



Detect cancer early, when it can be cured

1525 O'Brien Drive Menlo Park, CA 94025 / www.GRAIL.com

Call for Grants Announcement (CGA)

Released: 03 Mar 2023

GRAIL is committed to supporting educational activities focused on the improvement of knowledge, competence, confidence and performance of healthcare professionals and their teams in the delivery of quality care.

GRAIL invites accredited educational providers to submit applications for independent, certified medical education grants as outlined below. This announcement provides notice of the availability of funds for the development of independent education designed to address the healthcare gap(s) identified below. There has been no predetermined approval, nor any identified preferred educational providers. All submissions will be reviewed equally, thoroughly, and fairly.

Healthcare Gaps / Needs Assessment Summary

Early detection and optimized interventions can alter the course of cancer, improve patient outcomes, and reduce overall cancer-related mortality. Most cancer types do not have recommended screening tests, and even among those that do, various levels of adherence and access have been documented¹⁻¹⁰. A lack of cancer control methods leads to higher mortality due to late-stage diagnosis, sub-optimal population management, and increasing challenges for healthcare practices in their ability to optimize patient outcomes.^{11,33} Multi-cancer early detection tests (MCED), based on analysis of circulating cell-free DNA, are a new technology that may help address these issues.¹³⁻³²

Primary care, family practice physicians, and their teams are uniquely positioned to tackle population-based cancer screening and cancer control practices. Long-term relationship building with patients often involves an awareness of individual patient preferences, genetic and environmental risks, and an increased awareness of how patients interact with their health system. As primary care continues to play a critical role in population cancer control, early screening, including multi-cancer early detection, has the potential to improve patient outcomes,

but also may increase complexity and workload challenges. Research has already shown there to be a lack of efficient triage systems for cancer control through early detection.¹¹ As MCED tests are more broadly adopted, education is needed to help integrate early cancer detection effectively into daily practice.¹¹⁻¹²

Call for Grants Announcement Details

CODE: MCD10

Submission Type: Independent Medical Education (CME/CPD), certified education

Submission timeframe (submitted through the GRAIL RMS):

CGA currently open; **will accept applications until:**

09:01 AM PT ; Mon 17 Apr 2023.

Area of interest / unmet educational need:

- The science and technology behind multi-cancer screening tests and criteria for how to differentiate amongst new and emerging blood-based screening tests
- Barrier reduction methods to improve population-scale cancer screening, addressing health and sociodemographic disparities and challenges with patient engagement
- Tools for integration of new screening technologic into the clinical workflow to optimize patient engagement, patient outcomes, and ensure continuity of care

Target audience and target meeting (if applicable):

- Primary Care / Internal Medicine / Family Practice Physicians and related healthcare professional audiences

Anticipated educational formats and elements:

- Local, Regional, Grand Round Meeting Series
- Preference given to opportunities taking place in the following states:
 - California
 - New York
 - Texas
 - Florida
 - Washington (state)
 - Other states where a strong need may be demonstrated

- Hybrid / In-Person (preferred)
- Meeting content and agenda focused in the areas of interest indicated above
- Included scope expansion materials (e.g., point-of-care tools, online resources, physical enduring material development, other innovative sustainable components)

Available budget: \$250,000.00

Multi-support is encouraged, but not required

Medical and/or Advocacy Association participation is encouraged

Requirements for Submission and Checklist

Eligibility Requirements:

- Organization must be an accredited educational organization, certified through a recognized accreditation council (eg, ACCME).
- Organization must be in good standing with all accrediting organizations for which work will be performed.
- Neither the Organization nor any of its owners, officers, or directors are excluded or debarred from participating in any government program.
- Organization is appropriately firewalled from any sister or parent organization that provides strategy, marketing, or commercial services to GRAIL and its partners.
- Organization must have appropriate experience for the requested program and audience; and must be able to provide examples with outcomes.

Submission Checklist (submitted through the GRAIL RMS):

- Needs assessment with appropriately linked educational objectives tied to referenced and /or assessed healthcare gaps
- Educational methodology, strategy, and related tactics tied to the educational objectives
- The faculty recruitment and audience generation plan
- Objective outcomes assessment plan linked to the educational objectives
- An anticipated agenda and/or line of content
- Examples of potential marketing or promotional materials for the program
- A timeline and implementation plan

- A publication plan (optional)
 - A detailed budget for the anticipated activity
 - Examples of programs (w/outcomes) done previously in this or a similar focus area
-

Submission Instructions and Timeline

Proposals must be received, via formal submission **through the GRAIL Request Management System (RMS) (www.grail.com/meded)** no later than **09:01 AM PT ; Mon 17 Apr 2023**.

All submitted proposals will be reviewed via the GRAIL Medical Education Review Committee and a final decision will be communicated no later than **Monday 01 May 2023** via email.

A duly signed and formally executed letter agreement will be required to confirm support. Payment will be sent approximately 30 days after signatures are confirmed.

GRAIL reserves the right to defer and/or decline applications received after the due date indicated above.

Additional Information

All submissions will be reviewed against internal GRAIL policies, ACCME, AMA, the AdvaMed Code of Ethics on Interactions with Healthcare Professionals, and relevant OIG, and FDA guidance.

All grant applications received in response to this CGA will be reviewed in accordance with all GRAIL policies and appropriate guidelines.

This CGA does not commit GRAIL to award a grant or pay any costs incurred in the preparation of a response to this request.

GRAIL reserves the right to approve or deny any or all applications received as a result of this request or to cancel, in part or in its entirety, this CGA without prior written notification.

We request that all communications concerning this CGA should come exclusively to GRAIL's Medical Education team. You can reach the Medical Education team at GRAIL by contacting densign@grailbio.com.

Failure to follow the instructions within this CGA may result in a denial.

References

1. Smith RA, et al. Cancer Screening in the United States, 2018: A Review of Current American Cancer Society Guidelines and Current Issues in Cancer Screening. *CA Cancer J Clin.* 2018;68:297-316.
2. Siegel RL, et al. Cancer Statistics, 2018. *CA Cancer J Clin.* 2018;68:7-30.
3. Ashdown ML, et al. Chemotherapy for Late-Stage Cancer Patients: Meta-Analysis of Complete Response Rates. *F1000Res.* 2015;4:232.
4. Montazeri A. Quality of life data as prognostic indicators of survival in cancer patients: an overview of the literature from 1982 to 2008. *Health Qual Life Outcomes.* 2009;7:102.
5. von Moos, R, et al. Improving quality of life in patients with advanced cancer: Targeting metastatic bone pain. *Euro J Cancer.* 2017;72:80-94.
6. McPhail S, et al. Stage at diagnosis and early mortality from cancer in England. *Br J Cancer.* 2015;112:S108-S115.
7. Miller KD, et al. Cancer Treatment and Survivorship Statistics, 2016. *CA Cancer J Clin.* 2016;66:271-289.
8. World Health Organization Guide to Cancer: Early Diagnosis. 2017.
9. Kakushadze Z, et al. Estimating Cost Savings from Early Cancer Diagnosis. *Data.* 2017;2:30.
10. Liao MN, et al. Uncertainty and anxiety during the diagnostic period for women with suspected breast cancer. *Cancer Nurs.* 2008;31:274-283.
11. Lawler M, et al. Critical research gaps and recommendations to inform research prioritisation for more effective prevention and improve outcomes in colorectal cancer. *Gut.* 2018;67(1);179-193.
12. Selby K, et al. Personalized cancer screening: helping primary care rise to the challenge. *Public Health Reviews.* 2018;39:4.
13. Ahlquist DA. Universal cancer screening: revolutionary, rational, and realizable. *www.nature.com. Precision Oncology.* 2018 (2:23). Accessed 29Jan2020.
14. Razavi, P., Li, B.T., Brown, D.N. et al. High-intensity sequencing reveals the sources of plasma circulating cell-free DNA variants. *Nat Med* 25, 1928–1937 (2019). <https://doi.org/10.1038/s41591-019-0652-7>
15. Wolpin BM, et al. Performance of a Blood-based Test for the Detection of Multiple Cancer Types. *ASCO GI 2020; 23-25 January 2020; San Francisco, CA, USA.*
16. Melton C, et al. Optimized Early Cancer Detection from Whole-Genome Sequencing of Cell-Free DNA. 2019 ASHG Annual Meeting; 15-19 October 2019; Houston, TX, USA.
17. Liu MC, et al. Simultaneous multi-cancer detection and tissue of origin (TOO) localization using targeted bisulfite sequencing of plasma cell-free DNA (cfDNA) - oral presentation. *ASCO Breakthrough Summit 2019; 11-13 October, 2019; Bangkok, Thailand.*
18. Liu MC, Oxnard GR, Klein EA, Swanton C, Seiden MV, CCGA Consortium. Sensitive and specific multi-cancer detection and localization using methylation signatures in cell-free DNA. *Ann Oncol.* 2020;31(6):745-759. DOI: 10.1016/j.annonc.2020.02.011.
19. Ofman JJ, Raza A, Fendrick AM. Novel multicancer early detection technology—potential value to employers and the workforce. *Am J Manag Care: Evidence-Based Oncology.* 2020;26(10 Spec No.):SP317, SP363-SP364. DOI: 10.37765/ajmc.2020.88567.
20. Clarke CA, Hubbell E, Kurian AW, Colditz GA, Hartman A-R, Gomez SL. Projected reductions in absolute cancer-related deaths from diagnosing cancers before metastasis, 2006-2015. *Cancer Epidemiol Biomarkers Prev.* 2020;29(5):895-902. DOI: 10.1158/1055-9965.EPI-19-1366.
21. Hubbell E, Clarke CA, Aravanis AM, Berg CD. Modeled reductions in late-stage cancer with a multi-cancer early detection test. *Cancer Epidemiol Biomarkers Prev.* 2020;30(3):460-468. DOI: 10.1158/1055-9965.EPI-20-1134.
22. Klein EA, Richards D, Cohn A, Tummala M, Lapham R, Cosgrove D, Chung G, Clement J, Gao J, Hunkapiller N, Jamshidi A, Kurtzman KN, Seiden MV, Swanton C, Liu MC. Clinical validation of a targeted methylation-based multi-cancer early detection test using an independent validation set. *Ann Oncol.* 2021 Jun 23;S0923-7534(21)02046-9. DOI:<https://doi.org/10.1016/j.annonc.2021.05.806>
23. Hackshaw A, Cohen SS, Reichert H, Kansal AR, Chung KC, Ofman JJ. Estimating the population health impact of a multi-cancer early detection genomic blood test to complement existing screening in the US and UK. *Br J Cancer.* 2021 Aug 23. doi: 10.1038/s41416-021-01498-4. [published online ahead of print 23 August 2021].

24. Liu MC. Transforming the landscape of early cancer detection using blood tests—commentary on current methodologies and future prospects. *Br J Cancer*. 2021;124(9):1475-1477. DOI: 10.1038/s41416-020-01223-7.
25. Clarke CA, Hubbell E, Ofman JJ. Multi-cancer early detection: a new paradigm for reducing cancer-specific and all-cause mortality. *Cancer Cell*. 2021;39(4):447-448. DOI: 10.1016/j.ccell.2021.02.004.
26. Nadauld LD, McDonnell III CH, Beer TM, Liu MC, Klein EA, Hudnut A, Whittington R, Taylor B, Oxnard GR, Lipson J, Lopatin M, Shaknovich R, Chung KC, Fung ET, Schrag D, Marinac CR. The PATHFINDER Study: Assessment of the Implementation of an Investigational Multi-Cancer Early Detection Test into Clinical Practice. *Cancers (Basel)*. 2021 Jul 13;13(14):3501. DOI: 10.3390/cancers13143501
27. Chen X, Dong Z, Hubbell E, Kurtzman KN, Oxnard GR, Venn O, Melton C, Clarke CA, Shaknovich R, Ma T, Meixiong G, Seiden MV, Klein EA, Fung ET, Liu MC. Prognostic significance of blood-based multi-cancer detection in plasma cell-free DNA. *Clin Cancer Res*. 2021 Jun 4. DOI: 10.1158/1078-0432.CCR-21-0417
28. Pourrahmat MM, Kim A, Kansal AR, Hux M, Pushkarna D, Fazeli MS, Chung KC. Health state utility values by cancer stage: a systematic literature review. *Eur J Health Econ*. 2021 Jun 14. DOI: <https://doi.org/10.1007/s10198-021-01335-8>.
29. Larson MH, Pan W, Kim HJ, Mauntz RE, Stuart SM, Pimentel M, Zhou Y, Knudsgaard P, Demas V, Aravanis AM, Jamshidi A. A comprehensive characterization of the cell-free transcriptome reveals tissue- and subtype-specific biomarkers for cancer detection. *Nat Commun*. 2021;12(1):2357. DOI: 10.1038/s41467-021-22444-1.
30. Bredno J, Lipson J, Venn O, Aravanis AM, Jamshidi A. Clinical correlates of circulating cell-free DNA tumor fraction. *PLoS ONE*. 2021 Aug 25;16(8):e0256436. doi: 10.1371/journal.pone.0256436. eCollection 2021.
31. Offman JJ, Braunstein GD. Criteria for evaluating multi-cancer early detection tests. *Touch Oncology*, 2021:17(1) [published online ahead of print 15 Jul 2021].
32. www.galleri.com [accessed 12 January 2022]
33. Mapes D, Catching up with Cancer as COVID-19 starts to ebb. <https://www.fredhutch.org/en/news/center-news/2021/06/catching-up-with-cancer-screening-covid-19.html>, 29 June 2021 [accessed 19 Jan 2022]

Additional referenced materials may be found at:

<https://grail.com/manuscripts/>

<https://grail.com/presentations/>

<https://grail.com/clinical-expertise/?module=clinical-studies-title>

<https://grail.com/clinical-expertise/?module=clinical-program-overview>