FDA questions benefit of cystic fibrosis drug from Vertex (Update)

8 May 2015, byMatthew Perrone

Federal health regulators have questions about the benefits of an experimental combination drug for cystic fibrosis developed by Vertex Pharmaceuticals, including whether the addition of a second drug ingredient adds to the pill's effectiveness.

The Food and Drug Administration said in an online review that the drug improved breathing in patients with the deadly inherited disease, but that the effect was small.

About 30,000 Americans live with cystic fibrosis, a disease that causes sticky mucus buildup in the lungs and other organs, leading to infections, digestive problems and early death. In the 1950s, children with cystic fibrosis seldom survived long enough to complete elementary school. Due to improvements in care, the typical cystic fibrosis patient today can expect to survive into their early 40s, according to the Cystic Fibrosis Foundation.

Vertex's drug, which would be sold under the brand name Orkambi, is the company's follow-up to its breakthrough treatment Kalydeco, which became the first drug to treat the underlying cause of cystic fibrosis in 2012. Orkambi combines Kalydeco with a new drug, lumacaftor.

But FDA scientists say it's unclear that lumacaftor "contributes any added benefit over" Kalydeco alone.

The FDA will ask a panel of outside experts to vote on whether the drug should be approved next Tuesday. The agency is not required to follow the group's recommendations, but it often does.

The apparent lack of added benefit from the new ingredient could complicate Vertex's plans for the drug.

Orkambi is intended to treat the most common form of cystic fibrosis, which affects about 8,500 patients in the U.S. 12 years and older. Kalydeco is only approved for a cluster of rare forms of cystic fibrosis that affect about 2,000 patients 6 years old and up.

In company trials, patients treated with Orkambi for six months reported a 2.5 to 3 percent improvement in lung function, a key measure for cystic fibrosis patients. That improvement was statistically significant, the FDA notes, but "the clinical meaningfulness of the magnitude of the improvement remains to be determined."

Other study measures including body weight and quality of life, as measured via questionnaire, "failed to show substantial evidence of a treatment effect."

FDA scientists questioned whether patients would have seen a similar improvement if treated with the single ingredient in Kalydeco. The government's review notes that Vertex did not test its new drug ingredient alone, making it difficult to assess its benefit.

Despite the FDA's questions, shares of Vertex Pharmaceuticals Inc. rose $3.84, or 3.1 percent, to $128.89 in morning trading Friday. Its shares have more than doubled in price over the past year.

Expectations for Vertex's new drug have been tempered by study results that, while statistically significant, were not as dramatic as those first reported with Kalydeco. The original studies for that drug showed a 10 percent improvement in lung function.

Company officials have pointed out the differences in the forms of the disease targeted by Kalydeco versus their new drug. Kalydeco was developed for patients who have a defective protein on their cell walls that fails to properly balance the flow of water and chloride. Orkambi is intended for patients who lack that protein altogether.

The FDA is scheduled to make a decision on the new drug by July 5.

As with Kalydeco, Vertex's new drug grew out of a long-term partnership with the Cystic Fibrosis Foundation, which has funded a number specialty drugmakers in the search for new treatment options. Over 15 years, Vertex Pharmaceuticals Incorporated received roughly $120 million in research and funding from the foundation, culminating in the 2012 approval of Kalydeco. The twice-a-day pill had sales of $464 million last year, according to the Cambridge, Massachusetts company.

Last November the Cystic Fibrosis Foundation sold its royalty rights to Kalydeco and related Vertex drugs for $3.3 billion.