

# A Phase I, open-label, dose escalation study of LDK378 in pediatric patients with malignancies that have a genetic alteration in anaplastic lymphoma kinase (ALK)

Published: 08-05-2013

Last updated: 24-04-2024

Primary objective: Estimate the MTD and/or RDE of LDK378 as a single agent when administered orally to pediatric patients with ALK-activated tumors in the fasted and in fed state  
Secondary objectives: Objective 1: Characterize the safety and...

<b>Ethical review</b>	Approved WMO
<b>Status</b>	Recruitment stopped
<b>Health condition type</b>	Other condition
<b>Study type</b>	Interventional

## Summary

### ID

NL-OMON46950

### Source

ToetsingOnline

### Brief title

CLDK378X2103

### Condition

- Other condition
- Miscellaneous and site unspecified neoplasms malignant and unspecified

### Synonym

malignancies with ALK-aberrations, pediatric cancer

### Health condition

Alle maligniteiten met een ALK mutatie.

## **Research involving**

Human

## **Sponsors and support**

**Primary sponsor:** Novartis

**Source(s) of monetary or material Support:** Novartis Pharma BV

## **Intervention**

**Keyword:** ALK gene aberrations, LDK378, pediatric, Phase I

## **Outcome measures**

### **Primary outcome**

Primary endpoint: Incidence rate of Dose Limiting Toxicities (DLT) during the first cycle of LDK378 treatment.

### **Secondary outcome**

Secondary endpoints:

Endpoint 1: Adverse events and serious adverse events, changes in laboratory values, assessments of physical examinations, vital signs and electrocardiograms.

Endpoint 2: Plasma concentration time profiles, PK parameters, including but not limited to AUClast, AUCtau, Cmin, Cmax, Tmax, Racc, and T1/2,acc

Endpoint 3: Overall response rate (ORR) and duration of response (DOR), progression-free survival (PFS) as per RECIST 1.1 in patients with neuroblastoma and other solid tumors, and by International Working Group (IWG) criteria in patients with lymphoma. MIBG response in patients with neuroblastoma. Resolution of bone marrow disease in patients with neuroblastoma.

# Study description

## Background summary

LDK378 is a novel inhibitor of ALK that is active in a broad range of ALK-activated tumor models, including models driven by mutated versions of ALK known to be resistant to crizotinib, and by ALK gene amplification. The primary purpose of this study is to determine the maximum tolerated dose (MTD) and/or recommended dose for expansion (RDE) in pediatric patients in the fasted and in fed state, and to delineate a clinical dose to be used in any future pediatric studies. This study will also assess the safety, tolerability, PK and preliminary evidence of antitumor activity of LDK378 in pediatric patients with neuroblastoma, and other ALK-activated tumors.

## Study objective

Primary objective: Estimate the MTD and/or RDE of LDK378 as a single agent when administered orally to pediatric patients with ALK-activated tumors in the fasted and in fed state

Secondary objectives:

Objective 1: Characterize the safety and tolerability of LDK378 in pediatric patients in the fasted and in fed state

Objective 2: Characterize single and multiple-dose PK of LDK378 in pediatric patients in the fasted and in fed state

Objective 3: Assess the anti-tumor activity of LDK378 in the fasted and in fed state

## Study design

This is a two-part, phase 1 study, with a dose escalation part followed by an expansion part. The expansion part will start after the MTD/RDE has been determined. The expansion part will include 2 groups of patients, one restricted to patients with ALK-activated neuroblastoma in the fasted and in fed state and the second including patients with all other ALK-activated tumors. Enrollment will proceed in parallel. LDK378 will be administered orally, once daily, continuously.

## Intervention

Children will be treated with oral LDK378 long as they will benefit from it.

Response assessment every 21 days.

## Study burden and risks

### Risk:

Side effects of the study medication (see also the dose-limiting toxicities described on page 35, Table 6-2), drawing blood samples and tissue biopsies. Het collection of blood can cause a bruise, bleeding at the site or blood clothing. These usually disappear naturally.

### Burden:

- study visits 2 times per 21 days for 2 years after proceeding though the screening.
- blood draws for lab tests every visit
- other assesments such as tissue biospies, ECGs and radiology tests.

## Contacts

### Public

Novartis Pharma B.V.

Raapopseweg 1  
Arnhem 6824 DP  
NL

### Scientific

Novartis Pharma B.V.

Raapopseweg 1  
Arnhem 6824 DP  
NL

## Trial sites

### Listed location countries

Netherlands

## Eligibility criteria

### Age

Adolescents (12-15 years)  
Adolescents (16-17 years)  
Children (2-11 years)

## Inclusion criteria

- Diagnosed with a locally advanced or metastatic malignancy that has progressed despite standard therapy, or for which no effective standard therapy exists ; - Age \* 12 months and <18 years ; - The tumor must carry a genetic alteration of ALK ; - Patients must have evaluable or measurable disease; Other protocol-defined inclusion criteria may apply

## Exclusion criteria

- Symptomatic central nervous system (CNS) metastases who are neurologically unstable or require increasing doses of steroids or local CNS-directed therapy (such as radiotherapy, surgery or intrathecal chemotherapy) to control their CNS disease ; - Clinically significant, uncontrolled heart disease ; - Inadequate end organ function as defined by specified laboratory values; - History of known of interstitial lung disease or interstitial pneumonitis, including clinically significant radiation pneumonitis (i.e., affecting activities of daily living or requiring therapeutic intervention).; - Radiotherapy to lungs \* 4 weeks prior to starting the study treatment or patients who have not recovered from radiotherapy related toxicities. For all other anatomic sites, radiotherapy \* 2 weeks prior to starting the study treatment.; - Use of medications that are known to be strong inhibitors or inducers of CYP3A4/5 that cannot be discontinued at least 1 week prior to start of treatment with LDK378 and for the duration of the study ; - Use of medications that are mainly metabolized by CYP3A4/5 or CYP2C9 that cannot be discontinued at least 1 week prior to start of treatment with LDK378 and for the duration of the study.; - Patient has a history of pancreatitis or history of increased amylase or lipase that was due to pancreatic disease.; Other protocol-defined exclusion criteria may apply

## Study design

### Design

Study phase:	2
Study type:	Interventional
Masking:	Open (masking not used)
Control:	Uncontrolled

Primary purpose: Treatment

## Recruitment

NL  
Recruitment status: Recruitment stopped  
Start date (anticipated): 12-09-2013  
Enrollment: 6  
Type: Actual

## Medical products/devices used

Product type: Medicine  
Brand name: ceritinib  
Generic name: zykadia  
Registration: Yes - NL outside intended use

## Ethics review

Approved WMO  
Date: 08-05-2013  
Application type: First submission  
Review commission: METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

Approved WMO  
Date: 11-07-2013  
Application type: Amendment  
Review commission: METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

Approved WMO  
Date: 06-08-2013  
Application type: First submission  
Review commission: METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

Approved WMO  
Date: 25-03-2014  
Application type: Amendment  
Review commission: METC Erasmus MC, Universitair Medisch Centrum Rotterdam

(Rotterdam)

Approved WMO

Date: 14-05-2014

Application type: Amendment

Review commission: METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

Approved WMO

Date: 20-06-2014

Application type: Amendment

Review commission: METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

Approved WMO

Date: 08-08-2014

Application type: Amendment

Review commission: METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

Approved WMO

Date: 13-08-2014

Application type: Amendment

Review commission: METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

Approved WMO

Date: 14-11-2014

Application type: Amendment

Review commission: METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

Approved WMO

Date: 14-01-2015

Application type: Amendment

Review commission: METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

Approved WMO

Date: 26-05-2015

Application type: Amendment

Review commission: METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

Approved WMO

Date: 17-06-2015

Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)
Approved WMO	
Date:	28-08-2015
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)
Approved WMO	
Date:	16-09-2015
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)
Approved WMO	
Date:	22-09-2015
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)
Approved WMO	
Date:	18-12-2015
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)
Approved WMO	
Date:	20-01-2016
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)
Approved WMO	
Date:	19-05-2016
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)
Approved WMO	
Date:	28-09-2016
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)



Approved WMO	
Date:	16-11-2016
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

  

Approved WMO	
Date:	05-12-2016
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

  

Approved WMO	
Date:	25-01-2017
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

  

Approved WMO	
Date:	27-06-2017
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

  

Approved WMO	
Date:	15-08-2017
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

  

Approved WMO	
Date:	05-09-2017
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

  

Approved WMO	
Date:	06-06-2018
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

  

Approved WMO	
Date:	07-08-2018
Application type:	Amendment

Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)
Approved WMO	
Date:	13-08-2018
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)
Approved WMO	
Date:	15-08-2018
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)
Approved WMO	
Date:	30-08-2018
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)
Approved WMO	
Date:	17-10-2018
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)
Approved WMO	
Date:	20-11-2018
Application type:	Amendment
Review commission:	METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

## Study registrations

### Followed up by the following (possibly more current) registration

No registrations found.

### Other (possibly less up-to-date) registrations in this register

No registrations found.

## In other registers

Register	ID
EudraCT	EUCTR2012-002074-31-NL
CCMO	NL43465.078.13