GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
LOK SABHA
UNSTARRED QUESTION NO – 1826
ANSWERED ON 30/07/2025

USE OF NUCLEAR ENERGY IN HEALTH SECTOR

1826. SHRI RAJEEV RAI

Will the PRIME MINISTER be pleased to state:-

(a) whether it is a fact that nuclear energy can be applied in the health sector for advance treatment of various ailments and if so, the details thereof;

(b) whether the Government has initiated measures to augment research and development of nuclear medicine in our country and if so, the details thereof; and

(c) whether the Government has initiated any measures to spread the use of advanced nuclear medicine in hospitals and diagnostic centres in rural areas particularly in areas of Eastern Uttar Pradesh and if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS AND PRIME MINISTER'S OFFICE (DR. JITENDRA SINGH)

(a) Yes, Nuclear energy has potential to be applied in the health sector for advanced treatment of various ailments. In many of them diagnostic and therapeutic nuclear medicine can be practiced. In India, Single Photon Emission Computerized Tomography (SPECT), Positron Emission Tomography (PET), Computerized Tomography (CT) are the devices through which diagnostic nuclear medicine is practiced. They help in staging, restaging, response evaluation of cancer. There is availability of nuclear medicine facilities in the country in Government and private sector. There are more than 500 such facilities available.
Nuclear medicine imaging provides unique information by helping doctors view how organs are functioning, which is different from X-rays or CT scans that show only anatomical structure.

(b) The Government has taken several initiatives to augment research and development of nuclear medicine in the country. R&D is ongoing in radioisotope production, purification, and development of new technologies to ensure enhanced and uninterrupted supply of medical radioisotopes in the country. Bhabha Atomic Research Centre (BARC) has developed and launched several indigenously produced radio-pharma products for applications like radiation synovectomy, therapy of neuroendocrine tumours, breast cancer, bone pain palliation, liver cancer, and non-Hodgkin's lymphoma.

These efforts are enhanced through collaborations both within the Department of Atomic Energy and through collaborations with Institutes and leading nuclear medicine centers

such as All India Institute of Medical Sciences (AIIMS), Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh, Jawaharlal Institute of Postgraduate Medical Education & Research (JIPMER), Pondicherry through Board of Research in Nuclear Sciences (BRNS) funded projects.

Tata Memorial Centre, an aided institute under the aegis of Department of Atomic Energy has established P Ramaiah Naidu Shodhika, an advanced Nuclear Medicine Research and Treatment unit in the Advanced Centre for Treatment, Research and Education in Cancer (ACTREC) in Mumbai. This facility has 41 hot beds, one of the largest therapeutic nuclear medicine units in the world, and was inaugurated by the Hon'ble Prime Minister in 2023. It has state-of-art facilities for nuclear medicine and basic research.

(c) Bhabha Atomic Research Centre (BARC) regularly produces radio-isotopes and radiopharmaceuticals and supplies it through Board of Radiation & Isotope Technology (BRIT) to various nuclear medicine centres across India, enabling broader availability of diagnostic and therapeutic services including in rural and underserved areas. Tata Memorial Centre (TMC) has established Homi Bhabha Cancer Hospital and Mahamana Pt. Madan Mohan Malviya Cancer Centre at Varanasi, UP. There are 2 PET CT, 1 SPECT CT, High Dose Radioiodine Therapy and Theranotic Facility available for the use of nuclear medicine and diagnostic purpose.

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