Clinical Trial Results – Layperson Summary

A study looking at the use of pertuzumab, trastuzumab and docetaxel in Asian people with early-stage HER2-positive breast cancer ('PEONY')

See the end of the summary for the full title of the study.

About this summary

This is a summary of the results of a clinical trial (called a 'study' in this document) – written for:

- people who took part in the study and
- members of the public.

This summary is based on the information known at the time of writing (September 2019). More information may now be known.

No single study can tell us everything about the risks and benefits of a medicine. It takes lots of people in many studies to find out everything we need to know. The results from this study may be different from other studies with the same medicine.

- This means that you should not make decisions based on this one summary – always speak to your doctor before making any decisions about your treatment.

Contents of the summary

Thank you to the people who took part in this study

The people who took part have helped researchers to answer important questions about HER2-positive early-stage breast cancer and the study medicine.

1. General information about this study

Why was this study done?

People with the early stages of a type of breast cancer called 'HER2-positive breast cancer' are commonly treated by having surgery to remove the tumour and then being given treatment with cancer medicines to help kill any cancer cells not removed during surgery.

Previous studies showed that people given the cancer medicines pertuzumab and trastuzumab, plus chemotherapy before surgery had fewer cancer cells left in the breast after surgery, compared with people given only trastuzumab plus chemotherapy. However, fewer than 1 in 4 people in these studies were from Asia. The PEONY study was performed to understand how these treatments work in Asian people with early-stage HER2-positive breast cancer.

What are the study medicines?

Pertuzumab

- You say this as ‘per-too-za-mab’.
- Pertuzumab is the medicine being studied in PEONY. It works by attaching to the HER2 protein (sometimes also referred to as ERB-B2) on the surface of HER2-positive cancer cells. When pertuzumab attaches to HER2, it stops the HER2 protein from sending signals that make the cancer cells grow. It also makes cells in the immune system become active so that they can then attack cancer cells. This may mean that pertuzumab helps make the tumour smaller before people have surgery.

Trastuzumab

- You say this as ‘trass-too-za-mab’.
- Trastuzumab works in the same way as pertuzumab but attaches to a different part of the HER2 protein.

Docetaxel

- You say this as ‘doe-seh-tax-el’.
- Docetaxel is a chemotherapy medicine that works by attacking cancer cells and blocking their growth.

Pertuzumab has been approved by the European Medicines Agency for the treatment of the following diseases:

- HER2-positive breast cancer where the cancer has spread to other parts of the body where people have not previously been given chemotherapy medicines or medicines designed to target the HER2 protein, or breast cancer that has come back after treatment and cannot be removed by surgery. In these situations, people are given pertuzumab with trastuzumab and docetaxel.
- HER2-positive breast cancer where the cancer is likely to spread quickly, or where the cancer has spread to the surrounding tissue, or where the cancer is at an early stage and is at high risk of coming back after surgery. In these situations, people are given pertuzumab with trastuzumab and docetaxel before they have surgery.
- HER2-positive breast cancer where the cancer is at an early stage and surgery has been carried out to remove it, but where there is a high risk of the cancer coming back. In this situation, people are given pertuzumab with trastuzumab and docetaxel.

Pertuzumab with trastuzumab plus docetaxel was compared with a ‘placebo’ with trastuzumab and docetaxel.

- You say this as ‘plah – see – bo’.
- The placebo looked the same as pertuzumab but did not contain any real medicine. This means it had no medicine-related effect on the body.
- Researchers compared pertuzumab plus trastuzumab and docetaxel to a placebo plus trastuzumab and docetaxel so they could show which benefits or side effects are actually caused by pertuzumab.

What did researchers want to find out?

- Researchers did this study to compare pertuzumab given with two existing medicines (trastuzumab and docetaxel) versus a placebo (given with the same two existing medicines) to see how well this new study medicine worked in Asian people (see section 4 “What were the results of the study at this point?”).
- They also wanted to find out how safe the medicine was – by checking how many people had side effects when taking each of the medicines during this study (see section 5 “What were the side effects?”).

The main question that researchers wanted to answer was:

- How many people had no signs of cancer in their breast or lymph nodes after surgery in this study?

What kind of study was this?

This study was a ‘Phase 3’ study. This means that pertuzumab had already been tested in a different group of people with HER2-positive breast cancer before this study.

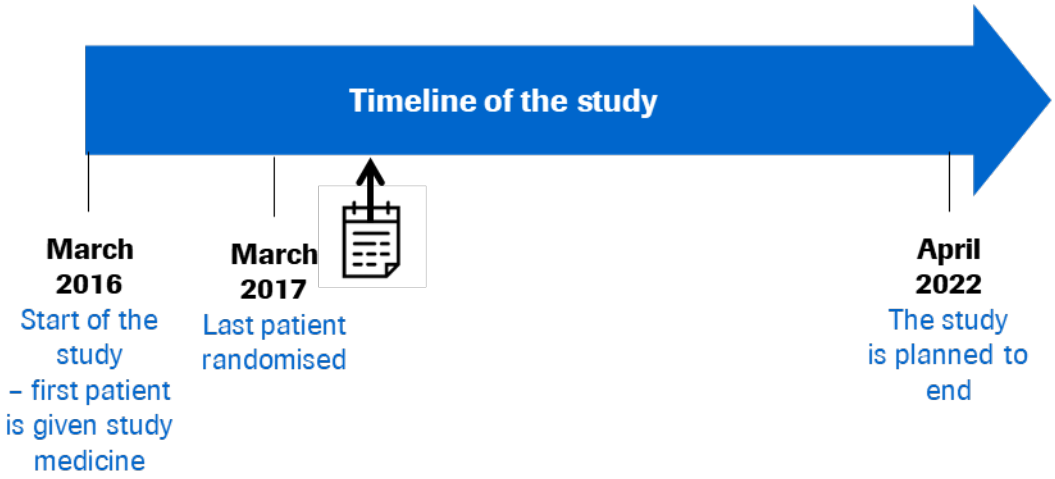
In this study, Asian people with early stage HER2-positive breast cancer took either pertuzumab or placebo along with two existing cancer medicines (trastuzumab and docetaxel) – this was to find out if pertuzumab helped to increase the number of people with no signs of cancer in their breast or lymph nodes after they had surgery, and to understand the side effects of pertuzumab.

The study was ‘randomised’. This means that it was decided by chance which of the medicines people in the study would have.

The randomisation was double-blind, which means that neither the people taking part in the study or the study doctors knew which of the study medicines people were taking.

When and where did the study take place?

The study started in March 2016 and will end in April 2022. This summary includes the results up until October 2017. At the time of writing this summary, the study is still happening – this summary presents the complete results from one part of the study.



As this study is still happening, the symbol on the timeline ( ) shows when the information shown in this summary was collected – October 2017, 19 months after the start of the study.

The study took place at 23 study centres – across four countries and territories in Asia. The countries and territories were: China, South Korea, Taiwan and Thailand.

2. Who took part in this study?

In this study, 329 people with HER2-positive breast cancer took part. Everyone who took part was female and between 24 and 72 years old.

People who could take part in this study:

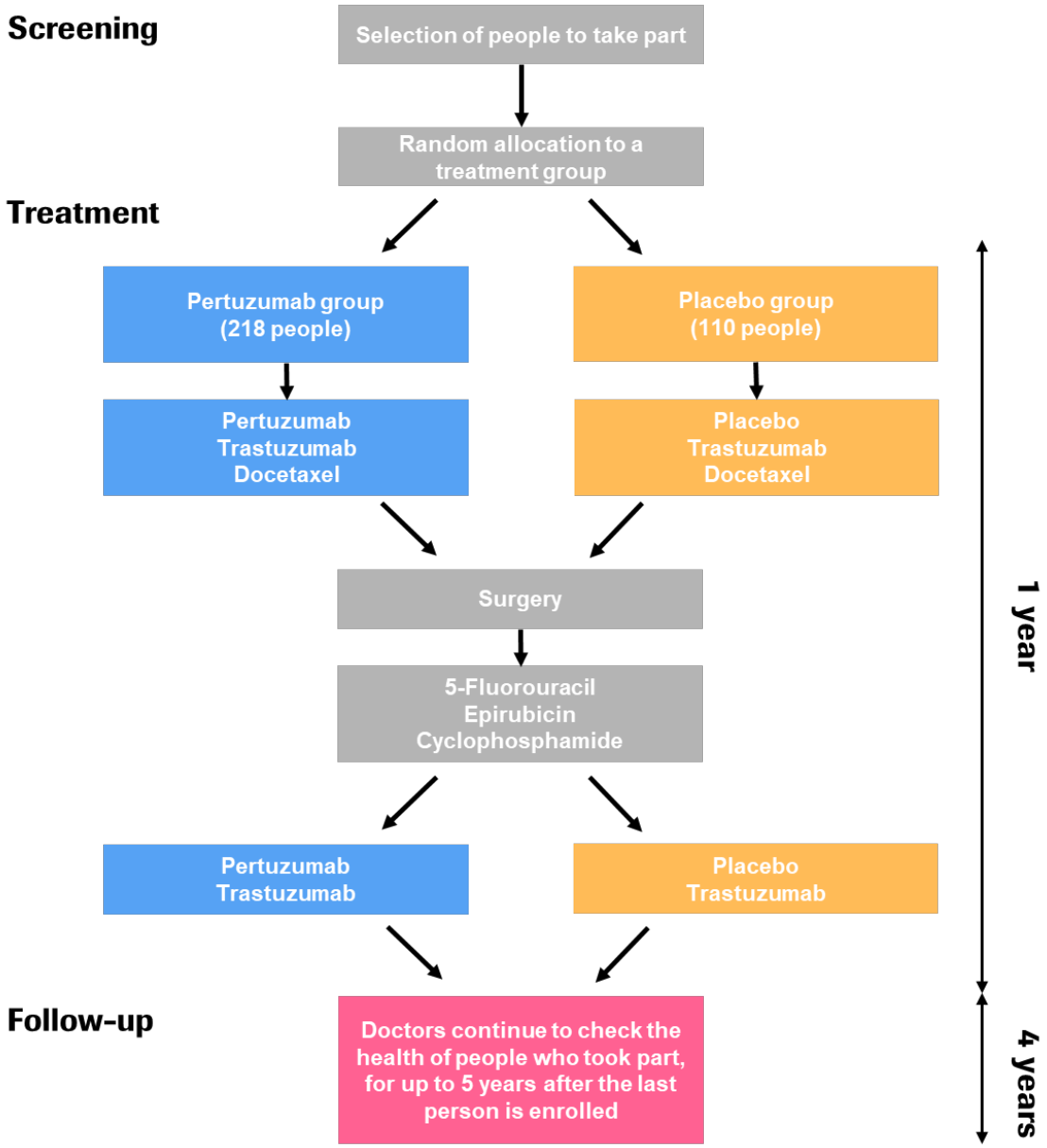
- Had early-stage breast cancer or breast cancer that had only spread to nearby cells in the breast and/or lymph nodes
- More than 10% of the breast cancer cells had the HER2 protein on the outside of the cell or were shown to have a higher number of HER2 genes compared with normal breast cells
- HER2-positive breast cancer confirmed by a specific test
- Were able to perform activities as well, or almost as well, as they could before they had the illness

People could NOT take part in this study if they had:

- Breast cancer that had spread to other parts of the body ('metastatic' cancer)
- A rare and aggressive disease in which cancer cells block lymph vessels in the skin of the breast ('inflammatory' breast cancer)
- Already taken anti-cancer medicines or radiotherapy for any cancer

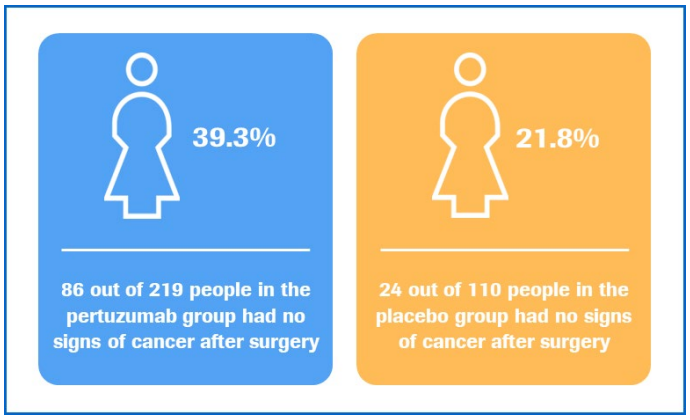
3. What happened during the study?

During the study, people were selected by chance to join one of two treatment groups (pertuzumab group or placebo group) before surgery. Each group followed a different treatment option as shown in the diagram below.



4. What were the results of the study at this point?

Question 1: How many people had no signs of cancer in their breast or lymph nodes after surgery in this study?



This section only shows the key results from the study at this point. You can find information about all other results on the websites at the end of this summary (see section 8).

5. What were the side effects?

Side effects (also known as 'adverse events') are unwanted medical problems (such as a headache) that happen during the study.

- Not all the people in this study had all of the side effects.

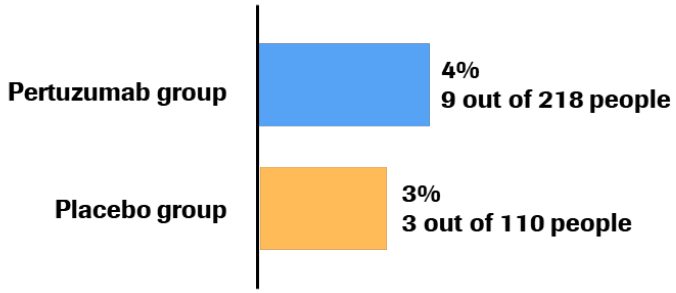
Serious and common side effects are listed in the following sections.

Serious side effects

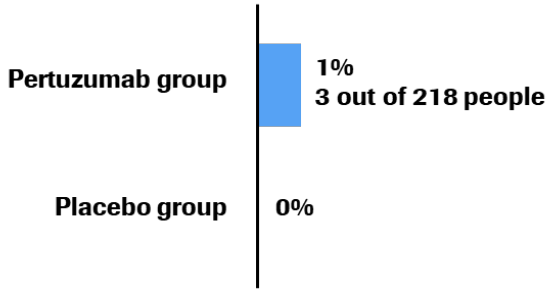
A side effect is considered 'serious' if it is life-threatening or needs hospital care or causes lasting problems.

The two most common serious side effects across both treatment groups are shown below.

Fever in a person who already has low levels of neutrophils (a type of white blood cell)



Bone marrow failure



Only one person died during this study due to side effects:

- 1 out of 218 people (less than 1%) in the pertuzumab group (the doctor treating this person thought that it was not related to study treatment).
- None of the 110 people in the placebo group.

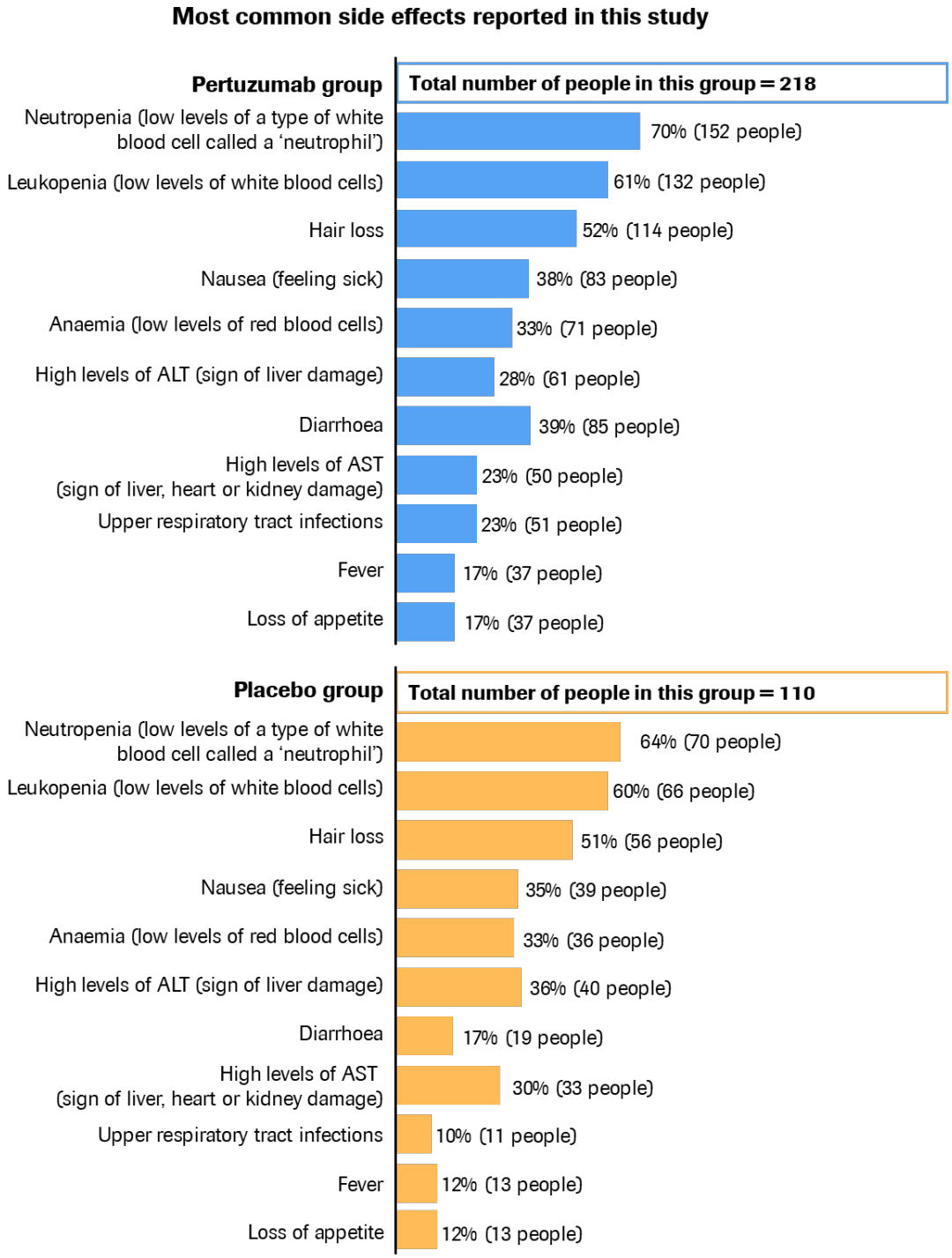
During the study, some people might decide to stop taking their medicine because of side effects:

- In the pertuzumab group, 1 out of 218 people (less than 1%) stopped taking their medicine. This person had a serious skin reaction during the treatment period.
- In the placebo group, no people stopped taking their medicine.

Most common side effects

During this study, almost all people (99%) had a side effect that was not considered serious. Only one person in the pertuzumab group and two people in the placebo group did not have a side effect.

The ten most common side effects across both treatment groups are shown on the next page.



ALT, alanine transferase; AST, aspartate aminotransferase.

Other side effects

You can find information about other side effects (not shown in the sections above) on the websites listed at the end of this summary – see section 8.

6. How has this study helped research?

The information presented here is from a single study of 329 people with early HER2-positive breast cancer. These results helped researchers learn more about early HER2-positive breast cancer and pertuzumab.

The results from this study show that, in early HER2-positive breast cancer, giving people pertuzumab as well as trastuzumab and docetaxel before surgery can help improve the success of surgery, compared with giving people placebo plus trastuzumab and docetaxel. The side effects seen in this study matched those that had been reported in previous studies of this medicine.

This study adds to the information already collected on the use of pertuzumab and trastuzumab plus chemotherapy before surgery in HER2-positive breast cancer. Importantly, it shows that Asian people with early-stage HER2-positive breast cancer may benefit from this medicine.

7. Are there plans for other studies?

At the time of writing this summary PEONY is ongoing and study doctors are still collecting information. There is a comprehensive clinical development programme underway to investigate pertuzumab for the treatment of HER2-positive breast cancer in people from Asia. In addition to PEONY, these studies include:

- The 'PUFFIN' study. This study looked at pertuzumab plus trastuzumab and docetaxel in Chinese patients with HER2-positive breast cancer that has spread to other parts of the body. The ClinicalTrials.gov identifier for the PUFFIN study is: NCT02896855.
- The 'APHINITY' study. This is a global study that included people from Asia with HER2-positive early breast cancer. The ClinicalTrials.gov identifier for the APHINITY study is: NCT01358877.

The results from PEONY, PUFFIN and the people from Asia in APHINITY were comparable with those looking at people from across the globe. They also supported the registration of pertuzumab for the treatment of HER2-positive breast cancer in China – this was in line with how pertuzumab is used in other countries globally.

An additional study ('FDChina') is looking at pertuzumab plus trastuzumab and chemotherapy in people from China with HER2-positive early breast cancer. This study is assessing an alternative, faster and less invasive method of treating people with pertuzumab together with trastuzumab ('fixed-dose formulation'). The fixed-dose formulation allows for the first time for pertuzumab and trastuzumab to be given as a single injection under the skin. The ClinicalTrials.gov identifier for this study is: NCT04024462; the study number is: YO41137.

8. Where can I find more information?

You can find more information about this study on the websites listed below:

- https://forpatients.roche.com/en/trials/cancer/bc/study-in-participants-with-early-stage-or-locally-advan-28195.html
- https://clinicaltrials.gov/ct2/show/NCT02586025

If you would like to find out more about the results of this study, the full title of the relevant scientific paper is: “Efficacy, safety, and tolerability of pertuzumab, trastuzumab, and docetaxel for patients with early or locally advanced ERBB2-positive breast cancer in Asia: The PEONY phase 3 Randomized Clinical Trial.” The authors of the scientific paper are: Zhimin Shao, Da Pang, Hongjian Yang, Wei Li, Shusen Wang and others. The paper was published online, ahead of print, in the journal ‘JAMA Oncology’, 24 October, 2019.

Who can I contact if I have questions about this study?

If you have any further questions after reading this summary:

- Visit the ForPatients platform and fill out the contact form – https://forpatients.roche.com/en/trials/cancer/bc/study-in-participants-with-early-stage-or-locally-advan-28195.html
- Contact a representative at your local Roche office.

If you took part in this study and have any questions about the results:

- Speak to the study doctor or staff at the study hospital or clinic.

If you have questions about your own treatment:

- Speak to the doctor in charge of your treatment.

Who organised and paid for this study?

This study was organised and paid for by F. Hoffmann-La Roche Ltd who have their headquarters in Basel, Switzerland.

Full title of the study and other identifying information

The full title of this study is: “A Randomized, Multicenter, Double-Blind, Placebo-Controlled, Phase III Study to Evaluate Pertuzumab in Combination With Docetaxel and Trastuzumab as Neoadjuvant Therapy, and Pertuzumab in Combination With Trastuzumab as Adjuvant Therapy After Surgery and Chemotherapy in Patients With Early-Stage or Locally Advanced HER2-Positive Breast Cancer”.

The study is known as ‘PEONY’.

- The protocol number for this study is: YO28762.
- The ClinicalTrials.gov identifier for this study is: NCT02586025.