. Prophylaxis should be determined according to individual institutional policy.<br>Read more about hepatitis B screening and prophylaxis in cancer patients requiring cytotoxic and/or immunosuppressive therapy |
| **Vaccinations** | Live vaccines are contraindicated in cancer patients receiving immunosuppressive therapy and/or who have poorly controlled malignant disease.<br>Refer to the recommended schedule of vaccination for immunocompromised patients, as outlined in the Australian Immunisation Handbook.<br>Read more about COVID-19 vaccines and cancer. |
| **Fertility, pregnancy and lactation** | Cancer treatment can have harmful effects on fertility and this should be discussed with all patients of reproductive potential prior to commencing treatment. There is a risk of foetal harm in pregnant women. A pregnancy test should be considered prior to initiating treatment in females of reproductive potential if sexually active. It is important that all patients of reproductive potential use effective contraception whilst on 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 effect of cancer treatment on fertility |

## 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)**.

**Note**: All dose reductions are calculated as a percentage of the starting dose

| Haematological toxicity | |
|---|---|
| **ANC x $10^9$/L (pre-treatment blood test)** | |
| 0.5 to less than 1.0 | Delay treatment until recovery |
| less than 0.5 | Delay treatment until recovery and consider reducing cisplatin and etoposide by 25% for subsequent cycles |
| Febrile neutropenia | Delay treatment until recovery and consider reducing cisplatin and etoposide by 25% for subsequent cycles |
| **Platelets x $10^9$/L (pre-treatment blod test)** | |
| 75 to less than 100 | Refer to local institutional guidelines; it is the view of the expert clinicians that treatment should continue if patient is clinically well. |
| 50 to less than 75 | Delay treatment until recovery |
| less than 50 | Delay treatment until recovery and consider reducing cisplatin and etoposide by 25% for subsequent cycles |

| Renal impairment | |
|---|---|
| **eGFR (CKI-EPI or MDRD) or eCrCl (Cockcroft Gault) (mL/min) *** | |
| greater than or equal to 70 | No dose modifications necessary |
| 50 to less than 70 | Reduce cisplatin by 25% |
| 30 to less than 50 | Reduce etoposide by 25% and cisplatin by 50% or consider substituting carboplatin for cisplatin |
| less than 30 | Reduce etoposide by 50% and omit cisplatin or consider substituting carboplatin for cisplatin |

** Each method has its limitations; refer to Nephrotoxicity associated with cisplatin for more information.*

| Hepatic impairment | |
|---|---|
| **Hepatic dysfunction** | |
| Mild | Reduce etoposide by 25% |
| Moderate | Reduce etoposide by 50% |
| Severe | Omit etoposide |

| Peripheral neuropathy | |
|---|---|
| Grade 2 , Grade 3 or Grade 4 | Omit cisplatin; consider substituting carboplatin for cisplatin |

| Mucositis and stomatitis | |
|---|---|
| Grade 2 | Delay treatment until toxicity has resolved to Grade 1 or less and reduce doses for subsequent cycles as follows:<br>1st occurrence: No dose reduction<br>2nd occurrence: Reduce cisplatin and etoposide by 25%<br>3rd occurrence: Reduce cisplatin and etoposide by 50%<br>4th occurrence: Omit cisplatin and etoposide |
| Grade 3 or Grade 4 | Delay treatment until toxicity has resolved to Grade 1 or less and reduce doses for subsequent cycles as follows:<br>1st occurrence: Reduce cisplatin and etoposide by 50%<br>2nd occurrence: Omit cisplatin and etoposide |

## 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*

| Cisplatin | | |
|---|---|---|
| | **Interaction** | **Clinical management** |
| **Nephrotoxic drugs (e.g. aminoglycosides, amphotericin, contrast dye, frusemide, NSAIDs)** | Additive nephrotoxicity | Avoid combination or monitor kidney function closely |
| **Ototoxic drugs (e.g. aminoglycosides, frusemide, NSAIDs)** | Additive ototoxicity | Avoid combination or perform regular audiometric testing |
| **Neurotoxic drugs (e.g. vincristine, paclitaxel)** | Additive neurotoxicity | Monitor closely for neuropathy if combination used |
| **Paclitaxel** | Administration schedule may influence the development of myelosuppression | Minimise toxicity by administering paclitaxel first in regimens using the combination |
| **Carbamazepine, phenytoin, valproate** | Decreased antiepileptic plasma levels | Monitor antiepileptic serum levels and seizure frequency for efficacy; adjust dosage as appropriate or select alternative antiepileptic (e.g. clonazepam, diazepam, lorazepam) |

| Etoposide and Etoposide Phosphate | | |
|---|---|---|
| | **Interaction** | **Clinical management** |
| **CYP3A4 and P-gp inhibitors (e.g. amiodarone, aprepitant, azole-antifungals, ritonavir, lapatinib, nilotinib, sorafenib, macrolides, ciclosporin etc.)** | Increased toxicity of etoposide possible due to reduced clearance | Avoid combination or monitor for etoposide toxicity |
| **CYP3A4 inducers (e.g. carbamazepine, phenytoin, phenobarbitone, rifampicin, St John's wort etc.)** | Reduced efficacy of etoposide possible due to increased clearance | Avoid combination or monitor for decreased clinical response to etoposide |
| **Glucosamine** | Reduced efficacy of etoposide (due to induction of glucose-regulated stress proteins resulting in decreased expression of topoisomerase II) | Avoid combination or monitor for decreased clinical response to etoposide |
| **Grapefruit juice** | Reduced efficacy of oral etoposide possible due to possible alteration of P-gp mediated intestinal transport of etoposide | Avoid combination or monitor for decreased clinical response to etoposide |

| NK-1 antagonist e.g. aprepitant, fosaprepitant, netupitant | | |
|---|---|---|
| | **Interaction** | **Clinical management** |
| **Dexamethasone** | Increased effects/toxicity of dexamethasone due to inhibition of its metabolism via CYP3A4 | Reduce dose of **antiemetic dexamethasone** by approximately 50% when adding a NK-1 antagonist. For protocols that already recommend a NK-1 antagonist, the dose reduction of **antiemetic dexamethasone** has already been taken into account.<br><br>If **dexamethasone is part of the chemotherapy protocol**, dose reduction as per the product information is not routinely recommended in clinical practice and no additional dexamethasone is required for antiemetic cover. |
| **Warfarin** | Reduced anticoagulant efficacy of warfarin due to increased clearance (aprepitant induces CYP2C9). *Note interaction only applicable to aprepitant/ fosaprepitant | INR should be monitored in the 2 week period, particularly at 7 to 10 days following the administration of aprepitant/ fosaprepitant |
| **Combined oral contraceptive** | Reduced contraceptive efficacy due to increased clearance. *Note interaction only applicable to aprepitant/ fosaprepitant | Alternative non-hormonal methods should be used during and for 1 month after stopping aprepitant/ fosaprepitant |
| **CYP3A4 inducers (e.g. carbamazepine, phenytoin, phenobarbitone, rifampicin, St John's wort etc.)** | Reduced efficacy of NK-1 antagonist possible due to increased clearance | Avoid combination or monitor for decreased antiemetic effect. Consider using an alternative antiemetic regimen |
| **CYP3A4 inhibitors (e.g. azole antifungals, clarithromycin, erythromycin, grapefruit juice, ritonavir etc.)** | Increased toxicity of NK-1 antagonist possible due to reduced clearance | Avoid combination or monitor for increased adverse effects of NK-1 antagonist (e.g. headache, hiccups, constipation) |
| **Drugs metabolised by CYP3A4 (e.g. etoposide, imatinib, irinotecan, midazolam, paclitaxel, vinblastine, vincristine etc.)** | Increased effects/toxicity of these drugs possible due to inhibition of CYP3A4 by NK-1 antagonist | Avoid combination or monitor for increased toxicity especially with orally administered drugs |

| General | | |
|---|---|---|
| | **Interaction** | **Clinical management** |
| **Warfarin** | Anti-cancer drugs may alter the anticoagulant effect of warfarin. | Monitor INR regularly and adjust warfarin dosage as appropriate; consider alternative anticoagulant. |
| **Direct oral anticoagulants (DOACs) e.g. apixaban, rivaroxaban, dabigatran** | 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. |
| **Digoxin** | Anti-cancer drugs can damage the lining of the intestine; affecting the absorption of digoxin. | Monitor digoxin serum levels; adjust digoxin dosage as appropriate. |
| **Antiepileptics** | 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. |
| **Antiplatelet agents and NSAIDs** | Increased risk of bleeding due to treatment related thrombocytopenia. | Avoid or minimise combination.<br>If combination deemed essential, (e.g. low dose aspirin for ischaemic heart disease) monitor for signs of bleeding. |
| **Serotonergic drugs, including selective serotonin reuptake inhibitors (SSRIs e.g. paroxetine) and serotonin noradrenaline reuptake inhibitors (SNRIs e.g. venlafaxine)** | Increased risk of serotonin syndrome with concurrent use of 5-HT3 receptor antagonists (e.g. palonosetron, ondansetron, granisetron, tropisetron, dolasetron, etc.) | Avoid combination.<br>If combination is clinically warranted, monitor for signs and symptoms of serotonin syndrome (e.g. confusion, agitation, tachycardia, hyperreflexia).<br>For more information link to TGA Medicines Safety Update |
| **Vaccines** | 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.<br>For more information; refer to the recommended schedule of vaccination for cancer patients, as outlined in the Australian Immunisation Handbook |

## 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

**Approximate treatment time: 5 hours**

Safe handling and waste management

Safe administration

General patient assessment prior to each day of treatment.

Peripheral neuropathy assessment tool

Any toxicity grade 2 or greater may require dose reduction, delay or omission of treatment and review by medical officer before commencing treatment.

Prime IV line(s).

Insert IV cannula or access TIVAD or CVAD.

### Pre treatment medication

Verify antiemetics taken or administer as prescribed.

Verify dexamethasone taken or administer as prescribed.

### Chemotherapy - Time out

### Cisplatin

**Commence prehydration for cisplatin:**

- administer 10 mmol magnesium sulphate ($MgSO_4$) in 1000 mL sodium chloride 0.9% over 60 minutes
- followed by 200 mL of mannitol 20% over 15 minutes
  - mannitol should be administered via a controlled infusion
- mannitol 10% may be used as per institutional policy; there is much variation in the use of mannitol and although there is no conclusive evidence that mannitol should be used, many sites have used it routinely without renal toxicity. The routine use of frusemide to increase urine flow is not recommended. Refer to your institutional guidelines and medical orders.
- ensure patient has passed urine prior to cisplatin administration as per institutional policy.

**Administer cisplatin (irritant):**

- via IV infusion over 60 minutes
- flush with 100 mL of sodium chloride 0.9%.

**Post hydration:**

- 1000 mL sodium chloride 0.9% over 60 minutes.

### Etoposide

**Administer etoposide (irritant):**

- via IV infusion over 30 to 60 minutes
- rapid infusion may cause hypotension
- observe for hypersensitivity
- flush with ~ 100 mL sodium chloride 0.9%
- if using etoposide phosphate administer in ~ 50 mL sodium chloride 0.9% or glucose 5% over ~15 minutes.

**Stop infusion at first sign of reaction:**

- if symptoms are mild and resolve when infusion is stopped, consider recommencing infusion after review by medical officer at a slower rate.
- for severe reactions seek medical assistance immediately and do not restart infusion.

Remove IV cannula and/or deaccess TIVAD or CVAD.

**Continue safe handling precautions until 7 days after completion of drug(s)**

## Day 2 and 3

**Approximate treatment time: 90 minutes**

Safe handling and waste management

Safe administration

General patient assessment prior to each day of treatment.

Any toxicity grade 2 or greater may require dose reduction, delay or omission of treatment and review by medical officer before commencing treatment.

Prime IV line(s).

Insert IV cannula or access TIVAD or CVAD.

### Pre treatment medication

Verify dexamethasone taken or administer as prescribed.

### Chemotherapy - Time out

### Etoposide

**Administer etoposide (irritant):**

- via IV infusion over 30 to 60 minutes
- rapid infusion may cause hypotension
- observe for hypersensitivity
- flush with ~ 100 mL sodium chloride 0.9%
- if using etoposide phosphate administer in ~ 50 mL sodium chloride 0.9% or glucose 5% over ~15 minutes.

**Stop infusion at first sign of reaction:**

- if symptoms are mild and resolve when infusion is stopped, consider recommencing infusion after review by medical officer at a slower rate.
- for severe reactions seek medical assistance immediately and do not restart infusion.

Remove IV cannula and/or deaccess TIVAD or CVAD.

**Continue safe handling precautions until 7 days after completion of drug(s)**

## Discharge information

**Antiemetics**

- Antiemetics as prescribed.

**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) | |
|---|---|
| **Hypersensitivity reaction** | Anaphylaxis and infusion related reactions can occur with this treatment.<br>Read more about hypersensitivity reaction |
| **Nausea and vomiting** | Read more about prevention of treatment induced nausea and vomiting |
| **Taste and smell alteration** | Read more about taste and smell changes |

| Early (onset days to weeks) | |
|---|---|
| **Oral mucositis** | Erythematous and ulcerative lesions of the gastrointestinal tract (GIT). It commonly develops following chemotherapy, radiation therapy to the head, neck or oesophagus, and high dose chemotherapy followed by a blood and marrow transplant (BMT).<br>Read more about oral mucositis |
| **Neutropenia** | Abnormally low levels of neutrophils in the blood. This increases the risk of infection. Any fever or suspicion of infection should be investigated immediately and managed aggressively.<br>Read more about immediate management of neutropenic fever |
| **Thrombocytopenia** | A reduction in the normal levels of functional platelets, increasing the risk of abnormal bleeding.<br>Read more about thrombocytopenia |
| **Fatigue** | Read more about fatigue |
| **Peripheral neuropathy** | Typically symmetrical sensory neuropathy, affecting the fingers and toes, sometimes progressing to the hands and feet. It is associated with several classes of anti-cancer drugs. These include taxanes, platinum-based compounds, vinca alkaloids and some drugs used to treat multiple myeloma.<br>Read more about peripheral neuropathy |
| **Anorexia** | Loss of appetite accompanied by decreased food intake.<br>Read more about anorexia |
| **Ototoxicity** | Tinnitus and hearing loss may occur due to damage in the inner ear. Tinnitus is usually reversible, while hearing loss is generally irreversible. Hearing loss is dose-related, cumulative and may be worse in those with pre-existing hearing problems.<br>Read more about ototoxicity - tinnitus and hearing loss |
| **Hypomagnesaemia, hypokalaemia, hypocalcaemia** | Abnormally low levels of magnesium, potassium and calcium in the blood. |
| **Nephrotoxicity** | Renal dysfunction resulting from damage to the glomeruli, tubules or renal vasculature. |

| Late (onset weeks to months) | |
|---|---|
| **Anaemia** | Abnormally low levels of red blood cells (RBCs) or haemoglobin in the blood.<br>Read more about anaemia |
| **Alopecia** | 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 alopecia and scalp cooling |

## Evidence

A search of the literature did not find strong evidence to support the use of cisplatin or any regime in the neoadjuvant treatment of small cell bladder cancer. There is consensus from the various literature that neoadjuvant chemotherapy, if tolerated by the patient should provide the best outcome. The expert reference panel supported publication of the protocol on the basis of the information summarised below, the committee was most strongly influenced by Siefeker- Radkte et al[1], Bex et al[2] and Meijer et al.[3]

This protocol has been used extensively in the treatment of small cell lung cancer.

| Source | Study & Year Published | Supports Use | Is the dose and regimen consistent with the protocol? | Comments |
|---|---|---|---|---|
| **Phase II trials** | Siefker-Radtke et al 2009[1] | **Yes** | No | cisplatin 20mg/m$^2$ etoposide 80mg/m$^2$ d 1-5; alternating with ifosfamide, doxorubicin |
| **Case Studies** | - | **N/A** | - | - |
| **Observational studies** | Meijer et al 2013[3] | **Yes** | Yes | - |
| | Lynch et al 2013[4] | **Yes** | n/a | various regimens used |
| | Bex et al 2005[2] | **Yes** | Yes | - |
| | Siefker-Radtke et al 2004[5] | **Yes** | n/a | various regimens used |
| | Lohrisch et al 1999[6] | **Yes** | n/a | - |
| | Choong et al 2005[7] | **Yes** | n/a | not specified |
| | Mukesh et al 2008[8] | **Yes** | n/a | doses not specified |
| | Quek et al 2005[9] | **Yes** | No | cisplatin/etoposide/doxorubicin |
| | Asmis et al 2004[10] | **Yes** | n/a | either carboplatin/etoposide or EP doses not specified |

| Guidelines | Date published/revised | Supports Use | Is the dose and regimen consistent with the protocol? | Comments |
|---|---|---|---|---|
| **NCCN** | v.1 2012 | **Yes** | no doses | refers to small cell lung cancer |
| **BCCA** | April 2013 | **Yes** | Yes | |
| **CCO** | - | **N/A** | - | |

## Efficacy

| Author/Year | No. of patients | Treatment | Overall survival | Response Rate | Cancer specific free survival | 5 y sur |
|---|---|---|---|---|---|---|
| **Meijer 2013**[3] | 27 | MVAC, IEP, EP, Cyclophosphamide/doxorubicin/etoposide, or carboplatin/etoposide followed by EBRT | 24 months (5 year OS 22.2%) | - | complete responders-52 months; incomplete responders-22 months | 45 |
| **Lynch 2013**[4] | 48 (36 pt with <pT2N0M0) | IA/EP (54%), EP (15%), MVAC (10%) followed by surgery, RT or chemoradiation | 187 months (95% CI 160 to infinity) | - | - | |
| **Siefker-Radtke 2009 (prospective)**[1] | 18 | IA/EP plus cystectomy | 58 months (CI 58 months to not achieved) | 78% | - | |
| **Siefker-Radtke 2004 (retrospective)**[5] | 46 | Upfront cystectomy -v- preoperative chemotherapy including EP, IA, methotrexate/cisplatin | 36-v-78% (cystectomy alone -v- neoadjuvant chemotherapy) | - | - | |
| **Bex 2005**[2] | 17 | TUR+platinum-based chemotherapy and local RT (56-70Gy). | 12 months (range 4 | - | - | |

| Author/Year | No. of patients | Treatment | Overall survival | Response Rate | Cancer specific free survival | s |
|---|---|---|---|---|---|---|
| | | | months to 84 months) | | | |
| **Lohrisch 1999**[6] | 10 | EP followed by local RT | 2 year 70% | - | - | 4 |
| **Choong 2005**[7] | 3 | 1 patient had neoadjuvant, 2 adjuvant chemotherapy (not specified- most likely EP) | 2 patients alive at the end of the study. OS of other not known | - | - | |
| **Mukesh 2008**[8] | 6/11 had chemotherapy for limited disease | 3 carboplatin/etoposide pre cystectomy and RT (1 pt died after chemotherapy), 2 CAV, 1 ACE | 33 months (range 6-60 months). 3 alive at time of article publication | - | - | |
| **Quek 2005**[9] | 20/25 small cell bladder | 14 chemotherapy (13 adjuvant 1 preoperative). cisplatin/etoposide/doxorubicin | 30% - 2 years<br>10% - 5 years | - | - | |
| **Asmis 2004**[10] | 8/12 limited bladder cancer | 1 neoadjuvant cisplatin etoposide, rest sequential chemotherapy and radiation therapy with either carboplatin/etoposide or EP | 19.8 months, 5 alive at 31.2 months | - | - | |

*This table had been expanded from Macedo et al 2011*[11]

*IA= ifosfamide & doxorubicin; EP= etoposide & cisplatin; MVAC= methotrexate, vinblastine, doxorubicin & cisplatin; IEP= ifosfamide, etoposide & cisplatin; CAV= cyclophosphamide, doxorubicin & vincristine; ACE= doxorubicin, cyclophosphamide & etoposide*

## Toxicity

Based on the meta-analysis of the cisplatin-based regimens compared with carboplatin-based regimens in small cell lung cancer, statistically significantly more haematological toxicities (anaemia, thrombocytopenia, leucopenia) were observed in patients treated with carboplatin. Other toxicities (nausea, neurotoxicity, nephrotoxicity) were significantly more common in patients treated with cisplatin.[12]

**Table 3.** Toxicity

| Toxicity | Patients With Toxicity Information | Any Grade | | | | | | Severe Toxicity (grade ≥ 3) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cisplatin (%) | Carboplatin (%) | Exact OR | 95% CI | P* | P† for Homogeneity | Cisplatin (%) | Carboplatin (%) | Exact OR | 95% CI | P* | P† for Homogeneity |
| Leucopenia | 655 | 74 | 77 | 1.22 | 0.81 to 1.88 | .357 | < .001 | 34 | 34 | 0.96 | 0.67 to 1.37 | .863 | < .001 |
| Neutropenia | 458 | 86 | 90 | 1.53 | 0.81 to 2.92 | .177 | .397 | 64 | 73 | 1.74 | 1.07 to 2.83 | .021 | .999 |
| Anemia | 512 | 84 | 89 | 1.72 | 0.99 to 3.03 | .049 | .046 | 16 | 25 | 1.73 | 1.12 to 2.89 | .011 | < .001 |
| Platelets | 512 | 39 | 71 | 3.36 | 2.83 to 6.34 | < .001 | < .001 | 14 | 42 | 3.78 | 2.88 to 7.19 | < .001 | < .001 |
| Nausea/vomiting | 655 | 72 | 63 | 0.66 | 0.47 to 0.93 | .013 | .012 | 6 | 3 | 0.49 | 0.21 to 1.11 | .066 | .999 |
| Stomatitis | 655 | 25 | 21 | 0.78 | 0.52 to 1.17 | .239 | .065 | 1 | < 1 | 0.24 | 0.01 to 3.32 | .320 | .999 |
| Diarrhea | 458 | 19 | 22 | 1.23 | 0.76 to 2.00 | .415 | .999 | 2 | 2 | 0.99 | 0.18 to 5.40 | .999 | .999 |
| Constipation | 239 | 39 | 51 | 1.58 | 0.92 to 2.73 | .091 | .999 | 3 | 5 | 1.51 | 0.35 to 7.48 | .749 | .999 |
| Neurotoxicity | 416 | 19 | 7 | 0.29 | 0.14 to 0.58 | < .001 | .243 | 1 | < 1 | 0.35 | 0.01 to 7.27 | .569 | .999 |
| Renal toxicity | 415 | 25 | 10 | 0.34 | 0.19 to 0.61 | < .001 | .787 | 1.5 | 5 | 0.28 | 0.01 to 3.78 | .351 | .540 |
| Toxic deaths | 655 | — | — | — | | — | — | 1.9 | 1.5 | 0.80 | 0.19 to 3.18 | .769 | .101 |

Abbreviation: OR, odds ratio.
*Exact text stratified by trial.
†Exact test for homogeneity of odds ratios.

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## History

### Version 5

| Date | Summary of changes |
|---|---|
| **10/09/2020** | Patient information title updated- 'small cell' added. Version number changed to V.5. |

### Version 4

| Date | Summary of changes |
|---|---|
| **04/05/2020** | Treatment schedule cycle title changed to 'cycle 1 to 4'. Patient information updated to include 'You will have 4 to 6 cycles'. Day 1 approximate treatment time changed to 5 hours. Version number changed to V.4. |
| **30/06/2020** | Protocol reviewed electronically by Medical Oncology Reference Committee. No changes. Review 5 years. |

### Version 3

| Date | Summary of changes |
|---|---|

| | |
|---|---|
| **27/03/2015** | New protocol discussed at Medical Oncology Reference Committee meeting |
| **11/05/2015** | Approved and published on eviQ. Review 2 years. |
| **31/03/2017** | Protocol discussed and decided to have a 5 year review period. Next due for review in 2020. |
| **31/05/2017** | Transferred to new eviQ website. Version number changed to V.2.<br><br>Antiemetic change: Netupitant/palonosetron combination has replaced aprepitant and a $5HT_3$ receptor antagonist in combination with dexamethasone for all highly emetogenic regimens. |
| **10/05/2018** | Haematological dose modifications updated as per consensus of the expert clinician group. Version number changed to V.3. |



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**Last reviewed:** 30 June 2020
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***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/1725*
*19 Jun 2023*

# Patient information - Bladder/urinary tract small cell cancer - Cisplatin and etoposide

**Patient's name:**

## Your treatment

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

**Cisplatin and etoposide**

This treatment cycle is repeated every 21 days. You will have 4 to 6 cycles. Your doctor will advise you of the number of treatments you will have.

| Day | Treatment | How it is given | How long it takes |
|---|---|---|---|
| 1 | **Cisplatin** (*siss-PLAT-in*)<br><br>**Etoposide** (*e-TOE-poe-side*) | By a drip into a vein | About 5 hours |
| 2 and 3 | **Etoposide** | By a drip into a vein | About 1.5 hours |

## When to get help

Anticancer drugs (drugs used to treat cancer) can sometimes cause serious problems. It is important to get medical help immediately if you become unwell.

| **IMMEDIATELY go to your nearest hospital Emergency Department, or contact your doctor or nurse if you have any of the following at any time:** | **Emergency contact details**<br><br>Ask your doctor or nurse from your treating team who to contact if you have a problem |
|---|---|
| • a temperature of 38°C or higher<br>• chills, sweats, shivers or shakes<br>• shortness of breath<br>• uncontrolled vomiting or diarrhoea<br>• pain, tingling or discomfort in your chest or arms<br>• you become unwell. | Daytime:.....<br>Night/weekend:.....<br>Other instructions:.....<br>.....<br>.....<br>..... |

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

- leaking from the area where the drugs are being given
- pain, stinging, swelling or redness in the area where the drugs are being given or at any injection sites
- 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

Anti-cancer drugs can reduce the number of blood cells in your body. You will need to have regular blood tests to check that your blood cell count has returned to normal. If your blood count is low, your treatment may be delayed until it has returned to normal. 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) | |
|---|---|
| **Allergic reaction** | • Allergic reactions are uncommon but can be life threatening.<br>• **If you feel unwell during the infusion or shortly after it, or:**<br>  ◦ **get a fever, shivers or shakes**<br>  ◦ **feel dizzy, faint, confused or anxious**<br>  ◦ **start wheezing or have difficulty breathing**<br>  ◦ **have a rash, itch or redness of the face**<br><br>**<u>While you are in hospital:</u> Tell your doctor or nurse immediately.**<br>**<u>After you leave:</u> Contact your doctor or nurse immediately, or go to the nearest hospital Emergency Department.** |
| **Nausea and vomiting** | • You may feel sick (nausea) or be sick (vomit).<br>• Take your anti-sickness medication as directed even if you don't feel sick.<br>• Drink plenty of fluids (unless you are fluid restricted).<br>• Eat small meals more frequently.<br>• Try food that does not require much preparation.<br>• Try bland foods like dry biscuits or toast.<br>• Gentle exercise may help with nausea.<br>• Ask your doctor or nurse for eviQ patient information - Nausea and vomiting during cancer treatment.<br>• **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.** |
| **Taste and smell changes** | • You may find that food loses its taste or tastes different.<br>• These changes are likely to go away with time.<br>• Do your mouth care regularly.<br>• Chew on sugar-free gum or eat sugar-free mints.<br>• Add flavour to your food with sauces and herbs.<br>• Ask your doctor or nurse for eviQ patient information - Taste and smell changes during cancer treatment. |

| Early (onset days to weeks) | |
|---|---|
| **Mouth pain and soreness (mucositis)** | • You may have:<br>  ◦ bleeding gums<br>  ◦ mouth ulcers<br>  ◦ a white coating on your tongue<br>  ◦ pain in the mouth or throat<br>  ◦ difficulty eating or swallowing.<br>• Avoid spicy, acidic or crunchy foods and very hot or cold food and drinks.<br>• Try bland and soft foods.<br>• Brush your teeth gently with a soft toothbrush after each meal and at bedtime. If you normally floss continue to do so.<br>• Rinse your mouth after you eat and brush your teeth, using either:<br>  ◦ 1/4 teaspoon of salt in 1 cup of warm water, or<br>  ◦ 1/4 teaspoon of bicarbonate of soda in 1 cup of warm water<br>• Ask your doctor or nurse for eviQ patient information - Mouth problems during cancer treatment.<br>• **Tell your doctor or nurse if you get any of the symptoms listed above.** |

| | |
|---|---|
| **Infection risk (neutropenia)** | • This treatment lowers the amount of white blood cells in your body. The type of white blood cells that help to fight infection are called neutrophils. Having low level of neutrophils is called neutropenia. If you have neutropenia, you are at greater risk of getting an infection. It also means that your body can't fight infections as well as usual. This is a serious side effect, and can be life threatening.<br>• Wash your hands often.<br>• Keep a thermometer at home and take your temperature regularly, and if you feel unwell.<br>• Do your mouth care regularly.<br>• Inspect your central line site (if you have one) daily for any redness, pus or swelling.<br>• Limit contact with people who are sick.<br>• Learn how to recognise the signs of infection.<br>• Ask your doctor or nurse for eviQ patient information - Infection during cancer treatment.<br>• **Tell your doctor or nurse immediately, or go to the nearest hospital Emergency Department if you get any of the following signs or symptoms:**<br>◦ **a temperature of 38°C or higher**<br>◦ **chills, shivers, sweats or shakes**<br>◦ **a sore throat or cough**<br>◦ **uncontrolled diarrhoea**<br>◦ **shortness of breath**<br>◦ **a fast heartbeat**<br>◦ **become unwell even without a temperature.** |
| **Low platelets (thrombocytopenia)** | • This treatment lowers the amount of platelets in your blood. Platelets help your blood to clot. When they are low, you are at an increased risk of bleeding and bruising.<br>• Try not to bruise or cut yourself.<br>• Avoid contact sport or vigorous exercise.<br>• Clear your nose by blowing gently.<br>• Avoid constipation.<br>• Brush your teeth with a soft toothbrush.<br>• Don't take aspirin, ibuprofen or other similar anti-inflammatory medications unless your doctor tells you to.<br>• Tell your doctor or nurse if you have any bruising or bleeding.<br>• **Tell your doctor or nurse immediately, or go to your nearest hospital Emergency Department if you have any uncontrolled bleeding.** |
| **Tiredness and lack of energy (fatigue)** | • You may feel very tired, have no energy, sleep a lot, and not be able to do normal activities or things you enjoy.<br>• Do not drive or operate machinery if you are feeling tired.<br>• Nap for short periods (only 1 hour at a time)<br>• Prioritise your tasks to ensure the best use of your energy.<br>• Eat a well balanced diet and drink plenty of fluids (unless you are fluid restricted).<br>• Try some gentle exercise daily.<br>• Allow your friends and family to help.<br>• **Tell your doctor or nurse if you get any of the symptoms listed above.** |
| **Nerve damage (peripheral neuropathy)** | • You may notice a change in the sensations in your hands and feet, including:<br>◦ tingling or pins and needles<br>◦ numbness or loss of feeling<br>◦ pain.<br>• You may find it difficult to do everyday activities, such as doing up buttons or picking up small objects.<br>• Test water temperature with your elbow when bathing to avoid burns.<br>• Use rubber gloves, pot holders and oven mitts in the kitchen.<br>• Wear rubber shoes or boots when working in the garden or garage.<br>• Keep rooms well lit and uncluttered.<br>• Ask your doctor or nurse for eviQ patient information – Nerve problems during cancer treatment.<br>• Tell your doctor or nurse if you get any of the symptoms listed above. |

| | |
|---|---|
| **Appetite loss (anorexia)** | • You may not feel like eating.<br>• Try to avoid drinking fluids at meal times.<br>• Try to eat small meals or snacks regularly throughout the day.<br>• Try to eat food that is high in protein and calories.<br>• If you are worried about how much food you can eat, or if you are losing weight, ask to speak to a dietitian. |
| **Hearing changes (ototoxicity)** | • You may get ringing in your ears or loss of hearing.<br>• You may have your hearing tested before and during your treatment.<br>• **Tell your doctor or nurse as soon as possible if you notice any changes to your hearing.** |
| **Low blood magnesium, potassium and calcium levels (hypomagnesaemia, hypokalaemia, hypocalcaemia)** | • This may be found from your routine blood tests and treated by your doctor.<br>• If it is severe you may get:<br>  ◦ muscle cramps or twitches<br>  ◦ numbness or tingling in your fingers, toes or around your mouth<br>  ◦ constipation<br>  ◦ an irregular heartbeat<br>  ◦ sleepy, drowsy or confused<br>• **Tell your doctor or nurse as soon as possible if you get any of the signs or symptoms listed above.** |
| **Kidney damage** | • This treatment can cause changes to how your kidneys work.<br>• You will have blood tests to make sure your kidneys are working properly.<br>• You may need to drink more fluids while you are having treatment. Your doctor or nurse will tell you if you need to do this.<br>• **Tell your doctor or nurse as soon as possible if you notice that your urine changes colour or you don't need to empty your bladder as often.** |

| Late (onset weeks to months) | |
|---|---|
| **Low red blood cells (anaemia)** | • You may feel dizzy, light-headed, tired and appear more pale than usual.<br>• Tell your doctor or nurse if you have any of these signs or symptoms. You might need a blood transfusion.<br>• **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.** |
| **Hair loss (alopecia)** | • Your hair may start to fall out from your head and body.<br>• Hair loss usually starts 2 to 3 weeks after your first treatment.<br>• You may become completely bald and your scalp might feel tender.<br>• Use a gentle shampoo and a soft brush.<br>• Take care with hair products like hairspray, hair dye, bleaches and perms.<br>• Protect your scalp from the cold with a hat, scarf or wig.<br>• Protect your scalp from the sun with a hat or sunscreen of SPF 50 or higher.<br>• Moisturise your scalp to prevent itching.<br>• Ask your doctor or nurse about the Look Good Feel Better program |

## General advice for people having cancer treatment

### Chemotherapy safety

- Learn how to keep you and your family safe while you are having anticancer drugs.
- See our patient information sheet - Chemotherapy safety at home.

### 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.

### Risk of developing a second cancer

- Some anticancer treatments can increase your chance of developing a second cancer, this is rare. Your doctor will discuss with you the specific risks of your treatment.

### 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

### Bladder and urinary tract cancer information

- Australian Government Bladder and Bowel – bladderbowel.gov.au
- Australian Government Department of Health & Ageing Stoma appliance scheme – health.gov.au/internet/main/publishing.nsf/Content/Stoma+Appliance+Scheme-1
- BEAT Bladder Cancer Australia Inc. – beatbladdercanceraustralia.org.au/
- Continence Foundation of Australia – continence.org.au
- National Continence Program – health.gov.au/initiatives-and-programs/national-continence-program-ncp
- National Public Toilet map – toiletmap.gov.au
- Recovering after Pelvic Radiation Therapy: A guide for women – Recovering after Pelvic Radiation Therapy: A guide for women

### 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:**

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