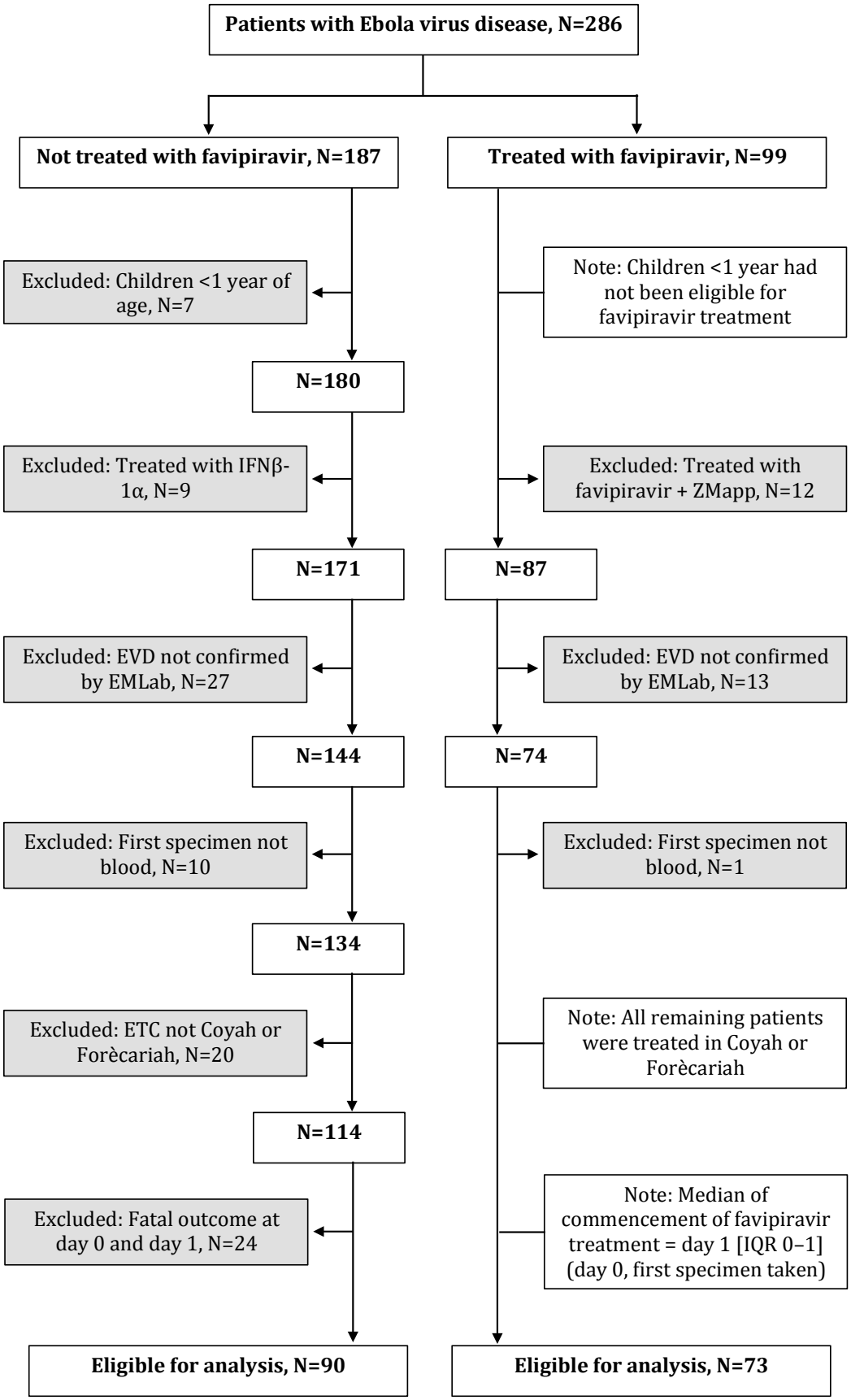
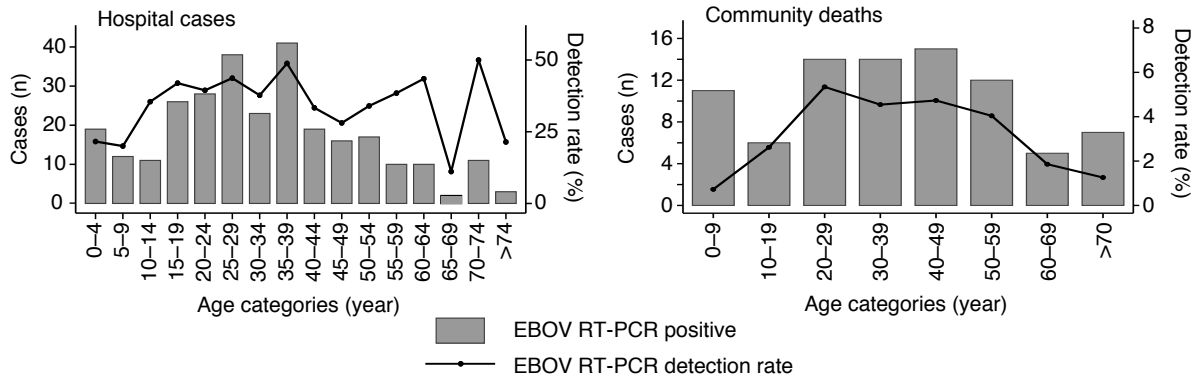
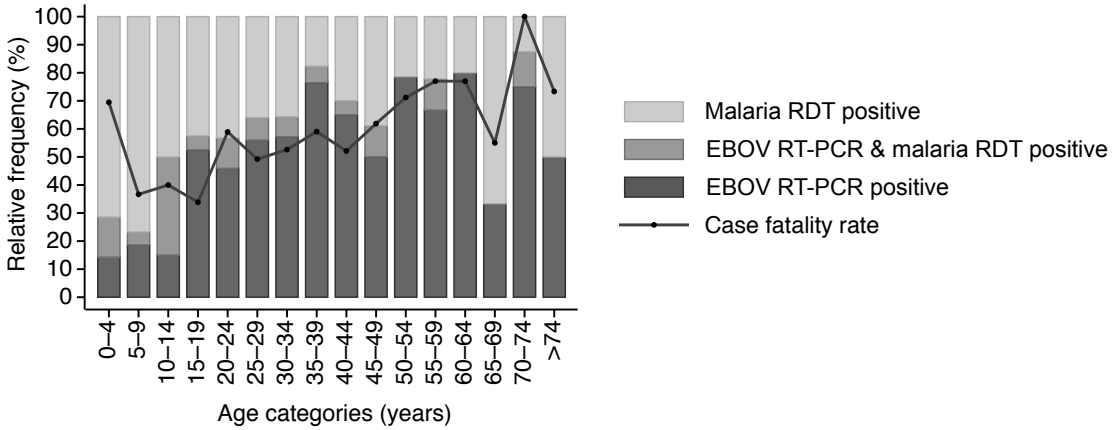


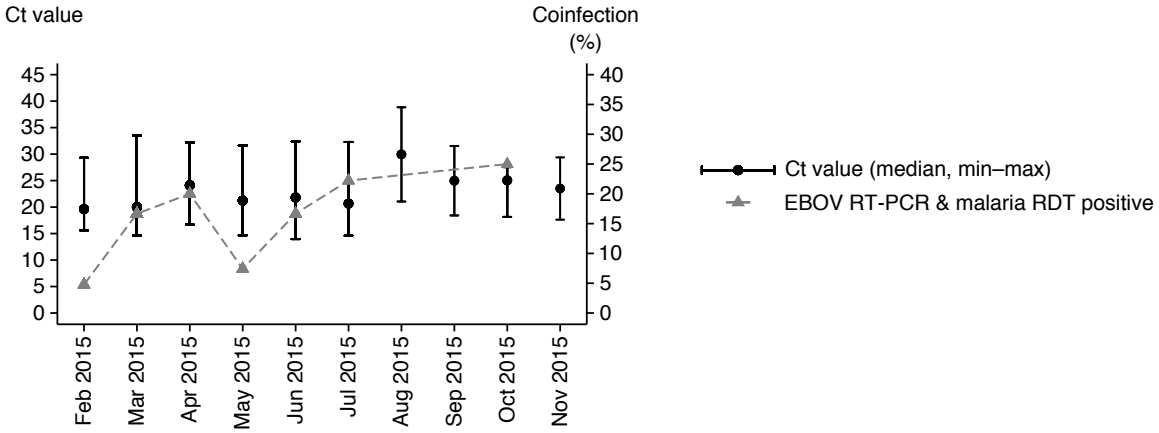
Supplementary Figure 1. Flowchart with inclusion and exclusion criteria for the retrospective observational study. Data of eligible patients were used to analyze an association between favipiravir treatment, Ct value, age, and probability of fatal outcome by regression modeling.



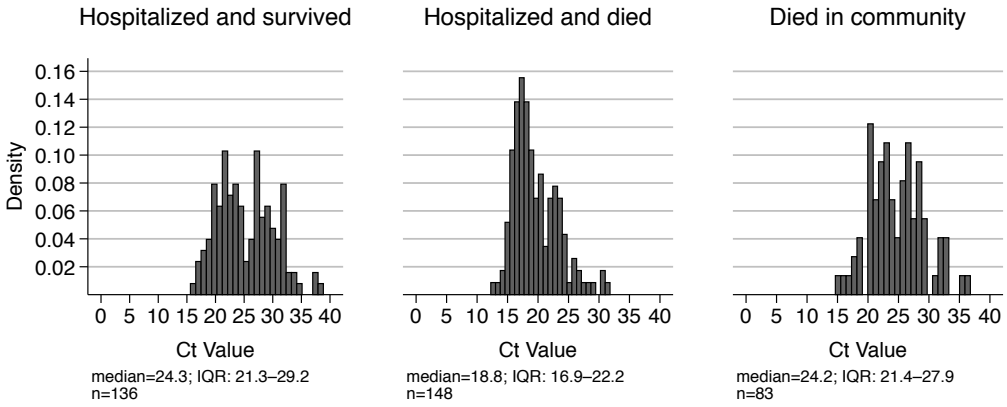
Supplementary Figure 2. Age distribution of EVD cases diagnosed by the EMLab unit in Coyah. (Left) Age distribution of hospitalized EVD cases (n = 286) with RT-PCR detection rate. (Right) Age distribution of EVD cases, who died in the community (n = 84) with RT-PCR detection rate.



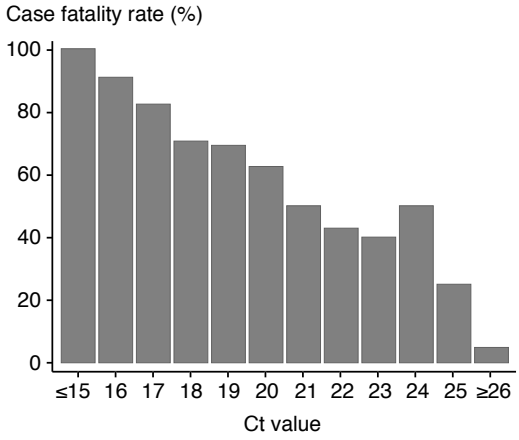
Supplementary Figure 3. EVD and malaria findings among EVD suspect cases and CFR according to age. The relative frequency of patients, who tested positive in EBOV RT-PCR, malaria RTD, or both, is shown. The CFR refers to hospitalized EVD patients (n = 286) irrespective of malaria co-infection.



Supplementary Figure 4. Ct values of EBOV RT-PCR and malaria co-infection rate over time. Monthly Ct values (median and range) of EBOV RT-PCR on admission (n = 286) and malaria co-infection rate for hospitalized EVD patients (n = 213).

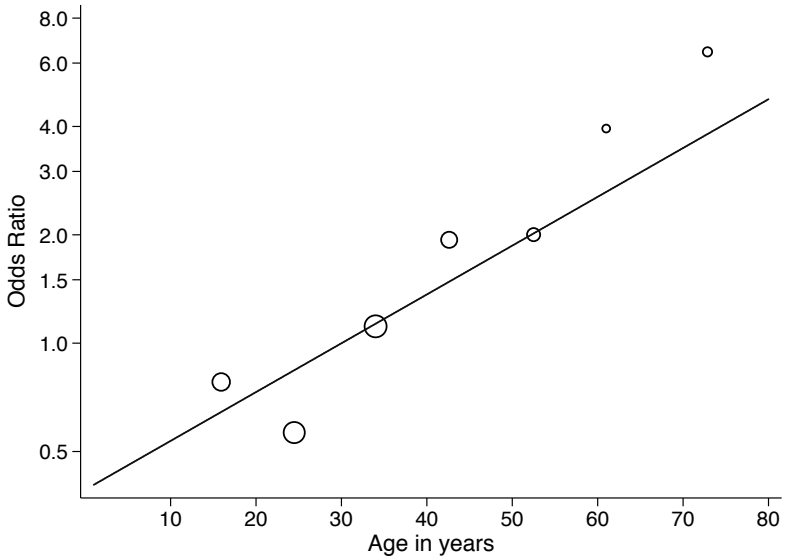


Supplementary Figure 5. Distribution of Ct values for EVD patients confirmed by EMLab. Median and IQR are shown below the diagrams.

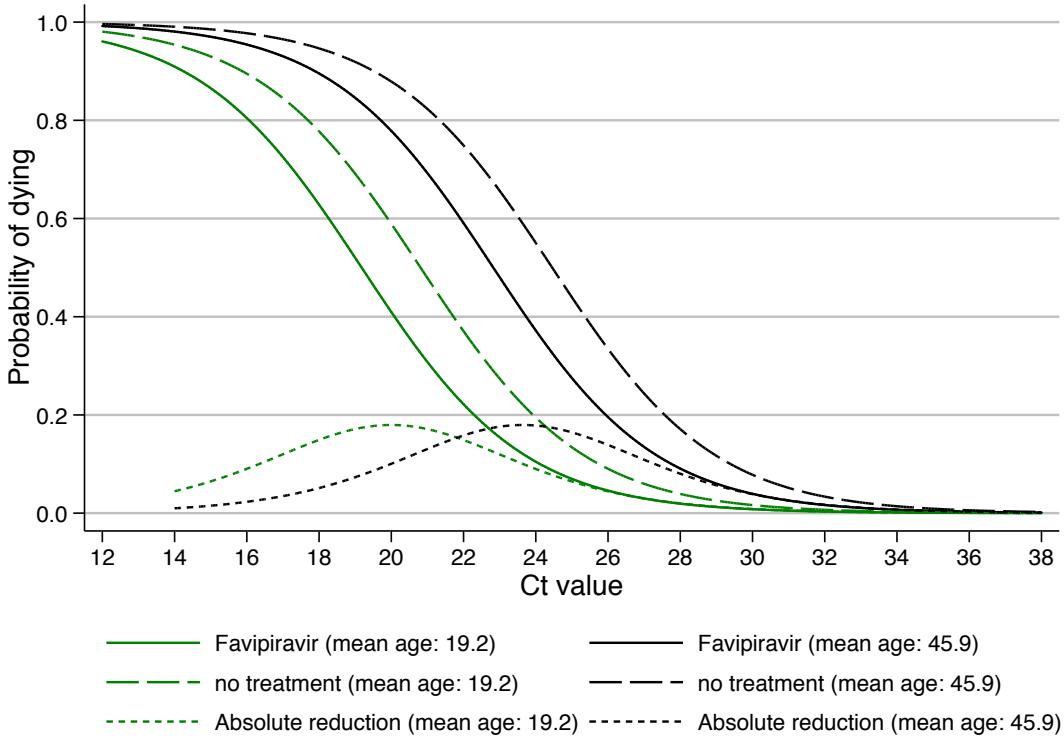


Ct value	No treatment (fatal / total cases [%])	Favipiravir treatment (fatal / total cases [%])
≤15	6/6 (100.0)	4/4 (100.0)
16	7/8 (87.5)	3/3 (100.0)
17	8/10 (80.0)	6/7 (85.7)
18	9/11 (81.8)	3/6 (50.0)
19	8/9 (88.9)	1/4 (25.0)
20	5/9 (55.6)	5/7 (71.4)
21	2/4 (50.0)	1/2 (50.0)
22	3/6 (50.0)	3/8 (37.5)
23	2/4 (50.0)	2/6 (33.3)
24	0/1 (0)	2/3 (66.7)
25	0/2 (0)	1/2 (50.0)
≥26	2/20 (10.0)	0/21 (0)
Total	**52/90 (57.8)**	**31/73 (42.5)**

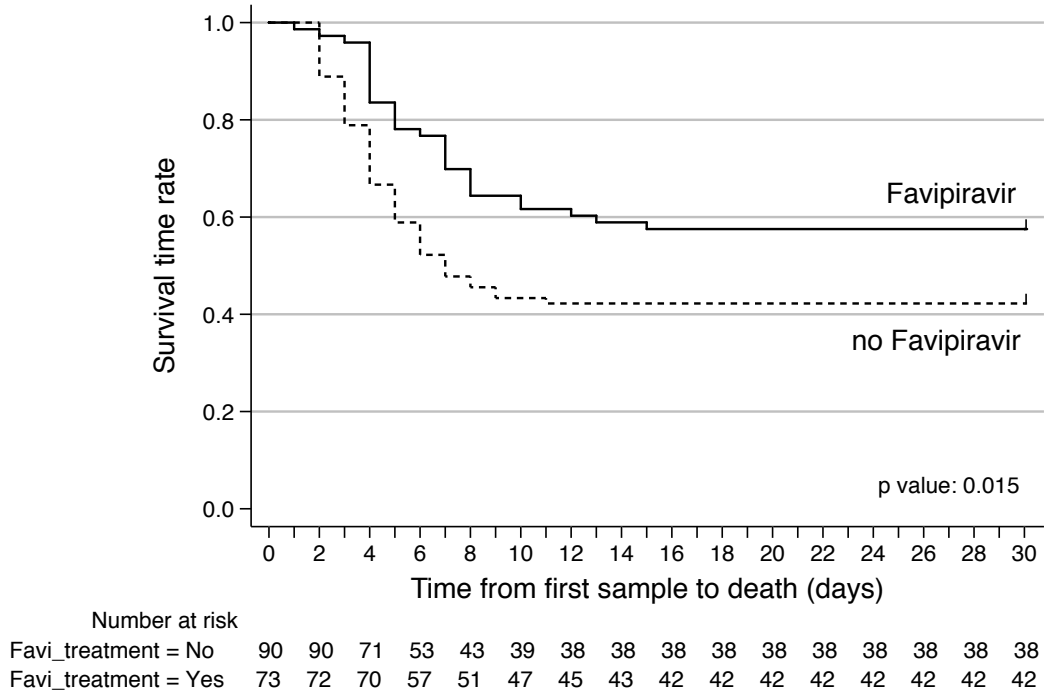
Supplementary Figure 6. Ct values of EBOV RT-PCR included in the regression model. The CFR of EVD patients included in the retrospective study (n = 163) is plotted according to Ct value. Only the Ct value for the first blood sample taken on admission was included in the analysis. The table summarizes the frequency data underlying the graph.



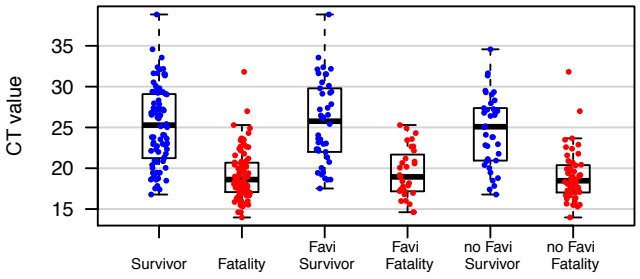
Supplementary Figure 7. Association between patient's age and EVD outcome. Odds ratio (OR) estimated by the univariate regression model for the association between age (continuous) and risk of fatal outcome (straight line). The circles represent the underlying data from the patients in the retrospective study (n = 163), i.e. categorical ORs per age category (10-years categories; the size of a circle is proportional to the number of patients per category).



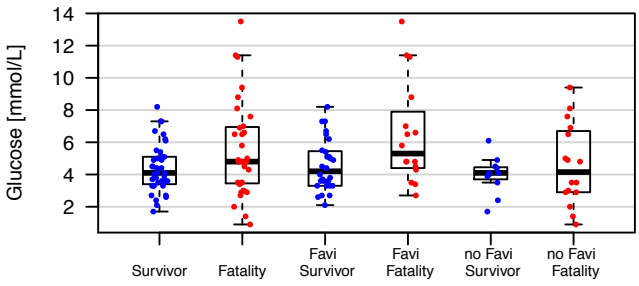
Supplementary Figure 8. Multivariate logistic regression model for the association between Ct value, age, favipiravir treatment, and probability of fatal outcome. To demonstrate the age dependency in the model, the regression curves were calculated for two patient groups with mean ages of 19.2 and 45.9 years, respectively. The estimated improvement in the chance of survival due to favipiravir treatment (absolute reduction in the probability of dying = difference between the "No treatment" curve and the "Favipiravir" curve) is shown. The curves were calculated from the parameters of the multivariate logistic regression analysis of data from the 163 EVD patients included in the retrospective study (Table 3).



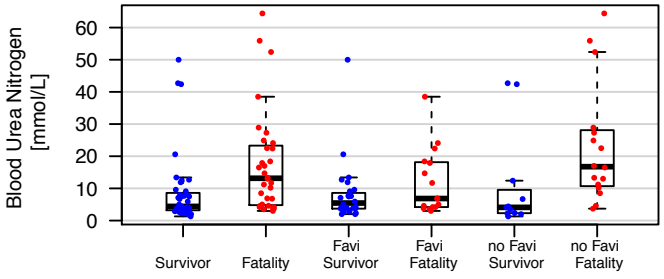
Supplementary Figure 9. Kaplan-Meier survival time analysis for patients in the retrospective study. An observation period of 30 days was assumed for all patients (n = 163).



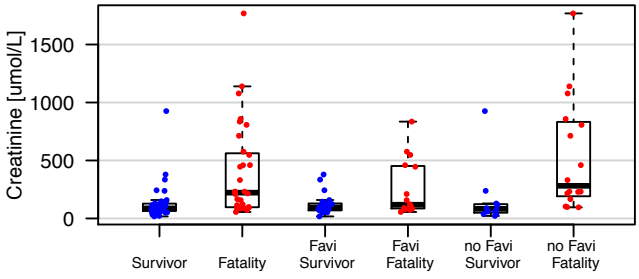
Med [IQR], Survivor: 25.28 [21.29–29.06], Fatality: 18.61 [17.07–20.68] (p: <0.001)
Favi, Survivor: 25.76 [22.03–29.69], Fatality: 18.94 [17.17–21.68]
no Favi, Survivor: 25.09 [20.99–27.34], Fatality: 18.47 [17.05–20.36]



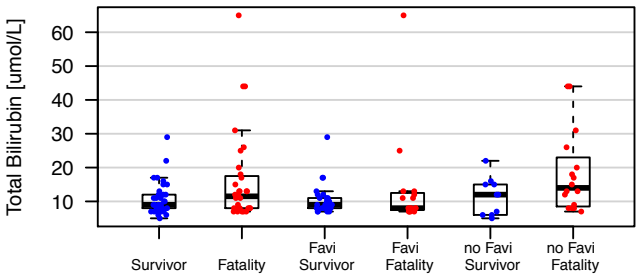
Med [IQR], Survivor: 4.1 [3.4–5.1], Fatality: 4.8 [3.48–6.93] (p: 0.199)
Favi, Survivor: 4.2 [3.3–5.43], Fatality: 5.3 [4.45–7.45]
no Favi, Survivor: 4.1 [3.7–4.45], Fatality: 4.15 [2.9–6.6]



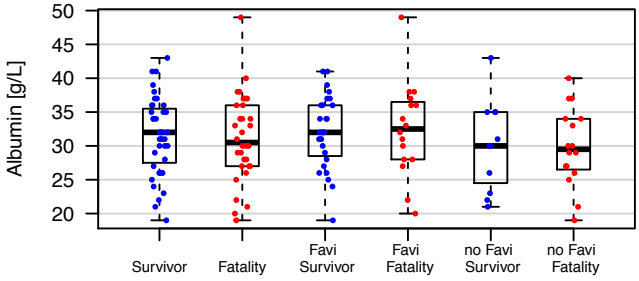
Med [IQR], Survivor: 4.4 [3.2–8.6], Fatality: 13.15 [4.9–22.9] (p: 0.002)
Favi, Survivor: 5.45 [3.75–8.35], Fatality: 6.85 [4.2–18.02]
no Favi, Survivor: 4.1 [2.3–9.55], Fatality: 16.75 [10.95–27.7]



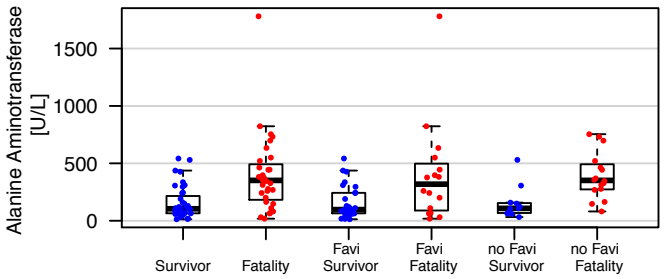
Med [IQR], Survivor: 87 [64.5–128], Fatality: 222.5 [97.5–555] (p: <0.001)
Favi, Survivor: 95 [70.25–128.25], Fatality: 118.5 [86.5–449.25]
no Favi, Survivor: 83 [49.5–123.5], Fatality: 281.5 [203.75–819.75]



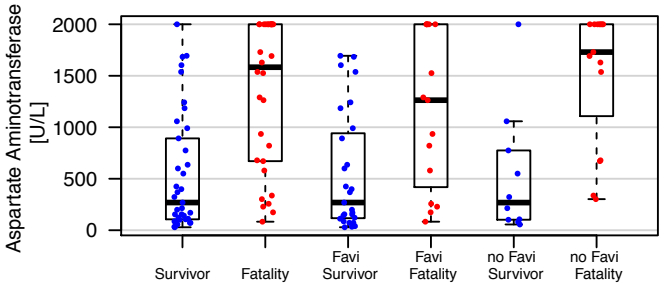
Med [IQR], Survivor: 9 [8–12], Fatality: 11.5 [8–17.25] (p: 0.199)
Favi, Survivor: 9 [8–11], Fatality: 8 [7.75–12.25]
no Favi, Survivor: 12 [6.25–15], Fatality: 14 [8.75–21.5]



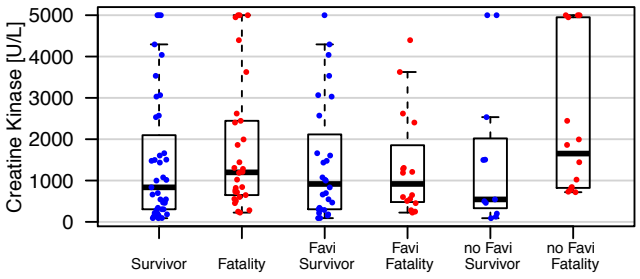
Med [IQR], Survivor: 32 [27.5–35.5], Fatality: 30.5 [27–36] (p: 0.724)
Favi, Survivor: 32 [28.75–36], Fatality: 32.5 [28–36.25]
no Favi, Survivor: 30 [24.5–35], Fatality: 29.5 [26.75–34]



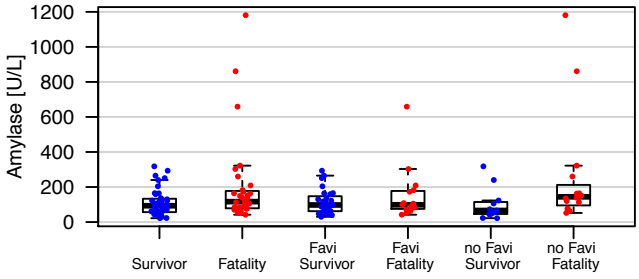
Med [IQR], Survivor: 104 [65–215.5], Fatality: 351.5 [191.75–477.5] (p: <0.001)
Favi, Survivor: 97 [65.25–242], Fatality: 318.5 [99.5–471.25]
no Favi, Survivor: 108 [67.5–154], Fatality: 351.5 [275–477.5]



Med [IQR], Survivor: 269 [106–892], Fatality: 1583 [673–2000.1] (p: <0.001)
Favi, Survivor: 269 [117–941.5], Fatality: 1263 [418.5–2000.1]
no Favi, Survivor: 268.5 [103–718.75], Fatality: 1730 [1108–2000.1]

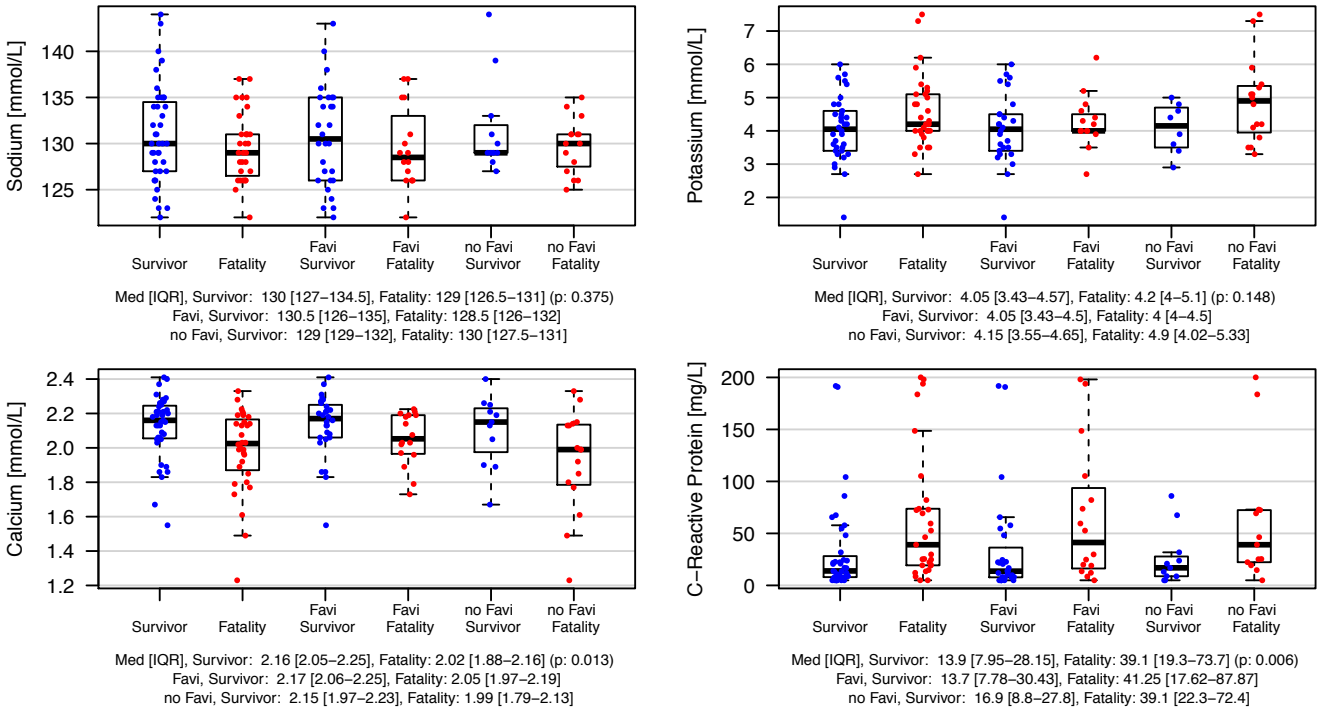


Med [IQR], Survivor: 835 [304.5–2097.5], Fatality: 1198 [665.5–2434.5] (p: 0.199)
Favi, Survivor: 917 [304.75–1888.5], Fatality: 917.5 [492.75–1580.25]
no Favi, Survivor: 543 [330–2019.5], Fatality: 1652.5 [827–4323.75]



Med [IQR], Survivor: 93 [56.5–133], Fatality: 116.5 [79.25–175.25] (p: 0.083)
Favi, Survivor: 97.5 [62.5–141.75], Fatality: 98.5 [77.5–175.25]
no Favi, Survivor: 66 [46–114.5], Fatality: 144 [104–188]

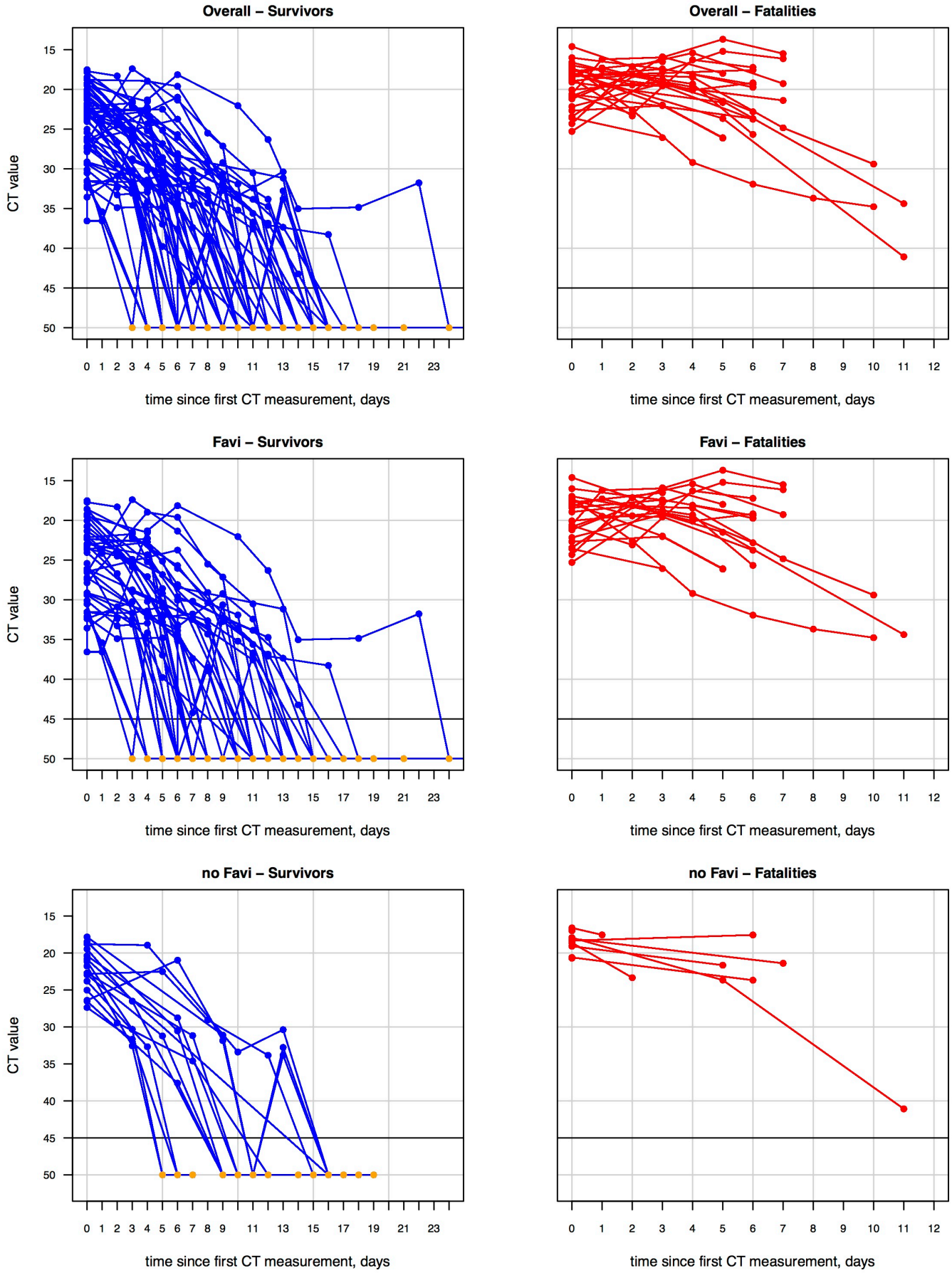
Supplementary Figure 10 (to be continued).



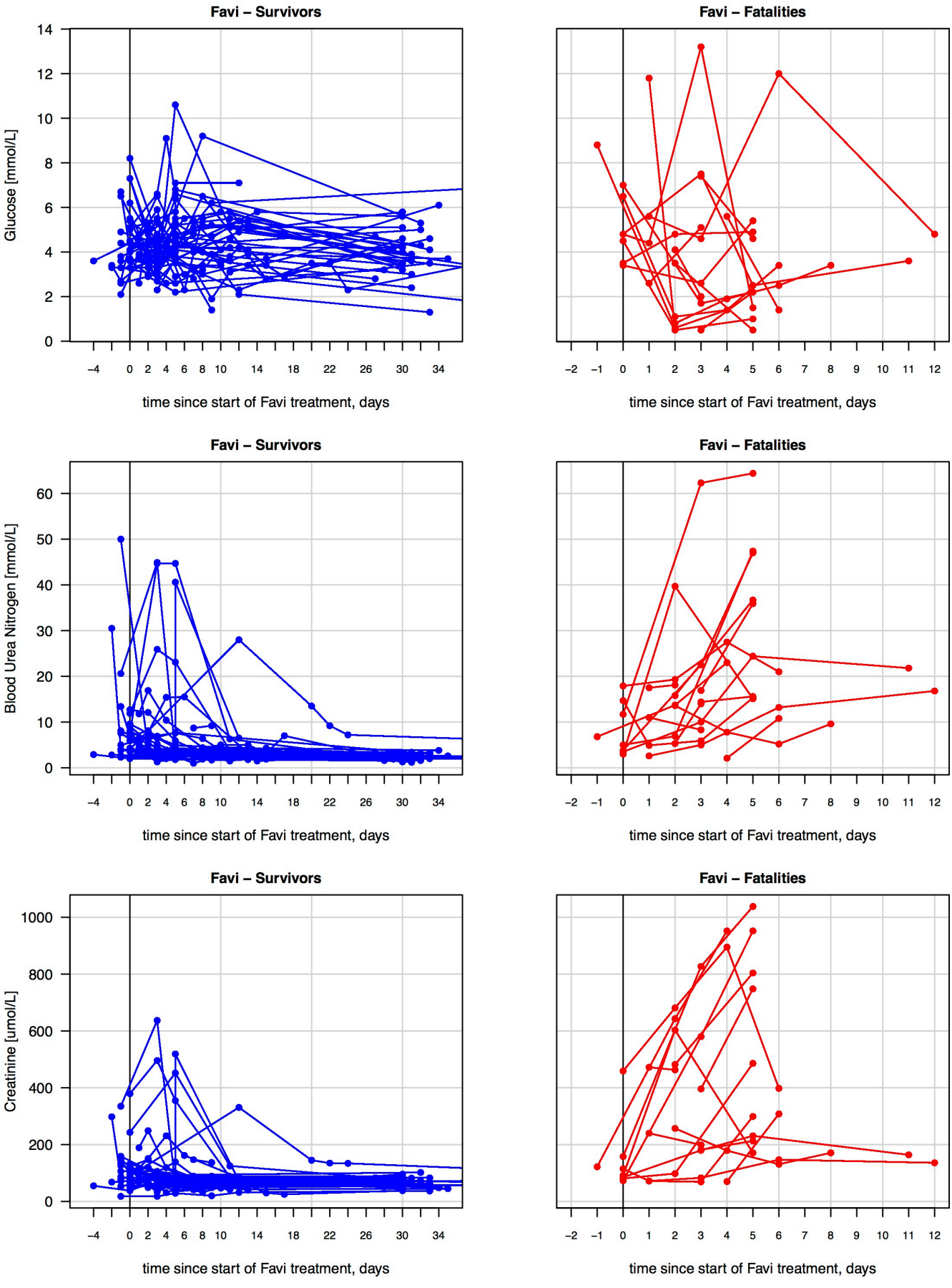
Supplementary Figure 10. Cross-sectional analysis of Ct values and blood chemistry on admission. Ct and blood chemistry values from EVD patients are displayed by boxplots according to outcome. The data were also stratified by favipiravir treatment (Favi and no Favi). The analysis of Ct values included all 163 study patients, of whom 80 (49%) survived and 83 (51%) died. Blood chemistry was available on admission for 39 (49%) of 80 survivors and 32–33 (39–40%) of 83 fatalities. Blood chemistry values were not cleaned according to plausibility criteria; all values generated in the field are included. Median and IQR are shown below the plots. Survivors and fatalities were compared using the Mann-Whitney U test with a Benjamini-Hochberg correction to account for multiple testing.

Reference intervals (Piccolo AmLyte 13, Abaxis, USA):

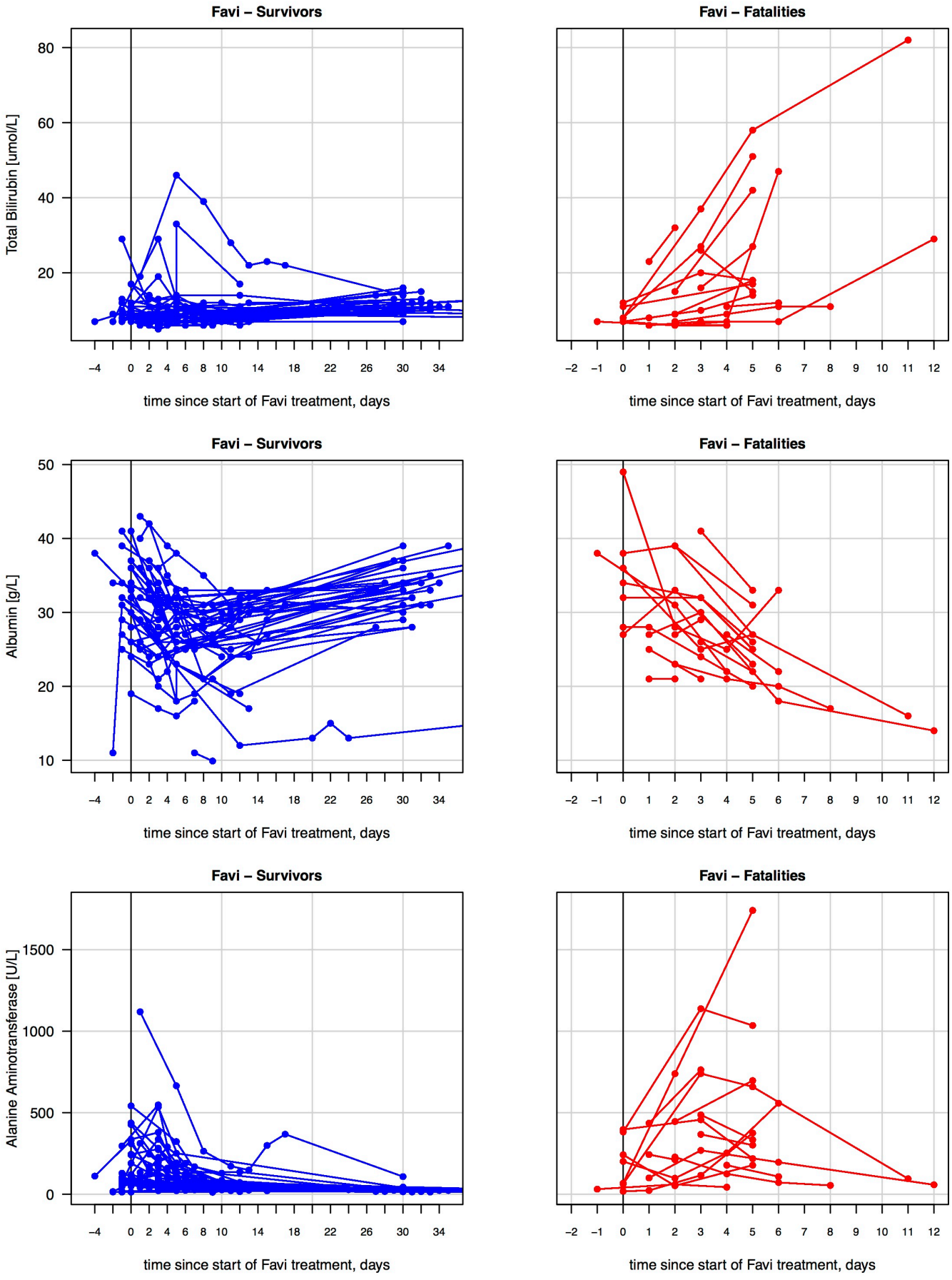
Analyte	Reference interval (SI Units)
Alanine Aminotransferase (ALT)	10–47 U/L
Albumin	33–55 g/L
Amylase	14–97 U/L
Aspartate Aminotransferase (AST)	11–38 U/L
Blood Urea Nitrogen (BUN)	2.5–7.9 mmol/L
Calcium	2.00–2.58 mmol/L
C-Reactive Protein (CRP)	<7.5 mg/L
Creatine Kinase (Female)	30–190 U/L
Creatine Kinase (Male)	39–380 U/L
Creatinine	53–106 µmol/L
Glucose	4.1–6.6 mmol/L
Potassium	3.6–5.1 mmol/L
Sodium	128–145 mmol/L
Total Bilirubin	3.4–27.4 µmol/L



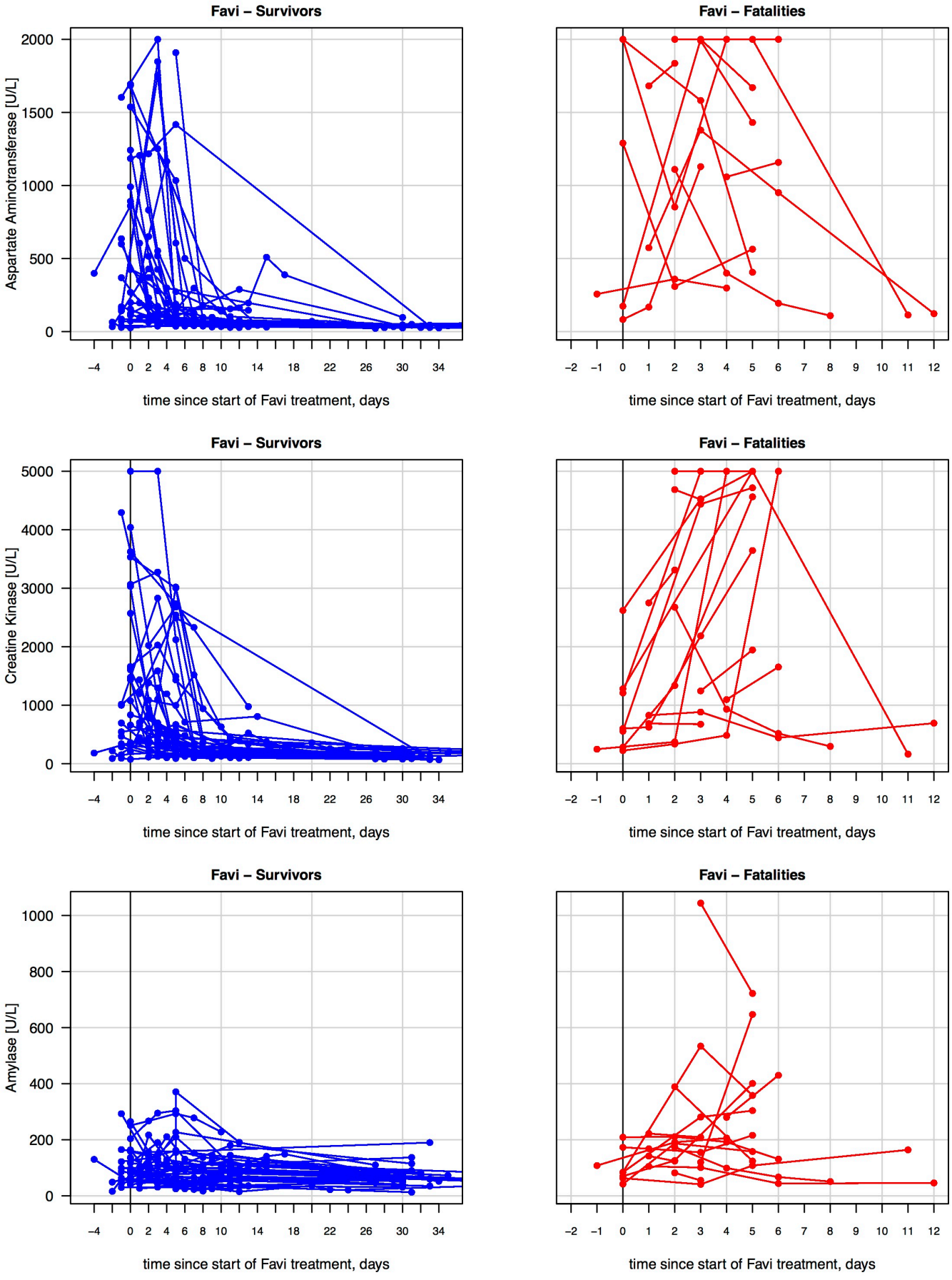
Supplementary Figure 11 (to be continued).



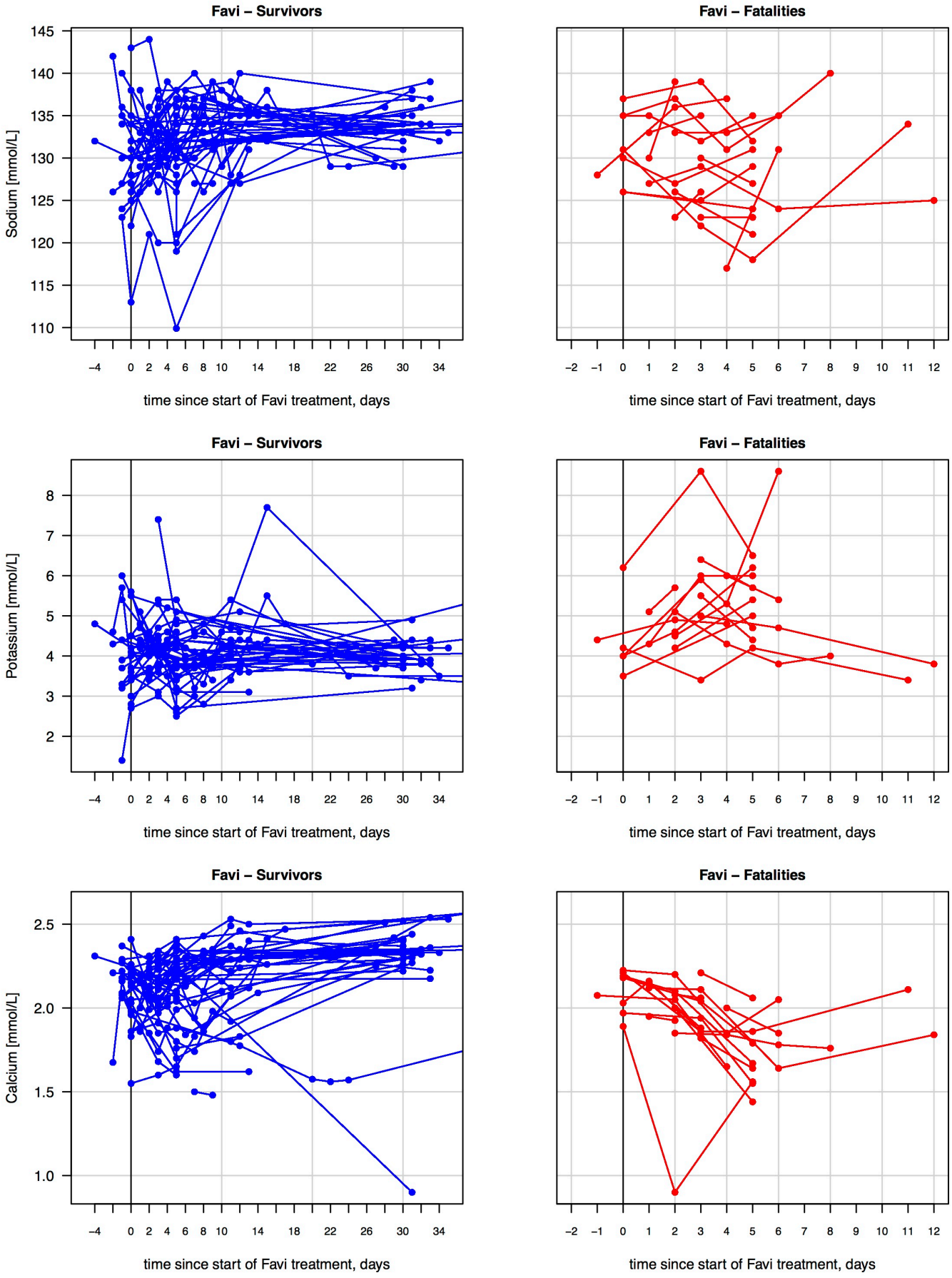
Supplementary Figure 11 (to be continued).



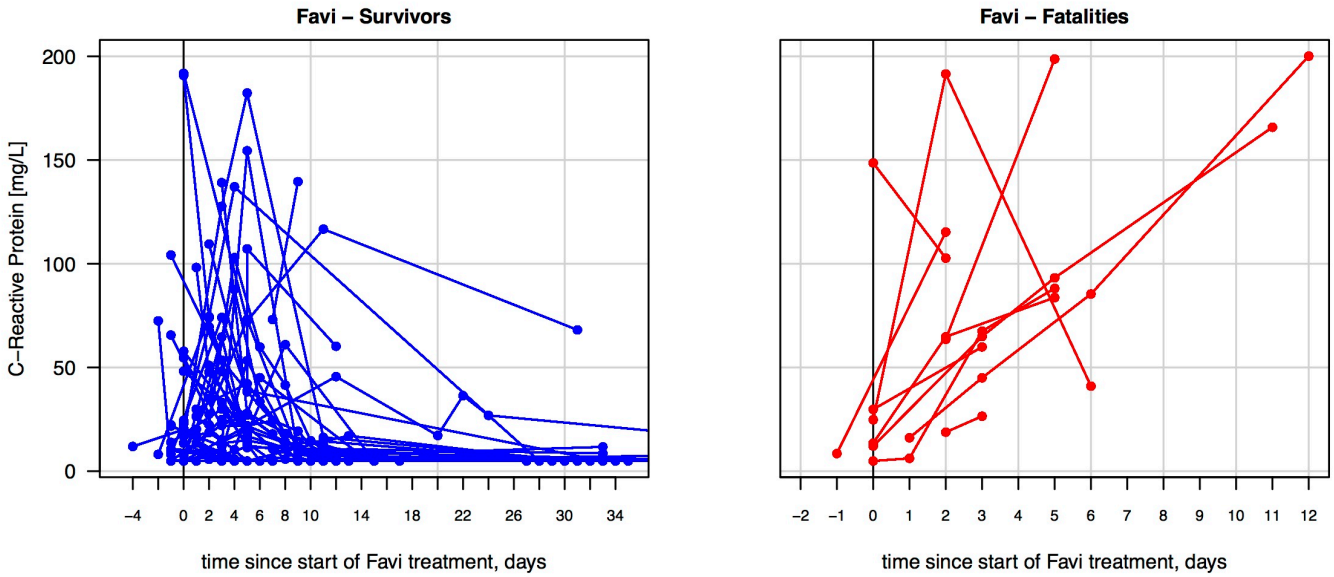
Supplementary Figure 11 (to be continued).



Supplementary Figure 11 (to be continued).



Supplementary Figure 11 (to be continued).



Supplementary Figure 11. Kinetics of Ct values and blood chemistry during hospitalization. Patients in the retrospective study (n = 163) with ≥2 serial Ct values or blood chemistry measurements were included in the longitudinal analysis. A total of 318 serial Ct values from 87 patients, of whom 55 (63%) survived and 32 (37%) died, were available. Negative Ct values (≥45) were plotted at an arbitrary Ct value of 50 (orange circles). The Ct values were also stratified by favipiravir treatment (Favi and no Favi). Serial blood chemistry was only available for favipiravir-treated patients, namely 33–41 (60–75%) of 55 survivors and 12–17 (38–53%) of 32 fatalities. The median duration between the day the first sample was taken and admission was 0 days [IQR 0–0] and between the day the first sample was taken and commencement of favipiravir treatment was 1 [IQR 0–1]. Blood chemistry values were not cleaned according to plausibility criteria; all values generated in the field are included.

Reference intervals (Piccolo AmLyte 13, Abaxis, USA):

Analyte	Reference interval (SI Units)
Alanine Aminotransferase (ALT)	10–47 U/L
Albumin	33–55 g/L
Amylase	14–97 U/L
Aspartate Aminotransferase (AST)	11–38 U/L
Blood Urea Nitrogen (BUN)	2.5–7.9 mmol/L
Calcium	2.00–2.58 mmol/L
C-Reactive Protein (CRP)	<7.5 mg/L
Creatine Kinase (Female)	30–190 U/L
Creatine Kinase (Male)	39–380 U/L
Creatinine	53–106 µmol/L
Glucose	4.1–6.6 mmol/L
Potassium	3.6–5.1 mmol/L
Sodium	128–145 mmol/L
Total Bilirubin	3.4–27.4 µmol/L