DEVELOPMENT OF A DATA-DERIVED ALGORITHM FOR USE OF PLERIXAFOR FOR PERIPHERAL BLOOD STEM CELL (PBSC) HARVEST IN PATIENTS ELIGIBLE FOR AUTOLOGOUS STEM CELL TRANSPLANT (ASCT)

PBSC mobilization and collection is a prerequisite for ASCT. In up to 35% of patients, initial mobilization attempts fail to harvest sufficient number of PBSC. Plerixafor has been approved on a case-by-case basis by the Saskatchewan Cancer Agency (SCA) for patients eligible for a second harvest. Our objective was to develop an institution specific, preemptive algorithm where patients likely to fail the first mobilization could be identified for use of upfront plerixafor, thus avoiding delays, patient stress and increased risk of interim disease progression.

Patients and Methods: The algorithm was developed through literature review and retrospective collection of data from medical records of 31 SCA patients eligible for ASCT during 2011/12.

Results: The algorithm was developed on the basis of an estimated minimum PBSC count for an adequate PBSC collection for multiple myeloma and lymphoma of 20x10^6/L and 10x10^6/L, respectively.

Conclusion: The algorithm for preemptive use of plerixafor was approved for funding by the SCA. The success of this strategy in optimizing plerixafor use in patients eligible for ASCT, improving success of first mobilization procedures, and reducing downstream system costs resulting from delays and second mobilization costs will be tracked in a prospective database.

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