Offering a boon

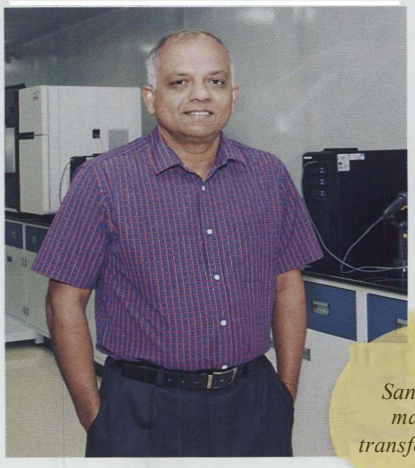
MedGenome has moved to offer genomics solutions in cancer

Lastfortnight,theBengaluru-based MedGenome, a global genomics firm with presence in the US, India and Singapore announced some major breakthroughs. In a development that could transform the management of cancer patients, it claims to have cracked the difficulties related to tracing malignant cells and avoid repeated biopsies. Doctors are often forced to conduct repeated biopsy tests to detect certain types of cancers related to skin, lung and colon. But, with the new method - liquid biopsy test - developed for the first time in India by MedGenome, physicians can identify genetic alterations, interpret, assess and treat various forms of cancer. The test facilitates detection of mutation where there is difficulty of obtaining biopsy or in the event of a damaged biopsy material and non-availability of tissue biopsy.

This development assumes significance in view of the fact that India has an estimated 1.73 million new cases of cancer and over 880,000 deaths due to the disease by 2020. About 70 per cent of all cancer patients approach the doctor when the disease has advanced, and the chances of cure are very low.

"Management of cancer will undergo a massive transformation in India with NGS (next generation sequencing) based liquid biopsies," explains Sam Santhosh, chairman, MedGenome. "We are constantly striving to get the most advanced genetic testing technique at affordable prices to the patients and 'Oncotrack' is one such offering".

In medical terms, the liquid biopsy based test, called Oncotrack, is a non-invasive screening that analyses cell-free DNA that is isolated from the patients' blood. Using high end sequencing technology, the screening process identifies specific gene mutations that are linked with melanoma, lung and colon cancers. This empowers cancer specialists, the oncologists, to look for actionable alterations in a patient's treatment, management, without having to do an invasive biopsy or where biopsy is not an option.



Santhosh: massive transformation

Correct diagnosis

"As the care gets more personalised, doctors will be equipped to make correct diagnosis, prognosis and prediction of diseases. Cell free tumour DNA (ctDNA) analysis will help in avoiding repeat biopsies of difficult-to-get tumours and also in monitoring the overall response to treatment on real time basis", says Kumar Prabhash, medical oncologist, Tata Memorial Hospital (TMH), Mumbai. The test has also been validated in a scientific study, in academic collaboration with TMH, togetherwithAmitDutt, principal investigator (Scientist F), ACTREC, Tata Memorial Centre.

"Liquid biopsy has the capacity to interpret infinite mutations which will pave the way for new drug discovery, research and therapies. Over thirty five oncologists in India have already screened patients using our Oncotrack. Further, since it has a very patient friendly approach, we are confident it will be well-accepted by the doctors and patients. Oncotrack is a proven molecular tool after histopathology diagnosis and detecting molecular changes at baseline and at the time of relapse in lung and colon cancer for deciding the right treatment," says V.L. Ramprasad, coo, Med Genome.

The second major announcement was the launch of Claria carrier screening test for genetic test for inherited diseases. Over a million babies are born each year in India with genetic disorders and 20-30 per cent of infant mortality is due to these disorders. It is also estimated that there are over 50 million people in India with single gene disorders.

To help address this problem and to give couples planning to have a baby get a better understanding of their risks of passing on genetic disorders, MedGenome's Claria Carrier Screening Test, based on the NGS technology, leverages the Indian population genetic variant database created by Ganga Ram Hospital over the last 20 years. are specific to Indian population.

Santhosh's test provides vital information of 'Carrier' status to couples and their risks of passing down recessive diseases (condition where a person has two copies of an abnormal gene) to their child. Based on NGS technology, it tests and can detect over 1,300 recessive diseases and disease-causing variations. In addition, MedGenome Claria has a dedicated expert genetic counselling unit, which offers absolutely free genetic counselling to help couples understand key genetic information while planning for a baby.

"Genetic disorders are common in India due to consanguineous and endogamous marriages," says Verma, director, Institute of Genetics & Genomics, Ganga Ram Hospital, Delhi. MedGenome has introduced cheap carrier screening tests for couples for 100, 500 and 4,500 genes of relevance in our country. It will help reduce the burden of genetic disorders in India".

"With high throughput NGS and cutting edge bioinformatics we can screen for almost all the recessive diseases with high accuracy at an affordable price," concludes Ramprasad.

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