

Trial in progress: QUINTESSENTIAL—a phase 2 study of arlocabtagene autoleucel (arlo-cel) in patients with relapsed/refractory multiple myeloma (RRMM)

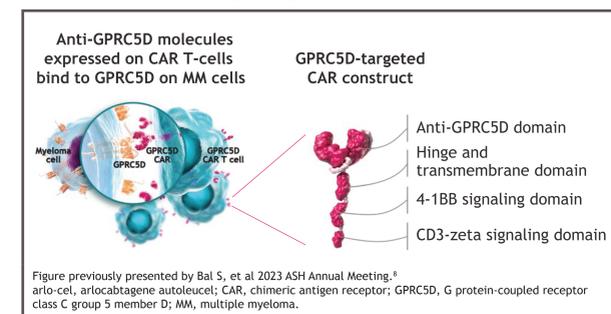
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Introduction

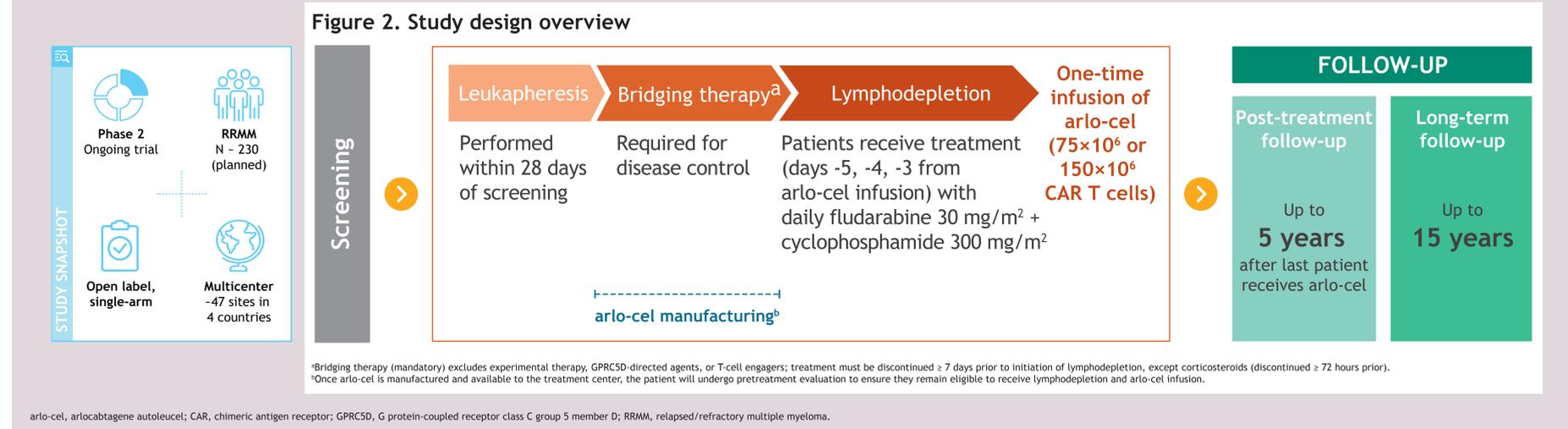
- Despite advances in the management of multiple myeloma, most patients relapse and become refractory to available treatments and continue to progress¹
- Limited treatment options exist for patients with RRMM who have been exposed to 4 or more drug classes, including immunomodulatory drugs (IMiDs), proteasome inhibitors (PIs), anti-CD38 monoclonal antibodies, and B-cell maturation antigen (BCMA)-targeted therapy^{2,3}
- To address this unmet therapeutic need, new treatment options with alternative targets and mechanisms of action are needed for late-line populations, which are growing as more patients become quadruple-class exposed (QCEX) following the use of anti-BCMA therapy in earlier lines^{4,5}
 - Patients with QCEX RRMM have poor survival outcomes; median event-free survival was 4.6 months (95% CI, 3.9-5.8) and overall survival was 15.6 months (95% CI, 11.5-24.5) in a retrospective study using the Flatiron Health database⁶
- G protein-coupled receptor class C group 5 member D (GPRC5D) is an orphan receptor expressed on plasma cells, with limited expression in healthy tissues, making it a validated therapeutic target for MM⁷
- Arlocabtagene autoleucel (arlo-cel; BMS-986393) is a potential first-in-class autologous chimeric antigen receptor (CAR) T-cell therapy targeting GPRC5D (Figure 1)

Figure 1. Mechanism of action of arlo-cel, a CAR T-cell therapy targeting GPRC5D^{8,9}



- Data from an ongoing phase 1 first-in-human study (NCT04674813) suggested that arlo-cel is safe and efficacious in patients with heavily pretreated RRMM (≥ 3 prior lines of therapy), including patients who received prior BCMA-targeted therapy

The QUINTESSENTIAL study (NCT06297226) is investigating efficacy and safety of arlo-cel, a GPRC5D-directed CAR T-cell therapy in RRMM, an approach that offers a novel mechanism of action and requires only 1 infusion



- Findings were comparable between doses of 75x10⁶ or 150x10⁶ CAR T-cells for overall response rate (ORR; 92% [22/24] and 91% [21/23], respectively) and complete response rate (CRR; 58% [14/24] and 44% [10/23], respectively)¹⁰
- Median progression-free survival (PFS) was 18.3 months (95% CI, 11.8-21.9) for all efficacy-evaluable patients treated with arlo-cel (n = 79)¹¹

Objective

- To present the design of the phase 2 QUINTESSENTIAL study, evaluating arlo-cel in patients with RRMM

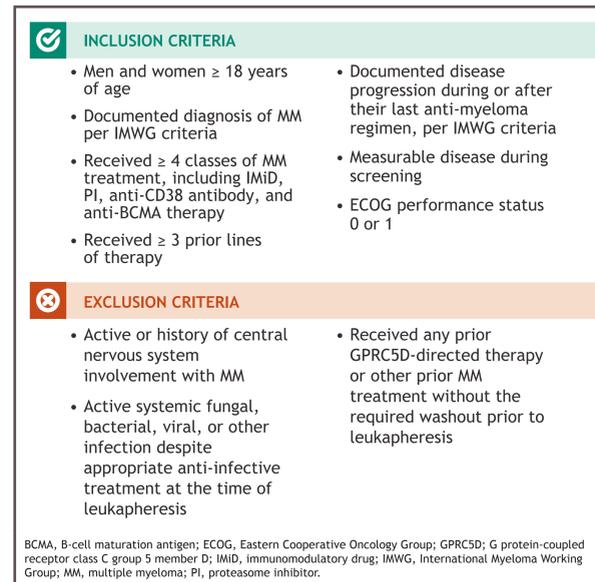
Study design

- QUINTESSENTIAL (NCT06297226) is an open-label, single-arm, multicenter, phase 2 study evaluating efficacy and safety of arlo-cel in patients with RRMM
- Following screening, eligible patients will undergo leukapheresis, mandatory bridging therapy during arlo-cel manufacturing, and lymphodepletion prior to the one-time infusion of arlo-cel (Figure 2)
- Patients will be followed for ≤ 5 years after the last patient receives arlo-cel, with a subsequent long-term follow-up study (≤ 15 years after infusion; Figure 2)

Population

- Adult patients with ≥ 4 classes of MM treatment (including IMiDs, PIs, anti-CD38 antibody, and anti-BCMA therapy) and ≥ 3 prior lines of therapy are eligible for the study (Figure 3)

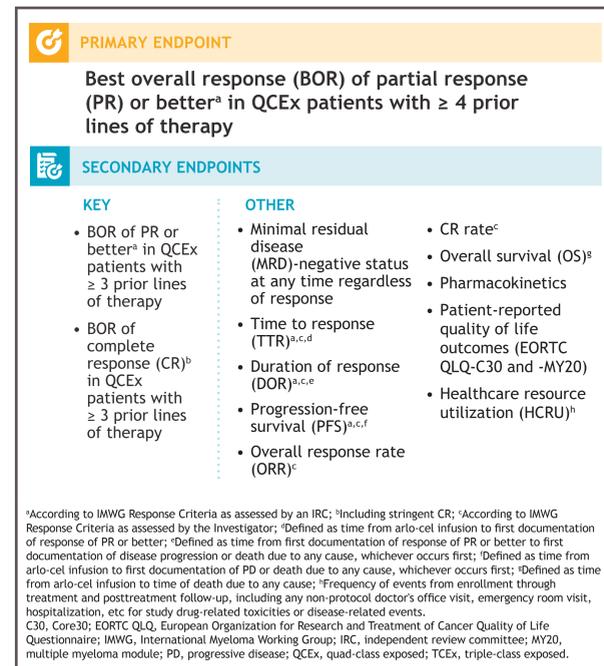
Figure 3. Key eligibility criteria



Study endpoints

- Study endpoints are detailed in Figure 4

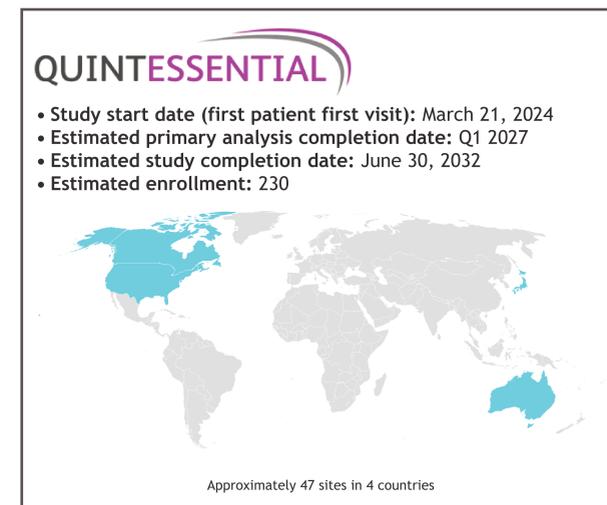
Figure 4. Study endpoints



Enrollment

- The study is currently recruiting, with an estimated enrollment of 230 patients
- This study will recruit at ~47 centers across the USA, Canada, Japan, and Australia (Figure 5)

Figure 5. Planned enrollment



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Disclosures

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