

## Personalized medicine for children with blood cancer, launched by Swagene

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Swagene, a specialty molecular lab in Chennai, is said to be the first and only centre in India to launch some of these advanced biomarkers in India to benefit children suffering from leukemia.

Blood cancer, or leukemias, are complicated because of the large number of 'driver' genetic mutations seen in the disease. These mutations affect the disease in terms of severity, survival, and risk of relapse. Apart from detecting the disease and determining its course, identifying the mutation in the patient is crucial to also provide targeted treatment protocols.

"When a patient is accurately stratified, giving him/her targeted treatment can vastly improve success rates. For the first time in India, Swagene is launching such a diagnostic panel that can help many children, who are commonly affected by leukemia", explained Dr Vani, Swagene's co-founder.

Swagene is said to be the first and only lab in India that offers IKAROS (IKZF1) and ERG deletion tests for leukemia patients. Being sub-microscopic mutations, these can be detected only by molecular diagnosis and not by conventional methods. The lab being a specialized molecular diagnostic centre founded by a scientist and a doctor, is also able to quickly report test results with detailed interpretation. It is expected that these two tests, which can also be ordered as a panel, will vastly improve the oncologist's and hematologist's armamentarium in fighting cancer successfully.

The mutations or biomarkers can be either favourable (good) or poor (bad) depending on how they affect the cancer. These bad markers, such as IKAROS or IKZF1 mutations, are important in identifying patients at risk of treatment failure and giving them stronger or modified therapy to prevent relapse. A lot of scientific evidence shows that tailoring the treatment to suit these patients using currently available drugs is greatly beneficial in improving survival.

Dr Vani further said, "In this case, there is also a silver lining. There is a good marker (ERG mutation), that is a hero because it has the power to overcome the villain IKZF1. If the hero mutation is present even in the presence of the other the patient will fare a lot better." So patients that carry both are still classified under favourable prognosis.

This is particularly helpful in deciding which patients may need bone marrow transplantation, the mainstay of leukemia therapy. This is very stressful for the patient because not only does identifying a matching donor take a long time, but it is also too expensive even for the insured classes.

Swagene has won numerous awards from CII, FICCI and DST, as well as institutes like IIT Kharagpur, IIM Ahmedabad and BITS Pilani.