

# IMMUNE DYSREGULATION PROGRAM



The Immune Dysregulation Program at Children’s Hospital of Philadelphia (CHOP) harnesses expertise from a team of immunologists, oncologists, rheumatologists and others to provide cutting-edge diagnostic and genetic testing, coordinate care and customize treatments for children with rare immune dysregulation disorders. This program is one of a trailblazing group of initiatives at CHOP known as Frontier Programs that are pioneering new advances in children’s health at an astonishing pace.

For most children, the immune system helps fight illness. But for nearly 50,000 children in the United States, the immune system malfunctions, causing dangerous inflammation and organ damage, and leaving them vulnerable to infection. The Immune Dysregulation Program provides a single place where clinicians can turn for help diagnosing and treating these children.

If your patient is suffering and you’re struggling to understand what’s causing their symptoms, let us partner with you to find answers. When children with immune deregulation disorders are diagnosed quickly and accurately, effective treatment — and in some cases a cure — is possible.

## DIAGNOSING IMMUNE DISORDERS

Immune dysregulation disorders are rare, complex and difficult to diagnose. Many symptoms mimic those of other diseases and can affect multiple organs at the same time. Because acting quickly is important to achieving the best outcomes for children with these disorders, our team

guides physicians through the complex process of ordering the right tests, interpreting the results, diagnosing the disease and developing a treatment plan.

## Immune dysregulation syndromes can be grouped into five primary categories:

- Undiagnosed conditions where an immune disorder is suspected
- Immune disorders of hyperinflammation
- Immunodeficiency disorders associated with autoimmunity
- Genetic autoimmune/autoinflammatory disorders
- Autoimmunity-associated abnormal blood counts

## CUTTING-EDGE TESTING

We will provide the most advanced, specialized diagnostic and genetic tests available, including an extensive menu of testing assays to examine both the cellular and humoral immune systems. Our lab ensures test results are available to clinicians quickly so they can be used to plan optimal care for patients.

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Our team is developing a gene panel — using the data we have today about which genes have been shown to cause immune dysregulation syndromes — to more quickly identify these rare disorders. As we discover new gene variants, we will add to the testing panel, ensuring that future patients will benefit from our experience.

### OUR TEAM. YOUR PARTNERS.

To provide the best outcome for children with immune dysregulation disorders, CHOP has brought together a team of immunologists, oncologists, rheumatologists, hematologists, neurologists, pathologists, clinical pharmacologists and basic scientists to form the Immune Dysregulation Program. Our team is led by Edward M. Behrens, MD, Michele Lambert, MD, Kathleen Sullivan, MD, PhD, and David T. Teachey, MD.

### LEADING RESEARCH

The biggest hurdle in treating immune dysregulation syndromes is identifying alternative therapies for children who don't respond to currently available combinations of chemotherapy, steroids and other medications, and stem cell transplantation. Our immune dysregulation experts at CHOP are hard at work in the lab studying the function of immune cells in these patients, trying to identify new genetic causes for these disorders and testing new drugs that might be effective for patients who experience a relapse or whose disorder does not respond to current treatments.

In addition, CHOP is hosting an in-house clinical trial and participating in a multi-site pilot study to evaluate the safety and effectiveness of several novel treatment regimens for patients with immune dysregulation disorders. The Immune Dysregulation Program was also recently named a Frontier Program, a designation given to programs within our hospital that best combine groundbreaking translational research and exceptional clinical care.



If your patient is suffering and you're struggling to understand what's causing their symptoms, let us partner with you to find answers.

#### PARTNER WITH US

To refer a patient or request a second opinion:

267-426-6298

[CHOPUSA@email.chop.edu](mailto:CHOPUSA@email.chop.edu)

#### LEARN MORE

[chop.edu/immunedysreg](http://chop.edu/immunedysreg)