

ELDERLY HEMODIALYSIS PATIENTS. ARE THERE ANY SPECIAL ISSUES?

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INTRODUCTION AND AIMS:

End stage renal disease is more common among the elderly, however there is no standard practice regarding the indication, characteristics and intensity of renal replacement therapy of very old patients. The aim of our study was to evaluate the life expectancies, lab and hemodialysis (HD) parameters of the ≥ 80 years old patients and compare them with the patients aged below 80 years.

RESULTS:

In the evaluated period 61 died out of 87 old patients, the mean age of patients was 80 ± 4 years (mean \pm SD) at the beginning of HD, and 84 ± 3 years at the time of death. The average survival from start of HD was 48 ± 40 months (1 year: 82%, 2 years: 69%, 5 years: 30%, 10 years: 8%).

In July 2016 we treated 26 ≥ 80 -year-old patients. One of them received conventional HD, 25 patients were treated with on-line hemodiafiltration (HDF) regularly, the mean age was 85 ± 3.5 years, the average time on dialysis was 48 ± 44 months.

In the control group the mean age of 123 patients was 57 ± 14 years, 3 patients were treated with conventional HD and 120 with HDF. The time spent on dialysis was 55 ± 37 months. (Table 1, 2)

The vascular access, comorbidity, main results of treatment parameters and efficiency, hydration status, blood pressure, anaemia- and nutrition status can be seen in Figures 1-16.

PATIENTS AND METHODS:

Using the EuCliD database, we evaluated the survival of HD patients who were treated between May 2008 and August 2016 for more than 90 days and reached at least 80 years of age. After that we compared the results of patients aged < 80 years with patients aged ≥ 80 years treated in July 2016. Student's t test was used to analyse the data.

≥ 80 years

- 26 patients
- Mean age 85 ± 3.5 years (min.: 80, max.: 96 years)
- Time on dialysis: 48 ± 44 month (min.: 5, max.: 149 month)
- Diabetic: 11 (42%)
- Cancer in medical history: 10 (38%)

< 80 years

- 123 patients
- Mean age 57 ± 14 years (min.: 24, max 78 years)
- Time on dialysis: 55 ± 37 month (min.: 3, max.: 267 month).
- Diabetic: 49 (40%)
- Cancer in medical history: 14 (15%)

Table 1. Patients in July 2016

≥ 80 years

- HD: 1, HDF: 25 patients
- 4x4 hours/week: 1 patients
- 2x4 hours/week regularly: 2 patients
- Missed HD: 1 patient (3,8%), 1 treatment
- Below the recommended weekly treatment time (≥ 720 / ≥ 660 min at age < 85 years / ≥ 85 years respectively): 5 patients (19%)

< 80 years

- HD: 3, HDF: 120 patients
- 4x4 hours/week 2 patients, 4x3 hours/week 1 patient
- 2x4 hours/week regularly: no
- Missed HD: 8 patients (6,5%), 19 treatments
- Below the recommended weekly treatment time (≥ 722 min): 22 patients (18%)

Table 2. Modality of treatment, patient compliance in July 2016

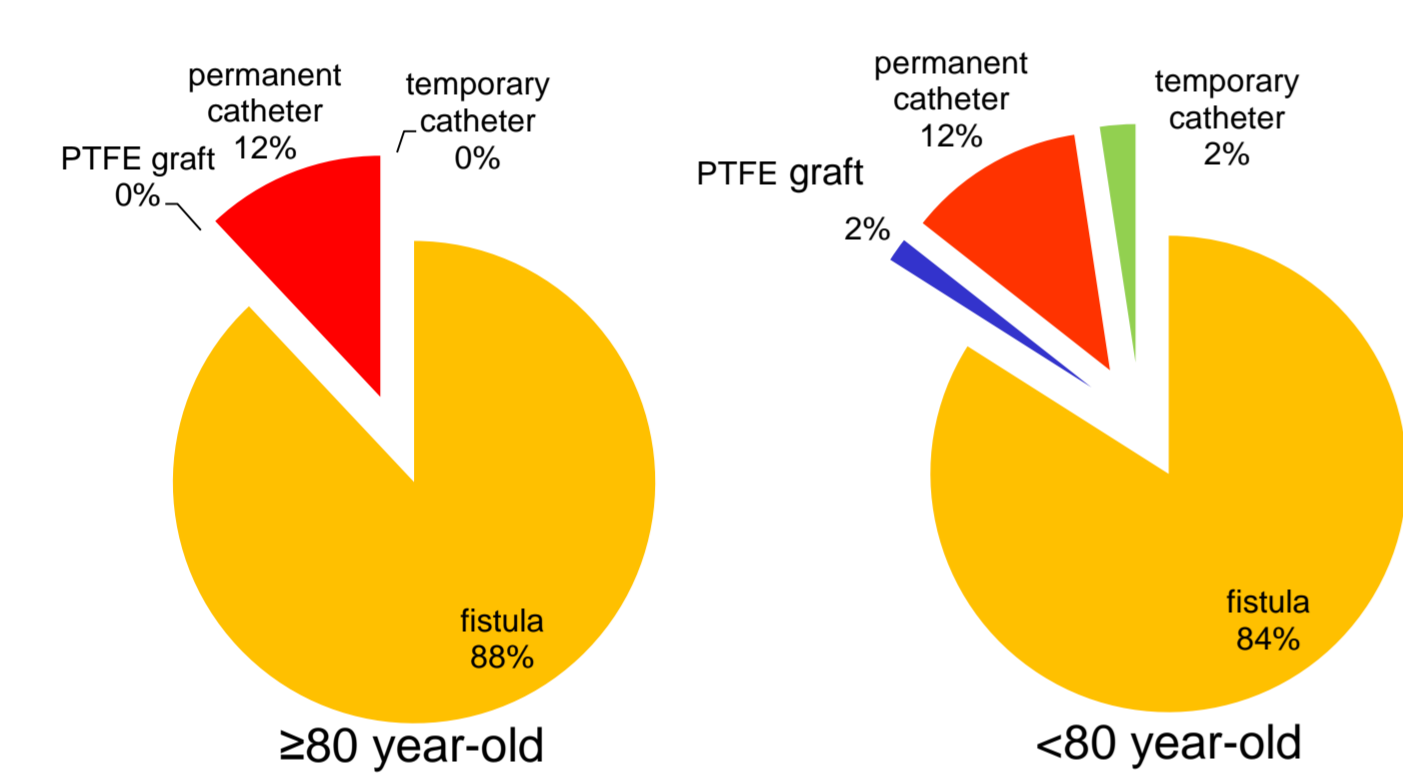


Fig. 1. Vascular access

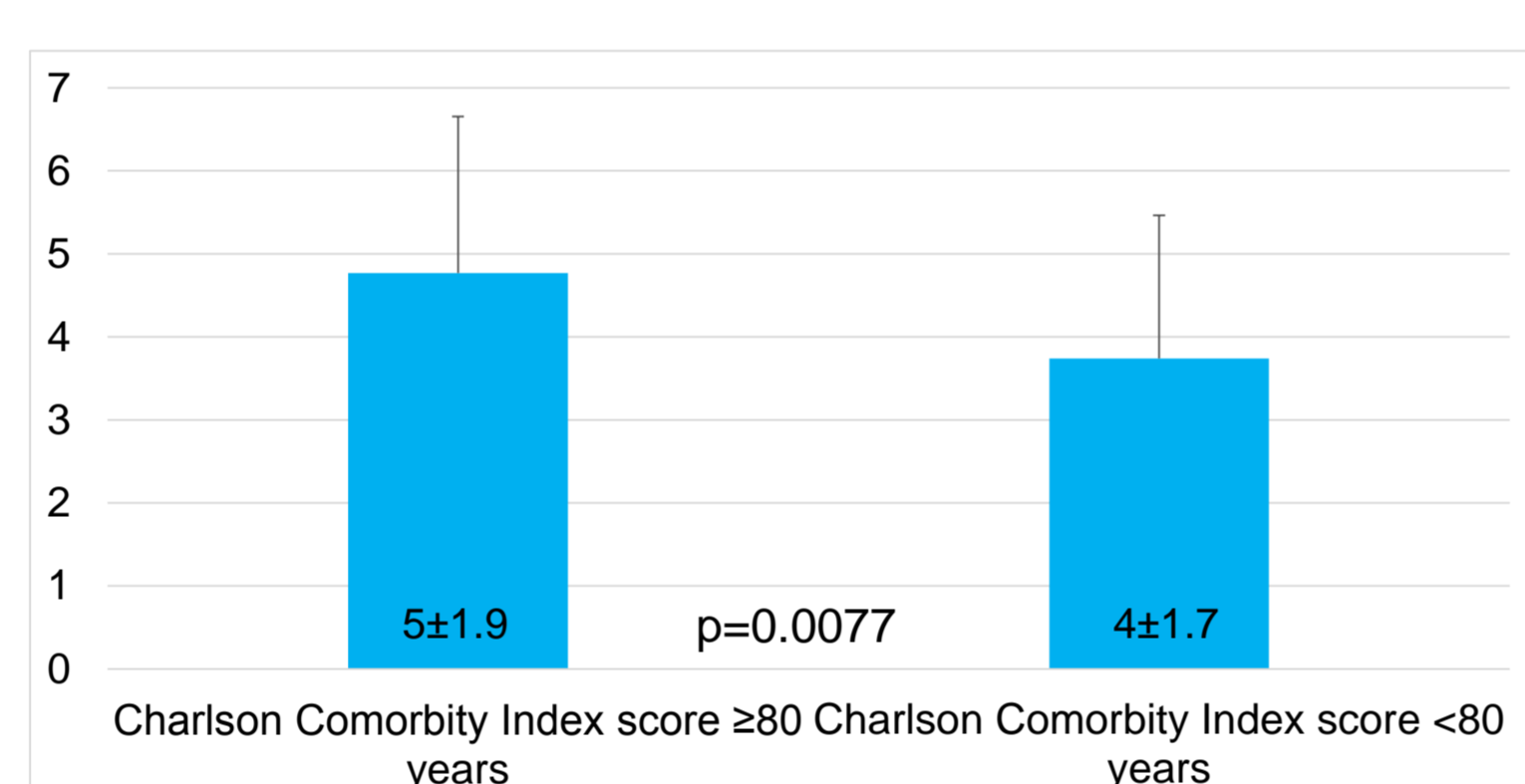


Fig. 2. Charlson comorbidity index

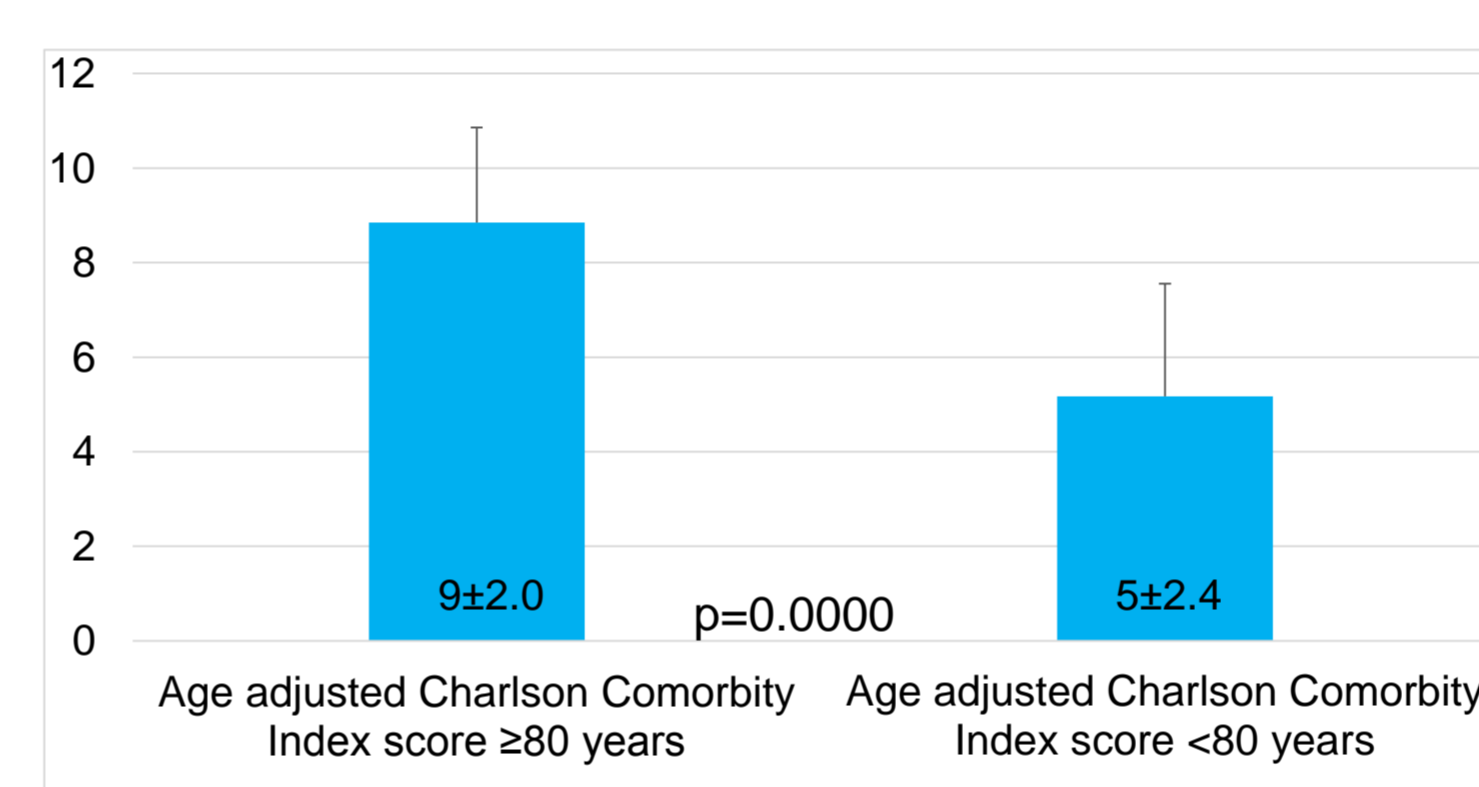


Fig. 3. Age adjusted Charlson comorbidity index

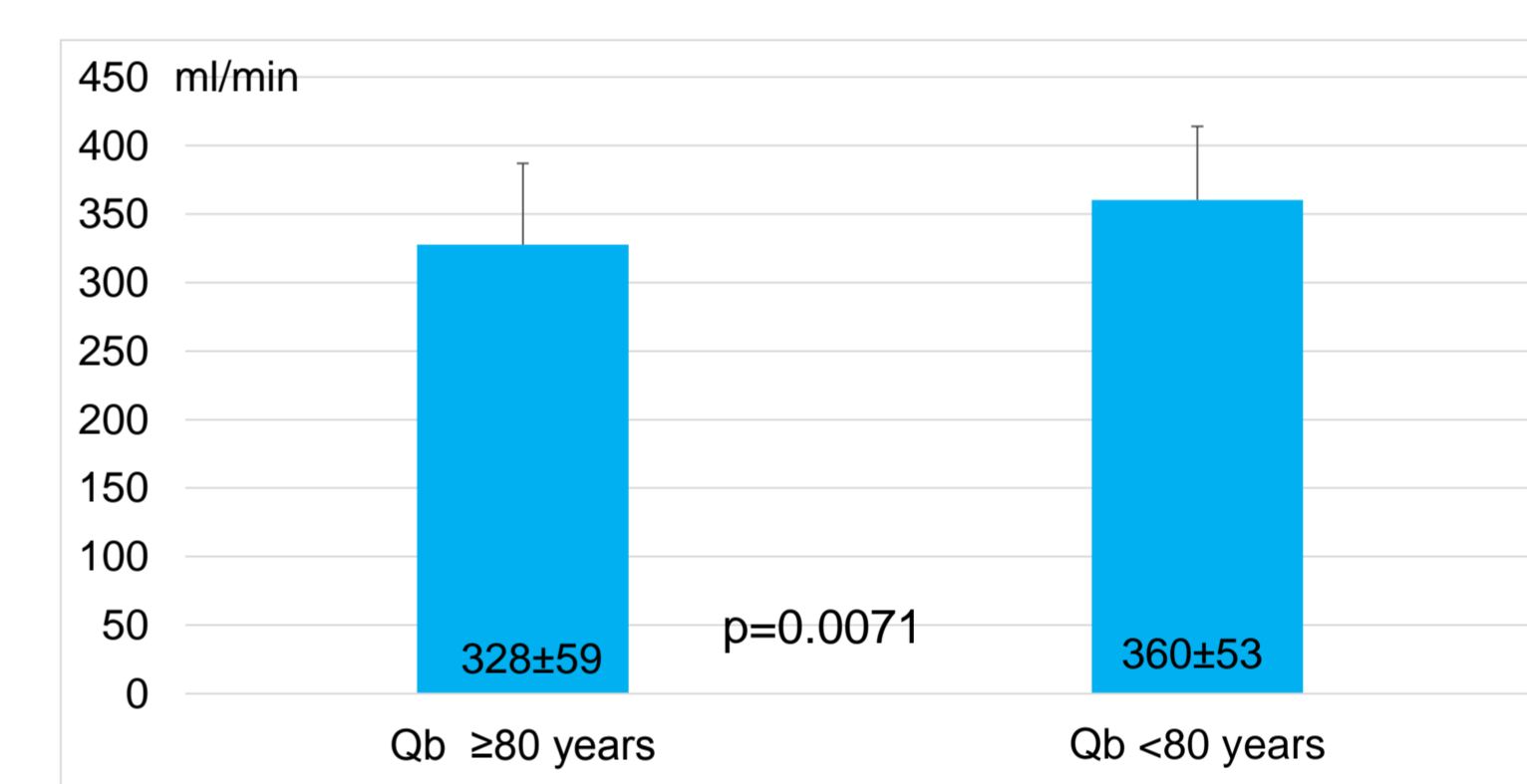


Fig. 4. Extracorporeal blood-flow (Qb)

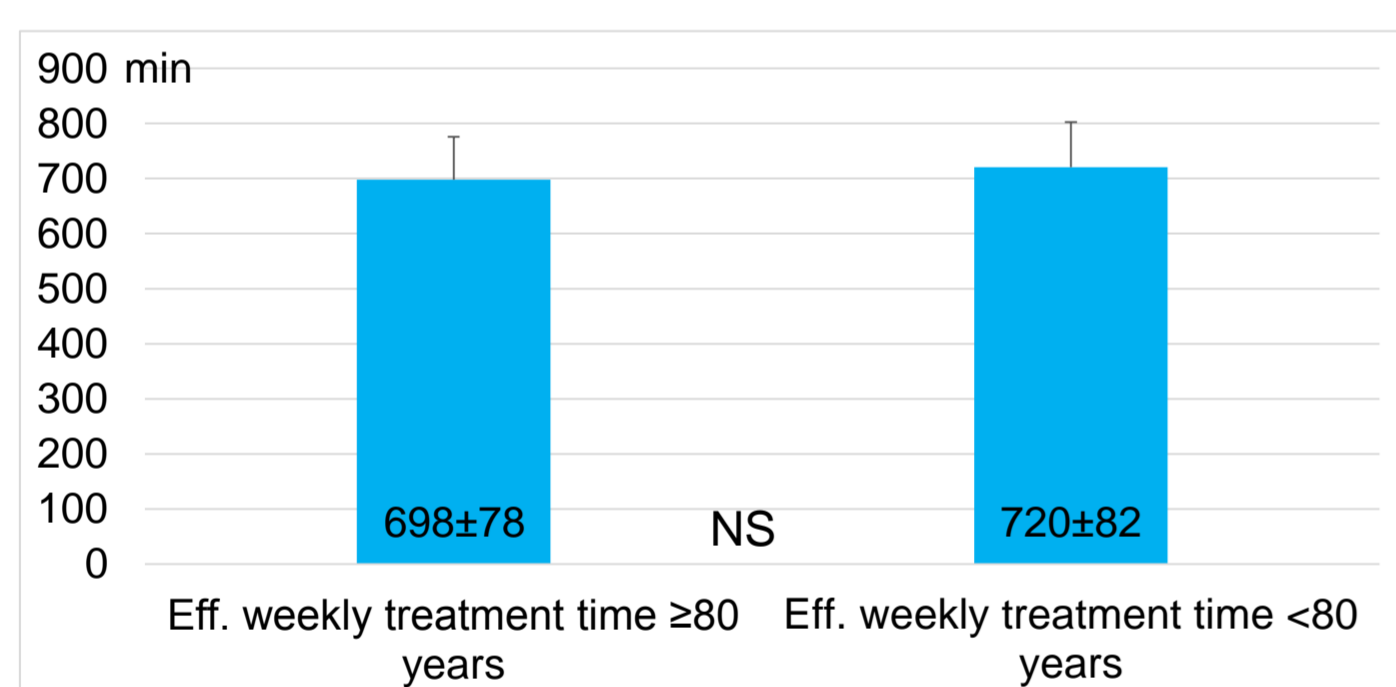


Fig. 5. Effective weekly treatment time

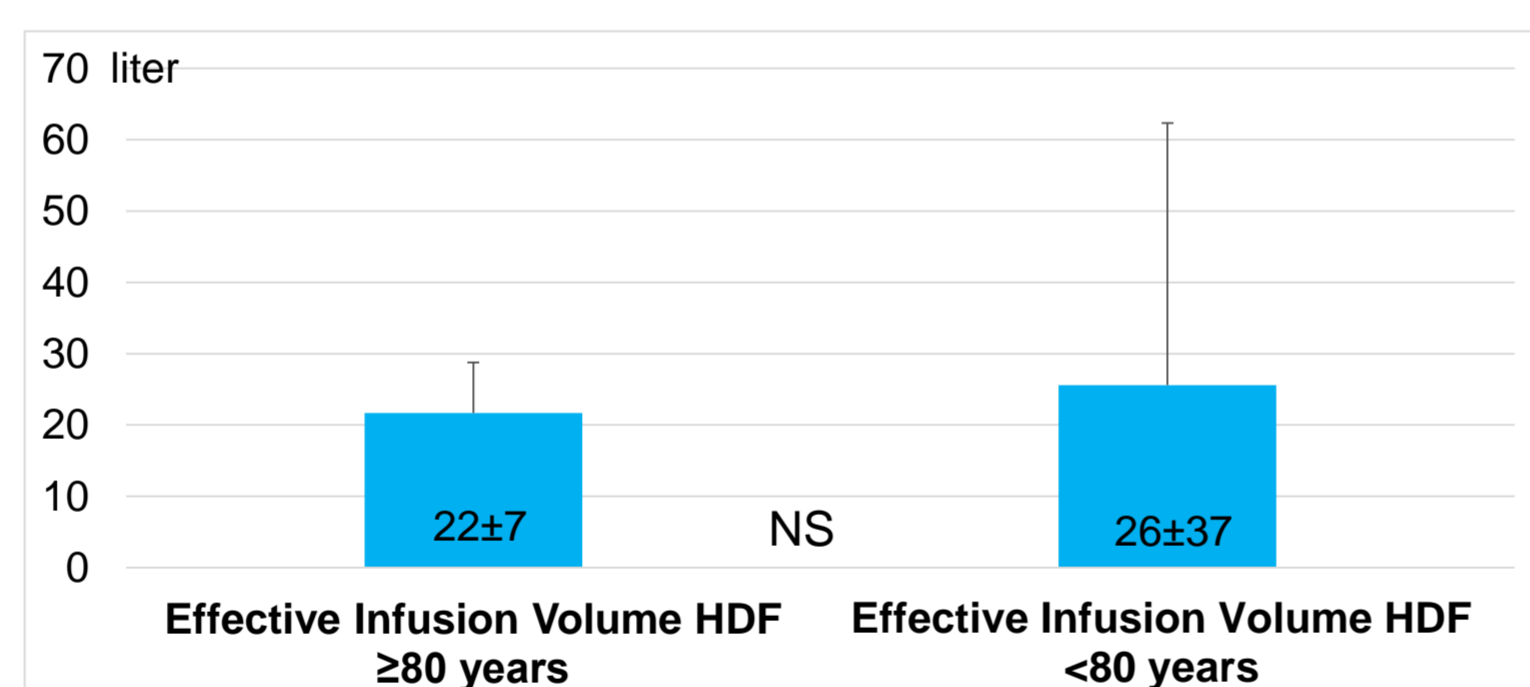


Fig. 6. Effective HDF infusion volume

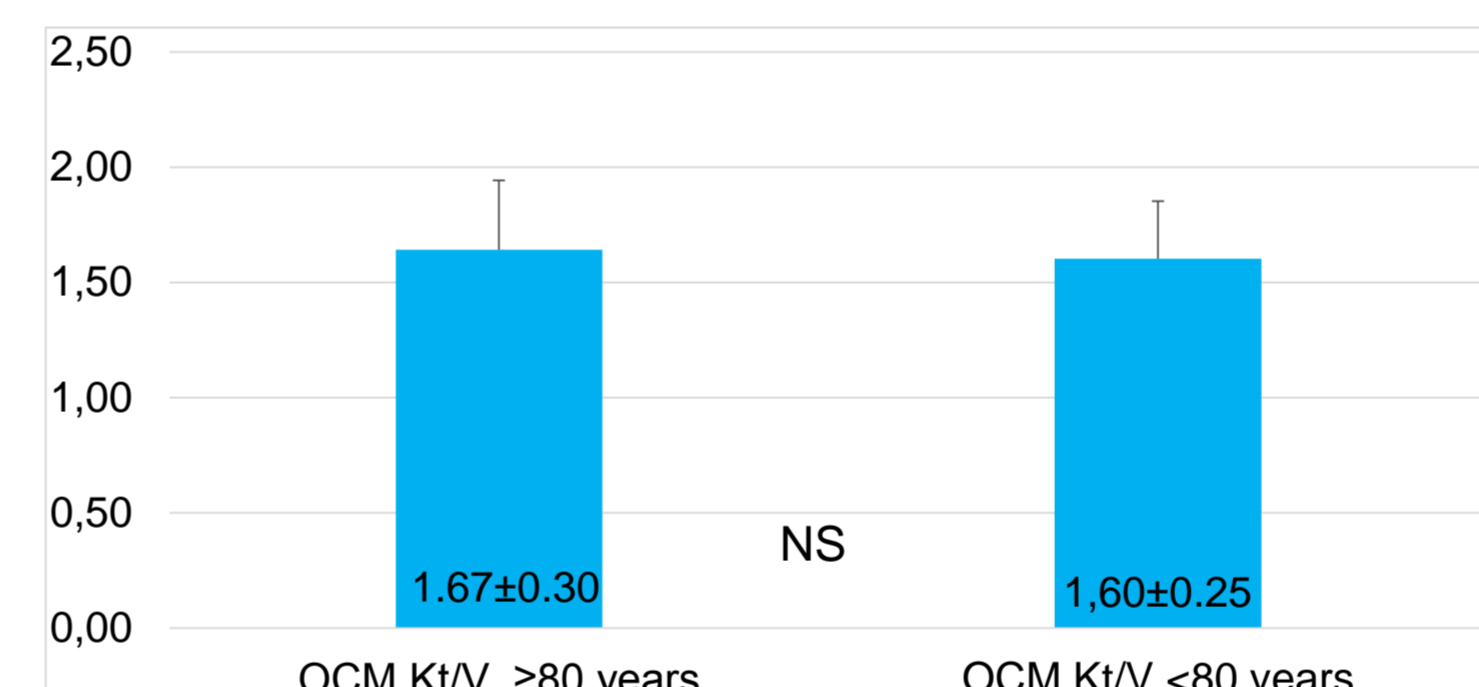


Fig. 7. sp Kt/V calculated by online clearance monitor (OCM)

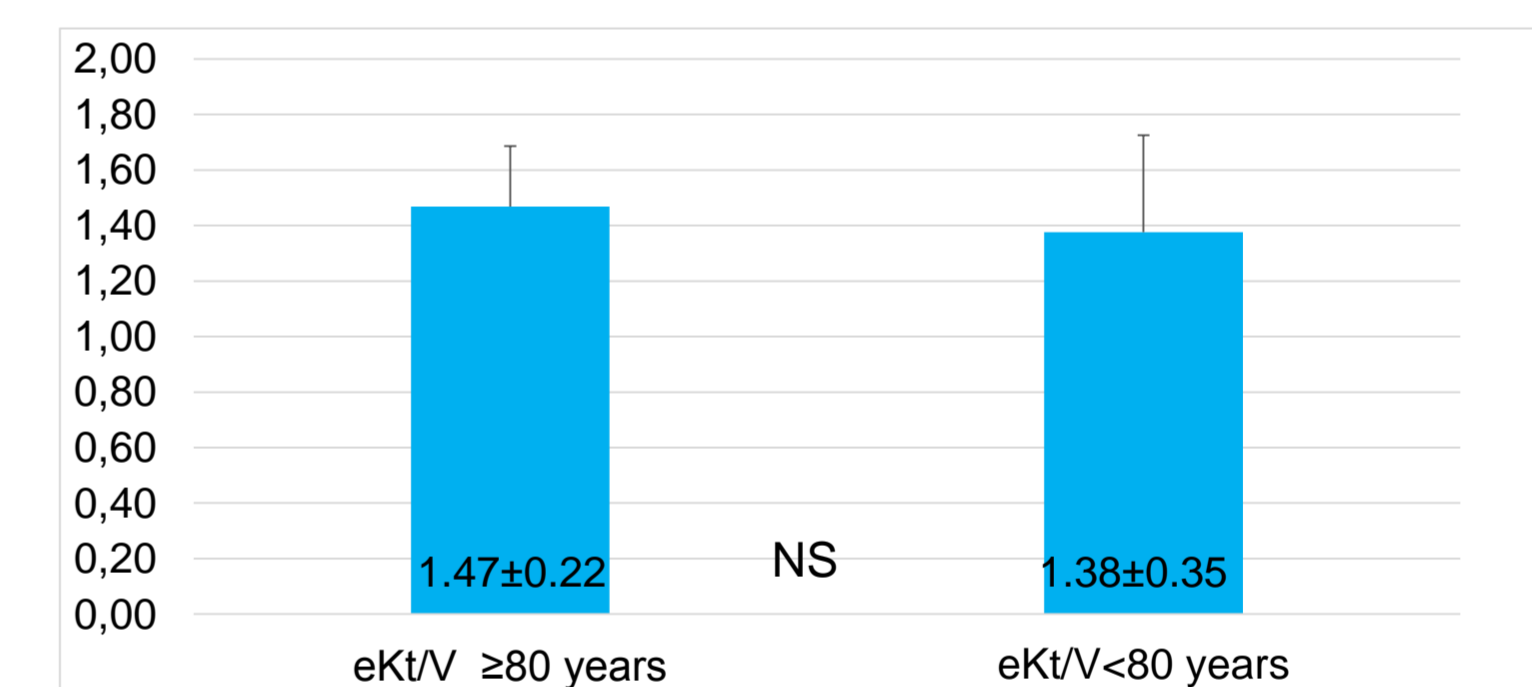


Fig. 8. eKt/V

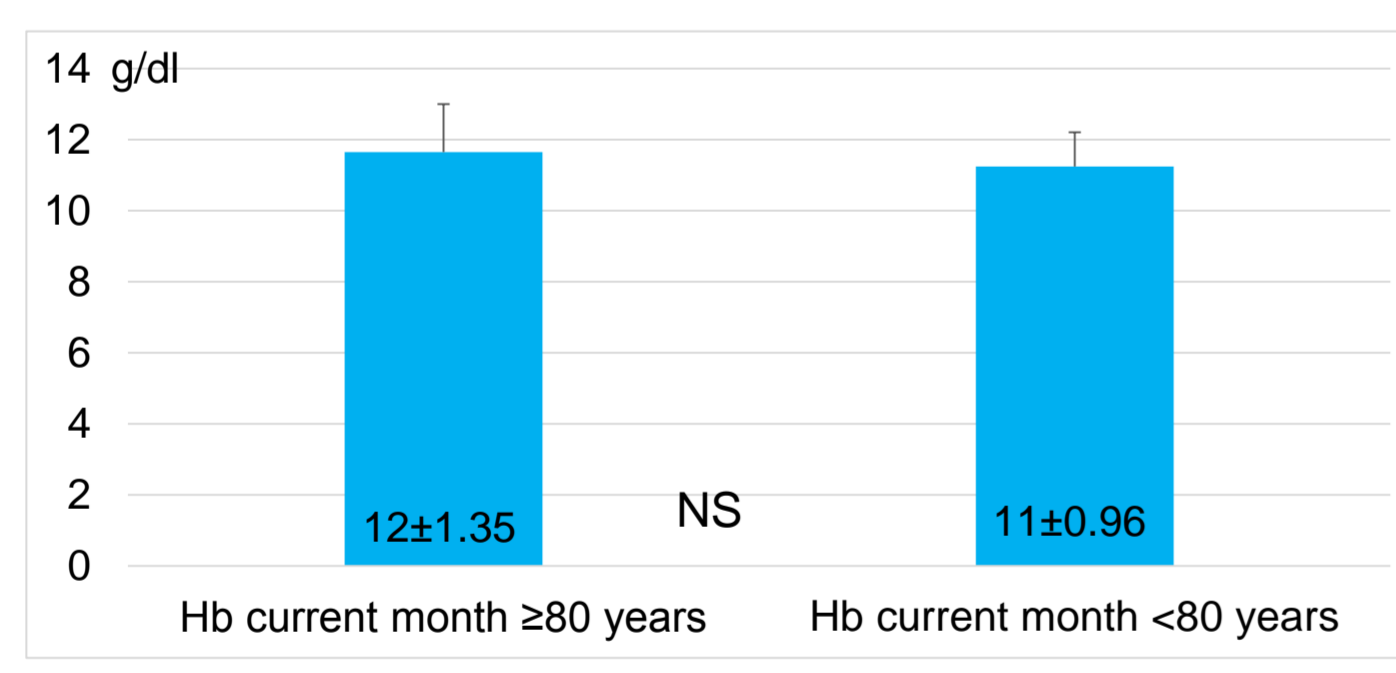


Fig. 9. Hemoglobin (Hb)

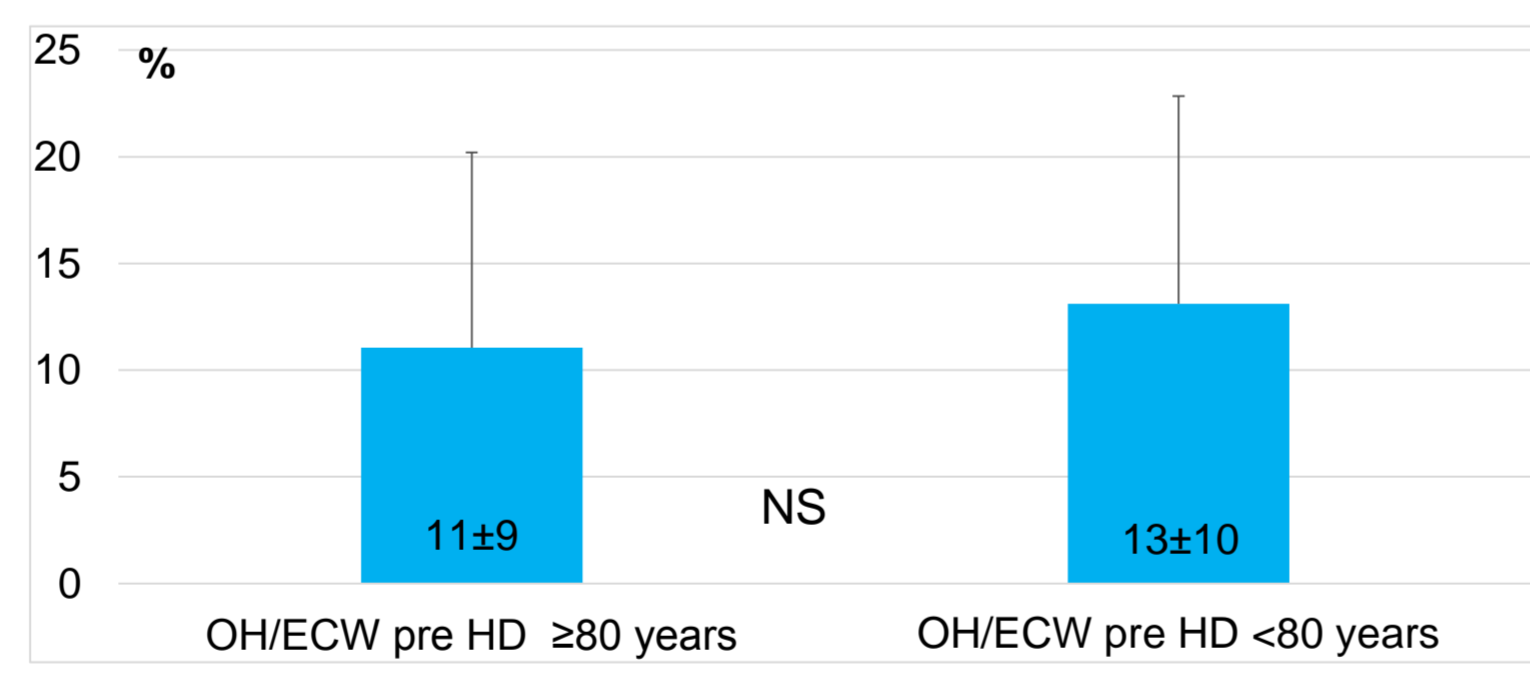


Fig. 10. Relative overhydration/extracellular water (OH/ECW) pre HD

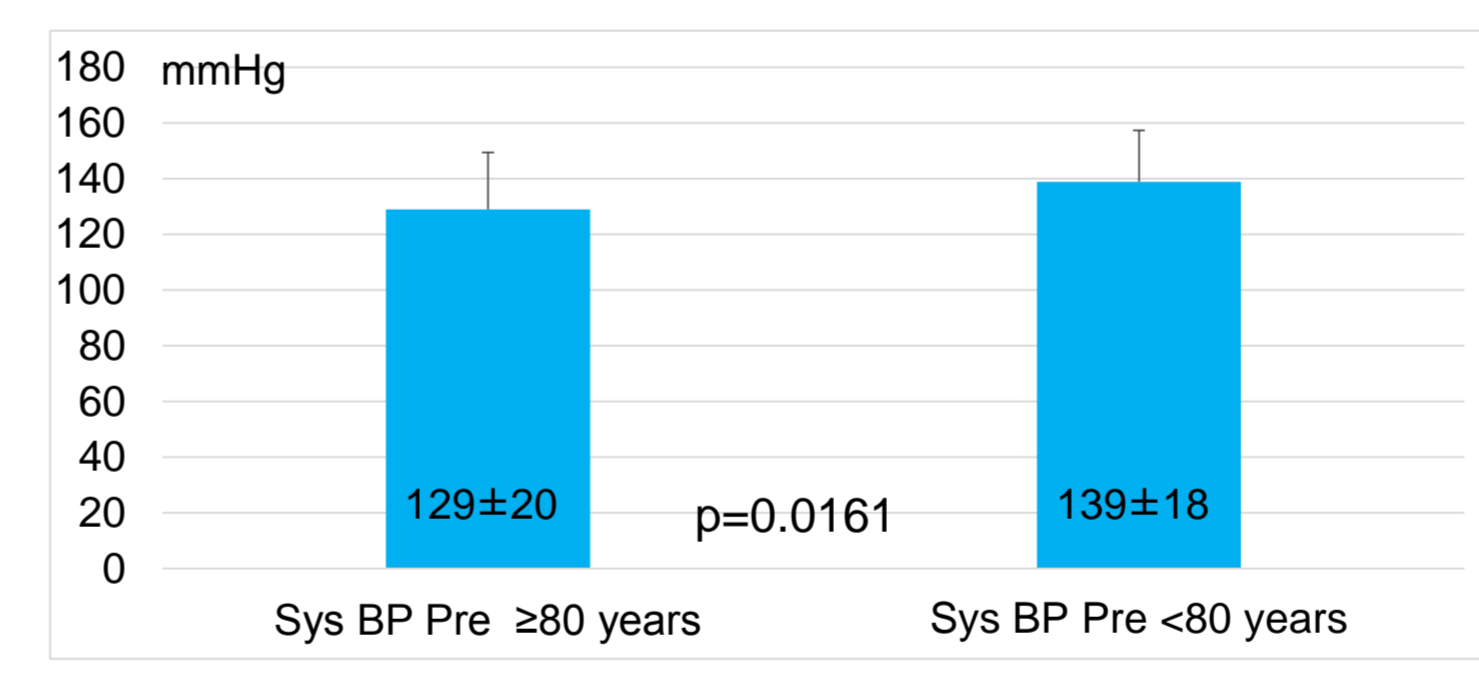


Fig. 11. Pre HD systolic blood pressure (BP)

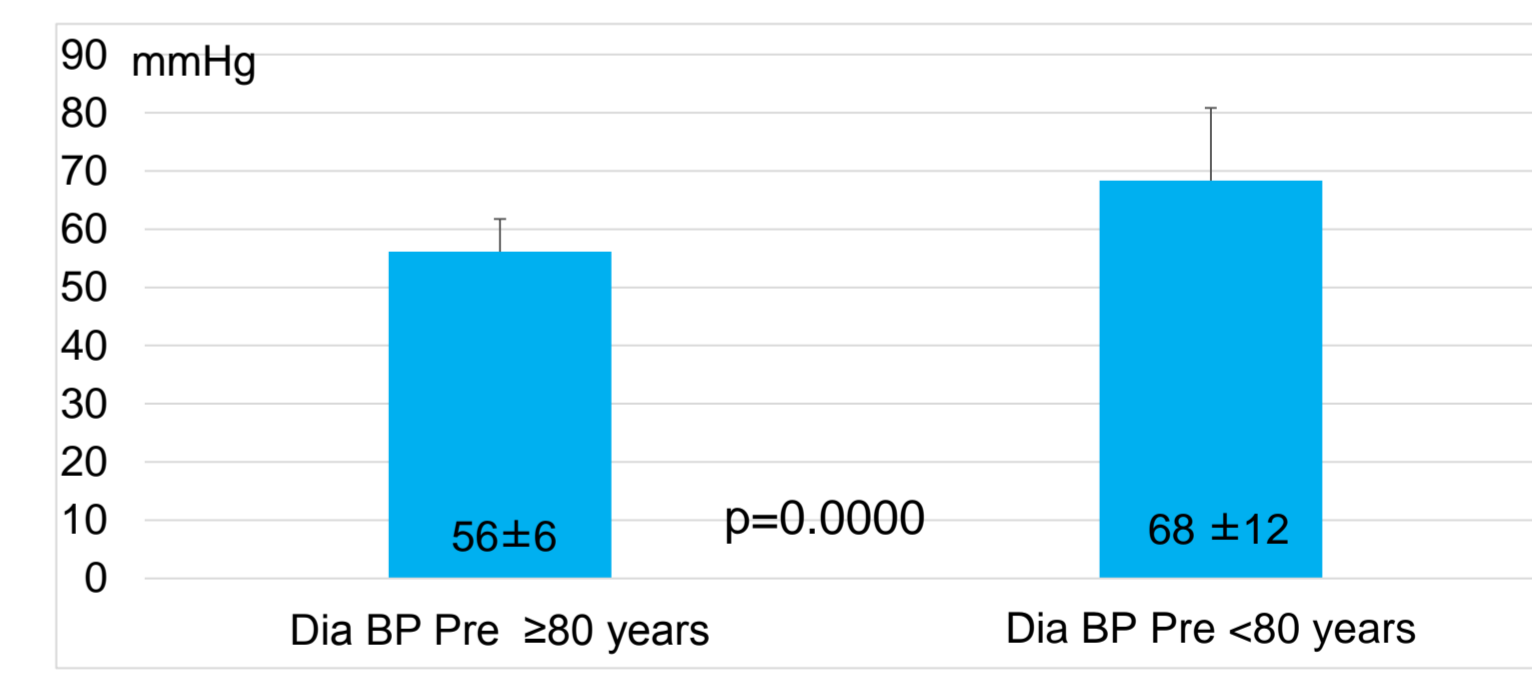


Fig. 12. Pre HD diastolic BP

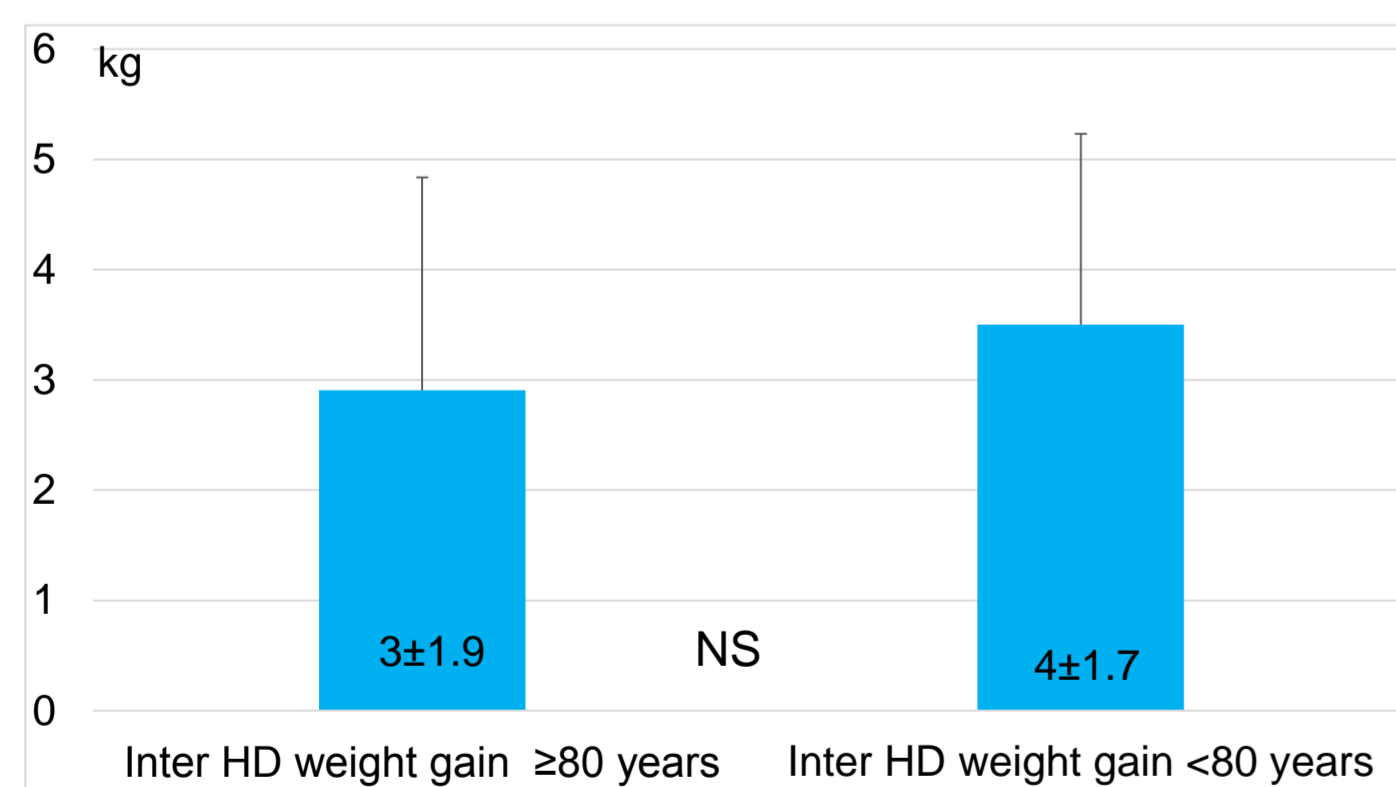


Fig. 13. Interdialytic weight gain

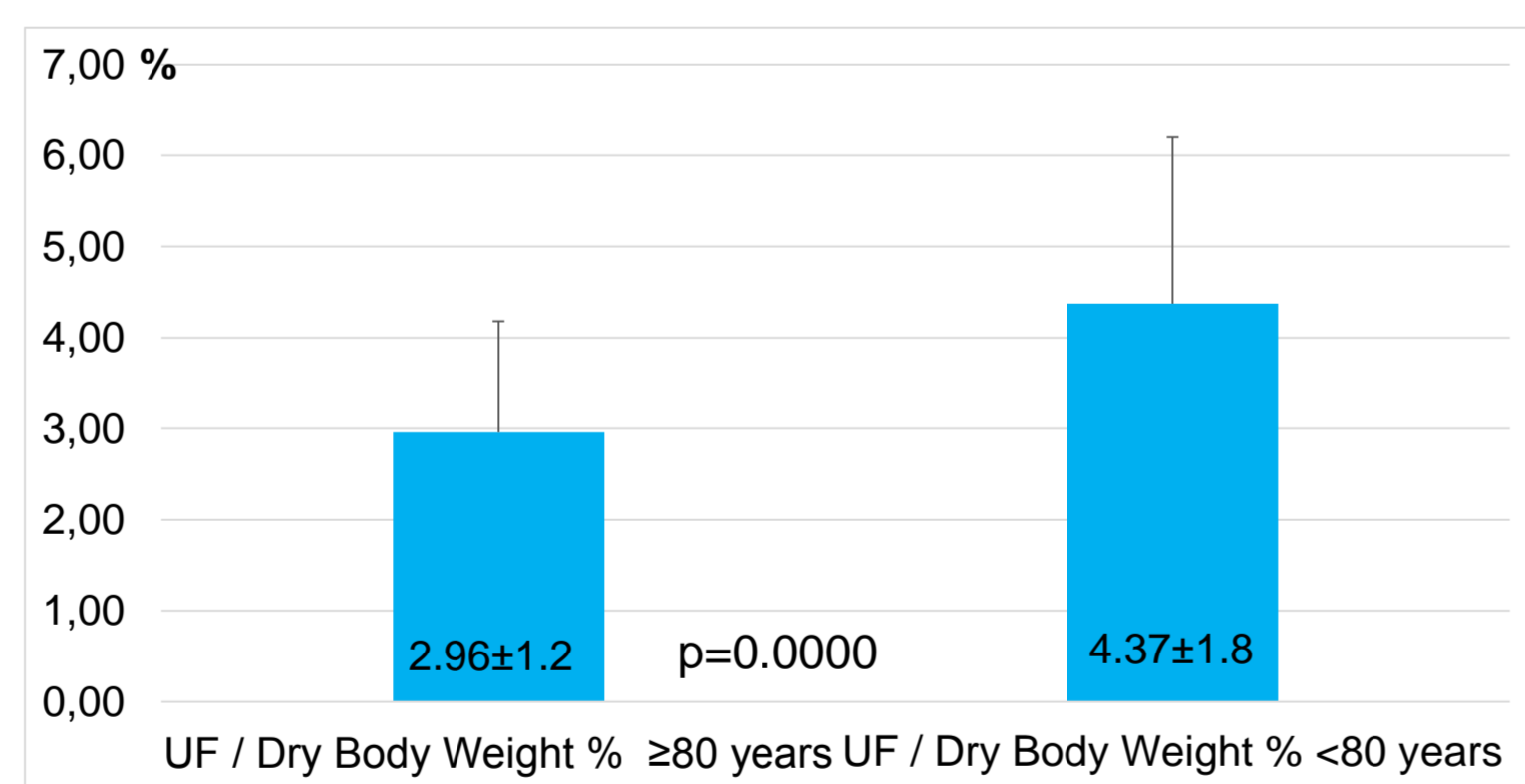


Fig. 14. UF/dry weight

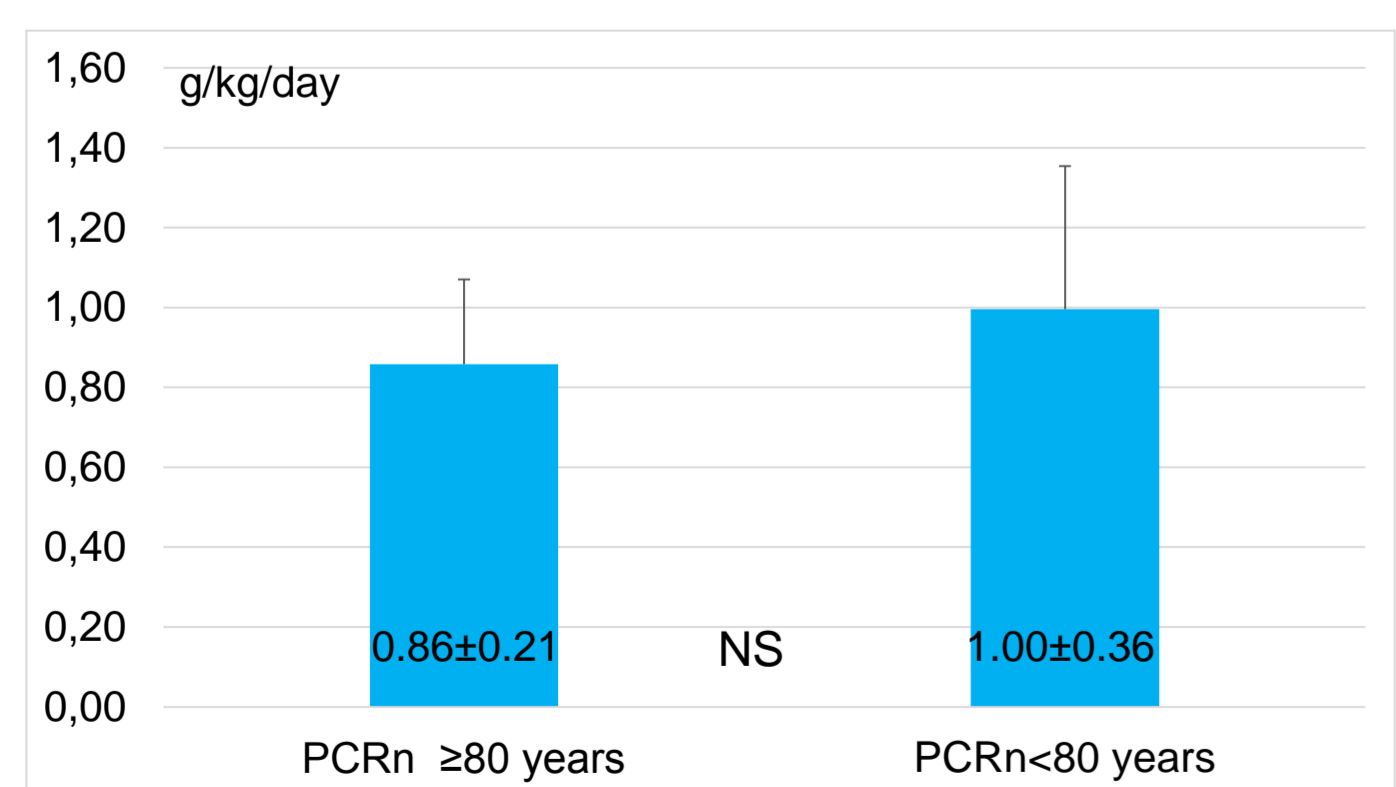


Fig. 15. Protein catabolic rate (PCRn)

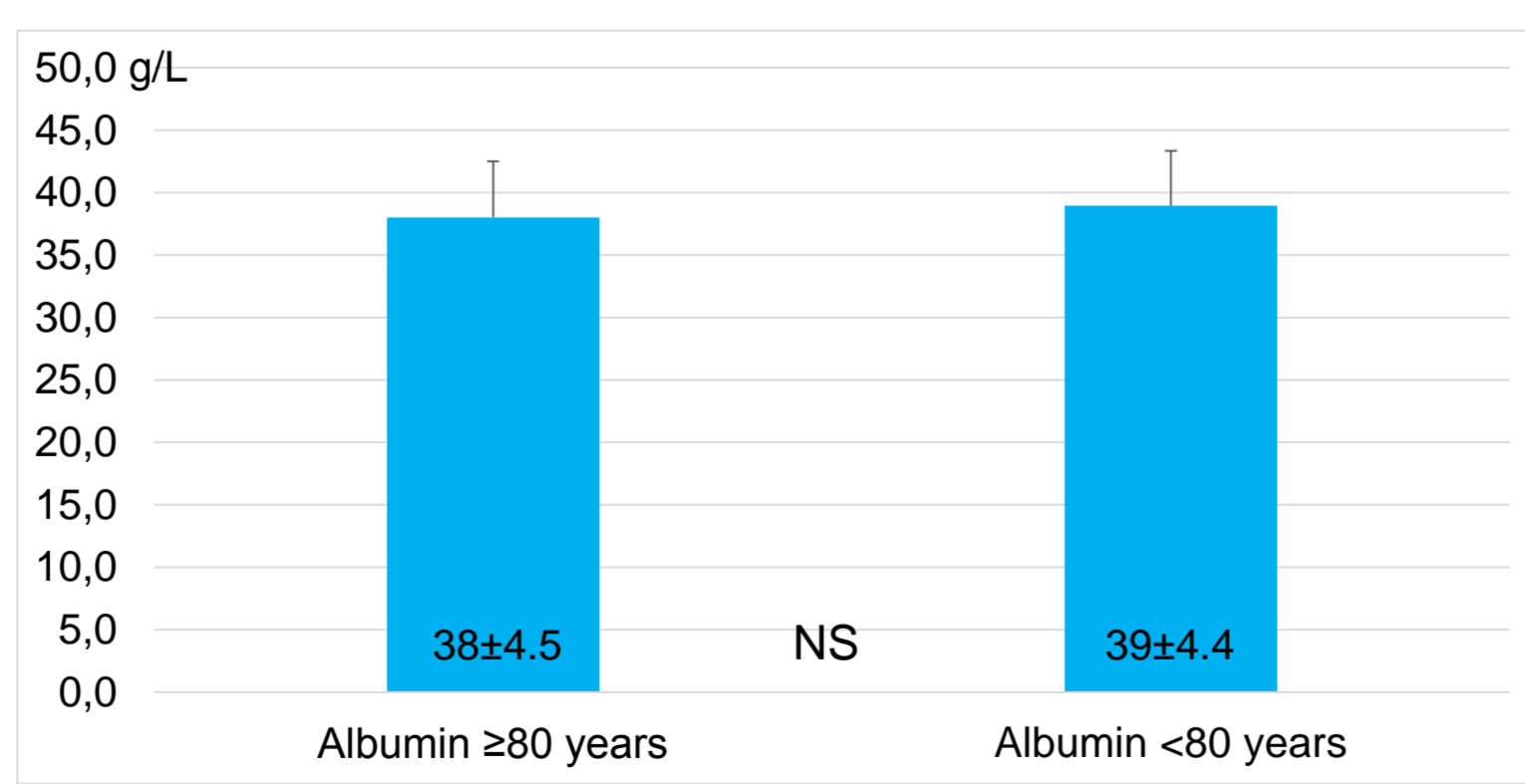


Fig. 16. Albumin

CONCLUSIONS:

Despite the higher comorbidity rate, the average survival of very old HD patients is relatively high, the proportion of AV fistulas, patient compliance, dialysis efficacy, nutrition and hydration state are comparable with the younger dialysis population. Special issues are the lower predialysis blood pressure, lower tolerance of UF, lower Qb, and not significantly lower protein intake.

References:

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3. Keane DF, Bowra K, Kearney K, et al.: Use of the body composition monitor for fluid status measurements in elderly malnourished subjects. *ASAIO J.* 2016 Dec 26.