# 1 Million Reasons

In a quiet, yet purposeful way, the world of pathology changed with little fanfare on February 22, 2019 – a change that will allow pathologists to positively impact the lives of people all over the world.

This change was put in motion at the Ohio State University (OSU) James Cancer Center, when Inspirata and the OSU pathology team scanned the 1,000,000th tissue image to form the largest library of whole slide images (WSI) in the world. Forming the most extensive tissue image resource for cancer research and laying the foundations of accelerated clinical care, this monumental achievement established the new era of digital pathology as real.

Every patient's battle with cancer begins with their diagnosis. With the advent of slide scanning devices, pathologists are using whole slide images (WSI) for primary diagnosis and treatment effectiveness assessment, as well as conferences, tumor boards, and case sharing. Furthermore, researchers have been using whole slide images to interrogate many aspects of histology with deep learning and artificial intelligence, which was not previously possible using traditional analog-based pathology.

A founding reason – accelerated care
Accelerating time to initial diagnosis, time from diagnosis to treatment initiation, and even early treatment pathway assessment is becoming an increasing priority in cancer care. To accelerate both clinical and research needs, Inspirata has built the world's largest WSI library. In the emerging era of digital diagnosis and artificial intelligence, access to a large volume of digital data becomes more important than ever. Less than one year ago, Inspirata announced that their digital pathology system was used to make the first-ever primary digital diagnosis in the US, heralding a new era in cancer diagnostics. The company created the world's first comprehensive high-throughput scanning facility at OSU,
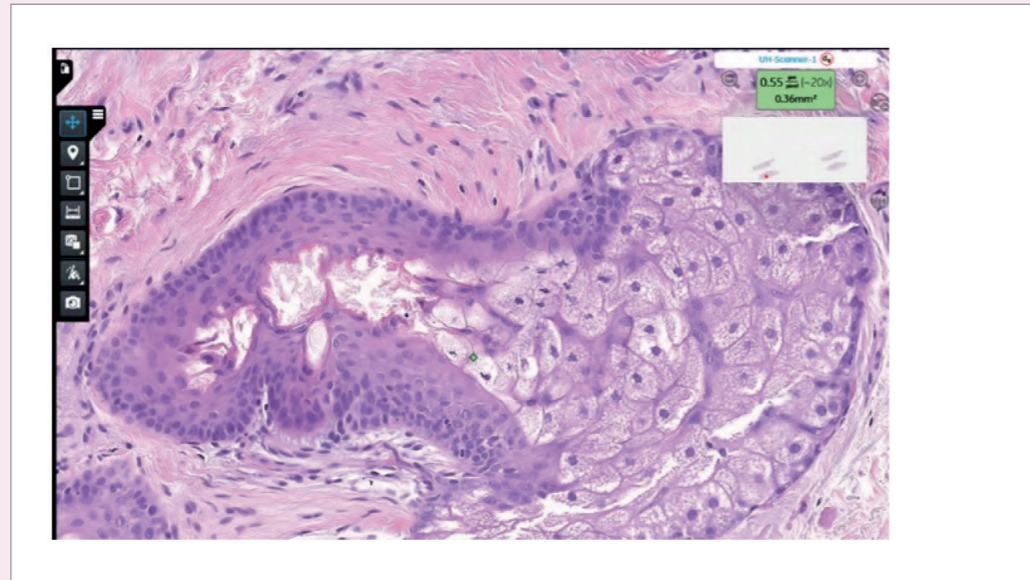
which has now scanned over one million whole slide images in less than 18 months.

The undertaking has included scanners from multiple vendors, full-time staff supplied by Inspirata, comprehensive planning, standard operating procedures, project governance, workflow review, communication and stakeholder engagement activities, system integrations, file storage, and IT support. This historic accomplishment has demonstrated Inspirata's ability to scan and support large digital pathology implementations while simultaneously creating imaging data that are now speeding up clinical and research efforts.

An efficiency reason
Pathology continues to feel the strain of more cases per pathologist. Now, coupled with large WSI libraries, pathologists can access priors at a touch of a button, perform quantified image analysis, and even offer patient hours wherein the pathologist can offer to view a patient's sample and engage in a far more interactive role in the patient's experience. Never before have pathologists had such a direct ability to impact patient care.

What has been required is a hub to the pathology ecosystem. Dynamyx™ brings each of the valuable aspects of digital pathology together in a single accessible and easy-to-use workflow, giving pathologists all over the world a reason to adopt Dynamyx™ digital pathology.

A million reasons
The advancement of artificial intelligence and deep learning technologies make WSI libraries even more important and valuable. The extraction of critical data and patterns from WSIs ushers in a new era of scalable and accelerated research opportunities. A million WSIs provides real reason to get excited.

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Anatomy of Dynamyx™

Data Mediator
Dynamyx™ provides an agnostic architecture that permits integration with almost any slide scanner, AP-LIS/LIMS, and image analysis platform, allowing pathology departments to pursue a multi-vendor approach. As scanning technology continues to advance, hospital consolidation continues to proceed, and vendor performance waxes and wanes, pathology departments can protect their investments by using Dynamyx's broad vendor integrations.

The Data Mediator leverages Inspirata's market-leading Enterprise Service Bus (ESB) to enable a diversified vendor strategy. The Data Mediator is the backbone of our workflow management toolsets, facilitating the flow of images and connecting data between scanners, laboratory systems, and best-of-breed algorithms that enhance the pathology workflow.

Knowledge Hub
Dynamyx™ brings all of your data together into a seamless workflow

accessible via our Tissue Diagnostics Knowledge Hub. Here, Inspirata applies our deep experience in digital pathology workflow and value-added analytics to develop the methodology and technology needed to offer a comprehensive pathology platform. The heart of the Inspirata Knowledge Hub is artificial intelligence; it enhances the pathologist's ability to accumulate, augment, and disseminate knowledge from a customizable suite of algorithms, reference materials, and AI-driven tools.

These innovative assays are a key business driver for the utility of digital pathology and the adoption of this emerging technology. Digitization of large libraries of WSIs facilitates a quantitative approach to evaluating disease recognition and progression. Our Knowledge Hub puts the power of these tools in the hands of your pathologists.

API Garden
Dynamyx™ boasts an "open" architecture designed to enable customers to arrive at their preferred blend of laboratory technologies. Inspirata is committed to accommodating the nuanced requirements of each individual customer by providing an "API

Garden" that allows each pathology department to continue to build upon their digital pathology capabilities at a pace that makes sense for their organization.

The API Garden leverages Inspirata's deep partnership capabilities with AP-LIS/LIMS information systems, image analysis tools, and even reference material and quality assurance strategies.

Conferencing Hub
Dynamyx™ facilitates the sharing of WSIs through its Conferencing Hub, allowing pathologists to achieve qualified diagnoses with peers anywhere in the world. Users can share in real time or by sending cases. The Dynamyx™ real-time collaboration allows an unlimited number of users to access, comment on, and annotate a slide at the same time, regardless of their physical location. Furthermore, entire cases can be shared in an identified fashion with approved users or de-identified for any collaborator. These cases include the WSI and the clinical history, gross images, and other pertinent diagnostic information. Driving collaboration elevates the impact and importance of pathology on the entire cancer care process.