

## ALEMTUZUMAB (SC or IV)

First or second line treatment option in a fit patient with 17p-deleted CLL

First or second line treatment for T-cell prolymphocytic leukaemia

Patients with bulky disease may be given alemtuzumab in combination with high dose methylprednisolone

**Currently only available via a Patient Access Scheme – see separate Access Form**

- Drugs/Dosage:** **Alemtuzumab dose escalation** during Week 1 (with pre-medication), as follows:  
Day 1: 3mg S/C or IV  
Day 2: 10mg S/C or IV  
Day 3: 30mg S/C or IV  
If acute severe reaction occurs at 3mg or 10mg, repeat that dose once daily until tolerated before escalating.
- Then, on Weeks 2 - 12:  
**Alemtuzumab** 30mg S/C or IV three times per week (Mon, Wed and Fridays)  
+/-  
**High dose Methylprednisolone** according to Alliance protocol
- Pre-medication for dose escalation, and as indicated thereafter:**  
Dexamethasone\* 4-8mg (or equivalent steroid) IV or PO 30 - 60 minutes before each dose (once dose escalation achieved, the dose may be reduced as clinically indicated)  
Chlorphenamine 4mg po 60 mins before each dose (or 10mg IV 30 mins pre dose)  
Paracetamol 1000mg po 30 - 60 minutes before each dose  
\* If the patient is also receiving high dose methylprednisolone, omit the dexamethasone on any day that methylprednisolone is also due, and administer the methylprednisolone at least 30 – 60 minutes before the alemtuzumab dose.
- Administration:** IV route: intravenously in 100ml Sodium Chloride 0.9% over 2 hours  
S/C route: bolus s/c injection of undiluted alemtuzumab (30mg/ml) into the thigh  
N.B. If treating T-PLL, the IV route only must be used.  
Patient must remain under observation for 1 hour after the first three doses in case of any delayed reaction.
- Other Drugs:** Allopurinol 300mg po od – review after 2 weeks  
PCP prophylaxis - prescribe according to unit practice/protocol (generally until 6 months after completion of treatment, or according to CD<sub>4</sub> counts)  
Fluconazole 50 – 150mg daily for antifungal prophylaxis  
Aciclovir 400mg bd until 4 months after completion of treatment  
Patients showing CMV viraemia to be treated with ganciclovir (see Alliance CMV guidelines)
- Frequency:** 3 times weekly for a maximum of 12 weeks, with a bone marrow performed after 4 weeks of therapy.  
Discontinue if CR or if no further clinical improvement over any 4 week period
- Main Toxicities:** intravenous infusion-related reactions (hypotension, rigors, fever, shortness of breath, chills, rash, bronchospasm); opportunistic infections; pancytopenia;  
injection site reactions (s/c route)
- Anti- emetics:** mildly emetogenic

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Prepared by: S Taylor	Checked by: C Tucker

Extravasation:	non-vesicant	
Regular Investigations:	FBC	once weekly
	U&Es and LFTs	once weekly
	Bone marrow	after 4 weeks of treatment
	CMV PCR	weekly until 2 months after last dose (see CMV guidelines)

Comments: In the event of mild infusion-related reactions associated with the IV route, temporarily stop the infusion. If more severe, treat with IV corticosteroids, or pethidine for severe rigors, and re-challenge with the same dose on the next day.  
If recurrent problems with infusion-related reactions, consider extending the infusion time.

Injection site reactions with the subcutaneous route may require changing back to the IV route. They are less common when given with high dose steroids, and usually resolve within 2 weeks of starting treatment.

All patients must receive irradiated blood products starting before treatment and for all future transfusions - inform patient and blood bank.

If, at any point, therapy is withheld for more than 7 days, alemtuzumab should be reinstated with gradual dose escalation from 3mg, as above.

Patients should not receive live viral vaccines for at least 12 months after treatment.

## Dose Modifications

Haematological Toxicity: If severe infection, neutrophils  $< 0.25 \times 10^9/L$  or platelets  $< 25 \times 10^9/L$ , treatment with alemtuzumab should be interrupted until neutrophils  $> 0.5$  and platelets  $> 50$ .  
If low counts occur a second time, a lower dose of 10mg three times a week is recommended after recovery.  
If low counts occur on a third occasion, it should be permanently discontinued.  
If therapy withheld for more than 7 days, it should be re-introduced with gradual dose escalation as above.

For patients initiating therapy with baseline neutrophils  $< 0.25 \times 10^9/L$  or baseline platelets  $< 25 \times 10^9/L$ , alemtuzumab should be interrupted if the neutrophils or platelets decrease to  $\leq 50\%$  of baseline value. Alemtuzumab may be re-commenced once counts return to baseline value.

Again, if therapy is withheld for more than 7 days, it should be re-introduced with gradual dose escalation as above.

Renal and Hepatic Impairment: Not studied

Patient Information: Macmillan leaflet for Alemtuzumab

References: Keating, MJ et al; Blood (2002); 99 (10): 3554 – 3561  
Letter on file from Sanofi (s/c route)

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