# Administration of Methotrexate

## Document Information

**Revision:** 05  
**Vault:** PBMT-General-rel  
**Status:** Release  
**Document Type:** General

## Date Information

**Creation Date:** 25 Oct 2018  
**Release Date:** 01 Dec 2018  
**Effective Date:** 01 Dec 2018  
**Expiration Date:**

## Control Information

**Author:** MOORE171  
**Owner:** MOORE171  
**Previous Number:** PBMT-GEN-047 Rev 04  
**Change Number:** PBMT-CCR-200
PBMT-GEN-047
ADMINISTRATION OF METHOTREXATE

1 SCOPE
1.1 To outline the procedure required for administration of Methotrexate.
1.2 Responsibilities of the nursing staff for administering and monitoring reactions to Methotrexate are described.

2 INTRODUCTION
2.1 Methotrexate is a folate antimetabolite.
2.2 Methotrexate exerts its chemotherapeutic effects by inhibiting dihydrofolate reductase, inhibiting DNA synthesis, and inhibiting protein synthesis causing cell death.
2.3 Adverse effects include stomatitis, esophagitis, oral ulceration, nausea/vomiting, abdominal distress, neutropenia, pancytopenia, thrombocytopenia, anemia, acute and chronic hepatotoxicity.
2.4 In the setting of Hematopoietic Stem Cell Transplant (HSCT), methotrexate is used to prevent acute graft versus host disease.
2.5 Methotrexate, used for GVHD prophylaxis, is given intravenously.

3 SCOPE AND RESPONSIBILITIES
3.1 Interdisciplinary: Requires an order from a chemotherapy certified physician to be placed into the electronic medical record.
3.2 Registered Nurses (RNs) may administer Methotrexate after successful completion of the medication administration test, the chemotherapy certification test and demonstration of clinical competency with their preceptors.

4 DEFINITIONS
4.1 GVHD Graft Versus Host Disease
4.2 HSCT Hematopoietic Stem Cell Transplant
4.3 RN Registered Nurse

5 MATERIALS
5.1 See materials section of PBMT-GEN-069 Administration of Chemotherapy Inpatient Unit- 5200.

6 EQUIPMENT
6.1 See equipment section of PBMT-GEN-069 Administration of Chemotherapy Inpatient Unit- 5200.
7 SAFETY
7.1 Use appropriate Personal Protective Equipment (PPE) when handling chemotherapy.

8 PROCEDURE
8.1 Patient Assessment
8.1.1 See PBMT-GEN-069 Administration of Chemotherapy Inpatient Unit-5200.
   8.1.1.1 Assess patient’s mouth for mucositis, noting ulcerations or white patches in patient’s mouth.
   8.1.1.2 Monitor patient’s renal and liver function tests and notify physician or designee of any elevations.
   8.1.1.3 Nurse MUST obtain a new approval order from the approved physician or designee prior to the administration of EACH dose. This requirement is unique to Methotrexate due to the risk of acute toxicity and the possible need for dose elimination or reduction.

8.2 Administration
8.2.1 See related SOP titled “PBMT-GEN-069 Administration of Chemotherapy Inpatient Unit- 5200” for complete steps for chemotherapy administration.
8.2.2 Methotrexate is generally administered as a slow intravenous push unless otherwise directed in the medication order.

9 RELATED DOCUMENTS/FORMS
9.1 PBMT-GEN-069 Administration of Chemotherapy Inpatient Unit- 5200.

10 REFERENCE

11 REVISION HISTORY

<table>
<thead>
<tr>
<th>Revision No.</th>
<th>Author</th>
<th>Description of Change(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>05</td>
<td>Sally McCollum</td>
<td>- Defined acronyms throughout</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Updated scope and responsibilities section to include: Requires an order from a chemotherapy certified physician to be placed into the electronic medical record.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Updated related SOP number and title to PBMT-GEN-069 Administration of Chemotherapy Inpatient Unit-5200.</td>
</tr>
</tbody>
</table>
- Added safety statement in section 7.1: Use appropriate Personal Protective Equipment (PPE) when handling chemotherapy.
### Signature Manifest

**Document Number:** PBMT-GEN-047  
**Revision:** 05  
**Title:** Administration of Methotrexate

All dates and times are in Eastern Time.

### PBMT-GEN-047 Administration of Methotrexate

#### Author

<table>
<thead>
<tr>
<th>Name/Signature</th>
<th>Title</th>
<th>Date</th>
<th>Meaning/Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sally McCollum (MOORE171)</td>
<td></td>
<td>19 Nov 2018, 10:03:19 AM</td>
<td>Approved</td>
</tr>
</tbody>
</table>

#### Medical Director

<table>
<thead>
<tr>
<th>Name/Signature</th>
<th>Title</th>
<th>Date</th>
<th>Meaning/Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joanne Kurtzberg (KURTZ001)</td>
<td></td>
<td>19 Nov 2018, 11:48:33 AM</td>
<td>Approved</td>
</tr>
</tbody>
</table>

#### Quality

<table>
<thead>
<tr>
<th>Name/Signature</th>
<th>Title</th>
<th>Date</th>
<th>Meaning/Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bing Shen (BS76)</td>
<td></td>
<td>19 Nov 2018, 04:49:59 PM</td>
<td>Approved</td>
</tr>
</tbody>
</table>

#### Document Release

<table>
<thead>
<tr>
<th>Name/Signature</th>
<th>Title</th>
<th>Date</th>
<th>Meaning/Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Betsy Jordan (BJ42)</td>
<td></td>
<td>20 Nov 2018, 09:11:54 AM</td>
<td>Approved</td>
</tr>
</tbody>
</table>