PROTOCOL

The Clatterbridge Cancer Centre NHS Foundation Trust

Systemic Anti Cancer Therapy Protocol

# Bendamustine Monotherapy (Trust Funded) Hodgkin's Lymphoma

PROTOCOL REF: MPHABMTFHL
(Version No. 1.0)

## Approved for use in:

- Relapsed/refractory Hodgkin's Lymphoma in patients that have exhausted other treatment options **(off label indication)**

**Bendamustine is not routinely funded by NHS England for this indication so Blueteq submission is not required, therefore approval from the Trust compassionate use panel is required prior to initiation.**

## Dosage:

| Drug | Dose | Route | Frequency |
|---|---|---|---|
| **Bendamustine** | **90 mg/m$^2$** | IV infusion | Days 1 and 2 |

**Cycle length every 28 days. Maximum of 6 cycles.**

## Administration:

- Patients will required irradiated blood products (lifelong) –the patients receive information booklets about irradiated blood when counselled by the specialist nurses. It contains an alert card that the patient carries around with them. The specialist nurses then contact the lab to inform them of the need for irradiated blood products.

## Emetogenic risk:

Moderately emetogenic.

## Supportive treatments:

***Bendamustine pre-infusion medicines:***

- Ondansetron IV 8mg

***Supportive medicines:***

- Allopurinol PO 300mg once daily for first cycle (or 100mg in renal severe renal dysfunction). Consider rasburicase if high risk of tumour lysis syndrome.
- Aciclovir PO 400mg twice daily is not generally required but may be given at the discretion of the prescriber.
- Co-trimoxazole PO 480mg once daily (continue for 3-6 months after treatment)
- Metoclopramide PO 10mg three times daily when required
- Ondansetron PO 8mg twice daily for 5 days
- Secondary prophylaxis with filgrastim s/c once daily for 5 days starting on day 5 of the cycle (30 million units if < 70 kgs or 48 million units if > 70kgs)

## Extravasation risk:

Bendamustine: irritant

Refer to the CCC policy for the 'Prevention and Management of Extravasation Injuries'

## Dosing in renal and hepatic impairment:

| | | |
|---|---|---|
| **Renal** | Bendamustine | No dose adjustment needed |

| | | **Bilirubin (µmol//L)** | **Modification** |
|---|---|---|---|
| **Hepatic** | Bendamustine | 20 - 51 | 70% dose |
| | | >51 | Not recommended |

## Interactions:

Bendamustine metabolism involves cytochrome P450 (CYP) 1A2 isoenzyme. Therefore, potential for interaction with CYP1A2 inhibitors such as fluvoxamine, ciprofloxacin, aciclovir or cimetidine exists

For more detailed interactions please refer to the SPC and add a link to the appropriate SPC

## Treatment schedule:

| Day | Drug | Dose | Route | Diluent and rate |
|---|---|---|---|---|
| 1 | **Ondansetron** | **8mg** | **IV** | 30 minutes before chemotherapy |
| | **Bendamustine** | **90mg/m2** | **IV** | In 500 mls of sodium chloride 0.9% over 60 minutes |
| 2 | **Ondansetron** | **8mg** | **IV** | 30 minutes before chemotherapy |
| | **Bendamustine** | **90mg/m2** | **IV** | In 500 mls of sodium chloride 0.9% over 60 minutes |

## Main toxicities:

| **Bendamustine** |
|---|
| Thrombocytopenia, neutropenia, anaemia, nausea, vomiting, diarrhoea, allergic reactions, fever, hepatitis B reactivation, non-melanoma skin cancers, tumour lysis syndrome and cardiac disorders, AST/ALT increase. |

## Investigations and treatment plan:

| | Pre | Cycle 1 | Cycle 2 | Cycle 3+ | Ongoing |
|---|---|---|---|---|---|
| Informed Consent | X | | | | |
| Clinical Assessment | X | X | X | X | Every cycle |
| FBC | X | X | X | X | Every cycle |
| U&E & LFTs | X | X | X | X | Every Cycle |
| CrCl (Cockcroft and Gault) | X | X | X | X | Every cycle |
| Hepatitis B core antibody & surface antigens, Hepatitis C & HIV 1+2 | X | | | | |
| PET-CT scan | X | | | | After 2-4 cycles and at end of treatment if palpable disease |
| ECG | | | | | If clinically indicated |
| Blood pressure measurement | X | | | | Repeat if clinically indicated |
| Respiratory Rate | | | | | If clinically indicated |
| Height recorded | X | | | | |
| Weight recorded | X | X | X | X | Every cycle |
| Blood glucose | X | | | | Repeat if clinically indicated |
| Pregnancy test | X | | | | Where appropriate |

## Dose Modifications and Toxicity Management:

## Haematological toxicity:

No dose modifications are required for cycle 1.

Subsequent cycles to proceed if-

| | |
|---|---|
| ANC ≥ 1.0 x $10^9$/L | Platelets ≥ 50 x $10^9$/L |

If ANC < 1 x $10^9$/L or platelets < 50 x $10^9$/L then chemotherapy to be delayed until blood counts have increased above these values. Bendamustine is to be dose reduced to 50mg/$m^2$ for the first episode of cytopenia and reduced to 25mg/$m^2$ for subsequent episodes

These haematological guidelines assume that patients are well with good performance status, that other acute toxicities have resolved and the patient has not had a previous episode of neutropenic sepsis.

## Non- Haematological toxicity:

See 'Dosing in Renal and Hepatic Impairment'

## References:

1. https://www.medicines.org.uk/emc Bendamustine 180 mg/4 ml Concentrate For Solution for Infusion. Accessed 03/07/2023. Revised 08/06/2022.
2. Krens S D, Lassche, Jansman G F G A, et al. Dose recommendations for anticancer drugs in patients with renal or hepatic impairment. Lancet Oncol 2019; 20: e201–08

## Circulation/Dissemination

| | |
|---|---|
| Date added into Q-Pulse | 13th October 2023 |
| Date document posted on the Intranet | N/A |

## Version History

| | | Author name and designation | Summary of main changes |
|---|---|---|---|
| July 2023 | 1.0 | **Aileen McCaughey – Advanced HO Pharmacist** | **New protocol** |
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