

## Docetaxel (NSCLC)

### Indication

Second line treatment of locally advanced or metastatic non-small cell lung cancer (NSCLC) in patients who have relapsed after previous chemotherapy.

(NICE CG 121)

### ICD-10 codes

Codes with a prefix C34

### Regimen details

Day	Drug	Dose	Route
1	Docetaxel	75mg/m <sup>2</sup>	IV infusion

### Cycle frequency

21 days

### Number of cycles

4-6 cycles (depending on response)

### Administration

Docetaxel is administered as an IV infusion in 250mL or 500mL (concentration dependent) PVC free sodium chloride 0.9% over 60 minutes.

Patients should be observed closely for hypersensitivity reactions, particularly during the first and second infusions.

Hypersensitivity reactions may occur within a few minutes following the initiation of the infusion of docetaxel and therefore facilities for the treatment of hypotension and bronchospasm must be available.

If hypersensitivity reactions occur, minor symptoms such as flushing or localised cutaneous reactions do not require discontinuation of therapy. The infusion may be temporarily interrupted and when symptoms improve re-started at a slower infusion rate. Severe reactions, such as hypotension, bronchospasm or generalised rash/erythema require immediate discontinuation of docetaxel and appropriate therapy.

Patients who have developed severe hypersensitivity reactions should not be re-challenged with docetaxel.

### Pre-medication

Dexamethasone 8 mg BD (morning and lunchtime) for 3 days starting 24 hours prior to chemotherapy. (Note: Patients must receive 3 doses of dexamethasone prior to treatment).

In the case where 3 doses have not been taken, dexamethasone 16-20mg IV should be administered 30-60 minutes prior to chemotherapy and the remaining 3 oral doses should be taken as normal.

### Emetogenicity

This regimen has mild - moderate emetic potential

### Additional supportive medication

Mouthwashes as per local policy  
 H<sub>2</sub> antagonist or proton-pump inhibitor if required  
 Loperamide if required.  
 Scalp cooling may be offered.

### Extravasation

Docetaxel is an exfoliant (Group 4)

### Investigations – pre first cycle

Investigation	Validity period (or as per local practice)
FBC	14 days
U+E (including creatinine)	14 days
LFTs	14 days

### Investigations – pre subsequent cycles

Investigation	Validity period (or as per local practice)
FBC	96 hours
U+E (including creatinine)	7 days
LFTs	7 days

### Standard limits for administration to go ahead

If blood results not within range, authorisation to administer **must** be given by prescriber/ consultant

Investigation	Limit
Neutrophils	$\geq 1.5 \times 10^9/L$
Platelets	$\geq 100 \times 10^9/L$
Bilirubin	$\leq$ ULN
AST/ALT	$\leq 1.5 \times$ ULN
Alkaline Phosphatase	$\leq 2.5 \times$ ULN

### Dose modifications

- Haematological toxicity**

If neutrophils  $<1.5 \times 10^9/L$  and/or platelets  $<100 \times 10^9/L$  delay 1 week or until recovery.

If febrile neutropenia or neutrophils  $< 0.5 \times 10^9/L$  for more than 1 week reduce dose to  $60\text{mg}/\text{m}^2$  for all subsequent cycles.

If platelets  $<25 \times 10^9/L$  consider dose reduction to  $60\text{mg}/\text{m}^2$  after recovery (discuss with consultant)

- Renal impairment**

There is no data available on the use of docetaxel in severe renal impairment. No modifications required.

- Hepatic impairment**

AST/ALT (x ULN)		Alkaline phosphatase* (x ULN)	Docetaxel dose
$\leq 1.5$	and	$< 2.5$	100%
$> 1.5$	or	$\geq 2.5- 6$	75%
$> 3.5$	or	$\geq 6$	Discuss with consultant

\*unless due to bone metastases only.

If bilirubin  $> 1.0 \times$  ULN withhold dose (or consultant decision to treat)

- **Other toxicities**

Grade 3 cutaneous reactions – once recovered reduce dose to 60mg/m<sup>2</sup>. If symptoms return, discontinue treatment.

Grade 2 neuropathy - once recovered reduce dose to 60mg/m<sup>2</sup>. If symptoms return, discontinue treatment.

Grade 3 or 4 neuropathy – discontinue treatment permanently.

Any other grade 3 or 4 toxicity- discuss with consultant.

**Adverse effects** - for full details consult product literature/ reference texts

- **Serious side effects**

Secondary malignancy

Myelosuppression

Infusion related reactions

Anaphylaxis

Interstitial pneumonitis

Teratogenicity

Infertility

Cardiotoxicity

Peripheral neuropathy

- **Frequently occurring side effects**

Diarrhoea

Constipation

Fatigue

Nausea and vomiting

Myelosuppression

Stomatitis and mucositis

Arthralgia and myalgia

- **Other side effects**

Alopecia

Fluid retention

Deranged liver function

Phlebitis

Skin toxicity

Nail changes

**Significant drug interactions** – for full details consult product literature/ reference texts

**CYP3A4 Enzyme inducers/inhibitors:** in vitro studies suggest that CYP3A inhibitors (such as ketoconazole, ritonavir, clarithromycin and erythromycin) may raise docetaxel levels, whereas CYP3A inducers (such as rifampicin and barbiturates) may reduce docetaxel levels.

**Additional comments**

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## References

- National Institute for Health and Clinical Excellence. Clinical Guideline 121 – Lung Cancer accessed via [www.nice.org.uk](http://www.nice.org.uk) (04 June 2014)
  - Summary of Product Characteristics Taxotere® (Docetaxel) 160mg/8ml concentrate and solvent for solution for infusion (Sanofi Aventis) accessed via [www.medicines.org.uk](http://www.medicines.org.uk) (04 June 2014)
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