

BC Cancer 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, sodium, potassium, creatinine, bilirubin, alk phos, LDH, magnesium, & calcium.

PREMEDICATIONS:

- [Antiemetic protocol for highly emetogenic chemotherapy \(see SCNAUSEA\)](#)

TREATMENT:

Drug	Dose	BC Cancer Administration Guideline
melphalan	200 mg/m ² day –1 of PBSCT	IV in 500 mL NS Concentration of IV bag must be between 0.1 mg/mL and 0.45 mg/mL (maximum of 272 mg in 500 mL NS). If the dose is greater than 272 mg, Pharmacy will divide the dose into TWO bags of 500 mL NS. Administer each bag over 15 to 60 minutes to prevent drug degradation. Hydrate with NS IV at 250 mL/h for 2 hours pre and post melphalan.

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 100 mg/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** at (604) 875-4863 with any problems or questions regarding this treatment program.

References¹⁻⁶:

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