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## **New concept drug hunts down late stage prostate cancer**

A new class of drug successfully targets treatment-resistant prostate cancers and prolongs the life of patients. The treatment delivers beta radiation directly to tumour cells, is well tolerated by patients and keeps them alive for longer than standard care, found a phase 3 trial to be presented at the European Association of Urology congress, EAU21, today.

Despite progress in medicine in recent years, metastatic castration-resistant prostate cancer remains untreatable and fatal. The new treatment, known as Lu-PSMA-617, takes a new approach, targeting a molecule called PSMA, which is known to be increased on the surfaces of the tumour cells, destroying them and their surrounding microenvironment.

Professor Johann de Bono, Professor of Experimental Cancer Medicine at The Institute of Cancer Research, London, and Consultant Medical Oncologist at The Royal Marsden NHS Foundation Trust, and Professor Ken Herrmann, Director of the Clinic for Nuclear Medicine at University Hospital Essen, Germany, and an international team of researchers set out to see whether Lu-PSMA-617 was more effective than standard care and recruited 831 patients with metastatic castration-resistant prostate cancer between June 2018 and October 2019. Patients were randomly assigned to receive the treatment plus standard care or standard care alone.

They report that the treatment significantly improved survival of patients by an average of four months, compared with standard treatment. Median survival time was 15.3 for the treatment group and 11.3 months for those receiving standard care. Progression-free survival, or the time before a patient's tumour became worse, was also longer with the treatment: a median of 8.7 months compared with 3.4 months for those with standard care.

The trial also compared side effects, finding that health-related quality of life was not negatively affected, and the team concludes that it is an effective and safe medicine that can improve standard of care for patients with this advanced prostate cancer.

Professor Ken Herrmann says: "This is a completely new therapeutic concept; a precision medicine that delivers radiation directly to a high incidence tumour. The treatment was well tolerated by patients and they had an average of four months' longer survival with good quality of life. Lu-PSMA-617 can improve the lives of many men with advanced prostate cancer and their families."

Professor Johann de Bono says: "Our findings show that this potent radioactive medicine can deliver radiation precisely to cancer cells and destroy them, extending patients' lives. I hope men whose tumours have high levels of PSMA can soon benefit from this highly innovative treatment. Currently, the treatment is being appraised by the National Institute for Health and Care Excellence (NICE) for use in the NHS in England and Wales."

"Using the PSMA molecule to directly target prostate cancer cells is the beginning of a new era of precision medicine in urology diagnostics as well as therapy", says Professor Peter

Albers, Head of the Department of Urology, Dusseldorf University, and Chair of the Scientific Office of the EAU. "LU-PSMA-617 was tested in so-called end-stage disease and still showed superiority and this paves the way for studies to treat patients in earlier stages. We have seen similar success in the diagnostic setting, using this molecule to improve the way we stage tumours. This targeted approach will revolutionise the way we approach the treatment of men with prostate cancer in the future."

## Ends

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### Notes to editors:

#### About EAU21

Europe's biggest urology congress will take place from 8th-12th July 2021 in a virtual setting. With over 1,500 abstracts presented and moderated live, the [Annual Congress of the European Association of Urology](#) (EAU21) will be amongst Europe's biggest medical congresses in 2021.

Clinicians, scientists, and patients will meet to discuss topics such as:

- Prostate cancer: new developments to improve treatments of the most common male cancer
- Urinary incontinence: a growing concern for the elderly population
- Practice changing treatments for both bladder and kidney cancer
- Prevention and treatment of urinary stones; 1 in 10 people (55 million adults in Europe) will form a stone at some point
- Special track for representatives of patient advocacy group on Friday 9 July

...and many other conditions related to the male and female urinary tract system and male reproductive organs. Review the full scientific programme on the [congress website](#).

#### About The Institute of Cancer Research, London

**The Institute of Cancer Research, London**, is one of the world's most influential cancer research organisations.

Scientists and clinicians at The Institute of Cancer Research (ICR) are working every day to make a real impact on cancer patients' lives. Through its unique partnership with The Royal Marsden NHS Foundation Trust and 'bench-to-bedside' approach, the ICR is able to create and deliver results in a way that other institutions cannot. Together the two organisations are rated in the top four centres for cancer research and treatment globally.

The ICR has an outstanding record of achievement dating back more than 100 years. It provided the first convincing evidence that DNA damage is the basic cause of cancer, laying the foundation for the now universally accepted idea that cancer is a genetic disease. Today it is a world leader at identifying cancer-related genes and discovering new targeted drugs for personalised cancer treatment.

The ICR is a charity and relies on support from partner organisations, funders and the general public. A college of the University of London, it is the UK's top-ranked academic institution for research quality, and provides postgraduate higher education of international distinction.

The ICR's mission is to make the discoveries that defeat cancer.

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