

Building a Transformative Cancer Detection Tool with Santovia Path AI and Prima CARE



Santovia is a physician founded health technology that is transforming patient engagement through best in class education, innovative design, shared decision-making tools and real time reporting. Santovia utilizes education, surveys, and EBSCO Health's Option Grid™ to increase patient satisfaction, experience and outcomes while also reducing costs for organizations.



Prima CARE is a large multi-specialty medical group that has been serving southeastern New England since 1991, with 160 providers across multiple locations including Fall River, Somerset, Tiverton, Westport and Dartmouth. The organization offers comprehensive healthcare services ranging from primary care and pediatrics to specialty care, providing care in offices, hospitals, nursing homes, walk-in clinics, and even making house calls for home-bound patients. Prima CARE operates a 60,000 square foot medical facility in Fall River that includes advanced diagnostic services such as MRI, CT scans, nuclear cardiac testing, ultrasound, and bone density testing.

“ This project represents the perfect synergy of AI innovation and healthcare application. Our goal is not only to push the boundaries of what's possible in AI but also to create solutions that save lives. This partnership is a critical step in turning this vision into reality.”

– Saeed Amal, Ph.D., Northeastern University

The Northeastern Team



Gene Tunik, PhD

Director, AI + Health
Professor, Bouvé College
of Health Sciences



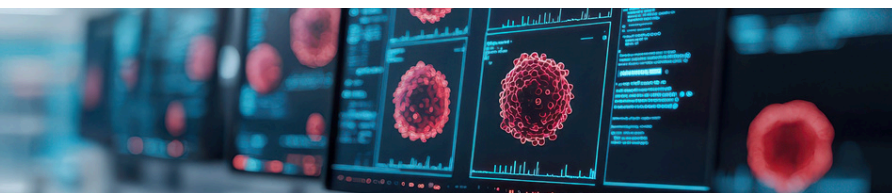
Sayeed Amal, PhD

Research Professor,
The Roux Institute &
Dept. of Bioengineering

- ▶ Northeastern Faculty
- ▶ Postdoctoral Fellows
- ▶ Graduate Research Assistants

“ This project exemplifies Northeastern's applied research approach. Artificial intelligence holds potential to bring quicker, more accurate cancer detection using digitized whole slide images of tissue biopsies. It can find pathologies at a dramatically higher throughput, with pathologists-in-the-loop verifying whether the model output is correct from halfway around the world, allowing the industry to overcome pathologist shortages, and it can bring all those improvements at lower costs.”

– GeneTunik, Ph.D., Principal Investigator



AI models to analyze digitized human tissue samples and classify cancer cells, which could transform the way clinicians diagnose and treat cancer.

The Problem

Today, most pathologists still diagnose cancer manually by looking at slides of each patient biopsy under a microscope in a time-consuming process that's susceptible to human error. **Precise, rapid AI detection of cancer could revolutionize oncologists' ability to provide early, life-saving treatment and personalize medical care.**

The Solution

- ▶ A multidisciplinary team will build advanced **AI models to analyze digitized human tissue samples and classify cancer cells**, which could transform the way clinicians diagnose and treat cancer.
- ▶ The multi-year project **combines cutting-edge AI expertise with state-of-the-art healthcare data.** Prima CARE will provide digitized patient samples for the project in partnership with GoPath Diagnostics.



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In addition to building models to detect cancer, Northeastern experts will develop **intuitive visualization tools to make it easy for medical professionals to take action based on model outputs**, ensuring the tools fit seamlessly into the workflows of pathologists and clinical teams.



The partnership structure is designed to accelerate the deployment of these tools at scale, improving medical care while providing a blueprint for how to integrate advanced technology into a high-performing clinical practice.

The initiative underscores Northeastern's commitment to experiential, applied AI research and a human-centered approach to AI technology

“This technology will revolutionize the pathology industry by providing the same types of physician support tools that exist today in the radiology industry. The beauty about this partnership is by combining physicians who are doing the actual day-to-day work with the university subject matter experts and commercial partners, we will get to market at warp speed.”

– Richard Mateus, CEO of Prima CARE