

BCCA Protocol Summary of the Conditioning Therapy for Autologous Stem Cell Transplant using high dose Melphalan in the Treatment of Multiple Myeloma

Protocol Code

BMTMM0301

Tumour Group

Leukemia/BMT

Contact Physician

Dr. Kevin W. Song

ELIGIBILITY:

- Patients with multiple myeloma with good performance status and organ function suitable for autologous stem cell transplantation.

EXCLUSIONS:

- Age greater than 70 years.

TESTS:

- Baseline, then as indicated: CBC & diff, electrolytes, creatinine, bilirubin, alk phos, LDH, magnesium, & calcium.

PREMEDICATIONS:

- Ondansetron 8 mg PO/IV pre-chemotherapy then q12h x 4 doses
- Dexamethasone 8 mg PO/IV pre-chemotherapy then q12 h x 4 doses

TREATMENT:

Drug	Dose	BCCA Administration Guideline
Melphalan	200 mg/m ² day -1 of PBSCT	<p>Melphalan IV in NS</p> <p>Concentration of melphalan must be between 0.1 mg/mL and 0.45 mg/mL (maximum of 225 mg in 500 mL NS). If the dose is greater than 225 mg, Pharmacy will divide the dose into TWO bags of 500 mL NS.</p> <p>Administer each bag of melphalan over 15-60 minutes to prevent drug degradation.</p> <p>Hydrate with 250 mL/hr of 2/3 D5W – 1/3 NS with 20 mEq/L KCl, 1 g/L MgSO4 for 2 hours pre and post melphalan.</p>

DOSE MODIFICATIONS:**1. Renal Dysfunction**

Dose modifications required for melphalan:

Creatinine Clearance (mL/min)	Dose
greater than or equal to 50	200 mg/m ²
Less than 50 *	140 mg/m ²

*** A Melphalan dose of 100mg/m² is not optimal treatment for plasma cell dyscrasias, but may be considered in individual patients, especially if other (non-renal function-related) medical concerns have been identified. Dialysis-dependent patients will require ongoing dialysis to be co-ordinated with the Nephrology Service.**

PRECAUTIONS:

- Neutropenia:** Fever or other evidence of infection must be assessed promptly and treated aggressively.
- Thrombocytopenia:** Support with platelet transfusion may be required.

Call Dr. Kevin Song or Dr. Donna Hogge (tumor group leader) at (604) 875-4863 with any problems or questions regarding this treatment program.

Date activated: 01 February 2003

Date revised: 01 Jul 2010 (renal dose adjustment revised, reference added)

References¹⁻⁶:

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