

IP CAGT ALLOGENEIC SCT BU-CY (WITH TACROLIMUS & MINI METHOTREXATE GVHD PROPHYLAXIS)

Types: ONCOLOGY TREATMENT

Synonyms: BU, CY, BUSULFAN, CYTOXAN, CYCLOPHOSPHAMIDE, MTX, METHOTREXATE, BMT, CAGT, ALLOGENEIC, SCT

Transplant	Repeat 1 time	Cycle length: 91 days
Day -8 through -1	Perform every 1 day x1	
Labs		
<input checked="" type="checkbox"/> ECG 12-LEAD		
Interval: Daily	Occurrences: --	
Comments:	Starting Day -3. Must be reviewed by MD daily prior to cyclophosphamide doses.	
<input checked="" type="checkbox"/> URINALYSIS, AUTOMATED WITH MICROSCOPY		
Interval: Daily	Occurrences: --	
Comments:	Day -3.	
<input checked="" type="checkbox"/> PHENYTOIN LEVEL		
Interval: Daily	Occurrences: --	
Comments:	Daily through Day -2	
<input checked="" type="checkbox"/> PHENYTOIN LEVEL		
Interval: Daily	Occurrences: --	
Comments:	Daily through Day -2	
<input type="checkbox"/> FREE PHENYTOIN LEVEL		
Interval: Daily	Occurrences: --	
Comments:	Daily through Day -2	
<input type="checkbox"/> FREE PHENYTOIN LEVEL		
Interval: Daily	Occurrences: --	
Comments:	Daily through Day -2	
Line Flush		
sodium chloride 0.9 % flush 20 mL		
Dose: 20 mL	Route: intravenous	PRN
Start: S		
Additional Orders		
ONC NURSING COMMUNICATION 49		
Interval: Until discontinued	Occurrences: --	
Comments:	Do NOT administer Acetaminophen/Azoles for 48 hours after last busulfan dose.	
Pre-Medications		
ondansetron (ZOFRAN) 16 mg, dexamethasone (DECADRON) 12 mg in sodium chloride 0.9% 50 mL IVPB		

Dose: -- Route: intravenous every 24 hours over 15 Minutes

Start: S+1

Instructions:

Administer 30 minutes prior to treatment on

Day -7, -6, -5, -4, -3, -2, -1.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	ONDANSETRON HCL (PF) 4 MG/2 ML INJECTION SOLUTION	Medications	16 mg	Yes	No
	DEXAMETHASONE 4 MG/ML INJECTION SOLUTION	Medications	12 mg	Yes	No
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	Base	50 mL	Always	Yes
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	Base		No	Yes

aprepitant (CINVANTI) 130 mg in dextrose (NON-PVC) 5% 130 mL IVPB

Dose: 130 mg Route: intravenous once over 30 Minutes for 1 dose

Start: S+1

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	APREPITANT 7.2 MG/ML INTRAVENOUS EMULSION	Medications	130 mg	Main Ingredient	Yes
	DEXTROSE 5 % IN WATER (D5W) IV SOLP (EXCEL; NON-PVC)	Base	130 mL	Yes	Yes
	SODIUM CHLORIDE 0.9 % IV SOLP (EXCEL;NON-PVC)	Base	130 mL	No	Yes

Antiemetics

promethazine (PHENERGAN) injection 25 mg

Dose: 25 mg Route: intravenous every 4 hours PRN

Start: S

Supportive Care

acyclovir (ZOVIRAX) 5 mg/kg (Ideal)

Dose: 5 mg/kg Route: intravenous every 8 hours

Start: S

levoFLOxacIn (LEVAQUIN) tablet 500 mg

Dose: 500 mg Route: oral daily at 0600 (time critical)

Start: S

fluconazole (DIFLUCAN) tablet 200 mg

Dose: 200 mg Route: oral daily

Start: S+8

Instructions:

Start Day 0

Hydration

sodium chloride 0.9 % infusion

Dose: 125 mL/hr Route: intravenous continuous

Start: S+5

Chemotherapy

ONC NURSING COMMUNICATION 21

Interval: Until discontinued

Occurrences: --

Comments:

During IV Busulfan:

- INFUSE in the WHITE lumen on the TRIPLE lumen catheter
- LABEL the White lumen: Busulfan
- Prime tubing and filter with Normal Saline only
- Do NOT give any Acetaminophen (Tylenol) during Busulfan doses and for 48 hours following the last dose of Busulfan
- Record START and STOP time of EVERY Busulfan dose
- FLUSH tubing and filter with 20cc Normal Saline after each dose

busulfan (BUSULFEX) in sodium chloride 0.9% chemo IVPB

Dose: --

Route: intravenous every 6 hours over 2 Hours for 16 doses

Start: S+1 8:00 AM

Instructions:

Day -7, -6, -5, -4.

Ingredients:

Name	Type	Dose	Selected	Adds Vol.
BUSULFAN 60 MG/10 ML INTRAVENOUS SOLUTION	Medications		Main Ingredient	Yes
SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	Base		Yes	Yes
DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	Base		No	Yes

ONC NURSING COMMUNICATION 7

Interval: Until discontinued

Occurrences: --

Comments:

During CYCLOPHOSPHAMIDE:

- 12 lead EKG must be ordered and reviewed by physician prior to each dose.
- Starting 4 hours PRIOR to cyclophosphamide, change IVF to Normal Saline at 125 mL/hr and continue for 24 hours after last dose of cyclophosphamide completes. (MAX total volume infusion rate during chemotherapy = 350 mL/hr).
- Instruct patient to void every 1-2 hours DAILY x 3 days.

mesna (MESNEX) 20 mg/kg in sodium chloride 0.9% 100 mL chemo IVPB

Dose: 20 mg/kg

Route: intravenous once over 30 Minutes for 1 dose

Start: S+5

Instructions:

Day -3.

Ingredients:

Name	Type	Dose	Selected	Adds Vol.
MESNA 100 MG/ML INTRAVENOUS SOLUTION	Medications	20 mg/kg	Main Ingredient	Yes
SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	Base	100 mL	Yes	Yes
DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	Base	100 mL	No	Yes

cyclophosphamide (CYTOXAN) 60 mg/kg in dextrose 5% 500 mL chemo IVPB

Dose: 60 mg/kg Route: intravenous every 24 hours over 2 Hours for 2 doses
Start: S+5
Instructions:
Day -3, -2.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	CYCLOPHOSPHAMIDE 1 GRAM INTRAVENOUS SOLUTION	Medications	60 mg/kg	Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	500 mL	No	Yes
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	QS Base	500 mL	Yes	Yes

mesna (MESNEX) 10 mg/kg in sodium chloride 0.9% 100 mL chemo IVPB

Dose: 10 mg/kg Route: intravenous every 4 hours over 30 Minutes for 12 doses
Start: S+5
Instructions:
Day -3, -2.

Start 4 hours after loading dose of Mesna

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	MESNA 100 MG/ML INTRAVENOUS SOLUTION	Medications	10 mg/kg	Main Ingredient	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	Base	100 mL	Yes	Yes
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	Base	100 mL	No	Yes

Line Flush

sodium chloride 0.9 % flush 20 mL

Dose: 20 mL Route: intravenous PRN

Additional Orders

furosemide (LASIX) injection 20 mg

Dose: 20 mg Route: intravenous every 24 hours for 2 doses
Start: S+5
Instructions:
-Give at completion of each dose of cyclophosphamide infusion on Day -3 and Day -2.

furosemide (LASIX) injection 20 mg

Dose: 20 mg Route: intravenous every 24 hours for 2 doses
Start: S+5
Instructions:
-Give 6 hours AFTER completion of each dose of cyclophosphamide infusion on Day -3 and Day -2.

Pharmacokinetic Instructions

Interval: Until discontinued
Comments:

Occurrences: --

1. Infuse Busulfan through the WHITE lumen of the TRIPLE lumen Catheter.
2. LABEL the White lumen: Busulfan.
3. NO other fluids are to be infusing during the Busulfan infusion or the Pharmacokinetics period (Doses #1 and #9).
4. IVF may resume AFTER the last PK is drawn for doses #1 and #9.
5. Busulfan infusion must be complete including flush. When infusion is finished, Disconnect & REMOVE Busulfan bag/tubing PRIOR to starting blood draws. (Does not matter if the post level is drawn 5 min after the infusion ends).
6. USE the same CLOCK / WATCH to document start and stop times, AND all blood draw times.
7. ALL blood samples for Pharmacokinetics to be drawn from the RED lumen of the triple lumen CVC.
8. FLUSH the RED lumen with 30 mL saline flush PRIOR to EVERY blood draw EXCEPT immediately after end of infusion.
9. Use a green top, heparinized tube for all PK samples.
10. After sample is collected, label and place in a plastic biohazard lab bag (NO pre-labeling of tubes).
11. Put sample on wet ice and place in the medication room refrigerator or in the medication room in a closed basin for pick up / transport to TCH lab.
12. DO NOT KEEP MULTIPLE SAMPLES at bedside.

Seizure Prophylaxis

phenytoin (DILANTIN) ER capsule 2.5 mg/kg

Dose: 2.5 mg/kg Route: oral 2 times daily

Start: S

Instructions:

Hold enteral nutrition at least 1 hour before and 2 hours after dose. Monitor drug levels.

VOD Prophylaxis

ursodiol (ACTIGALL) capsule 300 mg

Dose: 300 mg Route: oral 3 times daily

Start: S+1

Acute Graft Versus Host Prophylaxis

tacrolimus (PROGRAF) 0.02 mg/kg in sodium chloride (NON-PVC) 0.9 % 250 mL infusion

Dose: 0.02 mg/kg Route: intravenous every 24 hours over 24 Hours

Start: S+6 4:00 PM

Instructions:

Start Day -2.

Ingredients:

Name	Type	Dose	Selected	Adds Vol.
TACROLIMUS 5 MG/ML INTRAVENOUS SOLUTION	Medications	0.02 mg/kg	Main Ingredient	No
SODIUM CHLORIDE 0.9 % IV SOLP (EXCEL;NON-PVC)	Base	250 mL	Yes	Yes
DEXTROSE 5 % IN WATER (D5W) IV SOLP (EXCEL; NON-PVC)	Base	250 mL	No	Yes

Day of Rest

ONC NURSING COMMUNICATION 48

Interval: Until

Occurrences: --

discontinued
Comments: Day -1.

Day 0

Perform every 1 day x1

Labs

URINALYSIS, AUTOMATED WITH MICROSCOPY
Interval: Once Occurrences: --
Comments: Day 0.

Line Flush

sodium chloride 0.9 % flush 20 mL
Dose: 20 mL Route: intravenous PRN
Start: S

Antiemetics

ondansetron (ZOFTRAN) 16 mg in sodium chloride 0.9 % 50 mL IVPB
Dose: 16 mg Route: intravenous once over 15 Minutes for 1 dose
Start: S

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	ONDANSETRON HCL (PF) 4 MG/2 ML INJECTION SOLUTION	Medications	16 mg	Main Ingredient	No
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	Base	50 mL	No	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	Base	50 mL	Yes	Yes

Pre-Medications

acetaminophen (TYLENOL) tablet 650 mg
Dose: 650 mg Route: oral once for 1 dose
Start: S
Instructions:
Premed for TRANSPLANT

diphenhydramine (BENADRYL) injection 25 mg
Dose: 25 mg Route: intravenous once for 1 dose
Start: S
Instructions:
Premed for TRANSPLANT

hydrocortisone sodium succinate (Solu-CORTEF) injection 100 mg
Dose: 100 mg Route: intravenous once for 1 dose
Instructions:
Premed for TRANSPLANT

Transplant Orders

ONC NURSING COMMUNICATION 55
Interval: Once Occurrences: --
Comments: -Oxygen at bedside during transplantation
-Anaphylaxis precautions at bedside during transplant:

meperidine (DEMEROL) injection 12.5 mg
Dose: 12.5 mg Route: intravenous every 15 min PRN for 3 doses
Start: S

Instructions:

Administer every 15 minutes x 3 doses PRN for each episode of rigors (if rigors persist, call MD).

epINEPHrine (ADRENALIN) 1 mg/1 mL injection 0.3 mg

Dose: 0.3 mg Route: subcutaneous PRN
Start: S End: S+1

diphenhydrAMINE (BENADRYL) injection 25 mg

Dose: 25 mg Route: intravenous PRN
Start: S End: S+1

hydrocortisone sodium succinate (Solu-CORTEF) injection 100 mg

Dose: 100 mg Route: intravenous PRN

Day 1 through 11

Perform every 1 day x1

Line Flush

sodium chloride 0.9 % flush 20 mL

Dose: 20 mL Route: intravenous PRN
Start: S

Antiemetics

ondansetron ODT (ZOFRAN-ODT) disintegrating tablet 8 mg

Dose: 8 mg Route: oral every 8 hours PRN
Start: S+1
Instructions:
Start Day +2

Post-Transplant Orders

ONC NURSING COMMUNICATION 56

Interval: Once Occurrences: --
Comments: -Oxygen at bedside 24 hours after transplantation
 -Anaphylaxis precautions at bedside 24 hours after transplant:

meperidine (DEMEROL) injection 12.5 mg

Dose: 12.5 mg Route: intravenous every 15 min PRN for 3 doses
Start: S
Instructions:
Administer every 15 minutes x 3 doses PRN for each episode of rigors (if rigors persist, call MD).

epINEPHrine (ADRENALIN) 1 mg/1 mL injection 0.3 mg

Dose: 0.3 mg Route: subcutaneous PRN
Start: S End: S+1

diphenhydrAMINE (BENADRYL) injection 25 mg

Dose: 25 mg Route: intravenous PRN
Start: S End: S+1

hydrocortisone sodium succinate (Solu-CORTEF) injection 100 mg

Dose: 100 mg Route: intravenous PRN

Acute Graft Versus Host Prophylaxis

methotrexate PF 5 mg/m2 in sodium chloride 0.9 % 50 mL chemo IVPB

Dose: 5 mg/m2 Route: intravenous once over 15 Minutes for 1 dose
Start: S

Instructions:
HOLD UNTIL APPROVED BY CAGT.

Day +1.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	METHOTREXATE SODIUM (PF) 25 MG/ML INJECTION SOLUTION	Medications	5 mg/m2	Main Ingredient	Yes
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	QS Base	50 mL	No	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	50 mL	Yes	Yes

methotrexate PF 5 mg/m2 in sodium chloride 0.9 % 50 mL chemo IVPB

Dose: 5 mg/m2 Route: intravenous once over 15 Minutes for 1 dose

Start: S+2

Instructions:
HOLD UNTIL APPROVED BY CAGT.

Day +3.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	METHOTREXATE SODIUM (PF) 25 MG/ML INJECTION SOLUTION	Medications	5 mg/m2	Main Ingredient	Yes
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	QS Base	50 mL	No	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	50 mL	Yes	Yes

methotrexate PF 5 mg/m2 in sodium chloride 0.9 % 50 mL chemo IVPB

Dose: 5 mg/m2 Route: intravenous once over 15 Minutes for 1 dose

Start: S+5

Instructions:
HOLD UNTIL APPROVED BY CAGT.

Day +6.

Ingredients:	Name	Type	Dose	Selected	Adds Vol.
	METHOTREXATE SODIUM (PF) 25 MG/ML INJECTION SOLUTION	Medications	5 mg/m2	Main Ingredient	Yes
	DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	QS Base	50 mL	No	Yes
	SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	50 mL	Yes	Yes

methotrexate PF 5 mg/m2 in sodium chloride 0.9 % 50 mL chemo IVPB

Dose: 5 mg/m² Route: intravenous once over 15 Minutes for 1 dose

Start: S+10

Instructions:

HOLD UNTIL APPROVED BY CAGT.

Day +11.

Ingredients:

Name	Type	Dose	Selected	Adds Vol.
METHOTREXATE SODIUM (PF) 25 MG/ML INJECTION SOLUTION	Medications	5 mg/m ²	Main Ingredient	Yes
DEXTROSE 5 % IN WATER (D5W) INTRAVENOUS SOLUTION	QS Base	50 mL	No	Yes
SODIUM CHLORIDE 0.9 % INTRAVENOUS SOLUTION	QS Base	50 mL	Yes	Yes