How low do PSA levels need to be to maximize survival and slow cancer growth in patients with prostate cancer?

The full title of this abstract is: How low do you need to go? Association between various prostate-specific antigen (PSA) response measures and clinical outcomes in metastatic castration-sensitive prostate cancer (mCSPC) in the Veteran Health Administration (VHA) data

VIEW ABSTRACT

Please note that this summary only contains information from the scientific abstract:

View Scientific Abstract ›

Date of summary: May 2025

KEY TAKEAWAYS

What are the key takeaways from this study?

- Prostate-specific antigen (PSA) is a protein produced by normal prostate cells. Small amounts of PSA are usually found in the blood.
  - Prostate cancer cells that are growing quickly can result in increased PSA levels.
  - Some prostate cancer treatments lower PSA levels, which can help patients live longer.
- Patients with metastatic castration-sensitive prostate cancer (mCSPC) who reached a PSA level of less than 0.2 nanograms per milliliter within 9 months of starting prostate cancer treatment were 54% less likely to die and 55% less likely to have their cancer grow than patients who did not.
- Patients whose PSA levels decreased by 90% or more within 9 months of starting prostate cancer treatment were 22% less likely to die than patients who did not.
  - There was no difference between these patients in the likelihood of having their cancer grow.
- These results suggest that reaching a PSA level of less than 0.2 nanograms per milliliter within 9 months of starting prostate cancer treatment may be needed to maximize the chance of survival and reduce the chance of cancer growth.

PHONETICS

Find out how to say medical terms used in this summary

- **Androgen** < AN-droh-jen >
- **Docetaxel** < DOH-seh-TAK-sil >
- **Enzalutamide** < EN-zuh-LOO-tuh-mide >
- **Metastatic** < meh-tuh-STA-tik >
- **Prostate cancer** < PROS-tayt KAN-ser >

INTRODUCTION

What did this study look at?

- This study looked at patients with **mCSPC**.
- **Prostate cancer** is a cancer that occurs in the prostate. It is one of the most common cancers in males.
  - The prostate is part of the male body that helps make semen.
  - Cancer is a disease where abnormal cells multiply and form a tumor.
- Most prostate cancers need male sex hormones, called androgens, to grow.
  - Testosterone is an example of an androgen.
- Castration-sensitive prostate cancer (CSPC) is a type of prostate cancer that responds to treatments called androgen deprivation therapy (**ADT**) which lowers androgen levels.
- **Metastatic** means that the cancer has spread to other parts of the body.
- **PSA** is a protein produced by normal prostate cells. Small amounts of PSA are usually found in the blood.
  - Prostate cancer cells that are growing quickly can result in increased PSA levels.
  - A lower PSA level after treatment can be a sign that the treatment is keeping the cancer under control.

What treatments did patients in this study receive?

- All patients in this study received ADT.
- Some patients received ADT combined with another treatment. These treatments included:
  - nonsteroidal antiandrogens (**NSAAs**), which can stop testosterone from making cancer grow;
  - androgen-receptor pathway inhibitors (**ARPIs**), such as enzalutamide, which can stop testosterone from making cancer grow;
  - chemotherapy, such as **docetaxel**, which can block cancer growth.

What does the study describe?

- In this **real-world study**, researchers looked at medical records of patients with mCSPC to measure **PSA response** to prostate cancer treatment.
  - Real-world studies look at what happens to people in a real-life setting (such as a doctor's office or hospital) rather than in a clinical trial.
  - Prostate cancer treatments that lower testosterone can also lower PSA levels. This is known as PSA response.
- Researchers looked at two different ways of measuring PSA response:
  - Patients who reached a PSA level of less than **0.2 nanograms per milliliter** during PSA follow-up
  - Patients whose PSA level decreased by **90% or more** during PSA follow-up

Nanogram per milliliter: A nanogram is one billionth of a gram, and a milliliter is one thousandth of a liter.

PSA follow-up: The period of time that researchers collected a patient's PSA levels during the study.

Researchers wanted to find out...

- How many patients achieved these PSA responses during PSA follow-up?
- For patients who achieved PSA responses within 9 months of treatment, were these PSA responses related to:
  - how likely patients were to die after 9 months?
  - how likely patients were to have cancer growth after 9 months?

STUDY DETAILS

Who was included in this study?

Researchers looked at medical records from 4,890 patients with mCSPC who received treatment in the Veterans Health Administration between 2017 and 2024.

- Researchers looked at:
  - medical records of these patients for a median of 25 months
  - information on PSA levels during treatment for a median of 15 months

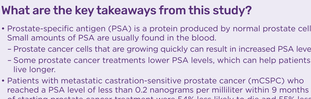
Median: The median is the middle number when a list of numbers is arranged in order. The median is different from the average or mean.

RESULTS

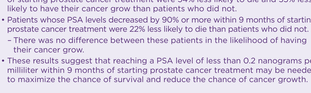
What were the results of the study?

How many patients achieved a PSA response during PSA follow-up?

- **44%** of patients reached a PSA level of less than **0.2 nanograms per milliliter**.



- **74%** of patients had their PSA level decrease by **90% or more**.



For patients who achieved PSA responses within 9 months of starting treatment, were these PSA responses related to how long patients lived or how long it took for their cancer to grow?

Patients who reached PSA levels of less than **0.2 nanograms per milliliter** within 9 months of starting treatment were:

- **54%** less likely to die
- **55%** less likely to have their cancer grow than patients who did not

Patients who had a **90% or more** decrease in their PSA level within 9 months of starting treatment were:

- **22%** less likely to die than patients who did not
  - There was no difference between these patients in the likelihood of having their cancer grow.

This summary reports the results of a single, real-world study. The results of this study may differ from those of other studies. Health professionals should make treatment decisions based on all available evidence, not on the results of a single study. Enzalutamide is approved to treat the condition that is discussed in this summary.

CONCLUSIONS

What were the researchers' main conclusions?

- Patients with mCSPC who achieved a PSA level of less than 0.2 nanograms per milliliter within 9 months of starting prostate cancer treatment were 54% less likely to die and 55% less likely to have cancer growth than patients who did not.
- Patients whose PSA levels decreased by 90% or more within 9 months of starting prostate cancer treatment were 22% less likely to die than patients who did not.
  - There was no difference between these patients in the likelihood of having their cancer grow.
- These results suggest that reaching a PSA level of less than 0.2 nanograms per milliliter within 9 months of starting prostate cancer treatment may be needed to maximize the chance of survival and reduce the chance of cancer growth.

MORE INFORMATION

Who sponsored this study?

This study was sponsored by Pfizer Inc. and Astellas Pharma Inc.

Pfizer Inc.
66 Hudson Boulevard
Hudson Yards
Manhattan, NY 10001
Phone: +1 (212) 733-2323

Astellas Pharma US, Inc.
2375 Waterview Drive
Northbrook, IL 60062
Phone: +1 (800) 727-7003

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