

Summary of Clinical Trial Results

A study of atezolizumab compared with observation only after surgery in people with bladder cancer

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:

- Members of the public and
- People who took part in the study.

This summary is based on information known at the time it was written (October 2020).

The study started in October 2015 and is expected to end in May 2022. This summary includes the results that were analysed up to November 2019. At the time of writing this summary, the study is still happening – study doctors are still collecting information. However, new participants are not being enrolled.

The purpose of this study was to see if atezolizumab after surgery helped to stop or significantly delay bladder cancer from coming back. The results from this study may be different from other studies with the same medicine. One study cannot tell us everything about how safe a medicine is and how well it works. It takes lots of people in many studies to find out everything we need to know.

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

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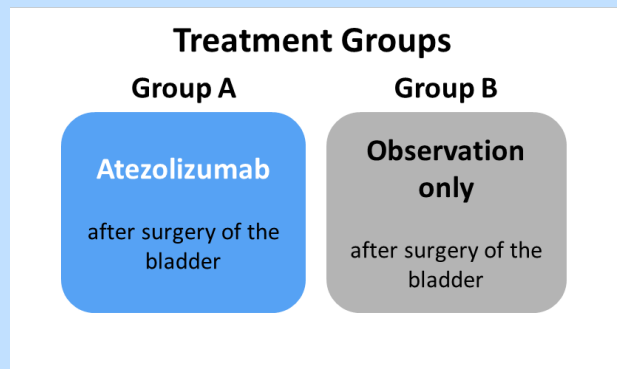
Thank you to the people who took part in this study

The people who took part have helped researchers answer important questions about bladder cancer and about treatment with a drug called 'atezolizumab' – given after surgery to remove the cancer.

Key information about this study

Why was this study done?

- This study was done to compare the medicine being studied (called atezolizumab) given after surgery – or observation only (no study medicine) after surgery in people with bladder cancer that had spread to the muscles of the bladder, called ‘muscle-invasive bladder cancer’.
 - The purpose of this study was to see if atezolizumab after surgery would help to stop or delay the bladder cancer from coming back
 - Currently, there are no treatment options for people who are not able to be given, or do not want to be given, chemotherapy after surgery of the bladder.
- In this study, people were either given the medicine being studied (called atezolizumab) or were given no medicine but were still checked by doctors (called ‘observation only’) – it was decided by chance which treatment each person was given.



- This study included 809 people in 24 countries or regions (see map on page 5).

What were the results?

- The main findings were that:
 - In **Group A**, people’s cancer did not get worse (in other words it did not come back, spread, spread further, or grew larger) for 19.4 months on average after starting the treatment, compared with about 16.6 months on average for those in **Group B**.
 - The difference between **Group A** and **Group B** was not big enough to show researchers that being given atezolizumab helped to stop the cancer from coming back or getting worse after surgery.

How many people had side effects?

- About 71% of people (276 out of 390 people) in **Group A** had side effects related to their treatment, compared with no people in **Group B**.
- At time of writing (December 2020), the study is still going on and information about side effects is still being collected. The study is expected to end in the middle of 2022. However, participants are no longer being enrolled in the study.

1. General information about this study

Why was this study done?

People who have bladder cancer that has spread into muscles of the bladder are generally considered as having ‘muscle-invasive bladder cancer’. There is currently no treatment that can cure all people with this type of disease. People often have a type of surgery called ‘cystectomy’ to remove the cancer from in and around the bladder. Sometimes the whole bladder or nearby organs may need to be removed.

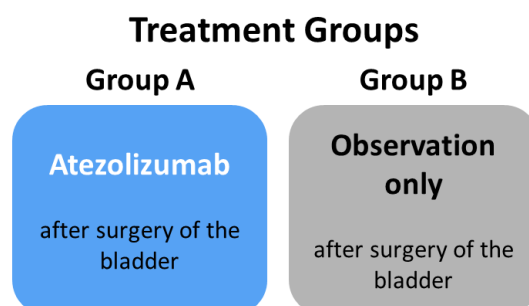
Some people with cancer are given chemotherapy before surgery to make it easier to remove the cancer. Chemotherapy and surgery do not work for all people – for some people, the cancer may come back, get worse, or spread to other areas of the body. New medicines are needed in addition to surgery to stop the cancer from coming back or getting worse – to help people to live longer. Immunotherapy is a type of medicine that helps a person’s own immune system attack cancer cells, and atezolizumab is a new immunotherapy drug that is already used in other kinds of cancers.

In this study, researchers wanted to see if giving an immunotherapy drug called ‘atezolizumab’ after surgery would help the surgery be more successful and stop the cancer from coming back. They compared people who were given the drug to people who were not given any medicine after surgery. The people who took part in this study had already had surgery for their cancer before they were given this medicine.

What was the medicine being studied?

This study looked at a medicine called atezolizumab compared with no treatment after surgery in two groups of people who had bladder cancer that had spread to the muscles of the bladder – ‘muscle-invasive bladder cancer’:

- **Group A: atezolizumab** (new medicine).
- **Group B: no treatment** – these people were not given atezolizumab after surgery. Since doctors continued to check people in this group, it was called ‘**observation only**’.



The medicine being studied is ‘atezolizumab’ (known by its brand name, Tecentriq®):

- You say this as ‘a – teh – zo – liz – oo – mab’

- The body’s immune system fights diseases like cancer. However, cancer cells can block the immune system from attacking the cancer. Atezolizumab releases this blockage – meaning that the immune system is able to fight the cancer cells.
- When people are given atezolizumab, their tumour (cancer) may get smaller.
- This medicine is a type of medicine called “immunotherapy”.
- In this study, this medicine was given after people had surgery to remove the cancer in order to stop the cancer from coming back or getting worse.

What did researchers want to find out?

- Researchers did this study to compare atezolizumab given after surgery with observation only (no atezolizumab) after surgery – to see how well atezolizumab worked in people with muscle-invasive bladder cancer (see section 4 “What were the results of the study?”).
 - People in **Group A** were given atezolizumab after surgery.
 - People in **Group B** were not given atezolizumab after surgery.
 - Researchers compared the 2 groups to see how well atezolizumab worked.
- Researchers also looked at how safe atezolizumab was – by checking how many people in each treatment group had side effects and how serious these side effects were (see section 5 “What were the side effects?”).

The main questions that researchers wanted to answer were:

1. In **Group A** and **Group B**, how much time was there between the start of treatment and the cancer coming back or getting worse?
2. How safe is atezolizumab? How many people in **Group A** and **Group B** had side effects and how severe were they?

What kind of study was this?

This study was a ‘**Phase 3**’ study. Before this study atezolizumab had already been tested and approved for the treatment of bladder cancer that has spread to nearby cells or other parts of the body. In this study, a large number of people with bladder cancer were given atezolizumab after they had surgery to remove their cancer. Phase 3 studies are done in a large number of people to see if a drug works better than the usual treatment and is safe enough for it to be ‘approved’ by the health authorities as a treatment that can be prescribed by your doctor.

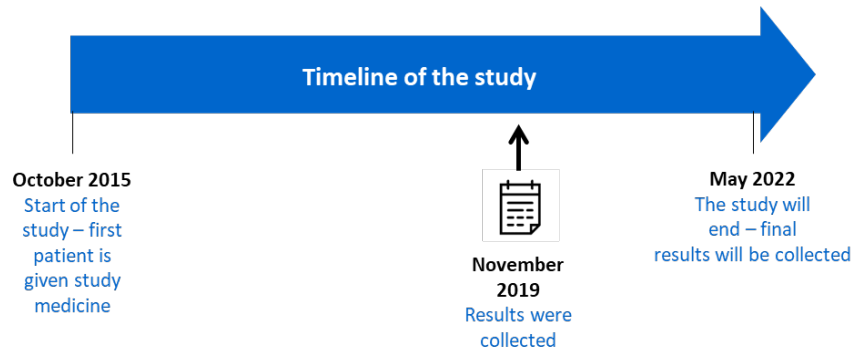
The study was ‘**randomised**’. This means that it was decided by chance which of the two treatment groups people in the study would be in – like tossing a coin. Deciding by chance which group people will be in makes it more likely that the types of people in both groups will be similar (for example, age, race). Other than the different study treatments given to people in each group (atezolizumab in **Group A** and observation in **Group B**), all other care was the same.

This was an ‘**open label**’ study. This means that both the people taking part in the study and the study doctors knew which of the treatment groups (**Group A** and **B**) people were in.

When and where did the study take place?

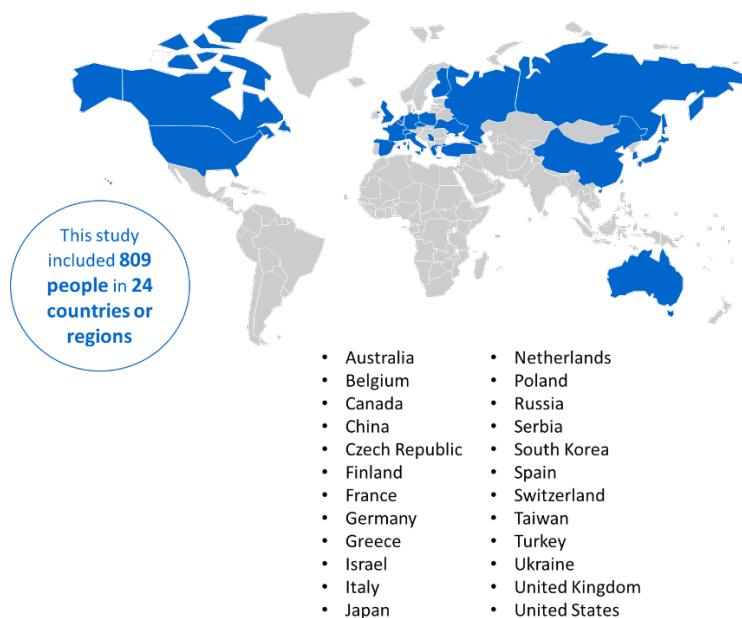
The study started in October 2015 and is expected to end in May 2022. Study doctors are still collecting information, and results are still being analysed. However, participants are no longer being enrolled.

At the time of writing this summary, the study is still happening, so this summary only includes the results up until November 2019.



The symbol on the timeline (📅) shows when the information shown in this summary was collected (November 2019– about 4 years after the study started).

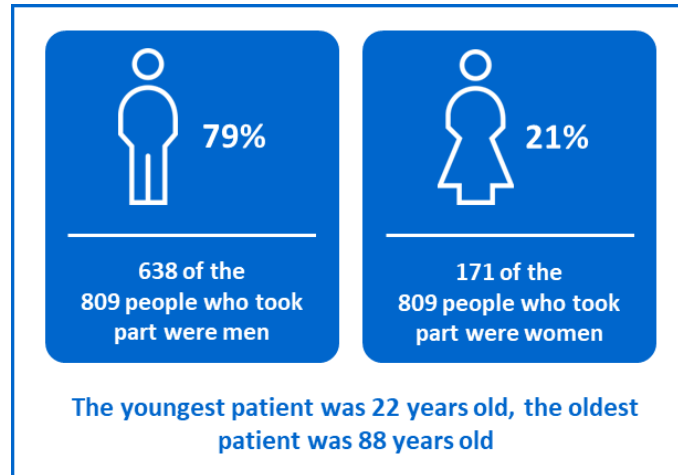
The study took place at 192 hospitals and clinics in 24 countries or regions. This map shows where this study took place.



2. Who took part in this study?

In this study, 809 people with muscle-invasive bladder cancer took part.

Here is more information about the people who took part in the study.



People could take part in the study if they:

- Had bladder cancer that had spread into the muscles of the bladder – ‘muscle-invasive bladder cancer’.
- Had surgery for bladder cancer.
- Allowed their doctor to take samples of their tumour(s).

People could not take part in the study if they:

- Had bladder cancer that had spread to other parts of the body.
- Had chemotherapy or radiation after surgery to treat bladder cancer.
- Had a type of immunotherapy that is injected straight into the bladder.

These are just some of the requirements that people needed to meet in order to be able to take part in this study. There were also other requirements that are not listed above.

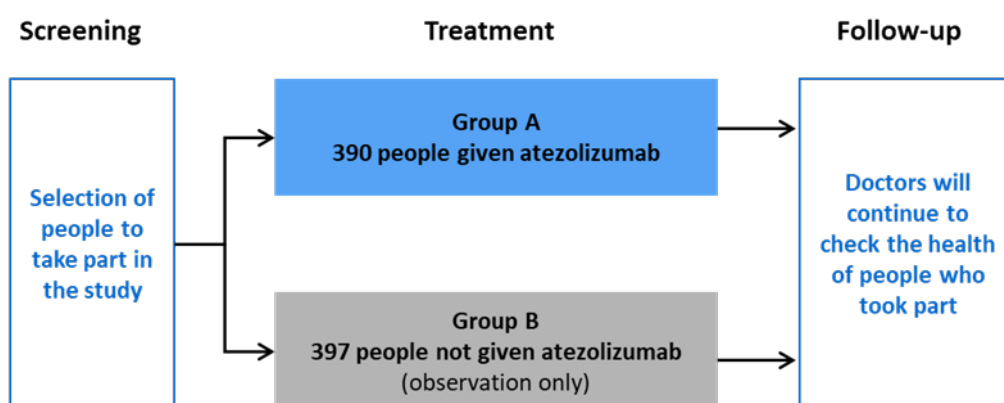
3. What happened during the study?

During the study, people were selected by chance to be in one of two treatment groups.

The treatment groups were:

- **Group A:** atezolizumab (new medicine).
- **Group B:** no atezolizumab (observation only) – these people were not given atezolizumab or any other study medicine for their cancer after surgery. However, they continued to be checked by doctors.

This study is still happening so people are still going back to their study centre for more visits – to check their overall health and collect information on side effects. This picture shows more information about what has happened in the study so far – and what the next steps are.



This table shows the number of people who were given each study treatment, and how often the drugs were given. Sometimes people who enroll in a study do not end up taking part. For example, some people may decide not to be involved or may have other reasons for not taking part.

	Group A Atezolizumab	Group B No atezolizumab (observation only)
Number of enrolled people randomly chosen to be included in each group	406	403
Number of people given this medicine or being observed	390	397
How and when the drug was given in each 21-day treatment cycle	Atezolizumab given by injection once every 21 days	No drugs given – people continued to be checked by doctors

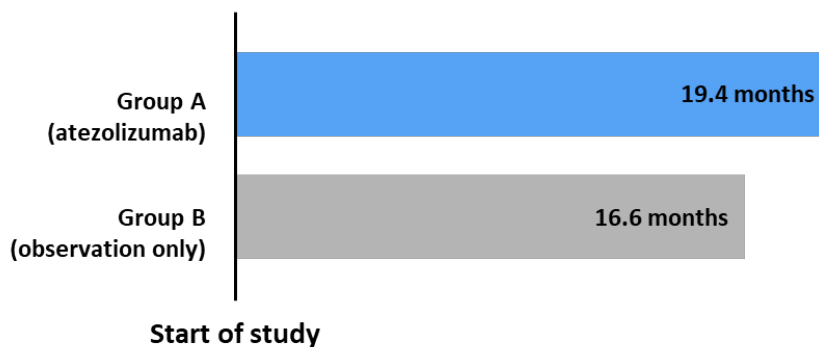
4. What were the results of the study?

How much time was there between the start of treatment and the cancer coming back or getting worse in **Group A** and **Group B**?

Researchers looked at how much time there was before the cancer became worse (in other words, came back, spread, spread further, or grew larger) in **Group A** and **Group B**. This information was collected from all the people in both groups from October 2015 until November 2019.

- In **Group A**, the cancer became worse after about 19.4 months, on average (in some people it took longer to become worse and in others it became worse sooner than 19.4 months). This is shown in the graph below.
- In **Group B**, the cancer became worse after about 16.6 months, on average (in some people it took longer to become worse and in others it became worse sooner than 16.6 months). This is shown in the graph below.
- The difference between **Group A** and **Group B** was not big enough to show researchers that being given atezolizumab helped stop the cancer from coming back or getting worse after surgery.

On average, how long did it take for people’s cancer to come back or get worse?



This information was collected from October 2015 until November 2019.

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

5. What were the side effects?

- Side effects are medical problems (such as feeling dizzy) that may happen during the study.
- Not all of the people in this study had all of the side effects.
- Side effects may be mild to very serious and can be different in each person.
- It is important to be aware that the side effects reported here are from this one study. Therefore, the side effects shown here may be different from those seen in other studies, or those that appear on the medicine leaflets.
- Serious and common side effects are listed in the following sections.

The side effects shown in this section are thought to be caused by the treatment being studied – atezolizumab. Since people in Group B were not given atezolizumab, the side effects that are listed below are for **Group A only** (people who were given atezolizumab).

Most common side effects related to atezolizumab

- During this study, 276 of the 390 people in Group A had at least one side effect that was related to treatment with atezolizumab.
- The means approximately 7 out of every 10 people in **Group A** had at one or more sides effect related to treatment with atezolizumab.

How many people in Group A had at least one side effect related to atezolizumab?



About **7 out of every 10 people** had at least one side effect

This table shows the most common side effects related to atezolizumab – these are the 10 most common side effects. Some people have had more than one side effect.

Most common side effects reported in this study	Group A Atezolizumab (390 people total)
Itchy skin	19% (75 out of 390)
Feeling tired	16% (63 out of 390)
Frequent, loose watery stools (diarrhoea)	10% (37 out of 390)
Rash	9% (33 out of 390)
Low thyroid activity	8% (31 out of 390)
Joint pain	7% (27 out of 390)
Low energy levels	6% (23 out of 390)
Feeling sick (nausea)	6% (23 out of 390)
Fever	6% (23 out of 390)
Reaction to the drip (infusion) into the vein	5% (20 out of 390)

Serious side effects

- During this study, 41 of the 390 (11%) people in **Group A** had at least one serious side effect that was related to treatment with atezolizumab. A side effect is considered ‘serious’ if it is life-threatening, needs hospital care, or causes lasting problems.
- One person in **Group A** died due to side effects that may have been related to treatment with atezolizumab.
- During the study, 61 of the 390 (16%) people in **Group A** had a side effect that made them decide to stop being given atezolizumab.

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 one study of 809 people with bladder cancer that has spread into the muscle of the bladder but not to other parts of the body – ‘muscle invasive bladder cancer’. These results helped researchers learn more about this type of bladder cancer and treatment with atezolizumab after surgery.

Overall, the difference between Group A and Group B was not big enough to show researchers that being given atezolizumab helped to stop the cancer from coming back or getting worse after surgery. People in this study did not have any new side effects that had not been seen before in people who were given atezolizumab in other studies. However, more research is needed to know whether atezolizumab helps to stop or delay the bladder cancer from coming back.

One study cannot tell us everything about how safe a medicine is and how well it works. 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 with your doctor before making any decisions about your treatment.**

7. Are there plans for other studies?

Other studies looking at the safety and effects of atezolizumab are happening. These studies are looking at the use of atezolizumab in different situations, for example:

- In combination with other medicines, including chemotherapy.
- In people with bladder cancer that has spread to other parts of the body.
- In people with bladder cancer that has not spread to the muscle, called ‘non-muscle invasive bladder cancer’.

8. Where can I find more information?

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

- [https:// clinicaltrials.gov/ct2/show/NCT02450331](https://clinicaltrials.gov/ct2/show/NCT02450331)
- <https://www.clinicaltrialsregister.eu/ctr-search/search?query=2014-005603-25>
- <https://forpatients.roche.com/en/trials/cancer/bladder-cancer/a-study-of-atezolizumab-versus-observation-as-adjuvant-therapy-i.html>

If you want to find out more about the results of this study, the full title of the relevant scientific paper is: “Adjuvant atezolizumab versus observation in muscle-invasive urothelial carcinoma (IMvigor010): a multicentre, open-label, randomised, phase 3 trial”. The authors of the scientific paper are Joaquim Bellmunt, Maha Hussain, Jürgen E Gschwend, Peter Albers, Stephane Oudard and others. The paper is published in the journal *The Lancet Oncology*, published online March 12, 2021. [https://doi.org/10.1016/S1470-2045\(21\)00004-8](https://doi.org/10.1016/S1470-2045(21)00004-8).

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

If you have any more questions after reading this summary:

- Visit the ForPatients platform and fill out the contact form – <https://forpatients.roche.com/en/trials/cancer/bladder-cancer/a-study-of-atezolizumab-versus-observation-as-adjvant-therapy-i.html>
- Contact a representative at your local Roche office.

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

- Speak with 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 Study of Atezolizumab Versus Observation as Adjuvant Therapy in Participants With High-Risk Muscle-Invasive Urothelial Carcinoma (UC) After Surgical Resection (IMvigor010)”.

The study is known as ‘IMvigor010’.

- The protocol number for this study is: WO29636.
- The ClinicalTrials.gov identifier for this study is: NCT02450331.
- The EudraCT number for this study is: 2014-005603-25.