CLINICAL TRIAL RESULTS

This summary reports the results of only one study. Researchers must look at the results of many types of studies to understand if a study medicine works, how it works, and if it is safe to prescribe to patients. The results of this study might be different than the results of other studies that the researchers review.

Sponsor: Hospira, a Pfizer company

Medicine(s) Studied: PF-06881894 (HSP-130)

Protocol Number: C1221002 (ZIN-130-1504)

Dates of Trial: 21 December 2015 to 05 October 2017

Title of this Trial: A Phase 1-2 Ascending Dose Study to Assess the Pharmacodynamics, Pharmacokinetics, and Safety of HSP-130 in Subjects With Non-Metastatic Breast Cancer Following Single-Dose and Multiple-Dose Administration by Subcutaneous Injection

Date of this Report: 24 August 2018

– Thank You –

Pfizer, the Sponsor, would like to thank you for your participation in this clinical trial and provide you a summary of results representing everyone who participated. If you have any questions about the study or results please contact the doctor or staff at your study site.

WHY WAS THIS STUDY DONE?

A "neutrophil" is a type of white blood cell that fights infections in the body. Certain chemotherapy medicines that are used for treating cancer can cause the number of neutrophils in the body to be too low. This is known as "chemotherapy-induced neutropenia", or CIN. Patients with CIN are at increased risk for fever and serious infections.

There are medicines that can be used to treat CIN. One medicine that is used is called Neulasta®. Neulasta may increase the number of neutrophils in the blood.

This study was designed to study a new medicine being developed for CIN. This medicine is called HSP-130 (PF-06881894), and it is similar to Neulasta. The reason for studying HSP-130 is to give patients another treatment option. HSP-130 is still being studied and has not been approved for use outside of clinical studies.

For this study, researchers were interested in learning how HSP-130 affects the body, when given as a single dose or as multiple doses. This information is important to help determine the right dose of HSP-130. The study was for women with breast cancer that had not spread to other parts of the body. It was divided into 2 parts. In the first part of the study, researchers wanted to answer this question:

- **What effect did HSP-130 have on the number of neutrophils in patients' blood, if they were not getting chemotherapy?**

For the second part of the study, researchers wanted to answer this question:

- **How many days did patients have severely low neutrophil counts (neutropenia) during their first chemotherapy cycle?**

WHAT HAPPENED DURING THE STUDY?

This study looked at how HSP-130 affects the body. The study included women with breast cancer who had never before taken chemotherapy. This was an "open-label" study, which means that both the patients and researchers knew what treatment was being given.

Since the study was divided into 2 parts, each patient took part in only Part 1 or Part 2. Patients were checked by the study doctor to make sure they were a good fit to join the study. This was called "screening".

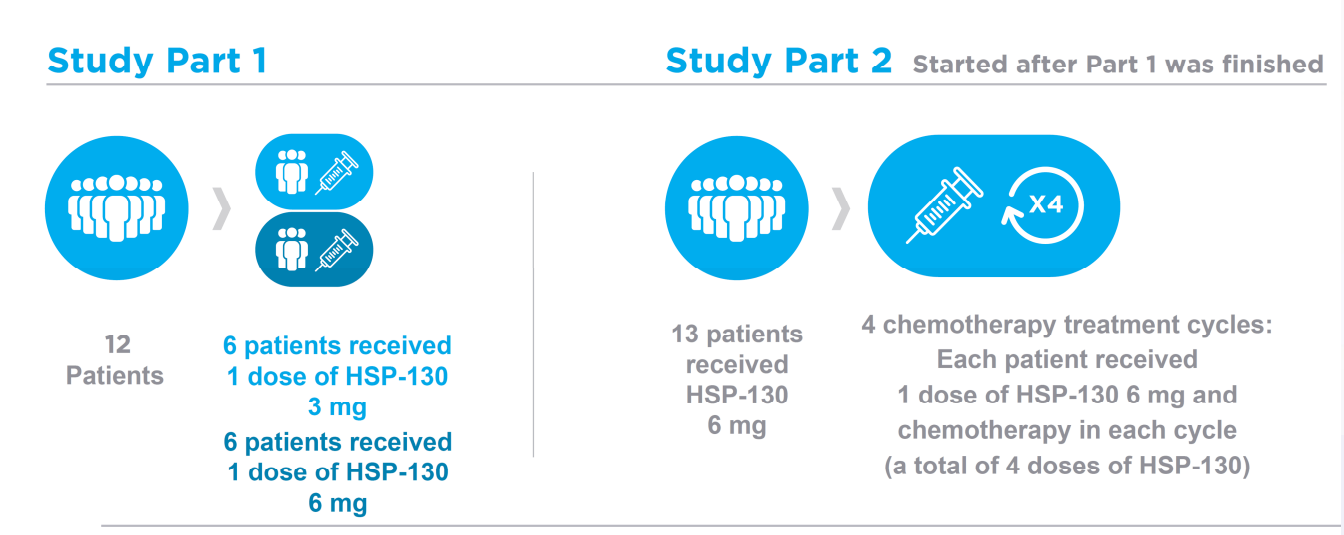
Part 1 - Without Chemotherapy

Part 1 lasted about 30 days and included 12 patients with breast cancer. The first 6 patients received 1 dose (3 mg) of HSP-130. The next 6 patients received 1 dose (6 mg) of HSP-130. HSP-130 was given as an injection just under the skin. The researchers tested patients' blood throughout the study to see how the body responds to the HSP-130, and to decide if the lower dose (3 mg) would be used during Part 2 of the study.

Part 2 - With Chemotherapy

Part 2 lasted about 94 days and included 13 patients who had already had surgery for their breast cancer. This part of the study was divided into 4 "chemotherapy treatment cycles" that each lasted about 3 weeks. During each cycle, patients received 1 dose (6 mg) of HSP-130 (for a total of 4 doses), and chemotherapy as prescribed by their study doctor. The researchers tested patients' blood throughout the study to learn how the body responds to the HSP-130.

The figure below shows what happened during the study.



While patients were only in the study for about 1 month (Part 1) or 4 months (Part 2), the entire study took about 2 years to complete. Patients joined the study at 1 of 7 locations in Hungary and Spain. It began 21 December 2015 and ended 05 October 2017. A total of 25 women between the ages of 39 and 78 participated. All 25 patients (100%) completed the study. When the study ended in October 2017, the Sponsor reviewed the total information collected during the study. The Sponsor then created a report of the results. This is a summary of that report.

WHAT WERE THE RESULTS OF THE STUDY?

What effect did HSP-130 have on the number of neutrophils in patients' blood, if they were not getting chemotherapy?

During Part 1 of this study, the researchers found that neutrophil levels increased in patients who received HSP-130. These results are similar to results reported in patients treated with Neulasta when used with chemotherapy.

Neutrophil levels were higher in the patients who received a 6 mg dose of HSP-130 than in those who received a 3 mg dose of HSP-130. Based on these results, the researchers selected 6 mg as the dose to test during Part 2.

How many days did patients have severely low neutrophil counts during their first chemotherapy cycle?

For each patient in Part 2, chemotherapy caused the neutrophil count to decrease. On average, patients had severely low neutrophil counts for less than 1 day (0.67, or about 2/3 of a day) during their first chemotherapy treatment cycle. These results are similar to results reported in patients treated with Neulasta.

All 25 patients had an increase in neutrophil counts as a result of receiving HSP-130. However, the specific ways that each patient's body responded may have been different, which is usual in clinical studies. These are just some of the main findings of the study, and more information may be available at the websites listed at the end of this summary.

WHAT MEDICAL PROBLEMS DID PATIENTS HAVE DURING THE STUDY?

The researchers recorded any medical problems the participants had during the study. Participants could have had medical problems for reasons not related to the study (for example, caused by an underlying disease or by chance). Or, medical problems could have been caused by a study treatment, or by another medicine the participant was taking. Sometimes the cause of a medical problem is unknown. By comparing medical problems across many treatment groups in many studies, doctors try to understand what the side effects of an experimental drug might be.

All patients (100%) in this study had at least 1 non-serious medical problem (that means a medical problem that is not life-threatening, does not cause lasting problems, or does not need hospital care). The most common non-serious medical problems reported by participants in this study are listed below.

Most Common Non-Serious Medical Problems (Reported by 2 or More Patients in any Treatment Group)

Medical Problem	Part 1 3 mg (6 Patients)	Part 1 6 mg (6 Patients)	Part 2 6 mg (13 Patients)
Back pain	2 (33%)	2 (33%)	4 (31%)
Bone pain	0 (0%)	0 (0%)	2 (15%)
Conjunctivitis ("red eye")	0 (0%)	0 (0%)	2 (15%)
Decrease in number of white blood cells	0 (0%)	0 (0%)	2 (15%)
Diarrhea	0 (0%)	1 (17%)	4 (31%)

Most Common Non-Serious Medical Problems (Reported by 2 or More Patients in any Treatment Group)			
Medical Problem	Part 1 3 mg (6 Patients)	Part 1 6 mg (6 Patients)	Part 2 6 mg (13 Patients)
Dizziness (vertigo)	2 (33%)	0 (0%)	1 (8%)
Feeling tired (fatigue)	0 (0%)	0 (0%)	3 (23%)
Fever	0 (0%)	0 (0%)	2 (15%)
Hair loss	0 (0%)	0 (0%)	8 (62%)
Headache	1 (17%)	4 (67%)	5 (39%)
Mouth ulcer (sore)	0 (0%)	0 (0%)	2 (15%)
Muscle pain	0 (0%)	0 (0%)	3 (23%)
Nausea	0 (0%)	2 (33%)	7 (54%)
Pain in arms or legs	1 (17%)	1 (17%)	3 (23%)
Skin reddening	0 (0%)	1 (17%)	3 (23%)
Upper abdominal pain	0 (0%)	0 (0%)	4 (31%)
Vomiting	1 (17%)	0 (0%)	3 (23%)
Weakness	0 (0%)	0 (0%)	2 (15%)

WERE THERE ANY SERIOUS MEDICAL PROBLEMS?

A medical problem is considered "serious" when it is life-threatening, causes lasting problems, or needs hospital care.

During Part 1, no patients had a serious medical problem. During Part 2, 2 out of 13 patients (15%) had at least 1 serious medical problem. One patient was in hospital 2 times for neutropenia with fever. The other patient was in hospital 1 time for neutropenia with fever. No patients died during the study.

WHERE CAN I LEARN MORE ABOUT THIS STUDY?

If you have questions about the results of your study, please speak with the doctor or staff at your study site.

For more details on this study protocol, please visit:

www.clinicaltrials.gov	Use the study identifier **NCT02650193**
www.clinicaltrialsregister.eu	Use the study identifier **2015-002057-35**

The Sponsor has done 3 different studies with HSP-130. Treatment in these 3 studies has been completed. The total information collected during the final study is currently being reviewed.

Please remember that researchers look at the results of many studies to find out which medicines are most appropriate for each patient.

Again, **thank you** for volunteering. We do research to try to find the best ways to help patients, and you helped us to do that!