Economic Impact of Ferric Citrate Versus Standard of Care For Hemodialysis Patients

Steven M Brunelli, MD, MSCE;1 Scott Sibb, PhD, MPH;1 Amit Sharma, MD;2 Andrew Hsieh, PharmD2
1DaVita Clinical Research, Minneapolis, MN, USA; 2Keryx Biopharmaceuticals Inc., New York, NY, USA

Objectives
• The objective of the current study was to evaluate the budgetary impact of FCCC versus standard of care (SOC) in a first-line phosphate binder from the perspective of dialysis providers.

Methods
• We constructed a Markov microsimulation model using TreeAge Pro 2013 (TreeAge Software Inc., Williamston, MA). The model considered 21 health states: 20 based on permuted categories of serum phosphate and phosphate binder dose strength; the 21st state was death. Two-state Markov models were used for all health state transitions.

Results
• We ran the model over a 5-year time horizon and considered a 1-month cycle length. We used combined first and second order Monte Carlo simulation to fit models. Each model considered 1,000 second-order trials.

Conclusions
• This net budget impact model demonstrates that if FCCC were adopted in clinical practice as a first-line phosphate binder rather than the current standard of care, approximately $1,286,000 per year per 1,000 patients receiving phosphate binder.

Limitations of the Model
• Data do not pertain to net budget impact in the context of a more comprehensive bundle, under which dialysis providers are financially responsible for the costs of end-of-life care.

Acknowledgments
The authors and an unrestricted grant to the investigators in the form of $10,000 from DaVita Clinical Research which was paid to each author on a per capita basis.

References

Figure 1. Schematic Depiction of the Microsimulation Model

Table 1. Base-Case Model Inputs

Table 2. Net Budgetary Impact: Base-Case Model

Table 3. Net Budgetary Impact: One-Way Sensitivity Analyses

For 1,000 patients receiving phosphate binder (DCR), and specifically acknowledge Abigail Hunt, PhD, of DCR for editorial contributions in preparing this manuscript.