



Ricerca e Innovazione: la Teranostica nel tumore della Prostata

Prof. Francesco Ceci, MD PhD

Direttore di Struttura Complessa – Divisione di Medicina Nucleare

IEO Istituto Europeo di Oncologia

Dipartimento di Oncologia ed Emato-Oncologia – Università di Milano

francesco.ceci@ieo.it



Today's Agenda

- Research and Innovation: Theranostics
- Future or Reality?
- Innovation for Patients

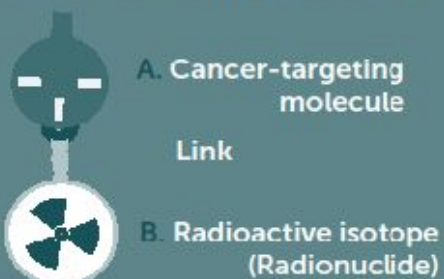


THERAPY & DIAGNOSTICS

THERAGNOSTICS EXPLAINED

DIAGNOSTICS ♥ THERAPEUTICS

RADIOLIGAND BASICS



C. TARGETING MOLECULE & RECEPTORS

Different types of cancer cells have specific receptors.

TARGETING MOLECULES



Like a key to a lock

D. NUCLIDES WITH DIFFERENT INTENTIONS

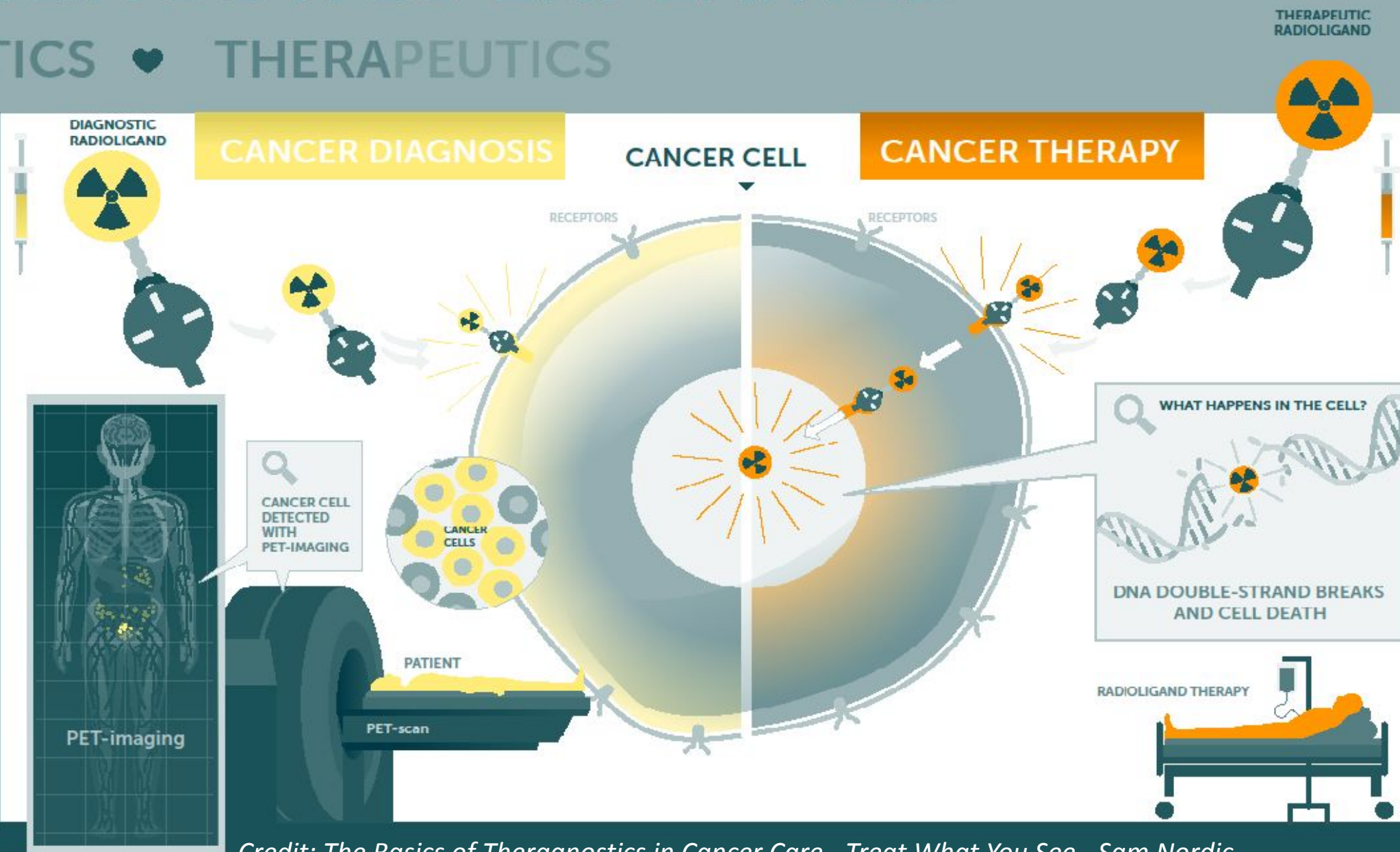


Diagnostic



Therapeutic

THERAGNOSTIC PAIR



Credit: The Basics of Theragnostics in Cancer Care - Treat What You See - Sam Nordic

Theranostics: Precision in Oncology



1

Treat What you See, See what you treat

2

Step-by-step evaluation of Therapy Response

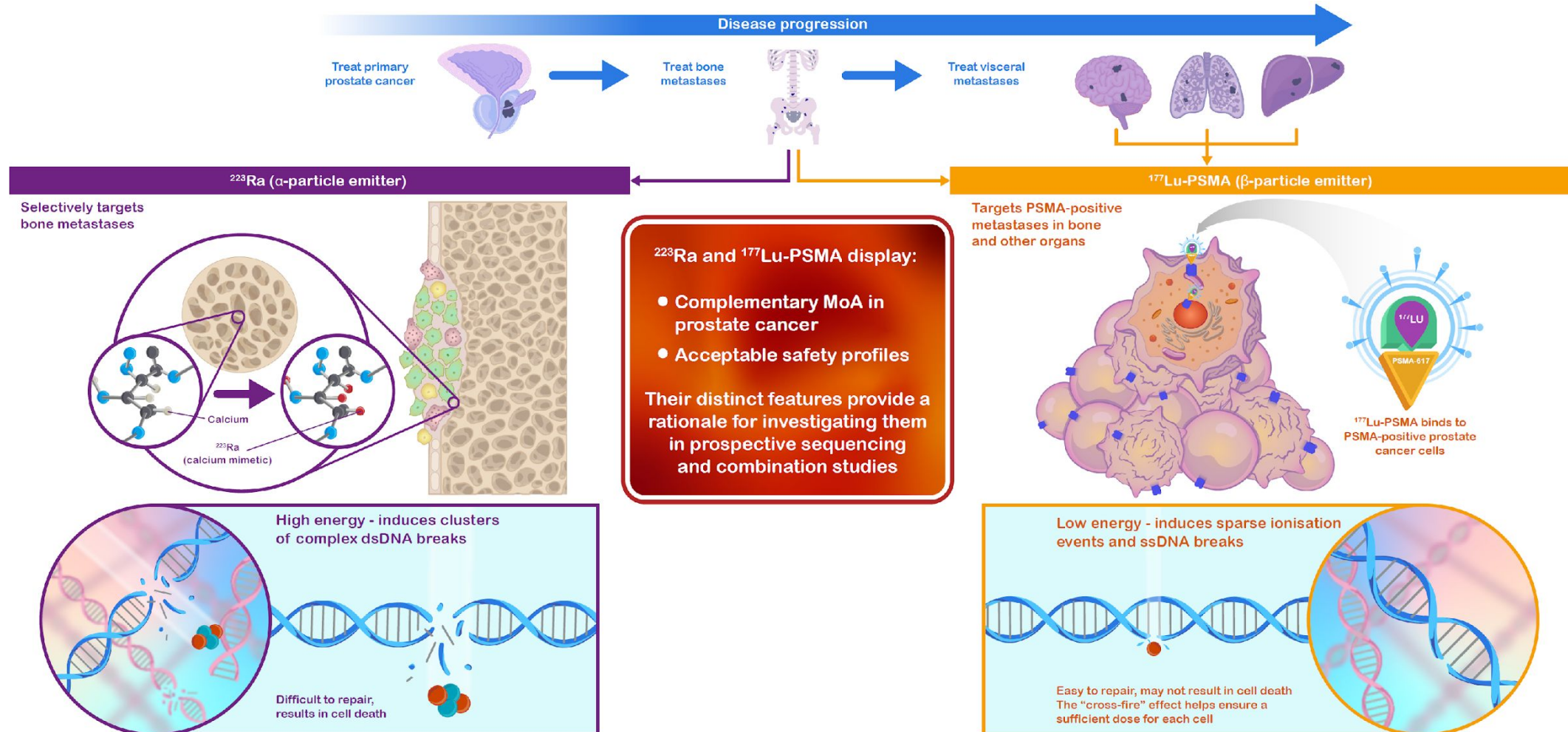
3

Predict Side Effects

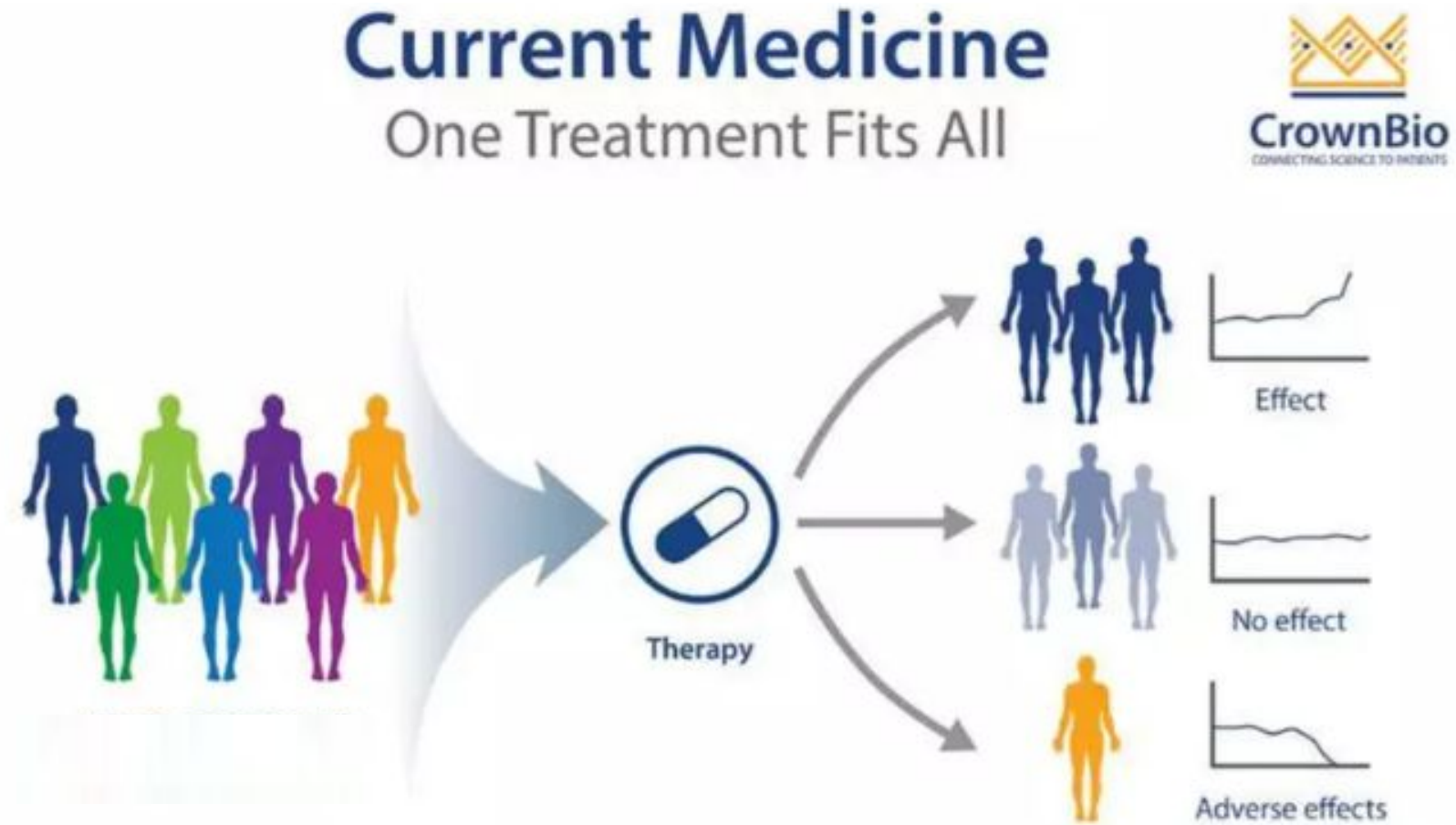
**LIQUID
THERANOSTICS
RADIOTHERAPY**

Precision Medicine in Prostate Cancer

Lutetium-177 PSMA-617 and Radium-223, already approved in Italy



Precision Medicine in Prostate Cancer



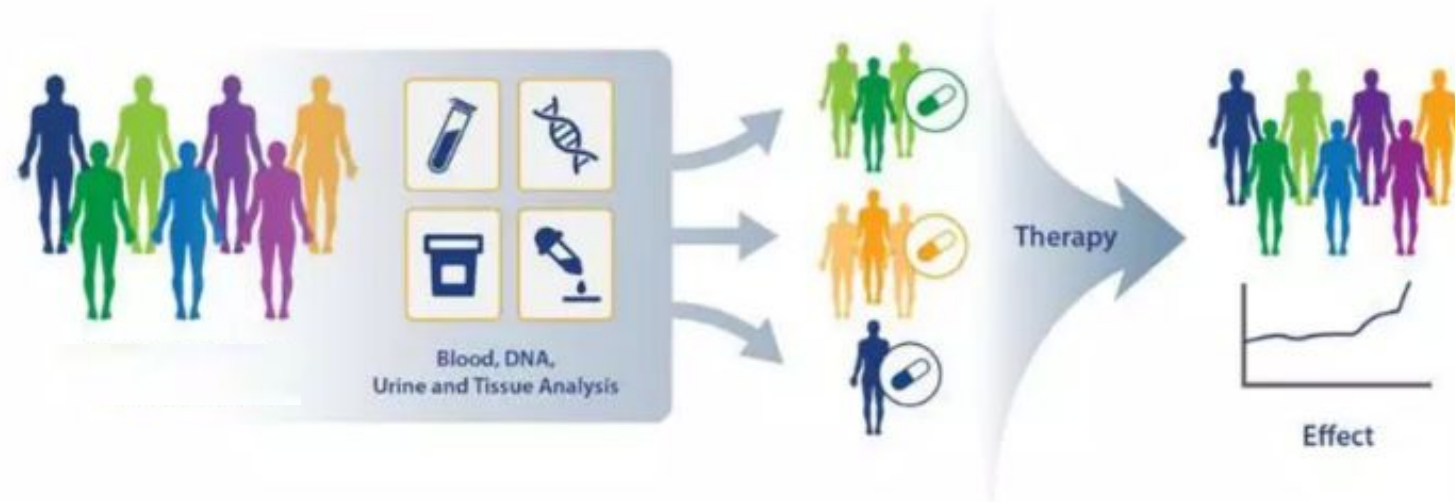
Current Medicine

One Treatment Fits All



Future Medicine

More Personalized Diagnostics



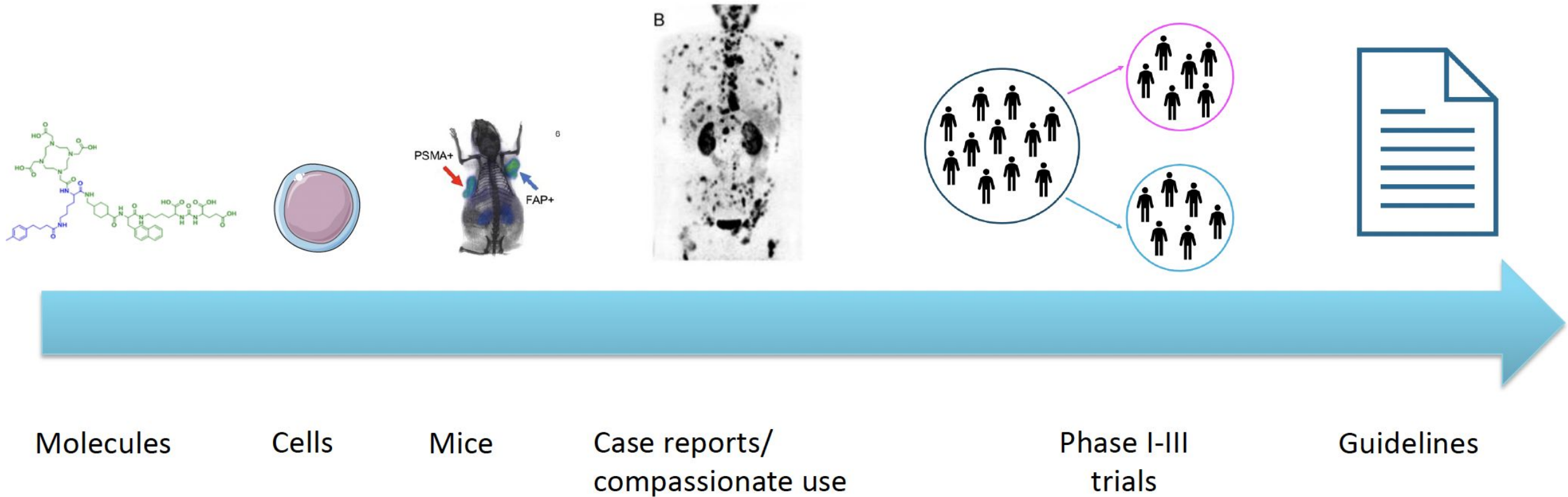


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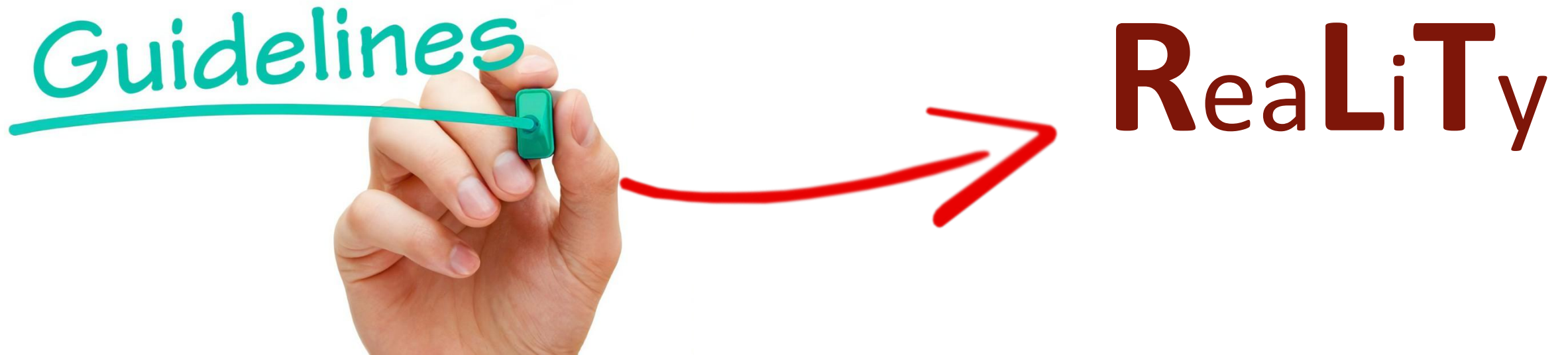
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Radioligand therapy and Prostate Cancer: a patient Journey

Heskamp S, EANM Focus 2023



Radioligand therapy and Prostate Cancer: a patient Journey



PRE Treatment



PSA 332 ng/mL
PSMA-PET 15/05/24

■ bone	
Size:	738 ml
Min:	2.5 SUV bw
Max:	35.1 SUV bw
Mean:	8.0 SUV bw
StdDev:	5.2 SUV bw
SUV Peak:	30.6 SUV bw
Total:	5,943 SUV×ml

C.R. 57 years old
mCRPC ISUP 5

Post ARSI and post
docetaxel/cabazitaxel

PD-L1 expression
Concomitant administration of
Pembrolizumab

Treated with **4 cycles** of
177Lu-PSMA-617



Complete Response

Durable response: May 2025 PSA 0,04 ng/dL

LhRH still on-going, Pembrolizumab STOP

POST Treatment



PSA < 0,008 ng/mL
PSMA-PET 23/10/24

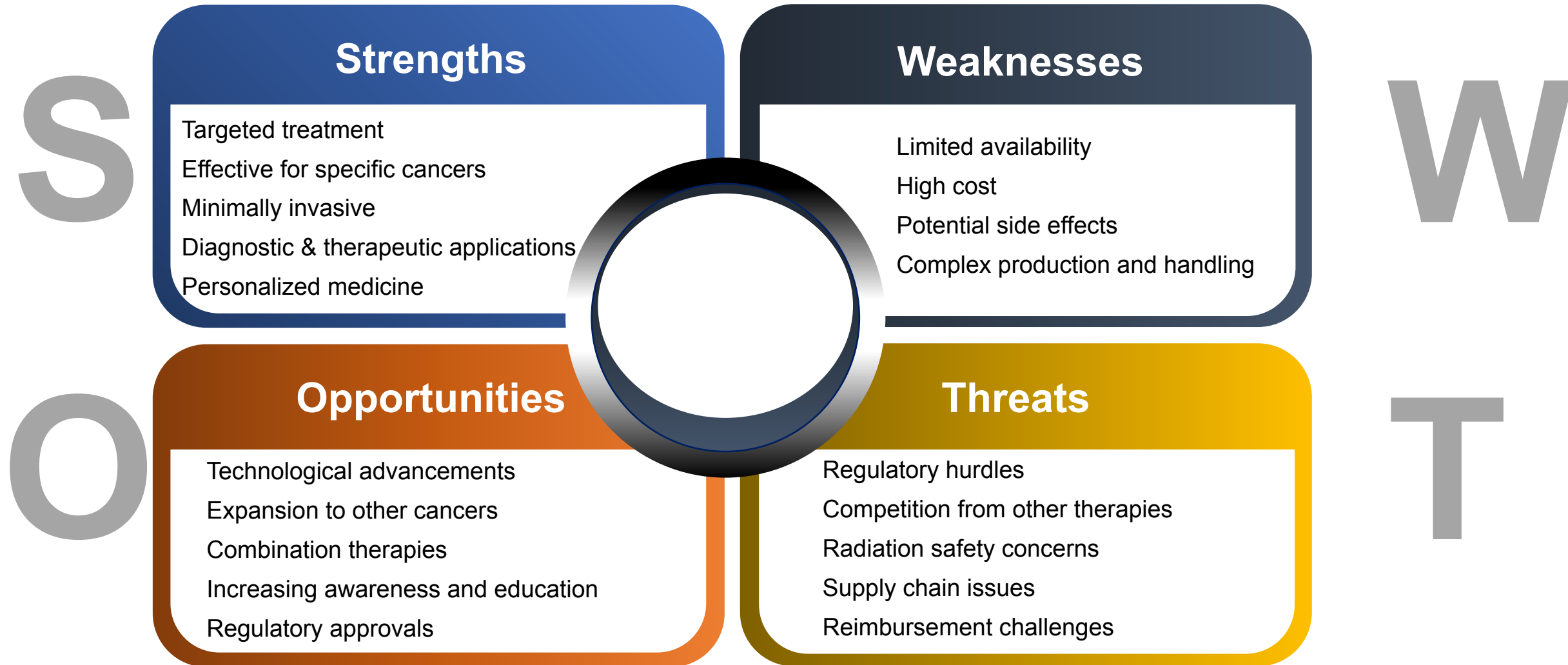
RLT and Italy



38 Centri attivi



RLT SWOT Analysis

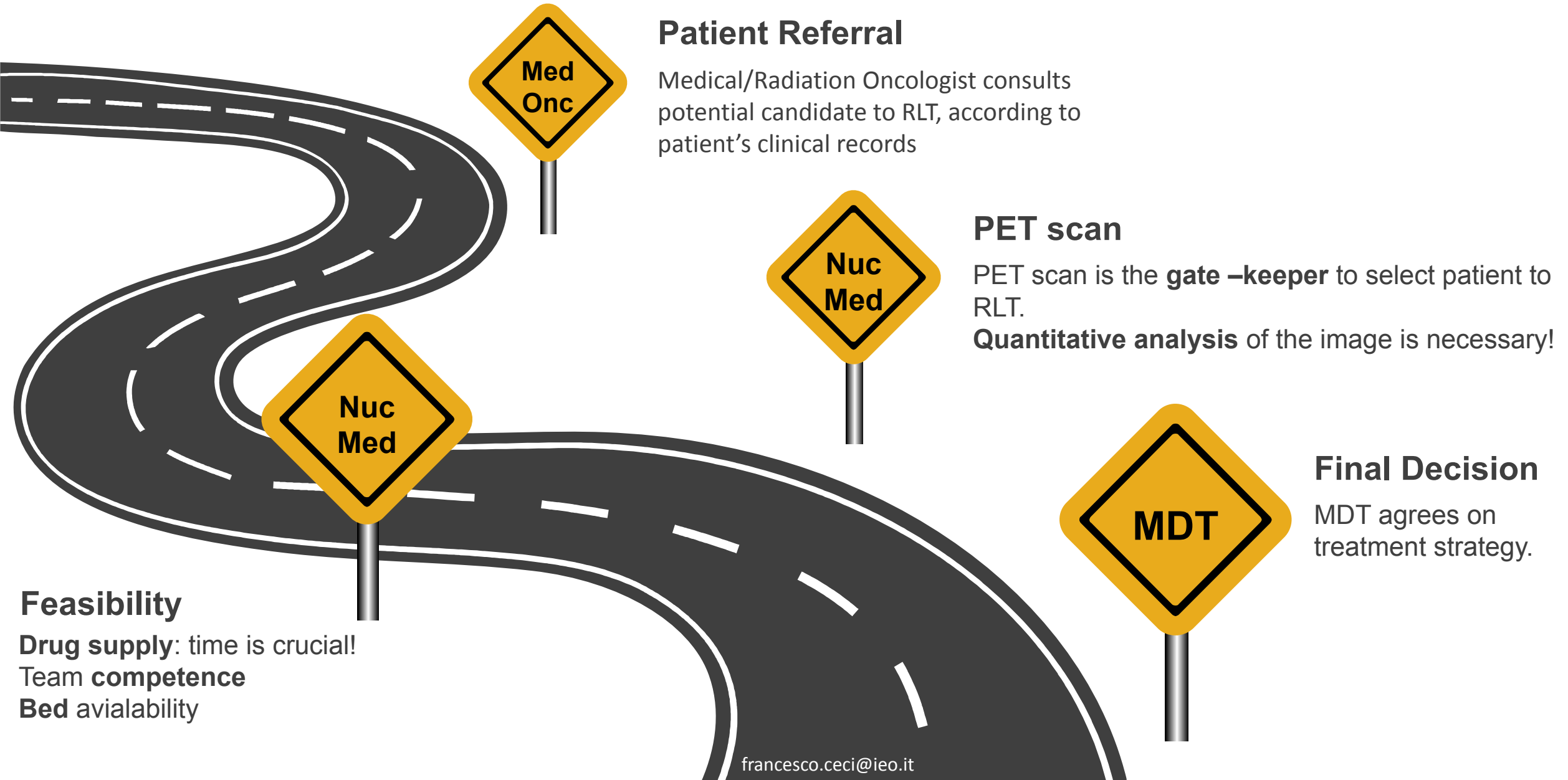




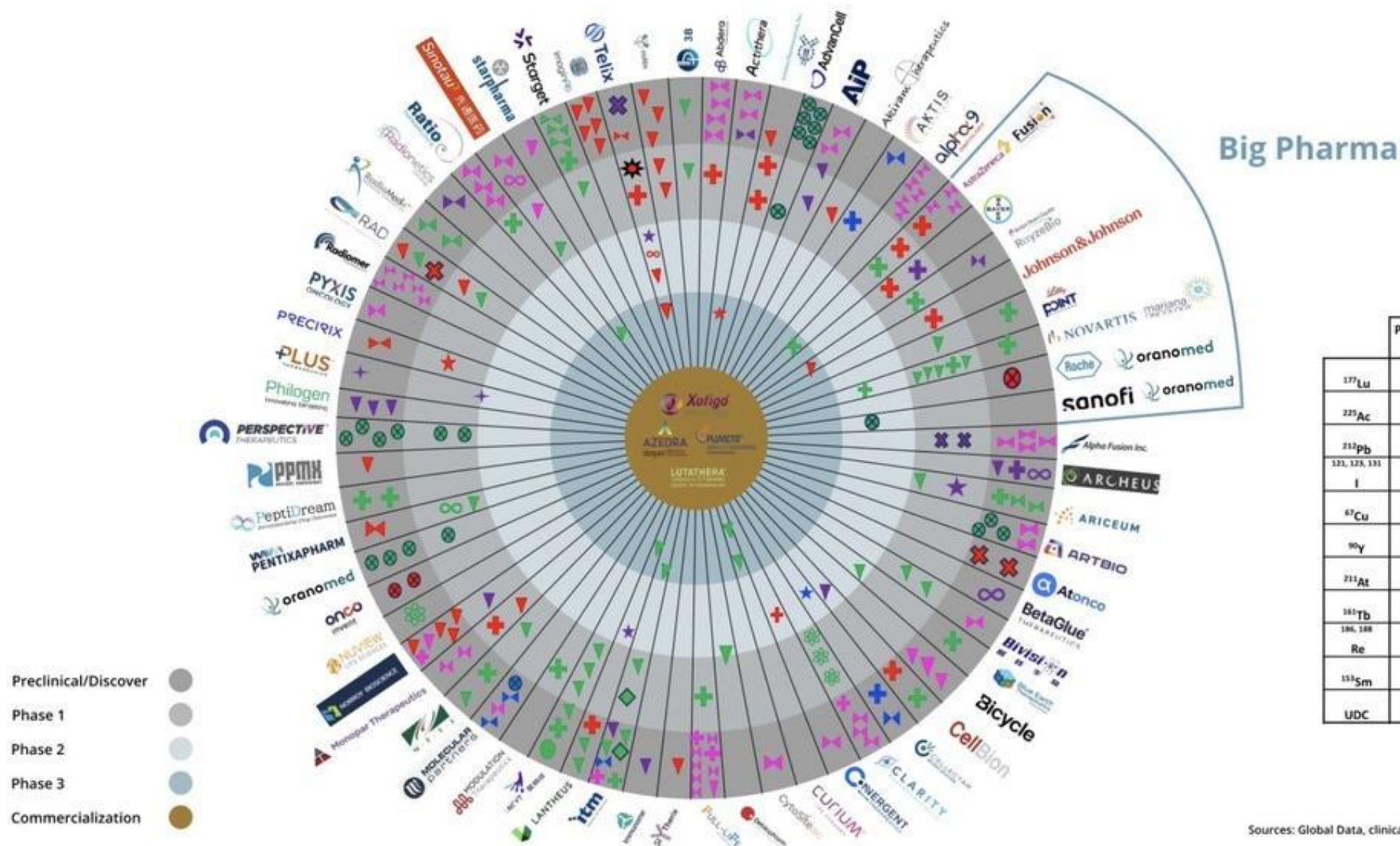
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Role of Industry in Theranostics in Oncology



	Peptide / Ligand	Antibody	Small Molecule	Mini Proteins	UDC
^{177}Lu					
^{225}Ac					
^{212}Pb					
$^{121, 123, 131}\text{I}$					
^{67}Cu					
^{90}Y					
^{211}At					
^{166}Tb					
$^{186, 188}\text{Re}$					
^{153}Sm					
UDC					

Sources: Global Data, clinicaltrials.gov, theranostics.org, Nucleus Radiopharm



FIGHTING HEROSUARES CANCER

RIGHT HERE, RIGHT NOW!