Clinical trial results:
Safety of tenofovir alafenamide (TAF) in patients with a history of tubulopathy on tenofovir disoproxil fumarate (TDF)

Summary

EudraCT number	2016-003345-29
Trial protocol	GB
Global end of trial date	21 July 2023

Results information

Result version number	v1 (current)
This version publication date	13 May 2026
First version publication date	13 May 2026
Summary attachment (see zip file)	FANTA CSR (FANTA_Clinical Study Report_v1.7_Nov2025_FINAL_Signed.pdf)

Trial information

Trial identification

Sponsor protocol code	3568

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	-
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	King's College Hospital NHS Foundation Trust
Sponsor organisation address	Denmark Hill, London, United Kingdom, SE5 9RS
Public contact	Dr Frank Post, Kings College Hospital NHS Foundation Trust, +44 2078485779, frank.post@kcl.ac.uk
Scientific contact	Dr Frank Post, Kings College Hospital NHS Foundation Trust, +44 2078485779, frank.post@kcl.ac.uk

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	No
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	No

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	21 July 2023
Is this the analysis of the primary completion data?	Yes
Primary completion date	21 July 2023
Global end of trial reached?	Yes
Global end of trial date	21 July 2023
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To evaluate the renal and bone safety of TAF in patients with a history of tubulopathy/Fanconi syndrome while receiving TDF

Primary endpoint

- Between study arm difference in change from baseline to week 12 in retinol-binding protein/creatinine ratio (RBPCR)

Secondary endpoints

- Incidence of tubulopathy in the TAF/FTC exposed population (through week 96)
- Between study arm difference in change from baseline in:
  - Renal function and bone turnover markers (week 4, 12)
- Change from baseline in the TAF/FTC exposed population:
  - Renal function and bone turnover markers (week 24, 48, 72, 96)
  - Bone mineral density (week 48, 96)

Protection of trial subjects:

All randomised subjects should remain in follow-up for the duration of the trial for the specified study visits, irrespective of whether or not they continue on their allocated treatment arm, unless the subject withdraws consent from the study, when they will return to routine clinical care and non-study commercial drug supply. All study subjects should be encouraged to continue to attend all study visits and complete all study procedures. If a patient withdraws from the study, data already collected may be used for the analyses unless the patient specifically requests that his/her data are removed from the database.

Background therapy:

DESCOVY (TAF) is a novel formulation of tenofovir with an approximately 90% reduced systemic tenofovir exposure. Clinical trials have demonstrated high efficacy and an improved safety profile of TAF vs. TDF in terms of changes in eGFR and tubular proteinuria . This study aims to examine the safety of DESCOVY in patients with a history of TDF-associated renal tubular disease under careful monitoring of kidney function and with evaluation of bone mineral density

DESCOVY has shown to be safe in patients with mild to moderate renal impairment (CrCl 30-69 mL/min). Establishing the safety of DESCOVY in those previously affected by TDF would help formulate novel regimens with enhanced efficacy, tolerability or convenience for these patients and inform monitoring strategies for those in rich countries and resource limited settings alike.

Evidence for comparator: -

Actual start date of recruitment	01 December 2016
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	Yes

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	United Kingdom: 31
Worldwide total number of subjects	31
EEA total number of subjects	31

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	0
Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	29
From 65 to 84 years	2
85 years and over	0

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

The number of patients screened not specified in CSR, only provided those randomised which the value that was used to populate this.

Pre-assignment period milestones

Number of subjects started	36[1]
Number of subjects completed	31

Pre-assignment subject non-completion reasons

Reason: Number of subjects	Did not meet the inclusion criteria: 4
Reason: Number of subjects	Consent withdrawn by subject: 1

Notes:

[1] - The number of subjects reported to have started the pre-assignment period are not the same as the worldwide number enrolled in the trial. It is expected that these numbers will be the same.
Justification: We do not count screening participants as enrolled

Period 1

Period 1 title	Overall trial (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Not blinded

Blinding implementation details:

Open-label on either of the two arms:

Arm 1: Immediate initiation of DESCOVY, one tablet daily, with investigator-selected NNRTI/PI/INSTI and discontinuation of abacavir, lamivudine/emtricitabine and entecavir or other hepatitis B drugs as appropriate

Arm 2: Deferred initiation (at week 12) of DESCOVY (10 or 25mg), one tablet daily, with investigator-selected NNRTI/PI/INSTI and discontinuation of abacavir, lamivudine/emtricitabine and entecavir or other hepatitis B drugs as appropriate

Arms

Are arms mutually exclusive?	Yes
Arm title	Immediate initiation arm

Arm description:

Immediate initiation of DESCOVY, one tablet daily, with investigator-selected NNRTI/PI/INSTI and discontinuation of abacavir, lamivudine/emtricitabine and entecavir or other hepatitis B drugs as appropriate

Arm type	Experimental
Investigational medicinal product name	DESCOVY
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

Immediate initiation of DESCOVY (10mg/200mg if currently regimen contains ritonavir or cobicistat; 25mg/200mg if current regimen does not contain ritonavir or cobicistat), one tablet daily, with continued use* of current NNRTI/PI/INSTI and discontinuation of abacavir, lamivudine/emtricitabine, and entecavir or other hepatitis B drugs as appropriate (*changes in NNRTI/PI/INSTI are allowed after

week 12)

Arm title	Deferred initiation (at week 12) of DESCOVY

Arm description:

Deferred initiation (at week 12) of DESCOVY (10 or 25mg), one tablet daily, with investigator-selected NNRTI/PI/INSTI and discontinuation of abacavir, lamivudine/emtricitabine and entecavir or other hepatitis B drugs as appropriate

Arm type	Active comparator
Investigational medicinal product name	DESCOVY
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

DESCOVY (10mg/200mg if currently regimen contains ritonavir or cobicistat; 25mg/200mg if current regimen does not contain ritonavir or cobicistat), one tablet daily, with continued use* of current NNRTI/PI/INSTI and discontinuation of abacavir, lamivudine/emtricitabine, and entecavir or other hepatitis B drugs as appropriate (*changes in NNRTI/PI/INSTI are allowed after week 12)

Number of subjects in period 1	Immediate initiation arm	Deferred initiation (at week 12) of DESCOVY
Started	17	14
Completed	15	13
Not completed	2	1
Discontinued treatment	2	-
Transient HIV viraemia (200 – 1000 copies/mL)	-	1

Baseline characteristics

Reporting groups	
Reporting group title	Overall trial

Reporting group description: -

Reporting group values	Overall trial	Total	
Number of subjects	31	31	
Age categorical Units: Subjects			
In utero	0	0	
Preterm newborn infants (gestational age < 37 wks)	0	0	
Newborns (0-27 days)	0	0	
Infants and toddlers (28 days-23 months)	0	0	
Children (2-11 years)	0	0	
Adolescents (12-17 years)	0	0	
Adults (18-64 years)	29	29	
Elderly (≥65 years)	2	2	
Gender categorical Units: Subjects			
Female	1	1	
Male	30	30	

End points

End points reporting groups

Reporting group title	Immediate initiation arm

Reporting group description:

Immediate initiation of DESCOVY, one tablet daily, with investigator-selected NNRTI/PI/INSTI and discontinuation of abacavir, lamivudine/emtricitabine and entecavir or other hepatitis B drugs as appropriate

Reporting group title	Deferred initiation (at week 12) of DESCOVY

Reporting group description:

Deferred initiation (at week 12) of DESCOVY (10 or 25mg), one tablet daily, with investigator-selected NNRTI/PI/INSTI and discontinuation of abacavir, lamivudine/emtricitabine and entecavir or other hepatitis B drugs as appropriate

Primary: Cases of recurrent tubulopathy

End point title	Cases of recurrent tubulopathy[1]

End point description:

End point type	Primary

End point timeframe:

From randomisation to end of follow-up

Notes:

[1] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: Please see uploaded report

End point values	Immediate initiation arm	Deferred initiation (at week 12) of DESCOVY		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	17	14		
Units: cases	0	0		

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information	
Timeframe for reporting adverse events:	
Randomisation to end of follow-up	
Assessment type	Systematic

Dictionary used	
Dictionary name	Not specified in CSR
Dictionary version	N/A

Reporting groups	
Reporting group title	Immediate initiation arm
Reporting group description:	
Immediate initiation of DESCOVY, one tablet daily, with investigator-selected NNRTI/PI/INSTI and discontinuation of abacavir, lamivudine/emtricitabine and entecavir or other hepatitis B drugs as appropriate	
Reporting group title	Deferred initiation (at week 12) of DESCOVY
Reporting group description:	
Deferred initiation (at week 12) of DESCOVY (10 or 25mg), one tablet daily, with investigator-selected NNRTI/PI/INSTI and discontinuation of abacavir, lamivudine/emtricitabine and entecavir or other hepatitis B drugs as appropriate	

Serious adverse events	Immediate initiation arm	Deferred initiation (at week 12) of DESCOVY	
Total subjects affected by serious adverse events			
subjects affected / exposed	9 / 17 (52.94%)	2 / 14 (14.29%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	
Injury, poisoning and procedural complications			
Fractures			
subjects affected / exposed	1 / 17 (5.88%)	0 / 14 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Nervous system disorders			
Alcohol withdrawal symptoms			
subjects affected / exposed	1 / 17 (5.88%)	0 / 14 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastrointestinal disorders			
Acute pancreatitis			

subjects affected / exposed	1 / 17 (5.88%)	0 / 14 (0.00%)	
occurrences causally related to treatment / all	0 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Respiratory, thoracic and mediastinal disorders			
Chest infection, Pneumonia, Respiratory failure, Exacerbation of COPD			
subjects affected / exposed	2 / 17 (11.76%)	1 / 14 (7.14%)	
occurrences causally related to treatment / all	0 / 7	0 / 11	
deaths causally related to treatment / all	0 / 0	0 / 0	
Skin and subcutaneous tissue disorders			
Cellulitis, Abscess			
subjects affected / exposed	2 / 17 (11.76%)	0 / 14 (0.00%)	
occurrences causally related to treatment / all	0 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Psychiatric disorders			
Suicidal ideation			
subjects affected / exposed	1 / 17 (5.88%)	0 / 14 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Musculoskeletal and connective tissue disorders			
Right hip pain, Torn Achilles tendon			
subjects affected / exposed	1 / 17 (5.88%)	1 / 14 (7.14%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	

Frequency threshold for reporting non-serious adverse events: 0 %

Non-serious adverse events	Immediate initiation arm	Deferred initiation (at week 12) of DESCOVY	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	17 / 17 (100.00%)	14 / 14 (100.00%)	
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Squamous cell carcinoma, Polycythaemia			

subjects affected / exposed	2 / 17 (11.76%)	0 / 14 (0.00%)	
occurrences (all)	2	0	
Vascular disorders			
Hypertension			
subjects affected / exposed	2 / 17 (11.76%)	2 / 14 (14.29%)	
occurrences (all)	2	2	
Surgical and medical procedures			
Tooth Extraction, CT guided nerve root block			
subjects affected / exposed	0 / 17 (0.00%)	2 / 14 (14.29%)	
occurrences (all)	0	2	
General disorders and administration site conditions			
Chills, Tiredness, Fatigue, Fever, Temperature, Leg Swelling			
subjects affected / exposed	4 / 17 (23.53%)	1 / 14 (7.14%)	
occurrences (all)	5	1	
Immune system disorders			
Hayfever			
subjects affected / exposed	1 / 17 (5.88%)	0 / 14 (0.00%)	
occurrences (all)	1	0	
Reproductive system and breast disorders			
Nipple pain, Itching foreskin, Testicular pain , Swollen penis head			
subjects affected / exposed	2 / 17 (11.76%)	2 / 14 (14.29%)	
occurrences (all)	2	2	
Respiratory, thoracic and mediastinal disorders			
Respiratory, thoracic and mediastinal disorders	Additional description: Dental abscess, Root Canal, Flu, Cold, Cough, Oral thrush, Asthma, Chest infection, Coryzal symptoms, Tonsillitis, Nose bleeding, Upper respiratory tract infection, Breathlessness, Dental work, Sinus infection, Infective exacerbation COPD, Epitaxis		
subjects affected / exposed	10 / 17 (58.82%)	11 / 14 (78.57%)	
occurrences (all)	27	22	
Psychiatric disorders			
Low mood, Vivid dreams, Memory problems, Depression, Concentration difficulties, Insomnia			
subjects affected / exposed	1 / 17 (5.88%)	5 / 14 (35.71%)	
occurrences (all)	1	9	
Investigations			
Deranged UPCR / UACR, Abnormal LFTs			

subjects affected / exposed	2 / 17 (11.76%)	0 / 14 (0.00%)	
occurrences (all)	2	0	
Injury, poisoning and procedural complications			
Fall on stairs, Pain post fall, Aches from fall, Bike accident			
subjects affected / exposed	0 / 17 (0.00%)	3 / 14 (21.43%)	
occurrences (all)	0	4	
Cardiac disorders			
Atypical chest pain, Fainting episode			
subjects affected / exposed	0 / 17 (0.00%)	2 / 14 (14.29%)	
occurrences (all)	0	2	
Nervous system disorders			
Nervous system disorders	Additional description: *Dizziness *Peripheral neuropathy *Headache *Leg numbness *Transient global amnesia *Worsening short term memory *Blackouts *Seizures *Daytime somnolence		
subjects affected / exposed	6 / 17 (35.29%)	6 / 14 (42.86%)	
occurrences (all)	6	11	
Ear and labyrinth disorders			
Labyrinthitis			
subjects affected / exposed	0 / 17 (0.00%)	1 / 14 (7.14%)	
occurrences (all)	0	1	
Eye disorders			
Floater left eye, Lens of eye opacification, Genetic peripheral retinal atrophy, MSSA Eyes			
subjects affected / exposed	4 / 17 (23.53%)	0 / 14 (0.00%)	
occurrences (all)	4	0	
Gastrointestinal disorders			
Gastrointestinal disorders	Additional description: Heartburn, Gastroenteritis, Diarrhoea, Nausea, Norovirus, Vomiting, Cramping, Aphthous ulcer, Stomach discomfort, Hemorrhoids, Stool darkening, Mouth dryness, Looser stool, Gastritis, Constipation, Lower abdominal discomfort, Abdominal bloating		
subjects affected / exposed	8 / 17 (47.06%)	8 / 14 (57.14%)	
occurrences (all)	12	19	
Skin and subcutaneous tissue disorders			
Skin and subcutaneous tissue disorders	Additional description: *Skin infection *Cellulitis *Seborrheic warts *Ingrown hair *Dermatitis *Nail infection *Psoriasis *Rash *Cyst *Multiple small wounds *Sporotrichosis *Echtym / MSSA		

	*Night sweats *Itchiness no rash *Back lump		
subjects affected / exposed	6 / 17 (35.29%)	5 / 14 (35.71%)	
occurrences (all)	15	5	
Renal and urinary disorders			
Renal and urinary disorders	Additional description: *Haematuria *Urinary frequency *Urinary tract infection *Kidney pain *Acute urinary retention *Renal stones *Benign prostatic hypertrophy *Nocturia *Drop>25% in eGFR		
subjects affected / exposed	4 / 17 (23.53%)	7 / 14 (50.00%)	
occurrences (all)	5	9	
Musculoskeletal and connective tissue disorders			
Musculoskeletal and connective tissue disorders	Additional description: *Left flank pain *Back pain *Knee pain *Shoulder pain *Hip pain *Finger pain *Joint pain *Gout *Osteopenia *Bilateral sacroiliitis *Sciatica *Strained tendon *Weakness *Torn knee cartilage *Arthralgia		
subjects affected / exposed	9 / 17 (52.94%)	11 / 14 (78.57%)	
occurrences (all)	15	22	
Infections and infestations			
Infections and infestations	Additional description: *Gonorrhoea (throat) *Non-gonoccocal urethritis *Possible Syphilis *Tooth infection *Rectal chlamydia *Right lower gum infection *Viral URTI *Genital, Oral, Perianal HSV *Pharyngeal candida		
subjects affected / exposed	2 / 17 (11.76%)	7 / 14 (50.00%)	
occurrences (all)	3	13	
Metabolism and nutrition disorders			
Metabolism and nutritional disorders	Additional description: *Vitamin D deficiency *Folate deficiency *Hypercho- lesterolaemia *Mixed hyper- lipidemia *Glucose intolerance *Weight gain *Low plasma folate		
subjects affected / exposed	1 / 17 (5.88%)	5 / 14 (35.71%)	
occurrences (all)	1	8	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? No

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported