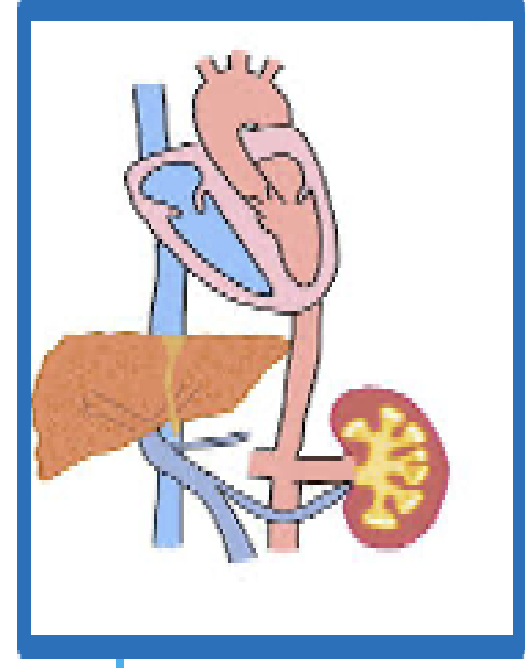
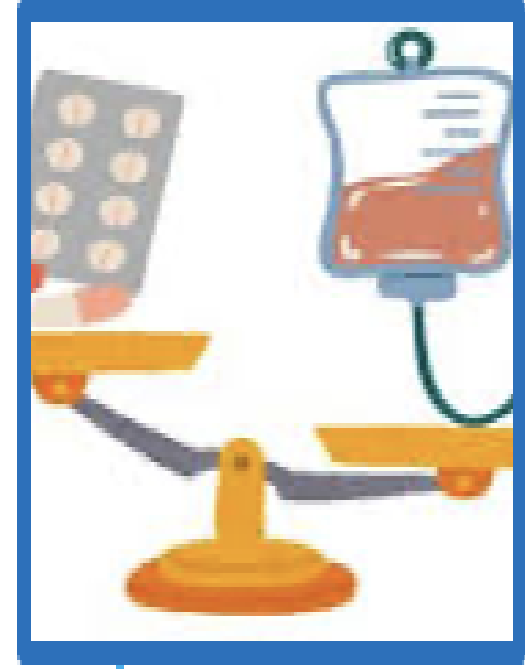


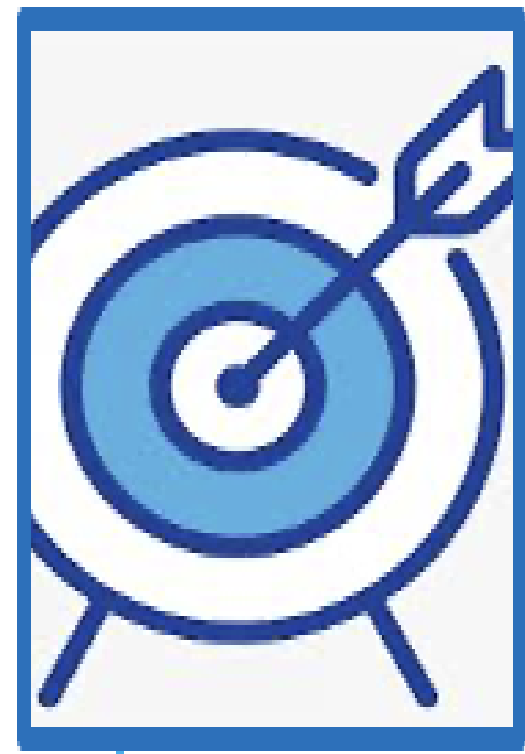
Background



• Hepatorenal syndrome (HRS) is a life-threatening complication of decompensated cirrhosis caused reduced renal perfusion^{1,2}



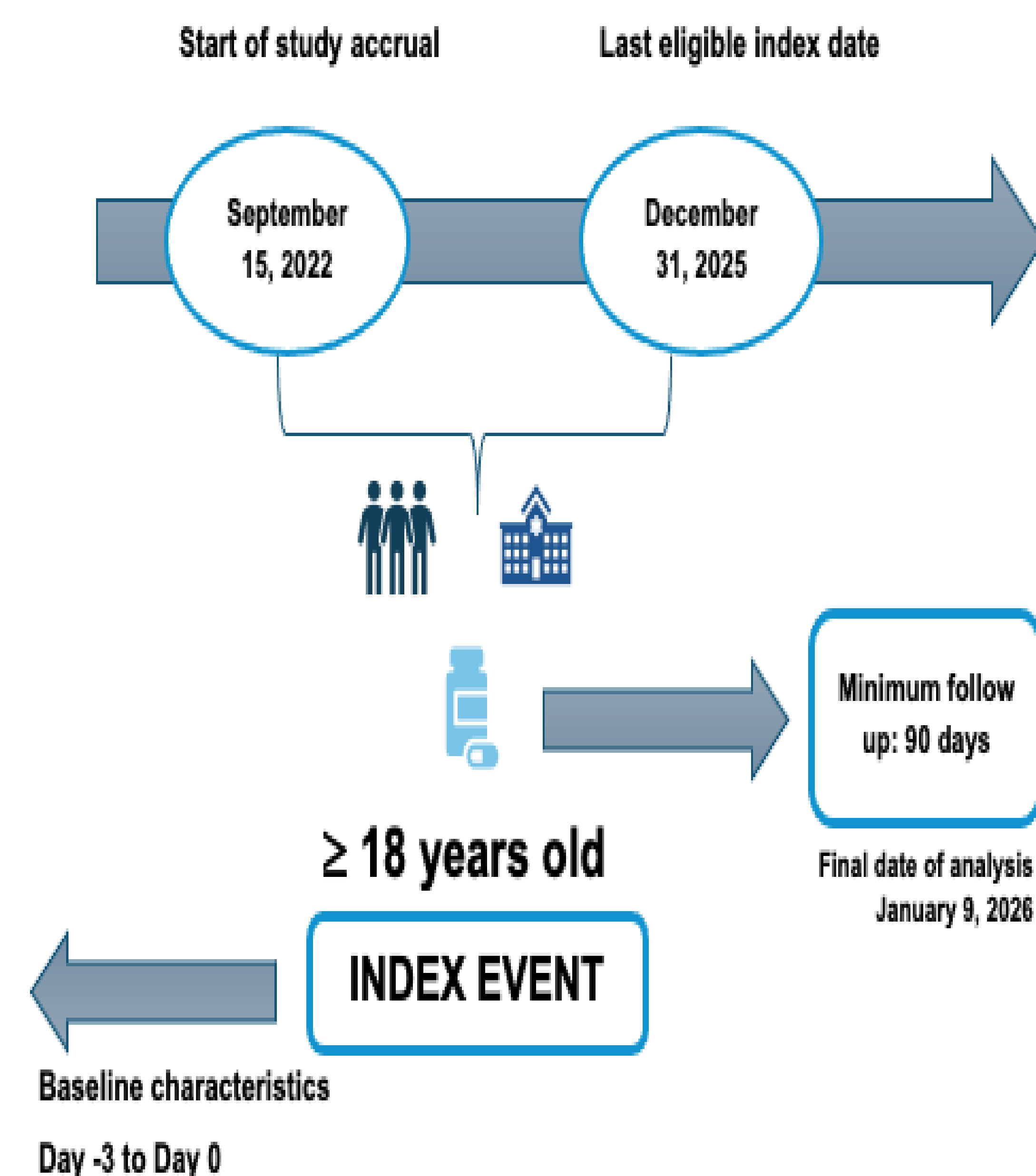
• Terlipressin, a vasopressin analog, improves renal blood flow and was FDA-approved in 2022.^{2,3}
• Midodrine plus octreotide is considered conventional regimen.⁴



• Real-world comparative effectiveness and safety data are limited
• Objective: to compare terlipressin vs. midodrine plus octreotide in hospitalized adults with HRS

Methods

- Design: retrospective cohort study using TriNetX
- Population: adults hospitalized with HRS
- Comparison: terlipressin vs midodrine + octreotide
- Matching: 1:1 propensity score matching for baseline covariates
- Outcomes: HRS reversal (serum creatinine ≤ 1.5 mg/dL) (3 -7 days), renal replacement therapy (RRT) (7 days), intensive care unit (ICU) admission (7 days), all-cause (30 days)
- Statistical analysis: comparative risk estimates with significance at $p < 0.05$



Results

Figure 1. Clinical outcomes of hospitalized adults with HRS: Terlipressin versus midodrine plus octreotide

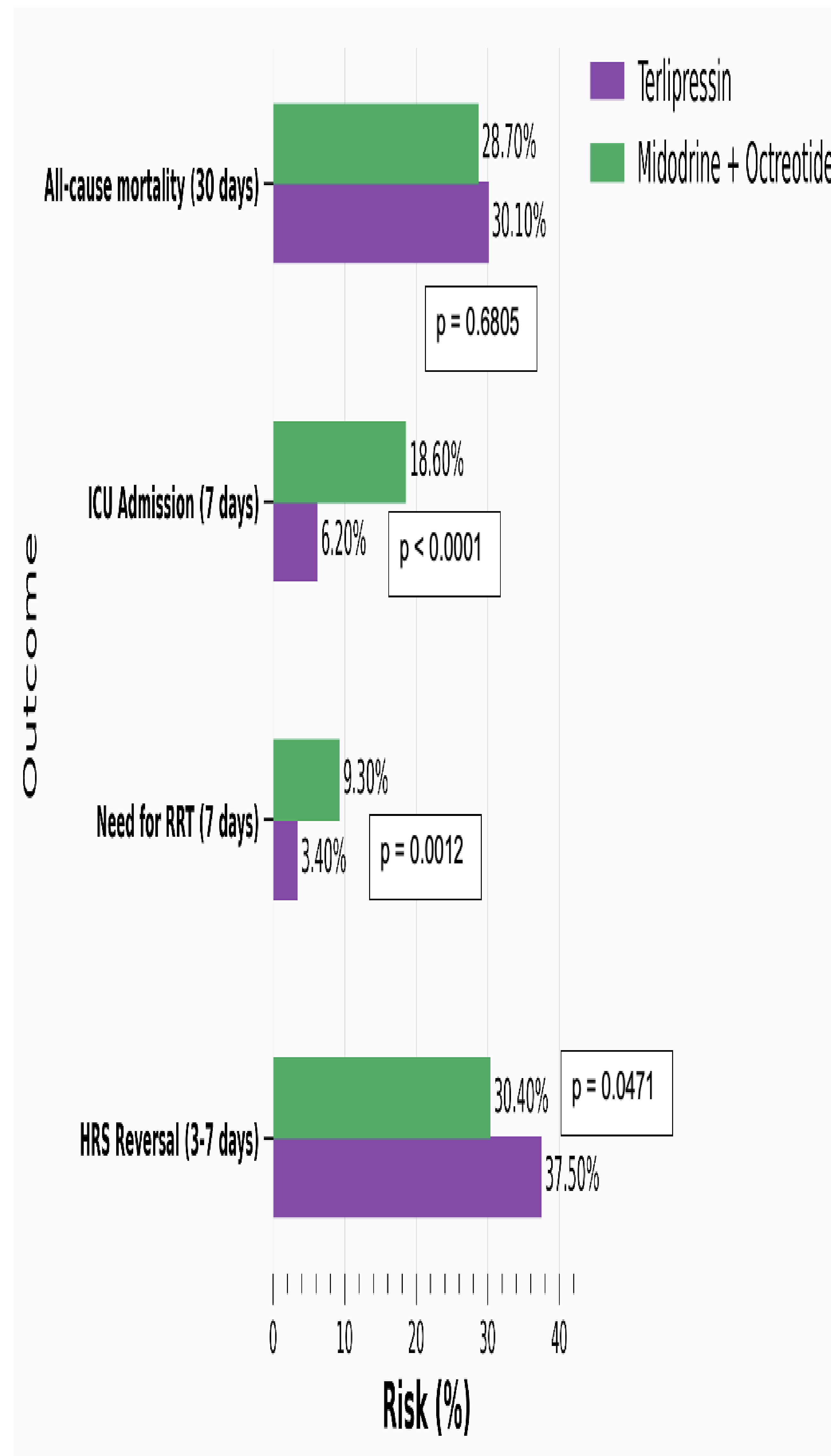


Figure 2. 90-day transplant-free survival after treatment initiation in HRS

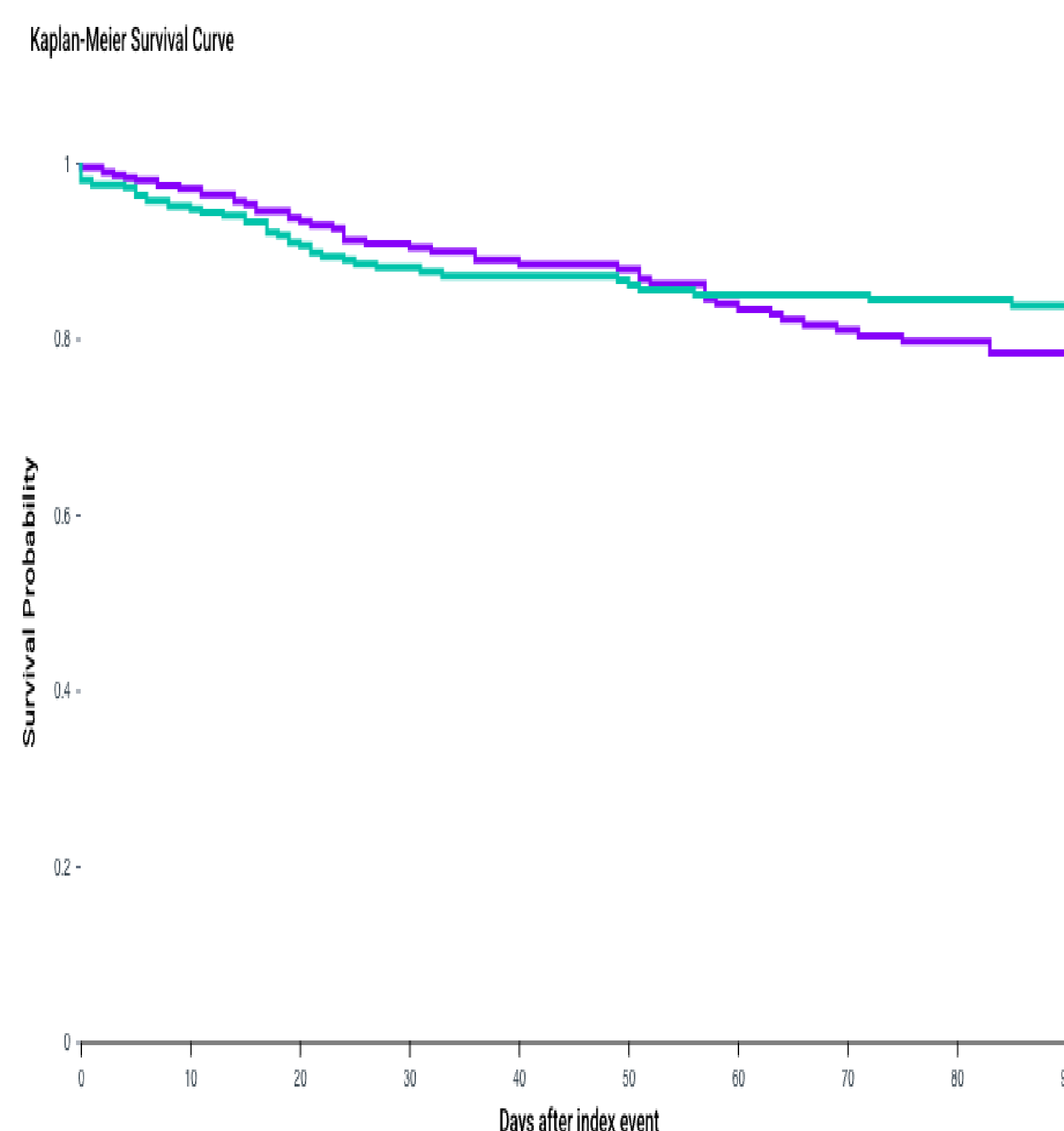


Table 1. Matched baseline characteristics of hospitalized adults with HRS receiving terlipressin versus midodrine plus octreotide

Characteristic	Terlipressin (n = 355)	Midodrine + Octreotide (n = 355)	P-value
Demographics			
Age at index, mean \pm SD	58.3 \pm 13.1	58.1 \pm 13.1	0.9043
Male sex, %	62.25	63.10	0.8159
White, %	56.62	54.93	0.6503
Black, %	5.92	5.92	1.000
Asian, %	16.06	18.87	0.3229
Hispanic/Latino, %	4.79	6.20	0.4102
Etiology of liver disease, %			
Alcohol-related liver disease	41.79	53.80	0.0016*
NAFLD/NASH	9.58	13.80	0.0798
Viral hepatitis	6.48	5.92	0.7556
Comorbidities, %			
Ascites	45.35	45.35	1.0000
Acute kidney injury	62.82	65.92	0.3887
Diabetes mellitus	23.38	25.63	0.4852
Hypertension	17.75	26.76	0.0039*
Coronary artery disease	7.61	7.61	1.0000
Heart failure	7.89	8.45	0.7841
Chronic obstructive pulmonary disease	3.94	3.94	1.0000
Medication, %			
Albumin human USP	92.11	89.30	0.1962
Laboratory values, mean \pm SD			
Serum creatinine (mg/dL)	2.81 \pm 1.28	2.88 \pm 1.56	0.5219
Serum sodium (mmol/L)	133 \pm 6.09	133 \pm 6.41	0.9356
Total bilirubin (mg/dL)	9.18 \pm 11.3	10.5 \pm 11.8	0.1432
Albumin (g/dL)	3.18 \pm 0.69	3.01 \pm 0.71	0.0027*

Conclusions

- Higher HRS reversal and lower short-term RRT with terlipressin
- No difference in mortality or transplant-free survival
- Safety comparable, with fewer ICU admissions
- Supports real-world effectiveness of terlipressin

References

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2. Simonetto DA, et al. *BMJ*. 2020;370:m2687
3. Wong F, et al. *N Engl J Med*. 2021;384(9):818-828
4. Cavallin M, et al. *Hepatology*. 2015;62(2):567-574