

# Recovery time after hemodialysis or hemodiafiltration is associated with dialysis efficiency and hemoglobin value

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## BACKGROUND

Recovery time can be used to identify patients with poorer health-related quality of life and higher risks of hospitalization and mortality (1).

Minutes to recover after a hemodialysis session represent a simple health-related quality of life question that is reliable, valid, and sensitive to change (2).

Recovery time after hemodialysis and the factors associated with longer postdialysis recovery time are still controversial matters.

## METHODS

This was a single center prospective, transversal and observational study which included 169 end-stage renal disease patients (age:  $57.5 \pm 15.9$  years and dialysis vintage:  $77.43 \pm 69.45$  months). 112 patients were on high-flux hemodialysis (HD) and 57 patients were treated with online hemodiafiltration (HDF).

Patients were asked "How long does it take you to recover from a dialysis session?"

We studied associations of the postdialysis recovery time with age, dialysis vintage, sex, body mass index, diabetes mellitus, hemoglobin, albumin, online conductivity monitoring Kt/V (OCM Kt/V), treatment time, dialysate sodium, ultrafiltration volume, volume of blood processed, blood pressure before and after dialysis session and vascular access type.

### Statistics

Independent-samples t-test and Pearson correlation test were used for normal distribution, while two-sample Wilcoxon test and Spearman rank-order test were applied for non-normal distribution data.

## RESULTS

The mean postdialysis recovery time was  $3.16 \pm 5$  hours.

Most patients (56.2%) had a recovery time of maximum 1 hour, while 42.6% required no time to recover.

Men ( $n=91$ ; 53.85%) had significantly reduced recovery time compared to women ( $n=78$ ; 46.15%) – figure 1.

Recovery time was negatively associated with hemoglobin and positively associated with OCM Kt/V. – figure 2 and figure 3. There were no other significant recovery time correlations.

We found no significant differences of recovery time between HD and HDF patients, between diabetes and non-diabetes patients and between arteriovenous fistula and catheter patients.

Figure 1. Recovery time for men and women

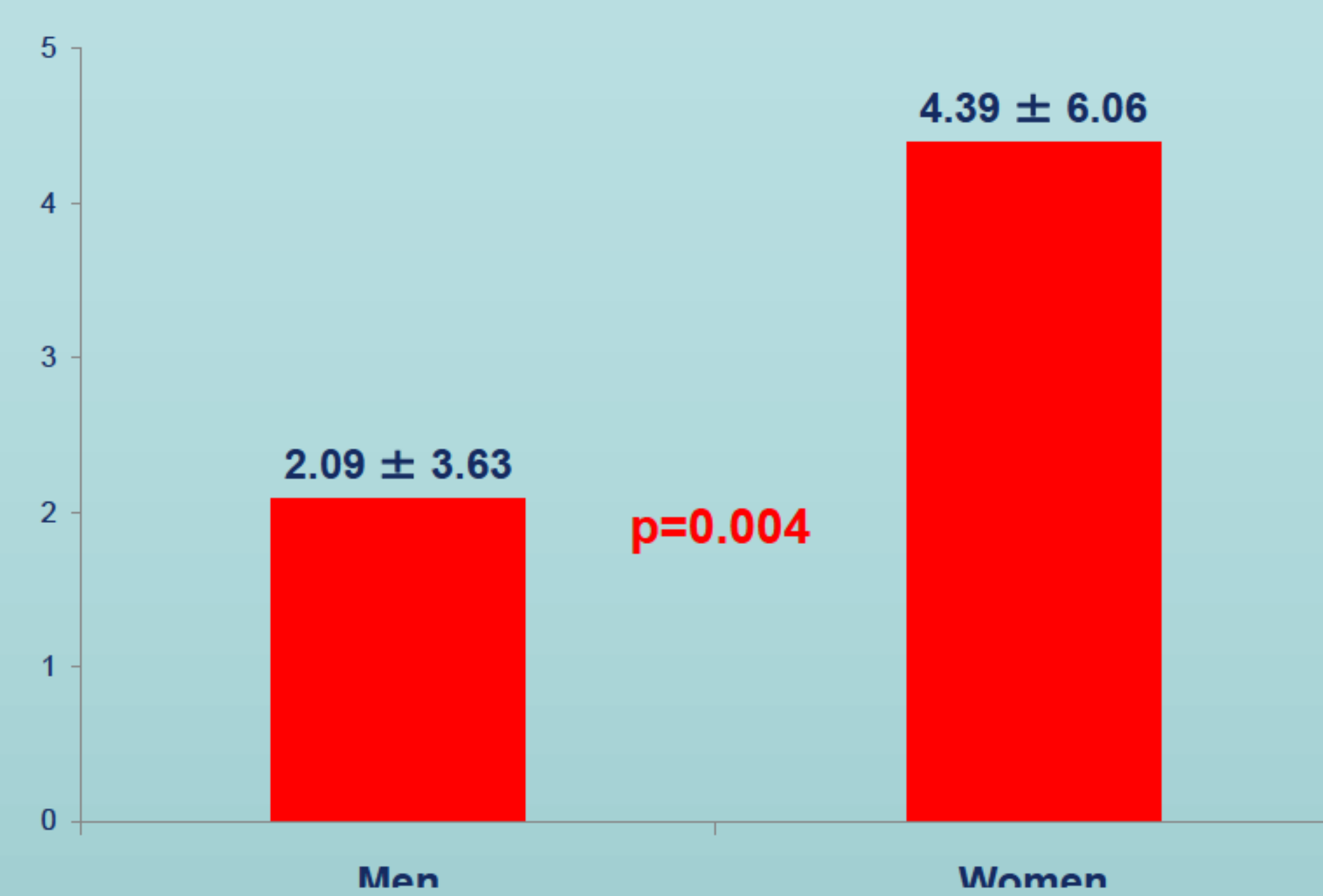


Figure 2. Correlation between recovery time and hemoglobin

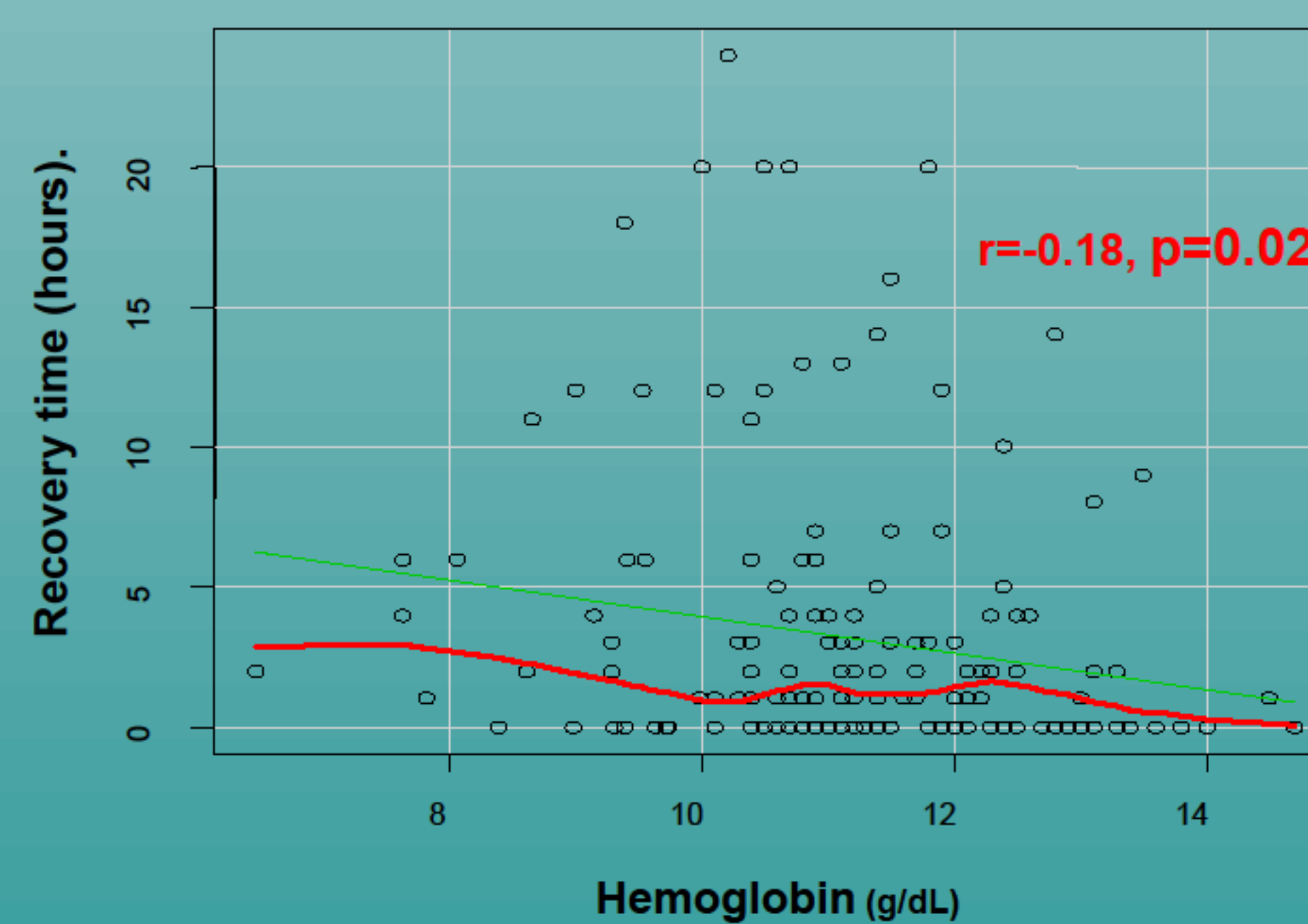
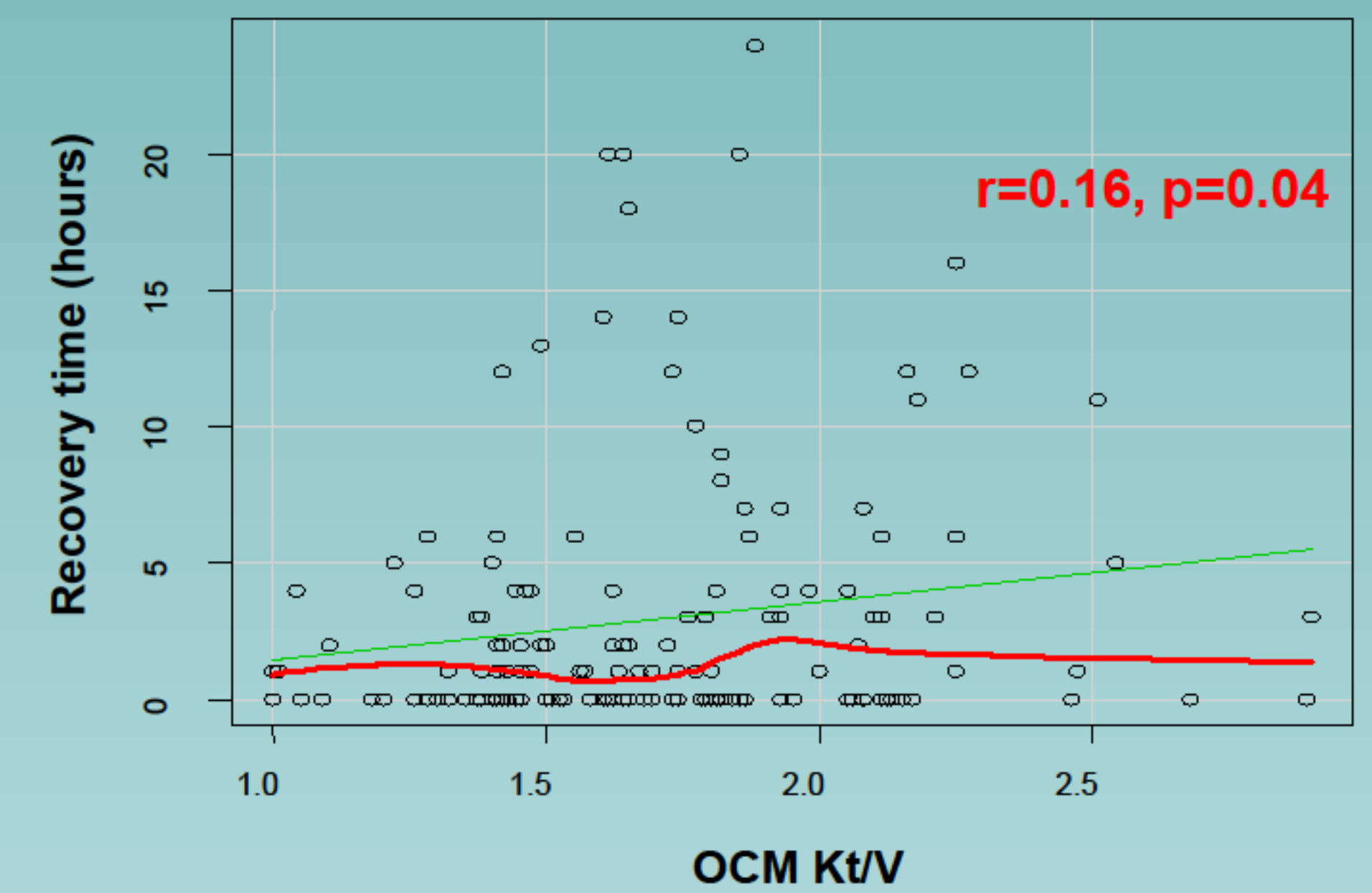


Figure 3. Correlation between recovery time and OCM Kt/V



## CONCLUSION

Post-session recovery time in patients treated with hemodialysis or online hemodiafiltration is influenced in our patients by dialysis efficiency and by the presence of anemia, but not by age, dialysis vintage, body mass index, diabetes, albumin, treatment time, dialysate sodium, ultrafiltration volume, processed blood volume and blood pressure.

Women seem to have longer recovery time compared to men.

We found no significant difference between post dialysis recovery time of patients treated with HD compared to HDF, between diabetes and non-diabetes patients and between patients having a fistula versus patients on catheter.

## REFERENCES

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