

LONG TERM OUTCOME OF HEMODIALYSIS VERSUS PERITONEAL DIALYSIS PATIENTS: 20-YEAR EXPERIENCE FROM A SINGLE CENTER

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INTRODUCTION: Survival in patients with end-stage renal disease (ESRD) on renal replacement therapy (RRT) remains an issue of vital importance and comparative studies between haemodialysis (HD) and peritoneal dialysis (PD) have often shown conflicting results.

AIM OF THE STUDY: The present study was designed to retrospectively evaluate the 20-year outcome of HD versus PD patients in our single-center dialysis program.

PATIENTS AND METHODS:

- One hundred and seven HD patients, 71 males and 36 females and 85 PD patients, 58 males and 27 females, with at least 3 months of follow-up, starting HD or PD between January 1993 and November 2013, at a median age of 59 years (range: 17-91) for HD and 65 years (range: 21-91) for PD patients were included. Among them, 24 (22.4%) HD and 20 (23.5%) PD patients were diabetics.
- Patients were followed until death, renal transplantation, transfer to other dialysis modality or to another renal center.
- Survival curves were generated according to the Kaplan Meier method and were compared using the log-rank test.

Table: Patients characteristics

	HD (n=107)	PD (n=85)
Male/female	71/36	58/27
Age at HD/PD start (median, range, years)	59 (17-91)	65 (21-91)
Diabetics (n, %)	24 (22.4)	20 (23.5)

RESULTS:

- The baseline demographics including age, presence of diabetes and other major co-morbidities were similar between HD and PD patients.
- Among HD patients, 40 deaths were observed, 3 were transferred to PD, 20 to another HD unit and 13 were transplanted. Among PD patients, there were 50 deaths. 12 were transferred to HD, 3 to another PD center and 9 received a kidney transplant.
- Median follow-up on HD was 39 months (range: 3-229) and on PD 33 (4-159).
- Both patient and technique survival were better in HD versus PD (log-rank test, $p < 0.001$ for patient and $p = 0.001$ for technique survival).
- Twenty-three patients (26.7%) on PD and 40 (38.4%) on HD survived more than 60 months.
- The 5-, 10-, and 20-year overall patient survival rates were 73%, 40% and 16.5% for HD patients and 45%, 17.5% and 0% for PD patients, respectively. Technique survival was 93% at all three time points for HD and 78%, 35% and 0% for PD patients, respectively, at the same intervals.
- Subgroup analysis showed better overall patient survival for non-diabetics versus diabetics (log-rank test, $p = 0.05$).

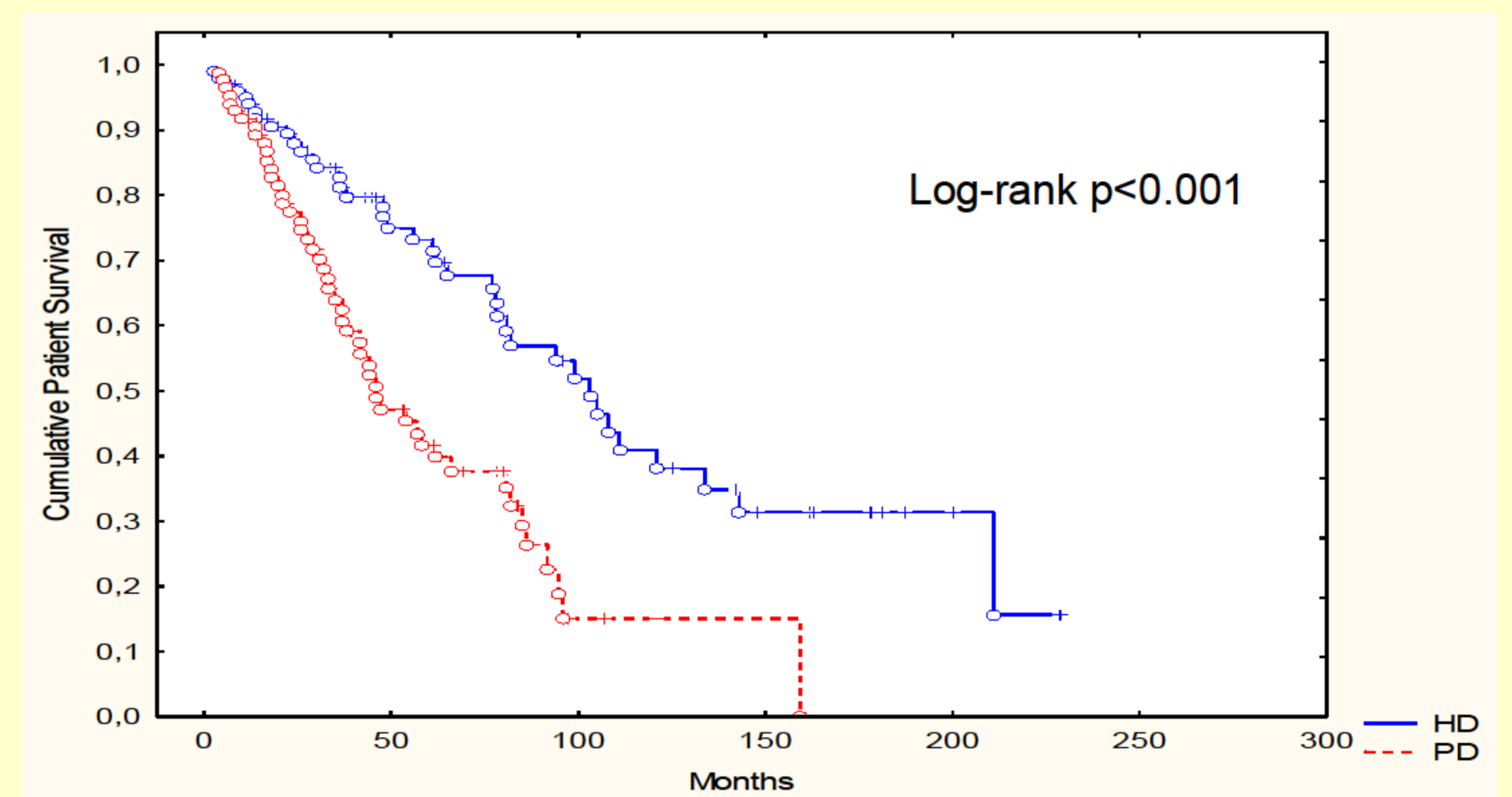


Fig 1: Cumulative patient survival (Kaplan-Meier curves)

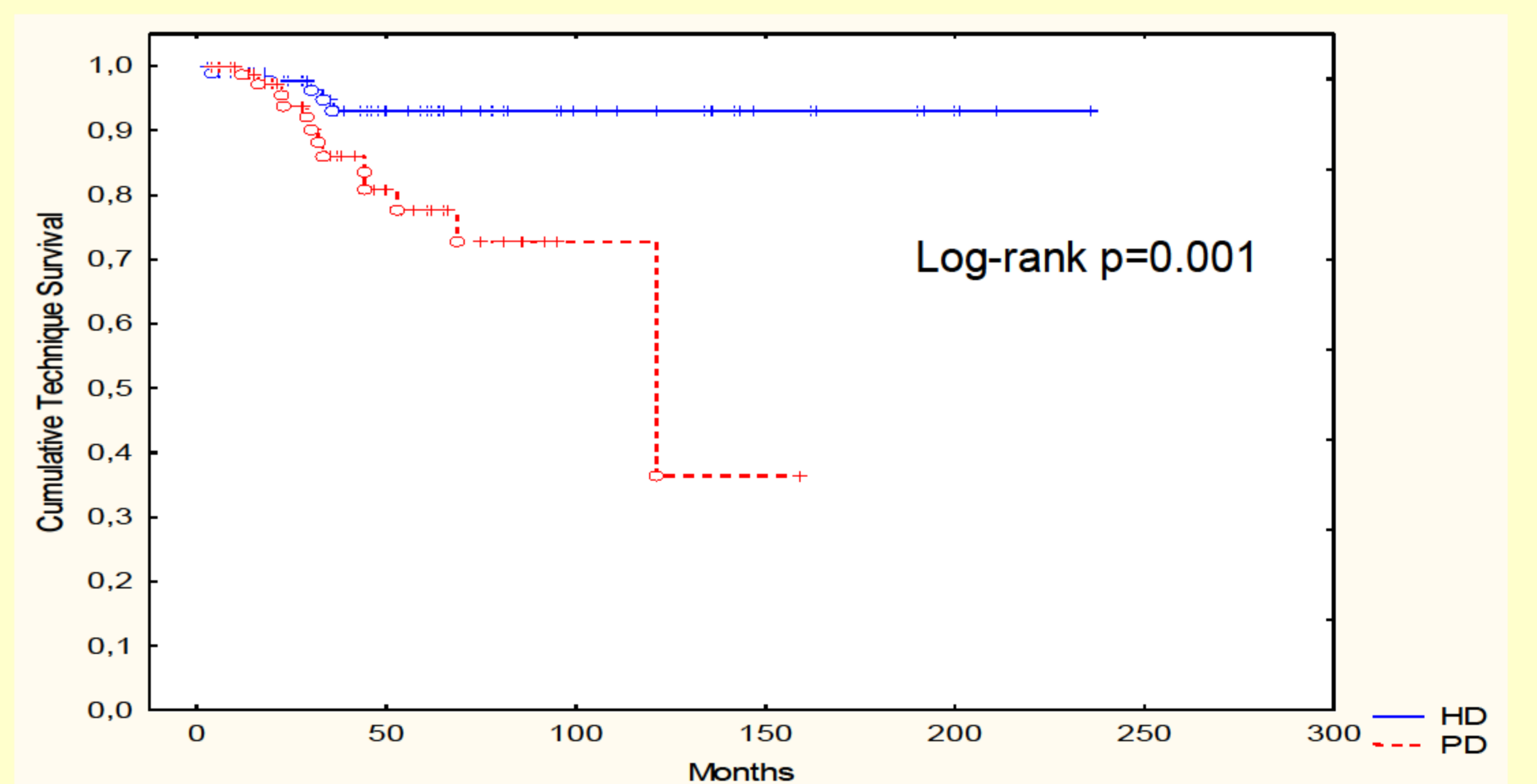


Fig 2: Cumulative technique survival (Kaplan-Meier curves)

CONCLUSION:

Patient and technique survival were better in ESRD patients on HD as compared to those on PD over a 20-year period in our single-center dialysis program. This survival advantage of HD over PD existed despite similar co-morbidities between the two groups. This difference could be attributed to a significant age difference between groups and method inclusion biases by the design of the study.

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