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3425 Simulation Modeling of Cost-Savings from Conversion to Biosimilar Pegfilgrastim-Cbqv for the Prophylaxis of Chemotherapy-Induced Neutropenia, and Budget-Neutral Expanded Access to Prophylaxis and Anti-Neoplastic Therapy from Derived Cost-Savings in Non-Hodgkin Lymphoma

Program: Oral and Poster Abstracts
Session: 902. Health Services Research—Malignant Conditions (Lymphoid Disease): Poster III
Hematology Disease Topics & Pathways:
Biological, Diseases, Therapies, Non-Hodgkin Lymphoma, Lymphoid Malignancies

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Introduction: Costs of prophylaxis of chemotherapy-induced (febrile) neutropenia (CIN/FN) have been reduced in recent years by the approval of several biosimilar filgrastim and pegfilgrastim agents. The savings from conversion to biosimilars can be reallocated to provide expanded access to CIN/FN prophylaxis or anti-neoplastic treatment. To illustrate this, we simulated in a panel of 20,000 non-Hodgkin lymphoma (NHL) patients: 1) the savings that could be realized from CIN/FN prophylaxis with biosimilar pegfilgrastim-cbqv over reference pegfilgrastim with or without on-body injector (PEG/PEG-OBI), 2) a model of expanded access to CIN/FN prophylaxis with biosimilar pegfilgrastim-cbqv from cost-savings achieved from conversion from PEG/PEG-OBI, and 3) a model of expanded access to chemotherapy with cyclophosphamide, doxorubicin, vincristine, and prednisone plus rituximab (R-CHOP) for NHL from cost-savings achieved from conversion from PEG/PEG-OBI.

Methods: Simulation modeling for a panel of 20,000 NHL patients was conducted from the US payer perspective. Medication costs for PEG/PEG-OBI, pegfilgrastim-cbqv, and R-CHOP drugs were calculated in three ways 1) Q1 2020 average selling price (ASP) derived from CMS Q3 2020 reimbursement limits, 2) Wholesale Acquisition Cost (WAC) from Redbook, and 3) a blended ASP/WAC rate proportionate to the NHL age distribution per Surveillance, Epidemiology, and End Results Program data. These three cost estimate bases were applied to one through six cycles of prophylaxis with conversion rates from PEG/PEG-OBI to biosimilar pegfilgrastim-cbqv ranging from 10% to 100%. The number-needed-to-convert (NNC) to biosimilar pegfilgrastim-cbqv from PEG/PEG-OBI to purchase one additional treatment of pegfilgrastim-cbqv or one additional cycle of R-CHOP chemotherapy was also estimated.

Results: Using ASP, cost-savings of biosimilar pegfilgrastim-cbqv over PEG/PEG-OBI in a panel of 20,000 NHL patients ranged from $371,444 (for 1 cycle of prophylaxis at 10% conversion) to $22,286,640 (6 cycles at 100% conversion). The corresponding savings ranged from $4,112,120 to $246,727,200 when using WAC; and from $1,976,194 to $118,571,640 when using the age-proportionate blended ASP/WAC rate.

Focusing on the blended ASP/WAC rate, the savings in a single cycle of chemotherapy translated into expanded access to biosimilar pegfilgrastim-cbqv ranging from 524 cycles at 10% conversion from PEG/PEG-OBI to 5,243 cycles at 100% conversion. The savings over six cycles of biosimilar prophylaxis could provide between 3,146 (at 10% conversion) and 31,457 (at 100% conversion) additional cycles of biosimilar pegfilgrastim-cbqv. The NNC from one

cycle of PEG/PEG-OBI to biosimilar pegfilgrastim-cbqv to purchase one additional cycle of biosimilar pegfilgrastim-cbqv is 4.

In a single cycle of chemotherapy, savings using the blended ASP/WAC rate translated into expanded access to R-CHOP ranging from 282 cycles at 10% to 2,817 cycles at 100% conversion. The savings over six cycles of biosimilar prophylaxis could provide between 1,690 (at 10% conversion) and 16,900 cycles (at 100% conversion) additional cycles of R-CHOP. The NNC from one cycle of PEG/PEG-OBI to biosimilar pegfilgrastim-cbqv to purchase one additional cycle of R-CHOP is 8.

Conclusions: These simulation models demonstrate that significant cost savings for supportive cancer care can be generated through conversion to biosimilar pegfilgrastim-cbqv for CIN/FN prophylaxis. The savings generated from conversion from PEG/PEG-OBI can be reallocated on a budget-neural basis to provide expanded access to additional patients/cycles of CIN/FN prophylaxis with biosimilar pegfilgrastim-cbqv or to curative anti-neoplastic treatment. Such efficiency and expanded access enhance the value of cancer care to payers and patients.

Disclosures: McBride: *MorphoSys:* Consultancy; *Sandoz:* Consultancy; *Pfizer:* Consultancy; *Merck:* Speakers Bureau; *Coherus BioSciences:* Consultancy, Speakers Bureau; *Bristol-Myers Squibb:* Consultancy. **MacDonald:** *Sandoz:* Consultancy; *MorphoSys:* Consultancy; *Celgene:* Consultancy; *Terumo:* Consultancy; *Rockwell Medical:* Consultancy; *Janssen:* Consultancy; *Novartis:* Consultancy; *Mylan:* Consultancy; *Coherus BioSciences:* Research Funding. **Abraham:** *MorphoSys:* Consultancy; *Sandoz:* Consultancy; *Mylan:* Consultancy; *Janssen:* Consultancy; *Rockwell Medical:* Consultancy; *Terumo:* Consultancy; *Celgene:* Consultancy; *Coherus BioSciences:* Research Funding, Speakers Bureau.

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