

Clinical trial identifies new breast cancer drug as a potential therapy for glioblastoma

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The Ivy Center features personalized brain tumor therapies designed to identify promising new strategies within an accelerated timeline. Credit: Ivy Brain Tumor Center

The Ivy Brain Tumor Center at the Barrow Neurological Institute, has released the results of its recent Phase 0 clinical trial of the breast cancer drug ribociclib (Kisqali) for the treatment of recurrent glioblastoma. The agent, recently approved by the FDA for advanced breast cancer, is part of a newly-discovered class of targeted therapy that undermines cancer cell division and could form the backbone of a new drug cocktail for patients with malignant brain tumors like glioblastoma.

"Glioblastoma presents singular, complex challenges as compared to other types of cancer," said Dr. Nader Sanai, director of the Ivy Brain Tumor Center. "You are not dealing with a single entity, but rather a collection of genetic variants that differ from patient to patient. This Phase 0 clinical trial used a precision medicine approach to uncover which subtypes of glioblastoma may respond to ribociclib and how our patients' tumors developed resistance to the new therapy."

Results from the trial show that ribociclib is uniquely capable of breaking through the [blood-brain barrier](#), a critical obstacle that for years has stalled [drug development](#) in brain tumor patients, and that the drug effectively hits its molecular target in cancer cells. The experimental Phase 0 clinical trial design also identifies a potential mechanism of drug resistance, which the Ivy Brain Tumor Center [clinical trials](#) team is now exploiting as part of an ongoing drug cocktail trial for recurrent glioblastoma patients.

"This comprehensive study has helped us to identify a potent combined-drug regimen to undermine a glioblastoma resistance mechanism to ribociclib. In less than a year, we have made tremendous progress in moving towards creating a new drug cocktail, which is significant given how precious time is for both patients and physicians fighting this disease," said Dr. Sanai.

Study results were released in *Clinical Cancer Research*, a journal published by the American Association of Cancer Research.

More information: An-Chi Tien et al, A Phase 0 Trial of Ribociclib in Recurrent Glioblastoma Patients Incorporating a Tumor Pharmacodynamic- and Pharmacokinetic-Guided Expansion Cohort, *Clinical Cancer Research* (2019). [DOI: 10.1158/1078-0432.CCR-19-0133](https://doi.org/10.1158/1078-0432.CCR-19-0133)

Provided by Ivy Brain Tumor Center

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