

# Nye studier

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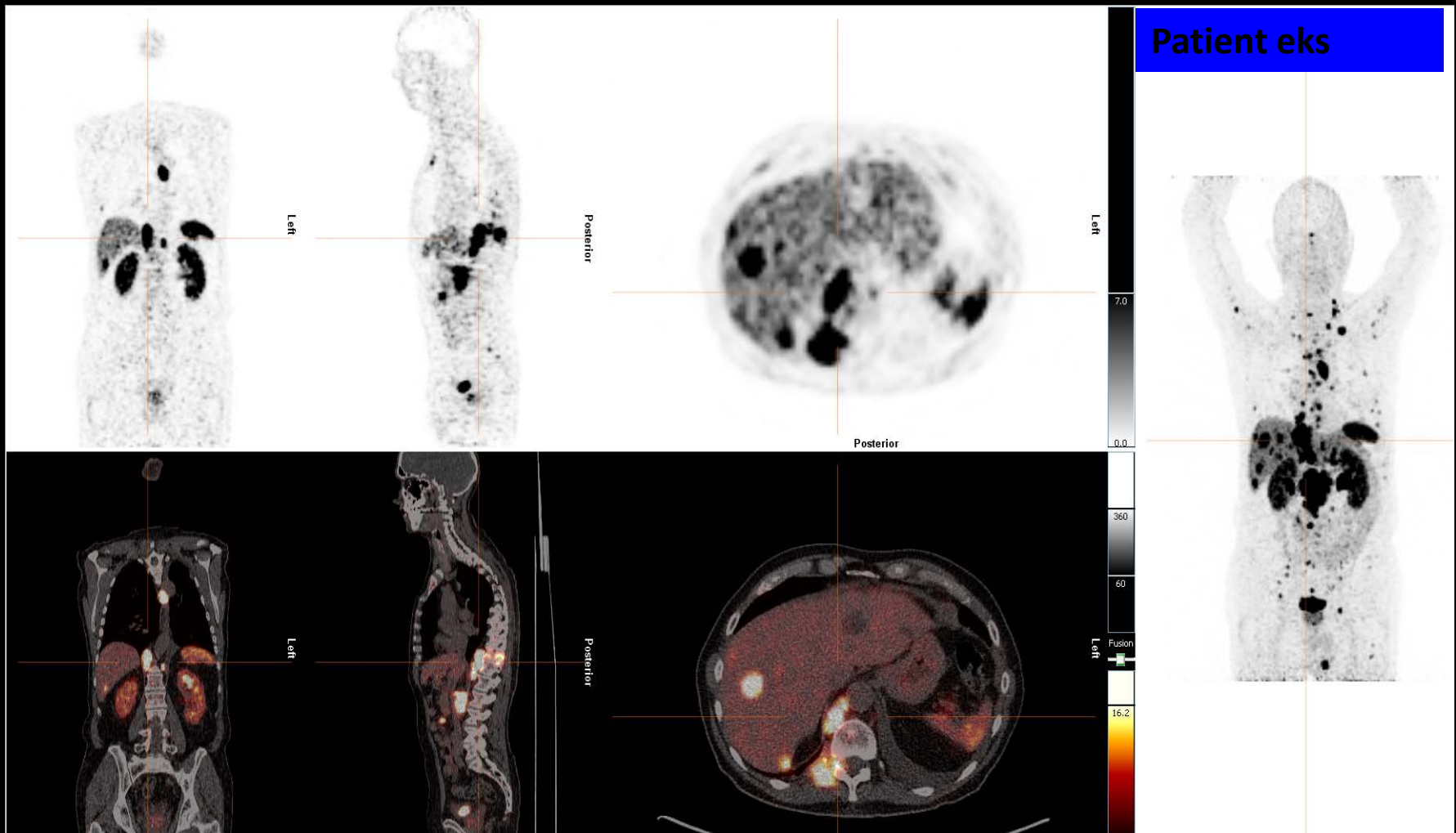
Medicinsk afd V

Aarhus Universitetshospital

# PRRT

- Peptid receptor radio terapi

# Lu-177-DOTATATE



# Radionuclide compounds

Somatostatin  
receptor  
peptide

Chelator

Radioisotope



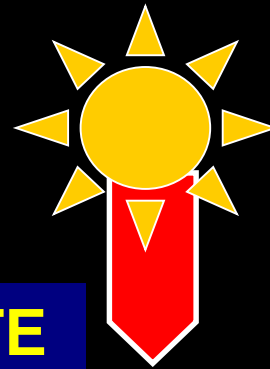
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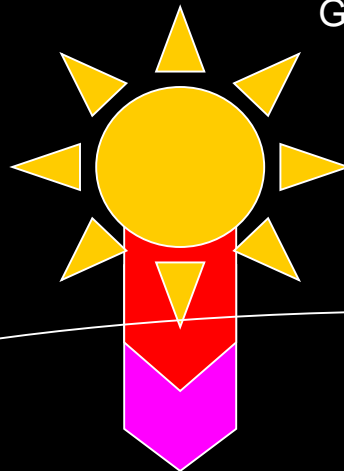


**$^{90}\text{Y}$ -DOTATOC**

**$^{177}\text{Lu}$ -DOTATATE**

$T_{1/2}$ : 2.7 d **SST2** (3,5)  
 $\beta$ : mean: 3.9 mm (max.11 mm)

$T_{1/2}$ : 6.7 d **SST2**  
 $\beta$ : mean: 0.2 mm (max.1.7 mm)  
Gamma 113 and 208 keV



NET celle

# Kliniske studier, Y-90, Lu-177

## Næsten alle har progressiv sygdom før radionuklid behandling

- **Komplet respons: <3%**
  - **Partiel respons: 20%**
  - **Stabil sygdom: 65%**
  - **Progressiv sygdom: 20%**
- 
- **Knoglemarv og nyrefunktion!**

size; PD (progressive disease), >25% increase in tumour size.

<sup>b</sup> Modification of SWOG criteria including MR (minor remission), between 25 and 50% reduction in tumour size.

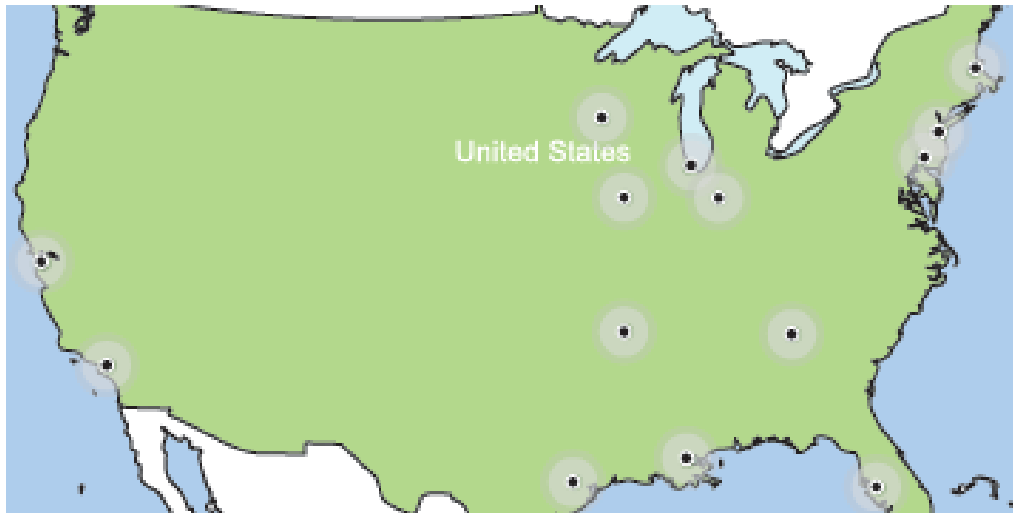
<sup>c</sup> R. Valkema, personal communication, 2004.

# Netter-1

- Sammenligning m/m behandling med  $^{177}\text{Lu}$ -DOTATATE og Octreotide (sandostatin) LAR 60 mg
- Patienter med
  - Inoperabel, progressiv, somatostatinreceptor positiv NET i tyndtarmen
- Ki67 < 20%

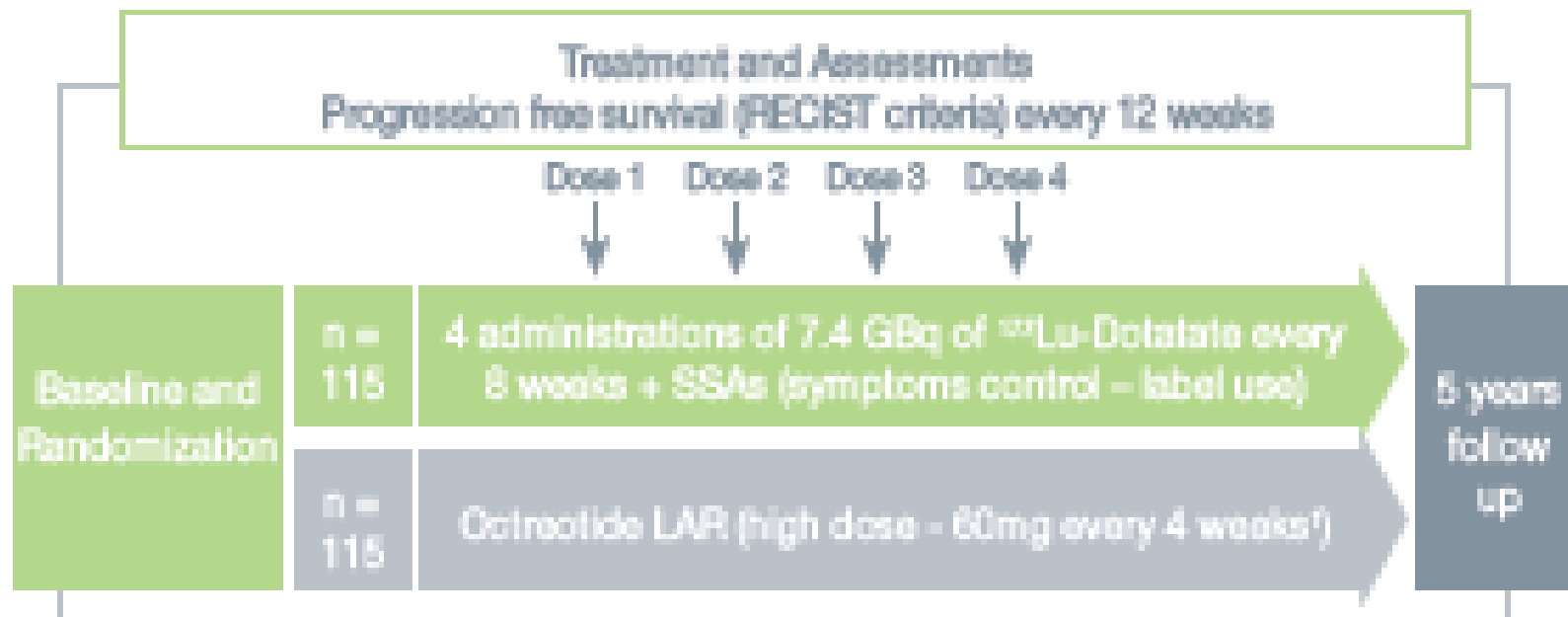
# 51 NET centre i 8 lande

## Participating Sites in 51 Centers - 8 Countries



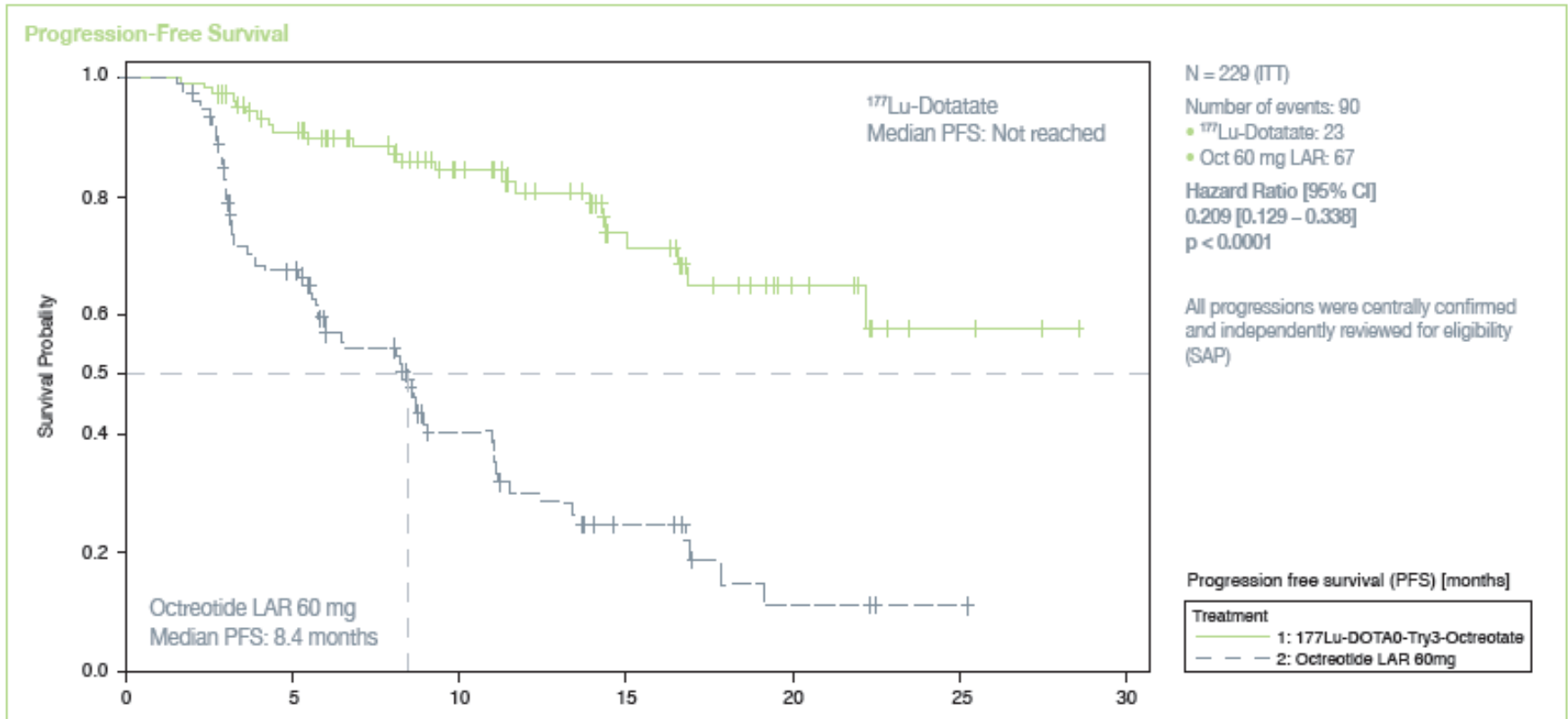
## NETTER -1 Study Objectives and Design

Objective	Evaluate the efficacy and safety of $^{177}\text{Lu}$ -Dotatate + SSAs (symptoms control) compared to Octreotide LAR 60mg (off-label use) <sup>1</sup> in patients with inoperable, somatostatin receptor positive, midgut NET, progressive under Octreotide LAR 30mg
Design	International, multicenter, randomized, comparator-controlled, parallel-group





# Progressionsfri overlevelse



# Main results

- Lu-Dotatate PFS 22 mdr vs. 10 mdr med somatostatin-analog
- n=115
- Lave hvide blodlegemer og blodplader (1-9%)

# Perspektiver

- Skal vi flytte rundt på rækkefølgen...

# Everolimus (RADIANT-4)

- Blokerer cellevækst og dannelse af blodkar
- Tablet
- Mundbetændelse, diarre, udslæt

**RADIANT-4: A Randomized, Double-blind, Multicenter, Phase III Study of Everolimus Versus Placebo in the Treatment of Patients With Advanced Non-functional NET of GI or Lung Origin**

**James C Yao**<sup>1</sup>; Marianne E Pavel<sup>2</sup>; Nicola Fazio<sup>3</sup>; Matthew Kulke<sup>4</sup>; Simron Singh<sup>5</sup>; Gaurav Shah<sup>6</sup>; Judith Klimovsky<sup>6</sup>; Jonathan Strosberg<sup>7</sup>

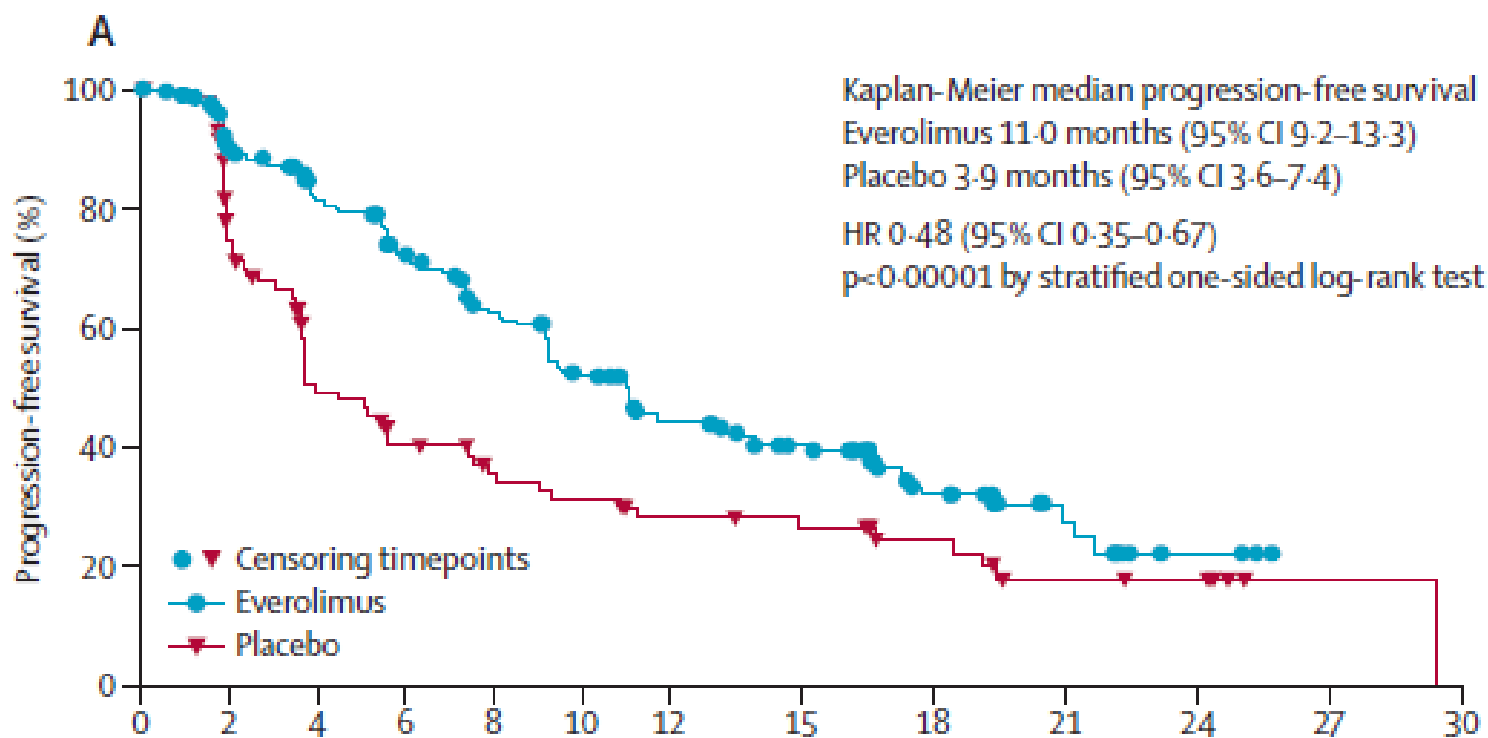
# Formål

- RADIANT-4 blev designet for at teste om Everolimus har gavlig effekt hos patienter med fremskreden NET i mave-tarmkanalen og lungerne

# Inklusion

- **Patienter med sygdom med spredning, veldifferentierede (G1/G2) NET fra mavetarmkanal og lunge**
- **Inkluderet fra 97 centres i 25 lande**
- **2012 og 2013**
- **302 patients**
  - **hvoraf 205 blev allokeret til everolimus 10 mg per dag og 97 fik placebo.**

# Progression-free survival



## Number at risk

Everolimus	205	168	145	124	101	81	65	52	26	10	3	0	0
Placebo	97	65	39	30	24	21	17	15	11	6	5	1	0