GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
LOK SABHA
UNSTARRED QUESTION NO.2835
ANSWERED ON 06/08/2025

SHORTAGE OF MEDICAL RADIOISOTOPES

2835. SHRI HANUMAN BENIWAL

Will the PRIME MINISTER be pleased to state:-

(a) the names and quantities of key medical radioisotopes currently produced indigenously for cancer diagnosis and treatment and whether this domestic production is sufficient to meet national demand and if so, the details thereof;

(b) whether there is a consistent demand-supply mismatch in medical isotopes such as Tc-99m, Lu-177, and Ga-68 and if so, the average gap between production and requirement during the last two years;

(c) the number of instances in which radioisotopes or radiopharmaceuticals got spoiled or rendered unusable due to transportation delays or inadequate cold-chain infrastructure;

(d) the number of Government and private hospitals that faced shortage or delay in receiving medical isotopes during the last year;

(e) the status of the proposed PPP-based isotope reactor initiative, its expected production capacity and timelines; and

(f) whether the Government has any plan to expand affordable nuclear medicine infrastructure to Tier-2 & Tier-3 cities, particularly to strengthen early cancer diagnosis in public hospitals and if so, the details thereof?

ANSWER

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

(a) The details are as follows:

Board of Radiation & Isotope Technology (BRIT) is a Constituent Unit of Department of Atomic Energy which provides products and services based on radiation & isotopes for applications in healthcare, agriculture, research and industry.

Names of key medical radioisotopes	Quantity	Whether this domestic production is sufficient to meet national demand (Yes or No)	Details thereof
Lutetium-177 (Lu-177)	1000-1200 Curie	Lu-177: Yes	BRIT fulfills ~ 85-90 % of country's demand for Lu-177 while part of the domestic demand is catered to in case of I-131 and Mo-99. F-18 [half-life: 110 min] being short lived poses a logistical challenge and limits its distribution range. Thus, F-18 products produced at MCF, Parel and Cyclon-30 are supplied to nearby hospitals only and not sufficient to meet national demand.
Iodine-131 (I-131)	1000-1200 Curie	I-131: No	
Molybdenum-99 (Mo-99) (parent of Tc-99m)	8000-10000 Curie	Mo-99: No	
Fluorine-18 (F-18)	300-400 Curie	F-18: No	

(b) There is no demand-supply mismatch in Ga-68. However, there is a demand-supply mismatch for Mo-99 and approximately 10-15 % gap in demand and supply of Lu-177.

(c) NIL.

(d) NIL.

(e) Bhabha Atomic Research Centre, a Research and Development unit under Department of Atomic Energy (DAE) has obtained in principle approval for the PPP-based isotope reactor project and Detailed Project Report (DPR) is under review for administrative and financial sanction of project. It is expected that production is likely to start around 2035 with 0.5 MCi(million Curie)radio-isotope production capacity.

(f) Yes. Tata Memorial Centre (TMC), a Grant-in-Aid institution under DAE has already expanded affordable nuclear medicine infrastructure in Tier–2 and Tier–3 cities. The name of such Tier-2 cities are New Chandigarh, Visakhapatnam, Bhubaneswar, Guwahati, Varanasi, Muzaffarpur (Bihar) and Tier-3 city is Sangrur (Punjab).

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