Health Care Gap

1. Mobilization Regimens

Autologous hematopoietic stem cell transplant (HSCT) is the standard of care in NHL and MM after primary therapy in eligible patients.\(^1\)\(^2\) Peripheral blood progenitor cell (PBPC) mobilization and collection is a key aspect of the HSCT procedure. There are a number of mobilization regimen options, with differing mechanisms of action (MOA), toxicities, and mobilization effectiveness. With mobilization failure rates of approximately 20%,\(^3\) the choice of mobilization regimen is critical.\(^4\)\(^-\)\(^6\)

The American Society for Blood and Marrow Transplant (ASBMT) published guidelines for the mobilization of PBPCs for transplant in 2014.\(^7\) The guidelines recommend filgrastim as the cytokine of choice for initial mobilization and recommend plerixafor plus filgrastim as an option for initial mobilization and re-mobilization. Recommendations for chemomobilization, target cell dose, and optimal cell dose are made as well.\(^7\)

A recent survey of mobilization and transplantation patterns was conducted with US oncologists and transplant specialists.\(^8\) The investigators noted many respondents’ misconceptions regarding the characteristics of various mobilization regimens (such as toxicity and efficacy), and these beliefs were drivers of the respondents’ choice of mobilization strategy. The authors concluded that education on the various stem cell mobilization options may improve patient outcomes.\(^8\)

2. Identifying Patients at Risk of Poor Stem Cell Mobilization

Using conventional mobilization regimens, many patients mobilize poorly and have difficulty collecting adequate CD34+ cells for HSCT.\(^9\) Recently published mobilization guidelines by the American Society for Blood and Marrow Transplant (ASBMT) recommend a minimum cell dose of 2 x 10^6 CD34 cells/kg and an optimal cell dose of 5 x 10^6 CD34 cells/kg for autologous HSCT.\(^7\) The NCCN Guidelines for multiple myeloma state that sufficient PBSCs be collected for two transplants for all potentially eligible patients.\(^2\) Administering the appropriate cell dose allows for rapid and sustained blood count recovery, which translates into reduced resource utilization in the form of reduced hospitalizations, blood products, and infections.\(^10\)

Many factors have been identified that may cause poor stem cell mobilization, and therefore would not allow patients to achieve optimal or even minimum cell doses. Marrow involvement by disease, prior treatment (either multiple cycles or specific therapies such as lenalidomide, melphalan, fludarabine, or radiation therapy, for example), advanced age, failed prior mobilization attempts, and low baseline platelet, CD34+ cells, or TNF-alpha counts have all been implicated in poor mobilization.\(^10\)

In a recent survey, oncologists and transplant specialists indicated that their perceived risk of mobilization failure was much lower than that reported in the literature. Furthermore, a minority of respondents indicated choosing mobilization strategies based on stratification for perceived risk of mobilization failure.\(^8\)
3. Pharmacoeconomics and Resource Utilization

Two common methods of PBPC mobilization are cytokines alone (such as filgrastim (G-CSF) or cytokines after chemotherapy (referred to as chemomobilization). Although cytokine mobilization is well tolerated, cell yields may be suboptimal. Furthermore, it may be difficult to collect sufficient stem cells to support transplantation, especially in patients with risk factors for poor mobilization (such as multiple rounds of prior chemotherapy). The addition of chemotherapy to a cytokine (chemomobilization) can improve cell yield but can increase chemotherapy-related complications such as neutropenia and infection. This may result in increased resource utilization, hospitalizations, antibiotic use, and transfusions. The addition of plerixafor to cytokine mobilization has also been shown to improve cell yield and has further allowed more patients to achieve collection goals compared to G-CSF alone. Some data indicate more toxicity and supportive care requirements (febrile neutropenia, use of antibiotics, transfusion requirements, hospitalizations) with chemomobilization compared to plerixafor, offset by higher mobilization costs for plerixafor. Some analyses indicate similar total mobilization costs when plerixafor+G-CSF was compared to chemomobilization.

A recent survey of mobilization and transplantation patterns was conducted with US oncologists and transplant specialists. Some respondents indicated that choice of mobilization strategy was dictated by perceived cost.

SANOFI US is seeking proposals to close these independently defined healthcare gaps of:

1. Improving the knowledge of stem cell mobilization strategies in autologous hematopoietic stem cell transplant.
2. Identification of patients at risk of poor stem cell mobilization and strategies to increase mobilization success in autologous hematopoietic stem cell transplant.
3. Raise awareness of pharmacoeconomics and resource utilization associated with stem cell mobilization strategies.

Single supported and multi-supported proposals involving independent medical education designed according to well-referenced learner preferences will be considered.

Please note that proposals are expected to include an analysis of the barriers and root causes for this gap and how the educational intervention would address this gap.

Proposal should include the following information:

- **Needs Assessment/Gaps/Barriers**: Include a comprehensive needs assessment that is well referenced and demonstrates an understanding of the specific gaps and barriers of the target audiences (i.e., ACCME accreditation element 2). The needs assessment must be independently developed and validated by the accredited provider.

- **Target Audience and Audience Generation**: Proposal should describe the target audience(s) and provide a rational for how and why this target audience is important to closing the identified healthcare gap. In addition, please describe methods for reaching the target audience(s) including description of and rationale for recruitment and placement strategies to maximize participation according to need. Any unique recruitment efforts specific to the target audience should be highlighted.

- **Learning Objectives and Content Accuracy**: Provide clearly defined and measurable learning objectives framed as expected practice improvements in relation to the identified gaps and barriers. Include an overview of program content and explanation of criteria that will guide content selection, considering level of evidence and other variables. SANOFI is committed to the highest standards in ensuring patient safety; the applicant should describe methods to ensure complete, accurate, evidence-based review of key safety data for any therapeutic entities discussed in the activity. Explain how content will be updated if necessary throughout the program period, and how accuracy will be ensured.
- **Educational Methods**: The ACCME calls for educational methods that are clearly designed to address the knowledge, competence and/or performance gaps that may underlie an identified healthcare gap. Your proposal should demonstrate an understanding of instructional design issues as they relate to the gaps in the knowledge, competence, or performance of the targeted audience. Education methods and design should be based on current literature in continuing education best practice and consistent with ACCME accreditation elements 3,4,5,6. For example, systematic reviews have suggested that the most effective continuing education is clearly linked to clinical practice, uses methods including interaction, reflection, strategies that ensure reinforcement through use of multiple educational interventions, and more. Preference will be given to applications that utilize methods that have been shown to result in practice improvements, and/or with data on the effectiveness of other programs of the same type. ACCME criteria recognize that barriers may be related to systems, lack of resources, or tools etc. and these may be included if relevant in your discussion of the gap and the educational methods you propose. In addition, the educational preferences of the target audience(s) may be considered to maximize attendance/participation and lead to practice improvements.

- **Faculty Recruitment and Development**: Provide information on the expected qualifications of contributors and description of methods to ensure recruitment of course directors and faculty who meet the qualifications. Explain any methods that will be used to ensure that faculty are fully trained in the program expectations and any skills that may be needed to ensure effective delivery of intended education.

- **Program Evaluation and Outcomes**: Provide a description of the approach to evaluate the reach and quality of program delivery; methods for monitoring individual activities and for ensuring ongoing quality improvements (Accreditation elements 12, 13, 14). Describe methods that will be used to determine the extent to which the activity has served to close the identified healthcare gap. (Accreditation Elements 10, 11, 12), and the qualifications of those involved in the design and analysis of the outcomes. Preference will be given to programs with Objectives and Outcomes Plans of Moore level 4-6.

- **Budget**: Include a detailed budget with rationale including breakdown of costs, clear explanation of the units, and calculations of:
  - Content cost per activity
  - Out-of-pocket cost per activity
  - Management cost per activity

- **Accreditation**: Programs must be accredited by the appropriate accrediting bodies and fully compliant with all ACCME criteria and Standards for Commercial Support. *If you are a non-accredited provider, the accredited provider must be involved from the concept origin, fully knowledgeable of the grant submission and documentation should be provided on the website grant application section entitled, “Other Information”.*

- **Resolution of Conflict**: The proposal should briefly describe methods for ensuring fair and balanced content, identification and resolution of conflict of interest, with particular emphasis on ACCME criteria 7, 8, 9.

- **Communication and Publication Plan**: Provide a description of how the provider will keep the supporter informed of progress. Include description of how the results of this educational intervention will be presented, published or disseminated.
References