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The DIPAK-1 study: Baseline characteristics and short-term effects of lanreotide versus standard care in patients with later stage ADPKD

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Introduction

- Recent small RCTs showed that somatostatin analogues, e.g. lanreotide, are promising to slow the rate of renal function decline in ADPKD
- The DIPAK-1 study, a large RCT, was designed to investigate whether lanreotide is effective to reduce the rate of disease progression in ADPKD

Objectives

- To investigate whether baseline characteristics are similar in both treatment groups of the DIPAK-1 study
- To investigate whether the study is enriched for subjects with a high likelihood of rapid disease progression
- To investigate the tolerability of lanreotide after 3 months of treatment

Methods

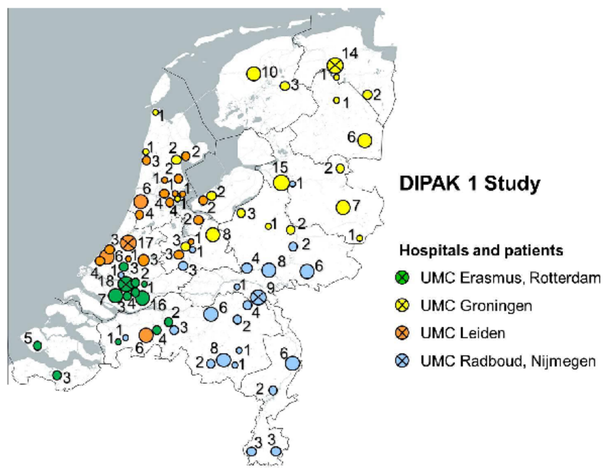
- Analysis of the baseline and 3 months data of the DIPAK-1 study, an investigator driven open-label multi center RCT in 309 ADPKD patients with an eGFR between 30-60 mL/min/1.73m^2 and age 18-60 years in the Netherlands
- Patients were randomized (1:1) to standard care or lanreotide 120 mg sc. every 4 weeks for a period of 120 weeks
- GFR was estimated by the CKD EPI equation and height adjusted total kidney and liver volume (hTKV and hTLV) were measured by MRI

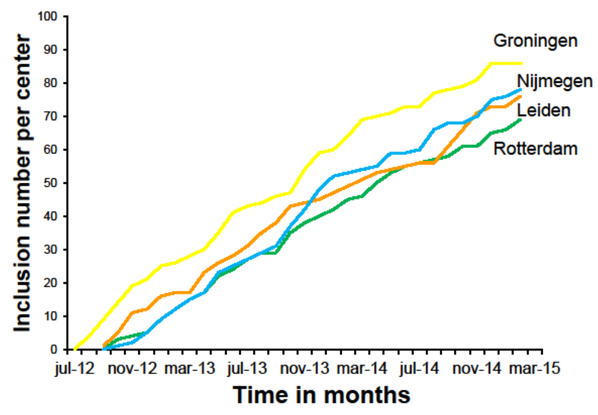
Conclusions

- **No significant differences were found in baseline characteristics between both treatment groups**
- **The study was enriched with patients with a high likelihood of rapid disease progression**
- **Lanreotide resulted in an acute reduction in eGFR in the first 4 weeks, that stabilized thereafter**
- **Treatment adherence was high and lanreotide was well tolerated in the first 3 months**

DIPAK
DUTCH KIDNEY FOUNDATION
CONSORTIUM

Referring centers and timeline randomization

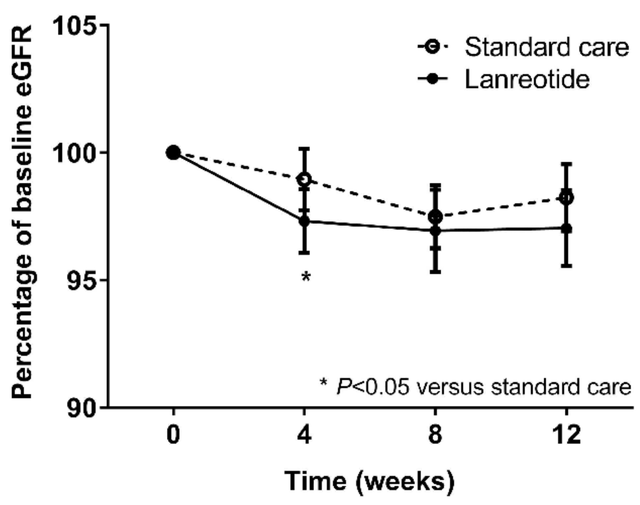




Baseline characteristics

	Lanreotide (n=154)	Standard care (n=155)	P-value
Female sex, %	53.2	52.8	0.9
Age, yrs	48 ± 7	48 ± 7	0.7
Caucasian, %	96.1	97.4	0.4
Body mass index, kg/m^2	26.9 ± 4.5	27.0 ± 4.9	0.7
Systolic blood pressure, mmHg	132 ± 13	133 ± 15	0.4
Diastolic blood pressure, mmHg	82 ± 10	82 ± 10	0.8
Antihypertensive medication, %	91.6	90.9	0.8
- RAAS blocker	81.8	83.2	0.3
eGFR, mL/min/1.73m^2	49.4 ± 10.8	50.0 ± 10.6	0.6
24hr urine volume, L	2.29 ± 0.69	2.45 ± 0.83	0.1
hTKV, L/m	1.15 (0.78 – 1.66)	1.04 (0.73 – 1.69)	0.4
hTLV, L/m	1.23 (0.99 – 1.72)	1.15 (1.00 – 1.39)	0.06
Mayo classification, %			
- Class 1A or 1B	16.0	17.0	0.8
- Class 1C / 1E	80.0	79.7	1.0
- Class 2	4.0	3.3	0.7
PKD mutation, %			
- *PKD-1* truncating	44.7	45.6	0.9
- *PKD-1* non-truncating	24.7	26.2	0.8
- *PKD-2*	21.3	14.8	0.1
- No mutation detected	9.3	13.4	0.3

Short term effect lanreotide on eGFR



- Lanreotide had an acute effect on eGFR:
  - eGFR decreased during the first 4 weeks (p=0.04)
  - eGFR stabilized in the 8 weeks thereafter (p=0.9)

Short term side effects lanreotide

	Lanreotide (n=154)	Standard care (n=155)	P-value
Diarrhea, %	79.2	10.0	<0.001
Abdominal cramps, %	50.6	0.6	<0.001
Pale stools, %	46.1	0.0	<0.001
Flatulence, %	13.6	0.0	<0.001
Injection lump, %	26.6	0.0	<0.001
Fatigue, %	26.6	0.0	<0.001
Bradycardia, %	11.0	0.0	<0.001
Drop-out first 12 weeks	3.9	3.2	0.8

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