Memorial Sloan Kettering Cancer Center

Considerations on nephrotoxicity of PRRT

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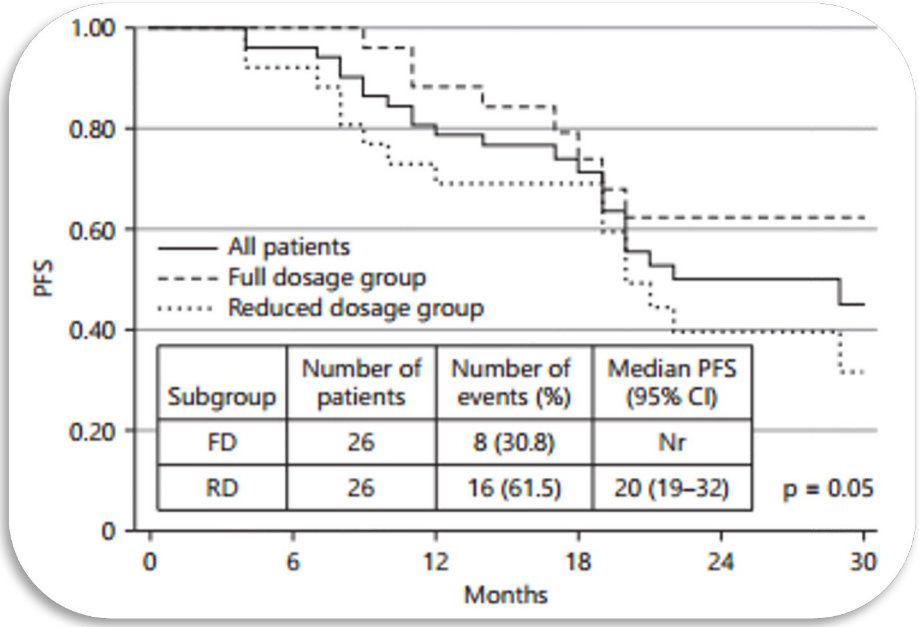
Lisa Bodei, MD, PhD
Attending, Director of Targeted Radionuclide Therapy
Molecular Imaging and Therapy Service
Department of Radiology
Professor of Radiology, Weill Medical College of Cornell University

No Dosimetry, Patient-adjusted Treatments based on Risk factors

^{177}Lu-DOTATATE

P-NETs

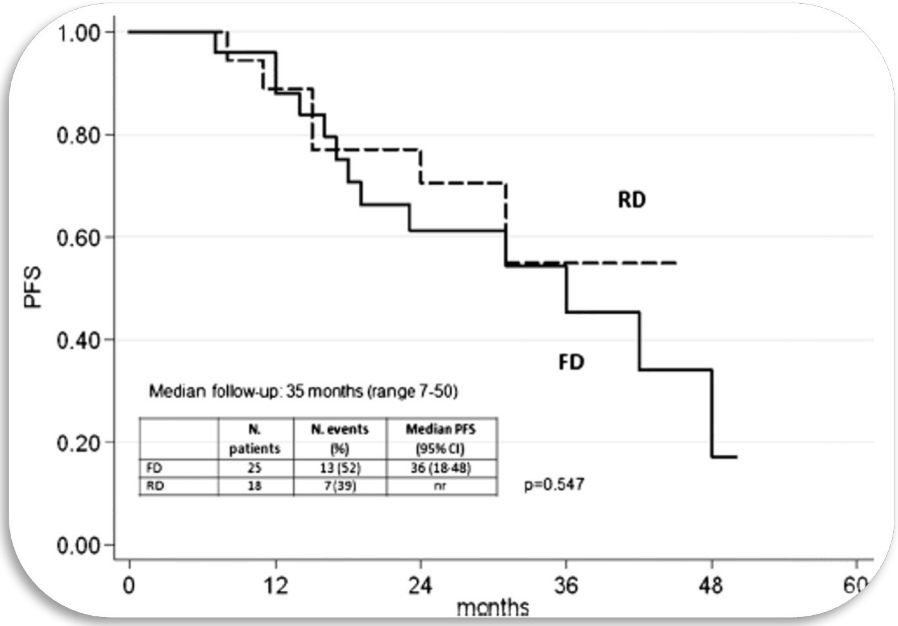


Subgroup	Number of patients	Number of events (%)	Median PFS (95% CI)
FD	26	8 (30.8)	Nr
RD	26	16 (61.5)	20 (19–32)

p = 0.05

Paganelli G Neuroendocrinology 2013

GI-NETs



	N. patients	N. events (%)	Median PFS (95% CI)
FD	25	13 (52)	36 (18-48)
RD	18	7 (39)	nr

p=0.547

Paganelli G EJNMMI 2014

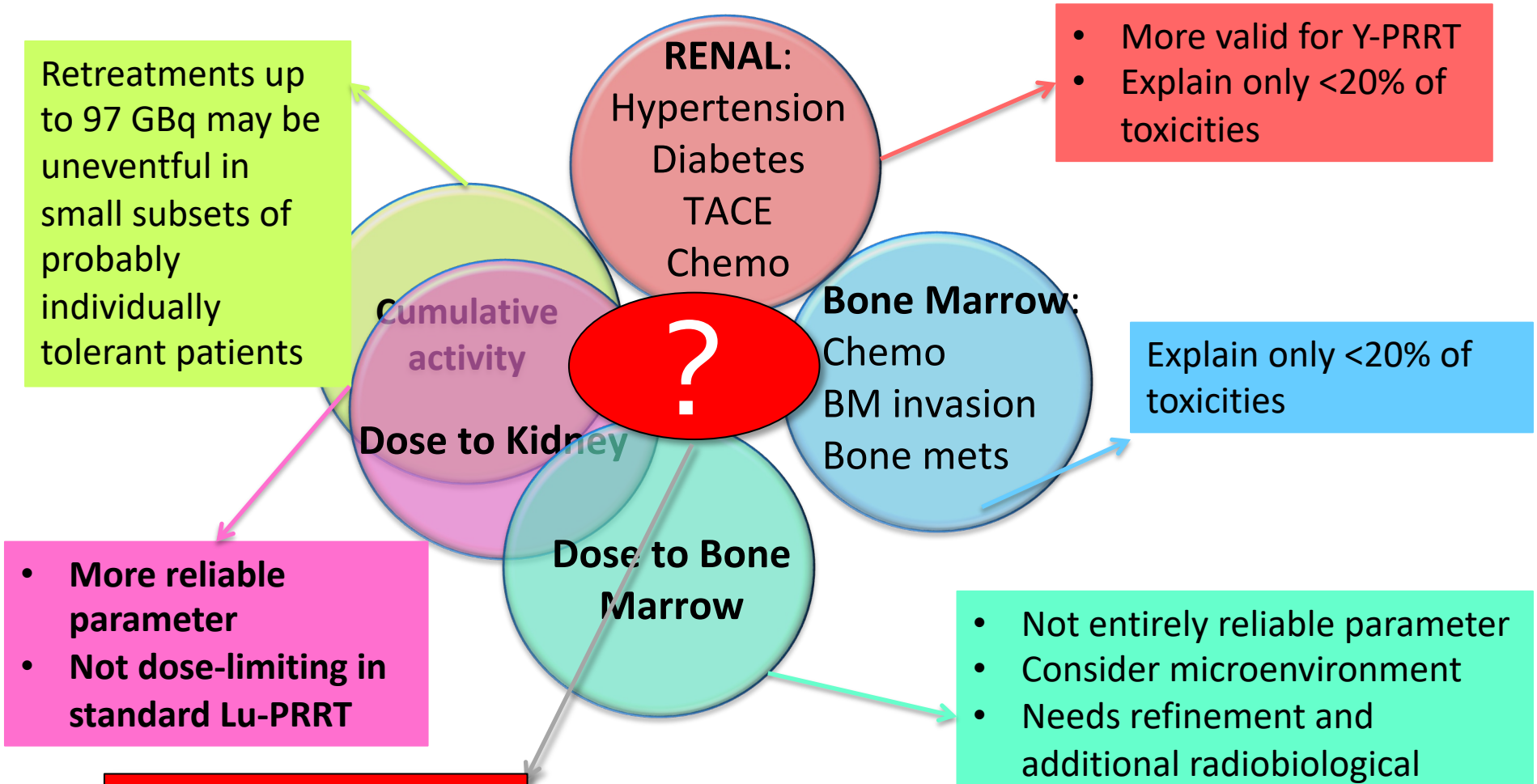
Lower PFS in lower PRRT dosages

Full dose scheme recommended

No difference between dose regimens

Risk pts may benefit from PRRT

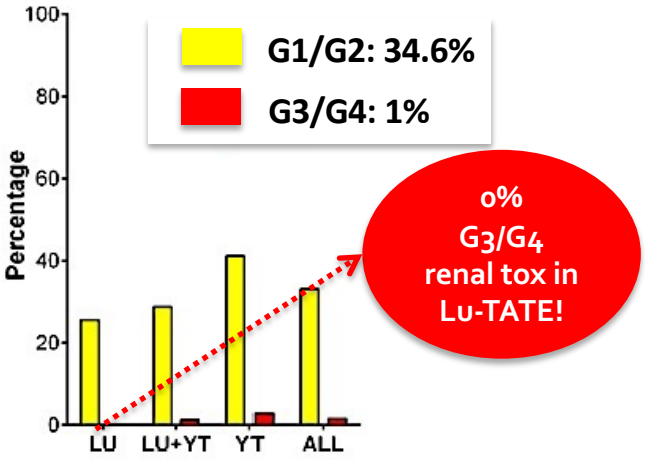
Predicting Toxicity to PRRT



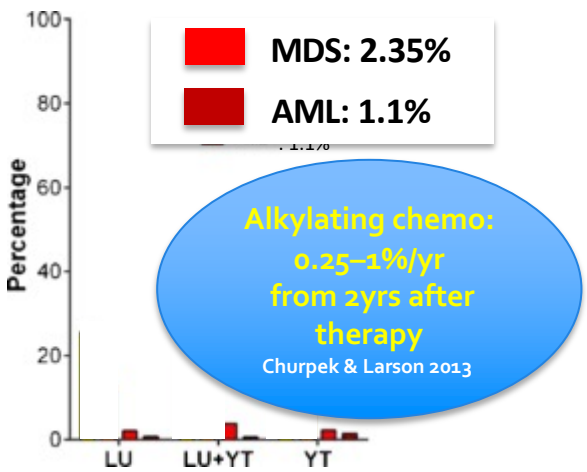
Bodei L et al. 2014, 2015
Cremonesi et al. 2011
Ahmadzadehfar H et al 2017
Sandstrom et al. 2013

Permanent toxicity after PRRT is low and comparable to other treatments
n=807

Renal Toxicity



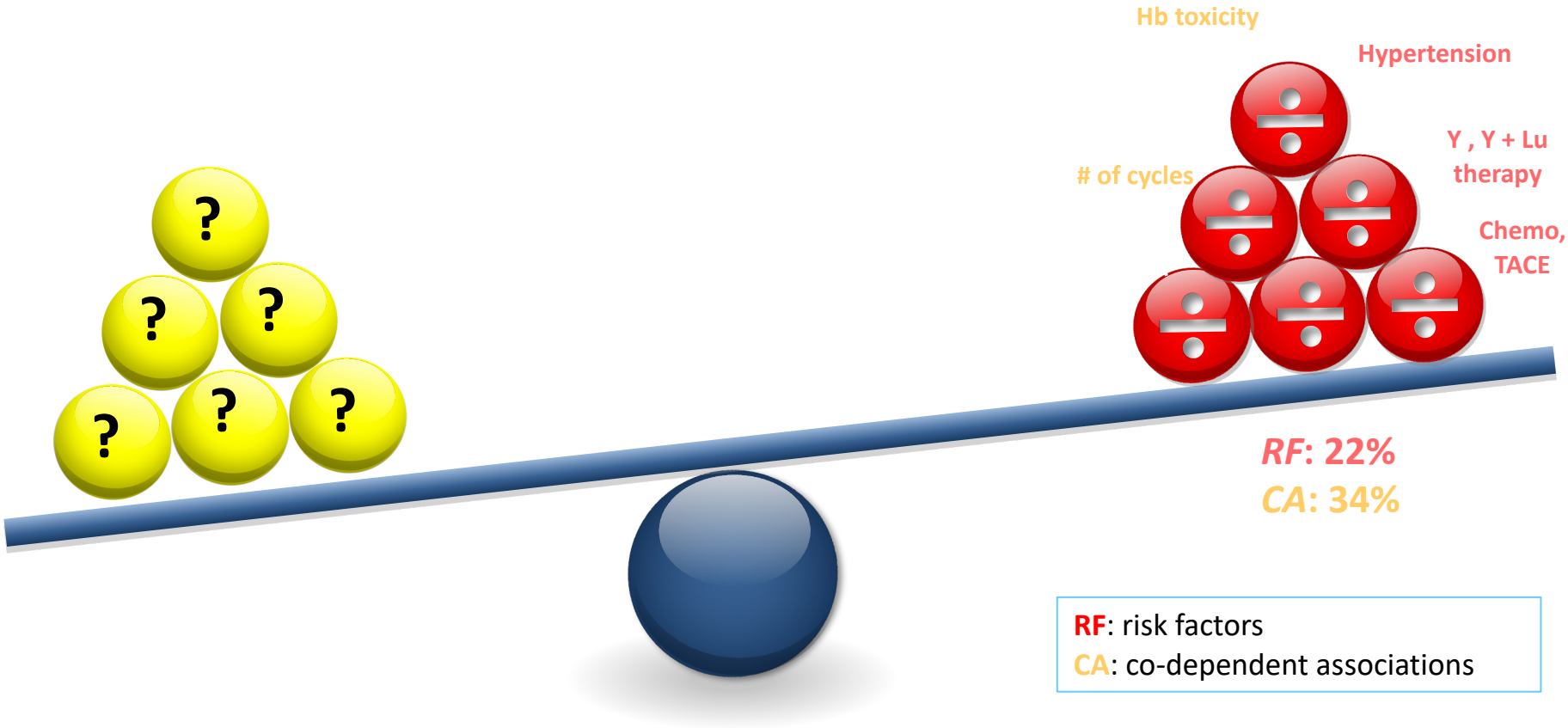
Bone Marrow Toxicity



- Severe nephrotoxicity was virtually absent after ^{177}Lu-peptides
- Bone marrow toxicity low and comparable with other anti neoplastic therapies

Bodei L et al. EJNMMI 2015

Nephrotoxicity: Comparative Analysis of Clinical Factor Weight
n=807



RF: risk factors
CA: co-dependent associations

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Bodei L et al. EJNMMI 2015

Dosimetry isn't all…

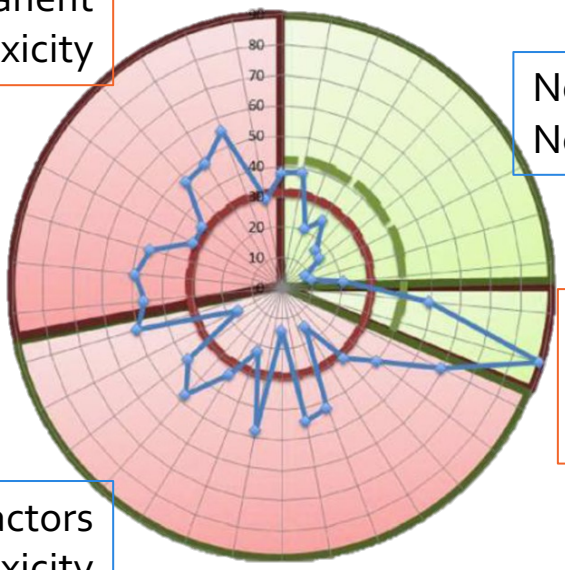
^{90}Y- and ^{177}Lu-PRRT

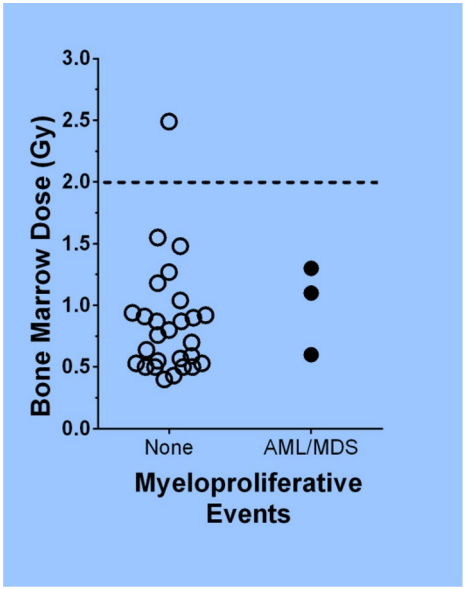
Risk factors
Permanent
toxicity

No risk factors
No toxicity

No risk factors
Permanent
toxicity

Risk factors
No toxicity





Unless very high doses are administered, there is a grey zone of unpredictable outcome around the thresholds

Individual susceptibility to adverse *sequelae* of PRRT is likely to have an individual genetic basis.

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Bodei L et al. EJNMMI 2015