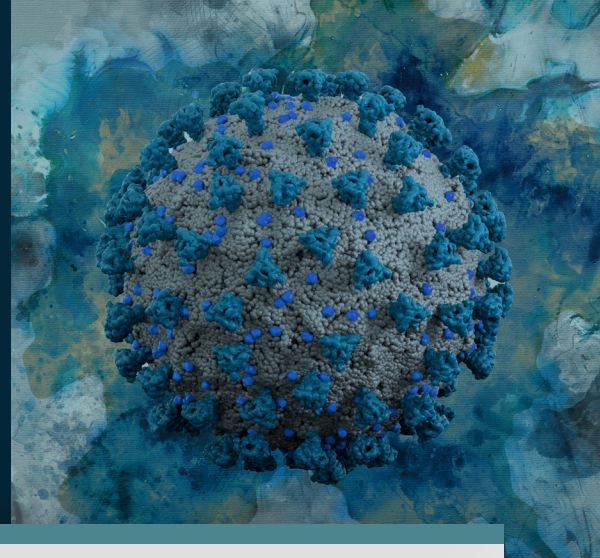


COVID-19 DIGITAL PATHOLOGY REPOSITORY AT NCI DELIVERS IMAGES TO RESEARCHERS FOR REAL-TIME COLLABORATION

WITH HALO LINK CLOUD-BASED IMAGE MANAGEMENT SOFTWARE



INTRODUCTION TO THE COVID DPR

The COVID-19 Digital Pathology Repository (DPR) is a virtual collection of high-resolution digital pathology images from COVID-19 patient tissues hosted at the National Institutes of Health. The DPR provides a much-needed mechanism for real-time international collaboration facilitated by Indica Labs' HALO Link image management platform.

The DPR went from idea to deployment in only three weeks overcoming challenges including patient confidentiality, data sharing agreements, and data submissions. The repository is available at <https://covid19pathology.nih.gov>.

MISSION OF THE COVID DPR¹

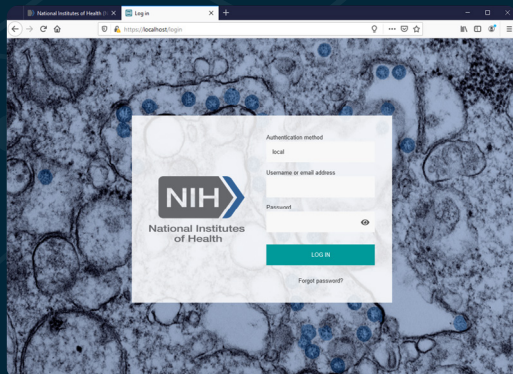
- Provide a reference dataset of COVID-19 histopathology, with a focus on lungs, liver, kidney, and heart
- Provide a dataset for image analysis studies utilizing machine learning and artificial intelligence (AI)-driven algorithms
- Support clinical trials for the treatment and prevention of COVID-19 infections

The National Institutes of Health

The goal of the COVID-DPR is to make whole slide images (WSI) of COVID-19 pathology readily accessible to the scientific community to support both clinical and research needs.

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QUANTITATIVE PATHOLOGY

HALO Link™ is a browser-based image management system that gives researchers the freedom to access their digital pathology images and analysis data anytime, anywhere and to share this data with collaborators worldwide.



“When COVID-19 was declared a pandemic, it was clear the global pathology community needed a good way to rapidly share images and develop a reference dataset. This unique resource will help accelerate our ability to develop effective countermeasures for COVID-19.”

Stephen Hewitt, MD, PhD, Clinical Investigator,
Head of Experimental Pathology Laboratory
National Cancer Institute

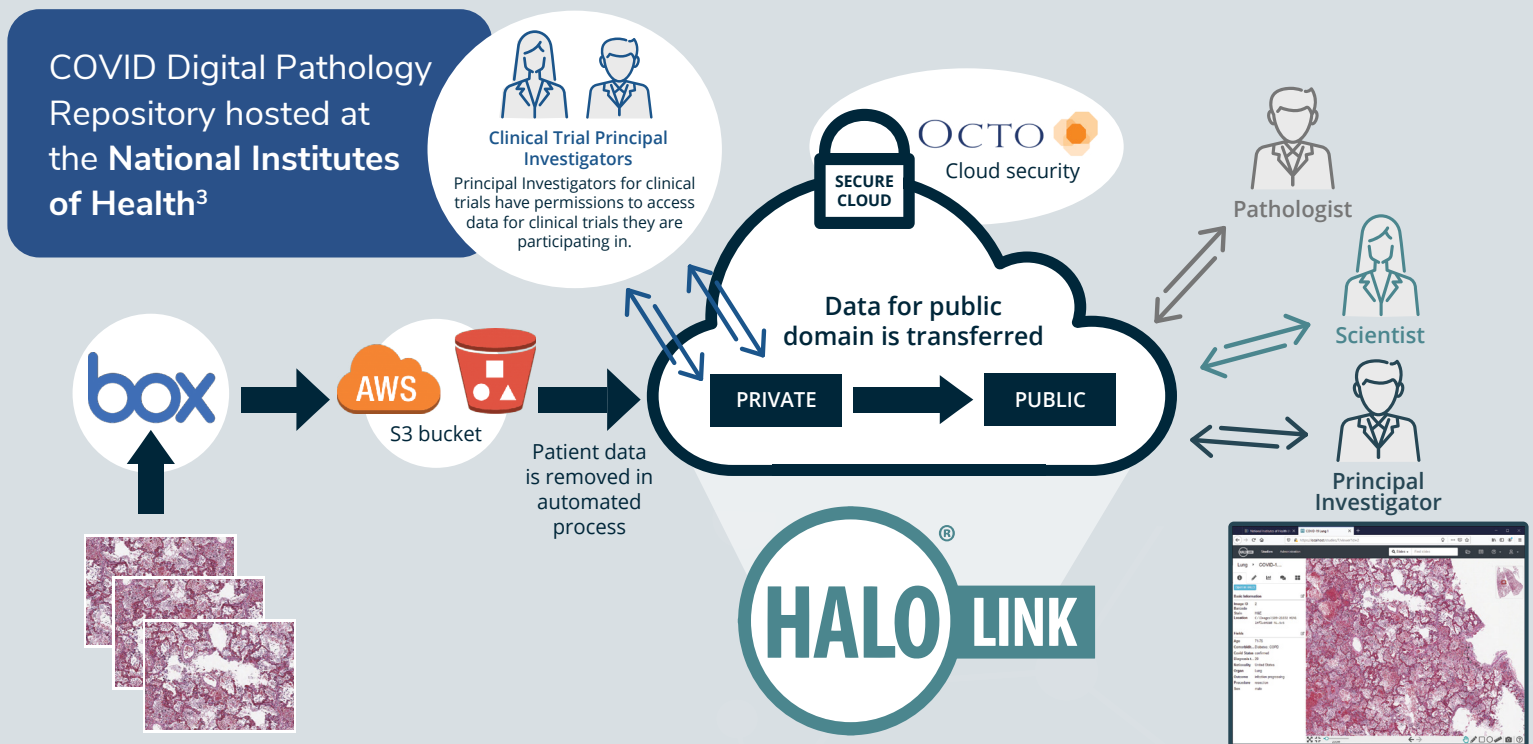
HALO LINK CUSTOMIZATIONS FOR COVID-19 DPR

The DPR was developed in collaboration with the R&D teams at Indica Labs. A key feature created specifically for the DPR is the guest user access function which facilitates fast and equitable access to the data in the public domain. In order to regulate data uploads in a manner that preserved patient anonymity and controlled the placement of data within the site architecture, the upload feature of HALO Link was disabled. In addition, Amazon Web Services optimizations were utilized to support a high volume of traffic to the site. Together with NIH branding, these customizations met the needs of NIH/NCI researchers designing the repository.

KEY STATISTICS

- **2,500** log-ins within the first month
- **1,755** images in public-facing repository*
- **3,023** images in private repository*
- Lymphoid, heart, lung, kidney, liver, placenta, and other tissue types are represented

*Data as of July 2021



"To better understand the ravaging effects of COVID-19 on the human body and to make progress in alleviating those effects, researchers need to have timely access to clinical and imaging data. The COVID-19 digital pathology repository is a significant step in this direction. This resource provides all investigators a platform to access important reference datasets, and in the next iteration, to support clinical trials research and provide datasets for computational studies based on imaging analysis and artificial intelligence, which are essential capabilities for defeating COVID-19.²"

Susan Gregurick
NIH Associate Director for Data Science
Director of the Office of Data Science Strategy

READY TO COLLABORATE?

Contact us to schedule a HALO Link demo.

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