Comparing Weight Gain on F/TAF and Placebo Using DISCOVER and iPrEx Study Data

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Last updated: 29/04/2026

Study Finalised

Administrative details

EU PAS number

EUPAS1000000509

Study ID

1000000509

DARWIN EU® study

No

Study countries

- Austria
- Brazil
- Canada
- Denmark

- Ecuador
- France
- Germany
- Ireland
- Italy
- Netherlands
- Peru
- South Africa
- Spain
- Thailand
- United Kingdom
- United States

Study description

GS-US-311-7562: This was a non-interventional study utilizing data from 2 Phase 3 Clinical studies, iPrEx (Study CO-US-104-0288; NCT00458393; emtricitabine/tenofovir disoproxil fumarate (coformulated; Truvada®, FTC/TDF) versus placebo) and DISCOVER (Study GS-US-412-2055; NCT02842086; emtricitabine/tenofovir alafenamide (coformulated; Descovy®, F/TAF) versus FTC/TDF) that compared F/TAF with placebo weight trajectories, using the common FTC/TDF groups as a negative control to assess the validity of the primary analysis results.

The primary objective of this study was to compare weight change/trajectory distributions between F/TAF and placebo cohorts.

Study status

Finalised

Research institutions and networks

Institutions

Gilead Sciences

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Institution | Pharmaceutical company

Contact details

Study institution contact

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Study contact

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Primary lead investigator

Gilead Study Director

Primary lead investigator

Study timelines

Date when funding contract was signed

Planned: 03/12/2024

Actual: 03/12/2024

Study start date

Planned: 30/04/2025

Actual: 27/06/2025

Date of final study report

Planned: 30/04/2026

Actual: 27/03/2026

Study protocol

GS-US-311-7562-appendix-16.1.1-Observational Study Protocol_f-redact.pdf

(1.4 MB)

Regulatory

Was the study required by a regulatory body?

No

Is the study required by a Risk Management Plan (RMP)?

Not applicable

Methodological aspects

Study type

Study type list

Study topic:

Disease /health condition

Human medicinal product

Other

Study topic, other:

Research method

Study type:

Non-interventional study

Scope of the study:

Safety study (incl. comparative)

Data collection methods:

Secondary use of data

Study design:

This study utilized existing data collected during 2 large Phase 3 clinical studies of FTC/TDF and F/TAF to conduct an indirect comparison of F/TAF (DISCOVER) and placebo treatment groups (iPrEX), using the common FTC/TDF treatment groups as negative controls.

Main study objective:

To compare weight change/trajectory distributions between F/TAF and placebo cohorts from the DISCOVER and iPrEx studies

Study Design

Non-interventional study design

Cohort

Study drug and medical condition

Medicinal product name

DESCOVY

TRUVADA

Medicinal product name, other

emtricitabine/tenofovir alafenamide

Emtricitabine/tenofovir Disoproxil Fumarate

Study drug International non-proprietary name (INN) or common name

EMTRICITABINE

TENOFOVIR ALAFENAMIDE

TENOFOVIR DISOPROXIL FUMARATE

Anatomical Therapeutic Chemical (ATC) code

(J05AR17) emtricitabine and tenofovir alafenamide

emtricitabine and tenofovir alafenamide

(J05AR03) tenofovir disoproxil and emtricitabine

tenofovir disoproxil and emtricitabine

Medical condition to be studied

HIV infection

Additional medical condition(s)

Pre-Exposure Prophylaxis of HIV-1 Infection

Population studied

Short description of the study population

Individuals not living with HIV, all of whom were adults aged at least 18 years, and with 1 or more
behavioral risk factors for contracting HIV-1. All iPrEx study participants were born male, and were recruited from North and South America, South Africa, and Thailand. All DISCOVER study
participants were born male or were TGW, and were recruited from North America, 8 European Union (EU) countries, and the UK. Study start and randomized-primary completion dates were as
follows, iPrEx: June 2007 to February 2011; DISCOVER: September 2016 to January 2019.

Age groups

- **Adult and elderly population (≥18 years)**
  - Adults (18 to < 65 years)
    - Adults (18 to < 46 years)
    - Adults (46 to < 65 years)
  - Elderly (≥ 65 years)
    - Adults (65 to < 75 years)
    - Adults (75 to < 85 years)
    - Adults (85 years and over)

Study design details

Setting

Both studies used for this study recruited individuals not living with HIV, all of whom were adults aged at least 18 years, and with 1 or more behavioral risk factors for contracting HIV-1.
All iPrEx study participants were born male, and were recruited from North and

South America, South Africa, and Thailand.
All DISCOVER study participants were born male or were TGW, and were recruited from North America, 8 European Union (EU) countries, and the UK.

Outcomes

- weight change trajectories/distributions
- weight gain
- incidence of weight-related comorbidities

Data analysis plan

To compare mean weight changes between individuals assigned to F/TAF and placebo over time, we used linear mixed models adjusting for potential confounders. Data from the two FTC/TDF groups were pooled and analyzed as a single group to facilitate an overall estimate of average TDF-associated weight change.

To investigate whether F/TAF selectively caused excessive weight change in only a small fraction of individuals or otherwise shifted the shape of the distribution of weight change over time relative to placebo, we compared top percentiles of weight change at Week 48 between individuals assigned to F/TAF and placebo using quantile regression adjusted by the same set of covariates as the linear mixed model. To adjust for differential patterns of missing information between the source studies, we estimated the probability of having complete data at Week 48 with logistic regression and weighted each individual by the inverse probability in the quantile regression model.

In the sensitivity analysis, we repeated the primary analyses after excluding individuals with suboptimal adherence to their assigned study drug.

Incidence of adverse events related to weight (cardiovascular events, diabetes and
hypertension) were reported for each source study.

Summary results

Leveraging data from two large, randomized, double-blind Phase 3 PrEP studies in PWoH, we observe no statistically or clinically meaningful differences in mean weight change between individuals receiving F/TAF and those receiving placebo. Observed weight changes with F/TAF were small relative to normal inter-individual variability and consistent
with background physiological weight trends.

Documents

Abstract of study report

GS-US-311-7562-appendix-16.1.3-CSR_f-redact.pdf (1.1 MB)

Data management

ENCePP Seal

The use of the ENCePP Seal has been discontinued since February 2025. The ENCePP Seal fields are retained in the display mode for transparency but are no longer maintained.

Data sources

Data source(s), other

All data used were collected as part of 2 Phase 3 randomized clinical studies. Data from both studies were owned by Gilead Sciences (Gilead), and scale weight was assessed similarly across studies consistent with routine clinical practice.

Data sources (types)

Clinical trial

Use of a Common Data Model (CDM)

CDM mapping

No

Data quality specifications

Check conformance

Yes

Check completeness

Yes

Check stability

Yes

Check logical consistency

Yes

Data characterisation

Data characterisation conducted

Yes