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# Lenalidomide and dexamethasone with or without high-dose melphalan and autologous blood stem cell transplantation followed by lenalidomide maintenance in the treatment of relapsed multiple myeloma

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| **Submission date**<br>24/08/2010 | **Recruitment status**<br>No longer recruiting | [X] Prospectively registered<br>[X] Protocol<br>[_] Statistical analysis plan<br>[_] Results<br>[_] Individual participant data<br>[_] Record updated in last year |
| **Registration date**<br>06/09/2010 | **Overall study status**<br>Completed | |
| **Last Edited**<br>06/10/2016 | **Condition category**<br>Cancer | |

**Plain English summary of protocol**
Not provided at time of registration

## Contact information

**Type(s)**
Scientific

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## Additional identifiers

**EudraCT/CTIS number**

**IRAS number**

**ClinicalTrials.gov number**

### Secondary identifying numbers
ReLApsE_RV-MM-GMMG-340

# Study information

### Scientific Title
A phase III national, multicentre, randomised open-label study with lenalidomide /dexamethasone versus lenalidomide/dexamethasone followed by high-dose chemotherapy melphalan with autologous blood stem cell transplantation and lenalidomide maintenance therapy for patients with relapsed multiple myeloma

### Acronym
ReLApsE

### Study objectives
The aim of this trial is to demonstrate a significant improvement of progression-free survival in patients treated with lenalidomide/dexamethasone induction therapy followed by high-dose chemotherapy melphalan and lenalidomide maintenance compared to conventional therapy with lenalidomide/dexamethasone.

### Ethics approval required
Old ethics approval format

### Ethics approval(s)
Ethikkommission der Medizinischen Fakultaet Heidelberg, University of Heidelberg, 12/03/2010

### Study design
Randomised open-label multicentre phase III trial

### Primary study design
Interventional

### Secondary study design
Randomised controlled trial

### Study setting(s)
Hospital

### Study type(s)
Treatment

### Participant information sheet
Not available in web format, please use the contact details below to request a patient information sheet

### Health condition(s) or problem(s) studied
Relapsed multiple myeloma

### Interventions

Patients are randomised into two treatment arms (A and B).

Standard arm A:
Rd until disease progression. Rd = lenalidomide 25 mg orally (po) days 1 - 21 and day 28 + dexamethasone 40 mg po day 1, 8, 15, 22 and 28.

Experimental arm B:
Induction therapy with 3 cycles Rd. Rd = lenalidomide 25 mg orally (po) days 1 - 21 and day 28 + dexamethasone 40 mg po day 1, 8, 15, 22 and 28. Then high dose melphalan (200 mg/m^2) with autologous peripheral blood stem cell transplantation (PBSCT) followed by lenalidomide maintenance (10 mg/day) until disease progression.

The total duration of treatment is a maximum of 5 years, the end of trial is defined 2 years after inclusion of last patient in the trial.

### Intervention Type
Drug

### Phase
Phase III

### Drug/device/biological/vaccine name(s)
Lenalidomide, dexamethasone, melphalan

### Primary outcome measure
Progression-free survival: time from randomisation until disease progression or death from any cause whichever occurs first. This is measured at several timepoints during study and follow up if there is a progression of the disease.

### Secondary outcome measures
1. Overall survival (time from randomisation until death from any cause or date last contact)
2. Response rate (subcategories: minimal response [MR], partial response [PR], very good partial response [VGPR], complete response [CR]), measured after third and fifth cycle Rd and every three months during maintenance (Arm A) and measured after third cycle Rd, after high dose melphalan and every three months during maintenance (Arm B)
3. Feasibility of stem cell collection
4. Assessment of safety and toxicity. measured from inclusion until 30 days after last dose
5. Time to initiation of new myeloma treatment

### Overall study start date
27/09/2010

### Completion date
30/06/2017

## Eligibility

### Key inclusion criteria
1. Understand and voluntarily sign an informed consent form (aged greater than or equal to 18 years at time of signature)
2. Aged greater than or equal to 18 years and less than or equal to 70 years at time of

randomisation, either sex
3. Able to adhere to the study visit schedule and other protocol requirements
4. Patients with relapsed multiple myeloma (1.-3. relapse) Salmon-Durie-Stage II or III requiring systemic therapy
5. World Health Organization (WHO) performance status less than or equal to 2 at study entry
6. Results of laboratory assessments at time of inclusion within these ranges
6.1. Absolute neutrophil count greater than or equal to 1.0 x 10^9/L
6.2. Platelet count greater than or equal to 75 x 10^9/L (if plasma cell infiltration of bone marrow less than 50%; platelets greater than or equal to 30 x 10^9/L if plasma cell infiltration of bone marrow greater than or equal to 50%)
6.3. Creatinine-Clearance greater than or equal to 30 mL/min
6.4. Total bilirubin less than or equal to 2 x upper limit of normal (ULN) (unless myeloma related)
6.5. Alanine aminotransferase (ALT) less than or equal to 3 x ULN (unless myeloma related)
7. Willing to adhere to requirements of Pregnancy Prevention Program
8. Disease free of other malignancies for greater than or equal to 5 years (exceptions include: basal cell carcinoma, carcinoma in situ of skin, cervix or breast)
9. Able to perform thromboprophylaxis with low molecular weight heparin
10. Patients who received high-dose chemotherapy and autologous stem cell transplantation in first-line therapy are eligible if they had no disease progression/relapse less than 12 months after transplantation

## Participant type(s)
Patient

## Age group
Adult

## Lower age limit
18 Years

## Sex
Both

## Target number of participants
282

## Key exclusion criteria
1. Pregnant or breast feeding female
2. Non-secretory myeloma (with normal FLC-ratio)
3. Systemic AL-amyloidosis with organ involvement (except for AL-amyloidosis of skin and/or bone marrow)
4. Received treatment with any non-market drug substance within 28 days prior to start of study treatment
5. Known hypersensitivity to thalidomide or to any constituent compounds of Lenalidomide (Revlimid, e.g. lactose)
6. Development of erythema nodosum, if characterised by a desquamating rash while taking thalidomide or similar drugs
7. Active uncontrolled infection
8. Known positivity for human immunodeficiency virus (HIV) or clinically active hepatitis B or C
9. Heart insufficiency New York Heart Association (NYHA) greater than or equal to 3
10. Any serious pulmonary, neurological or psychiatric disease

11. Patient with plasma cell leukaemia
12. Previous allogeneic transplantation
13. Previous therapy with lenalidomide
14. Previous salvage autologous transplantation

### Date of first enrolment
27/09/2010

### Date of final enrolment
30/06/2017

## Locations

### Countries of recruitment
Germany

### Study participating centre
**Universitätsklinikum Heidelberg**
Heidelberg
Germany
69120

## Sponsor information

### Organisation
University Hospital Heidelberg (Universitätsklinikum Heidelberg) (Germany)

### Sponsor details
Im Neuenheimer Feld 672
Heidelberg
Germany
69120

### Sponsor type
Not defined

### Website
http://www.klinikum.uni-heidelberg.de/

### ROR
https://ror.org/013czdx64

## Funder(s)

**Funder type**
Industry

**Funder Name**
Celgene (Europe)

**Alternative Name(s)**
Celgene Corporation

**Funding Body Type**
Private sector organisation

**Funding Body Subtype**
For-profit companies (industry)

**Location**
United States of America

**Funder Name**
Dietmar-Hopp-Foundation (Germany)

**Funder Name**
Chugai (Germany)

**Funder Name**
Amgen (Germany)

**Alternative Name(s)**
Amgen Inc., Applied Molecular Genetics Inc.

**Funding Body Type**
Government organisation

**Funding Body Subtype**
For-profit companies (industry)

**Location**
United States of America

## Results and Publications

## Publication and dissemination plan
Not provided at time of registration

## Intention to publish date

## Individual participant data (IPD) sharing plan

## IPD sharing plan summary
Not provided at time of registration

## Study outputs

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|---|---|---|---|---|
| Protocol article | protocol | 25/04/2016 | | Yes | No |