

HEALTH ECONOMIC EVALUATION OF PARICALCITOL
COMPARED TO NON-SELECTIVE VITAMIN D RECEPTOR
ACTIVATOR FOR THE TREATMENT OF SECONDARY
HYPERPARATHYROIDISM IN CHRONIC KIDNEY DISEASE
PATIENTS: US PERSPECTIVE

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The objective of this study was to determine the health economic impact of paricalcitol versus standard non-selective Vitamin D receptor activators (VDRA) treatment for secondary hyperparathyroidism in patients with chronic kidney disease (CKD) in the US.

A Markov process model was developed employing data sources from the published literature, paricalcitol clinical trials, and national population statistics. The comparator was calcitriol, a non-selective VDRA medication. The primary perspective of the study was that of the third party payor. The outcomes in the paricalcitol clinical trials and observational studies (reduction SHPT, reduction proteinuria, complications and mortality) were extrapolated to number of life years gained (LYG) and number of quality-adjusted life-years (QALYs). Clinical and economic outcomes were discounted at 3.5%.

The base case analysis is based on a 10-years time horizon and is based on a comparison of paricalcitol with a non-selective VDRA, which is started in CKD 3 and continued in CKD 4 and CKD 5. The use of paricalcitol leads to a reduction in medical cost of \$2,528 and an increase in LYG (0.47 years) and a gain in QALYs (0.43). Consequently the use of paricalcitol result is a dominant strategy, costing less and more effective, from the primary perspective of the US third party payor. The incremental cost-effectiveness ratio remained dominant from the perspective of the society after inclusion of indirect costs. One-way sensitivity analyses and probabilistic sensitivity analyses confirmed the robustness of the model.

The results showed that the favorable clinical benefit of paricalcitol results in positive health economic benefits in CKD Stages 3, 4 & 5. This study suggests that the use of paricalcitol in patients with early CKD may be cost-effective from a third party payor perspective when compared to standard non-selective VDRA medication.

Abstract topic: Epidemiology & Outcomes

Six key words that best describe the content of the abstract:

CKD

Hyperparathyroidism

Pharmacoeconomics

VDRA

Paricalcitol

Markov-model