ASX ANNOUNCEMENT

14 October 2024

Positive guidance from the U.S. FDA on ^{64}Cu-SAR-bisPSMA Phase III trial in patients with recurrence of prostate cancer

Highlights

- United States Food and Drug Administration (U.S. FDA) provided positive feedback on a pivotal Phase III trial for ^{64}Cu-SAR-bisPSMA diagnostic in prostate cancer patients with biochemical recurrence (BCR), AMPLIFY.
- The positive results of the completed COBRA and PROPELLER trials, including the significantly higher uptake and retention in lesions compared to standard-of-care (SOC) imaging, as well as the substantial increase in the number of lesions detected with next-day imaging compared to same-day imaging, formed the data package to guide the design of the AMPLIFY trial.
- Approximately 220 prostate cancer patients will take part in the pivotal, non-randomised, single-arm, open-label, multi-centre Phase III trial.
- AMPLIFY is Clarity's second registrational trial with ^{64}Cu-SAR-bisPSMA, following advice from the U.S. FDA to address the two relevant patient populations for registration of ^{64}Cu-SAR-bisPSMA: patients with confirmed prostate cancer pre-prostatectomy/pre-definitive treatment (CLARIFY trial); and patients with biochemical recurrence (BCR) of prostate cancer (AMPLIFY trial).
- Patient recruitment for the AMPLIFY trial is expected to commence in early 2025.

Clarity Pharmaceuticals (ASX: CU6) ("Clarity", "the Company"), a clinical stage radiopharmaceutical company with a mission to develop next-generation products that improve treatment outcomes for children and adults with cancer, is pleased to announce it will be commencing a pivotal Phase III trial of its ^{64}Cu-SAR-bisPSMA diagnostic in patients with BCR of prostate cancer following a successful end of phase meeting with the U.S. FDA. The trial, named **AMPLIFY** (^{64}Cu-SAR-bisPSMA Positron Emission Tomography: A Phase 3 Study of Participants with Biochemical Recurrence of Prostate Cancer), is expected to begin patient recruitment in early 2025.

The AMPLIFY trial will be a non-randomised, single-arm, open-label, multi-centre, Phase III diagnostic clinical trial of ^{64}Cu-SAR-bisPSMA Positron Emission Tomography (PET) in approximately 220 participants with rising or detectable PSA after initial definitive treatment. As a pivotal trial, the final study results are intended to provide sufficient evidence to support an application to the FDA for approval of ^{64}Cu-SAR-bisPSMA as a new diagnostic imaging agent in prostate cancer.

The aim of the Phase III trial is to investigate the ability of ^{64}Cu-SAR-bisPSMA PET/computed tomography (CT) to detect recurrence of prostate cancer. Evaluation will be across 2 imaging timepoints, Day 1 (day of administration, same-day imaging) and Day 2 (approximately 24 hours post administration, next-day imaging).

The initiation of the AMPLIFY trial is supported by compelling preclinical and clinical trial data to date, including the Phase I/II COBRA trial in patients with BCR of prostate cancer, and the Phase I PROPELLER trial in patients with confirmed prostate cancer pre-prostatectomy/pre-definitive treatment, which have been accepted for presentation or presented at leading medical conferences, including the Society of Nuclear Medicine and Molecular Imaging (SNMMI) Annual Meeting, European Association of Nuclear Medicine (EANM) Congress, American Society of Clinical Oncology (ASCO) Annual Meeting, ASCO Genitourinary Cancers Symposium and others. The data showed that ^{64}Cu-SAR-bisPSMA is safe, and its uptake in prostate-specific membrane antigen (PSMA)-expressing cancer lesions was significantly higher compared to the approved SOC PSMA imaging agents for prostate cancer in Australia and the US. Additionally, data from the COBRA trial established that ^{64}Cu-SAR-bisPSMA was able to detect much smaller lesions than anticipated, including a lesion with a diameter of less than 2 mm, which compares favourably against the SOC PSMA imaging agents.

^{64}Cu-SAR-bisPSMA was also able to identify lesions months prior to these being detected by approved SOC PSMA agents (**Figure 1**).

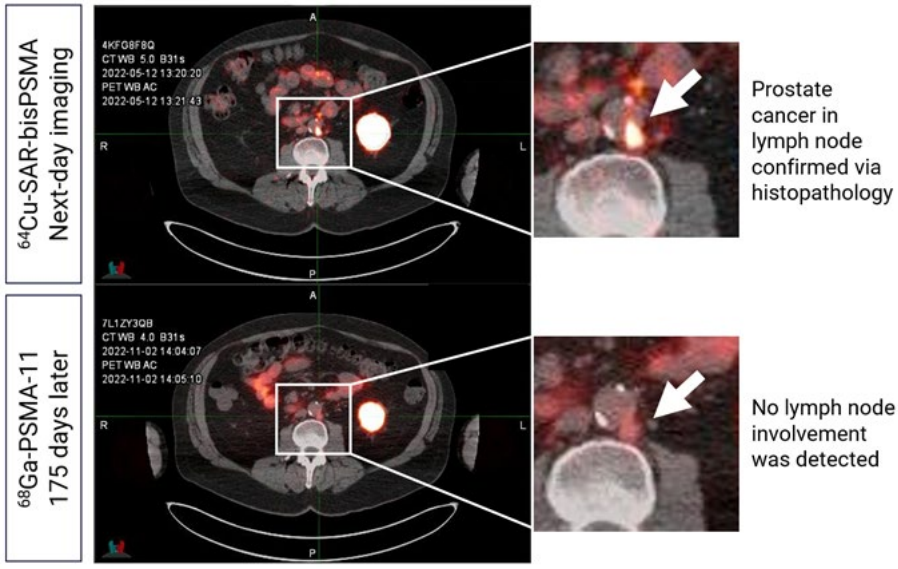


Figure 1. Retroperitoneal lymph node detected by ^{64}Cu-SAR-bisPSMA on next-day imaging. ^{68}Ga-PSMA-11 scan performed 176 days post-Day 0 (175 days post-Day 1) did not show tracer uptake. PET/CT fusion. Prostate cancer in lymph node was confirmed via histopathology.

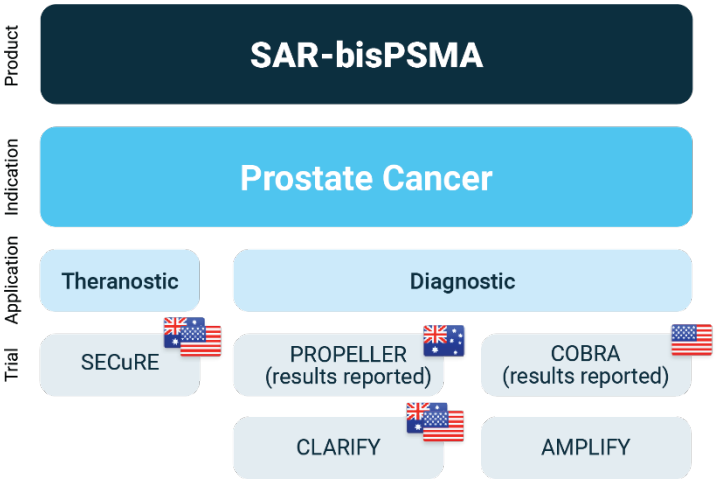
Clarity's Executive Chairperson, Dr Alan Taylor, commented, "We are very excited to progress our second Phase III trial with Clarity's lead product and appreciate the valuable guidance the FDA has provided in relation to our ^{64}Cu-SAR-bisPSMA program to date. The data we have seen so far for this product has been incredibly favourable and we believe ^{64}Cu-SAR-bisPSMA to be best-in-class.

"Beyond its clinical benefits, we believe that ^{64}Cu-SAR-bisPSMA's shelf-life of up to 48 hours will improve patient access to this important diagnostic and broaden the use of radiopharmaceuticals to more clinical sites where the short half-life of current PSMA PET tracers, such as ^{18}F- and ^{68}Ga-based products, restricts their use.

"This milestone with the AMPLIFY trial is a testament to the hard work of our team and collaborators. We would like to thank all clinicians and patients who participate in our clinical trials and trust us in delivering on our promise of developing products to improve treatment outcomes.

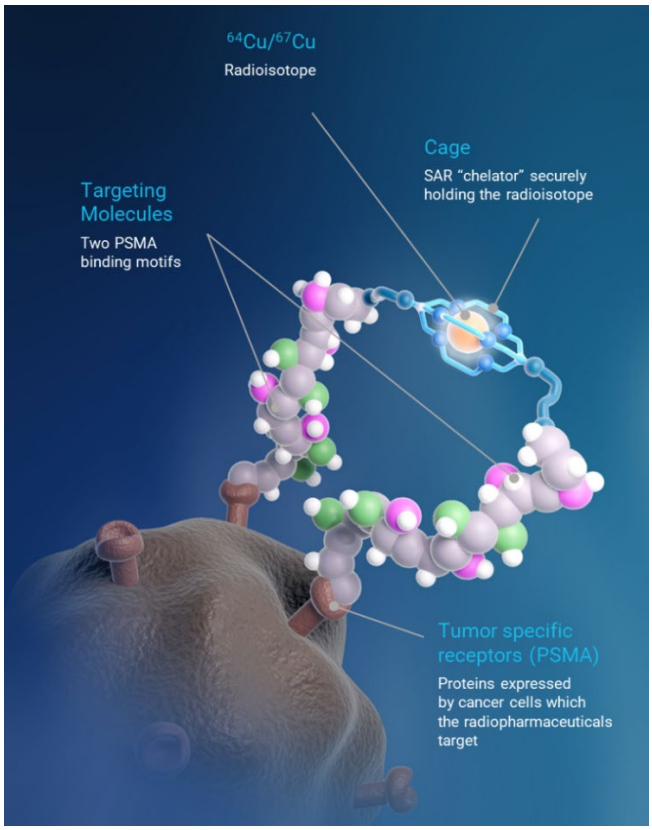
"We look forward to commencing recruitment in our registrational AMPLIFY trial early next year and continuing to build on the exceptional data that we have seen in our trials with ^{64}Cu-SAR-bisPSMA to date. We believe that better diagnostic tools will help clinicians determine the best course of treatment for their patients, and our team and collaborators look forward to bringing this next-generation PSMA diagnostic to prostate cancer patients around the world."

Overview of Clarity's SAR-bisPSMA clinical program



About SAR-bisPSMA

SAR-bisPSMA derives its name from the word "bis", which reflects a novel approach of connecting two PSMA-targeting agents to Clarity's proprietary sarcophagine (SAR) technology that securely holds copper isotopes inside a cage-like structure, called a chelator. Unlike other commercially available chelators, the SAR technology prevents copper leakage into the body. SAR-bisPSMA is a TCT that can be used with isotopes of copper-64 (Cu-64 or ^{64}Cu) for imaging and copper-67 (Cu-67 or ^{67}Cu) for therapy.



^{64}Cu-SAR-bisPSMA and ^{67}Cu-SAR-bisPSMA are unregistered products. Individual results may not represent the overall safety and efficacy of the products. The data outlined in this announcement has not been assessed by health authorities such as the US Food and Drug Administration (FDA). A clinical development program is currently underway to assess the efficacy and safety of these products. There is no guarantee that these products will become commercially available.

About Prostate Cancer

Prostate cancer is the second most common cancer diagnosed in men globally and the fifth leading cause of cancer death in men worldwide[1]. Prostate cancer is the second-leading causes of cancer death in American men. The American Cancer Institute estimates in 2024 there will be 299,310 new cases of prostate cancer in the US and around 35,250 deaths from the disease[2].

About Clarity Pharmaceuticals

Clarity is a clinical stage radiopharmaceutical company focused on the treatment of serious disease. The Company is a leader in innovative radiopharmaceuticals, developing targeted copper theranostics based on its SAR Technology Platform for the treatment of cancer in children and adults.

www.claritypharmaceuticals.com

References

1. Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries, https://acsjournals.onlinelibrary.wiley.com/doi/10.3322/caac.21660
2. American Cancer Society: Key Statistics for Prostate Cancer, https://www.cancer.org/cancer/prostate-cancer/about/key-statistics.html

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This announcement has been authorised for release by the Executive Chairperson.