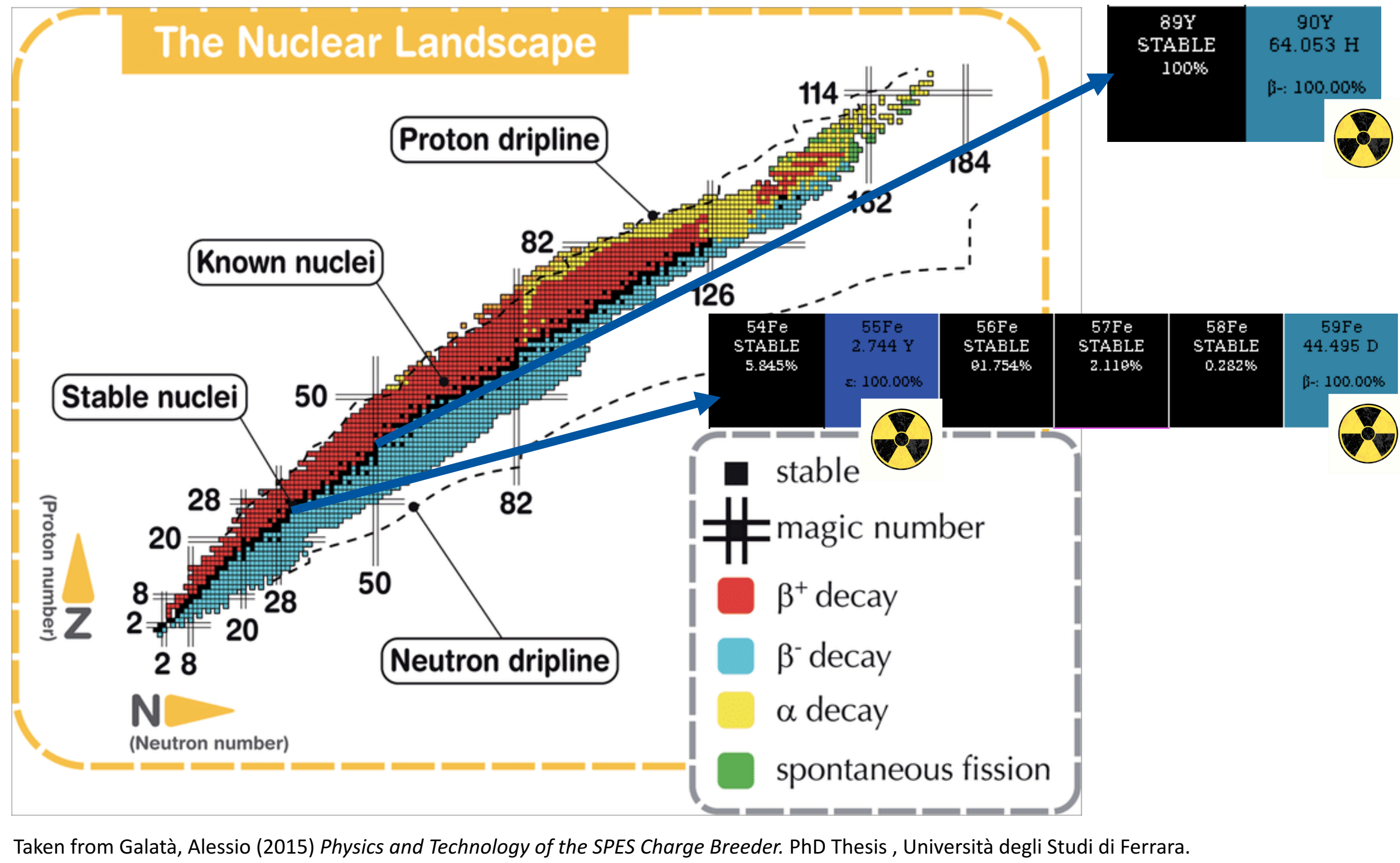


MEDICIS

Making new medical radionuclides available for cancer research Fournir de nouveaux radionucléides pour la recherche contre le cancer

Which radionuclides do we know? Quels radionucléides connaissons-nous?

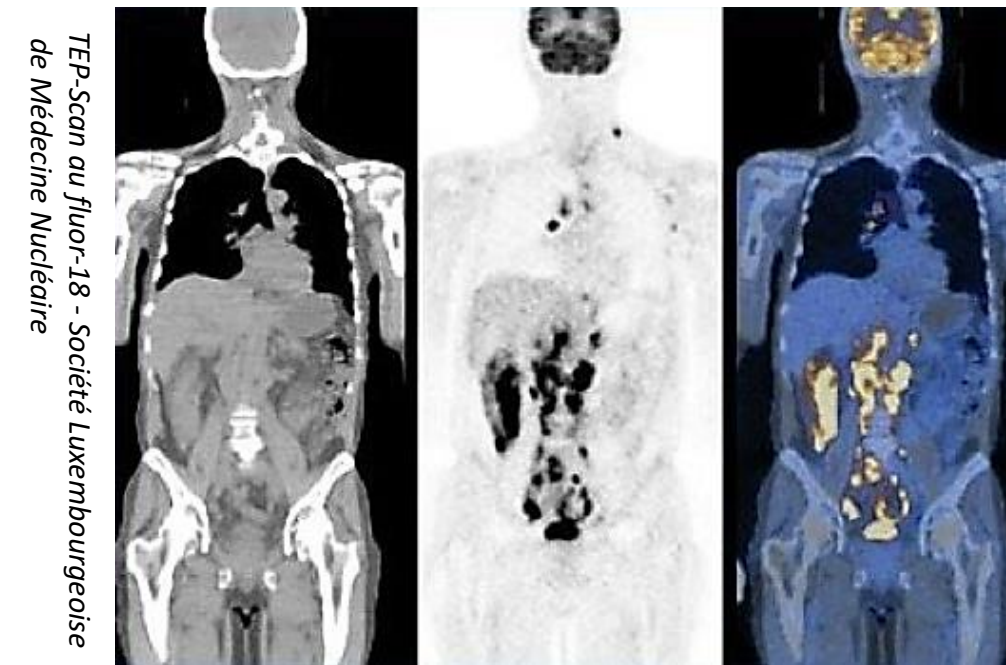


What are their applications in medicine? Quelles sont leur applications en médecine?

Functional imaging Imagerie fonctionnelle

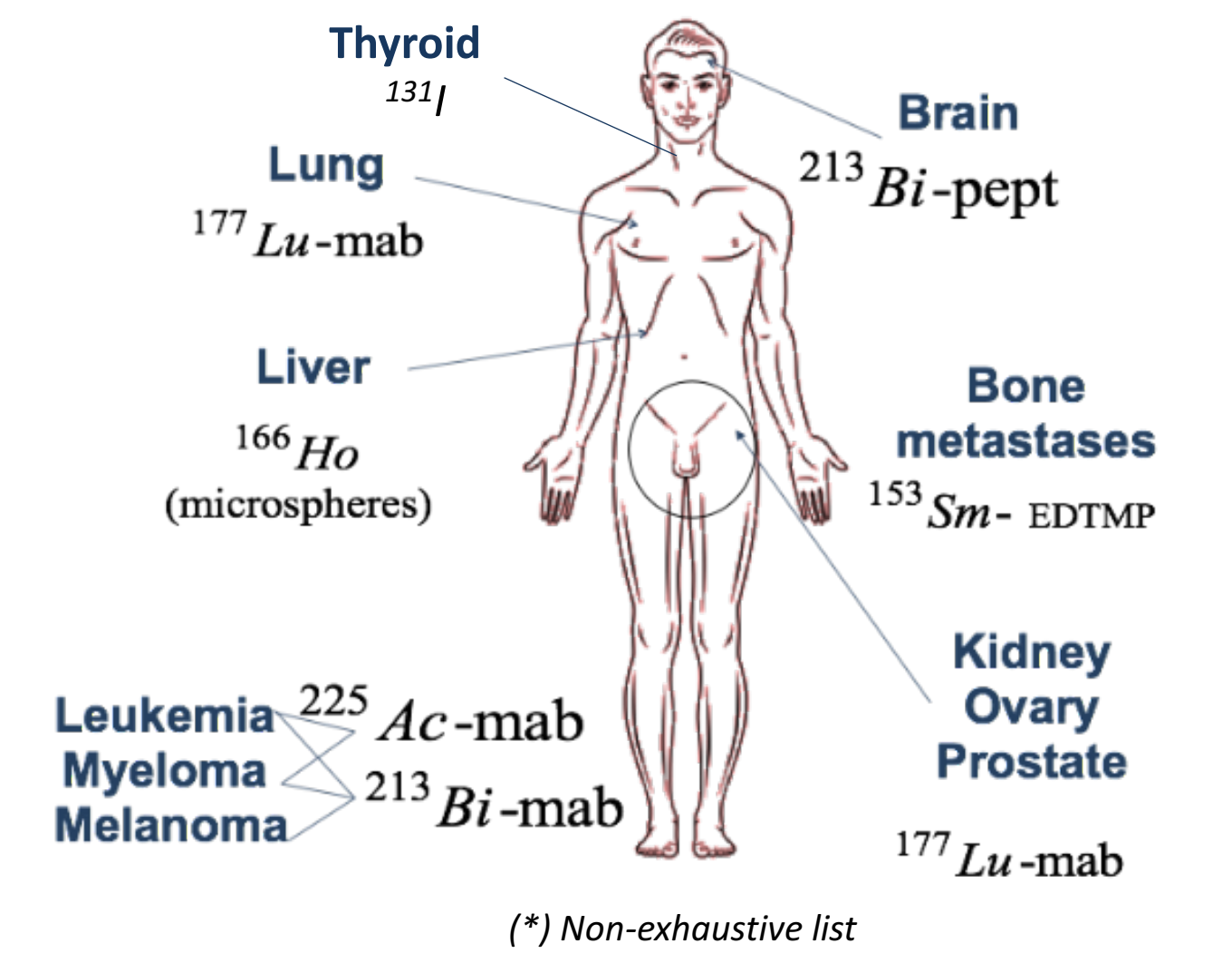


Positron Emission Tomography (PET)
Tomographie par Emission de Positons (TEP)



^{18}F
109.77 M
 β^- 100.00%

Internal Radiation therapy Radiothérapie interne



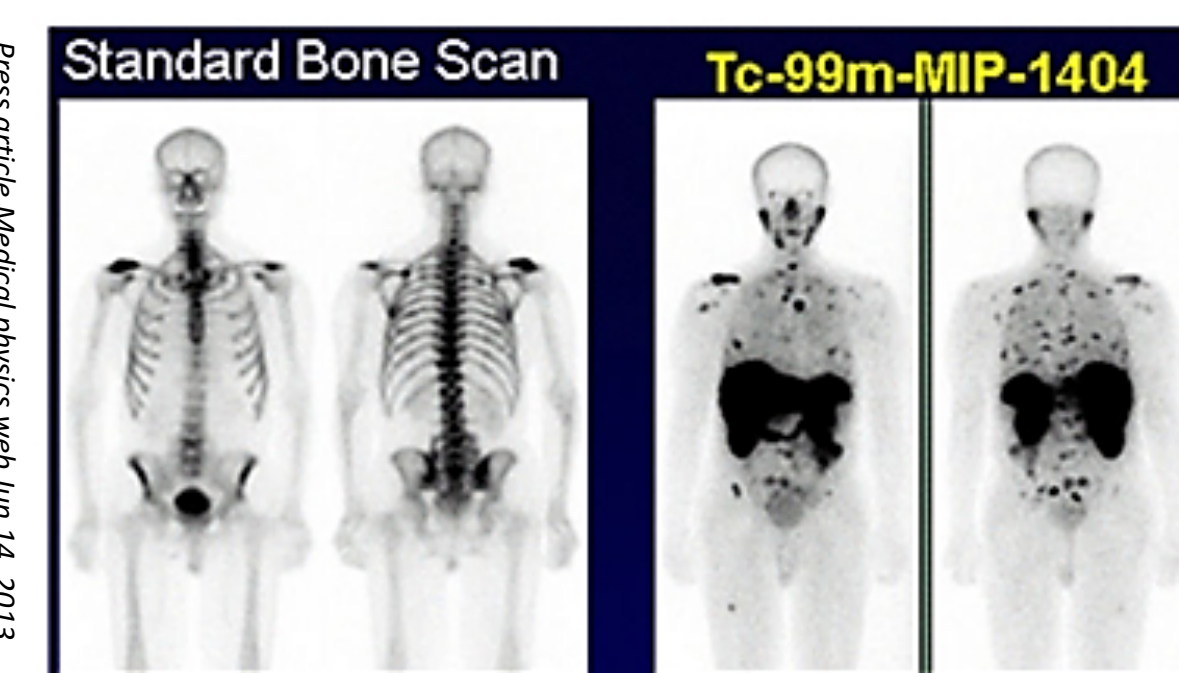
Theranostics Théranostique



$\text{Tb } 149$ 4.2 m 4.1 h β^- 83.30% α 16.70%	$\text{Tb } 152$ 4.2 m 17.5 h β^- 26.3% β^+ 3.97% α 3.89% γ 29%, 132%, 165%, 185%, 203%, 211%	$\text{Tb } 155$ 4.2 m 5.32 d β^- 28.8% β^+ 344% α 105% γ 187%, 203%, 211%, 227%	$\text{Tb } 161$ 4.2 m 6.90 d β^- 0.8, 0.6, γ 26, 49, 75, ... α e
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Terbium: A new 'Swiss Army knife' for cancer diagnosis and treatment
C. Müller et al. *Journal of Nuclear Medicine*, 2012, 53:1951-1959

Single Photon Emission Computed Tomography (SPECT) Tomographie par Emission de MonoPhotonique (TEMP)



$^{99\text{m}}\text{Tc}$
technetium-99m

CERN-MEDICIS radionuclides catalog Catalogue de production de radionucléides

Internal Radiotherapy Radiothérapie interne

^{149}Tb 4.118 H β^- 83.30% α 16.70%	^{153}Sm 46.284 H β^- 100.00%	^{161}Tb 6.889 D β^- 100.00%	^{212}Bi 60.55 M β^- 04.09% α 35.04%
^{166}Ho 26.824 H β^- 100.00%	^{167}Lu 6.647 D β^- 100.00%	^{177}Lu 6.647 D β^- 100.00%	^{140}Nd 3.37 D β^- 100.00%

Functional imaging Imagerie fonctionnelle

^{152}Tb 17.5 H β^- 100.00% α < 7.0E-7%	^{155}Tb 5.32 D β^- 100.00%
^{156}Tb 5.35 D β^- 100.00%	

Imaging & Therapy Imagerie & Thérapie

^{213}Bi 45.61 M β^- 97.80% α 2.20%
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How does MEDICIS work?

Comment fonctionne MEDICIS ?

