Share this APDS information sheet with your doctor.

APDS, or activated PI3K delta syndrome, is a rare primary immunodeficiency that affects 1 to 2 people per million. It occurs when there are variations to the genes *PIK3CD* or *PIK3R1*. While people with APDS may suffer from a wide variety of symptoms, infections of the ears, sinuses and upper and lower respiratory tracts are the most common symptoms of APDS.

Symptoms usually begin in early childhood. Due to the nature of the disease, people with APDS are vulnerable to repeat infections and autoimmune, neurological, and inflammatory symptoms such as lymphoproliferation, enlarged spleen, and are at a higher risk for cancers like lymphoma, although most people with APDS do not get cancer. [1]

APDS is inherited in an autosomal dominant manner, meaning that a person needs an abnormal gene from only one parent to potentially have it themselves. Symptoms of APDS can vary, even among family members carrying the same genetic condition. [2]

1 Recognize the Symptoms [3,4]

- Onset of symptoms under 12 years of age
- Documented severe recurrent sinopulmonary infections (> 2 events within 3 years of each other)
- Bronchiectasis
- Lymphadenopathy for greater than one month
- Any nodular lymphoid hyperplasia
- Chronic hepatomegaly or chronic splenomegaly
- Severe, persistent, or recurrent Herpesviridae infections (e.g., EBV, cytomegalovirus)
- Autoimmune cytopenia
- Enteropathy
- Lymphoma at 0-25 years – meets the 2 eligibility criteria
- Lymphoma at ≥ 26 years of age – requires second eligibility criteria

Any patient with two (2) or more of the above symptoms should be considered for genetic testing.

Genetic Testing is the only definitive way to diagnose APDS.

2 Differential Diagnosis

According to Dr Nicholas Hartog "Patients may have multiple complications though lack of a unified diagnosis".

Some individuals may be misdiagnosed with Common Variable Immunodeficiency (CVID) or Combined Immunodeficiency (CID) and Hyper IgM Syndromes. [5]

Individuals whose main symptoms are autoimmune cytopenias, lymphadenopathy, splenomegaly, hepatomegaly, nodular lymphoid hyperplasia, or lymphoma may be misdiagnosed with hematological disorders such as Autoimmune Lymphoproliferative Syndrome (ALPS), Evans syndrome, or simply refractory cytopenias. [6,7]

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Find out more about the navigateAPDS genetic testing program offering sponsored genetic testing and counseling at no charge.

https://navigateapds.com

3 Laboratory findings and flow cytometry to access T and B cell function / morphology [4,8]

- Low to normal concentrations of IgG and IgA
- Normal or elevated concentration of IgM
- Reversed CD4/CD8 ratio
- Reduced naive T cells (CD4+ CD8+)
- Reduced CD4+ T cells
- Increased transitional cells
- Reduced B cells

Note: Not all APDS patients will present with all of these laboratory findings.

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