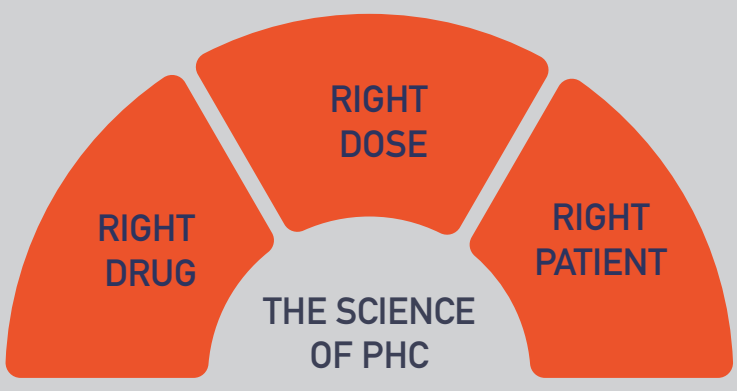
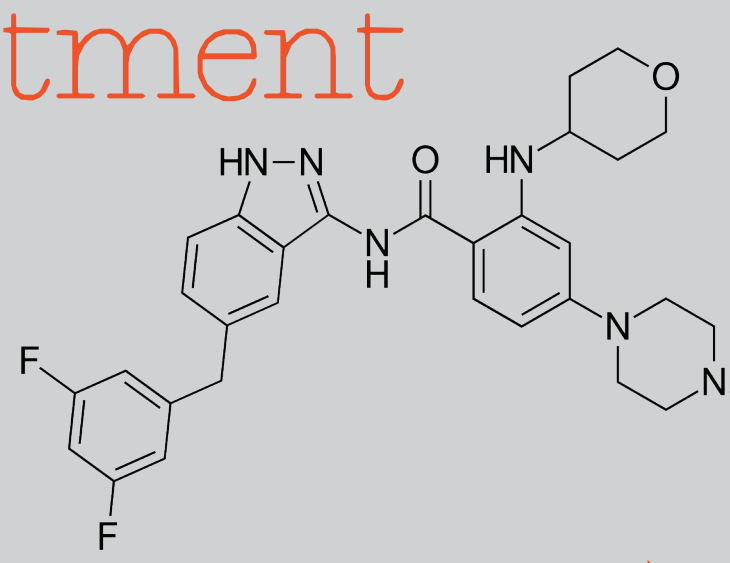


DEVELOPMENT SCIENCES

tumor agnostic targeted treatment

LEARN MORE ABOUT OUR FIRST APPROVED TUMOR-AGNOSTIC TARGETED MEDICINE AND HOW THE SCIENTISTS IN DEVSCI LEVERAGED ITS EXPERTISE IN PHC AND DIAGNOSTICS TO IDENTIFY PATIENTS WHO WOULD BENEFIT MOST



the science

WHAT IS IT?

The entrectinib molecule is a selective tyrosine kinase inhibitor designed to inhibit the kinase activity of the TRK A/B/C and ROS1 proteins, whose activating fusions drive proliferation in certain types of cancer. It blocks ROS1 and TRK kinase activity and may result in the death of cancer cells with ROS1 or NTRK 1,2,3 (the genes that encode TRK A,B,C) fusions.

Entrectinib targets an alteration to the ROS1 gene that occurs in 1-2% of patients with non-small cell lung cancer (NSCLC). However, it also targets tumors with NTRK gene fusions, which can occur across a wide range of solid tumors.

The ROS1 gene fusion can be found in patients with NSCLC and NTRK gene fusions are present in tumors irrespective of site of origin and have been identified in a broad range of solid tumor types.

In ROS1-positive, metastatic NSCLC, entrectinib shrank tumors in 78% of people with the disease and the duration of response ranged from 1.8 to 36.8+ months.

It also shrank tumors in more than half of people with NTRK gene fusion-positive, locally advanced or metastatic solid tumors. The duration of response ranged from 2.8 to 26+ months.

Biomarker testing for ROS1 in NSCLC and NTRK gene fusions across all solid tumors is the only way to identify patients who are eligible for treatment.

our work

A FEW HIGHLIGHTS OF OUR SCIENTIST'S WORK ON ENTRECTINIB:

THE BEGINNING

Roche acquired Ignyta in 2018, which brought entrectinib into the portfolio. Using a novel basket study (which recruits patients with multiple tumor types containing a desired mutation), Ignyta used next-generation sequencing (NGS) to evaluate tumor biopsy samples from thousands of patients to identify those who might be eligible for the STARTRK-2 trial.

COMPANION DIAGNOSTIC

Our OBD group teamed up with Foundation Medicine to build a tumor agnostic comprehensive companion diagnostic for entrectinib, which will be submitted to the FDA for approval in the U.S. soon, to identify future patients who might benefit from entrectinib.

VIRTUAL CONTROL GROUPS

Because of the rarity of ROS1 and NTRK gene fusions, all patients in the STARTRK-2 trial received entrectinib, so our scientists teamed up with Flatiron Health to create a virtual control group. By utilizing this real-world evidence, our team could see how patients in the STARTRK-2 trial were doing compared to patients with the same genomic alterations, taking standard-of-care therapies.

APPROVAL

Rozlytrek (entrectinib) was approved by the FDA in August 2019 for people with ROS1-positive, metastatic non-small cell lung cancer (NSCLC) and NTRK gene fusion-positive solid tumors.

> WE'RE PAVING A PATH FORWARD WITH THE FDA TO ENABLE ADVANCED DIAGNOSTICS THAT CAN IDENTIFY THE GENETIC CAUSE OF CANCERS IN PATIENTS, REGARDLESS OF WHERE THEY ORIGINATE. THIS IS ONLY THE BEGINNING.
>
> -Ron Mazumder, Vice President, OBD

IMPACT TO THE PIPELINE

Entrectinib is Genentech's first approved tumor-agnostic targeted medicine.

the future

Continuing a tumor-agnostic approach to extend the reach of personalized treatments to target a specific genetic mutation regardless of the type of cancer

Further utilize next generation sequencing to identify cancer-causing mutations across the genome of a tumor to identify potentially rare gene mutations across multiple tumor types.

more info

DNA NEWS
LIVING LIFE TO ITS FULLEST
AUGUST 2019

DNA NEWS
ENTRECTINIB TAKES THE FAST TRACK AND REVS OUR PHC 2.0 ENGINE
OCTOBER 2018

Development Sciences