This is a summary of a clinical study of a medicine called dabigatran in patients with heart rhythm problems who were undergoing a specific procedure called catheter ablation. It is written for the general reader and uses language that is easy to understand. It includes information about how researchers did the study and what the results were. The simplified title for the study is: 'A comparison of the safety of dabigatran and warfarin in patients who were undergoing catheter ablation for a heart rhythm disorder'.

We thank all patients who took part in this study. Through your participation, you helped researchers answer important questions about dabigatran in patients undergoing catheter ablation for a heart rhythm disorder.

What was this study about?

In this study, researchers compared the safety of 2 anti-blood-clotting medicines called dabigatran and warfarin, which prevent the formation of blood clots. The researchers tested these medicines in patients with the heart rhythm disorder called atrial fibrillation and who were undergoing catheter ablation.

Atrial fibrillation (AF) is a type of irregular heartbeat. It can lead to the formation of blood clots in the heart. These clots can travel from the heart to the brain and cause a stroke. Therefore, patients with AF receive medicines that prevent blood clotting. In addition, doctors sometimes use a procedure called 'catheter ablation' to destroy a small area of the heart that causes the irregular heartbeat. Catheter ablation is another treatment for patients with AF who have already tried medications, but these did not work or caused side effects. A small flexible plastic tube (catheter) is put into a vein and moved into the heart where the ablation is done. Blood clots can form in the heart during this procedure. The patients therefore continue to receive anti-blood-clotting medicines during and after this procedure. In this study, researchers compared the safety of the medicines dabigatran and warfarin. These medicines prevent blood clots, but they can also cause bleeding. Therefore, researchers wanted to know how often the patients in the study had serious bleeding events during and after this procedure. They also collected information on other side effects of these medicines.

This study started in May 2015 and finished in November 2016. The sponsor of this study was Boehringer Ingelheim.

Why was the study needed?

Dabigatran is used in many countries to prevent stroke in patients with AF. Doctors knew that keeping patients on the same anti-blood-clotting medicine was important, so they tested keeping patients on dabigatran before, during, and after a catheter ablation procedure. The researchers compared the constant use of dabigatran with the constant use of warfarin in patients undergoing catheter ablation for AF.

Which medicines were studied?

The researchers studied a medicine called dabigatran. Dabigatran helps to prevent blood from clotting. Warfarin is another anti-blood-clotting medicine that works in a different way to prevent blood clots. Dabigatran was compared to warfarin in this study.

Who participated in the study?

Patients in this study had AF that their doctors believed was best treated with catheter ablation. Patients could be in the study if they had a catheter ablation procedure planned within 8 weeks after entering the study.

Overall, 676 patients were treated: 502 were men and 174 were women. On average, patients were 59 years old. The youngest patient was 25 years old and the oldest patient was 84 years old. Of the 676 patients, 635 patients started the catheter ablation procedure. The table below lists the regions and countries where these patients took part in the study.

Western Europe (350 patients):		Asia (112 patients):
Belgium	Netherlands	Japan
France	Spain	
Germany	United Kingdom	
Italy		

Eastern Europe (69 patients):	North America (145 patients):
Russia	Canada
	United States

How was this study done?

Patients were divided into 2 groups of similar size to receive treatment with either dabigatran or warfarin. It was decided by chance who got into which group (randomised). The patients in the study and the study doctors knew what medicine the patients were taking. The patients in each group took the following medicine each day for 4 to 8 weeks before the catheter ablation procedure. They took the medicine on the day of the catheter ablation procedure. They also took the same medicine up to 8 weeks after the catheter ablation procedure. The 2 groups were:

Dabigatran group: 1 capsule of 150 milligrams (mg) dabigatran twice per day

Warfarin group: Tablets of warfarin, with the dosing determined by each patient's blood-clotting ability

Except for taking the different medicines, all patients followed the same procedures:

- Patients visited the study doctor:
  - 2 times before the catheter ablation procedure
  - At the hospital during and overnight after the catheter ablation procedure

- About 3 times after the catheter ablation procedure

- Patients had measurements of their heart rhythm taken before, during, and after the catheter ablation procedure.
- Patients had a test that used sound waves to look at the heart before the catheter ablation procedure.
- Doctors took blood samples at each visit. Patients taking warfarin had samples taken in between doctor visits as well.

Researchers compared the safety of dabigatran and warfarin in patients with AF who had a catheter ablation procedure. To do this, the study doctors watched the patients carefully for any bleeding events during and after the catheter ablation procedure. A bleeding event was considered 'major' if at least 1 of the following occurred:

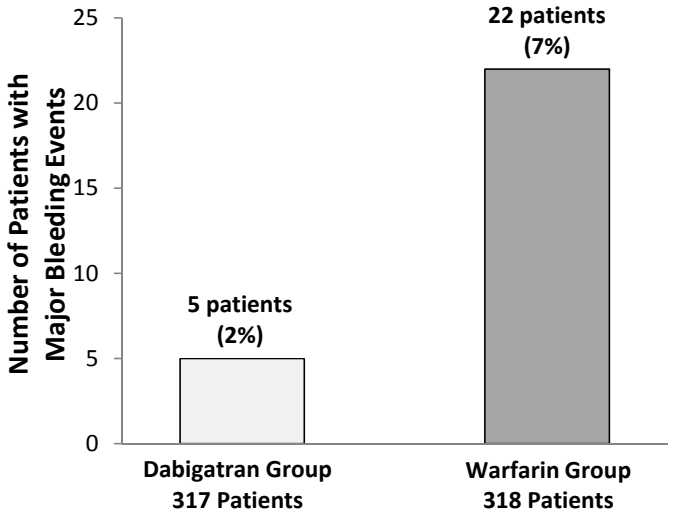
- The patient required a transfusion of blood.
- The bleeding occurred in an important place in the body (such as around the heart).
- The bleeding caused a risk to the patient's life.

Doctors also collected information on other side effects.

What were the results of this study?

During and after the catheter ablation procedure, the percentage of patients who had major bleeding events was lower in the dabigatran group (2%) than in the warfarin group (7%).

The picture below shows the number of patients with major bleeding events during or after the catheter ablation procedure.



The major bleeding events that patients had in this study included bleeding inside the skull, bleeding around the heart, bleeding in the groin (the inside of the thigh), bleeding in the gastrointestinal tract, and swelling filled with blood. The number of patients who had major bleeding events was lower in the dabigatran group than in the warfarin group. All patients were treated for the bleeding and recovered.

What side effects did patients have?

In addition to the major bleeding events described above, all other side effects were also reported. Here we summarise the side effects overall and then the side effects that were considered serious. For overall side effects, the 2 groups were similar. Overall, 21% of patients who took dabigatran and 18% of patients who took warfarin had side effects.

The table below shows side effects that occurred in at least 1% of patients in either treatment group.

Doctors keep track of all health problems patients have during a study. Some of these health problems might be caused by the study medicines, and some by other medicines taken by the patient. Others might be caused by the disease, and some have yet a different cause. Here we describe health problems that the doctors thought were caused by the study medicines. These health problems are called side effects.

	Dabigatran (338 patients)	**Warfarin (338 patients)**
Patients with any side effect	70 patients (21%)	59 patients (18%)
Swelling that is filled with blood (Haematoma)	6 patients (2%)	11 patients (3%)
Blood in the urine (Haematuria)	5 patients (2%)	4 patients (1%)
Bleeding at the site where the catheter was inserted (Puncture site haemorrhage)	5 patients (2%)	3 patients (less than 1%)
Pain in the stomach (Upper abdominal pain)	5 patients (2%)	2 patients (less than 1%)
Nosebleed (Epistaxis)	4 patients (1%)	9 patients (3%)
Bleeding inside the body (Haemorrhage)	4 patients (1%)	6 patients (2%)
Upset stomach (Dyspepsia)	4 patients (1%)	1 patient (less than 1%)
Inflamed stomach (Gastritis)	4 patients (1%)	0 patients

Some patients in the study had serious side effects. A side effect was serious if it caused the patient to go to the hospital or stay longer in the hospital, or if it needed a doctor's immediate attention or was life-threatening.

There were fewer patients who had serious side effects in the dabigatran group than in the warfarin group. In the dabigatran group, 7 patients (2%) had at least 1 serious side effect. In the warfarin group, 12 patients (4%) had at least 1 serious side effect. The types of serious side effects were similar for each group. These serious side effects included fluid build-up around the heart; abnormal or insufficient kidney function; blood clots in the heart, in the brain, and in the legs; bleeding in the nose, in the stomach, and in unspecified locations; swelling filled with blood; longer bleeding times; lower haemoglobin levels; and general discomfort.

Are there follow-up studies?

No follow-up studies are planned.

Where can I find more information?

You can find the scientific summaries of the study results at these websites:

www.trials.boehringer-ingelheim.com	search for the study number: 1160.204
www.clinicaltrialsregister.eu	search for the EudraCT number: 2014-003890-40
www.clinicaltrials.gov	search for the NCT number: NCT02348723

The full title of the study is:

'Randomised evaluation of dabigatran etexilate compared to warfarin in pulmonary vein ablation: assessment of an uninterrupted periprocedural anticoagulation strategy (the RE-CIRCUIT trial)'.

Important notice

This summary shows only the results from one study and may not represent all of the knowledge about the medicine studied. Usually, more than one study is done to find out how well a medicine works and the side effects of the medicine. Other studies may have different results.

You should consult the prescribing information for your country to get more information on the medicine studied, or ask your physician about the medicine. You should not change your therapy based on the results of this study without first talking to your physician. Always consult your physician about your specific therapy.

Boehringer Ingelheim has provided this lay summary in accordance with transparency obligations. This lay summary is intended for audiences located within the European Union.