

# CYCLOPHOSPHAMIDE WEEKLY

An alternative to melphalan in myeloma patients with a poor reserve of normal haematopoiesis  
or who have shown prolonged cytopenias after melphalan

Drugs/Dosage: **Cyclophosphamide** 400mg/m<sup>2</sup> po once weekly  
In elderly or frail patients, or those with significantly impaired marrow reserve or impaired renal function (see below), consider starting with 50 - 75% dose and increasing subsequently if tolerated  
+/-  
**Prednisolone** 40mg/m<sup>2</sup> po on alternate days for 6 weeks, then tailed off over 2 weeks

Administration: Cyclophosphamide available as 50mg tablets, to be swallowed whole with a full glass of water. Encourage 2 – 3 litres oral fluid intake over the 24 hours after each dose.  
Prednisolone available as 25mg, 20mg and 5mg tablets, to be taken in the morning with or after food

**Other drugs:** Allopurinol (dose according to renal function) – review after 4 weeks  
Omeprazole 20mg od (or ranitidine) is recommended if using prednisolone

Frequency: weekly cycle  
Treat until paraprotein stable for 3 months or until disease progression

Main Toxicities: myelosuppression; haemorrhagic cystitis; alopecia (mild);  
steroid side effects; ovarian failure; infertility

Anti- emetics: moderately emetogenic  
(N.B. If using prednisolone, anti-emetic doses of dexamethasone are not required)

Regular Investigations: FBC baseline, then at least every 4 weeks, more frequently if indicated  
U&Es & LFTs baseline, then as indicated  
Paraprotein and/or serum free light chains every 4-8 weeks

## Dose Modifications

Haematological:  
Toxicity:

**Cycle 1:** No dose modifications

**Subsequent cycles:** If neutrophil count < 1.0 x 10<sup>9</sup>/L or platelets < 50 x 10<sup>9</sup>/L, continue with prednisolone (if using).

Omit 1 – 3 weeks of cyclophosphamide, then re-introduce, with consideration of using a reduced dose.

If low counts are thought to be due to marrow infiltration, discuss with Consultant.

Reason for Update: overdue review ; CLL indication removed	Approved by Chair of Alliance TSSG: Dr A Laurie
Version: 5	Date: 6.2.17
Supersedes: Version 4	Review Date: Feb 2020
Prepared by: S Taylor	Checked by: C Tucker

Renal Impairment:

<b>CrCl (ml/min)</b>	<b>Cyclophosphamide Dose</b>
> 20	Give 100% dose
10 – 20	Give 75% dose
< 10	Give 50% dose

Steroid Side Effects: If severe steroid-related side effects develop, dose reduction of prednisolone may be considered.

Patient Information: Macmillan leaflet for Cyclophosphamide

References: Brandes LJ and Israels LG; Eur J Haematol 1987; 39: 362 – 368  
MacLennan I et al; Lancet 1992; 339: 200 – 205 (results from Myeloma V)

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