#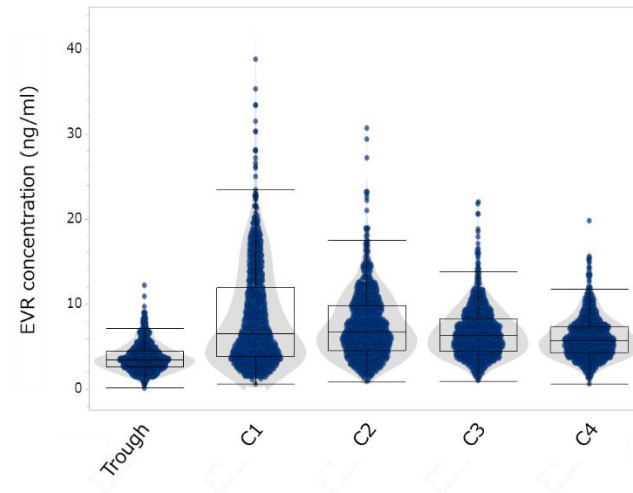 Evaluation of Everolimus Pharmacokinetic Monitoring Based on Trough Concentration and Area Under the Blood Concentration Time Curve in Kidney Transplantation
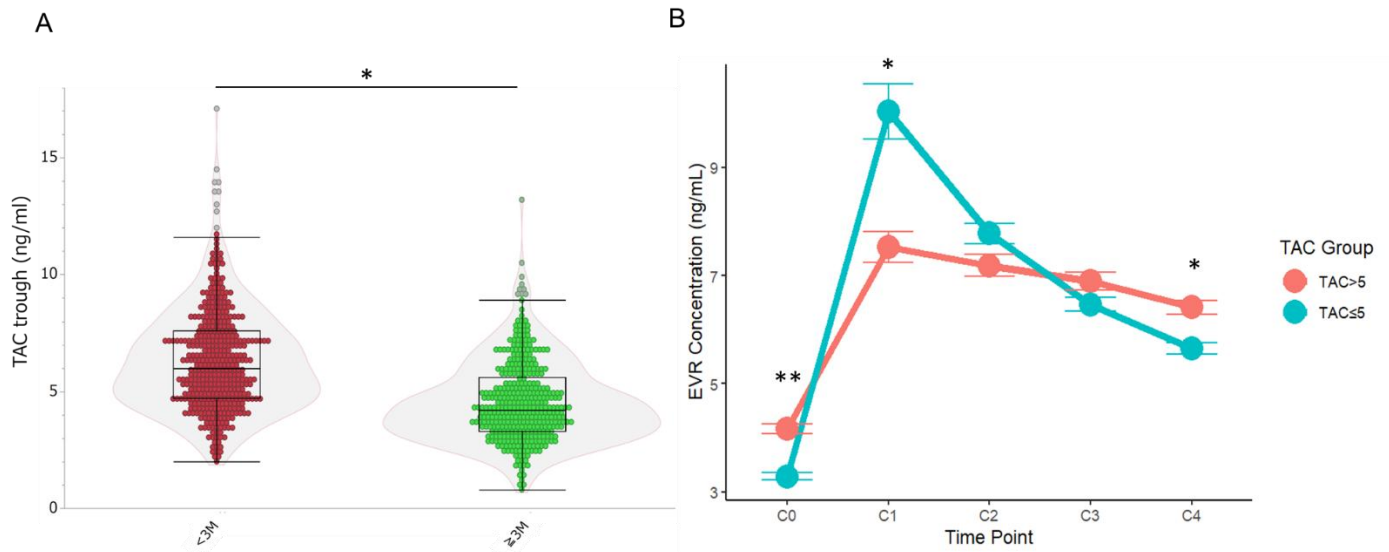
Supplemental materials

Supplemental Figure S1: **Distribution of everolimus (EVR) blood concentrations at each sampling time point (C0–C4)**

Violin plots showing the distribution of EVR concentrations at trough (C0) and 1, 2, 3, and 4 hours post-dose (C1–C4).

Horizontal bars indicate median values, and boxes represent interquartile ranges.

Whiskers denote the 10th–90th percentiles.

The figure illustrates that EVR concentrations peaked at C2, with a gradual decline thereafter. The median concentrations at each time point were as follows: C0: 3.5 ng/mL, C1: 6.5 ng/mL, C2: 6.7 ng/mL, C3: 6.3 ng/mL, and C4: 5.7 ng/mL.
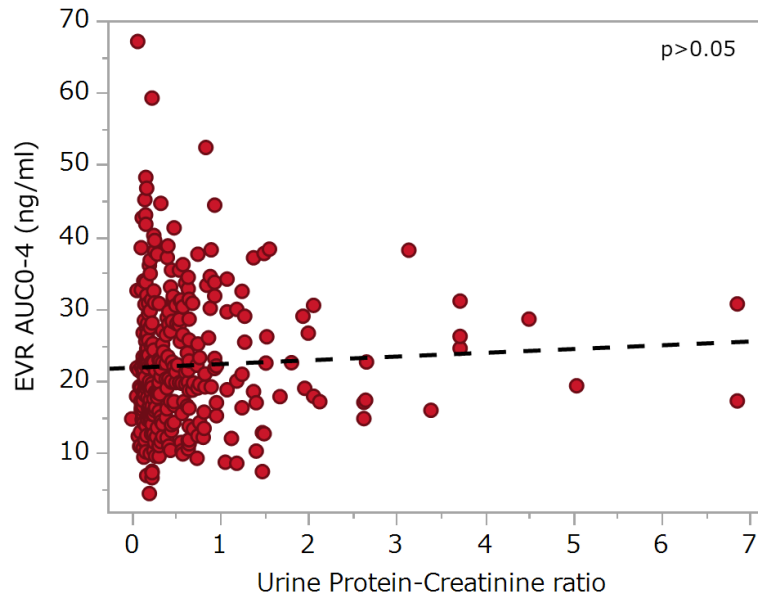
Supplemental Figure S2: Association between TAC trough levels and EVR concentrations.

(A) Violin plots comparing TAC trough levels between patients treated with EVR for <3 months (<3 M, red) and ≥3 months (≥3 M, green). Patients receiving EVR for ≥3 months exhibited significantly higher TAC trough concentrations than those treated for <3 months (median 5.8 vs. 4.2 ng/mL, $p < 0.05$, t-test).

(B) Line plots showing time-course EVR concentrations stratified by TAC trough cutoff (TAC > 5 ng/mL, red; TAC ≤ 5 ng/mL, blue). Patients with higher TAC trough levels demonstrated significantly elevated EVR concentrations at 1 hour post-dose (C1) compared with those with lower TAC levels (mean 8.8 vs. 5.4 ng/mL, $p < 0.05$, t-test).

Error bars represent standard error (SE). * $p < 0.05$; ** $p < 0.01$.

Supplemental Figure S3: Association between EVR AUC_{0-4} and urinary protein receiving EVR for less than 3 months

Scatter plot illustrating the correlation between AUC_{0-4} and the urine protein-to-creatinine ratio in patients receiving EVR for less than 3 months. *r*, Spearman's correlation coefficient with corresponding *p* value.

	De novo HL (+) (109 tests)	De novo HL (-) (421 tests)	p-value
Duration of taking EVR (Month)	14 (3 - 36)	0 (0 – 5.8)	<0.05
Duration from transplantation (Month)	14 (3 - 36)	0 (0 - 10)	<0.05
TAC trough (ng/ml)	4.3 (3.6 – 6.4)	5.2 (4.1 - 7)	<0.05

Supplemental Table S1: Characteristics of de novo hyperlipemia

Data, median (IQR). IQR, interquartile range. The two groups were compared using t-test.