



New study on Blood cancer

Why in news?

\n\n

A Study at DNA Fingerprinting and Diagnostics, Hyderabad, have come up with new insights on Leukemia.

\n\n

What is Leukemia?

\n\n

\n

- Leukemia is cancer of the blood or bone marrow which produces blood cells.
- A person who has leukemia suffers from an abnormal production of blood cells.
- There are several stages of maturation in a white blood cell's lifespan.
- Acute leukemia crowds out the good cells more quickly than chronic leukemia.
- Treatment requires holistic approach of financial support, psychological support, and a patient tracking system.

\n

\n\n

What is the status of leukemia in India?

\n\n

\n

- Acute leukemia cases are recorded across India.

\n

- There are nearly 25,000 children diagnosed with cancer in India every year and around 9000 of these have leukemia.
\n
- There would be 90,000 children with leukemia in a decade in India.
\n
- The data of those children who are treated are missing.
\n

\n\n

What are the findings of the study?

\n\n

- Mixed Lineage Leukemia (MLL) protein is closely associated with leukemia (blood cancer) in children and adults.
\n
- The protein plays a crucial role in cell division by regulating chromosome segregation.
\n
- The absence of MLL itself gives rise to genomic instability and makes the cell prone to cancer.
\n
- Efforts has been made to discover the essential cellular functions of MLL.
\n
- Kinesin 'motor' protein Kif2AK is responsible for organizing MLL cells and associated with several kinds of cancers.
\n

\n\n

What is the way forward?

\n\n

- The study helps in clear understanding the blood cancer.
\n
- The genome editing techniques can be carried out with a wide knowledge of MLL protein cells.
\n
- This breakthrough findings will help the Indian pharma sector to introduce new life saving drugs.
\n

\n\n

\n\n

Quick fact

\n\n

\n

- DNA fingerprinting is a method used to identify an individual from a sample of DNA by looking at unique patterns in their DNA.
- DNA fingerprinting was to extract DNA from a sample of human material, usually blood.
- This technology is globally used in solving the crimes.

\n

\n\n

\n\n

Source: Business Line

\n



IAS PARLIAMENT
Information is Empowering
A Shankar IAS Academy Initiative