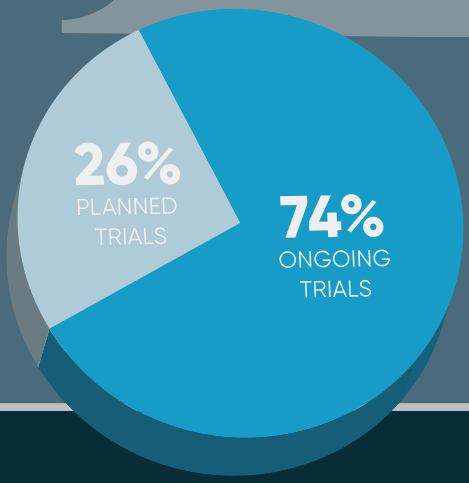
THERAPEUTIC RADIOPHARMACEUTICALS

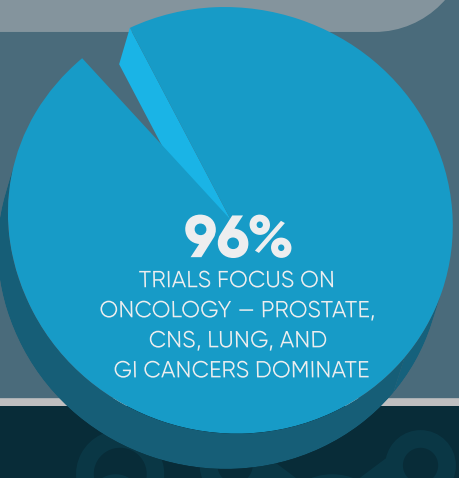
CLINICAL RESEARCH LANDSCAPE AND CRO ENABLERS (2025)

#DYK Did you know?

Therapeutic radiopharmaceuticals advance precision oncology; global market to reach **USD $6B by 2031.**

- **250+ clinical trials** across **800+ sites,** evaluating **250+ unique radiopharmaceutical compounds**
- North America leads with **120+ US-based trials;** highest patient enrollment
- Asia-Pacific driven by **China** and **Australia;** Europe includes key hubs like **Spain, France, Germany,** and the **UK**
- **80%+** early to mid-phase studies, with **late-phase trials on the rise**





- **13 approved agents,** mainly oncology-focused; small molecules lead targeting approaches.
- **Theranostics, AI-based drug discovery,** and novel targets (e.g., HER2, FAP, PD-L1) are driving **precision oncology** and **next-gen radiopharmaceutical innovation.**
- **Dual-use isotopes** like ^{64}Cu and supply-chain advances support **future scalability.**

Beta emitters (e.g.,177Lu, 90Y) are widely used and provide **deep tissue penetration.**

Alpha emitters (e.g., 223Ra, 225Ac) are emerging, offering **high precision and minimal damage.**

Targeted alpha therapies (TATs) demand exceeds supply, spurring **innovation** in production and delivery.

New alpha agents and combinations **target** resistant and hard-to-reach **tumors.**