

## CASE STUDY

# Enabling Individualized Patient Oncology Care

As an oncologist, you understand the need for an in-patient clinical support tool that is quick enough to allow you to keep up with your caseload, provides an up-to-date, valuable patient report for decision making while integrating with the tools you already have today.

## About Precision Health Cloud (PHC)

PHC seamlessly integrates genomic, EHR, imaging, demographic and any other data set into a single location. All of this data is indexed so you can effortlessly combine and visualize it either as part of ad hoc exploration or within applications such as clinical decision support.

## Holistic Patient View

With the ability to integrate patient data from all sources including EHR, genomic sequencing, medical devices, imaging and wearables into the PHC, clinicians can easily break down data silos to see a holistic view of patients over time. It goes beyond office visits with remote patient monitoring by integrating wearables and surveys as well as the ability to reach patients via secure video calls.

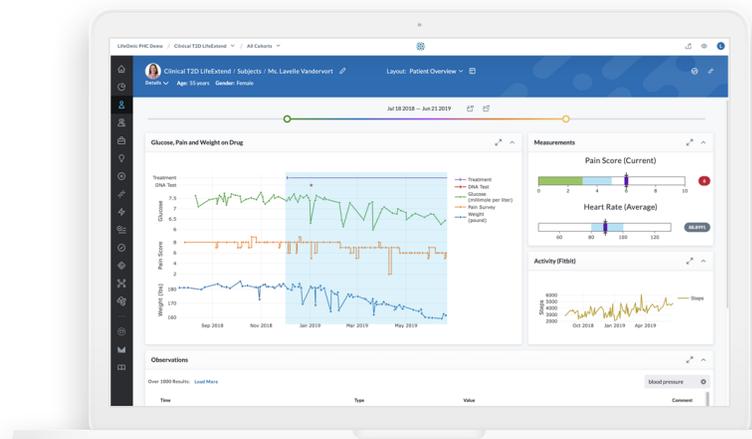
Clinicians can even add paper and fax documents to the patient's file and make these documents searchable with our Optical Character Recognition (OCR) machine learning module. This ability to assess the whole patient allows for real-time clinical decision making support based on individualized needs.

## Usability & Scalability

Our easy-to-use, graphical interface provides clear data visuals. It allows anyone, even those without a bioinformatics background, to navigate and gain benefits. Analyze more patients in a given time than before by scaling genomic interpretation of patients' cancer using the Knowledge Base. Our cloud-based infrastructure allows for the highest security measures all while being infinitely scalable.

## Genomics

The PHC provides a fully integrated Knowledge Base to streamline the analysis and annotation of your patient data. Easily query and annotate your data using a vast repository of biomedical and genomic information available from public, commercial and private sources so you only need one tool. Information is transformed, harmonized and linked to allow for unified access in an easily understandable and highly visual format.



## The Opportunity for Molecular Tumor Boards

Large-scale studies in cancer genomics have demonstrated that while there are shared drivers between different tumors, each patient's cancer is quite unique. Even patients who seemingly have the exact same diagnosis, demographics, and exposures will have different aberrations on the molecular level. Because of this, therapy needs to be tailored to each patient's unique cancer and genetics.

## The Solution

LifeOmic's Precision Health Cloud (PHC) accelerates oncology analysis by bringing all relevant patient information from clinical records to genomic sequencing into one platform for quick interpretation. The PHC's subject viewer capabilities provides physicians and researchers with a configurable view of patients' or subjects' longitudinal history, combining clinical and genomic data to better facilitate care.

The Omics Explorer contains an updated knowledge base with oncological variant data and clinical relevant drug information to allow providers to query for known details around variants, genes or genomic regions of interest. It also allows for easy import of your sequencing reports.

## The Outcome

With the PHC, Dr. Milan Radovich and the Precision Genomics Team reduced the time needed to interpret each patient from 15-30 minutes to 5 minutes. This enabled the program to scale precision medicine efforts to more patients.

In one interesting case, the PHC helped identify a rare genomic mutation as the solitary driver for a Metastatic Cholangiocarcinoma. This allowed the precision genomics team and his oncologist to identify a drug treatment specific to the rare genomic alteration. The patient has a dramatic response therapy that has been sustained.

The PHC was crucial because "given the continual flow of new evidence associating genomic alterations with potential therapies, having an informatics platform [like the PHC] ensures that no stone is unturned in the search for a tailored therapy or a clinical trial." Having a tool to lean on for oncologists is vital to better provide the right drug to the right patient at the right time.



**Dr. Milan Radovich**  
Associate Professor of Surgery and Medical and Molecular Genetics, at Indiana University (IU) School of Medicine, focused on triple-negative breast cancer

**Dr. Radovich uses the Precision Health Cloud to reduce his time interpreting each patient's genetic data by over 60%. This allows him to focus on delivering care to more patients than ever before.**

## Taking It Beyond A Specialist

Community hospitals with oncology programs see a large number of patients each day each bringing a unique profile. In most cases, molecular tumor boards are restricted by their bandwidth and turnaround time as well as the ability to overlay other relevant patient data to genome data using high-performance computing. This process limits their ability to scale and provide high-quality individualized patient treatment.

With all of this information at your grasp using the Precision Health Cloud, community oncologists can easily view and analyze the whole patient for trends through the individual subject view and aggregate patient data review allowing for the identification of optimal treatment options and the ability to care for patients as individuals.