iMerit

CASE STUDY

97%

DIAGNOSTIC ACCURACY

AI-ENABLED DIGITAL PATHOLOGY FOR CANCER DIAGNOSIS

This public health institution, responsible for biomedical and public health research, depends on iMerit to train pathology algorithms for improved cancer treatment.

THE CHALLENGE

During treatment, cancer patients routinely undergo biopsies to measure disease progression and treatment efficacy. When biopsies are sent to a lab, pathologists manually examine cells through microscopes.

It can often take up to 60 days for a sample to be turned around, resulting in poorer treatment responsiveness and manpower optimization. Patients suffered due to delayed results, which gave their disease more time to progress with less time to alter treatment.

> *We were still doing things the old fashioned way, and needed a tech-forward solution to improve our turnaround times.*
>
> -Tissue Imaging Scientist

After examining digital pathology solutions, this major public health institution chose to build an AI model that could automatically scan, annotate, and classify cells to boost lab efficiency and patient care. When in-house pathologists tried annotating slide images, the sheer size of the files caused their annotation software to crash.

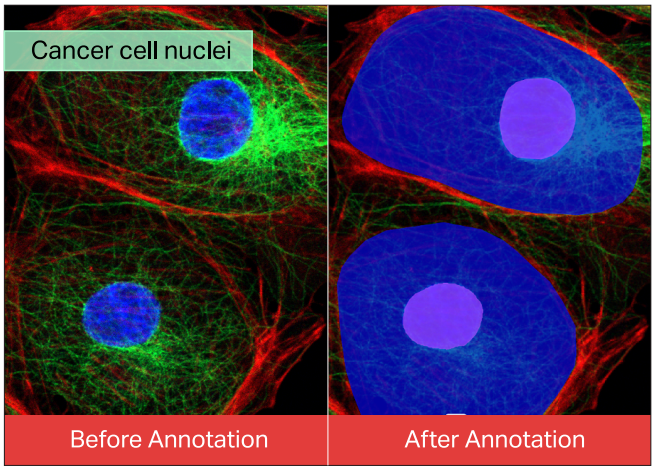
Realizing they needed a creative solution, this institution began evaluating annotation vendors.

THE SOLUTION

To annotate the images, this institution chose iMerit for its HIPAA-compliant processes, US-based team, and diverse team of cancer and pathology experts. To solve the file size challenge, iMerit suggested dividing images into quadrants and sending them over one at a time.

To optimize annotation costs, iMerit recommended specialized medical annotators instead of expensive medical experts. Working with the client, iMerit developed a specialized medical curriculum that taught annotators to accurately identify and annotate cancer cell nuclei.

After performing the annotations, ground-truth datasets were generated to begin training the model.



> *It was a night and day difference. Our labs were turning samples around faster than ever.*
>
> -Tissue Imaging Scientist

THE RESULT

Within two months, the model was conducting annotations with 97% accuracy at a 10x faster pace compared to pathologists working in a lab. The accelerated sample turnaround times meant faster disease staging and treatment evaluation for patients.

As the model performed annotations without the need of a doctor-in-the-loop, the client could allocate their pathology teams to other projects. Today, this institution is ramping up its partnership with iMerit across other pathology and radiology projects.

BOTTOM LINE IMPACT

10X
Faster Diagnosis

97%
Diagnostic Accuracy

GREATER
Laboratory Efficiency

About iMerit

iMerit provides end-to-end data labeling services to Fortune 500 companies in a wide array of industries including agricultural AI, autonomous vehicles, commerce, geospatial, manufacturing, government, financial services, medical AI and technology. iMerit employs more than 5,500 full-time data annotation experts in Bhutan, Europe, India and the United States.

info@imerit.net | imerit.net

LEARN MORE