Clinical trial results:
Carfilzomib and lenalidomide-based treatment for younger and elderly newly diagnosed primary plasma cell leukemia patients

Summary

EudraCT number	2013-005157-75
Trial protocol	NL BE NO DK GB IT
Global end of trial date	30 January 2025

Results information

Result version number	v1 (current)
This version publication date	23 October 2025
First version publication date	23 October 2025

Trial information

Trial identification

Sponsor protocol code	EMN12/HOVON_129_PCL

Additional study identifiers

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

Notes:

Sponsors

Sponsor organisation name	HOVON
Sponsor organisation address	Dr. Molewaterplein 40, Rotterdam, Netherlands, 3015GD
Public contact	HOVON Data Center, HOVON, +31 0107041560, hdc@erasmusmc.nl
Scientific contact	HOVON Data Center, HOVON, +31 0107041560, hdc@erasmusmc.nl

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	23 June 2022
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	30 January 2025
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To evaluate progression-free survival in adult pPCL patients by incorporation of carfilzomib and lenalidomide in induction, consolidation, and maintenance therapy

Protection of trial subjects:

Monitoring and Insurance

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	01 October 2014
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	Netherlands: 33
Country: Number of subjects enrolled	Norway: 3
Country: Number of subjects enrolled	United Kingdom: 2
Country: Number of subjects enrolled	Belgium: 5
Country: Number of subjects enrolled	Czechia: 2
Country: Number of subjects enrolled	Denmark: 7
Country: Number of subjects enrolled	Italy: 9
Worldwide total number of subjects	61
EEA total number of subjects	59

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)	32
From 65 to 84 years	29
85 years and over	0

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

All subjects gave written informed consent and were screened according to the inclusion- and exclusion criteria

Period 1

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

Arms

Arm title	Experimental

Arm description: -

Arm type	Experimental
Investigational medicinal product name	lenalidomide
Investigational medicinal product code	
Other name	REVLIMID®
Pharmaceutical forms	Capsule, hard
Routes of administration	Oral use

Dosage and administration details:

The recommended starting dose of lenalidomide is 25 mg/day PO on Days 1 to 21 of repeated 28-day cycles for RRMM. The recommended dose of dexamethasone is 40 mg/day PO on Days 1 to 4, 9 to 12, and 17 to 20 of each 28-day cycle for the first 4 cycles of therapy and then 40 mg/day PO on Days 1 to 4 every 28 days.

The recommended starting dose of lenalidomide is 25 mg PO QD on Days 1 to 21 of repeated 28-day cycles for newly diagnosed transplant-noneligible MM. The recommended dose of low-dose dexamethasone is 40 mg PO QD on Days 1, 8, 15, and 22 of repeated 28-day cycles.

Investigational medicinal product name	Carfilzomib
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Powder for solution for injection
Routes of administration	Solution for injection

Dosage and administration details:

Carfilzomib 20/36 mg/m^2 on days 1,2,8,9,15,16

Number of subjects in period 1	Experimental
Started	61
Completed	0
Not completed	61
Adverse event, serious fatal	2
Other	12
Patients request	5

Lack of efficacy	42

Baseline characteristics

Reporting groups	
Reporting group title	Overall period

Reporting group description: -

Reporting group values	Overall period	Total	
Number of subjects	61	61	
Age categorical Units: Subjects			
Adults (18-64 years)	32	32	
From 65-84 years	29	29	
Age continuous Units: years			
median	64		
full range (min-max)	31 to 84	-	
Gender categorical Units: Subjects			
Female	29	29	
Male	32	32	

End points

End points reporting groups

Reporting group title	Experimental

Reporting group description: -

Primary: Primary endpoint

End point title	Primary endpoint[1]

End point description:

End point type	Primary

End point timeframe:

See publication

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: See attached chart/documents for results

End point values	Experimental			
Subject group type	Reporting group			
Number of subjects analysed	61			
Units: Whole	61			

Attachments (see zip file)	Statistical data section from publication/HO129_Statistical data List of reported non-SAE's/nonsaedata129-1Sep2025.pdf List of reported SAE's/saedata129-1Sep2025.pdf

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Adverse events will be reported from signing of the informed consent form until 30 days following the last dose of any drug from the protocol treatment schedule or until the start of subsequent systemic therapy for the disease under study, if earlier.

Adverse event reporting additional description:

Adverse events occurring after 30 days after the last dose of any study drug and after the start of subsequent systemic therapy for the disease under study should also be reported if considered at least possibly related to the investigational medicinal product by the investigator.

Assessment type	Systematic

Dictionary used

Dictionary name	CTCAE
Dictionary version	4

Reporting groups

Reporting group title	Experimental group

Reporting group description: -

Serious adverse events	Experimental group		
Total subjects affected by serious adverse events			
subjects affected / exposed	46 / 61 (75.41%)		
number of deaths (all causes)	49		
number of deaths resulting from adverse events			
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Neoplasms benign, malignant and unspecified (incl cysts and polyps)	Additional description: All combined		
subjects affected / exposed	4 / 61 (6.56%)		
occurrences causally related to treatment / all	1 / 4		
deaths causally related to treatment / all	0 / 2		
Vascular disorders			
Vascualr disorders	Additional description: All combined		
subjects affected / exposed	4 / 61 (6.56%)		
occurrences causally related to treatment / all	2 / 5		
deaths causally related to treatment / all	0 / 0		
Surgical and medical procedures			
Surgical and medical procedures	Additional description: All combined		
subjects affected / exposed	1 / 61 (1.64%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		

General disorders and administration site conditions			
General disorders and administration site conditions	Additional description: All combined		
subjects affected / exposed	18 / 61 (29.51%)		
occurrences causally related to treatment / all	7 / 19		
deaths causally related to treatment / all	1 / 4		
Respiratory, thoracic and mediastinal disorders			
Respiratory, thoracic and mediastinal disorders	Additional description: All combined		
subjects affected / exposed	10 / 61 (16.39%)		
occurrences causally related to treatment / all	6 / 10		
deaths causally related to treatment / all	0 / 0		
Psychiatric disorders			
Psychiatric disorders	Additional description: All combined		
subjects affected / exposed	2 / 61 (3.28%)		
occurrences causally related to treatment / all	0 / 2		
deaths causally related to treatment / all	0 / 0		
Investigations			
Investigations	Additional description: All combined		
subjects affected / exposed	2 / 61 (3.28%)		
occurrences causally related to treatment / all	1 / 2		
deaths causally related to treatment / all	0 / 0		
Cardiac disorders			
Cardiac disorders	Additional description: All combined		
subjects affected / exposed	5 / 61 (8.20%)		
occurrences causally related to treatment / all	5 / 6		
deaths causally related to treatment / all	0 / 0		
Nervous system disorders			
Nervous system disorders	Additional description: All combined		
subjects affected / exposed	1 / 61 (1.64%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Blood and lymphatic system disorders			
Blood and lymphatic system disorders	Additional description: All combined		

subjects affected / exposed	5 / 61 (8.20%)		
occurrences causally related to treatment / all	3 / 6		
deaths causally related to treatment / all	1 / 1		
Gastrointestinal disorders			
Gastrointestinal disorders	Additional description: All combined		
subjects affected / exposed	4 / 61 (6.56%)		
occurrences causally related to treatment / all	2 / 5		
deaths causally related to treatment / all	0 / 0		
Hepatobiliary disorders			
Hepatobiliary disorders	Additional description: All combined		
subjects affected / exposed	3 / 61 (4.92%)		
occurrences causally related to treatment / all	1 / 3		
deaths causally related to treatment / all	0 / 0		
Skin and subcutaneous tissue disorders			
Skin and subcutaneous tissue disorders	Additional description: All combined		
subjects affected / exposed	1 / 61 (1.64%)		
occurrences causally related to treatment / all	1 / 2		
deaths causally related to treatment / all	0 / 0		
Renal and urinary disorders			
Renal and urinary disorders	Additional description: All combined		
subjects affected / exposed	3 / 61 (4.92%)		
occurrences causally related to treatment / all	2 / 3		
deaths causally related to treatment / all	0 / 0		
Musculoskeletal and connective tissue disorders			
Musculoskeletal and connective tissue disorders	Additional description: All combined		
subjects affected / exposed	1 / 61 (1.64%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Infections and infestations			
Infections and infestations	Additional description: All combined		
subjects affected / exposed	26 / 61 (42.62%)		
occurrences causally related to treatment / all	31 / 54		
deaths causally related to treatment / all	2 / 4		
Metabolism and nutrition disorders			

Metabolism and nutrition disorders	Additional description: All combined		
subjects affected / exposed	2 / 61 (3.28%)		
occurrences causally related to treatment / all	1 / 2		
deaths causally related to treatment / all	0 / 0		

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

Non-serious adverse events	Experimental group		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	49 / 61 (80.33%)		
Vascular disorders			
Vascular disorders	Additional description: All Combined		
subjects affected / exposed	9 / 61 (14.75%)		
occurrences (all)	15		
Surgical and medical procedures			
Surgical and medical procedures	Additional description: All Combined		
subjects affected / exposed	1 / 61 (1.64%)		
occurrences (all)	1		
General disorders and administration site conditions			
General disorders and administration site conditions	Additional description: All Combined		
subjects affected / exposed	22 / 61 (36.07%)		
occurrences (all)	51		
Immune system disorders			
Immune system disorders	Additional description: All Combined		
subjects affected / exposed	1 / 61 (1.64%)		
occurrences (all)	1		
Respiratory, thoracic and mediastinal disorders			
Respiratory, thoracic and mediastinal disorders	Additional description: All Combined		
subjects affected / exposed	18 / 61 (29.51%)		
occurrences (all)	25		
Psychiatric disorders			
Psychiatric disorders	Additional description: All Combined		
subjects affected / exposed	10 / 61 (16.39%)		
occurrences (all)	14		
Investigations			

Investigations	Additional description: All Combined		
subjects affected / exposed	16 / 61 (26.23%)		
occurrences (all)	36		
Injury, poisoning and procedural complications			
Injury, poisoning and procedural complications	Additional description: All Combined		
subjects affected / exposed	4 / 61 (6.56%)		
occurrences (all)	5		
Cardiac disorders			
Cardiac disorders	Additional description: All Combined		
subjects affected / exposed	5 / 61 (8.20%)		
occurrences (all)	5		
Nervous system disorders			
Nervous system disorder	Additional description: All Combined		
subjects affected / exposed	12 / 61 (19.67%)		
occurrences (all)	16		
Blood and lymphatic system disorders			
Blood and lymphatic system disorders	Additional description: All Combined		
subjects affected / exposed	18 / 61 (29.51%)		
occurrences (all)	75		
Ear and labyrinth disorders			
Ear and labyrinth disodrers	Additional description: All Combined		
subjects affected / exposed	1 / 61 (1.64%)		
occurrences (all)	1		
Eye disorders			
Eye disorders	Additional description: All Combined		
subjects affected / exposed	4 / 61 (6.56%)		
occurrences (all)	5		
Gastrointestinal disorders			
Gastrointestinal disorders	Additional description: All Combined		
subjects affected / exposed	21 / 61 (34.43%)		
occurrences (all)	51		
Hepatobiliary disorders			
Hepatobiliary disorders	Additional description: All Combined		
subjects affected / exposed	3 / 61 (4.92%)		
occurrences (all)	3		
Skin and subcutaneous tissue disorders			

Skin and subcutaneous tissue disorders	Additional description: All Combined		
subjects affected / exposed	16 / 61 (26.23%)		
occurrences (all)	23		
Renal and urinary disorders			
Renal and urinary disorders	Additional description: All Combined		
subjects affected / exposed	4 / 61 (6.56%)		
occurrences (all)	4		
Musculoskeletal and connective tissue disorders			
Musculoskeletal and connective tissue disorders	Additional description: All Combined		
subjects affected / exposed	8 / 61 (13.11%)		
occurrences (all)	9		
Infections and infestations			
Infections and infestations	Additional description: All Combined		
subjects affected / exposed	31 / 61 (50.82%)		
occurrences (all)	62		
Metabolism and nutrition disorders			
Metabolism and nutrition disorders	Additional description: All Combined		
subjects affected / exposed	7 / 61 (11.48%)		
occurrences (all)	18		

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
28 December 2016	The reason for the amendment is: Addition of an exclusion criterion in the protocol Update/correction of the protocol Correction of infusion duration of Carfilzomib in patient information
13 January 2017	The reason for the amendment is: Update/correction of the protocol
22 September 2017	The reason for the amendment is: Change of distributor of Carfilzomib.
04 July 2018	The reason for the amendment is: Change of the Carfilzomib maintenance schedule Update of the protocol and patient information
02 May 2019	The reason for the amendment is: Addition of Almac Ireland as importer due to the upcoming Brexit A new version of the IMPD of Carfilzomib is available. This will be sent directly to you from the pharmaceutical company Amgen.
28 January 2020	Reason for amendment: Change in the number of participants (from 116 to 61). Following this change, the protocol and ICF have been updated. Protocol changes New local investigator at UMCG New Investigator's Brochure (IB) for lenalidomide (v23, v24) New Investigator's Brochure (IB) for carfilzomib (v19)
19 June 2020	No consequence of IB change
30 July 2020	No consequences IB Carfilzomib and lenalidomide
01 April 2021	Reason for amendment: New sIMPD New QP declaration Comparative table of changes

28 July 2021	Reason for amendment The reason for the amendment is a change in the patient information form (PIF) for new patients, following the CCMO's note regarding the transfer of subject data to countries outside the European Economic Area. We also wish to submit the "no update memo" for the Investigator’s Brochure of Lenalidomide for notification.
02 February 2022	Reason for amendment The reason for the amendment is an addendum to the patient information form (PIF) for already participating patients, following the CCMO's note regarding the transfer of subject data to countries outside the European Economic Area (Schrems II ruling). We also wish to submit the new Investigator’s Brochures of Carfilzomib v.21 and v21.1.
14 March 2024	Notification of Study Termination Through this letter, we would like to inform you about the intended termination of the HOVON 129 study as of December 31, 2024. In the HO129 study, Carfilzomib and Lenalidomide are being investigated in combination. Lenalidomide has now already been included in the treatment guidelines for Multiple Myeloma/primary PCL patients. The primary endpoint analysis (progression-free survival) of this study was conducted in 2023, and a publication has been accepted (see attached article). Currently, there are still 5 patients in the Netherlands receiving maintenance treatment with lenalidomide. Additionally, 1 patient in Italy is receiving maintenance treatment with lenalidomide and carfilzomib. Patients currently receiving maintenance treatment with lenalidomide will not be adversely affected by the termination of the HO129 study, as the treatment will be continued outside the study. For the Italian patient, carfilzomib will be made available through a compassionate use program from Amgen.
28 March 2024	New ICF Addendum v03 To inform patients about the early termination of the aforementioned study as of December 31, 2024.

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/37717583