Atomic Energy-based cancer treatment in India

Prelims – *Current events of National and International Importance| Health.*

Why in News?

Recently, the Union Ministry of Science & Technology highlighted major initiatives by the Tata Memorial Centre (TMC) under the Department of Atomic Energy in expanding cancer treatment facilities.

- **Spearheaded by –** Tata Memorial Centre (TMC) under the Department of Atomic Energy.
- **Healthcare centres –** TMC has established 11 hospitals in 7 States of India, located in Mumbai, Varanasi, Vizag, Sangrur, Mullanpur, Guwahati and Bhubaneshwar.
- **Role of TMC –** It provides leadership in guiding the national/international policy and strategy for cancer care.
- It promotes outstanding services through evidence-based practice of oncology.
- It is committed to imparting education in cancer to students, trainees, professionals, employees and the public.
- It emphasizes research that is affordable, innovative and relevant to the needs of the country.
- **Accessibility and Affordability –** It has initiated and planned a strategy for making advanced cancer therapies accessible to the general public in the country through the ***National Cancer Grid (NCG).***
- 382 members / organizations are connected with NCG which is providing treatment to 8,50,000 new cancer cases.
- **Expansion of Networks –** It will extend its network under a ***hub and spoke model*** in a phased manner through technical collaboration and assistance.
- **Health monitoring –** Epidemiological surveys for health assessment with respect to employees working in close proximity to radiation and their families have been conducted at nuclear power plant sites with the help of local medical colleges and TMC.

Epidemiology is the study of the patterns, causes, and effects of health and disease conditions in specific populations. It helps to eliminate or reduce the health Problems and their consequence and assess public health trends to formulate preventive healthcare policies.

- **Achievements**
  - National Facility for Hadron Beam Therapy at Advanced Centre for Treatment, Research and Education in Cancer (ACTREC).
  - India's ***first homegrown CAR T-Cell therapy*** for cancer treatment.
  - **PREVALL** – First and only oral suspension of ***Mercaptopurine*** used in the ***treatment of Acute Lymphoblastic Leukaemia*** developed by ***TMC, DAE***.
  - Breakthrough ***Nutraceutical AKTOCYTE*** by the Department of Atomic Energy set to Transform Cancer Care.
  - **TRANS-ARTERIAL Radioembolization** Using Indigenously Sourced Y-90 Microspheres (*BHABHASPHERES*).
  - Largest Radiological Research Unit (Therapeutic Nuclear medicine unit).

Reference

PIB| Atomic Energy - based cancer treatment

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