



What do these results mean for individuals with mCSPC?

Patients with metastatic castration-sensitive prostate cancer (mCSPC) who have *BRCA1/2* mutations often don't respond well to current treatment. These patients typically experience rapid disease progression and may require additional treatment sooner compared to those without *BRCA1/2* mutations. This underscores the urgent need for the development of more effective, targeted therapeutic strategies for this patient subgroup.



What was the purpose of this study?

- This study of patients with mCSPC treated with androgen receptor pathway inhibitors (ARPIs) aimed to assess:
 - Time to patients receiving next treatment
 - Time to development of castration resistant cancer
- Outcomes were compared between patients with and without DNA repair gene mutations



How was the study carried out?

- The study was conducted by extracting data from a database of patients with mCSPC in the United States
- Researchers focused on adult male patients who initiated treatment with ARPIs and screened for the presence of DNA mutations particularly in homologous recombination repair (HRR) genes
- Patients were stratified into two cohorts: those with HRR gene mutations (HRR+) and those without (HRR-)
- Within the HRR+ group, further categorization was made based on the presence of *BRCA1/2* mutations
- The primary endpoints were time-to-next-treatment (TTNT), reflecting the duration until the initiation of subsequent therapy, and time-to-castration-resistance (TTCR), indicating the time until the development of castration resistance



What were the limitations of the study?

- The study had a limited number of patients (833 in total), which might affect the reliability of the results
- It focused only on patients from the US, so the findings might not apply to people in other countries

Real-world time-to-next-treatment and time-to-castration-resistance among patients with metastatic castration-sensitive prostate cancer using androgen-receptor pathway inhibitors with and without homologous recombination repair mutations

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What were the results?

Patients with *BRCA1/2* gene changes had faster worsening of their condition and needed new treatments sooner than those with other gene mutations or no gene mutations



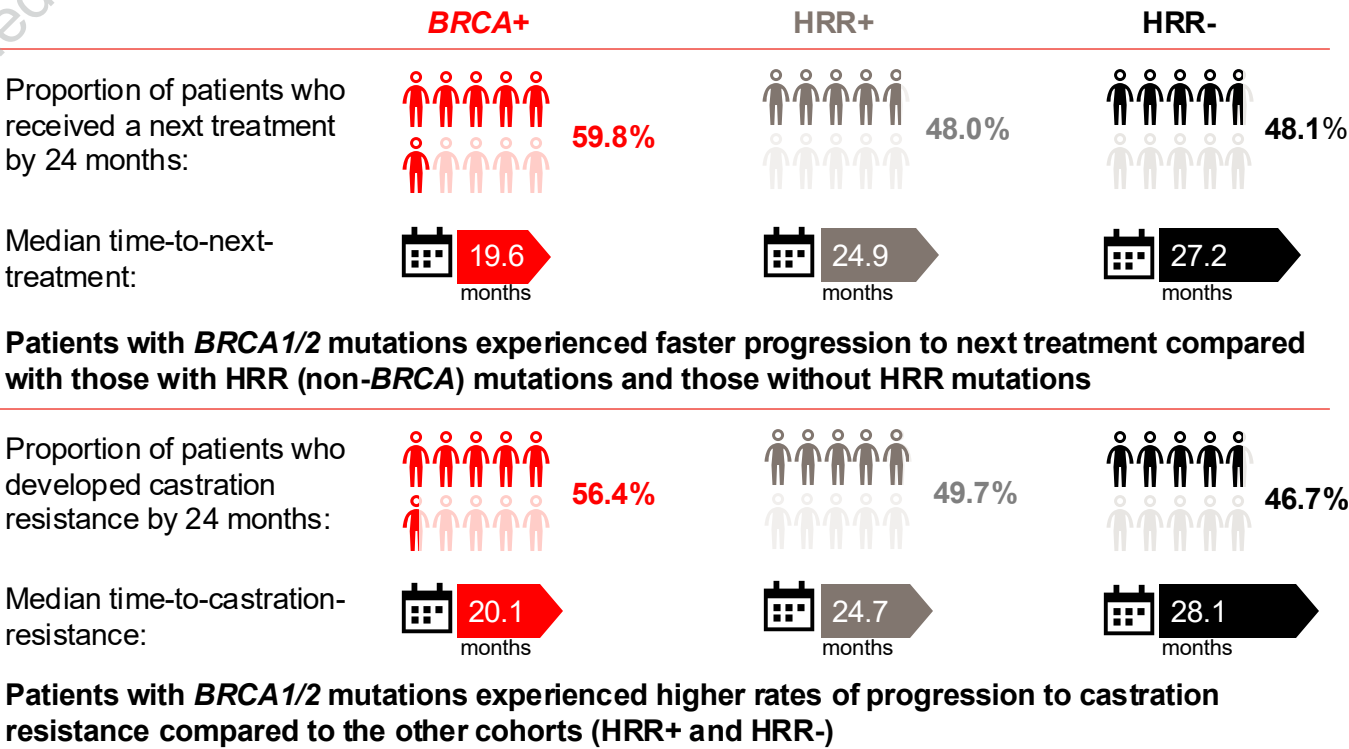
Who was in the study?

There were **833** patients with mCSPC who had started ARPI treatment and tested for a HRR before the cancer was deemed castration resistant

- A total of **125** patients were HRR+, of which **88** were *BRCA*+
- A total of **620** patients were HRR-
- The average age was 70 years for patients with HRR- and 71 years for patients with HRR+, and *BRCA*+
- Approximately two-thirds of patients were White
- Enzalutamide and abiraterone acetate were the most frequently used ARPIs
- Most patients were treated at community-based oncology practices



What was the effect of HRR status on the time to next cancer treatment and the time to development of castration resistance?



Glossary of Terms

ARPI	Androgen receptor pathway inhibitors are drugs used to treat prostate cancer by inhibiting the androgen receptor pathway, a key driver of prostate cancer cell growth.	HRR	Homologous recombination repair is a process that uses an undamaged, homologous sequence as a template to repair DNA double-strand breaks, ensuring high-fidelity repair and genomic stability.	TTCR	Time-to-castration-resistance refers to the duration from the start of primary androgen deprivation therapy to the onset of castration-resistant prostate cancer.
BRCA1/2	A tumor suppressor gene that is involved in preventing the uncontrolled growth of cells.	mCSPC	A type of prostate cancer that has spread to other parts of the body but is still responsive to treatments that lower testosterone.	TTNT	Time-to-next-treatment is a measure of the duration of time between the start of one treatment and the initiation of the next treatment line.



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