

STUDY SUMMARY INTENDED FOR EUROPEAN UNION PATIENTS ONLY

Short study title: To look at the amount of certolizumab pegol in breast milk (CRADLE)

Full study title: A Multicenter, Postmarketing Study to Evaluate the Concentration of Certolizumab Pegol in the Breast Milk of Mothers Receiving Treatment with Cimzia® (Certolizumab pegol)

Thank you	UCB would like to thank all of the participants of this clinical study. Participation in clinical studies like this one provides important information for breastfeeding mothers being treated with certolizumab pegol (Cimzia®).
Background	<ul style="list-style-type: none">• A concern of mothers taking medicine during breastfeeding is whether the medicine can get into the baby when they are breastfeeding.• Very few studies have been done to measure drug concentrations in breast milk.• This study was done to measure the concentration of certolizumab pegol in the breast milk samples of mothers taking this drug. This is the first published study about this topic.• A new test that can measure very low concentrations of certolizumab pegol was used in this study. This test can measure certolizumab pegol concentrations that are about 1/1000th of what is usually found in the blood of women taking certolizumab pegol.• The study plan did not include looking at the long-term effects of certolizumab pegol. Neither did the plan include looking at whether or not certolizumab pegol helps to improve the health of the mothers.
Purpose of the study	<p>The main purposes of the study were:</p> <ul style="list-style-type: none">• To see if certolizumab is in the breast milk of women who are taking certolizumab pegol. This was done by measuring the amount of certolizumab pegol in breast milk samples from mothers taking certolizumab pegol.• To estimate the amount of certolizumab pegol the babies may possibly have received from breastfeeding.• To look at the <u>side effects</u> of certolizumab pegol in breastfeeding mothers and the babies they are breastfeeding
Study participants	<ul style="list-style-type: none">• Some of the requirements to get into the study were that mothers:<ul style="list-style-type: none">○ Were at least 18 years old.○ Were breastfeeding.○ Were taking certolizumab pegol as told to by their doctors. The participant had to decide to take certolizumab pegol before she thought about being in the study.○ Had given birth at least 6 weeks before they got into the study.○ Had given birth to their baby after at least 37 weeks of pregnancy.

- Eighteen mothers were included in the study. The mothers were 28 to 42 years old. The babies were about 6 weeks to 17 months old.
- One mother left the study before giving breast milk samples. Her baby was not included in the study.

Study design and research methodology

- The study was run in the Netherlands, Switzerland, and the US.
- The study started in September 2014 and ended in January 2016.
- Mothers took either 200 milligrams of certolizumab pegol every 2 weeks or 400 milligrams of certolizumab pegol every 4 weeks as told to by their doctors.
- Each mother collected breast milk samples. Samples were collected over 2 weeks for mothers taking certolizumab pegol every 2 weeks. Samples were collected over 4 weeks for mothers taking certolizumab pegol every 4 weeks. The new test was used to measure the concentration of certolizumab pegol in each milk sample.
- The amount of certolizumab pegol that babies may have received from breastfeeding was estimated. The estimate was based on the concentration of certolizumab pegol in the mother's milk and an estimate of how much breast milk a baby receives.
- Doctors collected information about participants' medical problems during this study. This was done to look at the safety of the participants and to understand the safety of the study drug. The medical problems that the doctor thought were due to the study drug are called side effects. They are either serious side effects or not serious side effects. The doctor uses a set of rules when deciding whether or not a side effect is serious.

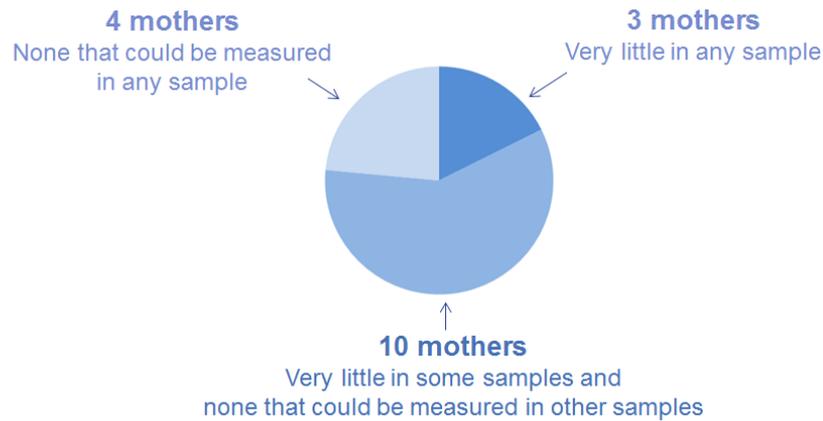
Key findings

- Each of the 17 mothers provided at least 8 breast milk samples.
- Minimal certolizumab pegol was found in the breast milk samples during the 2 to 4 weeks that milk was collected. Specifically,
 - 4 mothers had no certolizumab pegol that could be measured in any of their samples
 - 3 mothers had very little certolizumab pegol in all of their samples
 - 10 mothers had some samples that had very little certolizumab pegol and other samples that had no certolizumab that could be measured

Samples with certolizumab pegol had less than 1/400th of the concentrations expected to be in the mothers' blood.

This same information is shown on the next page in a picture.

Amount of certolizumab pegol in breast milk samples from 17 mothers



- Since minimal certolizumab pegol was found in the breast milk samples, the estimates showed that babies received no or very little certolizumab pegol from breastfeeding.
- No mothers or babies had serious side effects during the study.

Of the 17 mothers who gave breast milk samples, 3 mothers had side effects. One mother had pneumonia and upper respiratory tract infection. One mother had upper respiratory tract infection. One mother had Crohn's disease that got worse during the study. This mother had Crohn's disease before the study started.

- One baby had a side effect. The side effect was nasopharyngitis.
- For more information about this study, please visit <https://clinicaltrials.gov/ct2/show/NCT02154425?term=UP0016&rank=1>. For information about other studies for people taking certolizumab pegol, please visit clinicaltrials.gov.

Comment on the outcome of the study

In this study, minimal certolizumab pegol was measured in the breast milk of mothers taking certolizumab pegol. This means that the babies likely received very little or no certolizumab pegol from breastfeeding.

The side effects for the mothers were of the same type as those already known for certolizumab pegol. Babies in this study had the same kind of medical events as other babies their age.

The study did not look at long-term effects in breastfeeding mothers who took certolizumab pegol or in their breastfeeding babies.

Peer-reviewed publication

Clowse ME, Förger F, Hwang C, Thorp J, Dolhain RJ, van Tubergen A, et al. Minimal to no transfer of certolizumab pegol into breast milk: results from CRADLE, a prospective, postmarketing, multicentre, pharmacokinetic study. <https://www.ncbi.nlm.nih.gov/pubmed/28814432> (01 Feb 2018)

Last update on 01 Feb 2018.

This summary is provided for informational purposes only.

This summary only shows the results from this 1 study. Other studies may find different results. The overall results of the study may not reflect the experience of an individual participant of the study. If you need medical advice about your own health or situation, please contact your physician.

Thank you again to all participants!!!