

PATHOLOGY

A Critical Moment

Pathology has entered an era of exhilarating, unprecedented expansion. Pathologists are enabling increasingly efficient, accurate diagnosis and treatment across diseases, while also using new technologies to study the foundational causes of health disorders.

Now is the time to build on this momentum. With philanthropy, we can keep pace with these advancements and ensure that Mass General's Department of Pathology continues to serve as a leader in this crucial field.



"Our unwavering goal has always been excellence in service to patients—accurate diagnosis, communicated effectively and efficiently—and the highest standards in research and training."

David Louis, MD,
Pathologist-in-Chief

Positioned for Impact

Pathologists are in a prime position to lead research on human disease. Mass General's world-class Department of Pathology includes more than 850 faculty members, medical trainees and employees who lead the way in pathology every day.

Founded in 1896, our department was one of the first of its kind nationally. Over a century later, Mass General Pathology continues to shape and advance the field. Our clinical laboratory services provide medical teams with information that enables patient diagnosis and treatment. We play a vital role in caring for almost all patients at Mass General, and many pathologists outside of our hospital also use our services.

We meet these needs of patients and society through cutting-edge research, expertise in harnessing big data and technology to answer important clinical questions, and participation in patient care. Most recently, we were among the country's first academic medical centers to gain approval for a laboratory-developed COVID-19 test and to produce a highly effective serology test that can identify coronavirus-fighting antibodies.

In a typical year, the Department of Pathology processes approximately 30,000 tests per day for various diseases and conditions being treated at the hospital. Since COVID-19 hit, we have dramatically increased our capability and have begun running as many as 1,000 daily tests for COVID-19 alone—and the cities of Boston and Brookline have tapped our expertise to conduct COVID-19 tests for their residents, too.

With this kind of expertise and nimble innovation, Mass General Pathology stands ready to revolutionize personalized medical care on all fronts, which will usher in earlier diagnoses, more precise prognoses and tailored therapies for every patient.

Bold Breakthroughs. Compassionate Care. Revolutionary Results.

Our Vision

The field of personalized medicine is moving rapidly. We are at the cusp of being able to provide diagnostic services that were not imaginable even 10 years ago. Technologically advanced specialties like computational pathology and artificial intelligence bring us ever closer to launching a new era in highly individualized patient care.

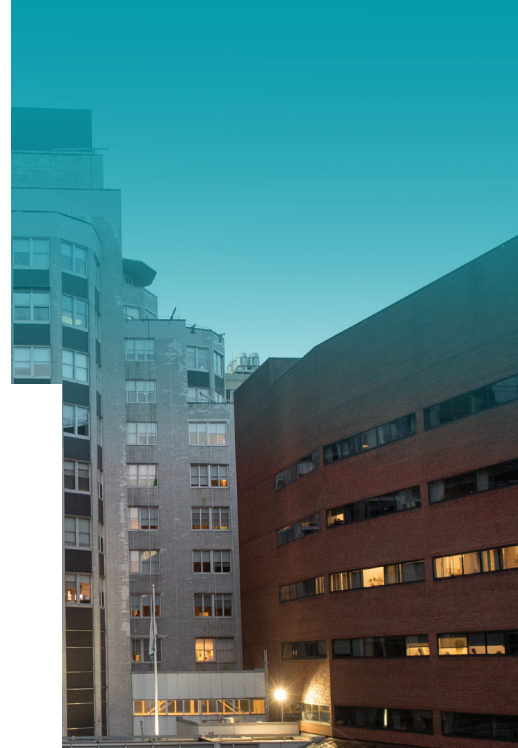
Moving forward, a major and critical focus for the Department of Pathology will be to build out our own pioneering Center for Advanced Microbial Diagnostics and Surveillance.

Whether diagnosing COVID-19 or more common forms of illness, the tests we develop and conduct on patient specimens are integral to medical care: They allow us to diagnose disease and gauge a treatment's effectiveness. Despite the expansive need for diagnostic tests across numerous health conditions, it has become more difficult to find the technical staff trained to run them. This staff shortage places the field at risk of not being able to sustain diagnostic laboratory services locally or nationally. To remedy this, our vision is to establish a pipeline of new pathology talent that begins with high school and college-aged students, and creates stable, rewarding career paths for individuals in Boston and beyond.

Opportunities to Support

The Department of Pathology's funding priorities include the following:

- » **Harnessing Big Data:** As the branch of medicine that generates vast amounts of patient data, pathology is well-positioned to interpret it. Our nationally leading digital health enterprise utilizes millions of patient data points to power sophisticated artificial intelligence, machine learning, computational pathology and advanced decision-support tools—all with the goal of creating better diagnostics and empowering medical providers with the insights they need to deliver highly personalized care. We must secure transformative philanthropic investments to remain at the forefront of these ever-evolving technological advancements.
- » **Creating a Center for Advanced Microbial Diagnostics and Surveillance:** To ready Boston and the nation for the next molecular invader, we will create this unprecedented center. It will help sustain the large-scale testing capacity that we developed during the COVID-19 surge, identify novel pathogens before they spread, help maintain our institution's readiness to act quickly against a new infection, continue robust molecular epidemiology and surveillance for microbial resistance, and promote strong collaboration among academia, government and industry.
- » **Fostering Pathology Laboratory Professionals:** We propose to work with Boston's high schools and community colleges to identify and train the next generation of laboratory professionals. This will allow Pathology to provide diagnostic services for personalized therapies and enhance patient care. It will also establish a stable career path in a high-demand field for young people in the local community.



JOIN US

With philanthropic support, we can usher in the next generation of Pathology through big data, expand the pipeline of qualified professionals in the field and build a large-scale program that nimbly responds to future infectious disease outbreaks.

FOR MORE INFORMATION, please contact Alexandra Mikkelsen at amikkelsen@mgh.harvard.edu or (617) 726-5561. Thank you for your interest and support.