



Date of report 25 Feb 2020

## Reported case interaction between **Efavirenz** and **Carvedilol**

### Drugs suspected to be involved in the DDI

Perpetrator

**Efavirenz**

Daily Dose

600 (mg)

Dose adjustment performed

No

Administration Route

Oral

Start date

June 6, 2017

End date

June 8, 2019

Victim

**Carvedilol**

Daily Dose

12.5 (mg)

Dose adjustment performed

No

Administration Route

Oral

Start date

Feb. 1, 2019

End date

Ongoing

# Complete list of drugs taken by the patient

Antiretroviral treatment  
Efavirenz/Emtricitabine/Tenofovir-DF

Complete list of all comedications taken by the patient, included that involved in the DDI  
Carvedilol, enalapril

# Clinical case description

Gender	Age
Male	41
eGFR (mL/min)	Liver function impairment
>60	No

### Description

41-year-old HIV positive patient, known for HIV infection since 2017. Undetectable on EFC/FTC/TDF (first and only regimen). Admitted to cardiology service for service due to diagnosis of hyperphosphic cardiomyopathy. Carvedilol and enalapril were prescribed and HIV consultation was requested to evaluate the need for treatment modifications of the ARV regimen. Carvedilol undergoes glucuronidation and additional metabolism via CYP2D6 and CYPs 2C9 and 1A2. Efavirenz could potentially increase carvedilol concentrations via CYP2C9 inhibition or decrease carvedilol concentrations via induction of glucuronidation (UGT1A1), being unknown the net final effect. No interactions were expected with enalapril. EFC/FTC/TDF was decided to be maintained with no side effects observed. The ART regimen was changed some months later due to other reasons (avoid EFV effect on cholesterol).

### Clinical Outcome

**No unwanted outcome**

### Editorial Comment

The interaction between efavirenz and carvedilol is one that has been difficult to predict due to the potential for both induction (UGT1A1) and inhibition (CYP2C9). This case report is helpful and lends some support to the recommendation of 'no a priori dosage adjustment' that is currently in the DDI resource [www.hiv-druginteractions.org](http://www.hiv-druginteractions.org).

## University of Liverpool Recommendation

⚠ Potential interaction likely to be of weak intensity.  
Additional action/monitoring or dosage adjustment is unlikely to be required

For more information [click here](#)