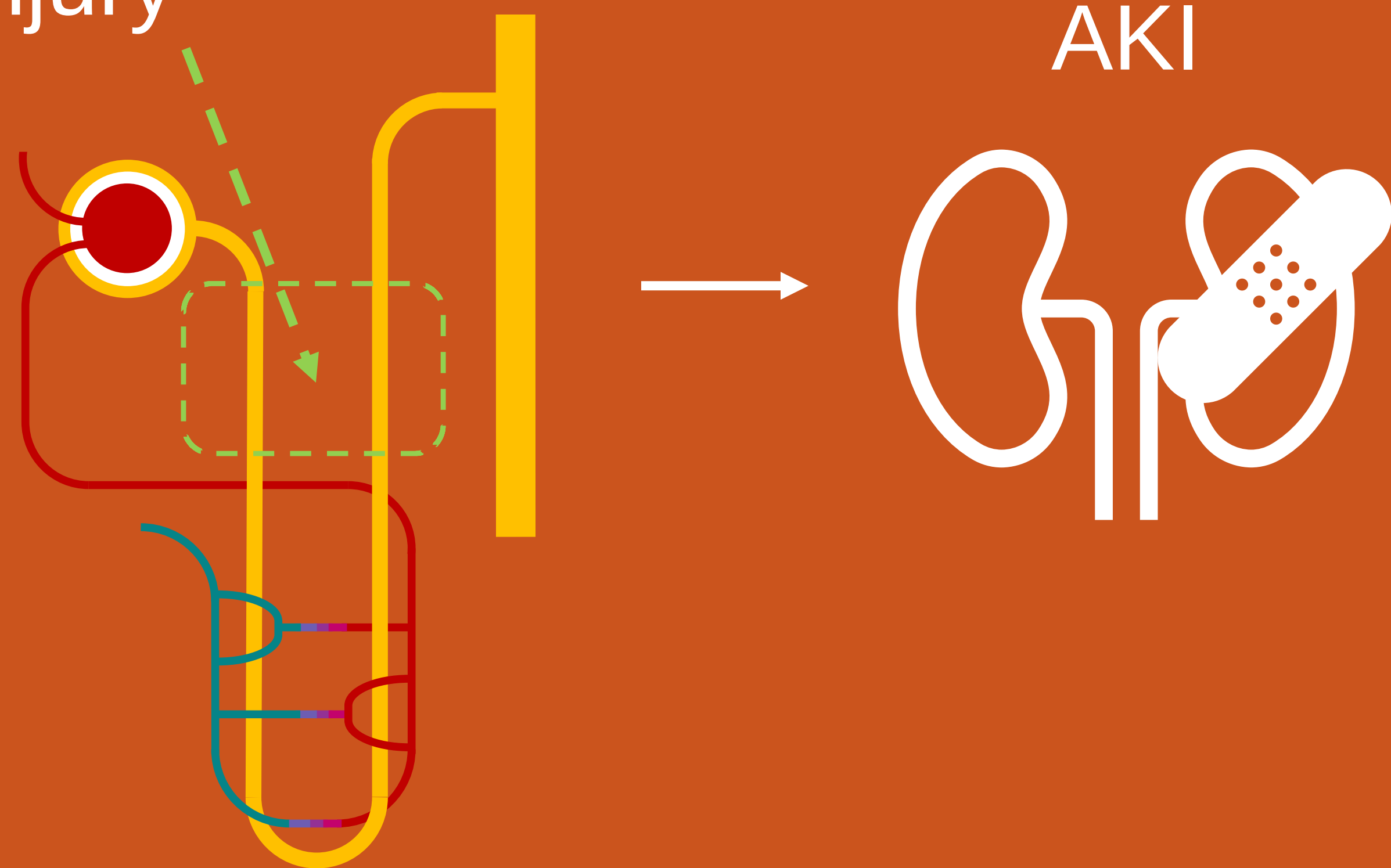


Ambulatory kidney tubular injury biomarkers are associated with subsequent AKI among men and women with HIV

Subclinical tubular injury



Ambulatory



Inpatient

Ambulatory Urine Biomarker Associations with AKI and Hospitalization in HIV-Infected Men and Women: Predictors of Acute Kidney Injury Study (PARIS)

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Background:

- People living with HIV (PLWH) generally have worse ambulatory levels of kidney injury biomarkers and excess risk of acute kidney injury (AKI) compared to persons without HIV.
- We evaluated whether this ambulatory subclinical kidney injury among PLWH is associated with subsequent AKI.

Methods:

- Enrolled 468 PLWH from April 2016 to August 2019
- Primary predictor: 10 urine biomarkers of kidney health (albumin, a1m, b2M, NGAL, IL18, KIM1, EGF, UMOD, MCP1, YKL40) at baseline and annually during follow-up
- Primary outcome: acute kidney injury (AKI) (≥ 0.3 mg/dL or ≥ 1.5 -times increase in serum creatinine from baseline)
- Secondary outcome: all-cause hospitalization
- Statistical Analysis: Multivariable Cox Models

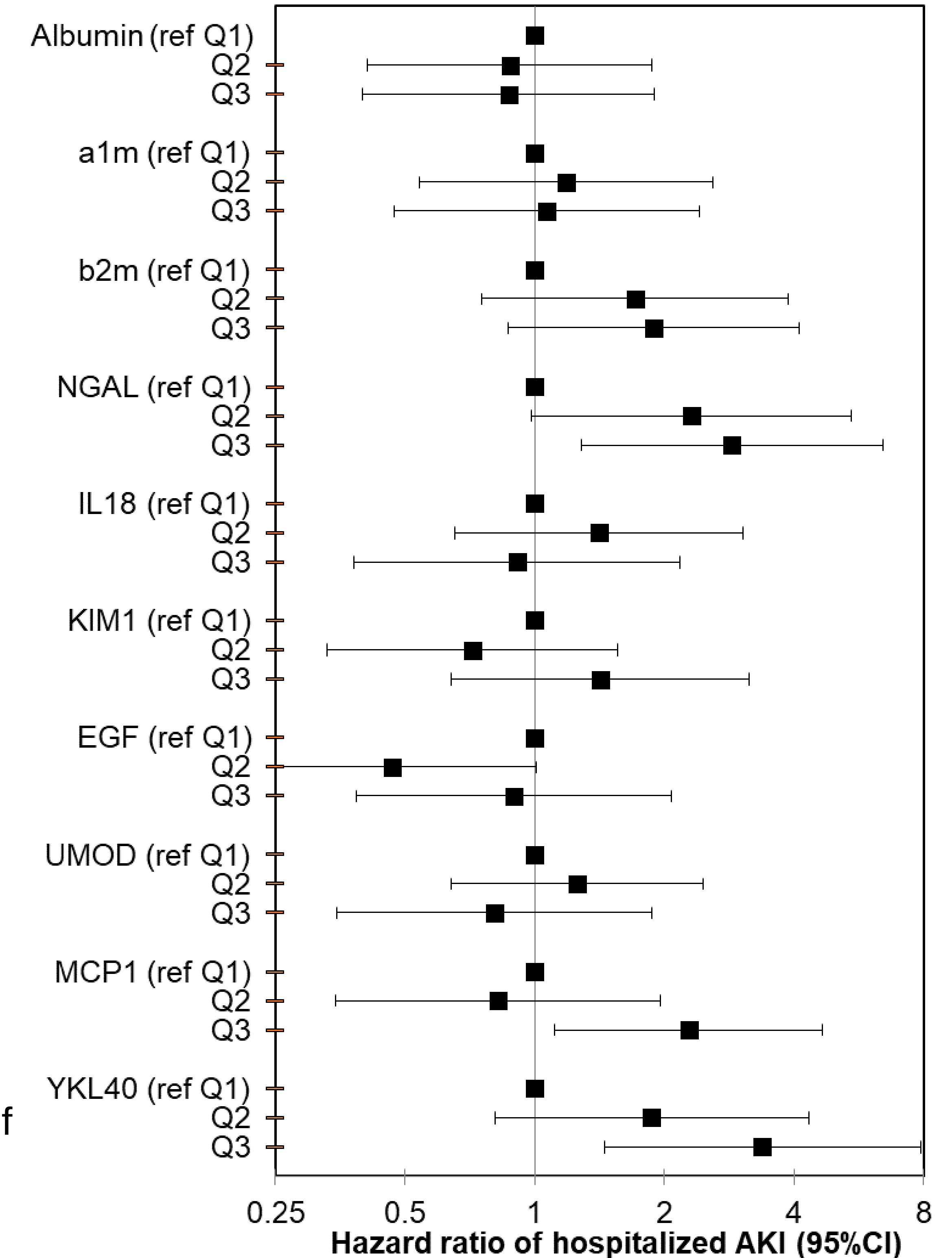
Results:

- Each 2-fold higher KIM1 (HR 1.30, 95% CI 1.03-1.63) and NGAL levels (HR 1.24, 95% CI 1.06-1.44) was associated with higher rate of hospitalized AKI
- Each 2-fold higher NGAL level (HR 1.13, 95% CI 1.01-1.26), KIM1 (HR 1.19, 95% CI 1.00, 1.41), and MCP1 (HR 1.20, 95% CI 1.00, 1.45) was associated with higher rate of hospitalization.

Discussion:

- Greater tubular injury as captured by KIM1 and NGAL is strongly associated with AKI among PLWH. These biomarkers may hold potential for risk stratification of future AKI, among PLWH.

Figure 1: Associations of kidney biomarkers with incident hospitalized AKI by Cox proportional hazards regression among people living with HIV.



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