

## Docetaxel and Prednisolone for prostate cancer

### DRUG ADMINISTRATION SCHEDULE<sup>1</sup>

Day	Drug	Dose	Route	Diluent & Rate
Day 0 to day 2	Dexamethasone	8mg BD*	Oral	For 3 days
Day 1	Sodium Chloride 0.9%	100 ml	Infusion	Fast Running
	Ondansetron	8 mg**	Oral /Slow bolus/15 min infusion	
	<b>Docetaxel</b>	<b>75mg/m<sup>2</sup></b>	<b>Intravenous</b>	250ml NaCl 0.9% over 60 minutes
Day 1-21	<i>Prednisolone</i>	<i>5mg BD***</i>	<i>Oral</i>	

\* Must pre-medicate with dexamethasone because of risk of hypersensitivity.

\*\* **Ondansetron IV must be infused over 15 minutes in patients over 65 years of age.**

\*\*\* Prednisolone maintenance may be omitted to reduce steroid burden

### CYCLE LENGTH AND NUMBER OF DAYS

21-day cycle

- Given up to a maximum of 10 cycles for metastatic castrate refractory patients.
- Given for 6 cycles for metastatic hormone naïve patients.

Re-challenge is not funded by NHS England.

### APPROVED INDICATIONS

As per NICE guidance TA101<sup>2</sup>

- Castrate refractory metastatic prostate cancer as evidenced by progressive increase in PSA (or gross disease) despite castrate levels of testosterone. In asymptomatic patients, further hormonal manipulation may be appropriate e.g. stilboestrol. If symptomatic then docetaxel should be offered at that stage.

**Or**

As per NHS England Clinical Commissioning Policy Statement: B15/PS/a<sup>3</sup>

- For treatment of hormone naïve metastatic prostate cancer where
  - Men either commencing, or who have commenced within 12 weeks, long-term ADT for metastatic disease for the first time; and
  - Men of sufficient performance status to be treated with 6 cycles of docetaxel chemotherapy.
  - **Note Docetaxel chemotherapy must be started at least three weeks after ADT to reduce the risk of neutropenia<sup>4</sup>**

### ELIGIBILITY CRITERIA

Karnofsky Performance Status ≥ 60% (WHO/ECOG PS 0-2)

Adequate liver function tests (Bilirubin < 1.5 x ULN, ALT < 2.5 x ULN)

Life expectancy > 3 months

### EXCLUSION CRITERIA

Patients not fitting the above criteria

### PREMEDICATION

Oral Dexamethasone as above

### RECOMMENDED TAKE HOME MEDICATION

Dexamethasone 8mg twice daily for 3 days starting 24 hours prior to chemotherapy

Metoclopramide 10mg three times daily as required

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*Suggested antiemetic regimen - may vary with local practice. See CINV policy for more details*

### **INVESTIGATIONS / MONITORING REQUIRED**

Prior to each cycle - FBC, U&Es, LFTs, PSA (PSA result not required to proceed with treatment)

### **ASSESSMENT OF RESPONSE**

PSA Level to be measured every 3 weeks. Treatment should be discontinued (progressive disease):

- If PSA rises by 25% from its lowest value on treatment,
- Or for patients with a baseline PSA > 20ng/ml and the nadir PSA has fallen to ≤ 50% of baseline and been maintained for at least 3 weeks and the PSA has now risen by 50% from nadir PSA.

Radiological imaging (by CT scan) should be considered for patients with appropriate disease. Decision, by consultant oncologist, to discontinue treatment should be based on the above and patient's overall symptoms.

Hormone naïve metastatic prostate cancer patients should receive 6 cycles of docetaxel then continue with ADT until the disease becomes resistant to this treatment.

### **REVIEW BY CLINICIAN**

Minimum of every 2 cycles

### **NURSE/PHARMACIST LED REVIEW**

On cycles where not seen by clinician.

### **ADMINISTRATION NOTES**

- Make sure the patient has taken oral dexamethasone premedication. Docetaxel has been known to produce hypersensitivity reactions, steroid co-medication will also reduce the risk of fluid retention and skin reactions.
- Facilities to treat anaphylaxis MUST be present when the chemotherapy is given.
- Do not need to stop treatment for minor hypersensitivity e.g. reactions, flushing, localised rash.
- Must be stopped for major reactions, e.g. hypotension, bronchospasm and generalised rash.
- The nadir occurs earlier with docetaxel than with other chemotherapy regimens.
- Raised bilirubin has been associated with increased toxicity.

### **TOXICITIES**

- Anaphylaxis and hypersensitivity reactions
- Fluid retention syndrome
- Nausea and Vomiting
- Bone Marrow Suppression
- Alopecia
- Pain on administration
- Peripheral Neuropathy
- Joint pains
- Deranged LFTs

### **EXTRAVASATION** See NCA/ Local Policy

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### DOSE MODIFICATIONS / TREATMENT DELAYS

#### Haematological toxicities

ANC (x10 <sup>9</sup> cells/l)		PLT (x10 <sup>9</sup> cells/l)	Docetaxel Dose	Docetaxel Dose after Neutropenic Sepsis, Fever with Grade III/IV Neutropenia or Infection
≥ 1.5	<b>AND</b>	> 100	100%	75%
1.0 – 1.4	<b>OR</b>	70 - 100	Delay then (90-100%)	75%
< 1.0	<b>OR</b>	< 70	Delay (then 75%)	Delay (then 75%)

If more than two 25% dose reductions, or delay, due to toxicity, lasting more than 2 weeks discontinuation of treatment should be considered.

#### Hepatic Dysfunction:

Bilirubin		ALP*		ALT	Docetaxel Dose
≤ ULN	<b>AND</b>	< 2.5 x ULN	<b>AND</b>	≤ 1.5 x ULN	100%
≤ ULN	<b>AND</b>	2.5-5 x ULN	<b>AND</b>	1.6-5 x ULN	75%
≤ ULN	<b>AND</b>	> 5 x ULN	<b>OR</b>	> 5 x ULN	Discuss with consultant

\*unless bone metastasis and no known hepatic dysfunction  
Docetaxel **contra-indicated** if bilirubin greater than 70µmol/L

### TREATMENT LOCATION

Suitable for administration within Cancer Units & Centres.

### REFERENCES

1. Docetaxel Summary of Product Characteristics Available at [www.medicines.org.uk](http://www.medicines.org.uk)
2. Docetaxel for the treatment of hormone-refractory metastatic prostate cancer NICE technology appraisal guidance [TA101] Published date: June 2006
3. NHS England: Clinical Commissioning Policy Statement: Docetaxel in combination with androgen deprivation therapy for the treatment of hormone naïve metastatic prostate cancer NHS England Reference: [B15/PS/a] 20<sup>th</sup> January 2016.
4. Bulach, McKay, Neilson, White, Wallace, Carruthers, MacLeod. (2018). Real world uptake, safety profile and outcomes of docetaxel in newly diagnosed metastatic prostate cancer. *BJU International*, 121(2), 268-274.

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<b>Summary of Changes</b>	1.0a	Document Approved	
	1.1a	Updated formatting. Hormone Resistant updated with Castrate Resistant. Re-treatment clarified.	
	1.2	Protocol reviewed and reformatted. Typing errors corrected.	
	1.3	Protocol reviewed and reissued, Antiemetic advice updated	
	2.0	Added hormone naïve indication	
	2.1	Updated from Chemocare protocol,	
	2.3	added three week delay to newly diagnosed and steroids made optional	