Childhood cancer

Prelims: *Current events of national and international importance | Health*

Why in News? C

Karnataka is witnessing a gradual year-on-year rise in childhood cancer cases, with 1,882 estimated cases in 2025, highlighting the growing burden of paediatric malignancies

- **Cancer –** Cancer is a disease in which some of the ***body's cells grow uncontrollably*** and can spread to other parts of the body.
  - **Malignant tumours –** Invade nearby tissues and can spread.
  - **Benign tumours –** They do not invade and usually do not grow back.
- **Childhood cancer –** It refers to ***cancers occurring in children and adolescents (0–19 years).***
  - In Karnataka, childhood cancers formed about 2.1% of all new cancer cases in 2025.

Globally, about 400,000 children develop cancer annually, and it is a leading cause of death in children and adolescents.

- **Causes –** Genetic changes in cells that control growth and division.
- Errors during cell division or inherited genetic mutations.
- Damage to DNA by harmful substances or infections (HIV, Epstein-Barr virus, malaria)
  - ***About 10% of childhood cancers have a genetic predisposition.***
- Unlike adults, lifestyle and environmental factors play a limited role

International Childhood Cancer Day (ICCD) is observed globally every year on 15 February to raise awareness about childhood cancers. The theme for ICCD 2026 is "Demonstrating Impact: From Challenge to Change."

- **Symptoms –** Fever, severe and persistent headaches, bone pain, weight loss.
- Unusual swellings, pallor, easy bruising or bleeding, fatigue
- White reflex in the eye, enlarged lymph nodes, night sweats
- **Vulnerable Populations –** Children in low- and middle-income countries (LMICs).
- Poor households with limited access to diagnosis and treatment.
- Children with inherited genetic predisposition.
- **Treatment –** Chemotherapy, surgery, radiotherapy, and bone marrow transplantation.

- Supportive and psychosocial care, palliative care, with treatment support under Arogya Karnataka scheme and NGOs in Karnataka.
- **Cure rates –**
  - >80% in high-income countries.
  - <30% in many Low- and Middle-Income Countries (LMICs).
  - >70% curable with early diagnosis and uninterrupted treatment (Karnataka data).
- **Measures –** Prompt and correct diagnosis followed by effective evidence-based therapy.
- Improving access, strengthening childhood cancer data systems, along with financial and psychosocial support for families.
- **India –**
- **Ayushman Bharat -** Arogya Karnataka (AB-ARK) provides up to ₹5 lakh per year for BPL families.
- **Kidwai Memorial Institute (KMIO) -** As the state's apex centre, it offers free treatment for BPL patients and has established a dedicated 65-bed pediatric ward.
- **NGO Support -** Organizations like the Indian Cancer Society and various local foundations often bridge the gap for medication and travel costs.
- **Prevention –** Childhood cancer generally cannot be prevented or screened.
- Vaccination (Hepatitis B, HPV) and early treatment of chronic infections
- Genetic counselling and monitoring in high-risk families.

Quick Fact

Types of Cancer
• **Carcinoma** – Cancer of epithelial cells (e.g., breast, colon, lung, prostate) • **Sarcoma** – Cancer of bone and soft tissues (muscle, fat, blood vessels, cartilage). • **Leukaemia** – Cancer of blood-forming tissues (bone marrow), does not form solid tumours. • **Lymphoma** – Cancer of lymphocytes (Hodgkin and Non-Hodgkin). • **Multiple Myeloma** – Cancer of plasma cells in bone marrow. • **Melanoma** – Cancer of pigment-producing melanocytes (skin, eye). • **Brain and Spinal Cord Tumours** – Cancers originating in the central nervous system. • **Germ Cell Tumours** – Tumours from sperm/egg-forming cells. • **Neuroendocrine Tumours** – Tumours from hormone-producing nerve cells (includes carcinoid tumours).

References

1. The Hindu | Childhood Cancer
2. WHO | Childhood Cancer

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