

# End-to-End Dosimetry for Radiopharmaceutical Development

## A Proven Partner in Radiopharmaceutical Development

Because radiopharmaceutical therapies demand absolute precision in how radiation is understood, modeled and translated, you need a partner who can deliver a quantitative, defensible link between biodistribution, absorbed dose, and patient safety. Perceptive is that partner.

Perceptive is the leading imaging CRO in radiopharmaceuticals, supporting **the vast majority of radiopharmaceutical programs from discovery through global clinical trials.**

With over 200 dosimetry studies supported, the largest dedicated dosimetry and advanced analytics team in the industry, and deep regulatory expertise, Perceptive provides sponsors the assurance that dose estimates are scientifically rigorous, reproducible, and regulatory aligned.

### Phase

Preclinical	Translational	Clinical
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### Species

Mouse	Rat	Canine	Pig
Cynomolgus	Rhesus	Human	Rabbit

### Isotopes

<sup>11</sup> C	<sup>18</sup> F	<sup>64/67</sup> Cu	<sup>68</sup> Ga
<sup>89</sup> Zr	<sup>99m</sup> Tc	<sup>111</sup> In	<sup>125</sup> I
<sup>123/124/131</sup> I	<sup>177</sup> Lu	<sup>203/212</sup> Pb	<sup>225</sup> Ac
<sup>233</sup> Ra	<sup>186</sup> Re	<sup>211</sup> At	

## The Perceptive Preclinical Dosimetry Advantage

Perceptive Discovery combines quantitative imaging, biodistribution science, and advanced dosimetry modeling to generate accurate absorbed dose estimates that directly inform clinical translation, including:

#### End-to-End or Standalone Dosimetry Support

Full-service study design, execution, analysis, and IND-enabling reporting—or rapid analysis using sponsor-provided biodistribution data

#### Advanced Human Dosimetry Modeling (OLINDA 2.2.3)

FDA-aligned workflows across adult, pediatric, and organ-specific models led by a dedicated health physics team

#### Accurate Alpha and Beta Dosimetry

Proprietary modeling strategies that address known limitations in standard workflows, improving dose estimation for red marrow and osteogenic cells

#### Radionuclide Translation and Surrogate Pairing Expertise

Proven workflows translating isotopes (e.g., <sup>203</sup>Pb to <sup>212</sup>Pb, <sup>111</sup>In/<sup>89</sup>Zr to <sup>225</sup>Ac) for efficient preclinical-to-clinical bridging

#### Quantitative Imaging and Biodistribution Integration

PET/SPECT imaging, cut-and-count studies, and time-activity curve generation integrated into MIRD-based dose calculations

#### Sub-Organ Dosimetry (Kidney)

Advanced segmentation and modeling to estimate regional dose within kidney substructures for improved toxicity assessment

#### Intrathecal (IT) Dosimetry Expertise

Specialized modeling to accurately estimate dose to spinal cord and CSF regions

**The Result: Predictive safety modeling and quantitative dose estimates that provide confidence in first in human dose planning.**

# Clinical Dosimetry for Translational Studies and Beyond

Perceptive Imaging leverages deep translational expertise to extrapolate preclinical biodistribution data into first-in-human dose projections and inform Phase I protocol design, supported by a team of leading RLT scientists with extensive experience advancing INDs through regulatory agencies. This ensures a seamless, data-driven transition from preclinical development to early-phase clinical execution.

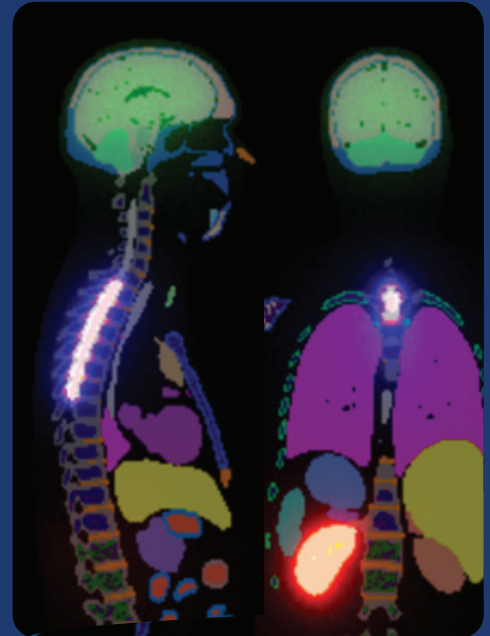
## Clinical Dosimetry Excellence

Perceptive's dosimetry solutions span:

1. Acquisition of quantitative imaging and/or gamma counter data
2. Generation of tissue and tumor time activity curves and time integrated activity coefficients
3. Calculation of absorbed dose values using validated, indication appropriate models

Our in-house dosimetry and advanced analytics teams support:

- Organ and tumor specific dose estimates using validated models (e.g., OLINDA) and custom in house tools
- Pediatric, translational, and complex dosimetry applications
- Single timepoint dosimetry and multi cycle treatment modeling
- Consistent dose estimation across isotopes and study phases
- Multi center clinical trial support with harmonized workflows



## The Integrated Value: Discovery to Clinic

By leveraging Perceptive's preclinical dosimetry expertise and clinical trial experience, sponsors benefit from:

- Seamless translation from biodistribution to human absorbed dose
- Consistency of models, assumptions, and methodologies across development
- Reduced risk during first in human studies and beyond
- Faster, more confident decision making supported by quantitative evidence

Perceptive is your reliable, experienced partner for end-to-end dosimetry—supporting the safe, efficient development of radiopharmaceutical therapies from preclinical through human clinical trials.



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To learn how Perceptive can help you meet your radiopharmaceutical development objectives.