



Clinical trial results:

Combined Prevention of Sexually Transmitted Infections (STIs) in Men Who Have Sex with Men using oral TDF/FTC for HIV Pre-Exposure Prophylaxis (PrEP)

Summary

EudraCT number	2019-002829-29
Trial protocol	FR
Global end of trial date	26 September 2024

Results information

Result version number	v1 (current)
This version publication date	09 October 2026
First version publication date	09 October 2026

Trial information

Trial identification

Sponsor protocol code	ANRS 174 DOXYVAC
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Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT04597424
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	INSERM ANRS
Sponsor organisation address	2 Rue d'Oradour Sur Glane , PARIS, France, 75015
Public contact	Adèle WEGANG NZEUFO, INSERM ANRS, cdp.clinique@anrs.fr
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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 April 2023
Is this the analysis of the primary completion data?	No
Global end of trial reached?	Yes
Global end of trial date	26 September 2024
Was the trial ended prematurely?	Yes

Notes:

General information about the trial

Main objective of the trial:

- To demonstrate that post-exposure prophylaxis (PEP) with doxycycline reduces the occurrence of a first episode of syphilis or Chlamydia trachomatis
- To demonstrate that the meningococcal B vaccine (Bexsero®) reduces the occurrence of first episode of Neisseria Gonorrhoea

Protection of trial subjects:

This study was conducted in accordance with the updated Declaration of Helsinki, in compliance with the approved protocol and its amendments, the International Council for Harmonisation guideline for Good Clinical Practice (ICH GCP), and French regulatory requirements.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	19 January 2021
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	France: 545
Worldwide total number of subjects	545
EEA total number of subjects	545

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)	536
From 65 to 84 years	9

85 years and over	0
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Subject disposition

Recruitment

Recruitment details:

10 hospital sites in Paris recruited participants from January 19, 2021 to September 19, 2022.
From the 556 participants randomised, only 545 were included in the analysis. 11 participants did not do the mandatory follow-up visit.

Pre-assignment

Screening details:

Inclusion criteria : MSM participating in the ANRS PREVENIR study, taking PrEP for at least 6 months (in the ANRS PREVENIR study or before participating in the ANRS PREVENIR study), no clinical signs of HIV infection and no symptoms of bacterial STI infection

Non-inclusion criteria : HIV infection, history of vaccination with Bexsero

Period 1

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

Arms

Are arms mutually exclusive?	Yes
Arm title	Doxycyclin - Bexsero

Arm description: -

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

Dosage and administration details:

Two 100 mg tablets of doxycycline should be taken orally after each instance of unprotected sex, ideally within 24 hours of sexual intercourse and no later than 72 hours afterward.

Investigational medicinal product name	Bexsero
Investigational medicinal product code	
Other name	Meningococcal Group B Vaccine
Pharmaceutical forms	Injection
Routes of administration	Intramuscular use

Dosage and administration details:

Two doses of the Bexsero vaccine (at the first visit and two months later). The vaccine will be administered by deep intramuscular injection, preferably in the deltoid muscle of the upper arm.

Arm title	Doxycyclin - no Bexsero
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Arm description: -

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

Dosage and administration details:

Two 100 mg tablets of doxycycline should be taken orally after each instance of unprotected sex, ideally within 24 hours of sexual intercourse and no later than 72 hours afterward.

Arm title	No Doxycyclin - Bexsero
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Arm description: -	
Arm type	Experimental
Investigational medicinal product name	Bexsero
Investigational medicinal product code	
Other name	Meningococcal Group B Vaccine
Pharmaceutical forms	Injection
Routes of administration	Intramuscular use
Dosage and administration details:	
Two doses of the Bexsero vaccine (at the first visit and two months later). The vaccine will be administered by deep intramuscular injection, preferably in the deltoid muscle of the upper arm.	
Arm title	No Doxycyclin - no Bexsero
Arm description: -	
Arm type	No intervention
No investigational medicinal product assigned in this arm	

Number of subjects in period 1	Doxycyclin - Bexsero	Doxycyclin - no Bexsero	No Doxycyclin - Bexsero
Started	182	180	93
Completed	170	157	82
Not completed	12	23	11
Adverse event, non-fatal	-	3	-
Participant's decision	3	4	1
In relationship	3	4	1
Lost to follow-up	3	5	5
Moved	3	7	3
HIV +	-	-	1

Number of subjects in period 1	No Doxycyclin - no Bexsero
Started	90
Completed	81
Not completed	9
Adverse event, non-fatal	-
Participant's decision	2
In relationship	1
Lost to follow-up	2
Moved	4
HIV +	-

Baseline characteristics

Reporting groups

Reporting group title	Doxycyclin - Bexsero
Reporting group description: -	
Reporting group title	Doxycyclin - no Bexsero
Reporting group description: -	
Reporting group title	No Doxycyclin - Bexsero
Reporting group description: -	
Reporting group title	No Doxycyclin - no Bexsero
Reporting group description: -	

Reporting group values	Doxycyclin - Bexsero	Doxycyclin - no Bexsero	No Doxycyclin - Bexsero
Number of subjects	182	180	93
Age categorical Units: Subjects			
Adults (18-64 years)	180	176	92
From 65-84 years	2	4	1
85 years and over	0	0	0
Age continuous Units: years			
median	40	41	41
inter-quartile range (Q1-Q3)	33 to 47	35 to 50	35 to 48
Gender categorical Units: Subjects			
Female	0	0	0
Male	182	180	93

Reporting group values	No Doxycyclin - no Bexsero	Total	
Number of subjects	90	545	
Age categorical Units: Subjects			
Adults (18-64 years)	88	536	
From 65-84 years	2	9	
85 years and over	0	0	
Age continuous Units: years			
median	38	-	
inter-quartile range (Q1-Q3)	33 to 47	-	
Gender categorical Units: Subjects			
Female	0	0	
Male	90	545	

End points

End points reporting groups

Reporting group title	Doxycyclin - Bexsero
Reporting group description: -	
Reporting group title	Doxycyclin - no Bexsero
Reporting group description: -	
Reporting group title	No Doxycyclin - Bexsero
Reporting group description: -	
Reporting group title	No Doxycyclin - no Bexsero
Reporting group description: -	
Subject analysis set title	Doxycyclin
Subject analysis set type	Full analysis
Subject analysis set description:	
Arm Doxycyclin-Bexsero (182) + Arm Doxycyclin (180)	
Subject analysis set title	No Doxycyclin
Subject analysis set type	Full analysis
Subject analysis set description:	
Arm Bexsero (93) + Arm No Doxycyclin-No Bexsero (90)	
Subject analysis set title	Bexsero
Subject analysis set type	Full analysis
Subject analysis set description:	
Arm Doxycyclin-Bexsero (182) + Arm Bexsero (93). 1 participant withdrew from the study.	
Subject analysis set title	No Bexsero
Subject analysis set type	Full analysis
Subject analysis set description:	
Arm Doxycyclin (180) + Arm No Doxycyclin-No Bexsero (90)	

Primary: First episode of CT and/or SY after the inclusion visit

End point title	First episode of CT and/or SY after the inclusion visit
End point description:	The primary endpoint for intervention 1 (with or without doxycycline PEP) is the first episode of chlamydia or syphilis after the enrolment visit (D0) (chlamydia and syphilis diagnosed at the enrolment visit will not be included in the primary endpoint).
End point type	Primary
End point timeframe:	January 19, 2021, to February 28, 2023.

End point values	Doxycyclin	No Doxycyclin		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	362	183		
Units: Number of events	35	80		

Statistical analyses

Statistical analysis title	Incidence of first episode of CT and/or SY
Statistical analysis description:	
Incidence of first episode of CT and/or SY after the inclusion visit	
Comparison groups	Doxycyclin v No Doxycyclin
Number of subjects included in analysis	545
Analysis specification	Pre-specified
Analysis type	superiority
P-value	< 0.05
Method	Regression, Cox
Parameter estimate	Hazard Ratio Adjusted
Point estimate	0.17
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.12
upper limit	0.26
Variability estimate	Standard deviation
Dispersion value	0.2

Primary: First episode of NG after the M3 visit

End point title	First episode of NG after the M3 visit
End point description:	
The primary endpoint for intervention 2 (with or without Bexsero® vaccine) is the first episode of gonorrhea reported one month after the second vaccine injection, so starting at the month 3 visit (gonorrhea episodes diagnosed at the enrolment visit and before the month 3 visit will not be included in the primary endpoint).	
End point type	Primary
End point timeframe:	
From January 19, 2021 to February 28, 2023 for participants who completed the M3 visit.	

End point values	Bexsero	No Bexsero		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	274	270		
Units: Number of events	103	122		

Statistical analyses

Statistical analysis title	Incidence of first episode of GC after 3 months
Comparison groups	Bexsero v No Bexsero

Number of subjects included in analysis	544
Analysis specification	Pre-specified
Analysis type	superiority
P-value	< 0.05
Method	Regression, Cox
Parameter estimate	Hazard Ratio Adjusted
Point estimate	0.78
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.6
upper limit	1.01
Variability estimate	Standard deviation
Dispersion value	0.13

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Participants reported adverse events during the entire trial.

Assessment type	Systematic
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Dictionary used

Dictionary name	MedDRA
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Dictionary version	26.0
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Reporting groups

Reporting group title	Doxycyclin - Bexsero
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Reporting group description: -

Reporting group title	Doxycyclin - no Bexsero
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Reporting group description: -

Reporting group title	No Doxycyclin - Bexsero
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Reporting group description: -

Reporting group title	No Doxycyclin - no Bexsero
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Reporting group description: -

Serious adverse events	Doxycyclin - Bexsero	Doxycyclin - no Bexsero	No Doxycyclin - Bexsero
Total subjects affected by serious adverse events			
subjects affected / exposed	40 / 182 (21.98%)	31 / 180 (17.22%)	17 / 93 (18.28%)
number of deaths (all causes)	0	0	0
number of deaths resulting from adverse events	0	0	0
Injury, poisoning and procedural complications			
Femur fracture			
subjects affected / exposed	1 / 182 (0.55%)	0 / 180 (0.00%)	0 / 93 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Cardiac disorders			
Pericardial effusion			
subjects affected / exposed	1 / 182 (0.55%)	0 / 180 (0.00%)	0 / 93 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Hepatobiliary disorders			
Hepatic cytolysis			
subjects affected / exposed	1 / 182 (0.55%)	0 / 180 (0.00%)	0 / 93 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Skin and subcutaneous tissue disorders			
Angioedema			
subjects affected / exposed	0 / 182 (0.00%)	0 / 180 (0.00%)	0 / 93 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Fixed eruption			
subjects affected / exposed	0 / 182 (0.00%)	1 / 180 (0.56%)	0 / 93 (0.00%)
occurrences causally related to treatment / all	0 / 0	1 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Rash maculo-papular			
subjects affected / exposed	1 / 182 (0.55%)	0 / 180 (0.00%)	0 / 93 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Psychiatric disorders			
Dependence			
subjects affected / exposed	0 / 182 (0.00%)	0 / 180 (0.00%)	0 / 93 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Depression			
subjects affected / exposed	1 / 182 (0.55%)	0 / 180 (0.00%)	0 / 93 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Drug dependence			
subjects affected / exposed	1 / 182 (0.55%)	0 / 180 (0.00%)	1 / 93 (1.08%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 2
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Suicide attempt			
subjects affected / exposed	0 / 182 (0.00%)	1 / 180 (0.56%)	0 / 93 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			
Acute hepatitis C			

subjects affected / exposed	1 / 182 (0.55%)	0 / 180 (0.00%)	0 / 93 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Arthritis bacterial			
subjects affected / exposed	0 / 182 (0.00%)	1 / 180 (0.56%)	0 / 93 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Gastroenteritis			
subjects affected / exposed	1 / 182 (0.55%)	0 / 180 (0.00%)	0 / 93 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Hepatitis C			
subjects affected / exposed	1 / 182 (0.55%)	1 / 180 (0.56%)	1 / 93 (1.08%)
occurrences causally related to treatment / all	0 / 1	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
HIV infection			
subjects affected / exposed	0 / 182 (0.00%)	0 / 180 (0.00%)	1 / 93 (1.08%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Monkeypox			
subjects affected / exposed	32 / 182 (17.58%)	27 / 180 (15.00%)	13 / 93 (13.98%)
occurrences causally related to treatment / all	0 / 33	0 / 27	0 / 13
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Streptococcal endocarditis			
subjects affected / exposed	0 / 182 (0.00%)	0 / 180 (0.00%)	1 / 93 (1.08%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Superinfection			
subjects affected / exposed	0 / 182 (0.00%)	0 / 180 (0.00%)	0 / 93 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Urinary tract infection			

subjects affected / exposed	0 / 182 (0.00%)	0 / 180 (0.00%)	1 / 93 (1.08%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Serious adverse events	No Doxycyclin - no Bexsero		
Total subjects affected by serious adverse events			
subjects affected / exposed	13 / 90 (14.44%)		
number of deaths (all causes)	0		
number of deaths resulting from adverse events	0		
Injury, poisoning and procedural complications			
Femur fracture			
subjects affected / exposed	0 / 90 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Cardiac disorders			
Pericardial effusion			
subjects affected / exposed	0 / 90 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Hepatobiliary disorders			
Hepatic cytolysis			
subjects affected / exposed	0 / 90 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Skin and subcutaneous tissue disorders			
Angioedema			
subjects affected / exposed	1 / 90 (1.11%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Fixed eruption			
subjects affected / exposed	0 / 90 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Rash maculo-papular			

subjects affected / exposed	0 / 90 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Psychiatric disorders			
Dependence			
subjects affected / exposed	1 / 90 (1.11%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Depression			
subjects affected / exposed	0 / 90 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Drug dependence			
subjects affected / exposed	0 / 90 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Suicide attempt			
subjects affected / exposed	0 / 90 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Infections and infestations			
Acute hepatitis C			
subjects affected / exposed	0 / 90 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Arthritis bacterial			
subjects affected / exposed	0 / 90 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Gastroenteritis			
subjects affected / exposed	0 / 90 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Hepatitis C			

subjects affected / exposed	0 / 90 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
HIV infection			
subjects affected / exposed	0 / 90 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Monkeypox			
subjects affected / exposed	12 / 90 (13.33%)		
occurrences causally related to treatment / all	0 / 12		
deaths causally related to treatment / all	0 / 0		
Streptococcal endocarditis			
subjects affected / exposed	0 / 90 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Superinfection			
subjects affected / exposed	1 / 90 (1.11%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Urinary tract infection			
subjects affected / exposed	0 / 90 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		

Frequency threshold for reporting non-serious adverse events: 5 %

Non-serious adverse events	Doxycyclin - Bexsero	Doxycyclin - no Bexsero	No Doxycyclin - Bexsero
Total subjects affected by non-serious adverse events			
subjects affected / exposed	160 / 182 (87.91%)	143 / 180 (79.44%)	82 / 93 (88.17%)
Nervous system disorders			
Headache			
subjects affected / exposed	10 / 182 (5.49%)	6 / 180 (3.33%)	6 / 93 (6.45%)
occurrences (all)	13	7	8
General disorders and administration			

site conditions			
Asthenia			
subjects affected / exposed	17 / 182 (9.34%)	20 / 180 (11.11%)	10 / 93 (10.75%)
occurrences (all)	22	21	10
Induration			
subjects affected / exposed	10 / 182 (5.49%)	1 / 180 (0.56%)	5 / 93 (5.38%)
occurrences (all)	11	1	5
Influenza like illness			
subjects affected / exposed	6 / 182 (3.30%)	7 / 180 (3.89%)	3 / 93 (3.23%)
occurrences (all)	6	9	3
Injection site erythema			
subjects affected / exposed	3 / 182 (1.65%)	1 / 180 (0.56%)	4 / 93 (4.30%)
occurrences (all)	3	1	4
Injection site pain			
subjects affected / exposed	65 / 182 (35.71%)	37 / 180 (20.56%)	36 / 93 (38.71%)
occurrences (all)	83	44	43
Nodule			
subjects affected / exposed	4 / 182 (2.20%)	1 / 180 (0.56%)	6 / 93 (6.45%)
occurrences (all)	5	1	6
Oedema			
subjects affected / exposed	6 / 182 (3.30%)	3 / 180 (1.67%)	5 / 93 (5.38%)
occurrences (all)	6	3	5
Pain			
subjects affected / exposed	28 / 182 (15.38%)	11 / 180 (6.11%)	12 / 93 (12.90%)
occurrences (all)	35	12	16
Pyrexia			
subjects affected / exposed	7 / 182 (3.85%)	13 / 180 (7.22%)	4 / 93 (4.30%)
occurrences (all)	7	15	4
Gastrointestinal disorders			
Abdominal pain			
subjects affected / exposed	4 / 182 (2.20%)	9 / 180 (5.00%)	3 / 93 (3.23%)
occurrences (all)	4	10	3
Diarrhoea			
subjects affected / exposed	10 / 182 (5.49%)	9 / 180 (5.00%)	5 / 93 (5.38%)
occurrences (all)	10	10	5
Reproductive system and breast disorders			

Erectile dysfunction subjects affected / exposed occurrences (all)	2 / 182 (1.10%) 2	7 / 180 (3.89%) 11	1 / 93 (1.08%) 1
Respiratory, thoracic and mediastinal disorders Cough subjects affected / exposed occurrences (all)	1 / 182 (0.55%) 1	4 / 180 (2.22%) 4	4 / 93 (4.30%) 4
Skin and subcutaneous tissue disorders Erythema subjects affected / exposed occurrences (all)	11 / 182 (6.04%) 16	4 / 180 (2.22%) 4	4 / 93 (4.30%) 4
Psychiatric disorders Depression subjects affected / exposed occurrences (all)	7 / 182 (3.85%) 7	4 / 180 (2.22%) 5	2 / 93 (2.15%) 2
Musculoskeletal and connective tissue disorders Arthralgia subjects affected / exposed occurrences (all) Myalgia subjects affected / exposed occurrences (all) Pain in extremity subjects affected / exposed occurrences (all)	1 / 182 (0.55%) 1 10 / 182 (5.49%) 11 10 / 182 (5.49%) 12	9 / 180 (5.00%) 10 9 / 180 (5.00%) 10 5 / 180 (2.78%) 5	2 / 93 (2.15%) 2 1 / 93 (1.08%) 1 7 / 93 (7.53%) 9
Infections and infestations Coronavirus infection subjects affected / exposed occurrences (all) Monkeypox subjects affected / exposed occurrences (all) Tonsillitis subjects affected / exposed occurrences (all)	32 / 182 (17.58%) 36 22 / 182 (12.09%) 22 3 / 182 (1.65%) 3	34 / 180 (18.89%) 37 20 / 180 (11.11%) 20 3 / 180 (1.67%) 3	19 / 93 (20.43%) 21 7 / 93 (7.53%) 7 5 / 93 (5.38%) 6

Non-serious adverse events	No Doxycyclin - no		
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	Bexsero		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	73 / 90 (81.11%)		
Nervous system disorders			
Headache			
subjects affected / exposed	1 / 90 (1.11%)		
occurrences (all)	1		
General disorders and administration site conditions			
Asthenia			
subjects affected / exposed	3 / 90 (3.33%)		
occurrences (all)	3		
Induration			
subjects affected / exposed	3 / 90 (3.33%)		
occurrences (all)	3		
Influenza like illness			
subjects affected / exposed	5 / 90 (5.56%)		
occurrences (all)	5		
Injection site erythema			
subjects affected / exposed	0 / 90 (0.00%)		
occurrences (all)	0		
Injection site pain			
subjects affected / exposed	16 / 90 (17.78%)		
occurrences (all)	16		
Nodule			
subjects affected / exposed	1 / 90 (1.11%)		
occurrences (all)	1		
Oedema			
subjects affected / exposed	2 / 90 (2.22%)		
occurrences (all)	2		
Pain			
subjects affected / exposed	9 / 90 (10.00%)		
occurrences (all)	12		
Pyrexia			
subjects affected / exposed	4 / 90 (4.44%)		
occurrences (all)	4		
Gastrointestinal disorders			

Abdominal pain subjects affected / exposed occurrences (all)	3 / 90 (3.33%) 3		
Diarrhoea subjects affected / exposed occurrences (all)	2 / 90 (2.22%) 2		
Reproductive system and breast disorders Erectile dysfunction subjects affected / exposed occurrences (all)	4 / 90 (4.44%) 4		
Respiratory, thoracic and mediastinal disorders Cough subjects affected / exposed occurrences (all)	2 / 90 (2.22%) 2		
Skin and subcutaneous tissue disorders Erythema subjects affected / exposed occurrences (all)	2 / 90 (2.22%) 2		
Psychiatric disorders Depression subjects affected / exposed occurrences (all)	5 / 90 (5.56%) 5		
Musculoskeletal and connective tissue disorders Arthralgia subjects affected / exposed occurrences (all) Myalgia subjects affected / exposed occurrences (all) Pain in extremity subjects affected / exposed occurrences (all)	0 / 90 (0.00%) 0 1 / 90 (1.11%) 1 4 / 90 (4.44%) 5		
Infections and infestations Coronavirus infection subjects affected / exposed occurrences (all)	16 / 90 (17.78%) 16		

Monkeypox			
subjects affected / exposed	8 / 90 (8.89%)		
occurrences (all)	8		
Tonsillitis			
subjects affected / exposed	4 / 90 (4.44%)		
occurrences (all)	4		

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
17 September 2020	The substantial modifications included in the amendment 1 of the protocol are : • Change to the study title. • Change of investigator at one site; resume submitted. • Update to the list of investigational sites • Addition of a secondary objective. • Change to the composition of the CSI: withdrawal of one member from the association (TRT-5), addition of a second STI specialist clinician. • Amendment to the research schedule due to the COVID-19 pandemic (postponed by two quarters). • Amendment regarding the packaging of Doxycycline; information documents amended accordingly. • Addition of the code 'DV' to the participant's code.
14 December 2020	The substantial modifications included in the amendment 2 of the protocol are : • Addition of a representative of people living with HIV and a microbiologist to the oversight committee. • Research schedule postponed by one quarter due to the COVID-19 pandemic. Insurance certificate updated. • New centralization of samples collected in cases of ulceration: Cochin Hospital. • Modification of capillary blood collection procedures.
23 November 2021	The substantial modifications included in the amendment 3 of the protocol are : • Extension of the enrollment period by 12 months. Extended coverage. • Update of the protocol following the creation of the ANRS-Emerging Infectious Diseases Agency (ANRS MIE). • Removal of center no. 61. • Addition of a sample collected in UTM (Universal Transport Medium) if the patient returns with a positive PCR for Chlamydia when picking up their treatment. • Addition of a "test-of-cure" sample collection 4 weeks into treatment in cases of positive STIs. This is part of standard care for Neisseria gonorrhoeae-positive STIs. If this second PCR is positive, a new sample must be collected at the site to isolate the Chlamydia strain and test for potential resistance to treatment for Neisseria and Mycoplasma. • Updates to the information letter (procedure for STIs). • Creation of a newsletter for participants.
12 May 2022	The substantial modifications included in the amendment 4 of the protocol are : - Added 4 new centers: Lariboisière, Garches, A Béclère, F Widal - Updated the Bexsero protocol - Changes related to the sponsor: ANRS MIE has moved to 2 Rue d'Oradour-sur-Glane, 75015 Paris and has a new logo.
25 July 2022	The substantial modifications included in the amendment 5 of the protocol concerns the collection of data on "monkeypox" status among participants in the ANRS 174 DOXYVAC study. - date of vaccination, - possible occurrence of a Monkeypox (MKPV) infection, - symptoms suggestive of MKPV since the last visit, - date of any childhood vaccinations, - indication of pre- or post-exposure vaccination, - indication of contact with a person diagnosed as positive.
17 October 2022	The substantial modifications included in the amendment 6 of the protocol are : - Halting enrollment in the efficacy trial; - Offering all enrolled participants both interventions: post-exposure doxycycline and vaccination with Bexsero

12 May 2023	The substantial modification included in the amendment 7 of the protocol is : Drafting a newsletter for participants to provide them with updated information on the results of the ANRS 174 DOXYVAC trial.
24 February 2024	The substantial modification included in the amendment 8 of the protocol is : Newsletter No. 4 to participants regarding the release of the final results of the ANRS 174 DOXYVAC trial.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported

Online references

<http://www.ncbi.nlm.nih.gov/pubmed/38797183>