

# Genetic Disorder Prediction Report

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Patient Age: 10

Gender: Male

Predicted Disorder: Genetic Disorder

Subclass: Cystic fibrosis

Date: 26-12-2025

Description:

## ### Overview

Cystic fibrosis (CF) is a genetic disorder that affects the lungs and digestive system. It causes the body to produce abnormally thick, sticky mucus that can clog the lungs and digestive tract.

## ### Causes

Cystic fibrosis is caused by a change (mutation) in a gene called CFTR (cystic fibrosis transmembrane conductance regulator). This gene provides instructions for making a protein that helps control the amount of salt and water in mucus and sweat. When the CFTR gene is mutated, it affects the function of the protein, leading to the symptoms of cystic fibrosis.

## ### Symptoms

Symptoms of cystic fibrosis can vary, but common ones include:

- \*\*Respiratory issues:\*\* Persistent cough, wheezing, shortness of breath, and frequent lung infections.
- \*\*Digestive problems:\*\* Difficulty digesting food, poor weight gain, and greasy, bulky stools.
- \*\*Salty skin:\*\* Many parents notice that their child's skin tastes salty when they kiss them.
- \*\*Other symptoms:\*\* Clubbing of fingers or toes (widening and rounding of the nails), and infertility in males.

## ### Diagnosis

Cystic fibrosis is usually diagnosed through:

- \*\*Newborn screening:\*\* A simple blood test done shortly after birth can check for CF.
- \*\*Sweat test:\*\* This test measures the amount of salt in sweat. People with CF have higher levels of salt in their sweat.
- \*\*Genetic testing:\*\* A blood test can identify mutations in the CFTR gene.

## ### Treatment

While there is no cure for cystic fibrosis, treatments can help manage symptoms and improve quality of life.

- \*\*Medications:\*\* Antibiotics to treat lung infections, mucus thinners to help clear mucus from the lungs, and enzymes to help digest food.
- \*\*Chest physiotherapy:\*\* Techniques to help loosen and clear mucus from the lungs.
- \*\*Nutritional support:\*\* A high-calorie diet and vitamin supplements to ensure proper nutrition.
- \*\*Lung transplant:\*\* In severe cases, a lung transplant may be considered.

## ### Follow-up Advice

If you or your child has cystic fibrosis, regular follow-up care is essential. This may include:

- \*\*Routine check-ups:\*\* Regular medical check-ups to monitor health and treat any complications.