FDA Approves Qinlock for Fourth-Line Treatment of Advanced Gastrointestinal Stromal Tumors

New targeted therapy delayed disease progression compared with a placebo.

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Today, the U.S. Food and Drug Administration approved Qinlock (ripretinib) tablets as the first new drug specifically approved as a fourth-line treatment for advanced gastrointestinal stromal tumor (GIST), a type of tumor that originates in the gastrointestinal tract. Qinlock is indicated for adult patients who have received prior treatment with three or more kinase inhibitor therapies, including imatinib.

“Despite the progress that has been made over the past 20 years in developing treatments for GIST, including four FDA-approved targeted therapies – imatinib in 2002, sunitinib in 2006, regorafenib in 2013 and avapritinib earlier this year – some patients don’t respond to treatment and their tumors continues to progress. Today’s approval provides a new treatment option for patients who have exhausted all FDA-approved therapies for GIST,” said Richard Pazdur, M.D., director of the FDA’s Oncology Center of Excellence and acting director of the Office of Oncologic Diseases in the FDA’s Center for Drug Evaluation and Research.

Each year, approximately 4,000 to 6,000 adults in the United States are diagnosed with a GIST. GISTs arise when abnormal cells form in the tissues of the gastrointestinal tract. GISTs most commonly occur in the stomach, small intestine, and large intestine but can start anywhere along the gastrointestinal tract.

Qinlock is a kinase inhibitor, meaning it works by blocking a type of enzyme called a kinase, which helps keep the cancer cells from growing.

Qinlock’s approval was based on the results of an international, multi-center, randomized, double-blind, placebo-controlled clinical trial that enrolled 129 patients with advanced GIST who had received prior treatment with other FDA-approved targeted therapies, imatinib, sunitinib and regorafenib. The trial compared patients who were randomized to receive Qinlock to patients who were randomized to receive placebo, to determine whether progression free survival (PFS) – the time from initial treatment in the clinical trial to growth of the cancer or death – was longer in the Qinlock group compared to the placebo group. During treatment in the trial, patients received

Qinlock or placebo once a day in 28-day cycles, repeated until tumor growth was found (disease progression), or the patient experienced intolerable side effects. After disease progression, patients who were randomized to placebo were given the option of switching to Qinlock.

On average, the PFS rate in patients in the Qinlock group was 6.3 months, compared to one month for patients in the placebo group.

The most common side effects with Qinlock were alopecia (hair loss), fatigue, nausea, abdominal pain, constipation, myalgia (muscle pain), diarrhea, decreased appetite, palmar-plantar erythrodysesthesia syndrome (a skin reaction in the palms and soles) and vomiting.

Qinlock can also cause serious side effects including skin cancer, hypertension (high blood pressure) and cardiac dysfunction manifested as ejection fraction decrease (when the muscle of the left ventricle of the heart is not pumping as well as normal). Health care providers should routinely check for symptoms and signs of these and other risks of Qinlock.

Qinlock may cause harm to a developing fetus or a newborn baby. Health care professionals should advise pregnant women of this risk and should advise both females of reproductive potential and male patients with female partners of reproductive potential, to use effective contraception during treatment and for one week after the last dose. Patients should be advised not to breastfeed while taking Qinlock.

The FDA granted this application Priority Review and Fast Track designation, as well as Breakthrough Therapy designation, which expedites the development and review of drugs that are intended to treat a serious condition when preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over available therapies.

Qinlock also received Orphan Drug designation, which provides incentives to assist and encourage the development of drugs for rare diseases. This review used the Real-Time Oncology Review, which streamlined data submission prior to the filing of the entire clinical application, and the Assessment Aid, a voluntary submission from the applicant to facilitate the FDA's assessment.

FDA collaborated with the Australian Therapeutic Goods Administration (TGA) and Health Canada on the review of this application as part of Project Orbis. FDA approved Qinlock three months ahead of schedule. The review of the applications is ongoing for the Australian TGA and Health Canada.

The FDA granted approval of Qinlock to Deciphera Pharmaceuticals, Inc.

The FDA, an agency within the U.S. Department of Health and Human Services, protects the public health by assuring the safety, effectiveness, and security of human and veterinary drugs, vaccines and other biological products for human use, and medical devices. The agency also is responsible for the safety and security of our nation's food supply, cosmetics, dietary supplements, products that give off electronic radiation, and for regulating tobacco products.

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