INNOVATIVE SOLUTIONS OPENING

FOR

ONE COMPREHENSIVE UNIVERSAL RADIOTHERAPY FOR EVERYONE

1-CURE

HEALTH SCIENCE FUTURES (HSF)

ARPA-H-SOL-26-147

March 16, 2026

TABLE OF CONTENTS

1. INTRODUCTION TO THE 1-CURE PROGRAM 5
1.1 Background 5
1.2 Program Overview 5
2. THE 1-CURE PROGRAM 6
2.1 Technical Areas 6
2.2 Program Structure 6
2.3 Program Option 7
2.4 Program Goals 7
2.5 Technical Area Metrics 8
2.6 Requirement for Making the Treatment Widely Available 12
2.7 Team Requirements 12
2.8 1-CURE Program Meetings and Attendance 13
2.9 Award Strategy 14
3. ELIGIBILITY INFORMATION 15
3.1 Eligible Proposers 15
3.1.1 Prohibition of Performer Participation from Federally Funded Research and Development Centers (FFRDCs) and Other Government Entities 15
3.1.2 Current Professional Support 16
3.1.3 Non-U.S. Entities 16
3.2 System for Award Management (SAM) 16
4. SUBMISSION PROCESS 16
4.1 Submission Process Overview 16
4.2 Submission Information 17
4.2.1 1-CURE ISO Package 17
4.2.2 Content and Form of Submission 17
4.2.3 Solution Summary Format 18
4.2.4 Full Proposal Format 18
4.2.5 Administrative and National Policy Requirement 18
4.2.6 Submission Deadline 18
4.2.7 Funding Restriction 18
4.2.8 Question and Answer 19
4.3 Proprietary Information 19
5. SUBMISSION REVIEW AND EVALUATION PROCESS 19
5.1 Conforming Submissions 19

5.2 Solution Summary Review Process 20
5.3 Proposal Review Process 20
5.4 Evaluation Criteria for Proposals 20
5.4.1 Criteria 1: Overall Scientific and Technical Merit 20
5.4.2 Criteria 2: Proposer's Capabilities and/or Related Experience 20
5.4.3 Criteria 3: Potential Contribution to Relevance to the ARPA-H Mission and User Experience 21
5.4.4 Criteria 4: Price/Cost 21
5.5 Handling Competition Sensitive Information 21
5.6 Evaluation and Award Disclaimers 21
6. POLICY REQUIREMENTS AND MISCELLANEOUS OTHER INFORMATION 22
6.1 Controlled Unclassified Information (CUI) on Non-Federal Information Systems 22
6.2 Organizational Conflicts of Interest (OCI) 22
6.2.1 Agency Supplemental OCI Policy 22
6.2.2 Research Security Disclosures 23
6.3 Intellectual Property 23
6.4 Human Subjects Research 23
6.5 Animal Subjects Research 23
6.6 Electronic Invoicing and Payments 24
6.7 Software Component Standards 24
6.8 Genomic Data Sharing 26
6.9 Procurement of Synthetic Nucleic Acids or Benchtop Synthesizers 26
6.10 Government-Furnished Property/Equipment/Information 26
APPENDIX A: SOLUTION SUMMARY CONTENT AND INSTRUCTIONS 27
APPENDIX B: FULL PROPOSAL CONTENT AND INSTRUCTIONS 31
APPENDIX C: TARGET PRODUCT PROFILE GUIDELINES 48

INNOVATIVE SOLUTIONS OPENING (ISO) SUMMARY INFORMATION

FEDERAL AGENCY: Advanced Research Projects Agency for Health (ARPA-H)

PROGRAM TITLE: One Comprehensive Universal Radiotherapy for Everyone (1-CURE)

ANNOUNCEMENT TYPE: Innovative Solutions Opening (ISO)

ISO SOLICITATION NUMBER: ARPA-H-SOL-26-147

ISO CONTACT: 1-CURE@ARPA-H.GOV

ANTICIPATED AWARDS: Multiple Other Transaction (OTs) Agreements

DATES: (All times listed are Eastern Time)

Questions & Answers (Q&A) due date: April 8, 2026, 11:59 PM ET
Solution Summaries due date: April 15, 2026, 11:59 PM ET
Full Proposals due date: May 22, 2026, 11:59 PM ET

WHERE TO SUBMIT:

Solution Summaries: https://solutions.arpa-h.gov/Submit-Solution/
Proposals: https://solutions.arpa-h.gov/Submit-Proposal/
Questions: https://solutions.arpa-h.gov/Ask-A-Question/

PROPOSERS' DAY

ARPA-H will host a Proposers' Day in support of the 1-CURE program as described in Special Notice ARPA-H-SN-26-152. The purpose is to provide potential proposers with information on the 1-CURE program, promote additional discussions, and encourage teaming and networking.

Interested proposers are not required to attend, and materials formally presented during Proposers' Day will be posted to the ARPA-H Program Website.

ARPA-H will not reimburse potential proposers for participation at Proposers' Day (or time and effort related to submissions in response to this ISO).

1. INTRODUCTION TO THE 1-CURE PROGRAM

1.1 BACKGROUND

Cancer remains a leading cause of death in the USA and worldwide. The goal of the 1-CURE program is to develop a revolutionary radiotherapy (RT) approach effective against all cancers with a single, rapid, and low-cost treatment. The 1-CURE approach involves integrating ultra-high dose rate (FLASH)-RT technology with multifunctional immunogenic smart radiotherapy biomaterials (SRBs). These SRBs will provide image-guided targeting and sustained immunoadjuvant delivery to boost the abscopal effect during RT, an effect which causes regression of both local and metastatic tumors. The strategy involves using ablative FLASH-RT to generate neoantigens during RT for any cancer, to effectively prime the abscopal effect bolstered by targeted sustained immunoadjuvant delivery from the SRBs to overcome resistance and immunosuppression with minimal toxicities. Transformative innovations will enable the integrated use of FLASH-RT with the immunogenic SRBs to revolutionize cancer care with a universal curative treatment approach, substantially reducing mortality and improving curative rates.

1.2 PROGRAM OVERVIEW

Today, RT is one of the most widely used cancer treatments in the U.S. and beyond. Professional societies and Lancet Oncology Commissions have recommended increased adoption of evidence-based hypofractionated RT (HFRT) to reduce treatment time, lower costs, and increase access. However, curative RT including HFRT is currently limited only to some localized cancers and is largely ineffective for curative treatment of metastatic cancers.

One emerging solution is FLASH-RT, a potentially revolutionary ultra-HFRT advancement that offers the potential to deliver RT at ultra-high dose rates (>40 Gy/s) while significantly reducing damage to healthy tissues. Currently, FLASH-RT systems, e.g., with protons, are being developed with the potential for clinical use to safely and effectively treat solid tumor types, including visceral tumors. However, this also has limitations in treatment of metastatic disease. Another limitation of current approaches is that RT biomaterials (e.g., fiducials) generally have only a single function, providing image guidance during RT for certain cancers that move during treatment. There are no multifunctional SRBs that can provide image-guidance while also enhancing RT outcomes for all cancers. Additionally, RT treatment planning systems are currently limited to planning curative treatment for localized cancers; there is no RT modality or associated treatment planning system for curative treatment of both local and metastatic cancers. The 1-CURE program will address these limitations.

The enabling technologies and developments that performers may leverage for 1-CURE include but are not limited to the following: FLASH-RT; smart nanoparticle technology; Click Chemistry; immunogenic materials and immunoadjuvants; artificial intelligence (AI).

Key Terms used in this Innovative Solutions Opening (listed alphabetically)

- *Abscopal effect:*
  A phenomenon in which local RT is associated with the regression of distant metastatic tumors that were not irradiated.
- *FLASH radiotherapy:*

Radiotherapy at ultra-high dose rates (>40 Gy/s) with selective sparing of healthy tissue.

- *Smart Radiotherapy Biomaterials (SRBs):*
  Multifunctional smart biomaterials designed to target tumors, provide image-contrast to guide RT, and sustainably deliver therapy enhancing payloads such as immunoadjuvants to amplify therapeutic efficacy.

2. THE 1-CURE PROGRAM

2.1 TECHNICAL AREAS

1-CURE focuses on the integration of advanced ultra-high dose rate FLASH-RT with multifunctional immunogenic nanoparticle SRBs. This integration aims to boost the abscopal effect from rare occurrences to reliable response rates of over 90% for all cancers and with minimal toxicities. The Technical Areas (TAs) for innovation include:

TA1: Immunogenic Nanoparticle SRBs

TA1 requires engineering new multi-functional nanoparticle SRBs that can be used for different cancers to guide FLASH-RT, and boost abscopal responses through coincident release of immunoadjuvants with high therapeutic efficacy at reduced treatment time and costs. Examples of immunoadjuvants that can potentially promote the abscopal effect include Granulocyte-macrophage colony-stimulating factor (GM-CSF) or others that can help recruit antigen presenting cells (APCs), anti-CD40 for priming the APCs, and check-point inhibitors.

TA2: Abscopal Treatment Planning System (ATPS)

TA2 requires development of an ATPS integrating FLASH-RT and immunogenic SRBs with optimal parameters (dose, field size, tumor type, etc.) to plan 1-CURE treatment for effective abscopal responses > 90% for different cancers, with minimal toxicities. In Phase 1, focus will be on building a model of the abscopal effect to determine the most important parameters that contribute to regression of both local and metastatic cancers. Success metrics for phase 1 will be focused on collecting or consolidating high-quality data from animal studies/extensive omics of primary tumors/metastases and the predictive power of the newly developed statistical model. In Phase 2, the focus will be on building statistical/AI models of the biology/chemistry following high-throughput parametric testing of conditions that increase immunogenicity of tumors with known RT and therapeutic conditions (outside of the SRB development). Success metrics for Phase 2 will be centered around a larger AI model that is trained on the updated data from TA1 and the validation of ATPS prototype(s).

2.2 PROGRAM STRUCTURE

The overall 1-CURE timeline is structured as a 60-month effort consisting of three phases: Phase I (18 months), Phase II (18 months), and Phase III (24 months). Phase I will focus on developing and validating research prototypes. Phase II will involve evaluating optimal prototypes in different animal models, generating data and manufacturing capabilities needed for clinical translation. Phase III will focus on clinical translation including early-stage clinical trial(s). Throughout, proposers will integrate and compare publicly available pre-clinical and clinical study data in developing prototypes.

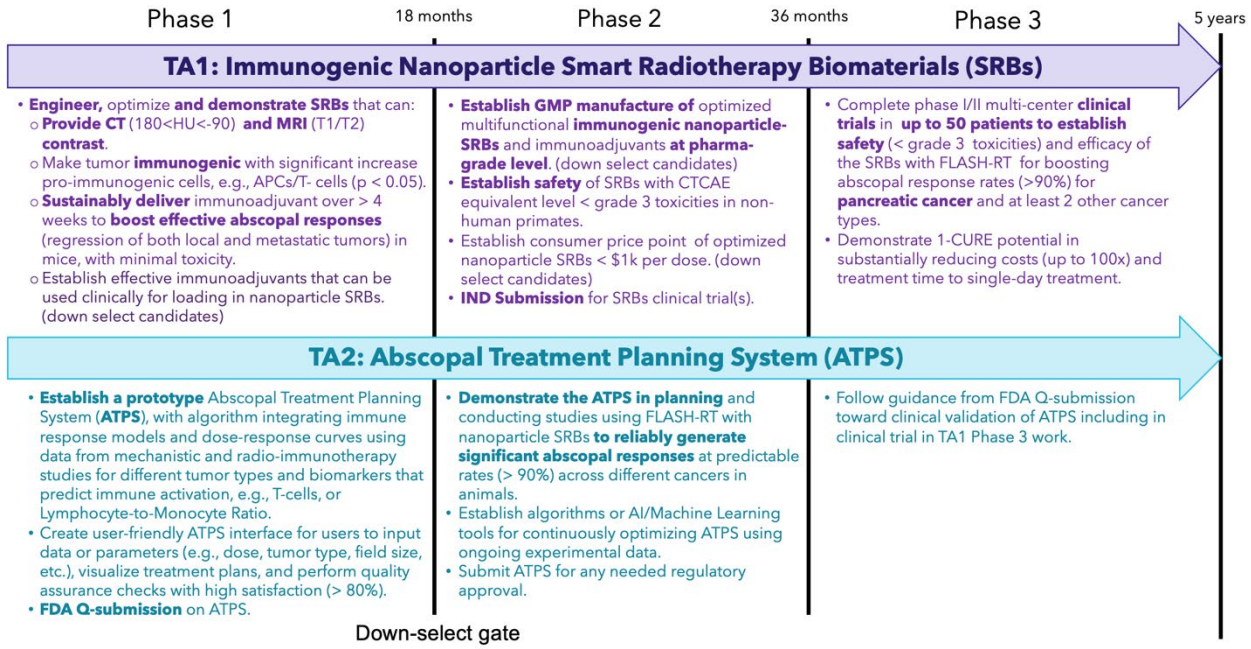

Figure 1. Program Structure. Note that, for the three specific goals, i.e., "Establish effective immunoadjuvants that can be used clinically for loading in nanoparticle SRBs." (TA1, Phase 1), "Establish GMP manufacture of optimized multifunctional immunogenic nanoparticle-SRBs and immunoadjuvants at pharma-grade level." (TA1, Phase 2), and "Establish consumer price point of optimized nanoparticle SRBs < $1k per dose." (TA1, Phase 2), the "(down select candidates)" markings indicate that if there are many effective immunoadjuvants or nanoparticle SRBs, the ones with optimal/best responses will be selected to go forward with instead of continuing with investigation for all. To be successful, each performer must identify and advance at least one (1) promising candidate of the immunoadjuvants or nanoparticles to each new phase. If a performer plans to advance more than two (2) of such candidates to a later phase, the performer must provide clear justifications and secure approvals from the ARPA-H Program Manager before the performer proceeds with further project implementation.

2.3 PROGRAM OPTION

Applicants must submit a comprehensive proposal addressing both TA1 and TA2.

2.4 PROGRAM GOALS

The overall 1-CURE program goals are shown in Table 1.

Table 1. Overall Program Goals

Overall Program Goals
1. Development of multifunctional immunogenic nanoparticle SRBs.
2. Development of ATPS.
3. Transformative integration of advanced ultra-high dose rate FLASH-RT with multifunctional immunogenic nanoparticle SRBs and ATPS. This integration aims to reliably boost the

	abscopal effect from rare occurrences to reliable response rates of over 90% for at least all solid tumors and with minimal toxicities.
4.	Ensure the approach will be widely accessible, with dramatic reduction in treatment time and costs.

2.5 TECHNICAL AREA METRICS

To evaluate the effectiveness of a proposed solution in achieving the program goal, the following program metrics will serve as the basis for determination of satisfactory progress to warrant continued funding. Although the program metrics are specified below, proposers should note that the Government has identified these goals with the intention of bounding the scope of effort while affording maximum flexibility, creativity, and innovation of proposed solutions to the goals. Proposals must cite the quantitative and qualitative success criteria that the effort will achieve at each phase's program milestone, as well as the measurement of intermediary metrics. If the metrics are not meaningful for a particular case, proposing teams are expected to provide their own metrics and describe the quantitative improvement that those metrics represent over the state-of-the-art. Power analysis calculations may be needed to support the proposed metrics.

The expected metrics are listed in Table 2 and Table 3. In addition to meeting the goals and metrics, proposers will be required to attend 1-CURE meetings and provide the following documents as directed by the ARPA-H:

- Clinical Trial Protocol(s)
- Commercialization Plan(s) including working with ARPA-H and the U.S. Food and Drug Administration (FDA) on ensuring regulatory standards are met or developed.

Table 2. TA1 Metrics

Phase 1	
SRB Technology	Engineer, optimize and demonstrate SRBs that can: 1) Provide CT (180<HU<-90) and MRI (T1/T2) contrast. 2) Make tumor immunogenic with significant increase of pro-immunogenic cells, e.g., APCs/T-cells ($P<0.05$). This should be done in-vivo with at least bilateral tumor models.
SRB Immunoadjuvant	1) Clearly identify/establish optimal immunoadjuvants that are effective in boosting probability of the abscopal effect by the end of the 12th month. 2) Demonstrate that the selected immunoadjuvants can be successfully loaded into the SRB vehicle(s) while maintaining clinically relevant levels of efficacy. 3) Establish low production costs for the selected immunoadjuvants, ideally by using generic immunoadjuvants or biosimilars. 4) Establish that humanized versions of the immunoadjuvants are available to be used clinically, including humanized versions where appropriate for loading/incorporating in SRBs.
Therapeutic Efficacy	Demonstrate significant therapeutic efficacy in use of FLASH-RT with SRBs as measured via the following metrics:

	1) Sustained delivery of immunoadjuvants over >4 weeks as quantified via imaging or other measurements. 2) Boosting effective abscopal responses in pancreatic cancer and at least 2 other cancer types, with the following required metrics: a) >90% of animals in the treatment cohort showing complete regression (as measured by tumor size) of both local and metastatic tumors. b) demonstration of significant ($p<0.05$) increase in survival by animals in the treatment cohort compared to control cohort, with long-term survival of at least 100 days. c) significant ($p<0.05$) increase in immunoscore, including activated T-Cells compared to the control cohort and development of immune memory demonstrated via complete tumor regression in cured animals following rechallenge. The Immunoscore developed must be suitable to demonstrate at least the following immune-driven efficacy in cancer: 1. CD8 density increases >2-3x 2. CD8: Treg ration >3 3. Activated cytotoxic markers (granzyme B, IFN-gamma) 4. high Immunoscore (>3) 5. and explicitly showing this in distant, non-irradiated tumor 3) Minimal toxicity < grade 3 equivalent toxicities in animals.
Phase 2	
Optimal SRB Technology	Establish GMP manufacturing of optimized multifunctional immunogenic SRBs and immunoadjuvants at pharma-grade level.
Therapeutic Efficacy	Establish safety of immunogenic SRBs with CTCAE equivalent level < grade 3 toxicities in small animals and non-human primates.
Costs	Establish consumer price point of optimized immunogenic SRBs <$1k per injection/dose.
IND	1) Submit a Target Product Profile (see Appendix C). 2) Submit FDA Investigational New Drug (IND) application(s) for clinical trial with immunogenic SRBs.
Phase 3	
Clinical Trial	Complete phase I/II multi-center clinical trials on safety (with CTCAE equivalent level < grade 3 toxicities) and efficacy of FLASH-RT with multifunctional immunogenic SRBs for pancreatic cancer and at least 2 leading cancer types: prostate, breast, lung, colorectal, liver, brain, etc.
Access	Demonstrate that the 1-CURE approach with immunogenic SRBs has the potential to substantially reduce costs (up to 100x) and significantly reduce treatment time to a single-day treatment.

Table 3. TA2 Metrics

Phase 1	
Predictive Model	1) Collect and secure access to existing and available high-quality data that were previously collected from animal studies and extensive omics of primary tumors/metastases for model training.

	Performers are encouraged to pull from any existing and relevant data sets. 2) Demonstrate the predictive power of the newly developed statistical model through superior accuracy (>80%), precision (>80%), recall score (>80%), F1-score (>70%), Area Under the Receiver Operating Characteristic Curve (AUC-ROC) score (>0.8), without overfitting.
ATPS Prototype	Establish a prototype ATPS capable of integrating: radiotherapy dose–response models, Immunoadjuvant dose-response models, SRB delivery parameters, and AI-driven treatment optimization. These models must characterize relationships among: radiotherapy dose and immune priming; SRB immunoadjuvant dose and immune activation; tumor immunogenicity (neoantigen levels) and systemic tumor regression. In addition: 1. By the end of the 12th month, demonstrate prototype capacity to integrate quantitative datasets linking: - FLASH radiotherapy parameters (dose rate ≥40 Gy/s); dose per fraction; spatial dose distribution. - SRB parameters: tumor localization efficiency or nanoparticle distribution. - immunoadjuvant release kinetics: Immune activation metrics including levels of CD8+ T-cell activation, dendritic cell maturation markers; cytokine profiles (e.g., IFN-γ). 2. By the end of the 18th month, demonstrate at minimum a prototype with capacity to: - generate optimized treatment plans integrating: FLASH beam parameters, beam geometry, SRB parameters and immunoadjuvant dose delivered. - predict abscopal response probability and systemic tumor regression with ≥70% accuracy in preclinical validation models.
ATPS User Experience	Develop user-friendly interface that can be used for input of treatment parameters including dose, field size, tumor type, etc., with high satisfaction (>80%) from RT professionals.
Quality Assurance	Establish quality assurance processes or protocols to ensure that treatment plans will meet safety and efficacy standards.
Regulatory Path	1) Submit a Target Product Profile (see Appendix C). 2) Q-submission to the FDA to establish a clear regulatory pathway for clinical translation.
Phase 2	
Effectiveness	Demonstrate the ATPS in planning and conducting studies using FLASH-RT with SRBs to reliably generate significant abscopal responses at predictable rates (>90%) across different cancers in animals. Performers will demonstrate this in pancreatic cancer and at

	least 2 of the leading cancer types including: breast, prostate, lung, liver, brain, colorectal cancers, etc.
Optimization	Establish algorithms or AI/Machine Learning tools that can continuously optimize ATPS using experimental data for different treatment parameters across different cancers. Optimization must follow the most current and relevant FDA guidance such as the "Marketing Submission Recommendations for a Predetermined Change Control Plan for Artificial Intelligence-Enabled Device Software Functions". This should be coordinated with the ARPA-H team building on the Q-Submission to ensure the soundness of the regulatory strategy across the spectrum of pre/post IDE to full submission.
Costs	Establish consumer price point of ATPS in range with current RT treatment planning systems (<$500K).
Regulatory Process	Submit the ATPS paperwork for any regulatory approval as may be needed or appropriate.
Phase 3	
Effectiveness	Validate the ATPS in 1-CURE phase I/II multi-center clinical trials described in TA1, Phase 3 work.

Performers may only propose to carry out both TAs (TAs1-2).

The metrics and timelines as outlined in the above tables may increase in difficulty and complexity over the course of the 1-CURE program. Monthly technical and financial status reports will be required and discussed with the ARPA-H Program Manager at monthly meetings. ARPA-H may request performer data as deemed necessary throughout the program to validate progress toward achieving the program's goals.

At the time of submission, proposers **must**:

- Propose to meet all milestones and metrics for the TA combination option in accordance with the timelines outlined in the Phases.

Performance reporting will be required throughout the program, and will include:

- Monthly technical and financial status reports for discussion with the ARPA-H Program Manager team.
- Monthly check-ins, which can be virtual, generally 1 hour to discuss results, underlying science, project challenges and solutions, and other project-related topics.
- ARPA-H may request performer and sub-performer data and arrange visits to their facilities as deemed necessary throughout the program to validate technical progress.
- Attendance at the meetings must include the performer Principal Investigator (PI), and project manager. In addition, ARPA-H may request other members of performer teams to attend these meetings as it deems necessary.
- A 2-page RT market research report, which must include sub-sections to cover at least the specific U.S. markets for RT biomaterials and treatment planning systems, by the end of Phase 1, a 5-page manufacturing protocol by the end of year four, and an ARPA-H

Exit Report, which includes a 2-page clinical trial report and a 2-page commercialization plan by the end of year five.

- Participation by team leaders in the beginning of Phase 3 in a workshop on 1-CURE treatment availability organized by ARPA-H. Working in partnership with ARPA-H, performer teams will provide yearly reports detailing their progress made in discussions with the FDA to ensure regulatory standards are met.

2.6 REQUIREMENT FOR MAKING THE TREATMENT WIDELY AVAILABLE

ARPA-H is committed to affordable health care for all geographic regions of the country. ARPA-H will review all conforming proposals and performers throughout the program to ensure that metrics and milestones prioritize end-user needs regarding affordability, independent of geographic region.

To address potential misperceptions about the program and educate patients and care providers of the benefits of developed technology, performers with ARPA-H will actively engage in conversations and workshops with relevant groups such as patient advocates, radiation oncologists, medical physicists, medical oncologists, nurses, clinical assistants and other relevant stakeholders on how best to inform and educate patients on the potential new treatment option.

2.7 TEAM REQUIREMENTS

Proposals are expected to involve teams with the expertise needed to collectively achieve the goals of the proposed TA(s). Communications, networking, and team formation are the sole responsibility of the proposer. Proposers must submit a single, integrated proposal led by a Principal Investigator, under a single prime proposer that addresses all program phases as applicable. Teaming (that considers access across geographies) is highly encouraged to accomplish the transformational goals set forth in the 1-CURE program.

Proposers may only submit one proposal as the prime proposer. The Government's expectation is that all key members of the performer team will be onboard within 60 days of the award.

At minimum, each Performer Team must include the following individuals:

- **Lead Principal Investigator (PI)**
  The lead PI is responsible for overseeing, directing, implementing, and reporting of results of the project. Further, the PI is responsible for organizing the performer team and ensuring compliance with 1-CURE requirements.
- **Project Manager**
  Proposers must include a Project Manager who coordinates efforts across the team, ensuring compliance with timelines and programmatic goals. The Project Manager will assist the lead PI in day-to-day project operations and execution as well as financial management and reporting.
- **Product Development Lead (PDL)**
  The Product Development Lead is an individual with the background necessary to manage commercialization and regulatory efforts. This includes oversight of the "product

development team": regulatory, reimbursement, and commercialization experts who can act as either consultants or subawardees. While the Government may offer to augment the proposers' team with additional commercialization experts post-award (e.g., Regulatory Consultants), the **Proposer must propose a team independently capable of meeting 1-CURE's translational/commercialization goals**.

- **1-CURE Fellows**
  The 1-CURE Fellows will be early-stage scientific investigators who are within the first 10 years of receiving their advanced research degree participating in the 1-CURE program performer teams. The background or expertise of the Fellows should align with the work of the performer teams' proposals. Each Fellow will spend at least 8 weeks each year to directly work on components of the performer team's projects. In addition, each Fellow is expected to meet regularly (at least monthly) with the lead PI or PDL to discuss the project progress and directions.

  During this time Fellows will conduct implementation research on the technologies being developed by their performer teams. Implementation research will assess any potential barriers or facilitators that will inform strategies for wide adoption of the technologies or approaches being developed by the teams. Each fellow will be encouraged to present their work yearly during American Society for Radiation Oncology (ASTRO), American Association of Physicists in Medicine (AAPM), Global Health Catalyst summits or other similar conferences for sharing experiences, dissemination, and stakeholder education. Proposals for the 1-CURE program must allocate funding for a 1-CURE Fellow and include expenses related to these efforts (such as travel expenses) in the program budget. The 1-CURE program requires a stipend for each 1-CURE Fellow to be, at minimum, $10,000/Fellow per year of the Period of Performance.

2.8 1-CURE PROGRAM MEETINGS AND ATTENDANCE

- **Monthly Status Reports (MSR) with PM/1-CURE Team** – Each PI and Project Manager will be required to meet with the PM/1-CURE Team monthly (estimated as 1-hour each meeting) for updates and reviews. Status reports outlining technical and financial updates will be required at monthly meetings with the PM.
- **Meeting of the Minds (M&M)** – In an effort to promote collaboration and learnings from all performer teams, the lead PI, PDL, and the Project Manager from each performer team must meet semiannually throughout the 1-CURE program at a virtual Meeting of the Minds (M&M) where discovery and technology will be discussed among all performers of the 1-CURE program. Additional members of each performing team are welcome to join M&M.
- **Principal Investigator (PI) Review Meetings** – Every year, 1-CURE will organize, in-person, PI Review Meetings (site to be determined) where all performers will present progress and updates on their technology and will have the opportunity to meet representatives of key stakeholder organizations. Further, this meeting will provide the opportunities for those members of the 1-CURE program to interact with patient advocates and other stakeholders of the global oncology community. The 1-CURE Fellows will also meet during the yearly PI Review Meetings and share results from their work with their respective performer teams. Travel for the 1-CURE Fellows to attend the PI Review Meetings will be supported by the travel budgets of the performer teams. The meetings will provide opportunities for participants to share knowledge, learn, network

and grow collaborations.

- **Attendance** – Attendance at all meetings will be recorded and expected to be no less than 80% annually. This policy establishes accountability, a competitive-yet-collaborative environment, and collaborative value-added contribution to the program's success. Each team will also be required to meet with the PM at least monthly to review progress, metrics, and milestones.
- **Invited Guests** – Guests from professional societies in area of oncology, and other government agencies may be invited to 1-CURE in-person and virtual meetings, workshops and PI meetings with the intended purpose of gathering insight into possible transition partners, commercialization strategies, regulatory hurdles and implementation research for wide adoption of technologies.

1-CURE recognizes the importance of stakeholder education and dissemination to ensure that the community embraces the new innovative technologies developed by this program. As such, 1-CURE intentionally included the PI Meetings to continuously engage and disseminate information with the broader global oncology community. Each PI is required to participate in the PI meetings. Further, 1-CURE will encourage collaborative efforts of the performer teams with the ARPANET-H Hub and spoke system. This may include formative user studies offering a broad array of stakeholders, customer discovery to inform product design and patient voice sessions including interactions with the FDA to include patient-led research.

The interactions and communications of the Performing Teams with various professional societies, advocacy groups, and students will strengthen and intentionally build formative educational opportunities and capacity among the oncology community engaging all stakeholders and user communities and therefore yielding more inclusive technologies and management of disease.

2.9 AWARD STRATEGY

The ISO constitutes a merit-based solicitation, and the number of awards made will depend on the quality of the proposals received and the availability of funds. Proposals are expected to use innovative approaches that include novel technology, enabling revolutionary advances in medicine and healthcare. The ISO uses competitive procedures to the maximum extent practicable. It is highly encouraged that commercial organizations propose as the prime on teams (teams may comprise a wide variety of organizations, including companies, academic institutions, and other non-profit entities). ARPA-H has determined, based on extensive market intelligence and the nature of the 1-CURE program, that this approach will be most effective in increasing the likelihood of programmatic success.

The Government reserves the right to select for negotiation all, some, one, or none of the proposals received in response to this ISO and to make awards without negotiations with proposers. The Government also reserves the right to conduct negotiations if it is later determined to be necessary. Additionally, ARPA-H reserves the right to accept proposals in their entirety or to select only portions of proposals for negotiation and award. The Government reserves the right to fund proposals in phases, including as optional phases, as applicable. ARPA-H reserves the right to make multiple awards, a single award, or no awards. Multiple awards are anticipated.

Proposals identified for negotiation are expected to result in Other Transactions (OTs). The Government may request additional necessary documentation, tailored to the individual proposals, during proposal evaluations. The Government reserves the right to remove proposals from award consideration should the parties fail to reach agreement on award terms, conditions, and/or cost/price within a reasonable time, and/or if the proposer fails to timely provide requested additional information.

The Agreements Officer has sole discretion to negotiate all terms and conditions with selectees. ARPA-H will incorporate pre-publication reviews or other restrictions, as necessary, if it determines the research resulting from the proposed effort will present a high likelihood of disclosing sensitive information including Personally Identifiable Information (PII), Protected Health Information (PHI), financial records, proprietary data, and any information marked Sensitive but Unclassified (SBU), Controlled Unclassified Information (CUI), etc. Any award resulting from such a determination will include a requirement for ARPA-H permission before publishing any information or results on the program.

For-profit organizations, as determined in SAM.gov, that do not qualify as small businesses under the NAICS 541714 SBA size standard of 1000 employees are required to contribute a meaningful cost share to participate in the 1-CURE program. Cost shares may be provided in cash or in-kind (e.g., equipment, facilities, or technical labor) and must directly support the execution of proposed milestones. The level of cost share should reflect the scale, maturity, and resources of the proposing organization and must be explicitly detailed in the proposal's budget justification. This requirement is intended to ensure sustained performer commitment and to increase the likelihood of rapid, cost-effective transition of 1-CURE technologies. Other organizations are not required to provide cost share but may do so voluntarily.

3. ELIGIBILITY INFORMATION

3.1 ELIGIBLE PROPOSERS

All responsible sources capable of satisfying the Government's needs may submit a proposal to this ISO. Specifically, universities, non-profit organizations, small businesses and other than small businesses are eligible and encouraged to propose to this ISO.

While there is statutory language that may suggest ARPA-H is limited in the number of awards it may make to one entity, there are circumstances in which ARPA-H may make more than three awards to a particular person or entity. ARPA-H encourages entities to submit their research ideas notwithstanding this perceived limitation. Any proposal received will be fairly considered for award and, if it is of interest to ARPA-H, will be selected for an award.

3.1.1 PROHIBITION OF PERFORMER PARTICIPATION FROM FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS (FFRDCS) AND OTHER GOVERNMENT ENTITIES

ARPA-H is primarily interested in responses to this solicitation from commercial performers, academia, non-profit organizations, etc. In certain circumstances, FFRDCs and Government Entities may have unique capabilities that are not available to proposing teams through any other resource. Accordingly, the following principles will apply to this solicitation.

- FFRDCs and Government entities, including federal Government employees, are not permitted to respond to this solicitation as a prime or sub-performer on a proposed performer team. If an FFRDC or Government entity has a unique research idea that is within the technology scope of this solicitation that they would like considered for funding; OR, if an FFRDC or Government entity, including a federal Government employee, is interested in working directly with the Government team supporting the research described by this solicitation, contact 1-CURE@arpa-h.gov.

- If a potential prime performer believes an FFRDC has a unique capability without which their solution is unachievable, they may provide documentation as part of their Solution Summary submission demonstrating they have exhausted all other options. ARPA-H will consider the documentation to determine if inclusion of the FFRDC is necessary for the Solution.

3.1.2 CURRENT PROFESSIONAL SUPPORT

Those individuals/entities currently providing contracted support services to ARPA-H have an organizational conflict of interest (OCI) that cannot be mitigated and thus are ineligible for award.

3.1.3 NON-U.S. ENTITIES

ARPA-H will prioritize awards to entities (organizations and/or individuals) that will conduct funded work in the United States. Non-U.S. entities may participate to the extent that such participants comply with any necessary nondisclosure agreements, security regulations, export control laws, and other governing statutes applicable under the circumstances. In accordance with these laws and regulations, in no case will awards be made to entities organized under the laws of a covered foreign country [as defined in section 119C of the National Security Act of 1947 (50 U.S.C. Ch 44 § 3059)]; a foreign entity of concern meeting any of the criteria in section 10638(3) of the CHIPS and Science Act of 2022; an individual that is party to a malign foreign talent recruitment program, as defined in Section 10638(4) of the CHIPS and Science Act of 2022; or entities suspended or debarred from business with the government.

3.2 SYSTEM FOR AWARD MANAGEMENT (SAM)

All proposers must have an active registration in SAM.gov for their proposal to be found conforming. Proposers must maintain an active registration in SAM.gov with current information at all times during which a proposal is under consideration or a current award from ARPA-H is held. Information on SAM.gov registration is available at SAM.gov.

NOTE: New registrations as well as renewals may take more than 14 business days to process in SAM.gov. SAM.gov is independent of ARPA-H and thus ARPA-H representatives have no influence over processing timeframes.

4. SUBMISSION PROCESS

4.1 SUBMISSION PROCESS OVERVIEW

The submission process consists of the following steps:

1. **Proposers' Day (Optional).** ARPA-H organized event to allow interested proposers to meet and self-organize into comprehensive teams capable of meeting all 1-CURE technical and non-technical requirements.
2. **Solution Summary.** Required overview of the effort to be proposed summarizing the goals of the proposed work, the research plan, and the team. See Appendix A for the required Solution Summary format.
3. **Review of Solution Summaries.** Based on the evaluation of Solution Summaries, selected teams will be encouraged or discouraged to submit full proposals.
4. **Full Proposal.** Required document package comprising a detailed description of the proposed effort, expected outcomes, performing team, timeline, budget, and any supporting materials. See Appendix B for the required Full Proposal format.
5. **Review of Full Proposals.**
6. **Feedback and Awards.**

4.2 SUBMISSION INFORMATION

4.2.1 1-CURE ISO PACKAGE

The official ISO and attachments are those posted on the System for Award Management (SAM) at SAM.gov. This announcement and any references to external websites herein constitute the total solicitation. If proposers cannot access the referenced material posted in the announcement found at https://www.sam.gov/, please contact the administrative contact listed herein.

4.2.2 CONTENT AND FORM OF SUBMISSION

All solution summaries and full proposals submitted in response to this ISO must be written in English and must be consistent with the content and formatting requirements of Appendix A (Solution Summary Format and Instructions), and Appendix B (Full Proposal Format and Instructions).

Proposers are responsible for submitting all solution summaries and full proposals via the ARPA-H Solution Submission Portal and ensuring receipt by the date and time specified in the ISO. No other method of submission is permitted.

Registration is required to submit via the ARPA-H Solution Submission Portal and registration may take several business days to process. Plan to register well in advance of the solution summary submission deadline as late submissions resulting from delays with registration will not be accepted or considered.

Proposers are responsible for clearly identifying proprietary information in order for the Government to handle proprietary information appropriately. Submissions containing proprietary information must have the cover page and each page containing such information clearly marked with a label such as "Proprietary."

***NOTE**: "Confidential" is a classification marking used to control the dissemination of U.S. Government National Security Information as dictated in Executive Order 13526 and should not be used to identify proprietary business information.*

4.2.3 SOLUTION SUMMARY FORMAT

Solution Summaries (formerly known as abstracts) are mandatory, and the Government may only consider those submitted by the Submission date. All Solution Summaries submitted in response to this solicitation must comply with the content and formatting requirements in Appendix A. Solution summaries may not exceed four (4) pages, excluding the cover page, the Target Product Profile, the Team Organization and Capabilities table, and Rough Order of Magnitude (ROM). The Government will not review pages beyond four (4) pages. Official transmittal letter is not required.

Based on the evaluation of Solution Summaries, selected teams will be encouraged or discouraged to submit full proposals.

4.2.4 FULL PROPOSAL FORMAT

All proposals submitted in response to this ISO must comply with the content and formatting requirements in Appendix B and Appendix C. Proposers should use the templates provided in the Bundle of Attachments. The Bundle of Attachments includes the following five (5) templates:

1. Tech and Management (20 pages)
2. Task Description Document (no page limit)
3. Cost Proposal (no page limit)
4. Cost Proposal Spreadsheet (fill in applicable tabs)
5. Administration & National Policy (no page limit)

Documents requested to be submitted with the templates should be included as attachments to the applicable template (e.g., Human Subjects Research/Animal Subjects Research (HSR/ASR) documents included as attachments to the Administration & National Policy template, cost back-up as attachments to the Cost Proposal template, etc.). Each template includes instructions for completion.

4.2.5 ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENT

Proposers must complete the Administrative and National Policy Requirements document. Additional information regarding completion of the document is included below (See Appendix B III).

4.2.6 SUBMISSION DEADLINE

Submission deadlines for Solution Summaries and full proposals are provided in ISO Summary Information.

4.2.7 FUNDING RESTRICTION

Pre-award costs will not be reimbursed unless pre-award agreement is negotiated prior to award.

4.2.8 QUESTION AND ANSWER (Q&A)

All questions regarding this ISO must be submitted to 1-CURE@arpa-h.gov. ARPA-H will post Q&As to the ARPA-H ISO Website and SAM.gov on an on-going basis and may not respond directly to email inquiries. All questions must be in English and must include the name, email address, and telephone number of a point of contact, and should be submitted by the Q&A deadline posted with other key dates. Proposers submitting questions to individual Government team members (e.g., Program Manager) should not expect a response.

ARPA-H will attempt to answer questions in a timely manner; however, questions submitted after the due date may not be answered. Further, duplicative questions may be combined and rephrased to streamline responses.

4.3 PROPRIETARY INFORMATION

Proposers are responsible for clearly identifying proprietary information in any submissions. Submissions containing proprietary information must have the cover page and each page containing such information clearly marked with a label such as "Proprietary."

NOTE: "Confidential" is a classification marking used to control the dissemination of U.S. Government National Security Information as dictated in Executive Order 13526 and should not be used to identify proprietary business information.

ARPA-H is responsible for handling submissions in accordance with applicable federal law, including the Freedom of Information Act (FOIA).

5. SUBMISSION REVIEW AND EVALUATION PROCESS

5.1 CONFORMING PROPOSALS

Conforming proposals contain all requirements detailed in this ISO. Proposals that fail to include required information may be deemed non-conforming and may be removed from further consideration and/or rejected without further review. A proposal may be deemed non-conforming under this ISO if it fails to meet one or more of the following solicitation requirements:

- The proposed concept is applicable to the 1-CURE program.
- The proposers meet the eligibility requirements.
- The proposal meets the submission requirements.
- The proposal meets the content and formatting requirements in the attached instructions.
- The proposer's concept has not already received funding or been selected for award negotiations for another funding opportunity (whether from ARPA-H or another Government agency).
- Proposers will be notified of non-conforming determinations via email correspondence.

Please note that ARPA-H reserves the right, at its discretion, to reject as non-conforming proposals that it determines are duplicative of previously submitted solution summaries and

proposals under this or other ARPA-H solicitations.

5.2 SOLUTION SUMMARY REVIEW PROCESS

ARPA-H will review and respond to all proposers submitting solution summaries. Solution summaries will be reviewed to provide potential proposers with feedback on whether ARPA-H is interested in the proposed solution/concept. At a minimum the response will indicate whether a proposer is encouraged or discouraged from submitting a proposal. Although potential proposers may submit a proposal regardless of the feedback provided in response to a solution summary, ARPA-H solution summary feedback is provided to ensure that potential proposers are making an informed decision on the investment of time and resources to a full proposal. Feedback will be provided to the administrative and technical points of contact noted on the solution summary cover page.

5.3 PROPOSAL REVIEW PROCESS

ARPA-H will conduct a scientific and technical review of each conforming full proposal, evaluating proposals on how well the submission meets the criteria stated in this ISO. At a minimum, proposers will be provided with notification of the Government's decision on whether the proposal was selected for negotiation of an award. Notification of the Government's decision will be provided to the primary technical point of contact included in the solutions tool.

5.4 EVALUATION CRITERIA FOR PROPOSALS

All proposals will be evaluated using the following evaluation criteria, listed in descending order of importance.

5.4.1 CRITERIA 1: OVERALL SCIENTIFIC AND TECHNICAL MERIT

The proposed technical approach is innovative, feasible, and complete. Task descriptions and associated technical elements provided are complete and in a logical sequence with all proposed deliverables clearly defined such that an outcome that achieves the goal can be expected as a result of the award. The proposal identifies major technical risks and planned mitigation efforts are clearly defined and feasible. In addition, the evaluation may take into consideration the extent to which the proposed intellectual property (IP) rights structure and software components will potentially impact the ability to commercialize the technology and adhere to open-source solutions and/or standards.

5.4.2 CRITERIA 2: PROPOSER'S CAPABILITIES AND/OR RELATED EXPERIENCE

The proposed technical team has the expertise and experience to accomplish the proposed tasks; the proposer's prior experience in similar efforts clearly demonstrates an ability to deliver products that meet the proposed technical performance within the proposed budget and schedule; the proposed team has the expertise to manage the cost and schedule and; similar efforts completed/ongoing by the proposer in this area are fully described, including identification of other Government entities (see Section 3.1.1).

In terms of capability, the Government shall assess the Volume III bio-sketches provided for the performer team members including the Principal Investigator, Project Manager, Regulatory expert (PDL), Commercialization Experts, and any other key personnel on the project team as requested by ARPA-H.

5.4.3 CRITERIA 3: POTENTIAL CONTRIBUTION TO RELEVANCE TO THE ARPA-H MISSION AND USER EXPERIENCE

Proposals will be evaluated on the potential future Research and Development (R&D), commercial, and/or clinical applications of the project proposed, including whether such applications may have the potential to address areas of currently unmet need within biomedicine and improve health outcomes; the degree to which the proposed project has the potential to transform biomedicine; and/or the potential for the project to take an interdisciplinary approach. Further, the proposed solution contemplates the end user and reflects an understanding of the direct needs and benefits for stakeholders, whether they are patients, providers, health systems or payers. For example, how would this solution fit inside the clinical workflow? Or how will this be accessible to users in all geographies, and at an affordable cost?

5.4.4 CRITERIA 4: PRICE/COST

Price and/or value analysis will assess the reasonableness and overall value of the proposed price provides to the Government for the selected technical solution.

If these analyses are inconclusive, cost realism analysis may be performed to ensure that the costs align with the technical and management approaches, accurately reflect the goals and objectives, and are consistent with the proposer's scope of work, demonstrating a clear understanding of the necessary costs and effort. The effort should leverage all relevant prior research to maximize the benefits of available funding.

NOTE: Proposers are encouraged to propose the best technical solution. For example, proposers are discouraged from proposing low-risk ideas with minimum uncertainty or to staff the proposed effort with junior personnel to be more appealing from a budget perspective. ARPA-H seeks novel solutions that are reflective of the level of effort and risk proposed.

5.5 HANDLING COMPETITION SENSITIVE INFORMATION

It is the intent of ARPA-H to protect all proposals as competition sensitive information and to disclose their contents only for the purpose of evaluation, and only to screened personnel for authorized reasons, in accordance with applicable federal laws and regulations, including FOIA. Restrictive notices notwithstanding, submissions may be handled by ARPA-H support contractors during the evaluation process for administrative purposes and/or to assist with technical evaluation.

ARPA-H support contractors are expressly prohibited from performing ARPA-H-sponsored technical research and are bound by appropriate non-disclosure agreements. Input on technical aspects of a proposal may be solicited by ARPA-H from non-government consultants/experts who are strictly bound by appropriate non-disclosure requirements. No submissions will be returned.

5.6 EVALUATION AND AWARD DISCLAIMERS

The Government reserves the right to select for negotiation all, some, one, or none of the proposals received in response to this ISO. In the event the Government desires to award only portions of a proposal, negotiations will commence upon selection notification. The

Government reserves the right to fund proposals with phases or options for continued work, as applicable.

The government reserves the right to request any additional necessary documentation to support the negotiation and award process. The Government reserves the right to remove a proposal from award consideration should the parties fail to reach agreement on award terms, conditions, price, and/or if the proposer fails to provide requested additional information in a timely manner.

In all cases, the government Agreements Officer (AO) will have sole discretion to negotiate all terms and conditions with proposers. ARPA-H will apply publication or other restrictions, as necessary, if it is determined the research resulting from the proposed effort will present a high likelihood of disclosing sensitive information including Personally Identifiable Information (PII), Protected Health Information (PHI), financial records, proprietary data, any information marked Sensitive but Unclassified (SBU), etc. Any award resulting from such a determination will include a requirement for ARPA-H concurrence before publishing any information or results on the effort.

6. POLICY REQUIREMENTS AND MISCELLANEOUS OTHER INFORMATION

6.1 CONTROLLED UNCLASSIFIED INFORMATION (CUI) ON NON-FEDERAL INFORMATION SYSTEMS

Information on Controlled Unclassified Information (CUI) identification, marking, protection, and control is incorporated herein and can be found at 32 CFR § 2002.

6.2 ORGANIZATIONAL CONFLICTS OF INTEREST (OCI)

The Proposer, through submission of a proposal, is required to identify and disclose all facts relevant to any potential OCI involving the Proposer, its organization, and/or any proposed team member (i.e., proposed subawardee). Along with the disclosure, the Proposer may be required to submit a mitigation plan, which is a description of the action the Proposer has taken to avoid, neutralize, or mitigate the stated OCI. The government may require the Proposer to provide additional information to assist the government in evaluating the OCI mitigation plan.

If the government determines the Proposer failed to fully disclose an OCI; or failed to provide the affirmation of ARPA-H support; or failed to reasonably provide additional information requested by the government to assist in evaluating the proposer's OCI mitigation plan, the government may reject the proposal and withdraw it from consideration for award.

6.2.1 AGENCY SUPPLEMENTAL OCI POLICY

ARPA-H restricts Performers from concurrently providing professional support services, including Advisory and Assistance Services or similar contracted support services, in addition to performing as an R&D technical Performer. Therefore, the Proposer must affirm whether it or any proposed team member (proposed subawardee, etc.) is providing professional support services to any ARPA-H office(s) under: (1) a current award or subaward; or (2) a past award or subaward that ended within one calendar year prior to the proposal's submission date.

If any professional support services are or were provided to any ARPA-H office(s), the proposal must include:

- The name of the ARPA-H office receiving the support,

- The prime contract number, and
- Identification of proposed team member (including any proposed subawardee) providing support.

6.2.2 RESEARCH SECURITY DISCLOSURES

In accordance with NSPM-33, research organizations should identify and mitigate conflicts of commitment (COCs) and conflicts of interest (COIs) to receive federal funding. A research organization proposing to this ISO must provide additional documentation as requested for Senior/Key Personnel for ARPA-H to determine the existence of any risk. The format for this submission can be found in the Administration and National Security Document Template (See Appendix B III).

6.3 INTELLECTUAL PROPERTY

Proposers must provide a good faith representation that the proposer either owns or possesses the appropriate licensing rights to all IP that will be utilized for the proposed effort. ARPA-H strongly encourages IP rights to be aligned with open-source regimes. Further, it is desired that all non-commercial software (including source code), software documentation, and technical data generated and/or developed under the proposed project is provided as a deliverable to the Government. IP delivered to the Government should align with project or Program goals and should be aligned with the level of government funding provided to generate and/or develop the IP.

6.4 HUMAN SUBJECTS RESEARCH

A proposal for funding that will involve engagement in human subjects research (HSR) (as defined in 45 CFR § 46) must provide documentation of one or more current *Assurance(s) of Compliance* with federal regulations for human subjects' protection, including at least a Department of Health and Human Services (HHS), Office of Human Research Protection Federal Wide Assurance. All HSR must be reviewed and approved by an Institutional Review Board (IRB), as applicable under 45 CFR § 46 and/or 21 CFR § 56. The entity's HSR protocol must include a detailed description of the research plan, study population, risks and benefits of study participation, recruitment and consent process, data collection, and data analysis. Recipients of ARPA-H funding must comply with all applicable laws, regulations, and policies for ARPA-H funded work. This includes, but is not limited to, laws, regulations, and policies regarding the conduct of HSR, such as the U.S. federal regulations protecting human subjects in research (e.g., 45 CFR § 46, 21 CFR § 50, § 56, § 312, § 812) and any other equivalent requirements of the applicable jurisdiction.

The informed consent document utilized in HSR funded by ARPA-H must comply with all applicable laws, regulations, and policies, including but not limited to U.S. federal regulations protecting human subjects in research (45 CFR § 46, and, as applicable, 21 CFR § 50). The protocol package submitted to the IRB must contain evidence of completion of appropriate HSR training by all investigators and key personnel who will be involved in the design or conduct of the ARPA-H funded HSR. Funding cannot be used toward HSR until ALL approvals are granted.

6.5 ANIMAL SUBJECTS RESEARCH

All entities submitting a proposal for funding that will involve engagement in animal subjects research (award recipients performing research, experimentation, or testing involving the use

of animals) shall comply with the laws, regulations, and policies on animal acquisition, transport, care, handling, and use as outlined in:

- 9 CFR parts 1-4, U.S. Department of Agriculture rules that implement the Animal Welfare Act of 1966, as amended, (7 U.S.C. § 2131-2159); and,

- the Public Health Service Policy on Humane Care and Use of Laboratory Animals, which incorporates the "U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training," and "Guide for the Care and Use of Laboratory Animals" (8th Edition)."

Proposers must provide documentation of a current Animal Welfare Assurance (AWA) on file with the Office of Laboratory Animal Welfare (OLAW).

The Proposer must complete and submit the Vertebrate Animal Section worksheet for all proposed research anticipating Animal Subject Research (ASR).

All Animal Use Research must undergo review and approval by the local Institutional Animal Care Use Committee (IACUC) prior to incurring any costs related to animal use research. For all proposed research anticipating animal use, proposals should briefly describe plans for IACUC review and approval.

6.6 ELECTRONIC INVOICING AND PAYMENTS

Performers will be required to register in, and submit invoices for payment through, the Payment Management Services (PMS) (https://pms.psc.gov).

6.7 SOFTWARE COMPONENT STANDARDS

The health- and healthcare data eco-system is complex and multi-dimensional with a variety of standards for data models, data transmission protocols, data routing methods, etc. that are similar to and extend the International Standards Organization (ISO) Open Systems Interconnection Model (OSI). ARPA-H programs are likely to involve research that touches on multiple layers of the OSI model, from low-level radio frequency (RF) based protocols for transmission of data from implantable devices (potentially OSI layers 1-5), to secure and fault tolerant networking protocols for medical devices (potentially OSI layers 3-6), to the exchange of health information including Electronic Health Records, lab results, and medical images related to a patient between healthcare facilities and health data brokers, including (but not limited to) Health Information Exchanges (HIE) and Trusted Exchange Framework and Common Agreement (TEFCA) Qualified Health Information Networks using protocols such as HL7 FHIR (Fast Healthcare Interoperability Resources, OSI Layer 7). This diversity requires careful consideration of the most appropriate standards to be used for the specific technologies in development and the layer at which they operate.

ARPA-H is committed to advancing interoperability in today's health ecosystem through the adoption of open, consensus-driven standards and laying the foundation for emerging technologies to interoperate in the health ecosystem of the future through the evolution of these standards across all layers of the health data information technology (IT) eco-system. With that in mind, we anticipate that the Performer will develop software and data communication components that fall into three categories:

(1) components that can leverage today's existing standards without impeding the R&D,
(2) components where extensions to existing standards will be necessary to unlock new capabilities in an interoperable way, and
(3) components in areas where consensus-based standards do not yet exist or where use of standards would seriously limit the ability to efficiently conduct R&D.

Whenever such an existing standard is available that meets the scientific, technical, and research needs of the proposed effort, proposers must use the existing standard instead of creating their own. In cases where an existing standard provides only partial functionality, proposers should expand upon the existing standard, ideally in a way that does not prohibit or interfere with backward compatibility, and create sufficient documentation for the Office of the National Coordinator for Health Information Technology (ONC), and the U.S. Department of Health and Human Services (HHS) agencies or standards organizations, to evaluate extensions for potential inclusion in the standard (including open Application Programming Interfaces (APIs) and open data formats).

In the case of information relating to health- and healthcare data at higher layers of the OSI model, all health IT components should adhere to or (as needed) expand upon applicable national standards adopted by HHS, including the ONC (e.g., Fast Healthcare Interoperability Resources (FHIR) and United States Core Data for Interoperability (USCDI)).

Technical solutions that contain software elements, commercial-friendly open-source licenses (e.g., MIT, BSD, or Apache 2.0) are preferred. If an open, consensus-based standard does not yet exist, the Proposer should identify the aspects that lack an open standard, describe a plan to develop a general-purpose open data model and to prototype new open APIs. A strong proposal will explain how the Performer will enhance data interoperability (including semantic interoperability) and expand the availability of open, consensus-based standards and data models.

A proposal must include a technical plan to align with applicable standards based on the OSI layer at which they are operating including (but not limited to) HHS-adopted health IT standards (45 CFR Part 170 Subpart B). For the full description of standards adopted in CFR Part 170, Subpart B, please review the complete text of the regulations; a strong technical solution will also outline integration with the Trusted Exchange Framework and Common Agreement (TEFCA). Adhering to international standard ISO/IEEE 11073 will enable broad support for current and future devices, especially those developed internationally. At other layers of the OSI model, and for software components operating outside the network stack (e.g., health databases, Picture Archiving and Communication Systems (PACS), etc.), other standards will be relevant, and strong technical solutions will seek to utilize or expand upon appropriate open, consensus-based standards.

If a technical solution requires an extension of existing standards or development of technologies outside of the standards, the Proposer must schedule a meeting with ARPA-H representatives prior to proposal submission to discuss the deviation to the standards.

6.8 GENOMIC DATA SHARING

A resulting award will include the requirement to comply with NIH's Genomic Data Sharing (GDS) Policy (NOT-OD-14-124). Information about the GDS policy can be found at: https://grants.nih.gov/grants/guide/notice-files/NOT-OD-24-157.html.

6.9 PROCUREMENT OF SYNTHETIC NUCLEIC ACIDS OR BENCHTOP SYNTHESIZERS

Beginning April 26, 2025, HHS funds may only be used to procure synthetic nucleic acids or benchtop nucleic acid synthesis equipment from sources adhering to the Office of Science and Technology Policy Framework for Nucleic Acid Synthesis Screening. HHS awardees are expected to adhere to the Office of Science and Technology Policy Framework for Nucleic Acid Synthesis Screening for HHS projects.

6.10 GOVERNMENT-FURNISHED PROPERTY/EQUIPMENT/INFORMATION

Government-furnished property/equipment/information may be provided to selected performers.

APPENDIX A: SOLUTION SUMMARY CONTENT AND INSTRUCTIONS

A. General Instructions

All Solution Summary submissions must be written in English with font type NOT smaller than 12-point font. Smaller font may be used for figures, tables, and charts (but should be legible). Delete all formatting and content instructions prior to submission. Content recommendations are displayed in blue font and should be deleted prior to solution summary submission. Margins may be no less than 0.5" inch in width. Solution Summaries are limited to four (4) pages, exclusive of a cover page, basis of estimate, team qualifications, target product profile (TPP), and references/citations. No tables of content shall be provided. The Government may not review pages beyond 4 total; and any Solution Summary submitted that exceeds 4 pages will only be reviewed at ARPA-H's discretion. Solution Summaries should be submitted in a PDF format to ARPA-H Solution Submission Portal. Attachments and embedded links shall not be included. The Solution Summary should address why the proposed idea is relevant to the ARPA-H mission and the proposed 1-CURE program. Your Solution Summary should address the technical merit of the proposed approach and team organization, capabilities, and qualifications for this proposed idea. Proposers should frame their responses using at least the first 4 Heilmeier questions:

1. What health problem are you trying to solve? Articulate your objectives using absolutely no jargon.
2. How is it done today, and what are the limits of current practice?
3. What is new in your approach, and why do you think it will be successful?
4. Who cares? If you succeed, what difference will it make?

And include the following items:

- ✓ Team qualifications
- ✓ R&D timeline—what you can accomplish in the agreed upon project timelines?
- ✓ Rough Order of Magnitude (ROM)

B. Cover Page

The cover page should follow the format below. The cover page does not count towards the page limit.

Innovative Solutions Opening	ARPA-H-SOL-26-147
Solution Summary Title	
Technical Approach (TA) Selection (Both TAs (TAs1-2))	
Team Lead/Submitter Organization	

Type of Organization (and website URL if applicable)	**Choose all that apply:** Large Business, Small Disadvantaged Business, Other Small Business, Historically Black Colleges & Universities (HBCU), Minority-Serving Institutions (MI), Other Educational, or Other Nonprofit
Unique Entity Identifier (UEI) of Prime Proposer/Awardee	
Technical Point of Contact (POC)	Name: Mailing Address: Telephone: Email:
Administrative POC (Authorized to Negotiate Award)	Name: Mailing Address: Telephone: Email:
Basis of Estimate (BOE)	Total: $
Place(s) of Performance	
Other Team Members (subawardees, including consultants, if any)	Technical POC Name: Organization: Organization Type:

C. Concept Summary

Clearly identify the applicable technical areas for the proposed 1-CURE program project. Describe the solution summary concept with minimal jargon and explain how it addresses the applicable 1-CURE technical areas.

D. Innovation and Impact

Clearly identify the outcome(s) sought and/or the problem(s) to be solved with the proposed technology concept. Describe how the proposed effort represents an innovative and potentially revolutionary solution to the applicable 1-CURE technical areas. Explain the

concept's potential to be disruptive compared to existing or emerging technologies and how the proposed approach will go far beyond current existing capabilities. To the extent possible, provide quantitative metrics in a table that compares the proposed technology concept to current and emerging technologies which may include:

- A progression of increasingly complex technical challenges.
- State of the art / emerging technology "baseline".
- Aggressive metrics for each year of the proposed project.
- Summary of specific outcomes from the proposed research.

E. Proposed Work

Describe the final deliverable(s) for the project, key interim milestones, and the overall technical approach used to achieve project objectives. Discuss alternative approaches considered, if any, and why the proposed approach is most appropriate for the project objectives. Describe the background, theory, simulation, modeling, experimental data, or other sound engineering and scientific practices or principles that support the proposed approach. Provide specific examples of supporting data and/or appropriate citations to the scientific and technical literature. Identify adoption challenges to be overcome for the proposed technology to be successful. Describe why the proposed effort is a significant technical challenge and the key technical risks. At a minimum, the solution summary should address:

- Does the approach require one or more entirely new technical developments to succeed?
- How will technical risk be mitigated?
- What use cases, capabilities, or demonstrations will be featured?

F. Target Product Profile

Proposers must include a specific target product profile (TPP) for the proposed solution. The TPP should thoughtfully outline the characteristics, features, and performance specifications of the product being developed. Target goals with respect to affordability and regional accessibility should be reflective of the best estimates and predictions at the time of writing. General guidelines of a target product profile are provided in Appendix C. No more than one page for each TPP, which is not included in the 4-page limit.

G. Team Organization and Capabilities

Indicate the roles and responsibilities of the organizations and key personnel that comprise the performer team. Provide the name, position, and institution of each key team member; and describe in 1-2 sentences the skills and experience they bring to the team.

Separately, please complete the below table for key personnel on a separate page of the solution summary. The table does not count towards the page limit but must not exceed one page.

Organization	Last Name	First Name	City	State	Country

H. Basis of Estimate (BOE)

Please include a BOE of timeline and federal funds requested to support the proposed project budget as well as the total project cost including cost sharing, if applicable. The BOE should also include a breakdown of the work by direct labor (fully burdened, inclusive of fringe), labor hours, subawards (including vendors/consultants), materials, equipment, other direct costs (e.g., travel), indirect costs, profit, cost sharing, and any other relevant costs. Also, estimate the total number of labor hours anticipated per phase in the labor hours row. All subawards should total together in the subawards line. The table below may be used for this breakdown:

Categories	**Phase I Amount**	**Phase II Amount**	**Phase III Amount**	**Total**
Direct Labor (fully burdened, including fringe)				
Labor Hours (in hours)				
Subawards (including vendors/consultants)				
Materials				
Equipment				
Travel				
Other Direct Costs				
Indirect Costs				
Profit/Fee				
Total				
Cost Sharing (if applicable/appropriate)				

Proposers must ensure the BOE encompasses all applicable costs and should modify the above to best reflect the proposer's expected costs. The BOE does not count toward the page limit.

NOTE: Delete all formatting and content instructions prior to submission.

APPENDIX B: FULL PROPOSAL CONTENT AND INSTRUCTIONS

Full proposals must follow the guidance in Appendix C. Conforming full proposals should consist of four volumes as follows:

1) Volume I, Technical and Management Proposal,

2) Volume II, Cost Proposal,

3) Volume III, Administrative and Policy Requirements Submission, and

4) Volume IV, Draft OT Response

Summary of Full Proposal Requirements, including page limits.

Volume I, Technical and Management Proposal	
Volume Element	Page Limit
Cover Page	1
A. Executive Summary	20
B. Solution Fit with 1-CURE	
C. Technical Plan	
D. Management Plan	
E. Capabilities	
F. Commercialization Plan	
G. Task Description Document (TDD)	N/A, use provided template/format
H. Target Product Profiles	1 (maximum per TPP), use provided template/format
I. Schedule and Milestones	N/A use provided template/format
J. Data Management and Sharing Plan (DMSP)	N/A (estimated 2 pages)
K. References	N/A

Volume II, Cost Proposal	
Volume Element	Page Limit
Cover Page	1
A. Cost Proposal Spreadsheet(s) (including for subawards at any tier)	N/A, use provided template/format
B. Cost and Pricing Data Support	1
Volume III, Administrative and Policy Requirements Submission	
Volume Element	Page Limit
Cover Page	1
A. Team Member Identification	N/A, use provided template/format
B. OCI Affirmations and Disclosure	
C. National Security Disclosure and Associated Biographical Sketches	
D. Novelty of Proposed Work	
E. Intellectual Property (IP)	
F. Human Subjects Research	
G. Animal Subjects Research	
H. Representations Regarding Unpaid Delinquent Tax Liability or a Felony Conviction Under Any Federal Law	

The page limitation includes all figures, tables, and charts. All pages shall be formatted for printing on 8-1/2 by 11- inch paper. Margins must be 1-inch on all sides, font size should be no less than 11 point (Arial or non-serif font), and page numbers should be included at the bottom of each page.

Documents must be clearly labeled with the ISO number, proposer organization, and proposal title/proposal short title (in the header of each page). Use the following Title Format: "Volume I_XYZ Institution", "Volume II_XYZ Institution", "Volume II Supporting Documents", etc.

I. Volume I, Technical and Management Proposal

The maximum page count for Volume I is twenty (20) pages, with exclusions as noted in the table above. The cover page and sections G-J below are not included in the page count. However, for all sections, ARPA-H encourages conciseness to the maximum extent practicable. No other supporting materials may be submitted for review. Note that while the Government's evaluation of Volume I against criteria 1-3 is limited to the sections included in the page count limitations, it will be reviewing all sections. The other documents may be used to cross-check the proposal and will also inform feedback for proposers whose full proposals are determined most advantageous and selected for award negotiations.

Volume I should include the following components:

Cover Page

Innovative Solutions Summary	ARPA-H-SOL-26-147
Full Proposal Title	
Technical Approach (TA) Selection (Both TAs (TAs1-2))	
Prime Awardee/Entity Submitting the Proposal	
Unique Entity Identifier (UEI) of Prime Proposer/Awardee	
Type of Organization (including website URL if applicable)	**Choose all that apply:** LARGE BUSINESS, OTHER SMALL BUSINESS, OTHER EDUCATIONAL, OR OTHER NONPROFIT (including non-educational government entities) (NOTE: The Small Business Administration's (SBA) size standards determine whether or not a business qualifies as small.). Size standards may be found here: https://www.ecfr.gov/current/title-13/chapter-I/part-121#121.201
Date of Submission	

Technical Point of Contact (POC)	Salutation: Last Name: First Name Mailing Address: Telephone: Email:
Administrative POC	Salutation: Last Name: First Name: Mailing Address: Telephone: Email:
Other Team Members (subawardees, including consultants, if applicable)	Technical POC Name: Organization: Organization Type:
Total Funds Requested from ARPA-H, and the Amount of Cost Share (if any)	Total: $
Place(s) of Performance	

A. Executive Summary: Provide a synopsis of the proposed project including answers to the following questions:

1. What is the proposed work attempting to accomplish or solve?
2. How is it done today? What are the limitations of present approaches?
    - *What is the competitive landscape?*
3. What are the key technical challenges in your approach, and how do you plan to overcome these?
4. What is new about your approach? Why do you think you can be successful at this time?

- *Who will benefit from your solution?*
- *What health outcomes are you accelerating?*

5. Who cares? If you succeed, what difference will it make?
6. What are the risks? Identify any risks that may prevent you from reaching your objectives as well as any risks the program itself may present. Please also describe plans to mitigate these risks at a high level.
7. How much will your project cost?
8. What are your milestones to check for success consistent with 1-CURE metrics?

B. Solution Fit with 1-CURE: Clearly describe what the team is trying to achieve and the difference it will make (qualitatively and quantitatively) if successful relative to 1-CURE's vision and metrics. Provide an overview of the current and previous research and development (R&D) efforts related to the proposed research and identify any challenges associated with such efforts including any scientific or technical barriers encountered during such efforts or challenges in securing sources of funding as applicable. Describe the innovative aspects of the project in the context of existing capabilities and approaches clearly delineating the uniqueness and benefits of this project in the context of the state of the art, alternative approaches, and other projects from the past and present. Describe how the proposed project is revolutionary and how it significantly rises above the current state-of-the-art. Describe the deliverables associated with the proposed project as well as how the project will integrate into existing clinical workflows and successfully improve patient care.

C. Technical Plan: Outline and address technical challenges inherent in the approach and possible solutions for overcoming potential problems. This section should provide appropriate measurable milestones (quantitative if possible) at intermediate stages of the program to demonstrate progress, a plan for achieving the milestones, and a simple process flow diagram of the final system concept. The technical plan should demonstrate a deep understanding of the technical challenges and present a credible (even if risky) plan to achieve the program goal. Discuss mitigation of technical risk.

D. Management Plan: Provide a summary of the expertise of the team including any subawardees and key personnel who will be doing the work. A PI for the project must be identified, along with a description of the team's organization, including the breakdown by TA. All teams are required to identify a Project Manager/Integrator to serve as the primary POC to communicate with the ARPA-H PM team and OT/Agreements equivalent for each award instrument (e.g., Agreements Officer), coordinate the effort across the team, organize regular performer meetings or discussions, facilitate data sharing, and ensure timely completion of milestones and deliverables. Provide a clear description of the team's organization including an organization chart that includes as applicable: the programmatic relationship of team members; the unique capabilities of team members; the task responsibilities of team members and the teaming strategy among the team members; and key personnel with the amount of effort to be expended by each person during each year. Provide a detailed plan for coordination including explicit guidelines for interaction among collaborators/subawardees of the proposed effort. Include risk management

approaches. Describe any formal teaming agreements required to execute this program.

E. Capabilities: Describe organizational experience in relevant subject area(s), existing intellectual property, specialized facilities, and any Government-furnished materials or information. Describe any specialized facilities to be used as part of the project, the extent of access to these facilities, and any biological containment, biosafety, and certification requirements. Discuss any work in closely related research areas and previous accomplishments.

F. Commercialization Plan: Briefly outline your current understanding of your technologies target market and the size of that market. Identify 2-3 key competitive technologies operating in the market and their limitations. Outline ownership plans for existing and future IP across the team. Identify ideal partners (e.g., private industry, investors, etc.), that may be pursued to secure funding, manufacturing, and marketing following the award period. Plans shall include completion of the following table:

IP Category (Trade Secret, Patent, or Data)	USPTO# and Docket # and Application #	IP Title	Summary of Intended Use in Project	Asserted Rights for Government Related to the 1-CURE Program (Government Purpose, Unlimited, Limited.)	Name of Person or Entity Asserting Restrictions (who owns the IP?)	Funding Source (Federal Government, Other, or Mix)

G. Task Description Document (TDD): The TDD should provide a detailed task breakdown, citing specific tasks for each TA and their connection to the milestones and program metrics. Each Phase of the program should be separately defined. The TDD must not include proprietary information. Please note the technical proposal must stand on its own as the TDD cannot be used to supplement the pages (20) of the technical proposal.

For each task/subtask, provide:

- A detailed description of the approach to be taken to accomplish each defined task/subtask.

- Identification of the primary organization responsible for task execution (prime awardee, subawardee(s), by name).

- A measurable milestone, i.e., a deliverable, demonstration, or other event/activity that marks task completion. Include completion dates for all milestones. Include quantitative metrics.

- A definition of all deliverables (e.g., data, reports, software) to be provided to the Government in support of the proposed tasks/subtasks.

It is recommended that the TDD be developed so that each TA and phase of the program is separately defined.

H. Schedule and Milestones: Using the provided format, provide a detailed schedule showing tasks (task name, duration, work breakdown structure element as applicable, and performing organization), milestones, and the interrelationships among tasks. The task structure must be consistent with that in the TDD. Measurable milestones should be clearly articulated and defined in time relative to the start of the project.

I. Data Management and Sharing Plan (DMSP) (not to exceed 2 pages) The DMSP shall include all information included in the 6-Element plan format recommended by the National Institutes of Health (to view the 6-Element suggested format visit https://grants.nih.gov/grants/forms/data-management-and-sharing-plan-format-page). Note this plan will not be specifically evaluated against Criteria 1-3, but will likely be used to inform feedback for proposals who are selected for award negotiations.

J. References: Add a list with the cited literature.

II. Volume II, Cost Proposal

There is no maximum page count for Volume II. The Cost Proposal shall be comprised of the editable Excel Cost Proposal spreadsheet and associated supporting materials ideally provided in a single attachment (e.g., Adobe pdf) led by a Cover page as follows.

Cover Page

Innovative Solutions Summary	ARPA-H-SOL-26-147
Full Proposal Title	
Technical Approach (TA) Selection (Both TAs (TAs1-2))	
Prime Proposer/Awardee (entity submitting the proposal)	

Unique Entity Identifier (UEI) of Prime Proposer/Awardee	
Type of Organization (and website URL if applicable)	**Choose all that apply:** LARGE BUSINESS, OTHER SMALL BUSINESS, OTHER EDUCATIONAL, OR OTHER NONPROFIT (including non-educational government entities) (NOTE: The Small Business Administration's (SBA) size standards determine whether or not a business qualifies as small.). Size standards may be found here: https://www.ecfr.gov/current/title-13/chapter-I/part-121#121.201
Technical Point of Contact (POC)	Salutation: Last Name: First Name Mailing Address: Telephone: Email:
Administrative POC	Salutation: Last Name: First Name: Mailing Address: Telephone: Email:
Other Team Members (sub-performers, including consultants, if applicable, and type of organization for each)	Technical POC Name: Organization: Organization Type:
Total Proposed Cost (separated by base and option(s), if any)	
Name, Address and Telephone Number	

of the Proposer's Cognizant Auditor (as applicable)	
Date Proposal was Submitted	
Commercial and Government Entity (CAGE) Code	
Proposal Validity Period (Minimum of 120 days)	

A. Cost Proposal Spreadsheet: ARPA-H Standard Excel Cost Proposal Spreadsheet (See Attachment 2). All tabs and tables in the cost proposal spreadsheet should be developed in an editable format with calculation formulas intact to allow traceability of the cost proposal. The cost proposal spreadsheet must be used by the prime organization and all subawardees at any tier.
While the prime proposer is ultimately responsible for submission of all required documents, subawardee cost proposal spreadsheets may be submitted directly to the Government by the proposed subawardee via email to 1-CURE@ARPA-H.gov. Subawardee proposals should include Interdivisional Work Transfer Agreements or similar arrangements between the awardee and divisions within the same organization as the awardee.

B. Cost and Pricing Data Support: In addition to using the cost proposal spreadsheet, the cost proposal must include documentation to support the proposed price/budget. Supporting documentation must be in sufficient detail to substantiate the summary cost estimates and should include a description of the method used to estimate costs (e.g., vendor quotes). For indirect costs, provide the most current indirect cost agreement (e.g., Colleges and Universities Rate Agreement, Forward Pricing Agreement, Provisional Billing Rates, etc.).

Cost and pricing support may also facilitate a value analysis by the Government through information other than detailed cost and pricing data. Proposers are encouraged to include information related to value-added resources or conditions that are not immediately obvious in the Cost Proposal Spreadsheet or the traditional forms of cost and pricing support information like vendor quotes (e.g., intended intellectual property terms and conditions with perceived future value).

C. Salary Cap: None of the federal funds awarded under this program shall be used to pay the salary of an individual at a rate in excess of the rate identified by the Office of Personnel Management for Executive Level II positions. Nor may the proposed and later negotiated salaries escalate in excess of the Executive Level II rate for the purposes of invoicing for salary support.

Note: The salary rate limitation does not restrict the salary that an organization may pay an individual working under an award; it merely limits the portion of that salary that may be paid with federal funds.

III. Volume III, Administrative and Policy Requirements Submission

Cover Page

Innovative Solutions Summary	ARPA-H-SOL-26-147
Full Proposal Title	
Technical Approach (TA) Selection (Both TAs (TAs1-2))	
Prime Proposer/Awardee (entity submitting the proposal)	
Unique Entity Identifier (UEI) of Primer Proposer/Awardee	
Type of Organization (and website URL if applicable)	**Choose all that apply:** LARGE BUSINESS, OTHER SMALL BUSINESS, OTHER EDUCATIONAL, OR OTHER NONPROFIT (including non-educational government entities) (NOTE: The Small Business Administration's (SBA) size standards determine whether or not a business qualifies as small.). Size standards may be found here: https://www.ecfr.gov/current/title-13/chapter-I/part-121#121.201
Technical Point of Contact (POC)	Salutation: Last Name: First Name Mailing Address: Telephone: Email:
Administrative POC	Salutation: Last Name: First Name: Mailing Address: Telephone:

	Email:
Other Team Members (sub-performers, including consultants, if applicable, and type of organization for each)	Technical POC Name: Organization: Organization Type:
Total Proposed Cost (separated by base and option(s), if any)	
Name, Address and Telephone Number of the Proposer's Cognizant Auditor (as applicable)	
Date Proposal was Submitted	
Commercial and Government Entity (CAGE) Code	
Proposal Validity Period (Minimum of 120 days)	

A. Team Member Identification

[Using the table below as a template, provide a list of all entities as well as specific Key Personnel (PI, Project Manager, other investigators, etc.). Note: Consultants (e.g., 1099s) are considered subawardees and must be listed.]

Prime		
Individual Name:	**Organization:**	Non-U.S. Organization: ☐ Yes ☐ No Non-U.S. Individual: ☐ Yes ☐ No
Subawardees, including Consultants		
Individual Name:	**Organization:**	Non-U.S. Organization: ☐ Yes ☐ No Non-U.S. Individual: ☐ Yes ☐ No
Individual Name:	**Organization:**	Non-U.S. Organization: ☐ Yes ☐ No Non-U.S. Individual: ☐ Yes ☐ No

B. Organizational Conflict of Interest Affirmations and Disclosure

a. Are any of the proposed individual team members or their respective organizations (whether prime or subawardee) currently providing support services to ARPA-H?

☐ No ☐ Yes

b. Did any of the proposed individual team members or their respective organizations (whether prime or subawardee) provide support services to ARPA-H within one calendar year of this proposal submission?

☐ No ☐ Yes

[If you answered "Yes" to a. OR b., provide the following information for each applicable team member:

- The name of the ARPA-H office receiving the support
- The prime contract number
- Identification of proposed team member (subawardee) providing the support; and
- An OCI mitigation plan.]

a. Are there any other potential Organizational Conflicts of Interest involving any of the proposed individual team members *or* their respective organizations (whether prime or subawardee)?

☐ No ☐ Yes

[If yes, provide the following information for each applicable team member:

- Identification of applicable team member; and
- An OCI mitigation plan.]

C. National Security Disclosure

[In accordance with National Security Presidential Memorandum (NSPM)-33 and the associated White House Office of Science and Technology Policy Implementation Guidance, which requires certain individuals to disclose potential conflicts of interest (COI) and commitment (COC), individuals designated as PIs and other senior/key personnel (e.g., Project Manager) under prime and subawardees are required to complete the Common Form for Current and Pending (other) Support as well as the Common Form for Biographical Sketch[1]:]

a. For PIs and other senior/key personnel (in both prime and subawardees, including consultants), please list:

[1] Biographical Sketch:
(https://www.nsf.gov/bfa/dias/policy/researchprotection/commonform_biographicalsketch.pdf)

i. Other organizational affiliations and employment

ii. Other positions and appointments[2]

iii. Participation in any foreign government-sponsored talent recruitment program(s)[3]

iv. Current and pending support / "Other Support[4]." For researchers, "Other Support" includes all resources made available to a researcher in support of and/or related to all of their professional R&D efforts, including resources provided directly to the individual rather than through the research organization, and regardless of whether or not they have monetary value (e.g., even if the support received is only in-kind, such as office/laboratory space, equipment, supplies, or employees). This support includes:

1. all resources made available, or expected to be made available, to an individual in support of the individual's R&D efforts, regardless of (i) whether the source is foreign or domestic; (ii) whether the resource is made available through the entity applying for a research and development award or directly to the individual; or (iii) whether the resource has monetary value;

2. in-kind contributions requiring a commitment of time and directly supporting the individual's R&D efforts, such as the provision of office or laboratory space, equipment, supplies, employees, or students. This includes resource and/or financial support from all foreign and domestic entities, including but not limited to, (i) gifts provided with terms or conditions, (ii) financial support for laboratory personnel, and (iii) participation of student and visiting researchers supported by other sources of funding; and

3. Private equity, venture, or other capital financing.

b. For consultants, please additionally list the following (Note: current, pending, and other support not required):

i. Other organizational affiliations and employment

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[2] Both foreign and domestic, including affiliations with foreign entities and governments. This includes titled academic, professional, or institutional appointments whether or not remuneration is received, and whether full-time, part-time, or voluntary (including adjunct, visiting, or honorary).

[3] The term "foreign government-sponsored talent recruitment program" or "foreign government-sponsored talent recruitment programs" means an effort directly or indirectly organized, managed, or funded by a foreign government or institution to recruit S&T professionals or students (regardless of citizenship or national origin, and whether having a full-time or part-time position). Compensation could take many forms including cash, research funding, complimentary foreign travel, honorific titles, career advancement opportunities, promised future compensation, or other types of remuneration or consideration, including in-kind compensation.

[4] Other Support: https://www.nsf.gov/bfa/dias/policy/researchprotection/commonform_cps.pdf

ii. Other positions and appointments

iii. Participation in any foreign government-sponsored talent recruitment program(s)

D. Novelty of Proposed Work

Has the proposed work been submitted to any other Government solicitation?

☐ No ☐ Yes

If yes, provide the following information:

- Solicitation number _____
- Agency/Office _____
- Proposed work has already received funding or a positive funding decision.

  ☐ No ☐ Yes ☐ Decision pending

E. Intellectual Property (IP)

[Provide the following information, as applicable.
The IP table in this section should match the table provided with the Commercialization Plan in Volume I and should include any background IP as well as intended IP related to deliverables under the intended OT. The table should be completed appropriately for each type (e.g., background/foreground. Additionally, the Government will assume delivery of Data related to each patent based on the license rights asserted. Thus, data in the table below is intended to relate to items not associated with a patent.]

IP Category (Trade Secret, Patent, or Data)	USPTO# and Docket # and Application #	IP Title	Summary of Intended Use in Project	Asserted Rights for Government Related to the 1-CURE Program (Government Purpose, Unlimited, Limited.)	Name of Person or Entity Asserting Restrictions (who owns the IP?)	Funding Source (Federal Government, Other, or Mix)

a. Technical Data and Computer Software

Are you asserting any IP restrictions on any technical data or computer software that will be delivered to the Government?

☐ No ☐ Yes

[If yes, in the table above list all anticipated proprietary claims to results, prototypes, deliverables, or systems supporting and/or necessary for the use of the proposed research, results, prototypes and/or deliverables.

Provide a short summary for each item asserted with less than unlimited rights that describes the nature of the restriction and the intended use of the intellectual property in the conduct of the proposed research. Use the following format for these lists.]

b. Patents

Does the proposed effort involve using patented inventions that are owned by or assigned to the proposing organization or individual?

☐ No ☐ Yes

[If yes, in addition to completing the above table, provide documentation proving ownership or possession of appropriate licensing rights to all patented inventions to be used for the proposed project. If a patent application has been filed for an invention, but it includes proprietary information and is not publicly available, provide documentation that includes: the patent number, inventor name(s), assignee names (if any), filing date, filing date of any related provisional application, and summary of the patent title, with either: (1) a representation of invention ownership; or (2) proof of possession of appropriate licensing rights in the invention (i.e., an agreement from the owner of the patent granting license to the proposer).]

c. Ability to meet programmatic goals with IP/Patent implications

[Describe how IP assertions and/or patent implications impact the applicable ARPA-H programmatic goals.]

F. Human Subjects Research

Does the proposed work involve Human Subjects Research?

☐ No ☐ Yes

[If yes, provide the Federal Wide Assurance (FWA) number and the plan for Institutional Review Board (IRB) review and approval.]

G. Animal Subjects Research

Does the proposed work involve Animal Subjects Research?

☐ No ☐ Yes

[If yes, provide the Animal Welfare Assurance (AWA) number, the Vertebrate Animals Section (VAS), and the plan for Institutional Animal Care and Use Committee (IACUC) review and approval.]

H. Representations Regarding Unpaid Delinquent Tax Liability or a Felony Conviction under Any Federal Law

[Complete the following statements.]

The Proposer represents that –

a. It is ☐ is not ☐ a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability,

b. It is ☐ is not ☐ a corporation that was convicted of a felony criminal violation under a federal law within the preceding 24 months.

IV. Volume IV, Draft OT Response

An initial draft of the ARPA-H agreement for this effort has been made available on SAM.gov. The proposer must include a copy of the draft agreement with any redlines, comments, and/or proposed edits to ARPA-H as a part of the proposal package. If no redline, comments, and/or edits are proposed, the proposer must provide a written statement that there are no proposed changes. There is no page limit for this document.

The document must be in .pdf, .odx, .doc, or .docx format. Please use the following cover page for Volume IV.

<PRIME ORGANIZATION LOGO (OPTIONAL)>

VOLUME IV: DRAFT OT RESPONSE

ISO#	ARPA-H-SOL-26-147
Proposal Title	
Proposer Organization	
Technical Point of Contact (POC)	Name: Address: Telephone: Email:
Administrative POC	Name: Address: Telephone: Email:
Date of Proposal Submission	
Proposal Validity Period (minimum 120 days)	

APPENDIX C: TARGET PRODUCT PROFILE GUIDELINES

The Target Product Profiles (TPP) located below provides guidance on the acceptable product specifications for products created by the 1-CURE program.

1-CURE: Target Product Profile (TPP) Guidelines

Proposers must submit a TPP for each TA selected, detailing the technologies capabilities. The template below outlines 1-CURE's minimum expectations but should be expanded and tailored to fit the specific disease indications selected.

Product Name (example):	1-CURE Smart Radiotherapy System	
Product Description	Immunogenic smart radiotherapy biomaterial (SRBs) technology and Abscopal Treatment Planning System (ATPS) that integrate with FLASH radiotherapy (FLASH-RT) machines for all cancers.	
Critical Quality Attributes (CQA) of the Product	SRBs and ATPS that provide image-guidance capability and predictable abscopal effects for use with FLASH-RT machines.	
Lead Indications & Target Population	All indications where standard radiotherapy is used today plus efficacy against metastatic tumors, for all cancer patients.	
Storage and Handling	SRBs can be stored at room temperature or 4°C (to preserve immunoadjuvant activity). ATPS as software can be stored in the cloud or memory device and must meet all U.S. regulatory standards.	
Key Features	**Performance**	**Comparator**
Immunogenic Smart Radiotherapy Biomaterials (SRBs)	- Biocompatible smart biomaterials that can be used to target different tumors to provide image contrast for FLASH-RT. - Can enhance the immune response against tumors. - Designed to be delivered alongside or within the radiation field to boost an abscopal effect. - Smart release technology for controlled/sustained immunoadjuvant delivery.	No comparable systems available.
Abscopal Treatment Planning Software (ATPS)	- Advanced radiotherapy treatment planning system with clinician-friendly user interface for input of different treatment parameters such as radiotherapy/immunoadjuvant dose, field size, tumor type, tumor size, etc., and algorithms to plan/optimize treatment outcomes for high (>90%) abscopal response rates on different cancers. - Personalized treatment plan based on tumor characteristics and patient-specific factors. - Capable of continuous unsupervised deep learning and optimization to adapt to new treatment data generated during routine clinical	No comparable systems available.

	care.	
Clinical Benefits	- Can be used for curative treatment of both localized and metastatic tumors with substantial increase in survival. - Minimal side effects, e.g., CTCAE equivalent level < grade 3 toxicities.	No comparable systems available.
Regulatory Strategy	- Compliance with FDA regulations for combination therapies with immunoadjuvants and Software as a Medical Device (SaM). - Planning for expedited review pathways based on breakthrough therapy designation.	

1-CURE: Target Product Profile additional details for system components

Product Name (example):	1-CURE Smart Radiotherapy Biomaterials (SRBs)	
Product Description	Multifunctional immunogenic SRB technology	
Critical Quality Attributes (CQA) of the Product	Smart nanomaterial that can be used to target and provide image-contrast e.g., CT and/or MRI contrast for image-guidance during radiotherapy, make tumor immunogenic and sustainably deliver synergistic immunoadjuvants to boost the abscopal effect.	
Lead Indications & Target Population	All indications where standard radiotherapy is used today plus efficacy against metastatic tumors, for all cancer patients.	
Storage and Handling	SRBs can be stored at room temperature or 4°C (to preserve immunoadjuvant activity).	
Key Features	**Performance**	**Comparator**
Immunogenic Smart Radiotherapy Biomaterials (SRBs)	- Multifunctional biocompatible biodegradable smart biomaterials that can be used to target different tumors to provide image contrast to guide radiotherapy. - Incorporates immunoadjuvant payload to boost the abscopal effect during radiotherapy. - Designed to be delivered by intratumoral injection, or systemic administration based on tumor location to boost an abscopal effect. - Smart release technology for controlled/sustained immunoadjuvant delivery. - Versatility: Effective across cancer types. - Scalable synthesis/GMP manufacturing nanoparticles with modular payload integrations.	Fiducial markers, which can only provide image-contrast for certain cancers but cannot boost the abscopal effect.
Clinical Benefits	- Can be used for curative treatment of both localized and metastatic tumors with substantial increase in survival. - Minimal side effects e.g., CTCAE equivalent level < grade 3 toxicities. - Reduced recurrence rates. - Can be effective for all cancers.	Immunotherapies which are not effective for all cancers.
Regulatory Strategy	- Compliance with FDA regulations for combination biologic-device products. - Planning for expedited review pathways based on breakthrough therapy designation.	
Economic Value	- Cost-effectiveness in treatment time, costs and improved patient outcomes, with reduced need for high systemic doses of immunoadjuvant drugs or repeated treatments. - Potential for reimbursement models that reflect the innovative nature of the treatment.	Up to 100x reduced cost compared to current immunotherapies.

1-CURE: Target Product Profile additional details for system components

Product Name (example):	1-CURE Abscopal Treatment Planning System (ATPS)	
Product Description	Radiotherapy Treatment Planning software with user interface for planning reliable abscopal effect for all cancers.	
Critical Quality Attributes (CQA) of the Product	Treatment Planning Algorithm to calculate optimal treatment parameters (doses, field size, tumor type, etc.) that can enable effective abscopal response rates >90%.	
Lead Indications & Target Population	All indications where standard radiotherapy is used today plus efficacy against metastatic tumors, for all cancer patients.	
Storage and Handling	ATPS as software can be stored in the cloud or memory device and must meet all relevant U.S. regulatory standards.	
Key Features	**Performance**	**Comparator**
Abscopal Treatment Planning System	- Advanced radiotherapy treatment planning system with clinician-friendly user interface for input of different treatment parameters such as radiotherapy/immunoadjuvant dose, field size, tumor type, tumor size, etc. and algorithms to plan optimize treatment outcomes for high (>90%) abscopal response rates based for different cancers. - Personalized treatment plan based on tumor characteristics and patient-specific factors. - Real-time imaging monitoring of immunogenic SRBs and adjustment capabilities. - May allow fusion of radiologic imaging (CT/MRI/PET, etc.). - May include AI-driven continuous unsupervised learning/optimization capabilities to adapt to new treatment data generated from routine clinical care.	No comparable systems available.
Clinical Benefits	- Can be used for radiotherapy planning of curative treatment of both localized and metastatic tumors with substantial increase in survival. - Planning to minimize side effects e.g., CTCAE equivalent level < grade 3 toxicities.	No comparable systems available.
Regulatory Strategy	- Compliance with FDA regulations for medical device software. - Planning for expedited review pathways based on breakthrough therapy designation.	
Economic Value	- Cost-savings with higher likelihood of effectiveness and durable responses, reducing recurrence and retreatment rates. - Potential for reimbursement models that reflect the innovative nature of the treatment.	