ALL IN ONE DAY

PRECISION MEDICINE IN 24 HOURS

Our vision is to make precision medicine a reality for cancer patients everywhere. From the moment a patient receives their genome sequence to receiving a personalized treatment plan—all in 24 hours.

THE OBSTACLES

4 main technical challenges in multiple areas, including computing. There are 3 steps in 1 day.

1. Data Management: With a 10Gbps transfer rate, 1.024PB (or 1,024TB) of data would take approximately 10 days and 10 hours to transfer from a data center to external disks/drives and an equivalent 10 days and 10 hours to capture changes in mutations, they would generate at least 1.2TB per year.

2. Privacy: According to CDC, 32.6 million people were five-year cancer survivors and 14.1 million new cancer cases were diagnosed worldwide in 2012, for a total of 46.7 million people alive with cancer as of 2012.

3. Scalability: It would take 10 days and 10 hours just to copy 1PB of data to a central location for analytics. If, for just one patient, genomic sequencing generates 1PB of data, moving datasets this large to a central location can often be impractical and regulatorily prohibitive.

4. Security: Patient privacy and preserving each institution’s intellectual property, but this is a challenge today.

OUR SOLUTION

Intel and world leaders in this space are overcoming these challenges in 3 steps.

1. Data Processing: Explore our secure sharing tools and transformative tools.

2. Privacy: The Collaborative Cancer Genomics Consortium (CCGC) is a non-profit organization created to identify actionable variants across multiple malignancies in patients with metastatic disease or progressive disease, with the potential for therapeutic benefit. This program is designed to adhere to all relevant regulations.

3. Security: In partnership with industry leaders worldwide, Intel is developing the necessary approaches to address these challenges.

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