

Kinetics of CMV viremia with Letermovir prophylaxis in the first 100 days post hematopoietic cell transplantation (HCT). A single center experience.

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Background

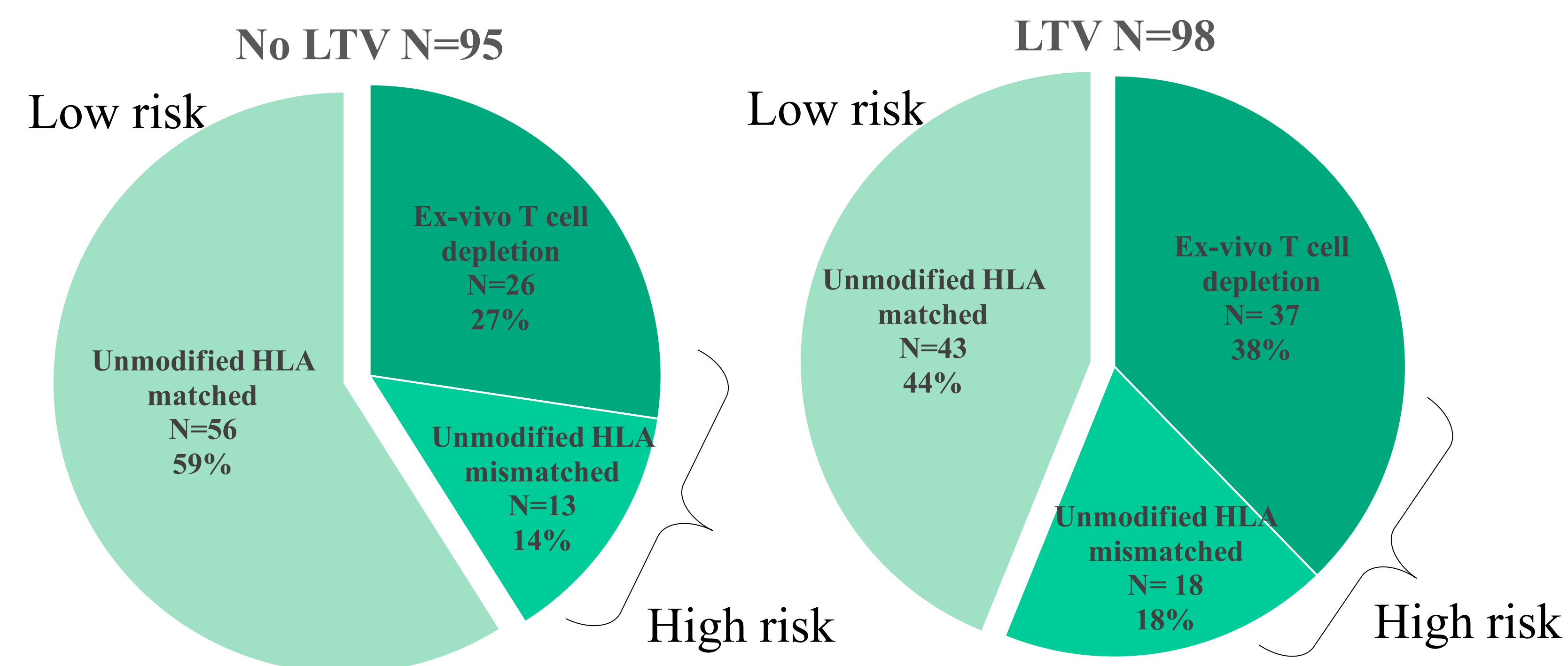
- Letermovir (LTV) was implemented in MSKCC for the prevention of CMV infection in CMV sero-positive (R+) HCT recipients in December 2017.
- We aimed to evaluate CMV kinetics in patients receiving LTV prophylaxis compared to a historical cohort not receiving LTV.
- We evaluated the following measures:
 - Incidence of CMV viremia
 - Maximal CMV viral load (VL) and duration of CMV viremia
 - Antiviral treatment days

Methods

- Retrospective cohort study of CMV R+ recipients of peripheral blood or marrow allografts at MSKCC during 2017-2018.
- Routine CMV monitoring was performed weekly by a qPCR assay in plasma from D +14 through D +100.
- Clinically significant CMV viremia (csCMV) was defined as any CMV VL treated preemptively.

Results

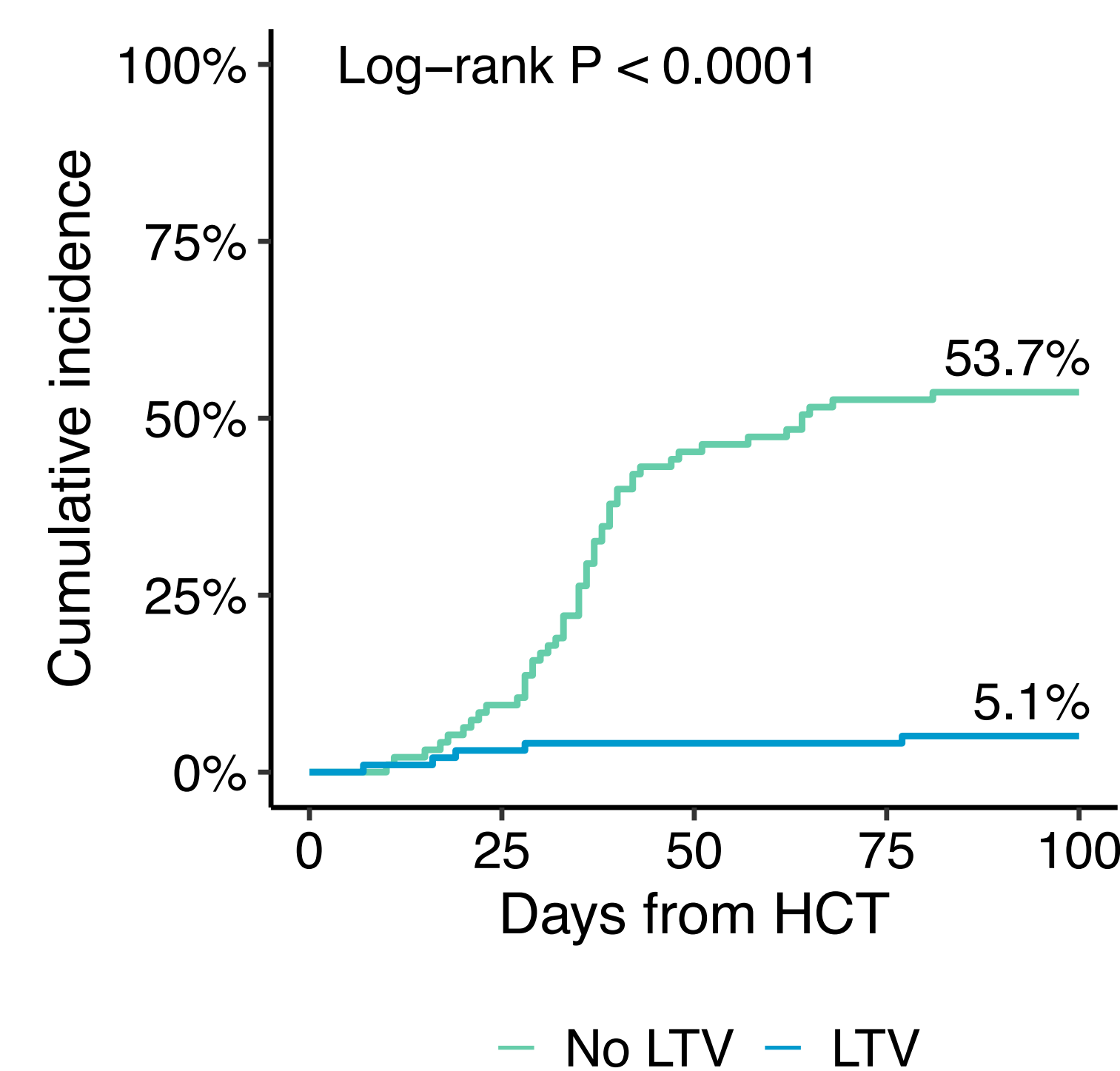
High CMV risk comprised 41% of No LTV and 56% of LTV group



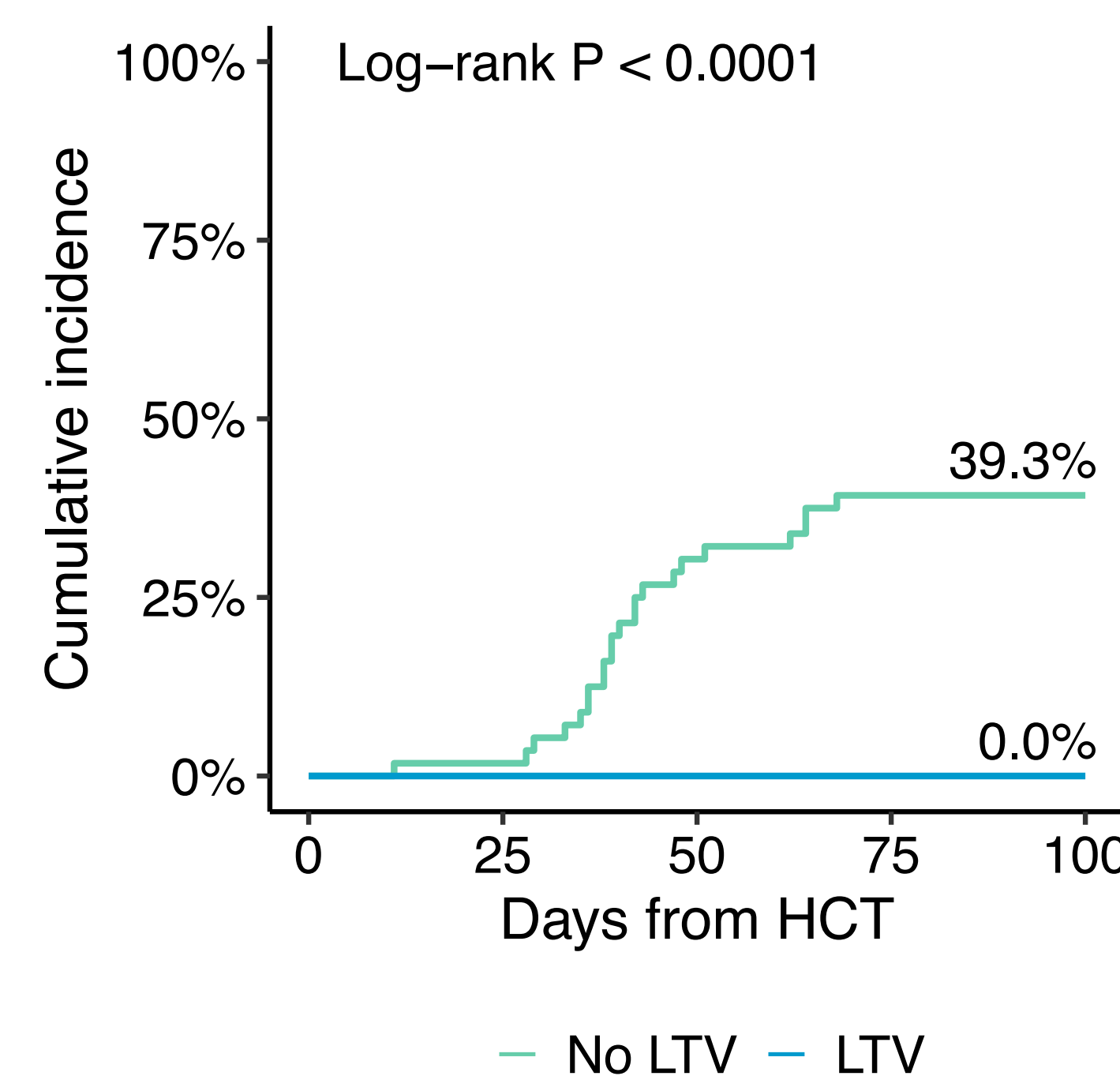
Incidence of clinically significant CMV viremia

LTV prophylaxis was associated with lower incidence of csCMV viremia for all patients, low CMV and high CMV risk patients

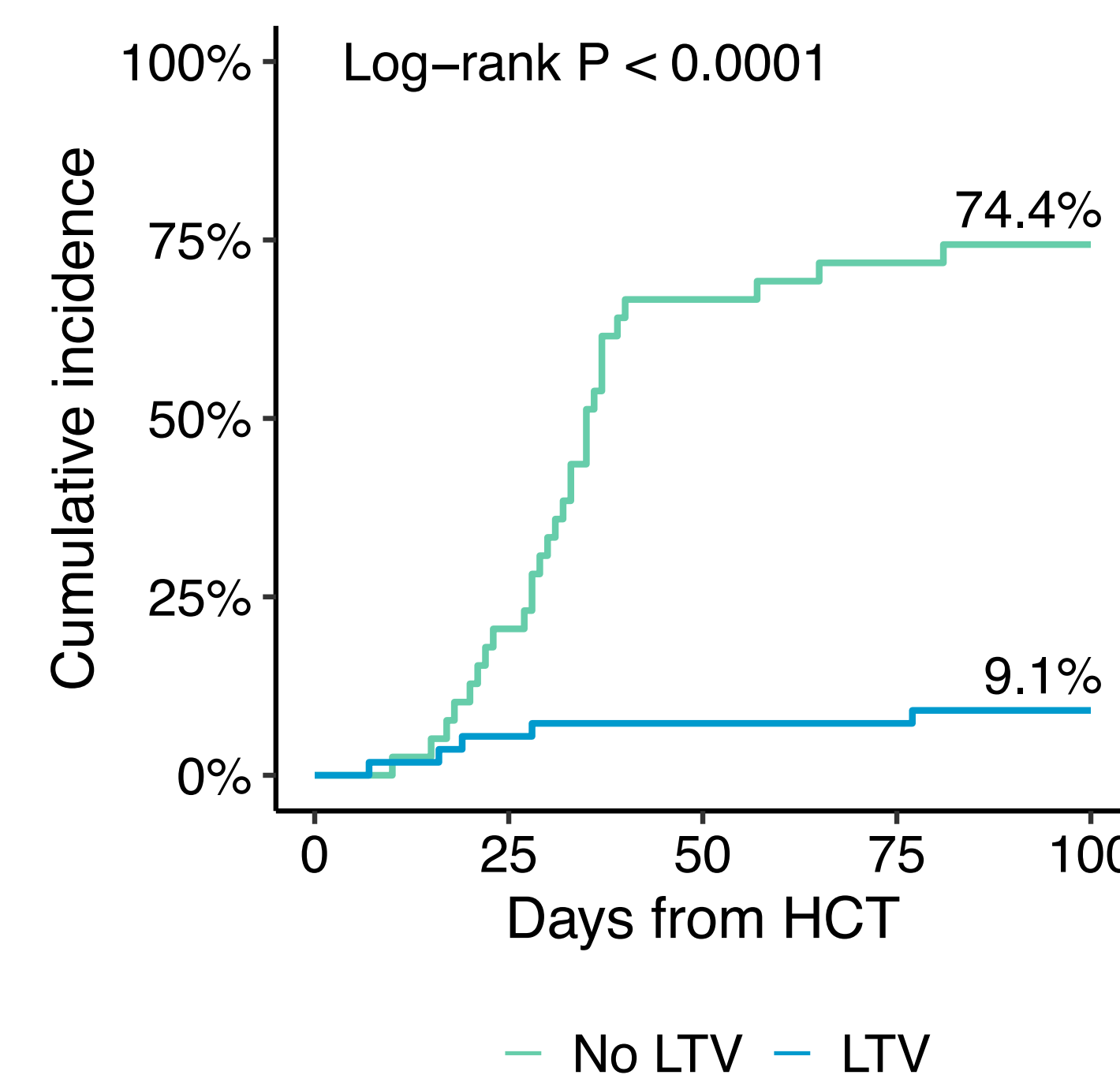
(A) All patients



(B) Low CMV risk



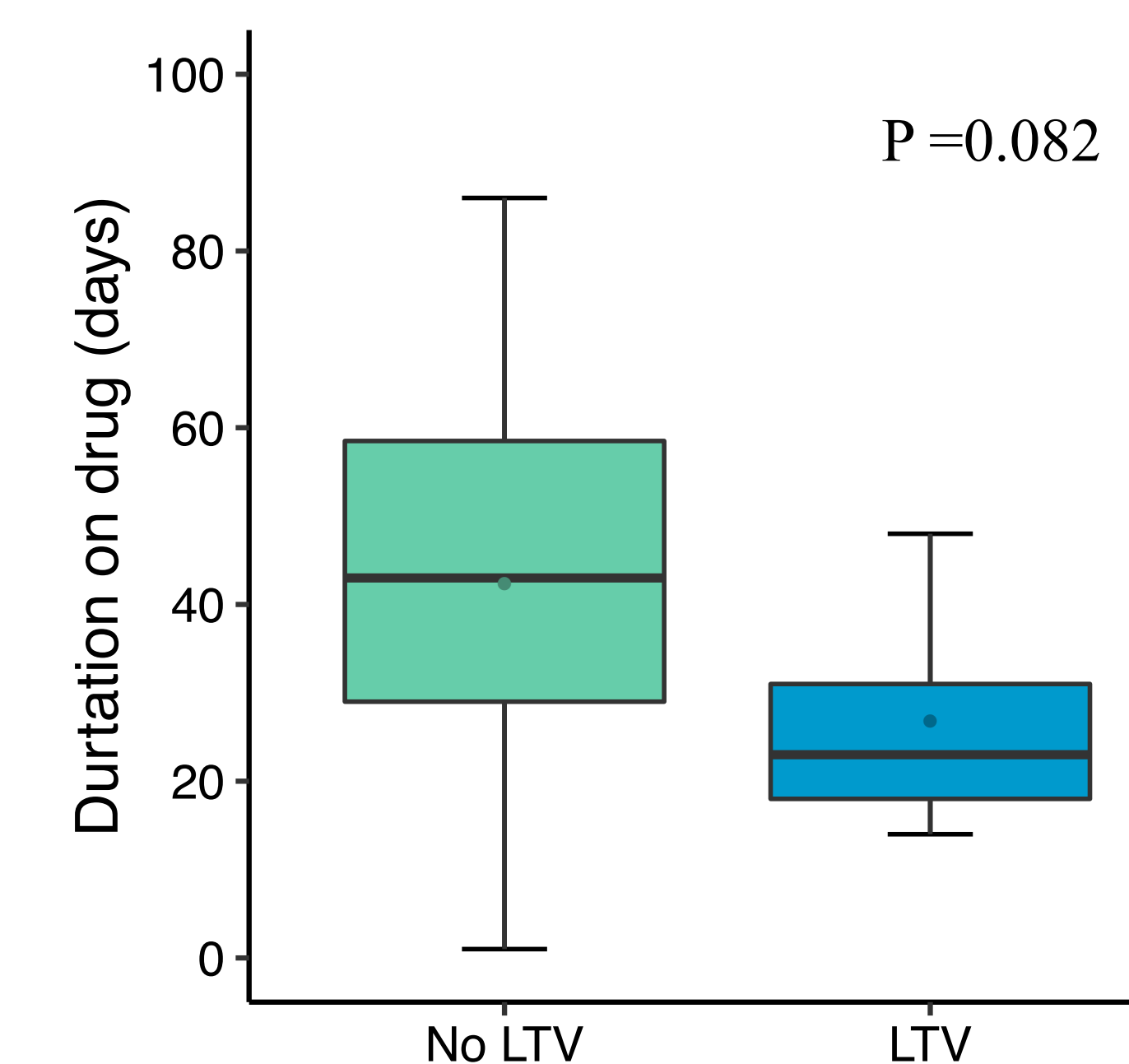
(C) High CMV risk



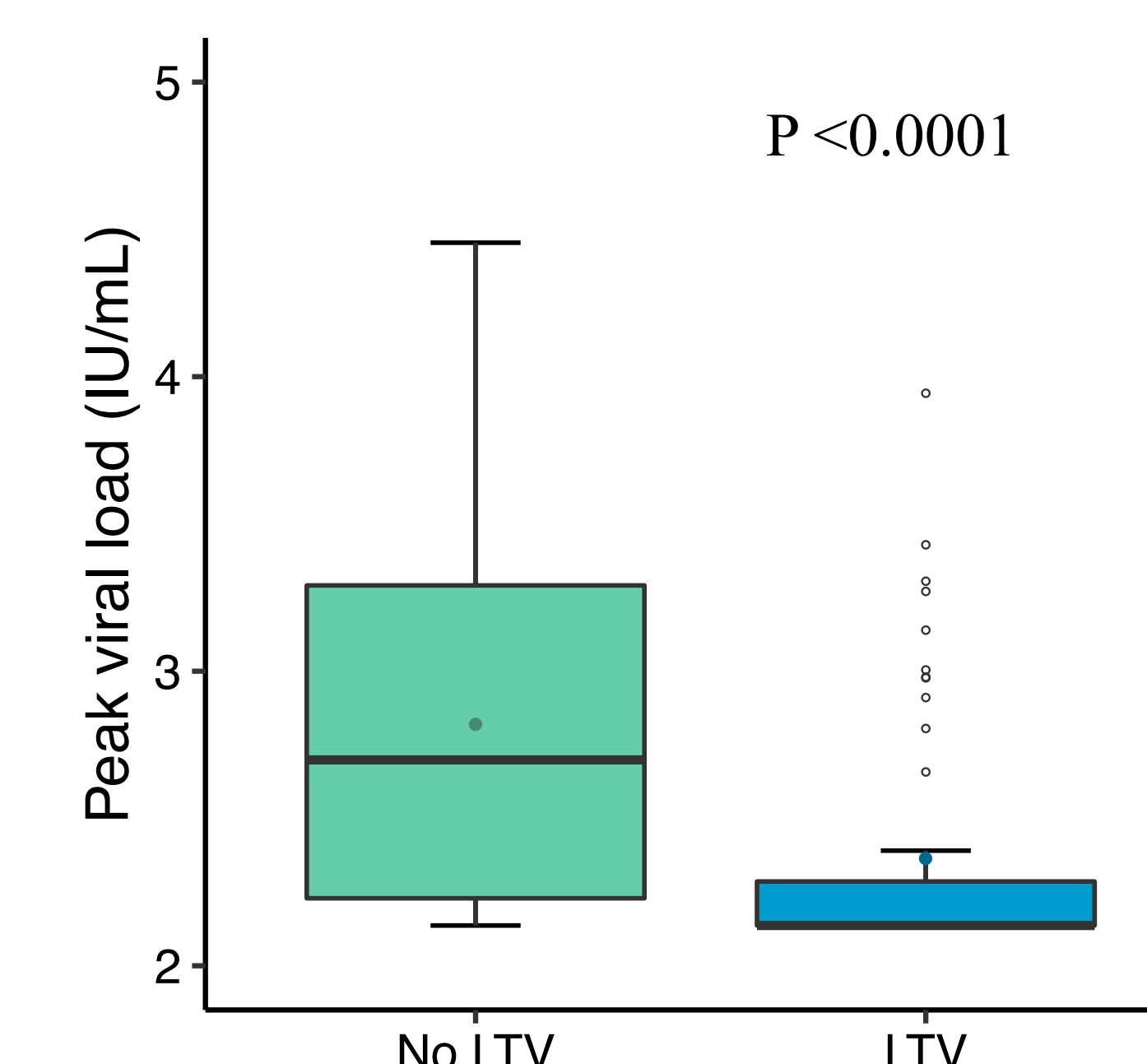
Incidence of csCMV viremia in LTV and No LTV groups

CMV risk	No LTV N=95	LTV N=98
Low risk	22/56 (39.3%)	0/43 (0.0%)
High risk	29/39 (74.4%)	5/55 (9.1%)

Duration of csCMV viremia Median (days)

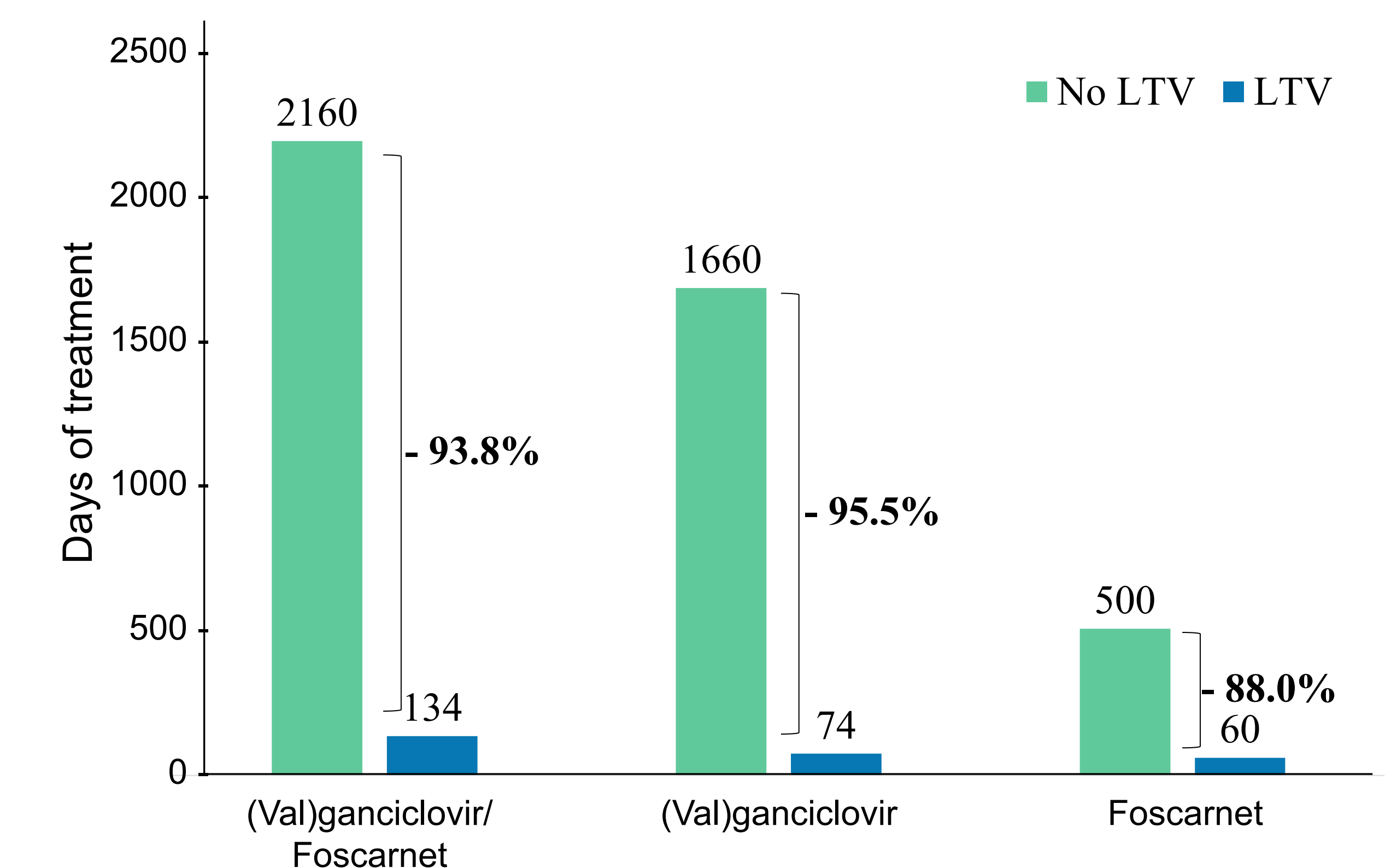


Maximum CMV viral load Median (log10 IU/mL)



Total days on preemptive treatment with LTV and No LTV

Letermovir prophylaxis resulted in 94% decrease in total days of preemptive therapy



Conclusions

- LTV prophylaxis was associated with significantly reduced rates of clinically significant CMV infection and peak viral load.
- The implementation of LTV was associated with a 94% reduction in total antiviral treatment days.