Abstract TPS10628

CAMPERR: a multicenter, prospective, observational study to evaluate a cfDNA-based genome-wide methylation enrichment assay for multicancer early detection (MCED), identification of molecular residual disease, and relapse prognostication

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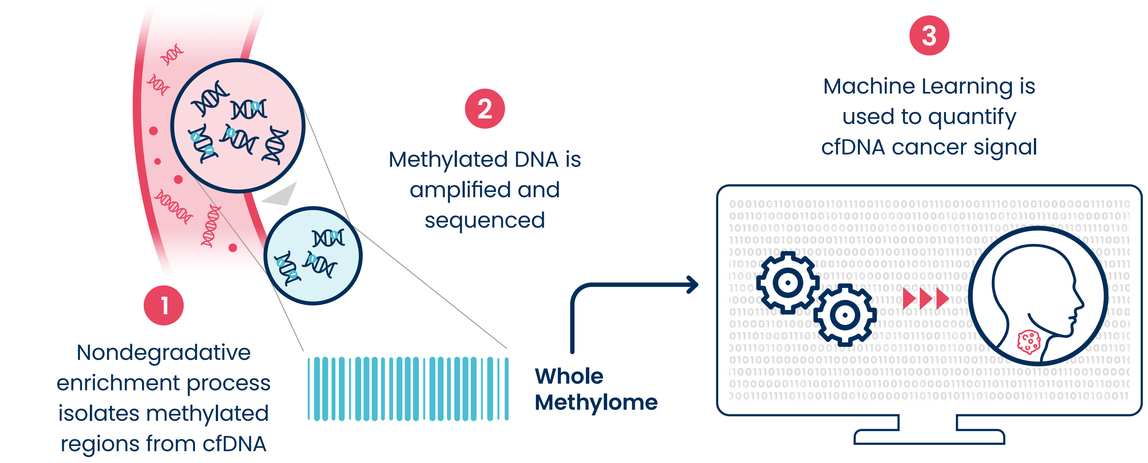
BACKGROUND

- Despite advances in treatment, a lack of population-level screening strategies for early detection across cancer types contributes to cancer-related mortality.[1]
- We previously showed that an initial MCED classifier based on a genome-wide methylome enrichment platform detected 12 cancer types, including early-stage, low-shedding tumors.[2]
- The CAMPERR study (NCT05366881) was designed to train and validate a test based on cell-free methylated DNA immunoprecipitation and high-throughput sequencing (cfMeDIP-seq) for detection and differentiation of 20 pre-selected cancer types, representing 93% of annual cancer incidence and 88% of annual cancer deaths.[3,4]
- Longitudinal follow-up for a subset of participants with lung cancer will enable training and validation for MRD-based recurrence prognostication.

MCED PLATFORM

- The genome-wide methylome enrichment platform leverages cfMeDIP-seq, a nondegradative approach for isolation of high-quality methylated DNA from plasma.[5-8] (Figure 1)

Figure 1. Overview of the cfMeDIP-seq platform



INCLUSION/EXCLUSION CRITERIA

- This case-control study is enrolling participants with 20 different pre-specified cancer types and those without known cancer. (Table 1)

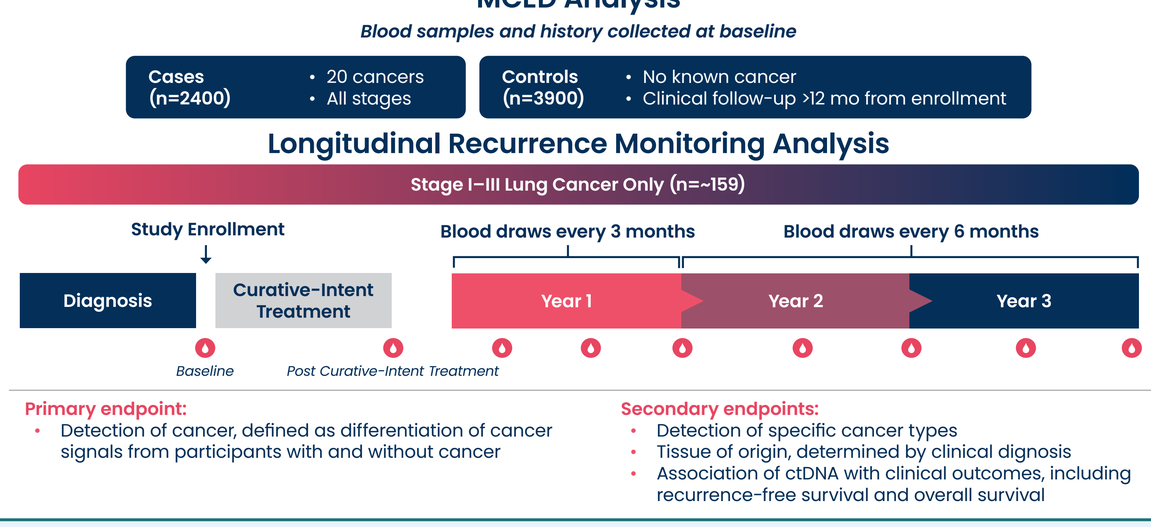
Table 1. Inclusion and exclusion criteria

Inclusion Criteria	Exclusion Criteria
• ≥40 years of age • ***Cases:*** Newly diagnosed (≤120 days) untreated cancer or recurrence of a cancer originally diagnosed >5 years ago of one of the following types: • Stage I-IV bladder, brain, breast, cervical, colorectal, endometrial, esophageal, gastric, head and neck, hepatobiliary, leukemia, lung, lymphoma, multiple myeloma, ovarian, pancreatic, prostate, renal, sarcoma, and thyroid • ***Controls:*** Not diagnosed with invasive cancer in the last 5 years	• Women who are known to be pregnant (self-reported) • Currently receiving any treatment for cancer • Currently taking any demethylating agents/DNA hypomethylating agents • Diagnosis of ≥2 invasive cancers simultaneously or within the last 5 years • Diagnosed with any chronic hematopoietic cancer, myelodysplastic syndrome, and/or precursor hematologic condition in addition to the index cancer

STUDY DESIGN

- To train and validate a classifier for MCED, blood samples and medical history will be collected from all case and control participants at baseline. A subset of participants with stage I-III lung cancer will have longitudinal follow-up to enable training and validation for MRD-based recurrence prognostication. (Figure 2)

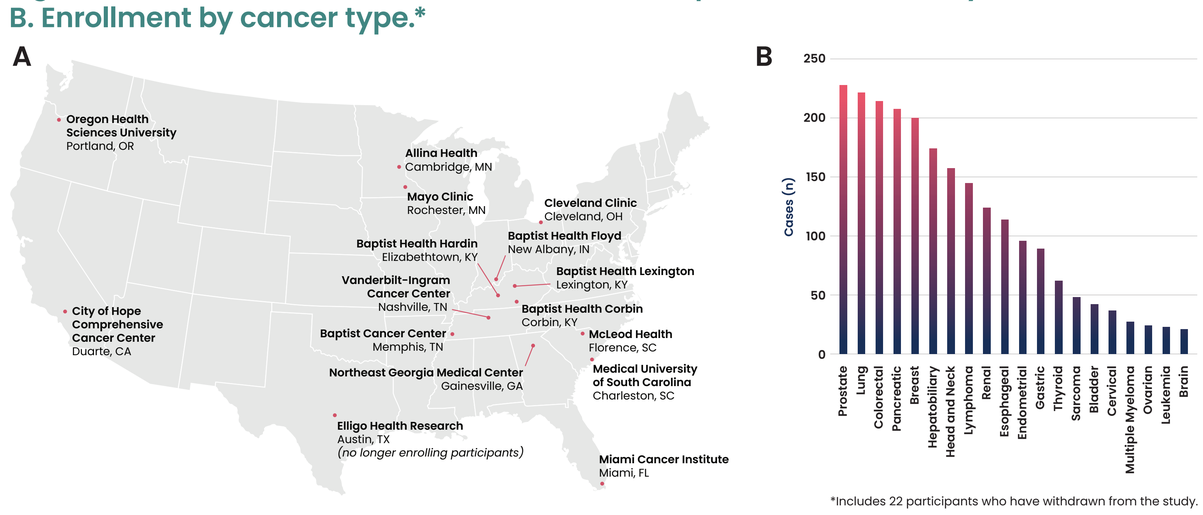
Figure 2. CAMPERR study schema



ENROLLMENT

- CAMPERR is currently enrolling at 15 sites in the US. (Figure 3A)
- As of April 10, 2026, 2248 of 2400 cancer cases have been enrolled; controls are fully enrolled. Enrollment is balanced across tumor types (Figure 3B) and stages (25.9% stage I, 21.1% stage II, 23.0% stage III, 21.8% stage IV, and 8.4% unknown/not applicable).

Figure 3. Overview of CAMPERR enrollment as of April 10, 2026. A. Study locations. B. Enrollment by cancer type.*



*Includes 22 participants who have withdrawn from the study.

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