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:** Pfizer, Inc.

**Medicine(s) Studied:** Enzalutamide (Xtandi®)

**Protocol Number:** C3431005 (MDV3100-14)

**Dates of Trial:** 26 November 2013 to data cutoff on 28 June 2017 (this study is ongoing)

**Title of this Trial:** A study to see if enzalutamide could help patients with prostate cancer have more time before their cancer starts to spread to other parts of the body or dying from any cause.

[PROSPER: A Multinational, Phase 3, Randomized, Double-Blind, Placebo-Controlled, Efficacy and Safety Study of Enzalutamide in Patients With Nonmetastatic Castration-Resistant Prostate Cancer]

**Date of this Report:** 17 December 2019

---

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?

Prostate cancer is the second most common type of cancer in men worldwide, and the sixth most common cause of cancer death in men. Most prostate cancers depend on the male sex hormone testosterone to grow. Early prostate cancer is treated by surgically removing the prostate gland, or by treating the prostate with radiation. If the cancer comes back or is more advanced, most men with prostate cancer will be treated by “castration”, or lowering the amount of testosterone that their body makes. This is done either by surgery to remove the testicles, or by taking drugs that stop the testicles from making testosterone. However, about 10-20% of men will have prostate cancer that continues to get worse, even with surgery or drugs to lower testosterone. This type of prostate cancer is called “castration-resistant” prostate cancer.

Enzalutamide is an investigational medicine that reduces the activity of testosterone in the body. It does this by decreasing the ability of testosterone to connect with “androgen receptors”, which are proteins on the surface of cells in the body that sense testosterone. At the time of this study, enzalutamide was approved in the United States of America (USA) and the European Union (EU) for the treatment of castration-resistant prostate cancer that has spread to other parts of the body (also called “metastatic” prostate cancer). However, there were no drugs approved to stop castration-resistant prostate cancer from beginning to spread to other parts of the body when this study was conducted.

The patients enrolled in this trial were men with a certain type of prostate cancer, called “castration-resistant with no evidence of metastasis”. This means that their prostate cancer was getting worse, even with surgery or drugs to lower testosterone, but had not yet started to spread to other parts of the body. The researchers in this study wanted to ask:

- Do patients taking enzalutamide treatment go longer without their prostate cancer spreading to other parts of the body, or dying from any cause?

Researchers were also interested in learning more about the safety of enzalutamide. They monitored the patients for any medical problems that happened while they were taking enzalutamide, and for 30 days after they stopped taking enzalutamide.
WHAT HAPPENED DURING THE STUDY?

This study compared 2 groups of patients to find out if patients taking enzalutamide went longer without their prostate cancer spreading to other parts of the body or dying from any cause, compared to patients taking a placebo. A placebo does not have any medicine in it, but looks just like the medicine.

The study included patients who:

- Were at least 18 years old,
- Were diagnosed with prostate cancer that had not spread to other parts of the body (also called “non-metastatic”),
- Were currently taking drugs that stop the testicles from making testosterone, or have had both testicles removed by surgery,
- Had prostate cancer that was getting worse, and
- Were not feeling any symptoms of prostate cancer (also called “asymptomatic”).

The patients and researchers did not know who took enzalutamide and who took the placebo. This is known as a “blinded” study. Patients were assigned to each group by chance alone. This is known as a “randomized” study. This is done to make the groups more similar, which makes comparing the groups more fair. Twice as many patients were assigned to take enzalutamide compared to placebo.

Each patient in the study took either 160 mg of enzalutamide or placebo capsules by mouth once daily. Patients who were taking drugs that stop the testicles from making testosterone continued to take these drugs during the study. The patients were checked every 16 weeks to see if their prostate cancer had started to spread. This was done by a bone scan (to check for cancer in the bones), followed by either a CT scan or an MRI scan (to check for cancer in the rest of the body). The figure below shows what happened during the study.
The sponsor ran this study at 254 locations in 32 countries in North and South America, Europe, Australia, and Asia. It began on 26 November 2013 and is ongoing. A total of 1401 men participated in this trial. All patients were between the ages of 50 and 95.

Patients were to be treated until their prostate cancer got worse or until their doctor decided that they needed to start a different therapy for their prostate cancer. Patients may also have stopped taking enzalutamide if they had a serious medical problem. Of the 1401 patients who started the study, 1395 received at least 1 dose of enzalutamide or placebo. As of June 2017, 206 patients had left the study. A total of 41 patients left before the study was over by their choice or a doctor decided it was best for a patient to stop the study.

When the study data was collected in June 2017, the Sponsor began reviewing the information collected. The Sponsor then created a report of the data collected up to that point in time. This is a summary of that report. Data collected after June 2017 is not part of this report.

**WHAT WERE THE RESULTS OF THE STUDY?**

**Did patients taking enzalutamide go longer without their prostate cancer spreading to other parts of the body, or dying from any cause?**

The results suggested that patients taking enzalutamide went longer before their prostate cancer began to spread to other parts of their body, or before dying from any
cause, when compared to patients taking the placebo. A total of 219 out of 933 patients (24%) in the enzalutamide group had their prostate cancer spread to other parts of the body or died from any cause during the study, compared to 228 out of 468 patients (49%) in the placebo group. Patients in the enzalutamide group went an average of 37 months before their prostate cancer spread to other parts of the body or dying from any cause, compared to an average of 15 months in the placebo group. Based on these results, the researchers have decided that the results are not likely a result of chance. Enzalutamide may be an option for treating patients with castration-resistant prostate cancer with no evidence of metastasis.

![Graph showing time until prostate cancer spread to other parts of the body or death due to any cause](image)

This does not mean that everyone in this study had these results. Other studies may produce different results, as well. 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 also 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.

A total of 1168 out of 1395 patients (84%) had at least 1 medical problem. A total of 131 patients (9%) stopped taking their study medication because of medical problems. The most common medical problems are listed below.

<table>
<thead>
<tr>
<th>Medical Problem</th>
<th>Enzalutamide (930 Patients treated)</th>
<th>Placebo (465 Patients treated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeling tired</td>
<td>303 (33%)</td>
<td>64 (14%)</td>
</tr>
<tr>
<td>Feeling too warm (hot flush)</td>
<td>121 (13%)</td>
<td>36 (8%)</td>
</tr>
<tr>
<td>High blood pressure</td>
<td>111 (12%)</td>
<td>24 (5%)</td>
</tr>
<tr>
<td>Nausea</td>
<td>106 (11%)</td>
<td>40 (9%)</td>
</tr>
<tr>
<td>Falling down</td>
<td>106 (11%)</td>
<td>19 (4%)</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>91 (10%)</td>
<td>45 (10%)</td>
</tr>
<tr>
<td>Dizziness</td>
<td>91 (10%)</td>
<td>20 (4%)</td>
</tr>
<tr>
<td>Decreased appetite</td>
<td>89 (10%)</td>
<td>18 (4%)</td>
</tr>
<tr>
<td>Muscle weakness</td>
<td>82 (9%)</td>
<td>28 (6%)</td>
</tr>
<tr>
<td>Headache</td>
<td>85 (9%)</td>
<td>21 (5%)</td>
</tr>
<tr>
<td>Constipation</td>
<td>85 (9%)</td>
<td>32 (7%)</td>
</tr>
<tr>
<td>Pain in a joint</td>
<td>78 (8%)</td>
<td>32 (7%)</td>
</tr>
<tr>
<td>Back pain</td>
<td>73 (8%)</td>
<td>33 (7%)</td>
</tr>
<tr>
<td>Blood in urine</td>
<td>62 (7%)</td>
<td>36 (8%)</td>
</tr>
<tr>
<td>Lower bodyweight</td>
<td>55 (6%)</td>
<td>7 (2%)</td>
</tr>
<tr>
<td>Urinary tract infection</td>
<td>38 (4%)</td>
<td>30 (7%)</td>
</tr>
<tr>
<td>Unable to urinate</td>
<td>20 (2%)</td>
<td>28 (6%)</td>
</tr>
</tbody>
</table>
WERE THERE ANY SERIOUS MEDICAL PROBLEMS?

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

A total of 311 patients (22%, or 1 out of 5 patients) had serious medical problems during the study. Not all of these problems were related to the study drug. As of June 2017, a total of 165 patients had died during the study. Most deaths were due to the patient's cancer getting worse. The researchers determined that the serious health problems that 2 of the patients had before they died (one patient had their overall health go bad, and one patient had bleeding in the intestines) may have been related to taking the study drug.

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.

The full scientific report of this study is available online at:

www.clinicaltrials.gov  Use the study identifier NCT02003924
www.clinicaltrialsregister.eu  Use the study identifier 2012-005665-12
www.pfizer.com/research/research_clinical_trials/trial_results  Use the protocol number C3431005

Please remember that researchers look at the results of many studies to find out which medicines can work and are safe for patients.

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!