



Cloud for Precision Cancer Treatment



Intel and the Knight Cancer Institute at Oregon Health & Science University have created a prototype collaborative platform to enable cancer precision medicine research across multiple institutions. Ultimately, the goal is to speed up genomic analysis so the care team can tailor a precision treatment plan for the patient within 24 hours.

While the cost of DNA sequencing continues to drop and molecular imaging is becoming more commonplace, much of the analysis work remains manual and can take six months or longer, according to Brian Druker, MD, director of the Knight Cancer Institute.

The platform called Collaborative Cancer Cloud uses existing public and private computing clouds and standardises research findings so information can be more easily shared. The new platform also uses a distributed model: researchers at different institutions can connect over a secure network without moving the data, yet the shareable cancer-treatment knowledge base grows.

"In large part, precision medicine is a data science. To maximise accuracy, doctors and researchers need to perform advanced computational analysis on massive data sets to discover which medication or combinations of medications will work best," Dr. Druker writes in an article at *Fortune*. "These data sets are so large — sequencing one person's genome creates up to 1 terabyte of data, or the equivalent of 200,000 MP3 songs — that it is impractical to transfer them from one institution to another."

Intel announced the Collaborative Cancer Cloud in August and said it would open source components of it in 2016. It also said universities in Boston and Austin, Texas, will be joining the effort. "At this scale, doctors anywhere will be able to sit at their computers and access genomic and clinical data on millions of cancer patients, allowing them to design the best and most effective treatments for each," says Dr. Druker.

Hopefully, success of this initiative will lead to the creation of collaborative precision medicine clouds for diseases such as diabetes, Alzheimer's, and autism, the doctor adds.

Source: [Fortune](#)

Image credit: Oregon Health & Science University

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