



## Clinical trial results: Training in intralymphatically injection technique. A realistic learning study

### Summary

|                          |                  |
|--------------------------|------------------|
| EudraCT number           | 2014-004031-40   |
| Trial protocol           | DK               |
| Global end of trial date | 29 November 2020 |

### Results information

|                                |                  |
|--------------------------------|------------------|
| Result version number          | v1 (current)     |
| This version publication date  | 16 December 2020 |
| First version publication date | 16 December 2020 |

### Trial information

#### Trial identification

|                       |                     |
|-----------------------|---------------------|
| Sponsor protocol code | Version3.22.11.2014 |
|-----------------------|---------------------|

#### Additional study identifiers

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

Notes:

### Sponsors

|                              |                                                                                                                                    |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Sponsor organisation name    | Aarhus University Hospital                                                                                                         |
| Sponsor organisation address | Palle Juul-Jensens Boulevard 99, Aarhus N, Denmark, 8200                                                                           |
| Public contact               | ILIT Læringsstudie, Department of Respiratory Diseases, Aarhus University Hospital, 0045 7846 2106 , hans.jurgen.hoffmann@ki.au.dk |
| Scientific contact           | ILIT Læringsstudie, Department of Respiratory Diseases, Aarhus University Hospital, 0045 7846 2106 , hans.jurgen.hoffmann@ki.au.dk |

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                       | 29 November 2020 |
| Is this the analysis of the primary completion data? | Yes              |
| Primary completion date                              | 29 November 2020 |
| Global end of trial reached?                         | Yes              |
| Global end of trial date                             | 29 November 2020 |
| Was the trial ended prematurely?                     | No               |

Notes:

## General information about the trial

Main objective of the trial:

We would like to examine how the new treatment with intralymphatically injections can be learned by doctors with no previous experience in the treatment.

Protection of trial subjects:

Followed Danish regulations

Background therapy: -

Evidence for comparator: -

|                                                           |                  |
|-----------------------------------------------------------|------------------|
| Actual start date of recruitment                          | 02 November 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 | Denmark: 175 |
| Worldwide total number of subjects   | 175          |
| EEA total number of subjects         | 175          |

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)                      | 175 |
| From 65 to 84 years                       | 0   |
| 85 years and over                         | 0   |

## Subject disposition

### Recruitment

Recruitment details: -

### Pre-assignment

Screening details:

Allergic rhinoconjunctivitis.

### Pre-assignment period milestones

|                            |     |
|----------------------------|-----|
| Number of subjects started | 175 |
|----------------------------|-----|

|                              |     |
|------------------------------|-----|
| Number of subjects completed | 175 |
|------------------------------|-----|

### Period 1

|                |                              |
|----------------|------------------------------|
| Period 1 title | Pre-ILIT grass pollen season |
|----------------|------------------------------|

|                              |     |
|------------------------------|-----|
| Is this the baseline period? | Yes |
|------------------------------|-----|

|                   |                             |
|-------------------|-----------------------------|
| Allocation method | Non-randomised - controlled |
|-------------------|-----------------------------|

|               |             |
|---------------|-------------|
| Blinding used | Not blinded |
|---------------|-------------|

### Arms

|           |              |
|-----------|--------------|
| Arm title | Intervention |
|-----------|--------------|

Arm description: -

|          |              |
|----------|--------------|
| Arm type | Experimental |
|----------|--------------|

|                                        |                          |
|----------------------------------------|--------------------------|
| Investigational medicinal product name | Alk 225. Phleum Pratense |
|----------------------------------------|--------------------------|

|                                        |  |
|----------------------------------------|--|
| Investigational medicinal product code |  |
|----------------------------------------|--|

|            |  |
|------------|--|
| Other name |  |
|------------|--|

|                      |           |
|----------------------|-----------|
| Pharmaceutical forms | Injection |
|----------------------|-----------|

|                          |                    |
|--------------------------|--------------------|
| Routes of administration | Intralymphatic use |
|--------------------------|--------------------|

Dosage and administration details:

1000squ.

Intralymphatic administration

| Number of subjects in period 1 | Intervention |
|--------------------------------|--------------|
| Started                        | 175          |
| Completed                      | 175          |

**Period 2**

|                              |                               |
|------------------------------|-------------------------------|
| Period 2 title               | Post-ILIT grass pollen season |
| Is this the baseline period? | No                            |
| Allocation method            | Non-randomised - controlled   |
| Blinding used                | Not blinded                   |

**Arms**

|                                        |                          |
|----------------------------------------|--------------------------|
| <b>Arm title</b>                       | Intervention             |
| Arm description: -                     |                          |
| Arm type                               | Experimental             |
| Investigational medicinal product name | Alk 225. Phleum Pratense |
| Investigational medicinal product code |                          |
| Other name                             |                          |
| Pharmaceutical forms                   | Injection                |
| Routes of administration               | Intralymphatic use       |

Dosage and administration details:

1000squ.

Intralymphatic administration

| <b>Number of subjects in period 2</b> | Intervention |
|---------------------------------------|--------------|
| Started                               | 175          |
| Completed                             | 175          |

**Period 3**

|                              |                             |
|------------------------------|-----------------------------|
| Period 3 title               | First injection             |
| Is this the baseline period? | No                          |
| Allocation method            | Non-randomised - controlled |
| Blinding used                | Not blinded                 |

**Arms**

|                                        |                          |
|----------------------------------------|--------------------------|
| <b>Arm title</b>                       | Intervention             |
| Arm description: -                     |                          |
| Arm type                               | Experimental             |
| Investigational medicinal product name | Alk 225. Phleum Pratense |
| Investigational medicinal product code |                          |
| Other name                             |                          |
| Pharmaceutical forms                   | Injection                |
| Routes of administration               | Intralymphatic use       |

Dosage and administration details:

1000squ.

Intralymphatic administration

| <b>Number of subjects in period 3</b> | Intervention |
|---------------------------------------|--------------|
| Started                               | 175          |
| Completed                             | 160          |
| Not completed                         | 15           |
| Lost to follow-up                     | 15           |

#### **Period 4**

|                              |                             |
|------------------------------|-----------------------------|
| Period 4 title               | Second injection            |
| Is this the baseline period? | No                          |
| Allocation method            | Non-randomised - controlled |
| Blinding used                | Not blinded                 |

#### **Arms**

|                                        |                          |
|----------------------------------------|--------------------------|
| <b>Arm title</b>                       | Intervention             |
| Arm description: -                     |                          |
| Arm type                               | Experimental             |
| Investigational medicinal product name | Alk 225. Phleum Pratense |
| Investigational medicinal product code |                          |
| Other name                             |                          |
| Pharmaceutical forms                   | Injection                |
| Routes of administration               | Intralymphatic use       |

Dosage and administration details:

1000squ.

Intralymphatic administration

| <b>Number of subjects in period 4</b> | Intervention |
|---------------------------------------|--------------|
| Started                               | 160          |
| Completed                             | 159          |
| Not completed                         | 1            |
| Lost to follow-up                     | 1            |

**Period 5**

|                              |                             |
|------------------------------|-----------------------------|
| Period 5 title               | Third Injection             |
| Is this the baseline period? | No                          |
| Allocation method            | Non-randomised - controlled |
| Blinding used                | Not blinded                 |

**Arms**

|                                        |                          |
|----------------------------------------|--------------------------|
| <b>Arm title</b>                       | Intervention             |
| Arm description: -                     |                          |
| Arm type                               | Experimental             |
| Investigational medicinal product name | Alk 225. Phleum Pratense |
| Investigational medicinal product code |                          |
| Other name                             |                          |
| Pharmaceutical forms                   | Injection                |
| Routes of administration               | Intralymphatic use       |

Dosage and administration details:

1000squ.

Intralymphatic administration

| <b>Number of subjects in period 5</b> | Intervention |
|---------------------------------------|--------------|
| Started                               | 159          |
| Completed                             | 154          |
| Not completed                         | 5            |
| Lost to follow-up                     | 5            |

## Baseline characteristics

### Reporting groups

|                       |                              |
|-----------------------|------------------------------|
| Reporting group title | Pre-ILIT grass pollen season |
|-----------------------|------------------------------|

Reporting group description: -

| Reporting group values                             | Pre-ILIT grass pollen season | Total |  |
|----------------------------------------------------|------------------------------|-------|--|
| Number of subjects                                 | 175                          | 175   |  |
| Age categorical<br>Units: Subjects                 |                              |       |  |
| In utero                                           | 0                            | 0     |  |
| Preterm newborn infants (gestational age < 37 wks) | 0                            | 0     |  |
| Newborns (0-27 days)                               | 0                            | 0     |  |
| Infants and toddlers (28 days-23 months)           | 0                            | 0     |  |
| Children (2-11 years)                              | 0                            | 0     |  |
| Adolescents (12-17 years)                          | 0                            | 0     |  |
| Adults (18-64 years)                               | 175                          | 175   |  |
| From 65-84 years                                   | 0                            | 0     |  |
| 85 years and over                                  | 0                            | 0     |  |
| Age continuous<br>Units: years                     |                              |       |  |
| arithmetic mean                                    | 35.2                         |       |  |
| standard deviation                                 | ± 7.5                        | -     |  |
| Gender categorical<br>Units: Subjects              |                              |       |  |
| Female                                             | 63                           | 63    |  |
| Male                                               | 112                          | 112   |  |

## End points

### End points reporting groups

|                                |              |
|--------------------------------|--------------|
| Reporting group title          | Intervention |
| Reporting group description: - |              |
| Reporting group title          | Intervention |
| Reporting group description: - |              |
| Reporting group title          | Intervention |
| Reporting group description: - |              |
| Reporting group title          | Intervention |
| Reporting group description: - |              |
| Reporting group title          | Intervention |
| Reporting group description: - |              |

### Primary: Injection score

|                        |                                    |
|------------------------|------------------------------------|
| End point title        | Injection score                    |
| End point description: |                                    |
| End point type         | Primary                            |
| End point timeframe:   | First, second and third injection. |

| End point values                     | Intervention     | Intervention     | Intervention     |  |
|--------------------------------------|------------------|------------------|------------------|--|
| Subject group type                   | Reporting group  | Reporting group  | Reporting group  |  |
| Number of subjects analysed          | 160              | 159              | 154              |  |
| Units: 1                             |                  |                  |                  |  |
| arithmetic mean (standard deviation) | 3.3 ( $\pm$ 0.7) | 3.2 ( $\pm$ 0.8) | 3.3 ( $\pm$ 0.6) |  |

### Statistical analyses

|                                         |                                            |
|-----------------------------------------|--------------------------------------------|
| Statistical analysis title              | Injection score                            |
| Comparison groups                       | Intervention v Intervention v Intervention |
| Number of subjects included in analysis | 473                                        |
| Analysis specification                  | Pre-specified                              |
| Analysis type                           | non-inferiority                            |
| P-value                                 | = 0.12 <sup>[1]</sup>                      |
| Method                                  | ANOVA                                      |
| Parameter estimate                      | Mean difference (final values)             |
| Point estimate                          | 1                                          |

|                      |                    |
|----------------------|--------------------|
| Confidence interval  |                    |
| level                | 95 %               |
| sides                | 2-sided            |
| lower limit          | 0                  |
| upper limit          | 1                  |
| Variability estimate | Standard deviation |
| Dispersion value     | 1                  |

Notes:

[1] - Anova p value 0.12.

Parameter estimates not calculated and reported below are fictive numbers.

### Secondary: cSMS

|                        |           |
|------------------------|-----------|
| End point title        | cSMS      |
| End point description: |           |
| End point type         | Secondary |
| End point timeframe:   |           |
| Pre-ILIT to post-ILIT  |           |

| End point values                          | Intervention        | Intervention        |  |  |
|-------------------------------------------|---------------------|---------------------|--|--|
| Subject group type                        | Reporting group     | Reporting group     |  |  |
| Number of subjects analysed               | 157                 | 157                 |  |  |
| Units: 1                                  |                     |                     |  |  |
| arithmetic mean (confidence interval 95%) |                     |                     |  |  |
| csms                                      | 1.56 (1.53 to 1.77) | 1.00 (0.89 to 1.12) |  |  |

### Statistical analyses

|                                         |                                |
|-----------------------------------------|--------------------------------|
| Statistical analysis title              | pre-post cSMS                  |
| Comparison groups                       | Intervention v Intervention    |
| Number of subjects included in analysis | 314                            |
| Analysis specification                  | Pre-specified                  |
| Analysis type                           | non-inferiority                |
| P-value                                 | < 0.0001                       |
| Method                                  | t-test, 2-sided                |
| Parameter estimate                      | Mean difference (final values) |
| Point estimate                          | 0.65                           |
| Confidence interval                     |                                |
| level                                   | 95 %                           |
| sides                                   | 2-sided                        |
| lower limit                             | 0.54                           |
| upper limit                             | 0.76                           |
| Variability estimate                    | Standard deviation             |
| Dispersion value                        | 0.67                           |



## Adverse events

### Adverse events information

Timeframe for reporting adverse events:

All study period.

|                 |            |
|-----------------|------------|
| Assessment type | Systematic |
|-----------------|------------|

### Dictionary used

|                 |        |
|-----------------|--------|
| Dictionary name | MedDRA |
|-----------------|--------|

|                    |   |
|--------------------|---|
| Dictionary version | 1 |
|--------------------|---|

### Reporting groups

|                       |              |
|-----------------------|--------------|
| Reporting group title | Intervention |
|-----------------------|--------------|

Reporting group description: -

| <b>Serious adverse events</b>                     | Intervention    |  |  |
|---------------------------------------------------|-----------------|--|--|
| Total subjects affected by serious adverse events |                 |  |  |
| subjects affected / exposed                       | 1 / 175 (0.57%) |  |  |
| number of deaths (all causes)                     | 0               |  |  |
| number of deaths resulting from adverse events    | 0               |  |  |
| Immune system disorders                           |                 |  |  |
| Anaphylactic reaction                             |                 |  |  |
| subjects affected / exposed                       | 1 / 175 (0.57%) |  |  |
| occurrences causally related to treatment / all   | 1 / 1           |  |  |
| deaths causally related to treatment / all        | 0 / 0           |  |  |

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

| <b>Non-serious adverse events</b>                     | Intervention      |  |  |
|-------------------------------------------------------|-------------------|--|--|
| Total subjects affected by non-serious adverse events |                   |  |  |
| subjects affected / exposed                           | 85 / 175 (48.57%) |  |  |
| Immune system disorders                               |                   |  |  |
| Local reaction                                        |                   |  |  |
| subjects affected / exposed                           | 85 / 175 (48.57%) |  |  |
| occurrences (all)                                     | 125               |  |  |

## **More information**

### **Substantial protocol amendments (globally)**

Were there any global substantial amendments to the protocol? No

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### **Interruptions (globally)**

Were there any global interruptions to the trial? No

### **Limitations and caveats**

None reported

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### **Online references**

<http://www.ncbi.nlm.nih.gov/pubmed/33099797>