# AI-driven test targets regional disparities in abiraterone access for prostate cancer patients



Recent research highlights a significant advancement in the treatment of advanced prostate cancer, driven by the integration of artificial intelligence (AI) into clinical practice. This technology aims to resolve the ongoing disparity, often referred to as the "postcode lottery," in patient access to abiraterone, a hormone therapy critical for extending the lives of men with this formidable illness. Currently, while abiraterone is available for patients in Scotland and Wales, men in England undergoing similar diagnoses find themselves without this treatment option, raising profound questions about treatment equity across regions.

The study, spearheaded by The Institute of Cancer Research, London, alongside University College London (UCL), reveals that AI can effectively discern which patients stand to gain the most from abiraterone. By employing advanced image analysis algorithms, the newly developed test processes biopsy images to identify features that the human eye might overlook. More than 1,000 participants in the Stampede trial contributed data, allowing researchers to classify patients as either biomarker-positive or biomarker-negative. Those identified as biomarker-positive experienced a significant reduction in mortality risk with abiraterone—from 17% to 9%—while biomarker-negative patients demonstrated a reduction from 7% to 4%, suggesting they would fare just as well with standard treatments like hormone therapy and radiotherapy.

Nick James, the chief investigator of the Stampede trial and a prominent figure at The Institute of Cancer Research, articulated the research's implications, stating, “This research shows that we can pick out the people who will respond best to abiraterone.” He hopes that these findings will prompt NHS England to reconsider its funding decision for high-risk patients whose cancers have not yet metastasised. The cost of abiraterone has significantly decreased since the patent expiry in 2022, now just £77 per pack—an economical option compared to the extensive financial burden posed by newer therapies.

Despite its potential benefits, abiraterone is not without side effects. Prof James underscored the importance of careful patient selection, as the drug can result in significant adverse reactions such as elevated blood pressure and liver problems, in addition to increasing diabetes and heart attack risks. This consideration makes AI's role in tailoring treatment even more crucial, offering a pathway to maximise therapeutic benefits while mitigating risks.

The findings were disseminated at the American Society of Clinical Oncology (ASCO) Annual Meeting, prompting renewed discussions about treatment availability. Prof Kristian Helin, chief executive of The Institute of Cancer Research, referred to abiraterone as a “game changer” for prostate cancer treatment. Helin emphasised the significance of precision medication, asserting that AI could revolutionise patient testing processes and potentially standardise treatment access across England.

Dr Matthew Hobbs, director of research at Prostate Cancer UK, echoed these sentiments, advocating for urgent approval of abiraterone for patients who require it most. He described the research as both exciting and hopeful for future implementations that would ensure equitable access to life-saving treatments, reinforcing the urgency for government intervention.

As advancements in AI continue to reshape the landscape of cancer treatment, the collective hope remains that such innovations will bridge existing gaps in healthcare provision, ensuring that all patients, regardless of their geographical location, have the opportunity to receive the most effective therapies available.

## Reference Map:

* Paragraph 1 – [[1]](https://www.independent.co.uk/news/health/ai-prostate-cancer-drug-test-b2760066.html), [[2]](https://www.independent.co.uk/news/health/ai-prostate-cancer-drug-test-b2760066.html)
* Paragraph 2 – [[1]](https://www.independent.co.uk/news/health/ai-prostate-cancer-drug-test-b2760066.html), [[2]](https://www.independent.co.uk/news/health/ai-prostate-cancer-drug-test-b2760066.html)
* Paragraph 3 – [[1]](https://www.independent.co.uk/news/health/ai-prostate-cancer-drug-test-b2760066.html), [[3]](https://time.com/7094698/arterai-multimodal-artificial-intelligence/), [[5]](https://www.oncnursingnews.com/view/fda-approves-abiraterone-acetate-combination-for-some-metastatic-prostate-cancers)
* Paragraph 4 – [[1]](https://www.independent.co.uk/news/health/ai-prostate-cancer-drug-test-b2760066.html), [[6]](https://www.jnj.com/media-center/press-releases/abiraterone-acetate-provided-significant-clinical-benefit-in-patients-with-high-risk-metastatic-hormone-naive-prostate-cancer-mhnpc-improving-overall-survival-and-radiographic-progression-free-survival)
* Paragraph 5 – [[1]](https://www.independent.co.uk/news/health/ai-prostate-cancer-drug-test-b2760066.html), [[2]](https://www.independent.co.uk/news/health/ai-prostate-cancer-drug-test-b2760066.html)
* Paragraph 6 – [[1]](https://www.independent.co.uk/news/health/ai-prostate-cancer-drug-test-b2760066.html), [[4]](https://acsjournals.onlinelibrary.wiley.com/doi/full/10.1002/cncr.35122)
* Paragraph 7 – [[2]](https://www.independent.co.uk/news/health/ai-prostate-cancer-drug-test-b2760066.html), [[3]](https://time.com/7094698/arterai-multimodal-artificial-intelligence/), [[5]](https://www.oncnursingnews.com/view/fda-approves-abiraterone-acetate-combination-for-some-metastatic-prostate-cancers)

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## Bibliography

1. <https://www.independent.co.uk/news/health/ai-prostate-cancer-drug-test-b2760066.html> - Please view link - unable to able to access data
2. <https://www.independent.co.uk/news/health/ai-prostate-cancer-drug-test-b2760066.html> - A recent study has demonstrated that artificial intelligence (AI) can identify patients who will benefit most from abiraterone, a hormone therapy for advanced prostate cancer. This advancement aims to eliminate the 'postcode lottery' in England, where access to this life-extending drug varies. The AI test, developed by Artera, analyses tumour images to detect features invisible to the human eye, potentially guiding treatment decisions and improving patient outcomes.
3. <https://time.com/7094698/arterai-multimodal-artificial-intelligence/> - Artera, a medical software company, employs artificial intelligence (AI) combined with extensive patient records and biopsy images to create personalised treatment plans for prostate cancer. This approach aims to balance avoiding over-treatment, which can lead to unnecessary side effects, and under-treatment, which risks allowing the disease to spread. The National Comprehensive Cancer Network has endorsed Artera's Multimodal Artificial Intelligence platform as the official standard of care for prostate cancer. ([time.com](https://time.com/7094698/arterai-multimodal-artificial-intelligence/?utm_source=openai))
4. <https://acsjournals.onlinelibrary.wiley.com/doi/full/10.1002/cncr.35122> - In August 2023, the FDA approved the combination of niraparib and abiraterone acetate (Akeega) with prednisone for men with BRCA-mutated metastatic castration-resistant prostate cancer. This expedited approval was based on the phase 3 MAGNITUDE trial, which demonstrated significant improvements in radiographic progression-free survival among patients treated with the combination therapy compared to those receiving placebo and abiraterone acetate plus prednisone. ([acsjournals.onlinelibrary.wiley.com](https://acsjournals.onlinelibrary.wiley.com/doi/full/10.1002/cncr.35122?utm_source=openai))
5. <https://www.oncnursingnews.com/view/fda-approves-abiraterone-acetate-combination-for-some-metastatic-prostate-cancers> - The FDA has approved abiraterone acetate in combination with prednisone for certain metastatic prostate cancers. Clinical trials have shown that this combination significantly improves overall survival and progression-free survival compared to androgen deprivation therapy alone. Patients treated with abiraterone acetate experienced a 53% reduction in the risk of progression or death, with a median overall survival rate of 66% at three years. ([oncnursingnews.com](https://www.oncnursingnews.com/view/fda-approves-abiraterone-acetate-combination-for-some-metastatic-prostate-cancers?utm_source=openai))
6. <https://www.jnj.com/media-center/press-releases/abiraterone-acetate-provided-significant-clinical-benefit-in-patients-with-high-risk-metastatic-hormone-naive-prostate-cancer-mhnpc-improving-overall-survival-and-radiographic-progression-free-survival> - A study found that abiraterone acetate plus prednisone, in combination with androgen deprivation therapy (ADT), reduced the risk of death by 38% compared to placebo plus ADT in patients with high-risk metastatic hormone-naïve prostate cancer. The median overall survival for the abiraterone acetate plus prednisone group was not reached, while the median overall survival for the placebo plus ADT group was 34.7 months. ([jnj.com](https://www.jnj.com/media-center/press-releases/abiraterone-acetate-provided-significant-clinical-benefit-in-patients-with-high-risk-metastatic-hormone-naive-prostate-cancer-mhnpc-improving-overall-survival-and-radiographic-progression-free-survival?utm_source=openai))
7. <https://www.urologytimes.com/view/adding-sbrt-to-frontline-abiraterone-shows-benefit-in-oligometastatic-mcrpc> - The addition of stereotactic body radiation therapy (SBRT) to first-line abiraterone acetate and prednisone (AAP) produced a clinical benefit in patients with oligometastatic castration-resistant prostate cancer (CRPC). The phase 2 ARTO trial demonstrated that patients treated with concomitant SBRT and abiraterone acetate had a 65% reduction in the risk of disease progression or death compared to those treated with AAP alone. ([urologytimes.com](https://www.urologytimes.com/view/adding-sbrt-to-frontline-abiraterone-shows-benefit-in-oligometastatic-mcrpc?utm_source=openai))