

DOES TENOFOVIR DISOPROXIL FUMARATE/EMTRICITABINE FOR HIV PRE-EXPOSURE PROPHYLAXIS INDUCE CHANGES IN KIDNEY FUNCTION IN PEOPLE OLDER THAN 50 YEARS OLD?

Novela, Francisco; Faria, Flávia; Pos, Ema; Almeida, Soraia; Cipriano, Ana; Mendez, Josefina – Department of Infectious Diseases,

BACKGROUND

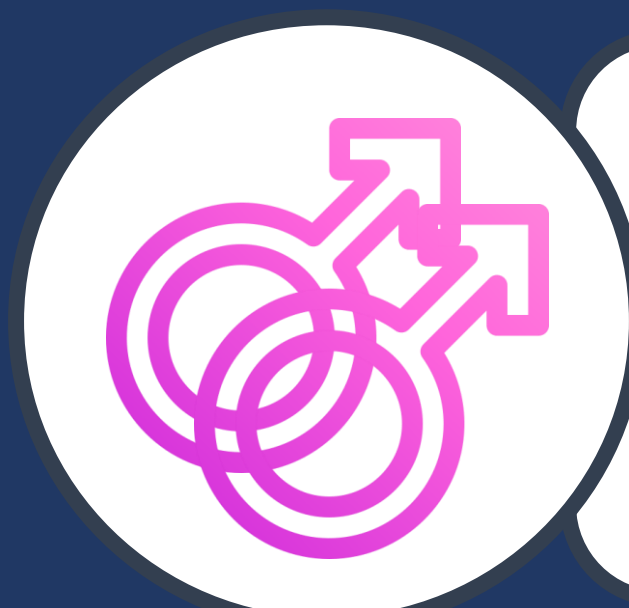
Tenofovir Disoproxil Fumarate (TDF) and emtricitabine (FTC) are the staple of HIV pre-exposure prophylaxis (PrEP).

TDF causes kidney injury through toxicity to the proximal tubule, leading to a decline in renal function. Concerns over TDF nephrotoxicity remain, particularly in those older than fifty years, who are at higher risk of developing chronic kidney disease (CKD).

MATERIALS & METHODS

- ❑ A retrospective review of the HIV PrEP outpatient in a Portuguese tertiary hospital, between 2018 and 2024;
- ❑ Subjects included were older than fifty years and demographics, PrEP management, risk factors for CKD and serum creatinine were recorded;
- ❑ Serum creatinine was measured before and one year after PrEP initiation;
- ❑ Kidney function was estimated using **2021 CKD-EPI** based on creatinine. CKD was classified according to KDIGO guidelines.

RESULTS



48 cisgender men who have sex with men

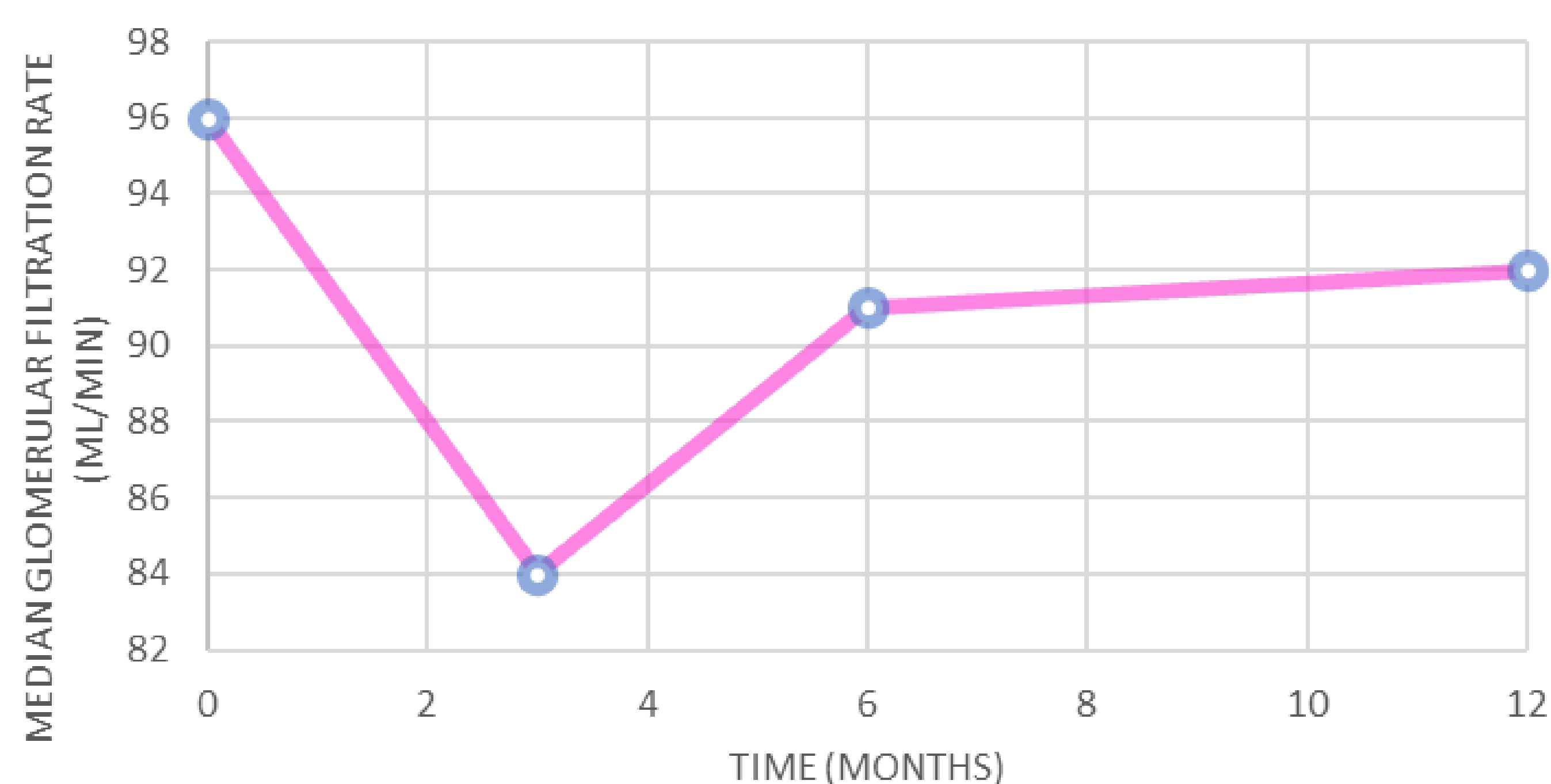
Age between 50 to 75 years old (median 53)



9 patients (18%) had hypertension

3 patients (6%) had type 2 diabetes

Renal Function under daily PrEP



Daily PrEP was the preferred regimen (85%; N=41)

Month 0 :

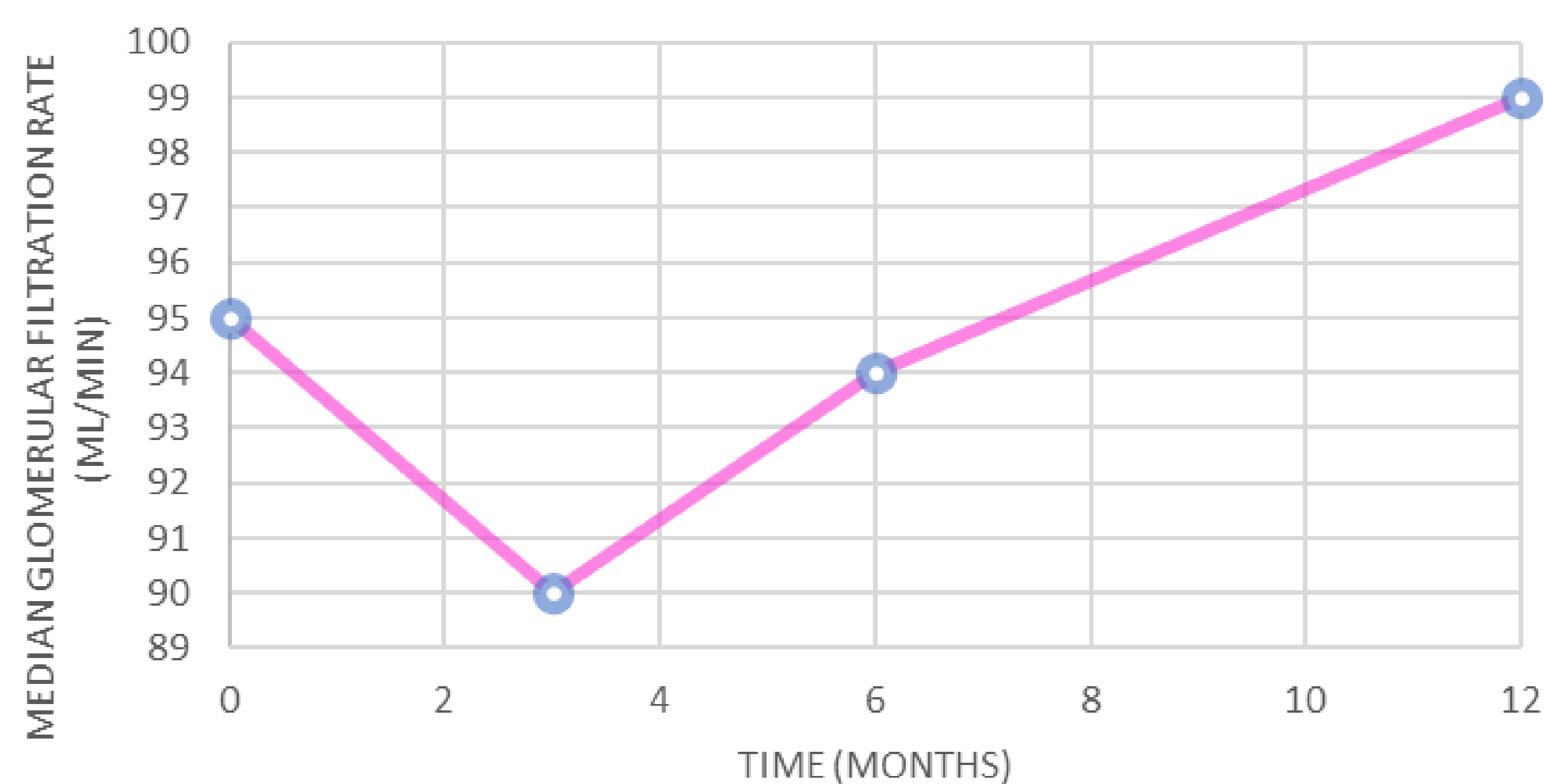
- ❑ KDIGO 1 → 63% (N=26)
- ❑ KDIGO 2 → 34% (N=14)
- ❑ KDIGO 3a → 2% (N=1)

Month 12 :

- ❑ KDIGO 1 → 51% (N=21)
- ❑ KDIGO 2 → 20% (N=20)

In this group, 7 patients evolved from KDIGO 1 to KDIGO 2

Renal Function under PrEP on demand



On demand PrEP was chosen in 15% (N=7) of the cases

Month 0 :

- ❑ KDIGO 1 → 57% (N=4)
- ❑ KDIGO 2 → 29% (N=2)
- ❑ KDIGO 3a → 14% (N=1)

Month 12 :

- ❑ KDIGO 1 → 57% (N=4)
- ❑ KDIGO 2 → 29% (N=2)
- ❑ KDIGO 3a → 14% (N=1)

In this group 1 patient evolved from KDIGO 1 to KDIGO 2

CONCLUSION

No significant changes in renal function were observed during follow-up in most subjects, in spite of their age and the presence of risk factors for CKD. This reinforces the safety of TDF/FTC for HIV PrEP in this age group. However, most of the patients had no previous risk factors and further studies with a longer period of monitoring are required.

REFERENCES

- (1) Geoffroy Liegeon, Lambert Assoumou, Ghosn, J., Mayssam El Mouhebb, Romain Palich, Palacios, C., Slama, L., Surgers, L., Genin, M., Lydie Beniguel, Lauriane Goldwirt, Duvivier, C., Daniela Rojas Castro, Costagliola, D., Jean Michel Molina, Jean-François Delfraissy, Dabis, F., Yazdan Yazdanpanah, Véronique Doré and Karon, S. (2022). Impact on renal function of daily and on-demand HIV pre-exposure prophylaxis in the ANRS-PREVENIR study. *The Journal of antimicrobial chemotherapy*/Journal of antimicrobial chemotherapy, 77(12), pp.3427–3435. doi:https://doi.org/10.1093/jac/dkac336.
- (2) Franconi, I. and Guaraldi, G. (2018). Pre-exposure Prophylaxis for HIV Infection in the Older Patient: What can be Recommended? *Drugs & Aging*, 35(6), pp.485–491. doi:https://doi.org/10.1007/s40266-018-0553-3.