Summary of Results for Laypersons

What was the Study Called?

An Open, Multicenter, Randomized, Parallel Group Study to Compare the Safety and Efficacy of a Tacrolimus/Azathioprine/Steroid Triple Regimen With and Without the Induction of the Monoclonal Antibody Basiliximab in Children After Kidney Transplant

Why was this Study Needed?

A kidney transplant is the best treatment for children with end stage kidney disease. Transplanting organs in children is different than transplanting organs in adults because children have a more robust immune system. Also, the types of end stage kidney disease are different than those seen in adults and there are more technical difficulties with the surgical procedures. Because of these differences, there is generally poorer survival of the transplanted kidney in children. Use of more and/or better medicines help lower the child's immune system which results in longer survival for the transplanted kidney. The immune system is part of the body that fights foreign objects or infections. Following organ transplant, the body recognizes the new organ as a foreign object. Medicines that lower a patient's immune system help prevent the body from rejecting the new organ.

Tacrolimus, azathioprine (AZA) and steroids are medicines that are used to prevent the body from rejecting a transplanted organ. These 3 medicines have been used together to prevent rejection after kidney transplant. When a patient is treated with more than 1 medicine, it is referred to as a "treatment regimen." Basiliximab blocks the immune system in a different way than tacrolimus, azathioprine and steroids. Basiliximab has been tested in clinical studies in Europe, Canada and the United States with good results. Preliminary information about this type of treatment in children was available before the study started.

The main point of this study was to compare 2 treatment regimens which could be used to prevent rejection for kidney transplant in children. The 2 regimens were:

- Without basiliximab regimen: Tacrolimus, AZA and steroid without basiliximab
- With basiliximab regimen: Tacrolimus, AZA and steroid with basiliximab

This study took place at 15 clinics in 6 European countries which included: Belgium, Czech Republic, Great Britain, Hungary, Poland and Sweden. The study started in March 2001 and ended in March 2004. The sponsor (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 an "open label" study which means that both the doctor and the patient (or the patient's parent or guardian) knew which treatment the patient was getting.

Patients were randomly assigned to 1 of the 2 treatment regimens described above. If a patient was placed in the basiliximab regimen they received basiliximab right before their kidney transplant. The study lasted 6 months. During the 6 months the patients had 7 clinic

visits.

Patients aged 17 years or younger who had been diagnosed with end stage kidney disease were enrolled in the study. They were all scheduled for a kidney transplant. The donated kidney was matched by blood type.

A total of 197 patients were placed in 1 of the 2 treatment regimens. Due to medical reasons 5 patients did not receive a transplant and did not receive any study medicine. A total of 192 patients received at least 1 dose of study medication. Patients were placed in the following treatment groups:

- With basiliximab regimen: 99 patients
- Without basiliximab regimen: 93 patients

	Number of Patients
Age Group	
Aged less than 12 years	88
Aged 12 years and older	104
Boys	119
Girls	73
EU Countries	192
Outside EU	0

What Were the Study Results?

Adding basiliximab to tacrolimus, AZA and steroid treatment for kidney transplant patients aged 17 years and younger did not cause an additional safety concern. Adding basiliximab made no difference to the amount of kidney rejection observed. Both treatment groups had high patient and kidney survival. Tacrolimus in this study was also well tolerated.

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 table below shows the most common adverse reactions experienced by patients while taking part in this study. Information from 192 patients who received at least 1 dose of study medicine is included in the table below.

Adverse Reactions	Tacrolimus AZA and Steroid (out of 93 patients)	Tacrolimus AZA and Steroid and Basiliximab (out of 99 patients)
High blood pressure	16	16
Increased blood level of creatinine (a substance normally eliminated by the kidneys into the urine)	10	17
Urinary tract infection	13	9
Decreased blood level of phosphate	10	10
Decreased blood level of magnesium	9	9
Kidney damage caused by the effects of a toxin	3	14

An adverse reaction is considered "serious" when it is life-threatening, causes lasting problems, or needs hospital care. In the treatment group without basiliximab, there were a total of 32 patients with at least one serious adverse reaction. In the basiliximab group, there were a total of 45 patients with at least one serious adverse reaction.

No patients died during the study.

Where Can I Learn More About This Study?

Astellas might perform additional trials to better understand tacrolimus combination treatment.

This summary of the clinical study results is available 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. If you have questions about tacrolimus combination treatment, please discuss these with your doctor.

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