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Summary of Results for Laypersons

Astellas is grateful to the patients who took part in this clinical study. Thank you.

What was the Study Called?

A Phase 1, Randomized, Placebo-controlled, Dose Escalation Study to Assess the Safety, Tolerability, and Pharmacokinetics of ASP5094 Following Multiple Intravenous Doses in Subjects With Rheumatoid Arthritis on Methotrexate

Why was this Study Needed?

The immune system is part of the body that fights foreign objects or infections. Patients with rheumatoid arthritis (or RA for short) have a faulty immune system that attacks the body's own tissues. As a result, these patients have inflammation (swelling and redness) and damage in joints (arthritis). Methotrexate is an oral prescription medicine (taken by mouth) that slows down the progress of joint damage in RA patients. It may cause unwanted effects or may not work well enough in some patients. ASP5094 is an experimental medicine for RA. It is given through a needle or tube inserted into a vein (intravenous infusion).

This was a phase 1 study. These studies look at what the body does to the study medicine and what the study medicine does to the body. Phase 1 studies often involve healthy participants. These studies may also involve patients with certain health conditions. This study was conducted in patients with RA. They received ASP5094 or a placebo solution. (The section below describes what a placebo solution is.) This study asked 2 main questions. It asked how ASP5094 is taken up, broken down, distributed through the body and removed from the body. And it asked whether ASP5094 is safe and how well patients tolerate it.

The study started in February 2016 and ended in September 2017. When the study ended, the sponsor of this study (Astellas) reviewed all the study information and created a report of the results. This is a summary of that report.

What Kind of Study was This and Who Took Part in it?

This was a "double-blinded" study. That means that the patients and the study doctors did not know who took which of the study medicines (ASP5094 or placebo). A "placebo" is a dummy treatment that looks like a medicine, but does not have any medicine in it. The placebo solution in this study was saline. Using a placebo helps make study results fair and unbiased, because study doctors and patients cannot tell who is taking a placebo, and who is taking the test medicine.

This study was open to women and men aged between 18 and 65 years. They had RA for at least 6 months before the study started. And they had been taking the same weekly dose of methotrexate (10 to 25 mg) for at least 4 weeks before the study started.

During the study, the study doctor did a check-up of the patients at several study visits. At the first visit, patients were checked to see if they could be in the study. Patients who could be in the study were picked for a treatment (ASP5094 or placebo) by chance alone. Four

times as many patients were picked for ASP5094 than for placebo. All patients continued to take their prescribed weekly dose of methotrexate during the study.

- ASP5094: Patients received the same dose of ASP5094 on days 1, 29 and 57 for a total of 3 doses. Their dose was 1, 3 or 10 mg/kg. (This means that 1, 3 or 10 mg of ASP5094 was given for every kg of body weight.) ASP5094 was given as an intravenous infusion. The infusion took 30 minutes.
- Placebo: Patients received a placebo solution the same way as ASP5094.

This study took place at 12 clinics in the US and Poland. 30 patients were in the study and received at least 1 dose of study medicine.

	Number of Patients
Age Group Aged 31 to 64 years	 30
Sex Men Women	 5 25
Clinic Location Poland The US	 5 25

What Were the Study Results?

This study helped answer the question how ASP5094 is taken up, broken down, distributed through the body and removed from the body. To do that, the amount of ASP5094 in the blood was measured. This was done before each of the 3 doses and at several time points after each dose.

The peak level of ASP5094 was reached at the end of the 30-minute intravenous infusion. The distribution of ASP5094 through the body and its removal from the body varied by dose. After 3 doses (day 57), the peak level of ASP5094 in the blood increased with increasing dose. This means that compared to patients who received the 1 mg/kg dose, the ASP5094 peak level was approximately 3 times higher in patients who received the 3 mg/kg dose; and the ASP5094 peak level was approximately 10 times higher in patients who received the 10 mg/kg dose.

After 3 doses (day 57), the total level of ASP5094 in the blood increased more than proportional with increasing dose. This means that compared to patients who received the 1 mg/kg dose, the ASP5094 total level was more than 3 times higher in patients who received the 3 mg/kg dose; and the ASP5094 total level was more than 10 times higher in patients who received the 10 mg/kg dose.

In this study, treatment with ASP5094 was safe and well tolerated in patients with RA who took methotrexate. The adverse reactions are described in the section below.

What Adverse Reactions did Patients Have?

A lot of research is needed to know whether a medicine causes a medical problem. So when new medicines are being studied researchers keep track of all medical problems that patients have while they are in the study. These medical problems are called "adverse events" and are recorded whether or not they might be caused by the treatment taken. An "adverse reaction" is any medical problem or "adverse event" that is judged by the study doctor to be possibly caused by a medicine or treatment used in the study.

The most common adverse reaction experienced by patients who received at least 1 dose of study medicine in this study was headache or head pain.

Adverse Reaction	Placebo (out of 6 patients)	ASP5094 (out of 24 patients)
Any adverse reaction	2 (33.3%)	8 (33.3%)
Headache or head pain	0	2 (8.3%)

An adverse reaction is considered "serious" when it is life-threatening, causes lasting problems or needs hospital care.

None of the patients experienced a serious adverse reaction in this study.

Where Can I Learn More About This Study?

This document is a short summary of the main results from this study and reflects the information available as of February 2018. You can find this summary and more information about this study online at http://www.astellasclinicalstudyresults.com.

Please remember that researchers look at the results of many studies to find out how well medicines work and which adverse reactions they might cause. This summary only shows the results of this 1 study. Your doctor may help you understand more about the results of this study.

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