

Systemic Anti Cancer Treatment Protocol Guide

# Oncology Methotrexate SHO Guide

## PAM/AM

PROTOCOL REF: GPHAPAMAM  
(Version No: 1.0)

### Background

Rescue folinic acid is required with high dose methotrexate in the PAM/AM treatment regimen. This **must** be prescribed and monitored independently and this protocol lays out the steps required to do this safely.

### Approved for use in:

- Patients who are receiving PAM/AM in an inpatient setting

### Key Information:

- When a patient is receiving the PAM/AM regimen, they will require a folinic acid rescue prescribing to commence **exactly 24 hours after the start time of the methotrexate infusion.**
- Nursing staff will alert you that this needs to be prescribed.
- **THIS MUST BE PRESCRIBED AS THE METHOTREXATE INFUSION COMMENCES – FAILURE TO DO SO CAN DELAY TREATMENT AND COMPROMISE PATIENT SAFETY.**
- **Folinic acid rescue should be prescribed in advance as soon as accurate times are known**
- Medical staffing can consider increasing the dose of folinic to 60mg if severe/symptomatic mucositis develops

### Responsibilities

- All ward doctors and NMPs are responsible for following this protocol.
- To be prescribed by ward doctors.

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Author: Olivia Court	Authorised by: Drug & Therapeutics Committee	Version No: 1.0

- The process below **MUST** be followed on a 24 hour basis until methotrexate levels **fall below 0.1 micromol/L** when **folinic acid rescue can be stopped**.

## Timings and Actions Required

Time (hrs)	Required Action															
0	<p>Methotrexate infusion commences.</p> <p>Folinic acid initial rescue dosing to be prescribed <b>to start at Time +24hrs.</b></p> <p><b>Screenshot of Initial Prescription Order Set</b></p> <div><div>OrderSCH</div><div>Folinic acid rescue (PAM/AM)</div><div><p>*INITIAL PRESCRIPTION*</p><p>START TIME MUST BE ENTERED MANUALLY</p><p>Folinic acid rescue to begin 24 hours after start of methotrexate, to run 6 hourly until methotrexate levels reach &lt;0.1micromol/L</p><p>N.B. If methotrexate levels exceed 2.0 micromol/L at 48 hours or subsequently the dose must be escalated as below</p><p>For patients with BSA above 2.0m2 increase the dose of folinic acid to 45mg</p><div>Folinic acid PAM/AM regime</div><div><div><input type="checkbox"/> folinic acid 30mg in NaCl 0.9% over 30min Q6H</div><div>SCH</div></div><div><div><input type="checkbox"/> folinic acid 45mg in NaCl 0.9% over 30min Q6H</div><div>SCH</div></div></div></div>															
+24	<p>Methotrexate infusion terminates and methotrexate level taken. Level recorded but no action taken.</p> <p>Folic acid rescue begins:</p> <table><tr><th>BSA (m<sup>2</sup>)</th><th>Drug</th><th>Dosage</th><th>Route</th><th>Frequency</th></tr><tr><td>≤2.0</td><td>Folinic Acid</td><td>30mg</td><td>IV</td><td>Every SIX hours</td></tr><tr><td>&gt;2.0</td><td>Folinic Acid</td><td>45mg</td><td>IV</td><td>Every SIX hours</td></tr></table> <p><b>**NOTE YOU WILL HAVE TO ENTER THE START TIME MANUALLY**</b></p>	BSA (m <sup>2</sup> )	Drug	Dosage	Route	Frequency	≤2.0	Folinic Acid	30mg	IV	Every SIX hours	>2.0	Folinic Acid	45mg	IV	Every SIX hours
BSA (m <sup>2</sup> )	Drug	Dosage	Route	Frequency												
≤2.0	Folinic Acid	30mg	IV	Every SIX hours												
>2.0	Folinic Acid	45mg	IV	Every SIX hours												

Order

SCH

Status

Start/Stop

Folinic acid rescue (PAM/AM)

\*INITIAL PRESCRIPTION\*

START TIME MUST BE ENTERED MANUALLY

Folinic acid rescue to begin 24 hours after start of methotrexate, to run 6 hourly until methotrexate levels reach <0.1micromol/L

N.B. If methotrexate levels exceed 2.0 micromol/L at 48 hours or subsequently the dose must be escalated as below

For patients with BSA above 2.0m2 increase the dose of folinic acid to 45mg

Folinic acid PAM/AM regime

☒ folinic acid 30mg in NaCl 0.9% over 30min Q6H
 SCH New Fri 20 Nov 09:00
 

Edit

\* Clinician

Haylock,Brian

☐ folinic acid 45mg in NaCl 0.9% over 30min Q6H
 SCH

Edit Order

Order

Start/Stop

Status

folinic acid 30mg in NaCl 0.9% over 30min Q6H

Sat 21 Nov 09:00

New

\*Clinician

Haylock,Brian

\* IV Fluid

Sodium Chloride 0.9% [Sodium Chloride 0.9% Infusion 100 MI]

100

ml

Additive/Medication

Folinic Acid [Folinic Acid (As Calcium Folate) 350...

30

mg

Total Volume

103

ml

Titrate

☐ Yes ☒ No

\*Rate

206

\*Units

mls/hr

\*Frequency

Q6H

Infusion Site

IV INFUS

\*Route

IV INFUS

\*Start Date

Sat 21 Nov

\*Start Time

09:00

Stop Date

Stop Time

Days

Hours

+48

Methotrexate level taken.

Folinic acid dosing to be prescribed dependent on methotrexate 48hr level:

BSA	Methotrexate plasma concentration (micromol/L)			
	<0.1	0.1 – 2.0	2.0 – 20 (Escalation Level 1)	20 – 100 (Escalation Level 2)*
≤2.0m <sup>2</sup>	Discontinue folinic acid	30mg Q6H	30mg Q3H	100mg/m <sup>2</sup> Q3H
>2.0m <sup>2</sup>		45mg Q6H	45mg Q3H	

\*For any methotrexate level >100 micromol/L inform consultant and pharmacy immediately.

**Screenshot of Dose Escalation Order Sets**

\*DOSE ESCALATION 1 for ALL levels taken at 48 hours or subsequently\*

Methotrexate Level 2.0 to 20 micromol/L

For patients with BSA above 2.0m<sup>2</sup> increase the dose of folinic acid to 45mg

☒ Folinic acid PAM/AM regime

☐ folinic acid 30mg in NaCl 0.9% over 30min Q3H

SCH

☐ folinic acid 45mg in NaCl 0.9% over 30min Q3H

SCH

\*DOSE ESCALATION 2 for ALL levels taken at 48 hours or subsequently\*

Methotrexate Level 20 to 100 micromol/L

☒ folinic acid [folinic acid (as calcium folinate) 350mg/35mL]

☐ DOSE mg IV INFUS Q3H vial  
100mg/m<sup>2</sup>

SCH

+72

Methotrexate level taken.

Folinic acid dosing to be prescribed dependent on methotrexate 72hr level:

BSA	Methotrexate plasma concentration (micromol/L)			
	<0.1	0.1 – 2.0	2.0 – 20 (Escalation Level 1)	20 – 100 (Escalation Level 2)*
≤2.0m <sup>2</sup>	Discontinue folinic acid	30mg Q6H	30mg Q3H	100mg/m <sup>2</sup> Q3H
>2.0m <sup>2</sup>		45mg Q6H	45mg Q3H	

**\*For any methotrexate level >100 micromol/L inform consultant and pharmacy immediately.**

+96

Methotrexate level taken.

Folinic acid dosing to be prescribed dependent on methotrexate 96hr level:

BSA	Methotrexate plasma concentration ( <u>micromol/L</u> )			
	<0.1	0.1 – 2.0	2.0 – 20 (Escalation Level 1)	20 – 100 (Escalation Level 2)*
≤2.0m <sup>2</sup>	Discontinue folinic acid	30mg Q6H	30mg Q3H	100mg/m <sup>2</sup> Q3H
>2.0m <sup>2</sup>		45mg Q6H	45mg Q3H	

**\*For any methotrexate level >100 micromol/L inform consultant and pharmacy immediately.**