

**Clinical trial results: *Full title of Trial******Summary**

EudraCT number*	2010-018709-12
Trial protocol	
Global end of trial date*	2013

Trial information**Trial identification**

Sponsor protocol code*	The OSCAR Study (HSR)
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Additional study identifiers

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

Notes:

Sponsors details*

Sponsor organisation name	IRCCS Ospedale San Raffaele
Sponsor organisation address	Via Olgettina, 60, Milano, Italy, 20132
Public contact	nozza.silvia@hsr.it
Scientific contact	Nozza Silvia – Adriano Lazzarin - Tambussi Giuseppe

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?	Yes
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	Yes

Results analysis stage

Analysis stage*	Final
Date of interim/final analysis*	Weeks 48
Is this the analysis of the primary completion data?*	Yes or No
Global end of trial reached?*	Yes or No
Global end of trial date*	
Was the trial ended prematurely?	Yes or No

General information about the trial

Main objective of the trial*: *Enter a description for the main objective(s) of the trial*

Actual start date of recruitment*	02/07/2010 Authorized on 06/05/2010
Long term follow-up planned*	No
If Yes, rationale:	Safety Efficacy Ethical reason Regulatory reason Scientific research
Duration	96 weeks follow-up
Independent data monitoring committee (IDMC) involvement?*	No
Protection of trial subjects*:	This study assessed the 48-week efficacy of an antiretroviral therapy including maraviroc following the assessment of co-receptor tropism by use of Geno2Pheno algorithm or the Trofile phenotypic assay in failing treatment-experienced HIV-1 patients. This was a multicenter, randomized, open-label, non-inferiority trial

Population of trial subjects**Subjects enrolled per country**

Country:	Italy
Planned number of subjects	50
Actual Number of subjects enrolled*	155
Worldwide total number of subjects	155
EEA total number of subjects	

Subjects enrolled per age group

In utero*	0
Preterm newborn - gestational age < 37wks*	0
Newborns (0-27 days)*	0
Infants and toddlers (28 days-23months)*	0
Children (2-11 years)*	0
Adolescents (12-17 years)*	0
Adults (18-64 years)*	155
From 65 to 84 years*	0
85 years and over*	0

Subject disposition

Recruitment details: Enter key information relevant to the recruitment process for the trial (eg gates of recruitment period and territories)

Treatment-experienced subjects with HIV-RNA ≥ 500 copies/mL were randomized (1:1) to undergo co-receptor tropism testing by the Geno-2Pheno algorithm (with a false positive rate $>10\%$) or the Trofile assay before starting a new antiretroviral treatment which included maraviroc. The primary endpoint was the 48 week proportion of patients with treatment success (TS). Intention-to-treat analyses are reported

Pre-assignment - Screening details: Enter relevant information related to screening (eg screening criteria, significant events and approaches)

Period 1

Period title*	Enter a title describing the stage of the trial. If the only one period is defined, the default title should be "Overall Trial"
Is this the baseline period?	Yes or No
Allocation method*	Randomised – open label – non inferiority
Blinding used*	Not blinded

Arms

Arm title*	Maraviroc
Arm description:	
Arm type*	Intervention treatment arm
Investigational medicinal product name*	Celsentri
Investigational medicinal product code	
Other name	
Pharmaceutical forms*	CPR
Routes of administration*	oral
Dosage and administration details*	Standard doses

Number of subjects in period	Arm Title (overall population)	Arm Title (repeat for each arms if applicable)
Started*	155	
Completed*	155	
Subject non-completion reason (if applicable)		
AE, non fatal		
AE, fatal		
Consent withdrawn by subject		
Lack of efficacy		
Lost to follow up		
Physician decision		
Pregnancy		
Protocol Deviation		
Other		

Baseline characteristics

Reporting groups* Overall cohort

Reporting group title*

Number of subjects at the baseline*

See TABLE 1

Reporting group description: *You can report per arm in the baseline period or for the overall baseline period*

Table 1 - Baseline characteristics of the 155 HIV-1 infected patients of the OSCAR clinical study.

	Trofile (N=77)	Geno2Pheno (N=78)	P-value
Age, years	46.0 (43.1-49.7)	45.0 (41.1-49.7)	0.416 ^a
Males	61 (79%)	66 (85%)	0.411 ^b
Years of HIV infection	16.2 (12.7-20.9)	13.8 (10.9-18.8)	0.034 ^a
HIV risk factor			0.077 ^b
IDU	15 (19%)	12 (15%)	
MSM	28 (36%)	41 (53%)	
Heterosexual	23 (30%)	22 (28%)	
Other/unknown	11 (14%)	3 (4%)	
CDC C Stage	19 (25%)	21 (27%)	0.855 ^a
ART duration, years	12.8 (10.5-15.5)	12.0 (7.4-15.1)	0.231 ^a
CD4+ nadir, cells/ μ L	174 (54-287)	176 (74-274)	0.692 ^a
CD4+, cells/ μ L	330 (214-473)	386 (236-588)	0.135 ^a
CD4%	17.8 (12.2-23.6)	18.9 (11.1-26.5)	0.686 ^a
CD8+, cells/ μ L	909 (702-1208)	1112 (890-1445)	0.065 ^a
CD8%	53.2 (47.9-59.3)	51.7 (45.4-62.9)	0.833 ^a
CD4+/CD8+ ratio	0.34 (0.18-0.50)	0.32 (0.18-0.56)	0.945 ^a
HIV-RNA, log ₁₀ copies/mL	4.2 (3.5-4.8)	3.9 (3.4-4.5)	0.204 ^a
Previous antiretroviral regimen			
NRTIs-including regimens	10 (18%)	14 (23%)	
NNRTIs-including regimens	7 (13%)	6 (10%)	0.777
PIs-including regimens	32 (57%)	36 (59%)	
Raltegravir-including regimens	7 (13%)	5 (8%)	
Baseline antiretroviral regimen			
MVC and NRTIs-including regimens	10 (13%)	11 (14%)	
MVC and NNRTIs-including regimens	1 (1%)	1 (1%)	0.897
MVC and PIs-including regimens	19 (25%)	23 (30%)	
MVC and raltegravir-including regimens	47 (61%)	43 (55%)	

Abbreviations: IDU, intravenous drug user; MSM, men who have sex with men; ART, antiretroviral treatment; MVC, maraviroc.

Results as median (IQR) or frequency (%).

^aby Wilcoxon rank sum test.

^bby chi-square or Fisher exact test, as appropriate.

Subject analysis sets

Add a subject analysis set if you wish to report on groups different from the reporting group defined above (repeat if applicable)

Subject analysis set title*

Subject analysis set type*

Full Analysis

Intention to treat

	Per protocol Safety analysis Sub-group analysis
Subject analysis set description*	<i>Enter a clear description which defines this set of subjects</i>
Number of subjects in subjects analysis set*	29

Age characteristics*

Complete either the age categorical, age continuous or complete both these characteristics in order to collect values for the reporting groups and optionally the subject analysis sets.

	Characteristic title*	Units*	Age categories*
Age categorical	45/46	age	years

	Characteristic title*	Units*	Central tendency*	Dispersion type*
Age continuous	Overall cohort	Years Months Weeks Days	Arithmetic Mean Median least square mean geometric mean log mean	full range (min-max) standard deviation inter quartile range

Gender characteristics*

	Characteristic title*	Units*	Gender categories*
Gender categorical	M	M	Male

Study specific characteristics

	Characteristic title*	Units*	Categories*	Number of subject for each categories
Study specific categorical				
Study specific categorical				
Study specific categorical				
Study specific categorical				
Study specific categorical				

End points

Add subject analysis set if you wish to report on groups different from reporting groups defined above

Subject analysis set title*	
Subject analysis set type*	Full Analysis Intention to treat Per protocol Safety analysis Sub-group analysis
Subject analysis set description*	Between July 2010 and February 2012, 155 patients were randomized and underwent tropism evaluation before starting a new antiretroviral treatment which included

	maraviroc (ITT population): 77 patients assessed tropism by the Trofile test and 78 patients by the Geno2Pheno algorithm. Baseline characteristics were well balanced between the two groups (<i>Table 1</i>).
Number of subject in subject analysis set *	155

End points definitions

End point title*	Proportion of patients with HIV-RNA < 50 copies/mL at week 48	
		Values
Countable or measurable?*	<i>Countable</i>	-
If countable, Countable units*:	% of patients with HIV-RNA < 50 copies/mL	
If measurable, Measurable units*:		
Measure type*:	Number Arithmetic Mean Median least square mean geometric mean log mean	
Precision/dyspersion type*	95% Confidence Interval (CI)	

End point type*	Primary Secondary Other pre-specified Post Hoc
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End point timeframe*: 48 weeks

End point title*	Time to treatment failure and immunological changes (CD4, CD4%, CD8, CD8%) at week 48	
		Values
Countable or measurable?*	<i>Measurable</i>	-
If countable, Countable units*:		
If measurable, Measurable units*:	<i>Time to treatment failure</i> → weeks <i>CD4 count</i> → cells/mm ³ <i>CD4%</i> → % <i>CD8 count</i> → cells/mm ³ <i>CD8%</i> → %	
Measure type*:	Number Arithmetic Mean Median least square mean geometric mean log mean	
Precision/dyspersion type*	Interquartile Range (IQR), p-value (per immunological changes) Confidence Interval + p-value	

	(Log-rank test per time to treatment failure)	
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End point type*	Primary Secondary Other pre-specified Post Hoc
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End point timeframe*: 48 weeks

Use categories only if the data for the end point can be categorized

Category title

Specify the groups of subjects applicable to this end point

Reporting groups*			
Period			
Arms			
subject analysis sets			

Adverse events

Adverse events information

Timeframe for reporting adverse events*: *Enter the time point(s) or time period for AE assessment*

First patient first visit: July 2010

Last recruitment date: February 2012

Study closure: 2013 (Full paper on 2016)

Adverse event reporting additional description: *Enter information about the AE collection and provide details about the method of assessment and monitoring*

In the Trofile arm, 10 patients had treatment failure by week 48: 5 patients had confirmed viral rebound and 5 patients discontinued the study [1 grade 3 hepatic toxicity, 2 patient's decision, 1 lost to follow-up, 1 death due to non Hodgkin's lymphoma].

Assessment type*	Non applicable (48 week outcomes of maraviroc-containing regimens following the genotyping or Trofile assay in HIV failing subject)
Frequency threshold for reporting non-serious adverse events*	<i>Enter the frequency of non SAE that are reported in the results database for all arms or reporting groups</i>

Dictionary used

Dictionary name*	MedDRA or CTCAE
Dictionary version*	

Adverse events reporting group definition

Use arms from baseline period as reporting groups

OR

Reporting group title*: *Overall cohort*

For this reporting group, provide the following totals:

Subject exposed*	
Subjects affected by non -SAE*	
Total number of deaths (all causes)*	
Total number of deaths resulting from adverse event*	

Serious adverse event details and values

System organ class*:

Event term*:

Values for serious adverse event per reporting group *

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Reporting groups	Subjects affected number	Subjects exposed number	Occurrences all number	Occurrences causally related to treatment number	Fatalities number	Fatalities causally related to treatment number

Non - Serious adverse event details and values

System organ class*:

Event term*:

Values for non-serious adverse event per reporting group*

Threshold for non-serious adverse event reporting is:

Reporting groups	Subjects affected number	Subjects exposed number	Occurrences all number

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol*? Yes or No

Date	Amendment

Notes:

Interruptions (globally)

Were there any global interruptions to the trial*? Yes or No

If Yes, Interruption date

Limitations and caveats

None reported

Online references

Nozza S, Pignataro AR, Galli L, Svicher V, Alteri C, Boeri E, Ripa M, Castagna A, Sampaolo M, Clementi M, Perno CF, Lazzarin A. 48 week outcomes of maraviroc-containing regimens following the genotypic or Trofile assay in HIV-1 failing subjects: the OSCAR Study. *New Microbiol.* 2016 Jul;39(3):192-196. PMID: 27704143.