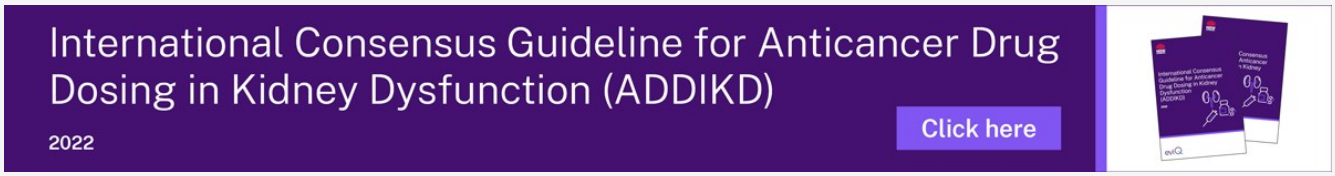
Prostate metastatic castration-sensitive DOCEtaxel three weekly

ID: 1664 v.4 **Endorsed** Essential Medicine List

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:

- Prostate metastatic goserelin
- Prostate metastatic leuprorelin (Eligard)
- Prostate metastatic leuprorelin (Lucrin)
- Androgen deprivation therapy (ADT) for prostate cancer

Treatment schedule - Overview

Cycle 1 to 6

Drug	Dose	Route	Day
DOCEtaxel	75 mg/m^2	IV infusion	1

- Docetaxel is to be given at least 4 weeks after commencement of androgen deprivation therapy as per reference committee consensus[1]
- Daily prednisolone is not used in this regimen

Frequency: 21 days

Cycles: 6

Drug status: **Docetaxel** is on the PBS general schedule

Cost: ~ $80 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 **defaults only** and may be substituted to reflect individual institutional policy. Select here for recommended doses of alternative antiemetics.*

Cycle 1 to 6

Day before chemotherapy

Day before chemotherapy		
Dexamethasone	8 mg (PO)	TWICE a day with or after food

Day 1		
Dexamethasone	8 mg (PO)	TWICE a day with or after food
DOCEtaxel	75 mg/m^2 (IV infusion)	in 250 mL to 500 mL sodium chloride 0.9% over 60 minutes

Day 2		
Dexamethasone	8 mg (PO)	TWICE a day with or after food

- Docetaxel is to be given at least 4 weeks after commencement of androgen deprivation therapy as per reference committee consensus[1]
- Daily prednisolone is not used in this regimen

Frequency: 21 days

Cycles: 6

Indications and patient population

- Metastatic castration-sensitive prostate cancer receiving initial hormone therapy
  - ECOG performance status 0 to 2

Clinical information

Venous access required	IV cannula (IVC) or central venous access device (CVAD) is required to administer this treatment. Read more about central venous access device line selection
Hypersensitivity/infusion related reaction	High risk with docetaxel
Premedication	The product information states that premedication is required for this treatment. Please refer to the treatment schedule for the suggested premedication regimen. This may be substituted to reflect institutional policy. Read more about premedication for prophylaxis of taxane hypersensitivity reactions
Emetogenicity LOW	Suggested default antiemetics have been added to the treatment schedule, and may be substituted to reflect institutional policy. Ensure that patients also have sufficient antiemetics for breakthrough emesis: Metoclopramide 10 mg three times a day when necessary (maximum of 30 mg/24 hours, up to 5 days) OR Prochlorperazine 10 mg PO every 6 hours when necessary. Read more about preventing anti-cancer therapy induced nausea and vomiting
Peripheral neuropathy	Assess prior to each treatment. If a patient experiences grade 3 or greater, cessation of drug is recommended; review by medical officer before commencing treatment. Read more about peripheral neuropathy Link to chemotherapy-induced peripheral neuropathy screening tool
Bone modifying agents	There is no proven role for bone modifying agents in patients with castration sensitive prostate cancer. These agents are not recommended, due in part, to cumulative toxicity.
Blood tests	FBC, EUC and LFTs at baseline and prior to each cycle.

Hepatitis B screening and prophylaxis	Routine screening for HBsAg and anti-HBc is NOT usually recommended for patients receiving this treatment. 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. Refer to the recommended schedule of vaccination for immunocompromised patients, as outlined in the Australian Immunisation Handbook. Read more about COVID-19 vaccines and cancer.
Fertility and fathering a child	Cancer treatment can have harmful effects on fertility and this should be discussed with all patients of reproductive potential prior to commencing treatment. It is important that all patients of reproductive potential use effective contraception whilst on therapy and after treatment finishes. Effective contraception methods and contraception timeframe should be discussed with all patients of reproductive potential. 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)	
1.0 to less than 1.5	Refer to local institutional guidelines; it is the view of the expert clinicians that treatment should continue if patient is clinically well.
0.5 to less than 1.0	Delay treatment until recovery
less than 0.5	Delay treatment until recovery and consider reducing docetaxel by 25% for subsequent cycles
Febrile neutropenia	Delay treatment until recovery and consider reducing docetaxel by 25% for subsequent cycles
Platelets x 10^9/L (pre-treatment blood test)	
75 to less than 100	The general recommendation is to delay, however if the patient is clinically well it may be appropriate to continue treatment; refer to treating team and/or local institutional guidelines.
50 to less than 75	Delay treatment until recovery

Haematological toxicity	
less than 50	Delay treatment until recovery and consider reducing docetaxel by 25% for subsequent cycles

Renal impairment
No dose modifications necessary

Hepatic impairment	
Hepatic dysfunction	
Minimal	Reduce docetaxel by 25%
Mild	Reduce docetaxel by 50%
Moderate/Severe	Omit docetaxel

Peripheral neuropathy	
Grade 2 which is present at the start of the next cycle	Consider ceasing docetaxel
Grade 3 or Grade 4	Omit docetaxel

Mucositis and stomatitis	
Grade 2	Delay treatment until toxicity has resolved to Grade 1 or less and reduce the dose for subsequent cycles as follows: 1st occurrence: No dose reduction 2nd occurrence: Reduce docetaxel by 25% 3rd occurrence: Reduce docetaxel by 50% 4th occurrence: Omit docetaxel
Grade 3 or Grade 4	Delay treatment until toxicity has resolved to Grade 1 or less and reduce the dose for subsequent cycles as follows: 1st occurrence: Reduce docetaxel by 50% 2nd occurrence: Omit docetaxel

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*

Docetaxel		
	Interaction	**Clinical management**
CYP3A4 and P-gp inhibitors (e.g. amiodarone, aprepitant, azole-antifungals, ritonavir, lapatinib, nilotinib, sorafenib, macrolides, ciclosporin, grapefruit juice etc.)	Increased toxicity of docetaxel possible due to reduced clearance	Avoid combination or monitor for docetaxel toxicity
CYP3A4 inducers (e.g. carbamazepine, phenytoin, phenobarbitone, rifampicin, St John's wort etc.)	Reduced efficacy of docetaxel possible due to increased clearance	Avoid combination or monitor for decreased clinical response to docetaxel

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. 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. Rivaroxaban: avoid concurrent use with strong CYP3A4 and P-gp inhibitors. Dabigatran: avoid combination with strong P-gp inducers and inhibitors. 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. 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. If combination is clinically warranted, monitor for signs and symptoms of serotonin syndrome (e.g. confusion, agitation, tachycardia, hyperreflexia). 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. 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: 90 minutes

Safe handling and waste management

Safe administration

General patient assessment prior to each day of treatment.

Peripheral neuropathy assessment tool.

Any toxicity grade 3 or greater may require dose reduction, delay or omission of treatment and review by medical officer before recommencing treatment.

Prime IV line(s).

Insert IV cannula or access TIVAD or CVAD.

Pre treatment medication

Verify premedication taken or administer as prescribed.

Verify antiemetics taken or administer as prescribed.

Chemotherapy - Time out

Docetaxel

Prior to administration:

- assess patient for fluid retention or weight gain prior to each cycle
  - notify medical officer of any signs of fluid retention or unexplained weight gain.

The medicines information reference publications stipulate the use of non-PVC containing bags and administration sets. However, this is not consistently recommended in the product information, therefore the decision should be at the discretion of the administering unit.

Administer docetaxel (irritant with vesicant properties):

- via IV infusion over 60 minutes
- observe for hypersensitivity reactions
- flush with ~ 100 mL of sodium chloride 0.9%.

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

Premedication

- Premedication for next cycle of chemotherapy.

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 taxanes. Read more about premedication for prophylaxis of taxane hypersensitivity reactions
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)	
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. Read more about immediate management of neutropenic fever
Thrombocytopenia	A reduction in the normal levels of functional platelets, increasing the risk of abnormal bleeding. Read more about thrombocytopenia
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). Read more about oral mucositis
Diarrhoea	Read more about treatment induced diarrhoea
Skin rash	Anti-cancer drugs can cause a number of changes in the skin with maculo-papular rash the most common type of drug-induced skin reaction. Read more about skin rash
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. Read more about peripheral neuropathy
Palmar-plantar erythrodysaesthesia (PPE) - hand-foot syndrome (HFS)	Bilateral erythema, tenderness, pain, swelling, tingling, numbness, pruritus, dry rash, or moist desquamation and ulceration of the palms and soles. It is also known as hand-foot syndrome (HFS). Symptoms appear to be dose dependent and palms are affected more than soles. Read more about hand-foot syndrome associated with chemotherapy
Arthralgia and myalgia	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. Read more about arthralgia and myalgia
Ocular changes	Symptoms may include eye pain, blurred vision, blepharitis, uveitis, optic neuritis, tear duct stenosis, conjunctivitis, hyperlacrimation, watery or dry eyes and photophobia.
Fatigue	Read more about fatigue
Fluid retention syndrome	Fluid retention, including peripheral oedema and weight gain, may occur with docetaxel treatment. The main risk factor for development is cumulative docetaxel dose. Pre-medication with dexamethasone may be used. Fluid retention will slowly resolve after cessation of treatment. Read more about fluid retention syndrome associated with docetaxel

Late (onset weeks to months)	
Anaemia	Abnormally low levels of red blood cells (RBCs) or haemoglobin in the blood. Read more about anaemia
Alopecia - partial	Hair thinning and/or patchy hair loss. Patients can also experience mild to moderate discomfort of the hair follicles, and rarely pain as the hair is falling out. Read more about alopecia and scalp cooling
Nail changes	Hyperpigmentation, paronychia, onycholysis, splinter haemorrhage, pyogenic granuloma formation, subungal haematoma and subungal hyperkeratosis are some of the nail changes associated with anti-cancer drugs. Read more about nail toxicities

Evidence

The evidence for docetaxel in metastatic castration sensitive prostate cancer comes from three phase III studies.

CHAARTED[2]

This study compared six cycles of docetaxel 75 mg/m² 3 weekly, plus androgen deprivation therapy (ADT) versus ADT alone.

Between July 2006 and November 2012, 790 men were randomly assigned to a maximum of 6 cycles of docetaxel plus ADT (n=397) or ADT alone (n=390).

The primary end point was overall survival (OS) and secondary endpoints included time to progressive disease (PD) and time to symptomatic PD. Men were stratified by volume of metastatic disease (high versus low), age, ECOG and prior adjuvant ADT.

STAMPEDE[3]

Survival data from the STAMPEDE trial, a multicentre, randomised control trial presented at ASCO 2015, showed a clinically and statistically significant improvement from the addition of docetaxel to androgen deprivation therapy in men with high-risk locally advanced or metastatic prostate cancer.

GETUG-AFU 15[4]

This study compared the addition of nine cycles of docetaxel to ADT versus ADT alone in patients with metastatic castration sensitive prostate cancer. Between October 2004 and December 2008, 385 patients were randomly allocated to receive docetaxel 75 mg/m² 3 weekly, plus ADT (n=192) versus ADT alone (n=193).

The primary endpoint was overall survival (OS) and secondary endpoints were time to clinical progression or death (clinical progression-free survival) and time to PSA progression, clinical progression or death (biochemical progression-free survival).

Efficacy

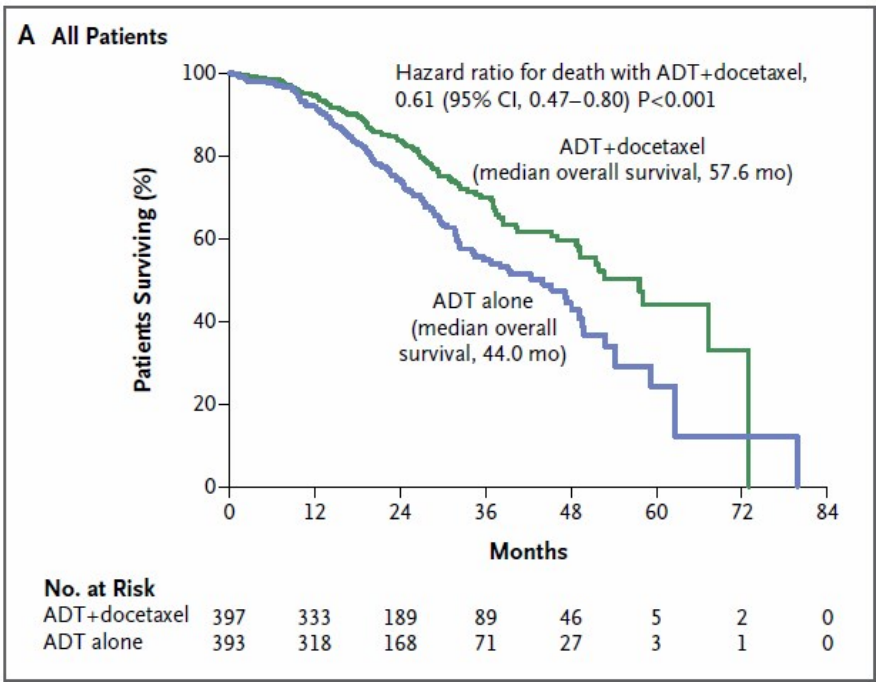
CHAARTED[2]

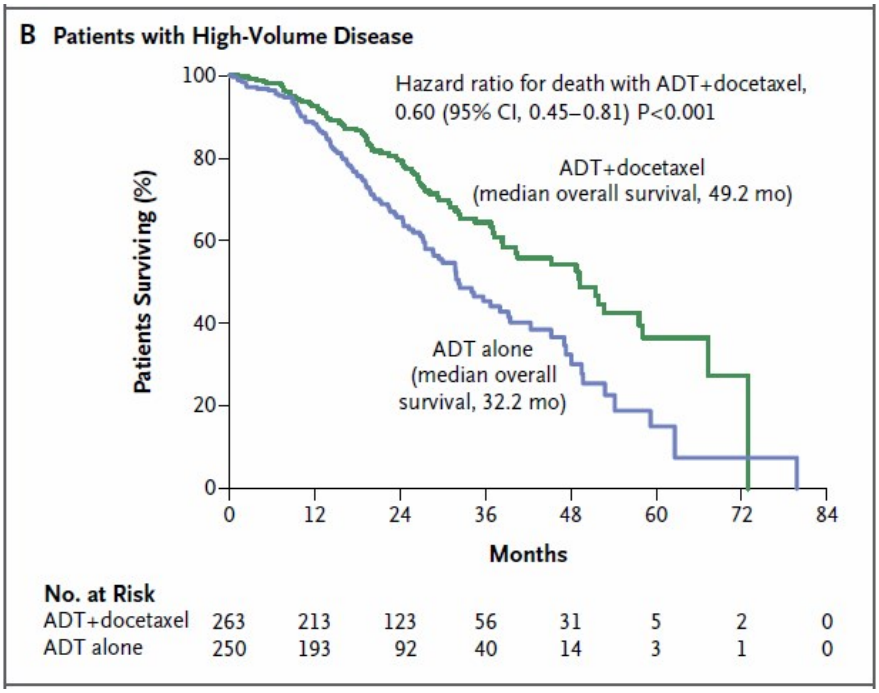
After a median follow up of 28.9 months there were 101 deaths in the docetaxel plus ADT group compared with 136 deaths in the ADT alone group.

Median OS was 57.6 months for those receiving docetaxel plus ADT group and 44.0 months in those receiving ADT alone (HR 0.61, 95% CI 0.47-0.80; p=0.0003).

For men with high volume metastases (visceral metastases and/or four or more bone metastases) receiving docetaxel plus ADT median OS was significantly improved compared with those receiving ADT alone, 49.2 months and 32.2 months respectively (HR 0.60, 95% CI 0.45-0.81; p<0.0006). Longer follow-up is required for patients with low volume metastatic disease. Subgroup analysis demonstrated benefit in most groups analysed. Median time to clinical progression was 32.7 months in patients receiving docetaxel plus ADT compared with 19.8 months in patients receiving ADT only (HR 0.49, 95% CI 0.37-0.65; p<0.0001). Median time to castrate-resistant prostate cancer was 20.7 months in those receiving the combination therapy compared with 14.7 in those receiving ADT only (HR 0.56, 95% CI 0.44-0.70; p<0.0001).

Overall Survival:[2]


A All Patients
Hazard ratio for death with ADT+docetaxel, 0.61 (95% CI, 0.47–0.80) P<0.001
ADT+docetaxel (median overall survival, 57.6 mo)
ADT alone (median overall survival, 44.0 mo)
Patients Surviving (%)
100
80
60
40
20
0
0 12 24 36 48 60 72 84
Months
No. at Risk
ADT+docetaxel 397 333 189 89 46 5 2 0
ADT alone 393 318 168 71 27 3 1 0


B Patients with High-Volume Disease
Hazard ratio for death with ADT+docetaxel, 0.60 (95% CI, 0.45–0.81) P<0.001
ADT+docetaxel (median overall survival, 49.2 mo)
ADT alone (median overall survival, 32.2 mo)
Patients Surviving (%)
100
80
60
40
20
0
0 12 24 36 48 60 72 84
Months
No. at Risk
ADT+docetaxel 263 213 123 56 31 5 2 0
ADT alone 250 193 92 40 14 3 1 0

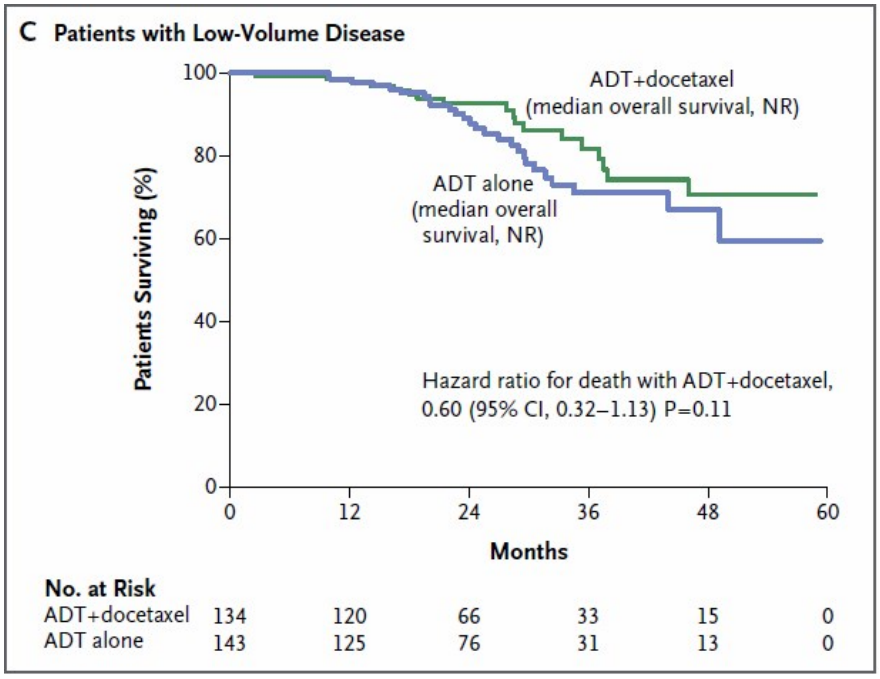


Figure 1. **Kaplan–Meier Estimates of Overall Survival.**
The median duration of follow-up was 28.9 months among all patients (Panel A), 29.2 months among patients with high-volume disease (Panel B), and 27.6 months among patients with low-volume disease (Panel C). ADT denotes androgen-deprivation therapy, and NR not reached.

GETUG AFU 15[4]

At median follow up of 50 months, median OS was 58.9 months (95% CI 50.8 to 69.1 months) in the docetaxel and ADT group and 54.2 months (95% CI 42.2 months to not yet reached) in the group given ADT alone (HR 1.01, 95% CI 0.75-1.36 p=0.955).

Overall Survival:[4]

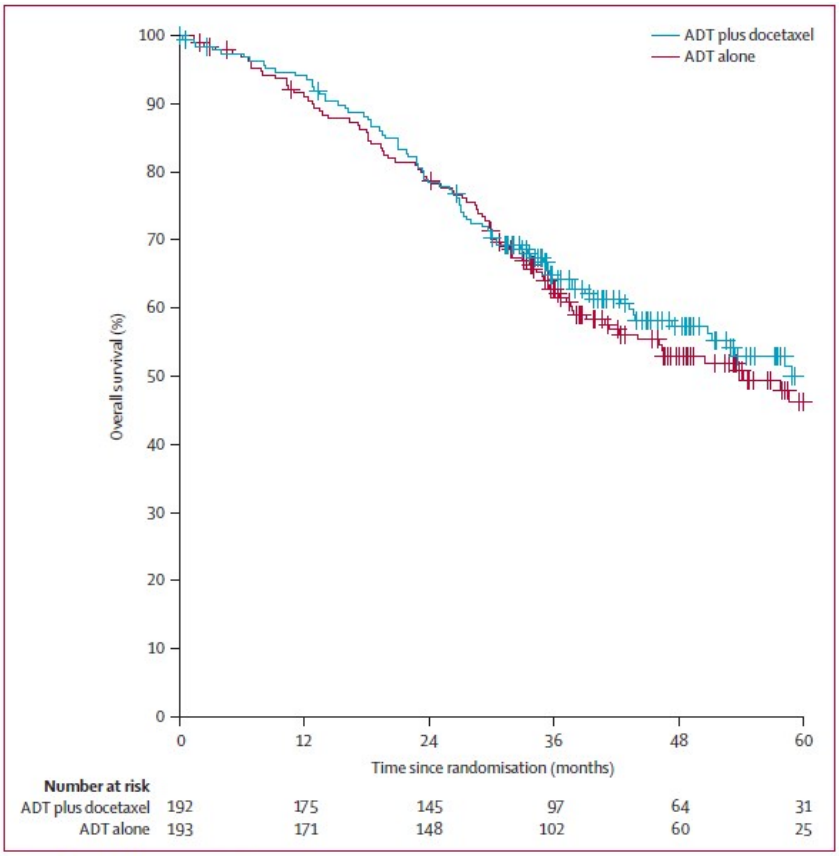


Figure 2: **Kaplan-Meier curves for overall survival by treatment group**
Crosses indicate censoring. ADT=androgen-deprivation therapy.

Updated data presented at ASCO GU meeting 2015[5] with a median follow up of 82.9 months, the median OS was 46.5 months in the ADT arm and 60.9 months in the ADT +D arm (HR 0.9, 95% CI 0.7 to 1.2; p=0.44). Retrospective analysis using the definition of volume of metastases used in the CHAARTED trial showed a non-significant 4 months increase in OS with ADT+D in the high visceral disease subset of patients.

Toxicity

CHAARTED[2]

Grade 3 and 4 adverse events were observed in 16% and 12% of docetaxel with ADT patients respectively. Febrile neutropenia was observed in 6% of patients. Sensory neuropathy was reported in 1% of patients. Toxicity from the ADT alone arm is yet to be reported. There was one treatment related death from chemotherapy (1/397).

Table 3. Adverse Events of Grade 3 or Higher among the 390 Patients Who Received the Docetaxel-Containing Regimen and Had Follow-up Data Available.*

Event	Grade 3	Grade 4	Grade 5
	no. of patients (%)		
Allergic reaction	7 (1.8)	1 (0.3)	0
Fatigue	16 (4.1)	0	0
Diarrhea	4 (1.0)	0	0
Stomatitis	2 (0.5)	0	0
Neuropathy, motor	2 (0.5)	0	0
Neuropathy, sensory	2 (0.5)	0	0
Thromboembolism	1 (0.3)	2 (0.5)	0
Sudden death	0	0	1 (0.3)
Anemia	4 (1.0)	1 (0.3)	0
Thrombocytopenia	0	1 (0.3)	0
Neutropenia	12 (3.1)	35 (9.0)	0
Febrile neutropenia	15 (3.8)	9 (2.3)	0
Infection with neutropenia	5 (1.3)	4 (1.0)	0
Any event	65 (16.7)	49 (12.6)	1 (0.3)

* Patients were classified according to the worst grade reported across all body systems. Patients assigned to ADT plus docetaxel were monitored every 3 weeks during the time docetaxel was administered and then every 3 months, whereas patients assigned to the ADT-alone group were seen every 3 months after randomization. Toxic effects in the group that received ADT plus docetaxel were captured at this frequency to ascertain the adverse-event profile of chemotherapy. The adverse-event profile of ADT was assumed to be common to the two groups. The potential risk of ascertainment bias for adverse events and early progression in the ADT-plus-docetaxel group was recognized, but such bias, if it existed, would have favored the ADT-alone group.

GETUG AFU 15[4]

	Androgen-deprivation therapy plus docetaxel (n=189)			Androgen-deprivation therapy alone (n=186)		
	Grade 1–5	Grade 3–4	Grade 5	Grade 1–5	Grade 3–5	Grade 5
Neutropenia	94 (50%)	61 (32%)	0	5 (3%)	0	0
Febrile neutropenia	15 (8%)	14 (7%)	1 (<1%)	0	0	0
Infections with neutropenia	5 (3%)	4 (2%)	1 (<1%)	0	0	0
Anaemia	136 (72%)	4 (2%)	0	41 (22%)	2 (1%)	0
Thrombocytopenia	20 (11%)	1 (<1%)	0	9 (5%)	0	0
Fatigue	140 (74%)	13 (7%)	0	37 (20%)	2 (1%)	0
Nausea	55 (29%)	0	0	4 (2%)	0	0
Vomiting	16 (8%)	0 (0%)	0	0	0	0
Diarrhoea	58 (31%)	1 (<1%)	0	4 (2%)	0	0
Constipation	42 (22%)	0	0	9 (5%)	0	0
Alopecia	102 (54%)	5 (3%)	0	1 (<1%)	0	0
Sensory neuropathy	54 (29%)	3 (2%)	0	7 (4%)	0	0
Nail changes	74 (39%)	5 (3%)	0	0	0	0
Peripheral oedema	55 (29%)	2 (1%)	0	10	0	0
Dyspnoea	36 (19%)	4 (2%)	0	6 (3%)	0	0
Stomatitis	15 (8%)	1 (<1%)	0	0	0	0
Mucositis	40 (21%)	1 (<1%)	0	0	0	0
Hot flushes	70 (37%)	8 (4%)	0	118 (63%)	3 (2%)	0
Erectile dysfunction	21 (11%)	16 (8%)	0	23 (12%)	14 (8%)	0
Decreased libido	21 (11%)	12 (6%)	0	28 (15%)	9 (5%)	0
Gynaecomastia	8 (4%)	0 (0%)	0	10 (5%)	1 (<1%)	0
Increased concentrations of alanine aminotransferase	43 (23%)	3 (2%)	0	22 (12%)	1 (<1%)	0
Increased concentrations of aspartate aminotransferase	38 (20%)	3 (2%)	0	17 (9%)	1 (<1%)	0
Other	131 (69%)	13 (7%)	2 (1%)	56 (30%)	1 (<1%)	0

Table 3: **Toxic effects reported in the first 6 months of treatment**

References

1 Franke, R. M., M. A. Carducci, M. A. Rudek, et al. 2010. "Castration-dependent pharmacokinetics of docetaxel in patients with prostate cancer." J Clin Oncol 28(30):4562-4567.

2 Sweeney, C. J., Y. H. Chen, M. Carducci, et al. 2015. "Chemohormonal Therapy in Metastatic Hormone-Sensitive Prostate Cancer." N Engl J Med 373(8):737-746.

3 James, N. D., M. R. Spears, N. W. Clarke, et al. 2015. "Survival with Newly Diagnosed Metastatic Prostate Cancer in the "Docetaxel Era": Data from 917 Patients in the Control Arm of the STAMPEDE Trial (MRC PR08, CRUK/06/019)." Eur Urol 67(6):1028-1038.

4 Gravis, G., K. Fizazi, F. Joly, et al. 2013. "Androgen-deprivation therapy alone or with docetaxel in non-castrate metastatic prostate cancer (GETUG-AFU 15): a randomised, open-label, phase 3 trial." Lancet Oncol 14(2):149-158.

5 Gravis, G., J. Boher & F. Joly et al. 2015. "Androgen deprivation therapy (ADT) plus docetaxel (D) versus ADT alone in hormone naive metastatic prostate cancer (PCa): Long-term analysis of the GETUG-AFU 15 phase III trial." J Clin Oncol 33, 2015 (suppl7;abstr140).

History

Version 4

Date	Summary of changes
04/11/2014	Protocol approved and published on eviQ. Intensive review.
27/03/2015	Protocol reviewed. Evidence updated. Review 2 years.
15/09/2015	Protocol reviewed by Reference Committee. Evidence updated to include STAMPEDE trial. Review 2 years
19/05/2017	Reviewed by Reference Committee, no changes. Review in 2 years.
31/05/2017	Transferred to new eviQ website. Protocol version number changed to V.2. Hepatitis screening changed to not recommended.
6/12/2017	Link to ADT patient information document added to protocol and patient information
10/05/2018	Haematological dose modifications updated as per consensus of the expert clinician group. Version number changed to V.3.
25/03/2019	Protocol reviewed at Medical Oncology Reference Committee meeting on 15/03/2019. Title, indication and evidence changed from hormone sensitive to castration sensitive. Treatment schedule note updated to include 4 week period between docetaxel and ADT. Dexamethasone dose changed to 8mg bd on day -1 to day 2 to align with ID 3264 taxane premedication dose. Version number changed to V.4. Next review in 5 years.

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19 Jun 2023

Patient information - Prostate cancer metastatic hormone-sensitive - Docetaxel

Patient's name:

Your treatment

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

Docetaxel			
This treatment cycle is repeated every 21 days. Your doctor will advise you of the number of treatments you will have. This treatment begins after androgen deprivation treatment (ADT) has started			
Day	**Treatment**	**How it is given**	**How long it takes**
1	**Docetaxel** (*doe-ce-tax-elle*)	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** Ask your doctor or nurse from your treating team who to contact if you have a problem
• 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.	Daytime: Night/weekend: Other instructions:

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.

Androgen deprivation therapy (ADT)

For more information see the eviQ patient information sheet on Androgen deprivation therapy (ADT) for prostate cancer.

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.
- **Docetaxel premedication:** before your treatment with docetaxel you may need to take a tablet called a premedication to help prevent you from having a reaction to docetaxel. A steroid tablet called dexamethasone may be used and should be taken with or after food as directed. The following table may be used to remind you when to take your premedication. Ask your doctor, nurse or pharmacist to fill it out for you.

Tablet	Dose	When to take

Tell your doctor or nurse if you have not taken your premedications before you have your treatment.

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.
	• **If you feel unwell during the infusion or shortly after it, or:**
	  ◦ **get a fever, shivers or shakes**
	  ◦ **feel dizzy, faint , confused or anxious**
	  ◦ **start wheezing or have difficulty breathing**
	  ◦ **have a rash, itch or redness of the face**
	
	<u>While you are in hospital:</u> Tell your doctor or nurse immediately.
	<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). • 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.**
Taste and smell changes	• You may find that food loses its taste or tastes different. • These changes are likely to go away with time. • Do your mouth care regularly. • Chew on sugar-free gum or eat sugar-free mints. • Add flavour to your food with sauces and herbs. • Ask your doctor or nurse for eviQ patient information - Taste and smell changes during cancer treatment.

Early (onset days to weeks)	

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.
	• Wash your hands often.
	• Keep a thermometer at home and take your temperature regularly, and if you feel unwell.
	• Do your mouth care regularly.
	• Inspect your central line site (if you have one) daily for any redness, pus or swelling.
	• Limit contact with people who are sick.
	• Learn how to recognise the signs of infection.
	• Ask your doctor or nurse for eviQ patient information - Infection during cancer treatment.
	• **Tell your doctor or nurse immediately, or go to the nearest hospital Emergency Department if you get any of the following signs or symptoms:**
	  ◦ **a temperature of 38°C or higher**
	  ◦ **chills, shivers, sweats or shakes**
	  ◦ **a sore throat or cough**
	  ◦ **uncontrolled diarrhoea**
	  ◦ **shortness of breath**
	  ◦ **a fast heartbeat**
	  ◦ **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. • Try not to bruise or cut yourself. • Avoid contact sport or vigorous exercise. • Clear your nose by blowing gently. • Avoid constipation. • Brush your teeth with a soft toothbrush. • Don't take aspirin, ibuprofen or other similar anti-inflammatory medications unless your doctor tells you to. • Tell your doctor or nurse if you have any bruising or bleeding. • **Tell your doctor or nurse immediately, or go to your nearest hospital Emergency Department if you have any uncontrolled bleeding.**
Mouth pain and soreness (mucositis)	• You may have: ◦ bleeding gums ◦ mouth ulcers ◦ a white coating on your tongue ◦ pain in the mouth or throat ◦ difficulty eating or swallowing. • Avoid spicy, acidic or crunchy foods and very hot or cold food and drinks. • Try bland and soft foods. • Brush your teeth gently with a soft toothbrush after each meal and at bedtime. If you normally floss continue to do so. • Rinse your mouth after you eat and brush your teeth, using either: ◦ 1/4 teaspoon of salt in 1 cup of warm water, or ◦ 1/4 teaspoon of bicarbonate of soda in 1 cup of warm water • Ask your doctor or nurse for eviQ patient information - Mouth problems during cancer treatment. • **Tell your doctor or nurse if you get any of the symptoms listed above.**
Diarrhoea	• 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.**
Skin rash	• You may get a red, bumpy rash and dry, itchy skin. • Moisturise your skin with a gentle non-perfumed moisturising cream like sorbolene or aqueous cream. • Do not scratch your skin. • Protect your skin from the sun by wearing sun-protective clothing, a wide-brimmed hat, sunglasses and sunscreen of SPF 50 or higher. • **Talk to your doctor or nurse about other ways to manage your skin rash.**

Nerve damage (peripheral neuropathy)	• You may notice a change in the sensations in your hands and feet, including:
	  ◦ tingling or pins and needles
	  ◦ numbness or loss of feeling
	  ◦ pain.
	• You may find it difficult to do everyday activities, such as doing up buttons or picking up small objects.
	• Test water temperature with your elbow when bathing to avoid burns.
	• Use rubber gloves, pot holders and oven mitts in the kitchen.
	• Wear rubber shoes or boots when working in the garden or garage.
	• Keep rooms well lit and uncluttered.
	• Ask your doctor or nurse for eviQ patient information – Nerve problems during cancer treatment.
	• Tell your doctor or nurse if you get any of the symptoms listed above.

Hand-foot syndrome (palmar-plantar erythrodysaesthesia)	• The palms of your hands and soles of your feet may become:
	  ◦ red and hot
	  ◦ swollen
	  ◦ painful and tender
	  ◦ blistered.
	• The skin in the area may also peel.
	• Moisturise your hands and feet daily with sorbolene or aqueous cream.
	• Keep your hands and feet clean and dry.
	• Avoid hot water, instead use lukewarm water to bathe.
	• Avoid direct sunlight.
	• Avoid unnecessary walking, jogging or exercise.
	• Wear cotton socks and avoid tight-fitting shoes.
	• **Tell your doctor or nurse as soon as possible if you notice any skin changes on your hands or feet.**

Joint and muscle pain and stiffness	• You may get muscle, joint or general body pain and stiffness. • Applying a heat pack to affected areas may help. • Talk to your doctor or nurse about other ways to manage these symptoms. You may need medication to help with any pain.

Eye problems	• You may get:
	  ◦ eye pain
	  ◦ red, sore or swollen eyes
	  ◦ blurred vision
	  ◦ watery or gritty eyes
	  ◦ changes in your eyesight
	  ◦ sensitivity to sunlight.
	• Protect your eyes from the weather (sun and wind) by wearing sunglasses, especially if you have lost your eyelashes.
	• **Tell your doctor or nurse if you get any of the symptoms listed above. Eye drops may help with your symptoms.**

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. • Do not drive or operate machinery if you are feeling tired. • Nap for short periods (only 1 hour at a time) • Prioritise your tasks to ensure the best use of your energy. • Eat a well balanced diet and drink plenty of fluids (unless you are fluid restricted). • Try some gentle exercise daily. • Allow your friends and family to help. • **Tell your doctor or nurse if you get any of the symptoms listed above.**

Extra fluid in the body (fluid retention)	• You may gain weight over a short amount of time. • Your hands and feet may become swollen, appear red or feel hot and uncomfortable. • These symptoms are caused by the drug docetaxel. • Wear loose clothing and shoes that are not too tight. • Try not to stand up or walk around too much at one time. • If your ankles or legs get swollen, try raising them. • Make sure that any cuts or areas of broken skin are treated as soon as possible. • **Tell your doctor or nurse as soon as possible if you get any of the symptoms listed above.** • **Tell your doctor or nurse immediately, or go to the nearest hospital Emergency Department if you become short of breath.**

Late (onset weeks to months)	
Low red blood cells (anaemia)	• You may feel dizzy, light-headed, tired and appear more pale than usual. • Tell your doctor or nurse if you have any of these signs or symptoms. You might need a blood transfusion. • **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 thinning	• Your hair may become dry and may break easily. • You may lose some of your hair. • Use a gentle shampoo and a soft hairbrush. • Take care with hair products like hairspray, hair dye, bleaches and perms. • Protect your scalp from the cold with a hat or scarf. • Protect your scalp from the sun with a hat and sunscreen of SPF 50 or higher. • Ask your doctor or nurse about the Look Good Feel Better program (www.lgfb.org.au)

Nail changes	• Your nails may:
	  ◦ grow more slowly
	  ◦ become darker
	  ◦ develop ridges or white lines
	  ◦ become brittle and flaky
	• In some cases, you may lose your nails completely.
	• Keep your nails clean and short.
	• Avoid things like biting your fingernails, getting a manicure, pedicure or false nails.
	• Wear gloves when you wash the dishes, work in the garden, or clean the house.

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 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.

Fathering a child

- Some cancer treatments can be dangerous to unborn babies. Talk to your doctor or nurse if you think there is any chance that your partner could be pregnant.
- Do not try to 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 fatherhood after completing this treatment, talk to your doctor. Some doctors advise waiting between 6 months and 2 years after treatment.

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

Prostate cancer information

- Continence Foundation of Australia – continence.org.au
- Healthy Male Andrology Australia – healthymale.org.au
- National Continence Management Strategy – bladderbowel.gov.au/ncp/ncms
- National Public Toilet Map – toiletmap.gov.au

- Prostate Cancer Foundation of Australia – prostate.org.au
- South Australian Prostate Cancer Clinical Outcome Collaborative – prostatehealth.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

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