Will Necitumumab Be Cost-Effective?

By Caroline Helwick

Necitumumab is currently being considered by the US Food and Drug Administration's (FDA) Oncology Drugs Advisory Committee for the treatment of metastatic squamous-cell lung cancer. According to an economic analysis presented at ASCO 2015 by Daniel Goldstein, MD, of Emory University, Atlanta, GA, the drug must cost less than $1300 per cycle to be cost-effective at the currently accepted willingness-to-pay threshold of $150,000.

The modeling done in this study could apply across the drug development process, according to Dr Goldstein, who suggested, "Our study is not only useful for evaluating this drug in this disease, but provides a framework for establishing value-based prices for all new cancer drugs entering the marketplace."

Leonard B. Saltz, MD, of Memorial Sloan Kettering Cancer Center, NY, agreed. "I like Dr Goldstein's approach," he told *American Health & Drug Benefits*. "I think he's showing exactly what we need to do: anticipate what would be value-based, cost-effective medicine, which is not saying that we don't need the drug, but that we can't afford the drug at prices that don't deliver value."

"I also like the idea of establishing goals in advance and having agreed-upon targets," he continued, "and saying that in order for a drug to be acceptable it's got to deliver benefit at a price commensurate with the amount of benefit."

Cost-Effectiveness Studies: Poor Timing?

Much of the excitement over targeted treatment in lung cancer has not applied to tumors of squamous histology. The positive results of the SQUIRE trial of necitumumab, an EGFR inhibitor, were therefore considered encouraging.

At last year's meeting, the SQUIRE investigators reported an overall survival benefit of 1.6 months (hazard ratio, 0.84) in the first-line setting when necitumumab was added to gemcitabine plus cisplatin, followed by maintenance with necitumumab, compared with the doublet alone.

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>
> —Daniel Goldstein, MD

"The study reached its prespecified end point, so it may soon gain FDA approval and become the standard of care in this population," Dr Goldstein predicted.

He would like to see cost-effectiveness results included in drug approval discussions rather than be revealed after drugs are approved. As they are currently conducted, he said, "Cost-effectiveness studies in the United States rarely change clinical practice or policy."

Giving cost-effectiveness information to FDA panels could influence the cost at which the drug launches and its cost-effectiveness in clinical practice, he said.

At What Price Is Necitumumab Cost-Effective?

Dr Goldstein and colleagues evaluated the cost of necitumumab for which it could be considered cost-effective using a simple Markov model that replicated the design of the SQUIRE trial. They assigned patients to first-line chemotherapy plus necitumumab, plus the standard second-line treatments. The clinical inputs were survival benefits and adverse events. The cost inputs included drug costs based on the Medicare average sales price and on the costs for drug administration and management of adverse events based on 2014 Medicare reimbursements. They used a health utility of 0.71 to 0.74 (0, dead; 1, full health), and ran 10,000 model simulations, each time varying the willingness-to-pay values to evaluate the incremental cost-effectiveness ratio (ICER) across a range of drug costs.

"We inputted the ICER and worked backward to see what necitumumab actually needed to cost to demonstrate this ICER," he explained.

In the base-case analysis, the addition of necitumumab produced an incremental survival benefit of 0.15 life-years and 0.11 quality-adjusted life-years (QALYs).

At $350 per cycle, necitumumab meets the $50,000 per QALY willingness-to-pay threshold; however, to stay under the $200,000 willingness-to-pay threshold, the cost of adding necitumumab to chemotherapy must not exceed $1850 per cycle.

"We established with 90% confidence that when necitumumab costs less than $563 per cycle, the ICER for adding necitumumab would be less than $100,000 per QALY, and at less than $1309, the ICER would be less than $200,000," Dr Goldstein noted.

They then inputted values that would "put this in line with the cost of drugs being released in 2015" and found that when the cost of necitumumab exceeded $6628 per cycle, there was 99% confidence that the ICER would exceed $500,000 per QALY.

Dr Goldstein concluded, "For necitumumab to be considered cost-effective, it should cost between $563 and $1300 per cycle, which is equivalent to $750 to $1745 per month." ■

KEY POINTS

- Providing cost-effectiveness information to the FDA could influence the cost at which a drug launches and its cost-effectiveness in clinical practice
- The SQUIRE trial of necitumumab reached its prespecified end point and may soon become the standard of care in this population
- Although necitumumab meets the currently accepted willingness-to-pay threshold of $150,000, the drug's cost needs to be <$1300 per cycle to be cost-effective

UnitedHealthcare's Episode-Based Payment Model Program Cuts Cost

An episode-based payment model cut the cost of breast cancer treatment by 34%, according to Lee N. Newcomer, MD, MHA, Senior Vice President of Oncology, Genetics and Women's Health, UnitedHealthcare.

UnitedHealthcare will be expanding its episode-based program to approximately 12 practices in 2015, based on the good results seen in the pilot project, which was initiated in 2009.

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>
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As Dr Newcomer explained, "Physicians are getting better at following pathways and eliminating unnecessary or duplicate care." The next issue, he said, was how to change the system in a way that "rewards good performance but doesn't make the physicians 'do things to get paid.'"

The episode-based program aims to reward physicians for "actual results, not the work that was done" to eliminate the dependency on chemotherapy "sales and

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