Provincial Clinical Knowledge Topic

TBuM +/- R, Adult BMT– Inpatient

V 1.0

Revision History

Version	Date of Revision	Description of Revision	Revised By
1.0	January 29, 2019	Topic Completed	See Acknowledgments

Important Information Before you Begin

The recommendations contained in this knowledge topic have been provincially adjudicated and are based on best practice and available evidence. Clinicians applying these recommendations should, in consultation with the patient, use independent medical judgment in the context of individual clinical circumstances to direct care. This knowledge topic will be reviewed periodically and updated as best practice evidence and practice change.

The information in this topic strives to adhere to Institute for Safe Medication Practices (ISMP) safety standards and align with Quality and Safety initiatives and accreditation requirements such as the Required Organizational Practices. Some examples of these initiatives or groups are: Health Quality Council Alberta (HQCA), Choosing Wisely campaign, Safer Healthcare Now campaign etc.

Guidelines

This topic is based on the following guideline(s): Alberta Blood and Marrow Transplant Program (ABMTP) Standard Practice Manual

Please refer to ABMTP Standard Practice Manual for more information and recommendations about this topic.

Keywords

Topic Name: TBuM +/- R, Adult BMT - Inpatient

- Alberta Blood and Marrow Transplant Program (ABMTP)
- Blood and Marrow Transplant (BMT)
- Stem Cell Transplant
- Autologous Transplant
- Conditioning
- Rituximab (R)

Guides:

- Order set should include access to the ABMTP Standard Practice Manual

References:

- Reference in Order Groups as indicated in each protocol once developed
  - Stem Infusion: Autologous
- If acetaminophen, metoclopramide, metronidazole, or prochlorperazine are ordered, alert ordering clinician these medications are not recommended starting 3 days (Day -7) prior to Day -4 busulfan and continuing until after last busulfan infusion is complete on Day -2 (Can be removed if attached to drug order)
- *Rituximab IV/SUBCUT: Busulfan Protocols – Inpatient:* All orders are to be defaulted to the protocol day identified above the order panel or appropriately aligned with this protocol day as specified within the individual orders
- Advanced Order Groups:
  - *Rituximab IV/SUBCUT: Busulfan Protocols - Inpatient: :* Rituximab **option #1 Rituximab – Subcutaneous** to be default order option with **option #2 Rituximab – Intravenous** as Advanced Order Group
  - Melphalan **option #1 – IV DIRECT** to be default order option with **option #2 – IV Infusion** as Advanced Order Group

Alberta Health Services

TBuM +/- R, Adult BMT Inpatient Order Set

Order Set Keywords: thiotepa, busulfan, melphalan**,** rituximab, autologous, bone marrow transplant, blood and marrow transplant, BMT, conditioning, secondary CNS Lymphoma, transplant eligible, step 3

Order Set Requirements

Most recent:

- Height _____ cm
- Weight
  - actual _____ kg
  - ideal _____ kg
- BSA _____ m^2
- Ideal BSA _____ m^2
- Estimated Creatinine Clearance (CrCl) _____
- Bilirubin and creatinine lab results

Link patient weight with recommended dose of filgrastim

- For patient weighing less than 60 kg: filgrastim 300 mcg IV/SUBCUT daily
- For patient weighing 60 – 90 kg: filgrastim 480 mcg IV/SUBCUT daily
- For patient weighing more than 90 kg: filgrastim 600 mcg IV/SUBCUT daily

~~~~~~

Indication

Autologous conditioning for Secondary CNS Lymphoma Transplant Eligible (Categories A, B, C) - Step 3

Treatment Cycle and Dates

Stem Cell Infusion date: Day 0 _____ (*dd-Mon-yyyy*)

Protocol Summary:

Protocol DAY -7

riTUXimab 375 mg/m^2/dose IV ***OR*** *riTUXimab 1400 mg Subcutaneous Injection* ***(if applicable)***

Protocol DAY -6 and -5

thiotepa 250 mg/m^2 (ideal)/dose

Protocol DAY -4, -3, -2

busulfan 3.2 mg/kg/dose (Target AUC not to exceed 4500 umol x min/L)

Protocol DAY -1

melphalan 100 mg/m^2/dose (Age GREATER than 60: melphalan dose adjustment may be necessary)

Protocol DAY 0

Autologous Stem Cell Infusion
~~~~~~

~*Start of Order Panel~ BMT Laboratory Investigation – ONCE - Inpatient*

**BMT Laboratory Investigation – ONCE - Inpatient

Keywords: Admission, labs, one time

ONCE – Day of Admission/Pre-Treatment - STAT

☐ Unit to Collect ☐ Lab to Collect

Hematology

☑ Complete Blood Count (CBC) with Differential
☑ PTT
☑ PT (INR)
☐ Retic count

Chemistry

☑ Electrolytes (Na, K, Cl, CO2)
☑ Creatinine
☑ Glucose Random
☑ Calcium (Ca)
☑ Magnesium (Mg)
☑ Phosphate
☑ Albumin
☑ ALP
☑ ALT
☑ Bilirubin Total
☑ Bilirubin Direct
☑ GGT
☐ LD
☑ Protein Total
☑ Urea
☑ Urate (uric acid)

Other Labs

Order for ALL women of childbearing age

☐ HCG Beta - serum

Urine Tests

☐ Urinalysis

~*End*~

~*Start of Order Panel~ BMT Laboratory Investigation – REPEATING - Inpatient*

**BMT Laboratory Investigation – REPEATING - Inpatient

Keywords: labs, repeat, Day 2

REPEATING - Starting on second day of protocol

☐ Unit to Collect ☐ Lab to Collect

Draw the following labs daily for 35 occurrences:

☑ Complete Blood Count (CBC) with Differential
☑ Electrolytes (Na, K, Cl, CO2)
☑ Creatinine
☑ Magnesium (Mg)

Draw the following labs every Mon/Thurs for 5 weeks:

Hematology

☑ PTT
☑ PT (INR)
☑ Retic Count

Chemistry

☑ Glucose Random
☑ Calcium (Ca)
☑ Phosphate
☑ Albumin
☑ ALP
☑ ALT
☑ Bilirubin Total
☑ Bilirubin Direct
☐ GGT
☐ LD
☐ Protein Total
☑ Urea
☐ Urate (uric acid)

~End~

Choose both Day -4 and Day -2, only ONE, or no levels to be drawn:

Day -4

~Start of Smart Group~ Busulfan Pharmacokinetic (PK) Testing - Inpatient

*Busulfan Pharmacokinetic (PK) Testing - Inpatient

☐ **Busulfan PK Levels:** Draw first sample within 5 minutes after completion of sodium chloride 0.9% 25 mL IV flush and then at 1, 3, 5, and 7 hour intervals post busulfan infusion: Level must be drawn from a non-Busulfan infusion lumen of central venous access device (CVAD)

- Busulfan – End of Infusion LEVEL**:** Label sample with time. Place on ice and send to lab
- Busulfan – 1 Hour LEVEL**:** Label sample with time. Place on ice and send to lab
- Busulfan – 3 Hour LEVEL**:** Label sample with time. Place on ice and send to lab
- Busulfan – 5 Hour LEVEL**:** Label sample with time. Place on ice and send to lab
- Busulfan – 7 Hour LEVEL**:** Label sample with time. Place on ice and send to lab

~End~

Day -2

~Start of Smart Group~ Busulfan Pharmacokinetic (PK) Testing - Inpatient

*Busulfan Pharmacokinetic (PK) Testing - Inpatient

☐ **Busulfan PK Levels:** Draw first sample within 5 minutes after completion of sodium chloride 0.9% 25 mL IV flush and then at 1, 3, 5, and 7 hour intervals post busulfan infusion: Level must be drawn from a non-Busulfan infusion lumen of central venous access device (CVAD)

- Busulfan – End of Infusion LEVEL**:** Label sample with time. Place on ice and send to lab
- Busulfan – 1 Hour LEVEL**:** Label sample with time. Place on ice and send to lab
- Busulfan – 3 Hour LEVEL**:** Label sample with time. Place on ice and send to lab
- Busulfan – 5 Hour LEVEL**:** Label sample with time. Place on ice and send to lab
- Busulfan – 7 Hour LEVEL**:** Label sample with time. Place on ice and send to lab

~End~

☐ **No Busulfan Pharmacokinetic Testing to be drawn**

Day -6 to Day -3

~Start of Smart Group~ Thiotepa Skin Care Protocol - Inpatient

* Thiotepa Skin Care Protocol – Inpatient

Starting first day of thiotepa and continuing until 36 hours post last dose of thiotepa

Patient Teaching

☐ Teach - Patient Education - Thiotepa Skin Care: The protocol is in effect from the start of the thiotepa infusions until 36 hours post last dose of thiotepa. Thiotepa is excreted mostly through the urine (85%) but a percentage is excreted through the sweat glands. As a result, this can cause significant toxicity to the skin if not cared for properly, therefore, strict adherence to the protocol is necessary

Activity

☐ Mobilize - Encourage patient to mobilize or ambulate each day. An occlusive-like phenomena occurs with the bed or chair during prolonged sitting, predisposing the patient to increased dermal toxicity

Patient Care

☐ Foley Catheter - Action: Insert prior to thiotepa administration if patient unable to adequately perform perineal care
☐ Foley Catheter – Remove: 96 hours after insertion
☐ Neurological Vital Signs - every 4 hours: In brain tumor patients who have received CNS irradiation; Re-orient patient and maintain safety precautions if any CNS symptoms exist, and report new onset of symptoms to provider

Hygiene and Grooming

☐ Hygiene and Grooming - Shower every 6 hours; Do NOT apply CVC barrier dressing or allow water to spray directly on CVC site during shower
☐ Hygiene and Grooming - Change all bed linens with every shower
☐ Hygiene and Grooming - Perineal Care: Use peri-bottle filled with tap water every 3 hours and post each void (if no foley) and bowel movement
☐ Hygiene and Grooming - Patient not to use: soap, occlusive creams, ointments, deodorants, or any other skin care agents
☐ Clothing/Dressing - No restrictive clothing, jewellery, or head coverings, including wigs

Skin – Assess and Care

☐ Assess - all areas of body; every shift and PRN: Assess for skin breakdown, especially the groin, gluteal folds, perineum, axilla, and under breast area. **Continue until 3 weeks post start of thiotepa administration** as skin breakdown may take 10 to 14 days to manifest
☐ Skin Care - No tapes or adhesives should be applied to; Use gauze dressing secured with non-adhesive material (i.e. kling, self-adhesive wrap) where necessary
☐ Assess Wound - Hands; daily; Ensure the areas where thick scabs have developed on hands have new healthy, pink, intact skin underneath scabs; If unable to assess and/or debridement is required, enter ET Nurse referral
☐ Wound Care - Areas of skin breakdown: Cleanse with sterile water; every shift and PRN; Use sterile water only; Use of a 60 mL syringe may facilitate cleaning of folds or sensitive areas. Keep area as clean and dry as possible
☐ ET Nurse – Enter ET Nurse referral if extensive wound care and debridement is required

Central Venous Access Device (CVAD) Care

☐ CVAD Site Care: Cleanse site with normal saline only; perform daily and/or post showers to ensure water residue is removed from the site and line

☐ CVAD Site Care: Gauze and Disc dressing if available or leave site open to air; No tapes or adhesives should be applied; Ensure CVAD is properly secured where necessary

~End~

Provider Communication

☐ Provider Communication: busulfan test dose not required for this protocol
☐ Provider Communication: busulfan Treatment Dose Levels only ordered at sites where pharmacokinetics are measured; May eliminate one or both days of PK levels if appropriate
☐ Provider Communication: busulfan exposure should be kept below an AUC of 4500 umol x min/L
☐ Provider Communication: For administration of melphalan via IV Infusion, refer to the Advanced Order Group for all relevant orders
☐ Provider Communication: For administration of riTUXimab via Subcutaneous, refer to the Advanced Order Group for all relevant orders

Nurse Communication

☐ Nurse Communication: Initiate mouth care protocol
☐ Nurse Communication: Irradiated Blood Products only
☐ Nurse Communication: Ensure central venous access device is insitu and patent prior to initiating treatment protocol
☐ Nurse Communication: Ensure *Thiotepa Skin Care Protocol* is initiated; Assess patient for falls risk while on *Thiotepa Skin Care Protocol* and taking schedule LORazepam
☐ Nurse Communication:
☐ Nurse Communication - Do Not Order/ Do Not Give: Avoid use of acetaminophen, metoclopramide, metronidazole, prochlorperazine or other medications that may lower seizure threshold or interfere with busulfan clearance starting 3 days (Day -7) prior busulfan on Day -4 and continuing until after last busulfan infusion is complete

Day -7

~Start of Therapy Plan~ Rituximab IV/SUBCUT: Busulfan Protocols – Inpatient

**Rituximab IV/SUBCUT: Busulfan Protocols - Inpatient

Rituximab Pre-Medications

Consider ordering Tumor Lysis Management prior to starting induction therapy

Required

Due to interactions with busulfan, acetaminophen has been removed as a pre-medication; May add acetaminophen if riTUXimab is scheduled to be administered greater than 3 days prior to first dose busulfan or after last dose busulfan is complete

☐ cetirizine 10 mg PO daily starting 1 day prior to riTUXimab for a total of 2 doses; Take dose 60 minutes prior to riTUXimab on day of infusion;

Alternative/Additional

Order the following medications alternatively or in addition to the required pre-medications as per clinician preference

☐ diphenhydrAMINE 50 mg PO/IV once; Give 45 minutes pre-riTUXimab infusion

☐ hydrocortisone sodium succinate 100 mg IV once; Give dose 30 minutes pre-riTUXimab infusion

☐ montelukast 10 mg PO daily starting 1 day prior to riTUXimab for a total of 2 doses; Take dose 60 minutes pre-riTUXimab infusion

☐ ranitidine 150 mg PO once; Give 30 to 60 minutes pre-riTUXimab infusion

☐ ranitidine 50 mg IV once; Give 30 minutes pre-riTUXimab infusion

Emergency Medications

~Start of Order Panel~ Hypersensitivity Reaction Management Order Panel

**** Hypersensitivity Reaction Management**

Keywords: emergency medications, infusion reaction, antihistamine, corticosteroid, bronchodilator-Beta2-Adrenergic Agonist, nebulizer, opiate agonist, Benadryl, Solu-cortef, Ventolin, Demerol

Infusion-Related or Hypersensitivity Reaction

☐ diphenhydrAMINE 50 mg IV once PRN for infusion-related or hypersensitivity reaction

☐ hydrocortisone sodium succinate 100 mg IV once PRN for infusion related or hypersensitivity reaction

☐ salbutamol inhaler 100 mcg/dose 1-2 puffs every 4 to 6 hours PRN for dyspnea

☐ meperidine 25 mg IV every 4 hours PRN for rigors

☐ meperidine 50 mg IV every 4 hours PRN for rigors

☐ 0.9% NaCl _____ mL IV bolus at _____ mL/hour

~End~

Choose orders from either the *1. Rituximab – Subcutaneous* or *2. Rituximab - Intravenous* order groups:

Patients who have received a full dose of riTUXimab IV may receive subsequent doses as subcutaneous injections regardless of whether the patient had infusion reactions or the grade of the reaction

1. Rituximab – Subcutaneous (Default)

Patient Care

☐ Vital Signs: once pre-riTUXimab administration

☐ Monitoring: observe patient for at least 15 minutes post riTUXimab administration; A longer period may be appropriate for patients with an increased risk of hypersensitivity reactions

Nurse Communication

☐ Nurse Communication: Refer to AHS provincial parenteral monograph for subcutaneous administration instructions

☐ Nurse Communication: Do NOT use acetaminophen as pre-medication within 72 hours of first busulfan dose or until after last dose of busulfan is complete

Recommend holding antihypertensive with initial riTUXimab administration, however, consider patient status with subsequent doses
*Choose **BOTH**:*

☐ Nurse Communication: Hold anti-hypertensive medications 12 hours prior to riTUXimab infusion as transient hypotension may occur
AND

☐ Nurse Communication: Restart anti-hypertensive medications one hour post riTUXimab infusion if systolic blood pressure is GREATER than 120

OR

☐ Clinical Communication: Do not hold anti-hypertensive medications

Rituximab – Subcutaneous

Patients who have never received rituximab must receive their first full dose by IV infusion

☐ riTUXimab 1400 mg SUBCUT once; Administer over 5 minutes to abdomen as per provincial parenteral monograph **SUBCUTANEOUS administration** instructions; Observe for 15 minutes or longer if patient is high risk for hypersensitivity reaction; Recommend administration of antihistamine (cetirizine is preferred medication) and acetaminophen before riTUXimab administration

2. Rituximab – Intravenous (Advanced Order Group - All)

Patient Care

☐ Vital Signs: For riTUXimab infusion
- Pre-riTUXimab infusion initiation
- Then with every rate change
- Then 15 minutes after infusion completed

Nurse Communication

☐ Nurse Communication: Anaphylaxis kit must be available during riTUXimab infusion as it may cause anaphylaxis reactions; Refer to AHS Anaphylaxis Management: Administration of Intramuscular Epinephrine (Policy HCS-223) for epiNEPHrine administration and further anaphylaxis management

☐ Nurse Communication: If patient experiences a hypersensitivity reaction associated with riTUXimab, nurse may initiate the use of emergency medications immediately upon

presentation of symptoms, however, most responsible practitioner must also immediately be notified

- ☐ Nurse Communication: Refer to AHS provincial parenteral monograph for INITIAL, SUBSEQUENT and ACCELERATED infusion instructions, or infuse as per site practice
- ☐ Nurse Communication: Do NOT use acetaminophen as pre-medication within 72 hours of first busulfan dose or until after last dose of busulfan is complete

Recommend holding antihypertensives with initial riTUXimab infusion, however, consider patient status with subsequent doses
*Choose **BOTH**:*

- ☐ Nurse Communication: Hold anti-hypertensive medications 12 hours prior to riTUXimab infusion as transient hypotension may occur

AND

- ☐ Nurse Communication: Restart anti-hypertensive medications one hour post riTUXimab infusion if systolic blood pressure is GREATER than 120

OR

- ☐ Nurse Communication: Do not hold anti-hypertensive medications

Rituximab - IV
If patient has never received riTUXimab, first dose shall be given by intravenous route

- ☐ riTUXimab (375 mg/m^2) _____ mg IV once; Refer to provincial parenteral monograph for INITIAL, SUBSEQUENT and ACCELERATED infusion instructions, or infuse as per site practice; Recommend administration of antihistamine (cetirizine is preferred medication) and acetaminophen before riTUXimab infusion

~End~

Intravenous Fluids

Hydration Day -7, -6, -5, -4, -3, -2

- ☐ 0.9% NaCl infusion at 100 mL/hour starting on Day -7 and continuing until Day -2; May disconnect for passes at physician discretion

Pre-Melphalan Hydration Day -2, -1

- ☐ 0.9% NaCl infusion at 100 mL/hour starting at 2000 hours on Day -2 for a total of 14 hours until melphalan administration on Day -1

Day -6, -5, -4, -3, -2

Pre-Medication

- ☐ ondansetron 8 mg IV/PO TID starting on Day -6 for a total of 8 days; Give morning dose 30 to 60 minutes pre-chemotherapy

Busulfan Seizure Prophylaxis

- ☐ LORazepam 1mg SUBLING tab QID starting Day -4 for a total of 4 days; Continue until 24 hours post final busulfan infusion

Systemic Therapy

If actual body weight is less than ideal body weight, use actual body weight for all dosing calculations

☐ thiotepa (250 mg/m^2-ideal) _____ mg IV daily starting on Day -6 and -5 for a total of 2 doses; Infuse each dose over 3 hours; Requires 0.2 to 0.22 micron filter on primary IV line

- ❖ *Dosing adjustments: Dosage reduction may be required for renal and hepatic impairment*

If ideal body weight is less than actual body weight, use ideal body weight for all dosing calculations.

Seizure prophylaxis with BMT doses

☐ busulfan (3.2 mg/kg) _____mg IV starting on Day -4, -3, -2 for a total of 3 doses. **Infuse at a rate of 160 mL/hr;** Requires 0.2 to 1.2 micron filter on primary line; Busulfan exposure should be kept below an AUC of 4500 umol x min/L; Busulfan test dose not required for this protocol

- ❖ *Dosing adjustments: Dosage adjustment may be required as a result of pharmacokinetic analysis*

Day -1

Cryotherapy

☐ Cryotherapy Treatment – Start 30 minutes pre-melphalan; Instructions: Patient to hold ice chips in mouth until melted and repeat, continue until 6 hours post-melphalan administration; Eating hot foods and fluids is **NOT** recommended during cryotherapy

Pre-Medication

☐ dexamethasone 12 mg IV once on Day -1 for a total of 1 dose; Give dose pre-chemotherapy; Ensure patient is not already on scheduled dexamethasone or other steroid

Systemic Therapy

Melphalan

*Choose **ONE** of the following advanced order groups:*

1. IV Direct (Default - All)

☐ melphalan (100 mg/m^2) _____ mg IV starting 1000 hours on Day -1 for a total of 1 dose; Administer IV direct push over 5 minutes; Drug has 120 minute stability once mixed

- ❖ *Dosing adjustments: Dosage reduction may be required for age and renal impairment*

Post IV Direct Melphalan Medications & Intravenous fluids

Order the following only if giving Melphalan IV direct:

☐ furosemide 20 mg IV once starting 1015 hours on Day -1 for a total of 1 dose; Give immediately post melphalan IV direct

☐ mannitol 20% 250 mL IV once starting 1030 hours on Day -1; Infuse over 1 hour immediately post furosemide

☐ 0.9% NaCl IV at 500 mL/hr starting 1130 hours on Day -1; Infuse over 3 hours immediately post mannitol

☐ KCl 40 mmol in 0.9% NaCl IV at 125 mL/hr starting 1430 hours on Day -1; Infuse over 18 hours immediately post 3 hour NaCl infusion

OR

2. Infusion (Advanced Order Group: select all)

☐ melphalan (100 mg/m^2) _____ mg IV once starting 1000 hours on Day -1 for a total of 1 dose; Infuse over 1 hour; Drug has 120 minute stability once mixed
- ❖ *Dosing adjustments: Dosage reduction may be required for renal impairment*

Post Melphalan Intravenous fluids

☐ KCl 20 mmol in 0.9% NaCl at 200 mL/hr starting 1100h hours on Day -1 for a total of 24 hours then reassess

Day 0

Required order set *(Currently under development; to be referenced in upon completion)*

- ➢ **Stem Cell Infusion – Autologous**

~Start of Smart Group~ Filgrastim

***BMT Filgrastim**

For patient weighing less than 60 kg

☐ filgrastim 300 mcg SUBCUTANEOUS daily starting on Day 7; Discontinue when absolute neutrophil count (ANC) greater or equal to 1x10^9/L for 24 hours; May be given intravenously

OR

For patient weighing 60 to 90 kg

☐ filgrastim 480 mcg SUBCUTANEOUS daily starting on Day 7; Discontinue when absolute neutrophil count (ANC) greater or equal to 1x10^9/L for 24 hours; May be given intravenously

OR

For patient weighing greater than 90 kg

☐ filgrastim 600 mcg SUBCUTANEOUS daily starting on Day 7; Discontinue when absolute neutrophil count (ANC) greater or equal to 1x10^9/L for 24 hours; May be given intravenously

~End~

~Start of Order Panel~ BMT Electrolyte Imbalance - Inpatient

**** BMT Electrolyte Imbalance - Inpatient**

Order Set Keywords: potassium, K, KCl, magnesium, Mg

Nurse Communication:

☐ Nurse Communication: Ensure patient has no other IV potassium infusing while receiving PRN IV potassium doses

Potassium:

*Choose **ONE** option based on site availability of product*

☐ KCl 20 mmol in 100 mL sterile water IV bolus daily PRN if potassium level 3.0 to 3.3 mmol/L; infuse as per provincial parenteral monograph

OR

☐ KCl 10 mmol in 100 mL sterile water IV bolus daily PRN; Give 2 boluses for a total of 20 mmol if potassium level 3.0 to 3.3 mmol/L; Infuse as per provincial parenteral monograph

Magnesium:

☐ magnesium sulfate 4 grams IV daily PRN if magnesium level is LESS than 0.55 mmol/L; Infuse as per provincial parenteral monograph

~End

~Start of Smart Group~ Autologous Prophylactic/Supportive Medication - Inpatient

*Autologous Prophylactic/Supportive Medication – Inpatient

Prophylactic Medications

☐ valACYclovir 500 mg PO daily starting on day of admission

Start Protocol Day 14 if neutrophils are greater than $1x10^9/L$

☐ sulfamethoxazole - trimethoprim 400 mg - 80 mg 1 tab PO daily starting on Day 14 if neutrophils are greater than $1x10^9/L$

OR

If patient has allergy to sulfa or sulfamethoxazole/trimethoprim order one or both:

Start Protocol Day 14 if neutrophils are greater than $1x10^9/L$

☐ dapsone 50 mg PO daily starting on Day 14 if neutrophils are greater than $1x10^9/L$

☐ penicillin V potassium 300 mg PO BID starting on Day 14 if neutrophils are greater than $1x10^9/L$

Supportive Medications

Only order for menstruating women

☐ norethindrone - ethinyl estradiol (Ortho 1/35®) 1 tab PO daily starting on day of admission

~End~

Transition Planning

Patient and Family Education

MyHealth.Alberta.ca
- Cancer Resources
- Autologous Stem Cell Transplant

YouTube: AHS Channel
- CancerControl Alberta Playlist

Transitions to Primary Care

Alberta Health Services Website (External)
- Provider and Patient Resources

Patient Medication Teaching Sheets

MyHealth.Alberta.ca
- Busulfan
- Ondansetron
- Lorazepam
- Dapsone
- Sulfamethoxazole/Trimethoprim
- Penicillin V Potassium
- Fluconazole
- Valacyclovir
- Ursodiol
- Norethindrone/ethinyl estradiol

Alberta Health Services Website (Internal)
- Melphalan - Please see *Patient Medication Teaching Sheets* on the CancerControl Alberta AHS Internal website

Lexicomp Website (Internal)
- Thiotepa - Please see *Adult Patient Education: Thiotepa* on the Lexicomp website

References

1. Cancer Control Alberta: Guideline Resource Unit: Alberta Blood and Marrow Transplant Program (ABMTP) Standard Practice Manual. Alberta, Canada. https://www.albertahealthservices.ca/assets/info/hp/cancer/if-hp-cancer-guide-bmt-manual.pdf. Updated January 16, 2017. Accessed July 1, 2018

Acknowledgements

We would like to acknowledge the contributions of the clinicians who participated in the development of this topic. Your expertise and time spent are appreciated.

Name	Title	Zone
Knowledge Lead		
Elizabeth Kurien	Physician, Oncology	Provincial
Topic Lead		
Andrew Daly	Director of Alberta Blood and Marrow Transplant Program (ABMTP)/Physician Hematology - FMC/TBCC/PLC	Calgary
Working Group Members		
Doug Pankoski	CKCM Foundation Team	Provincial
Jennifer Jupp	Provincial Pharmacy (SPOC)	Provincial
Irwindeep Sandhu	Physician, Hematology/BMT - UAH	Edmonton
Ahsan Chaudhry	Physician, BMT – FMC/TBCC	Calgary
Lynn Savoie	Physician, Hematology/BMT - FMC/TBCC	Calgary
Chris Venner	Physician, Hematology/BMT - CCI	Edmonton
Nanette Cox-Kennett	Nurse Practitioner - CCI	Edmonton
Nadia Kloc	Inpatient Manager - CCI	Edmonton
Michelle Gardecki	Unit Charge Nurse – Unit 31 CCI	Edmonton
Michelle Blue	Inpatient Unit Manager - CCI	Edmonton
Laura Spilchen	Unit Manager - Unit 5F4 UAH	Edmonton
Benjamin Dowell	Clinical Nurse Educator - Unit 57 FMC	Calgary
Carla Hornberger	Clinical Nurse Educator - Unit 57 FMC	Calgary
Etienne Mahe	Hematopathologist, Calgary Lab Services	Calgary
Clinical Support Services		
Lesley Beique	on behalf of Pharmacy Information Management Governance Committee (PIM-GC) - Pharmacy Services	Provincial
James Wesenberg	on behalf of Laboratory Services - Provincial Networks	Provincial
Carlota Basualdo	on behalf of Nutrition & Food Services	Provincial
Mark Buller	on behalf of Diagnostic Imaging Services	Provincial
SCN or Provincial Committee		
Provincial Hematology Tumor Team		Provincial
Clinical Informatics Lead		
Alexis Desautels RNBN		Provincial

Additional Contributors

Thank you to the clinicians who participated in the colleague review process.
Your time spent reviewing the knowledge topics and providing valuable feedback is appreciated.

For questions or feedback related to this knowledge topic please contact Clinical Knowledge Topics by emailing ClinicalKnowledgeTopics@albertahealthservices.ca