

THERA4CARE

From innovative radiotheranostics

to a European ecosystem for personalised cancer care

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FACTS & FIGURES

Start date:	01/10/2024
End date:	30/09/2029
IHI funding:	14 130 974 €
Industry contribution:	7 550 500 €
Contributing Partners:	4 197 618 €
Total Cost:	25 879 093 €
Project website:	www.thera4care.eu
Social media:	linkedin.com/company/thera4care/

ACHIEVED RESULTS



Preclinical validation

Development and preclinical characterisation of innovative FAP- and uPAR-targeting radiotheranostic candidates.



¹⁶¹Tb-FAPI clinical translation

Compassionate and Prospective Phase I/II clinical trial package developed for CTIS in FAP-expressing metastatic solid tumours.



AI-enabled treatment monitoring

Development of AI-based tools for multimodal data integration, supporting disease burden quantification, patient stratification and personalised treatment monitoring.



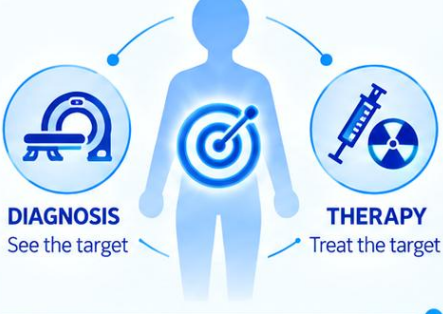
Advanced precision imaging

Successful measurement of a new alpha emitter phantom using next-generation digital SPECT/CT.

CHALLENGE

1

A transformative promise



DIAGNOSIS

See the target

THERAPY

Treat the target

Theranostics are reshaping the way we think about cancer treatment: combining diagnosis and therapy to deliver the right treatment to the right patient, at the right time.

2

Barriers to clinical adoption



Radionuclide availability

Imaging

Production capacity

Personalised dosimetry

Clinical adoption is limited by gaps in radionuclide availability, imaging, production capacity and personalised dosimetry. Regulatory barriers, fragmented infrastructures and limited specialised expertise further hinder the translation of innovative radiotheranostic solutions into routine clinical practice.

3

The way forward



Closing this gap is essential to turn theranostics from a promising approach into a scalable, personalised standard of cancer care.

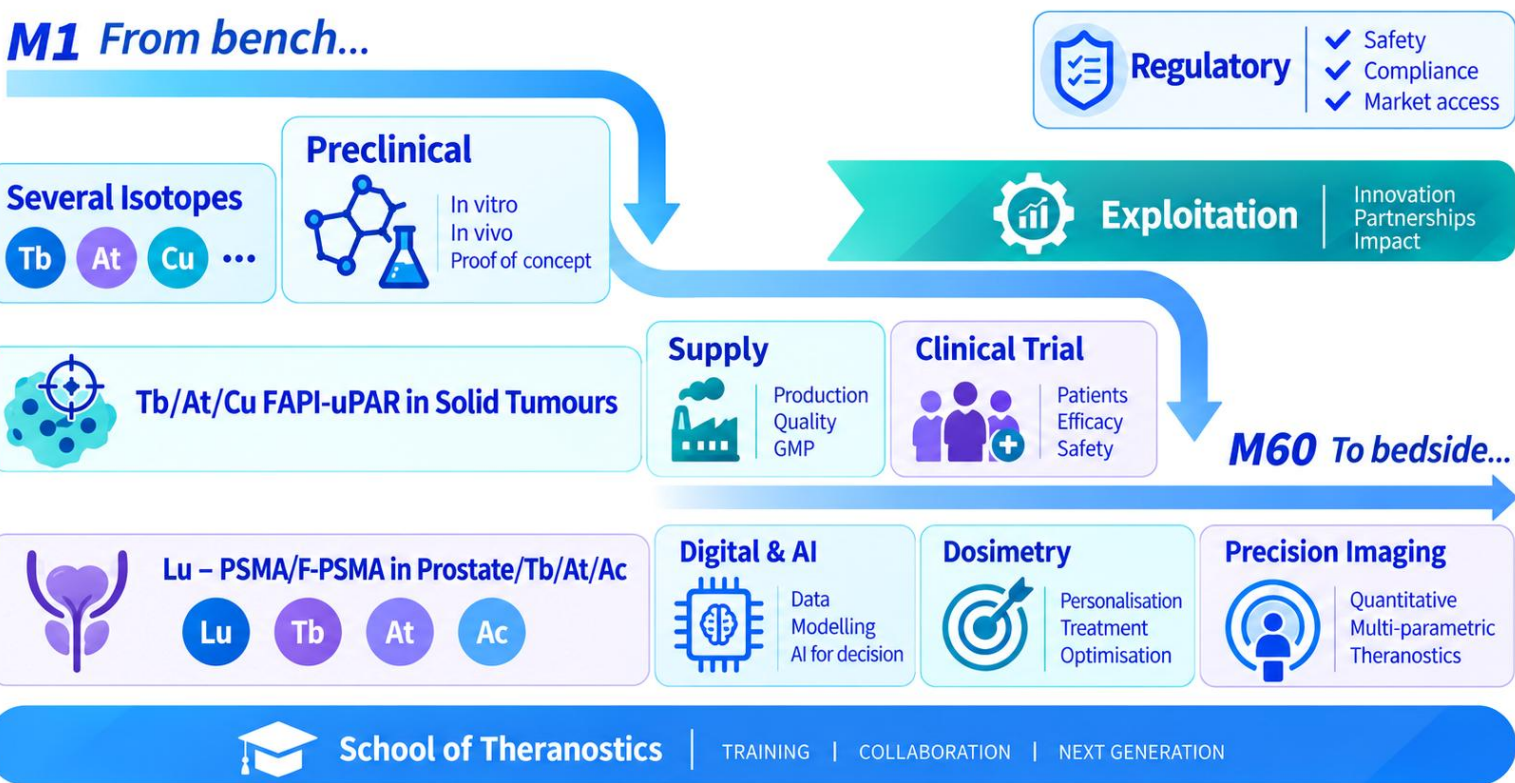
VALUE OF IHI COLLABORATION

Thera4Care showcases the unique strength of the IHI model: industry, SMEs, research organisations, academia and hospitals work together around shared, concrete objectives. This collaboration is **strongly result-oriented**, combining complementary expertise and resources to accelerate the delivery of **usable, scalable and sustainable solutions** with a clear pathway to real-world implementation and patient benefit.



APPROACH & METHODOLOGY

- Regulatory & preclinical pipeline:** evaluation of novel radionuclide–ligand pairs, safety, efficacy and translational readiness.
- Clinical validation:** Phase I/IIa trials in small cohorts using standardised master protocols.
- Precision medicine:** PET/SPECT imaging, personalised dosimetry and AI-based patient stratification on large datasets.
- Translation & scale-up:** standardised radionuclide production/supply, regulatory pathways, training and clinical guidelines.



CAREER IMPACT

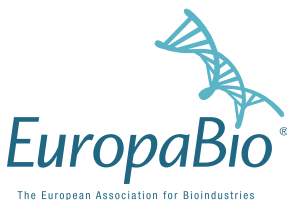
For Academy: Thera4Care has strengthened interdisciplinary, research and project-management skills, expanded international networks, and provided early-career researchers with access to industrial expertise and infrastructures, supporting their professional development.

For Industry: Industrial partners have gained direct access to broad academic and clinical expertise, fostering knowledge exchange, innovation and stronger links between research and real-world application.

- Mapanao, A.K., Adakli, E.S., Vaccarin, C. et al. Preclinical characterization of FAP-targeting radioconjugates: assessing biophysical and pharmacokinetic equivalence of lutetium-177 and terbium-161. EJNMMI Res (2026).













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