

## **SUMMARY OF PRODUCT CHARACTERISTICS**

▼ This medicinal product is subject to additional monitoring. This will allow quick identification of new safety information. Healthcare professionals are asked to report any suspected adverse reactions. See section 4.8 for how to report adverse reactions.

### **1 NAME OF THE MEDICINAL PRODUCT**

Yeytuo 300 mg film-coated tablets

### **2 QUALITATIVE AND QUANTITATIVE COMPOSITION**

Each film-coated tablet contains lenacapavir sodium equivalent to 300 mg of lenacapavir.

For the full list of excipients, see section 6.1.

### **3 PHARMACEUTICAL FORM**

Film-coated tablet (tablet)

Beige, capsule-shaped, film-coated tablets of dimensions 10 mm x 21 mm, debossed with “GSI” on one side of the tablet and “62L” on the other side of the tablet.

### **4 CLINICAL PARTICULARS**

#### **4.1 Therapeutic indications**

Yeytuo tablet is indicated in combination with safer sex practices for pre-exposure prophylaxis (PrEP) to reduce the risk of sexually acquired HIV-1 infection in adults and adolescents with increased HIV-1 acquisition risk, weighing at least 35 kg for:

- oral loading
- oral bridging

(see sections 4.2, 4.4 and 5.1).

## 4.2 Posology and method of administration

Yeytuo should be prescribed by a healthcare professional experienced in the management of HIV prevention.

All individuals must be screened for HIV-1 prior to initiating lenacapavir and additionally as clinically appropriate (see sections 4.3 and 4.4). A combined antigen/antibody test as well as an HIV-RNA-based test should be negative. Prescribers are advised to perform both tests, even if the result of the HIV-RNA-based test will become available after initiation of lenacapavir. If a combined testing strategy including both tests is not available, testing should follow local guidelines.

Prior to starting Yeytuo, healthcare professionals should identify individuals for whom the required initiation and every 6-month continuation injection dosing schedule is appropriate, and counsel individuals about the importance of adherence to scheduled dosing visits (see section 4.4).

### Posology

The dosing schedule in adults and adolescents weighing at least 35 kg consists of a required initiation dosing (subcutaneous injections and oral tablets) (Table 1), followed by once every 6-month continuation dosing (subcutaneous injections).

#### *Initiation*

On Day 1, the required dose is 927 mg of lenacapavir administered by subcutaneous injection and 600 mg taken orally. On Day 2, the required dose is 600 mg taken orally.

**Table 1: Dosing schedule for lenacapavir initiation**

Time	
	<b>Dose of lenacapavir: Initiation<sup>a</sup></b>
Day 1	927 mg subcutaneous injection (2 x 1.5 mL injections <sup>b</sup> ) 600 mg orally (2 x 300 mg tablets)
Day 2	600 mg orally (2 x 300 mg tablets)

a The complete initiation dosing schedule, consisting of subcutaneous injections and oral tablets, is required; the efficacy of lenacapavir has only been established with this dosing schedule.

b Two injections, with the second injection at least 5 centimetres from the first injection (see Method of Administration in the Yeytuo solution for injection SmPC).

#### *Missed initiation dose*

If the Day 1 or Day 2 oral initiation dose (600 mg) is missed, it should be taken as soon as possible. Day 1 and Day 2 doses should not be taken on the same day.

#### *Anticipated delayed injections*

During continuation dosing, if the scheduled 6-month injection is anticipated to be delayed by more than 2 weeks, lenacapavir tablets may be used for oral bridging on an interim basis (for up to 6 months if needed) until injections

resume. Oral bridging should be initiated within 26 to 28 weeks from the last injection. The dosing schedule is 300 mg (1 tablet) taken orally once every 7 days. Resume the continuation injection dosage within 7 days after the last oral dose.

#### *Vomiting*

If the individual vomits within 3 hours of taking an oral dose of lenacapavir, another oral dose should be taken. If the individual vomits more than 3 hours after taking an oral dose of lenacapavir there is no need to take another oral dose of lenacapavir, and the scheduled dosing regimen should continue.

#### Special populations

##### *Elderly*

No dose adjustment of lenacapavir is required for elderly individuals. There are limited data available on the use of lenacapavir in individuals aged 65 years and above (see section 5.2).

##### *Renal impairment*

No dose adjustment of lenacapavir is required in individuals with mild, moderate, or severe renal impairment (creatinine clearance [CrCl]  $\geq$  15 mL/min). Lenacapavir has not been studied in individuals with end stage renal disease (CrCl < 15 mL/min or on renal replacement therapy) (see section 5.2), therefore lenacapavir should be used with caution in these individuals.

##### *Hepatic impairment*

No dose adjustment of lenacapavir is required in individuals with mild or moderate hepatic impairment (Child-Pugh Class A or B). Lenacapavir has not been studied in individuals with severe hepatic impairment (Child-Pugh Class C) (see section 5.2), therefore lenacapavir should be used with caution in these individuals.

##### *Paediatric population*

Safety and efficacy of lenacapavir in children and adolescents weighing less than 35 kg have not been established. No data are available.

#### Method of administration

For oral use.

Lenacapavir tablets should be taken orally with or without food (see section 5.2). The film-coated tablet should not be chewed, or crushed, because the effects on lenacapavir absorption have not been studied. For individuals who are unable to swallow the tablet whole, the tablet may be split in half and both halves taken one after the other, ensuring that the full dose is taken immediately.

### 4.3 Contraindications

Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.

Use in individuals with unknown HIV-1 status (see section 4.4).

Co-administration with strong inducers of CYP3A, P-gp, and UGT1A1, such as:

- antimycobacterials: rifampicin
  - anticonvulsants: carbamazepine, phenytoin
  - herbal products: St. John's wort (*Hypericum perforatum*)
- (see section 4.5).

### 4.4 Special warnings and precautions for use

#### Prevention strategy

Yeytuo should only be used to prevent HIV-1 acquisition in individuals confirmed to be HIV-negative. HIV-1 negative status should be confirmed prior to initiation of lenacapavir, and additionally as clinically appropriate in individuals receiving lenacapavir.

If recent (<1 month) exposures to HIV-1 are suspected or clinical symptoms consistent with acute HIV-1 infection are present, HIV-1 status should be reconfirmed.

Yeytuo should be used to prevent HIV-1 acquisition as part of a strategy to reduce the risk of sexually transmitted infections (STIs). Individuals should be identified for whom the required initiation and every 6-month continuation injection dosing schedule is appropriate. Nonadherence to the required initiation and continuation dosing schedule (see section 4.2) may lead to HIV-1 acquisition. Individuals should be counselled and supported on adhering to the lenacapavir administration schedule, on the use of other measures to prevent STIs, and on the importance of testing for HIV-1 and other STIs.

Mean lenacapavir plasma concentrations associated with significant antiviral activity were reached by Day 2 of the required initiation dosing and were maintained through the dosing interval of 26 weeks (see section 5.2). The exact time from initiation of lenacapavir for HIV-1 PrEP to maximal protection against HIV 1 infection is unknown.

#### Risk of Resistance

Lenacapavir may not always be effective in preventing HIV-1 infection (see section 5.1). There is a risk of developing resistance to lenacapavir if an

individual acquires HIV-1 either before or when receiving Yeytuo, or following discontinuation of Yeytuo. To minimise this risk, it is essential to confirm HIV-1 negative status before each subsequent injection, and additionally as clinically appropriate. Yeytuo alone does not constitute a complete regimen for HIV-1 treatment and mutations have emerged in some individuals with undetected HIV-1 infection who were only taking Yeytuo. Individuals who are confirmed to have HIV-1 must immediately begin a complete HIV-1 treatment regimen to reduce the risk of developing resistance.

#### Co-administration of other medicinal products

Co-administration with medicinal products that are moderate inducers of CYP3A and P-gp is not recommended (see section 4.5).

Co-administration with medicinal products that are strong inhibitors of CYP3A, P-gp, and UGT1A1 together (i.e. all 3 pathways) is not recommended (see section 4.5).

#### Excipients

This medicinal product contains less than 1 mmol sodium (23 mg) per tablet, that is to say essentially 'sodium-free'.

### **4.5 Interaction with other medicinal products and other forms of interaction**

#### Effect of other medicinal products on the pharmacokinetics of lenacapavir

Lenacapavir is a substrate of CYP3A, P-gp and UGT1A1. Strong inducers of CYP3A, P-gp, and UGT1A1 may significantly decrease plasma concentrations of lenacapavir which may result in reduced effectiveness of lenacapavir. Concomitant administration of lenacapavir with strong inducers of CYP3A, P-gp, and UGT1A1 is contraindicated (see section 4.3). Moderate inducers of CYP3A and P-gp may decrease plasma concentrations of lenacapavir. Concomitant administration of lenacapavir with moderate inducers of CYP3A and P-gp is not recommended (see section 4.4).

Strong inhibitors of CYP3A, P-gp and UGT1A1 together (i.e., all 3 pathways) may significantly increase plasma concentrations of lenacapavir, therefore co-administration is not recommended (see section 4.4).

Strong CYP3A4 inhibitors alone or strong inhibitors of CYP3A4 and P-gp together do not result in a clinically meaningful increase in lenacapavir exposure.

#### Effect of lenacapavir on the pharmacokinetics of other medicinal products

Lenacapavir is a moderate inhibitor of CYP3A and a P-gp inhibitor. Caution is

advised if lenacapavir is co-administered with a sensitive CYP3A and/or P-gp substrate with a narrow therapeutic index. Lenacapavir is not a clinically meaningful inhibitor of BCRP and does not inhibit OATP.

Clinical drug interaction data for lenacapavir as victim are from studies with oral lenacapavir. Clinical drug interaction data for subcutaneous lenacapavir are not available.

**Table 2: Interactions between Yeytuo and other medicinal products**

Medicinal product by therapeutic areas	Effects on concentrations. Mean percent change in AUC, C <sub>max</sub>	Recommendation concerning co-administration with lenacapavir
<b>ANTIMYCOBACTERIALS</b>		
Rifampicin <sup>a,b</sup> (600 mg once daily) (strong inducer of CYP3A, and an inducer of P-gp and UGT)	Lenacapavir: AUC: ↓84% C <sub>max</sub> : ↓55%	Co-administration is contraindicated (see section 4.3).
Rifabutin Rifapentine	Interaction not studied.  Co-administration of rifabutin or rifapentine may decrease lenacapavir plasma concentrations.	Co-administration is not recommended (see section 4.4).
<b>ANTICONVULSANTS</b>		
Carbamazepine Phenytoin	Interaction not studied.  Co-administration of carbamazepine, oxcarbazepine, phenobarbital, or phenytoin with lenacapavir may decrease lenacapavir plasma concentrations.	Co-administration is contraindicated (see section 4.3).
Oxcarbazepine Phenobarbital		Co-administration is not recommended (see section 4.4).  Alternative anticonvulsants should be considered.
<b>HERBAL PRODUCTS</b>		
St. John's wort ( <i>Hypericum perforatum</i> )	Interaction not studied.  Co-administration of St. John's wort may decrease lenacapavir plasma concentrations.	Co-administration is contraindicated (see section 4.3).

Medicinal product by therapeutic areas	Effects on concentrations. Mean percent change in AUC, C <sub>max</sub>	Recommendation concerning co-administration with lenacapavir
<b>ANTIRETROVIRAL AGENTS</b>		
Atazanavir/cobicistat <sup>b,c,d</sup> (300 mg/150 mg once daily) (strong inhibitor of CYP3A, and an inhibitor UGT1A1 and P-gp.)	Lenacapavir: AUC: ↑ 321% C <sub>max</sub> : ↑ 560%	Co-administration of lenacapavir and strong inhibitors of CYP3A, P-gp, and UGT1A1 is not recommended (see section 4.4).
Efavirenz <sup>b,c,d</sup> (600 mg once daily) (moderate inducer of CYP3A and an inducer of P-gp)	Lenacapavir: AUC: ↓ 56% C <sub>max</sub> : ↓ 36%	Co-administration is not recommended (see section 4.4).
Cobicistat <sup>b,c,d</sup> (150 mg once daily) (strong inhibitor of CYP3A and an inhibitor of P-gp)	Lenacapavir: AUC: ↑ 128% C <sub>max</sub> : ↑ 110%	No dose adjustment of lenacapavir is required.
Darunavir/cobicistat <sup>b,c,d</sup> (800 mg/150 mg once daily) (strong inhibitor of CYP3A, and an inhibitor and inducer of P-gp)	Lenacapavir: AUC: ↑ 94% C <sub>max</sub> : ↑ 130%	
Tenofovir alafenamide <sup>c,e</sup> (25 mg) (substrate of P-gp)	Tenofovir alafenamide: AUC: ↑ 32% C <sub>max</sub> : ↑ 24%  Tenofovir <sup>f</sup> : AUC: ↑ 47% C <sub>max</sub> : ↑ 23%	No dose adjustment of tenofovir alafenamide is required.
<b>ERGOT DERIVATIVES</b>		
Dihydroergotamine Ergotamine	Interaction not studied.  Plasma concentrations of these medicinal products may be increased when co-administered with lenacapavir.	Caution is warranted when dihydroergotamine or ergotamine, is co-administered with lenacapavir.
<b>PHOSPHODIESTERASE-5 (PDE-5) INHIBITORS</b>		
Sildenafil Tadalafil Vardenafil	Interaction not studied.  Plasma concentration of PDE-5 inhibitors may be increased when co-administered with lenacapavir.	Use of PDE-5 inhibitors for pulmonary arterial hypertension: Co-administration with tadalafil is not recommended.  Use of PDE-5 inhibitors for erectile dysfunction: Sildenafil: A starting dose of 25 mg is recommended. Vardenafil: No more than 5 mg in a 24-hour period. Tadalafil: <ul style="list-style-type: none"> <li>• For use as needed: no more than 10 mg every 72 hours</li> <li>• For once daily use: dose not to exceed 2.5 mg</li> </ul>

Medicinal product by therapeutic areas	Effects on concentrations. Mean percent change in AUC, C <sub>max</sub>	Recommendation concerning co-administration with lenacapavir
<b><i>CORTICOSTEROIDS (systemic)</i></b>		
Dexamethasone Hydrocortisone/cortisone	Interaction not studied.  Plasma concentrations of corticosteroids may be increased when co-administered with lenacapavir.  Plasma concentrations of lenacapavir may decrease when co-administered with systemic dexamethasone.	Co-administration of lenacapavir with corticosteroids whose exposures are significantly increased by CYP3A inhibitors can increase the risk for Cushing's syndrome and adrenal suppression. Initiate with the lowest starting dose and titrate carefully while monitoring for safety.  Caution is warranted when systemic dexamethasone is co-administered with lenacapavir, particularly for long-term use. Alternative corticosteroids should be considered.
<b><i>HMG-CoA REDUCTASE INHIBITORS</i></b>		
Lovastatin Simvastatin	Interaction not studied.  Plasma concentrations of these medicinal products may be increased when co-administered with lenacapavir.	Initiate lovastatin and simvastatin with the lowest starting dose and titrate carefully while monitoring for safety (e.g. myopathy).
Atorvastatin		No dose adjustment of atorvastatin is required.
Pitavastatin <sup>c,e</sup> (2 mg single dose; simultaneous or 3 days after lenacapavir) (substrate of OATP)	Pitavastatin: AUC:↔ C <sub>max</sub> :↔	No dose adjustment of pitavastatin and rosuvastatin is required.
Rosuvastatin <sup>c,e</sup> (5 mg single dose) (substrate of BCRP and OATP)	Rosuvastatin: AUC:↑ 31% C <sub>max</sub> :↑ 57%	
<b><i>ANTIARRHYTHMICS</i></b>		
Digoxin	Interaction not studied.  Plasma concentration of digoxin may be increased when co-administered with lenacapavir.	Caution is warranted and therapeutic concentration monitoring of digoxin is recommended.

Medicinal product by therapeutic areas	Effects on concentrations. Mean percent change in AUC, C <sub>max</sub>	Recommendation concerning co-administration with lenacapavir
<b>SEDATIVES/HYPNOTICS</b>		
Midazolam <sup>c,e</sup> (2.5 mg single dose; oral; simultaneous administration) (substrate of CYP3A)	Midazolam: AUC: ↑ 259% C <sub>max</sub> : ↑ 94%  1-hydroxymidazolam <sup>g</sup> : AUC: ↓ 24% C <sub>max</sub> : ↓ 46%	Caution is warranted when midazolam or triazolam, is co-administered with lenacapavir.
Midazolam <sup>c,e</sup> (2.5 mg single dose; oral; 1 day after lenacapavir) (substrate of CYP3A)	Midazolam: AUC: ↑ 308% C <sub>max</sub> : ↑ 116%  1-hydroxymidazolam <sup>g</sup> : AUC: ↓ 16% C <sub>max</sub> : ↓ 48%	
Triazolam	Interaction not studied.  Plasma concentration of triazolam may be increased when co-administered with lenacapavir.	
<b>ANTICOAGULANTS</b>		
Direct Oral Anticoagulants (DOACs) Rivaroxaban Dabigatran Edoxaban	Interaction not studied.  Plasma concentration of DOAC may be increased when co-administered with lenacapavir.	Due to potential bleeding risk, dose adjustment of DOAC may be required. Consult the Summary of Product Characteristics of the DOAC for further information on use in combination with moderate CYP3A inhibitors and/or P-gp inhibitors.
<b>ANTIFUNGALS</b>		
Voriconazole <sup>a,b,h</sup> (400 mg twice daily/200 mg twice daily) (strong CYP3A inhibitor)	Lenacapavir: AUC: ↑ 41% C <sub>max</sub> : ↔	No dose adjustment of lenacapavir is required.
Itraconazole Ketoconazole	Interaction not studied.  Plasma concentration of lenacapavir may be increased when co-administered with itraconazole or ketoconazole.	
<b>H2-RECEPTOR ANTAGONISTS</b>		
Famotidine <sup>a,b</sup> (40 mg once daily, 2 hours before lenacapavir)	Famotidine: AUC: ↑ 28% C <sub>max</sub> : ↔	No dose adjustment of famotidine is required.

Medicinal product by therapeutic areas	Effects on concentrations. Mean percent change in AUC, C <sub>max</sub>	Recommendation concerning co-administration with lenacapavir
<b>ORAL OR LONG-ACTING CONTRACEPTIVES</b>		
Long-acting contraceptives: Medroxyprogesterone acetate Etonogestrel Norethisterone enanthate	Observed data does not indicate clinically relevant changes in the exposure of long-acting contraceptives.	No dose adjustment of oral or long-acting contraceptives is required.
Oral contraceptives: Ethinylestradiol Progestins	Interaction not studied.  Plasma concentrations of oral contraceptives may be increased when co-administered with lenacapavir.	
<b>GENDER AFFIRMING HORMONES (feminising or masculinising)</b>		
Estradiol Testosterone	Observed data does not indicate clinically relevant changes in the exposure of estradiol and testosterone.	No dose adjustment of these gender affirming hormones is required.
Anti-androgens Progestogen	Interaction not studied.  Plasma concentrations of these medicinal products may be increased when co-administered with lenacapavir.	

- a Fasted.
- b This study was conducted using lenacapavir 300 mg single dose administered orally.
- c Fed.
- d These antiretroviral medicinal products are probes for the referenced enzymes/transporters and are not to be co-administered with lenacapavir for PrEP.
- e This study was conducted using lenacapavir 600 mg single dose following a loading regimen of 600 mg twice daily for 2 days, single 600 mg doses of lenacapavir were administered orally with each co-administered medicinal product.
- f Tenofovir alafenamide is converted to tenofovir *in vivo*.
- g Major active metabolite of midazolam.
- h This study was conducted using voriconazole 400 mg loading dose twice daily for a day, followed by 200 mg maintenance dose twice daily.

## 4.6 Fertility, pregnancy and lactation

### Individuals of childbearing potential

If an individual plans a pregnancy, the benefits and the risks of initiating or continuing Yeytuo during pregnancy should be discussed.

### Pregnancy

There are limited data (130 birth outcomes) from the use of lenacapavir in pregnant women. The rates of adverse pregnancy outcomes in participants who received Yeytuo were similar to reported background rates.

Animal studies do not indicate direct or indirect harmful effects with respect to reproductive toxicity (see section 5.3).

Yeytuo may be considered during pregnancy if the expected benefit outweighs the potential risk to the foetus.

#### Breast-feeding

Lenacapavir is present in human milk. Lenacapavir was detected at low levels in infants who were breastfed by individuals who became pregnant while receiving Yeytuo (see section 5.2). There is insufficient information on the effects of lenacapavir in newborns/infants.

Yeytuo may be considered during breastfeeding if the expected benefit outweighs the potential risk to the child.

#### Fertility

There are no data on the effects of lenacapavir on human male or female fertility. Animal studies indicate no effects of lenacapavir on male or female fertility (see section 5.3).

### **4.7 Effects on ability to drive and use machines**

Yeytuo is expected to have no or negligible influence on the ability to drive and use machines.

### **4.8 Undesirable effects**

No adverse reactions to lenacapavir taken orally were identified in adults or adolescents in PURPOSE 1 and PURPOSE 2.

#### Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the *Yellow Card Scheme*, Website: [www.mhra.gov.uk/yellowcard](http://www.mhra.gov.uk/yellowcard) or search for *MHRA Yellow Card* in the Google Play or Apple App Store.

### **4.9 Overdose**

If overdose occurs the individual must be monitored for signs or symptoms of adverse reactions. Treatment of overdose with Yeytuo consists of general supportive measures including monitoring of vital signs as well as observation of the clinical status of the individual. As lenacapavir is highly protein bound, it is unlikely to be significantly removed by dialysis.

## **5 PHARMACOLOGICAL PROPERTIES**

### **5.1 Pharmacodynamic properties**

Pharmacotherapeutic group: Antivirals for systemic use, other antivirals, ATC code: J05AX31

#### Mechanism of action

Lenacapavir is a multistage, selective inhibitor of HIV-1 capsid function that directly binds to the interface between capsid protein (CA) subunits. Lenacapavir inhibits HIV-1 replication by interfering with multiple, essential steps of the viral lifecycle, including capsid-mediated nuclear uptake of HIV-1 proviral DNA (by blocking nuclear import proteins binding to capsid), virus assembly and release (by interfering with Gag/Gag-Pol functioning, reducing production of CA subunits), and capsid core formation (by disrupting the rate of capsid subunit association, leading to malformed capsids).

#### Antiviral activity and selectivity *in vitro*

The antiviral activity of lenacapavir against laboratory and clinical isolates of HIV-1 was assessed in lymphoblastoid cell lines, PBMCs, primary monocyte/macrophage cells, and CD4+ T-lymphocytes. The EC<sub>50</sub> and selectivity (CC<sub>50</sub>/EC<sub>50</sub>) values ranged from 30 to 190 pM and 140,000 to >1,670,000, respectively, for wild-type (WT) HIV-1 virus. The protein-adjusted EC<sub>95</sub> for lenacapavir was 4 nM (3.87 ng per mL) in the MT-4 T-cell line for wild-type HIV-1 virus.

Lenacapavir displayed antiviral activity in cell culture against all HIV-1 groups (M, N, O), including subtypes A, A1, AE, AG, B, BF, C, D, E, F, G, H.

Lenacapavir was 15- to 25-fold less active against HIV-2 isolates relative to HIV-1.

#### Resistance

##### *In cell culture*

HIV-1 variants with reduced susceptibility to lenacapavir have been selected in cell culture. *In vitro* resistance selections with lenacapavir identified 7 mutations in CA: L56I, M66I, Q67H, K70N, N74D/S, and T107N singly or in dual combination. Phenotypic susceptibility to lenacapavir was reduced 4- to >3,226-fold, relative to WT virus.

### *In clinical trials*

There were 2 incident infections (infections that occurred after starting lenacapavir for HIV-1 PrEP) among participants in the lenacapavir group of the PURPOSE 1 trial. Both infections occurred after the time of the primary analysis. Genotyping of virus in one of the participants revealed no lenacapavir resistance-associated capsid substitutions. The second participant had viral loads that were too low for genotyping.

There were 3 incident infections among participants in the lenacapavir group of the PURPOSE 2 trial. One of the infections occurred after the time of the primary analysis. Lenacapavir resistance-associated substitutions were detected in viruses from the 3 participants, 2 with N74D, and 1 with Q67H/K70R.

### *Cross resistance*

The *in vitro* antiviral activity of lenacapavir was determined against a broad spectrum of HIV-1 site-directed mutants and patient-derived HIV-1 isolates with resistance to the 4 main classes of antiretroviral agents (NRTIs, NNRTIs, INSTIs and PIs; n = 58), as well as to viruses resistant to maturation inhibitors (n = 32), and to viruses resistant to the entry inhibitors (EI) class (fostemsavir, ibalizumab, maraviroc, and enfuvirtide; n = 42). These data indicated that lenacapavir remained fully active against all variants tested, thereby demonstrating a non-overlapping resistance profile. In addition, the antiviral activity of lenacapavir in patient isolates was unaffected by the presence of naturally occurring Gag polymorphisms.

### Effects on electrocardiogram

In a parallel-design thorough QT/QTc study, lenacapavir had no clinically relevant effect on the QTcF interval. At supratherapeutic exposures of lenacapavir (16-fold higher than the therapeutic exposures of lenacapavir), the predicted mean (upper 90% confidence interval) increase in QTcF interval was 2.6 (4.8) msec, and there was no association (p = 0.36) between observed lenacapavir plasma concentrations and change in QTcF.

### Clinical data

The efficacy and safety of lenacapavir in preventing the acquisition of HIV-1 were evaluated in two randomised, double-blind, active-controlled, multinational trials (PURPOSE 1 and PURPOSE 2).

### *PURPOSE 1*

This study was conducted in sexually active cisgender women. Participants were randomised to receive lenacapavir per the recommended dosing schedule (see Table 1, section 4.2 in the Yeytuo solution for injection SmPC; n = 2134), once daily emtricitabine/tenofovir alafenamide (FTC/TAF) (n = 2136), or once daily emtricitabine/tenofovir disoproxil fumarate (FTC/TDF) (n = 1068) in a 2:2:1 ratio.

The median age of participants was 21 years (range, 16-26); and 99.9% were

Black. Baseline characteristics in the randomised participants were similar to the screened population.

The efficacy of lenacapavir was established by comparing the HIV-1 incidence in the lenacapavir group to the HIV-1 incidence in the FTC/TDF group. Incident HIV-1 infections were observed in none (0%) of the participants in the lenacapavir group compared to 16 (1.5%) participants in the FTC/TDF group. Lenacapavir demonstrated superiority with a 100% reduction in the risk of HIV-1 acquisition over FTC/TDF (Table 3).

**Table 3: Overall HIV-1 Infection Outcomes in PURPOSE 1**

	<b>Lenacapavir n = 2134</b>	<b>FTC/TDF n = 1068</b>	<b>Rate Ratio (95% CI)</b>
<b>Person-years</b>	1939	949	-
<b>HIV-1 infections (incidence rate per 100 person-years)</b>	0 (0.00)	16 (1.69)	Lenacapavir/ FTC/TDF: 0.000 (0.000, 0.101) p < 0.0001

CI = confidence interval

#### *PURPOSE 2*

This study was conducted in sexually active cisgender men, transgender women, transgender men, and gender nonbinary individuals. Participants were randomised to receive lenacapavir per the recommended dosing schedule (see Table 1, section 4.2 in the Yeytuo solution for injection SmPC; n = 2179) or once daily FTC/TDF (n = 1086) in a 2:1 ratio.

The median age of participants was 29 years (range, 17-74); 33% were White; 27% were Black, 13% were Asian; 63% were Hispanic/Latine; 22% identified as gender-diverse (transgender women, transgender men, and gender nonbinary people); and 1% were over 65 years. Baseline characteristics in the randomised participants were similar to the screened population.

The efficacy of lenacapavir was established by comparing the HIV-1 incidence in the lenacapavir group to the HIV-1 incidence in the FTC/TDF group. Incident HIV-1 infections were observed in 2 (0.1%) participants in the lenacapavir group compared to 9 (0.8%) participants in the FTC/TDF group. Lenacapavir demonstrated superiority with an 89% reduction over FTC/TDF (Table 4). HIV-1 infections in the two participants receiving lenacapavir were diagnosed using standard serologic HIV testing.

**Table 4: Overall HIV-1 Infection Outcomes in PURPOSE 2**

	<b>Lenacapavir n = 2179</b>	<b>FTC/TDF n = 1086</b>	<b>Rate Ratio (95% CI)</b>
<b>Person-years</b>	1938	967	-
<b>HIV-1 infections (incidence rate per 100 person-years)</b>	2 (0.1)	9 (0.93)	Lenacapavir/ FTC/TDF: 0.111 (0.024, 0.513) p = 0.00245

CI = confidence interval

## **5.2 Pharmacokinetic properties**

## Absorption

### *Subcutaneous administration*

Absolute bioavailability of lenacapavir following subcutaneous administration was 91% based on population pharmacokinetic analysis. Subcutaneously administered lenacapavir forms a drug depot whereby lenacapavir is slowly released from the site of administration, with peak plasma concentrations occurring 84 days post dose.

### *Oral administration*

Lenacapavir is absorbed following oral administration with peak plasma concentrations occurring approximately 4 hours after administration of lenacapavir. Absolute bioavailability following oral administration of lenacapavir is low based on population pharmacokinetic analysis (approximately 4 to 7%). Lenacapavir is a substrate of P-gp.

Lenacapavir AUC,  $C_{max}$  and  $T_{max}$  were comparable following administration of a low fat (~400 kcal, 25% fat) or high fat (~1000 kcal, 50% fat) meal relative to fasted conditions. Oral lenacapavir can be administered without regard to food.

### *Pharmacokinetic parameters*

The population pharmacokinetic parameter estimates of lenacapavir after oral and subcutaneous administration to adult and adolescent (weighing at least 35 kg) participants are provided in Table 5. Similar exposures are achieved when lenacapavir is administered subcutaneously in the abdomen or thigh.

**Table 5: Pharmacokinetic parameters of lenacapavir following oral and subcutaneous administration to adult and adolescent participants receiving Yeytuo**

Parameter Mean (%CV) <sup>a,b</sup>	Day 1 to end of Week 26	Steady State
AUC <sub>tau</sub> (h•ng/mL)	188112 (41.0)	257332 (38.7)
$C_{max}$ (ng/mL)	73.8 (55.6)	82.5 (48.4)
$C_{trough}$ (ng/mL)	27.0 (58.3)	37.0 (60.7)

CV = Coefficient of Variation

a Simulated exposures utilising population PK analysis.

b Mean lenacapavir plasma concentrations reached inhibitory quotient 4 (IQ4; 4-fold greater than the *in vitro* protein adjusted 95% effective concentration) associated with significant antiviral activity by Day 2 of the required initiation dosing and were maintained above IQ4 through the dosing interval of 26 weeks.

## Distribution

Lenacapavir steady state volume of distribution was 1657 litres based on population pharmacokinetic analysis. Lenacapavir is highly bound to plasma proteins (99.8%).

### Biotransformation

Following a single intravenous dose of radiolabelled-lenacapavir to healthy subjects, 76% of the total radioactivity was recovered from faeces and < 1% from urine. Unchanged lenacapavir was the predominant moiety in plasma (69%) and faeces (33%). Metabolism played a lesser role in lenacapavir elimination. Lenacapavir was metabolised via oxidation, N-dealkylation, hydrogenation, amide hydrolysis, glucuronidation, hexose conjugation, pentose conjugation, and glutathione conjugation; primarily via CYP3A and UGT1A1. No single circulating metabolite accounted for > 10% of plasma drug-related exposure.

### Elimination

The median half-life following oral and subcutaneous administration ranged from 10 to 12 days, and 8 to 12 weeks, respectively. Systemic clearance of lenacapavir was 3.4 L/h based on population pharmacokinetic analysis.

### Linearity/non-linearity

The single dose pharmacokinetics of lenacapavir after oral administration are non-linear and less than dose proportional over the dose range of 50 to 1800 mg.

The single dose pharmacokinetics of lenacapavir after subcutaneous injection (309 mg/mL) are dose proportional over the dose range of 309 to 927 mg.

### Other special population

#### *Age, sex, gender identity, race, ethnicity, and weight*

Population pharmacokinetic analysis using data from trials in adults, including a limited number of elderly participants (n = 19; ≥ 65 to 78 years), and adolescents weighing at least 35 kg did not identify any clinically relevant differences in the exposure of lenacapavir due to age, sex assigned at birth, gender identity, race, ethnicity, or weight.

#### *Hepatic impairment*

The pharmacokinetics of a single 300 mg oral dose of lenacapavir were evaluated in a dedicated Phase 1 trial in participants with moderate hepatic impairment (Child-Pugh Class B). Lenacapavir mean exposures (total and unbound) were 1.47- to 2.84-fold and 2.61- to 5.03-fold higher for AUC<sub>inf</sub> and C<sub>max</sub>, respectively in individuals with moderate hepatic impairment (Child-Pugh B) compared to participants with normal hepatic function. However, this increase is not considered clinically relevant based on lenacapavir exposure-response. The pharmacokinetics of lenacapavir have not been studied in individuals with severe hepatic impairment (Child-Pugh C) (see section 4.2).

#### *Renal impairment*

The pharmacokinetics of a single 300 mg oral dose of lenacapavir were evaluated in a dedicated study in participants with severe renal impairment (estimated creatinine clearance  $\geq 15$  and  $< 30$  mL/minute). Lenacapavir exposures were increased (84% and 162% for  $AUC_{inf}$  and  $C_{max}$ , respectively) in participants with severe renal impairment compared with participants with normal renal function; however, the increase was not considered clinically relevant. The pharmacokinetics of lenacapavir have not been studied in individuals with end-stage renal disease, including those on dialysis (see section 4.2). As lenacapavir is approximately 99.8% protein bound, dialysis is not expected to alter exposures of lenacapavir.

#### *Pregnancy*

No clinically relevant changes in lenacapavir exposure during pregnancy and postpartum were observed compared to lenacapavir exposures in non-pregnant participants.

#### *Lactation*

The median (Q1, Q3) lenacapavir concentration in human breast milk to maternal plasma ratio in participants (n = 102 matched pairs) who received Yeytuo was 0.52 (0.38, 0.77). The median (Q1, Q3) infant plasma concentration (n = 98) was 1.63 ng/mL (0.87, 2.85) as compared to the median (Q1, Q3) matched maternal plasma concentration (n = 96) of 65.65 ng/ml (46.00, 91.10). The median (Q1, Q3) infant-to-mother plasma ratio for lenacapavir in infants (n = 98 matched pairs) who were breastfed by participants receiving Yeytuo was 0.02 (0.01, 0.05).

### **5.3 Preclinical safety data**

Non-clinical data revealed no special hazard for humans based on conventional studies of safety pharmacology, repeated dose toxicity, genotoxicity, toxicity to reproduction and development.

Lenacapavir was not mutagenic or clastogenic in conventional genotoxicity assays.

Lenacapavir was not carcinogenic in a 6-month rasH2 transgenic mouse study at doses of up to 300 mg/kg/dose once every 13 weeks, which resulted in exposures approximately 88 times the exposure in humans at the recommended human dose (RHD).

In a 2-year rat carcinogenicity study, there were lenacapavir-treatment induced subcutaneous primary sarcomas associated with fibrosis and inflammation present at the injection sites in animals administered 927 mg/kg/dose once every 13 weeks. 11/110 animals manifested sarcomas at the high dose where each animal had up to 16 injection sites – corresponding to an incidence of  $<1\%$  total injection sites across animals at the high dose. Drug concentrations in the injection depot sites are difficult to determine but systemically, the 927 mg/kg dose corresponds to 44 times the exposure in humans at the RHD.

At the no-observed-adverse-effect level (NOAEL), the 309 mg/kg/dose corresponds to 25 times the exposure in humans at the RHD. Rats are prone to sarcoma formation at the subcutaneous injection site, but a clinical relevance cannot be excluded considering the long duration of the drug depot in humans. There were no neoplasms associated with systemic exposure to lenacapavir at any dose.

In offspring from rat and rabbit dams treated with lenacapavir during pregnancy, there were no toxicologically significant effects on developmental endpoints.

In rats, male and female fertility was not affected at lenacapavir exposures up to 9 (male) and 6 (female) times the human exposure at the RHD. In rats and rabbits, embryofetal development was not affected at exposures up to 20 and 159 times the human exposure, respectively, at the RHD. In rats, pre- and postnatal development was not affected at exposures up to 6 times the human exposure at the RHD.

## **6 PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

#### Tablet core

Mannitol (E421)  
Microcrystalline cellulose (E460)  
Croscarmellose sodium (E468)  
Copovidone  
Magnesium stearate (E572)  
Poloxamer

#### Film coat

Polyvinyl alcohol (E1203)  
Titanium dioxide (E171)  
Macrogol (E1521)  
Talc (E553b)  
Iron oxide yellow (E172)  
Iron oxide black (E172)  
Iron oxide red (E172)

### **6.2 Incompatibilities**

Not applicable.

### **6.3 Shelf life**

3 years

### **6.4 Special precautions for storage**

This medicinal product does not require any special temperature storage conditions. Store in the original package in order to protect from moisture.

### **6.5 Nature and contents of container**

Yeytuo tablets are packaged in white high-density polyethylene (HDPE) bottle containing polyester coil and silica gel desiccant. Each bottle is capped using a white, continuous thread, child-resistant polypropylene screw cap with an induction sealed, aluminium-faced liner. Pack size of 4 tablets.

### **6.6 Special precautions for disposal**

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

## **7 MARKETING AUTHORISATION HOLDER**

Gilead Sciences Ltd  
280 High Holborn  
London  
WC1V 7EE  
United Kingdom

## **8 MARKETING AUTHORISATION NUMBER(S)**

PL 11972/0066

## **9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION**

19/12/2025

**10 DATE OF REVISION OF THE TEXT**

19/12/2025