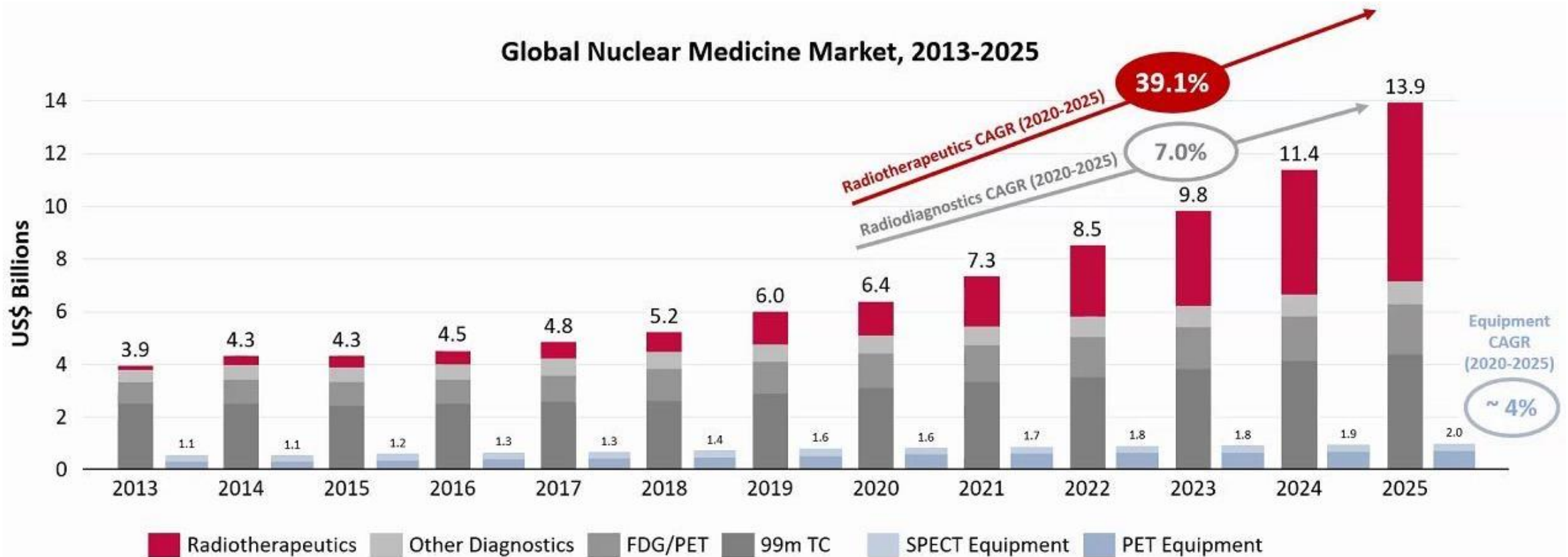


PANTERA

- # From Full Cost Recovery to Social Value Compensation

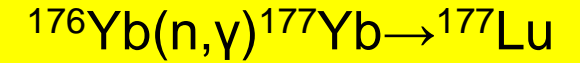
Workshop Medical Radioisotopes Supply – OECD
Paris, October 30-31, 2023

Radiotherapeutics will drive radioisotope demand



A unique opportunity to go beyond “full-cost recovery” to a “social value compensation”
Offset ^{99}Mo pricing deficiency with therapeutic isotope production → protect today's ^{99}Mo producers
Social value of radiopharmaceutical determined by reimbursement and use → 10% to Radioisotope producers
Radioisotope price remains market driven, but base retribution in function of social value created

Production capacity: ^{177}Lu



Operating Reactors

2022
BR2 – Belgium
HFR – Netherlands
FRM2 – Germany
OPAL – Australia
SAFARI – South Africa
ILL – France
MURR – USA
Up to 2032
Smaller reactors
SHINE
Pallas replacing HFR
JHR – France

Targets per reactors

Values likely different for new production methods (CANDU, accelerator, ...)
?? Reliability, sustainability, ^{99}Mo combination, ... ??

Irradiation frequency

Irradiation is performed during 1 or 2 weeks but 1 week seems to become standard

Extraction yields

Yield/g: 25
Loading: 1.5g

Needs by 2032

200 mCi /dose
400 mCi EOI

2-6 doses per patient
3 in average

For 1 large indication (e.g. prostate)
100,000 patients (100K)

6 to 9 equivalent units

5 to 10 capsules with 6 1g ampoules

Average operating weeks: 30

1.5x25

120 kCi/drug

203 kCi (2022)
608 kCi (2032)

2022
2032

6
9

X

5x6
10x6

X

30

X

Only nca ^{177}Lu will be used in the future

Access to ^{176}Yb to be solved by 2025

Reactor production capacity is limited to about 500K patients before reactor capacity saturation

