



# THE EYE CANCER FOUNDATION

SAVING SIGHT SAVING LIFE

## Executive Summary

### *Eye Cancer Machine-Learning / Direct-Learning Research Grant*

#### *The Eye Cancer Foundation Background:*

The Eye Cancer Foundation was founded in 1998 to support research, education, and social needs of eye cancer patients, their families, and eye cancer specialists around the world. We have developed and encouraged *international, multi-center research* on new diagnostic treatments; we have provided much-needed *support services* for patients and their families; and have indirectly saved lives through our *international fellowship program*. *The Eye Cancer Foundation together with our affiliate centers have trained new eye cancer specialists to return to underserved and unserved countries. They have been tasked to treat eye cancer and save the lives and eyes of children with retinoblastoma. Working to develop such eye cancer care networks, and machine-learning AI, will allow us to fight the care inequities around the world.*

#### *What is machine learning?*

**Machine learning is a type of artificial intelligence that allows software applications to help doctors diagnose and treat eye cancer patients. Machine learning uses historical data (e.g., clinical images with physician descriptors and interpretations) to screen for diagnostic findings, thereby assisting with new patient diagnoses and treatment alternatives.**

In ophthalmic oncology we often rely on, images and historical data to differentiate between eye cancers, determine malignancy, monitor for growth, and select appropriate treatments. Doctors often say, “I have seen a case just like this” my experience says, “it is the kind of tumor that is best treated by this method.” What if that doctor, or a team of doctors could share their thinking teaching a machine how they came to a certain diagnosis or treatment decision. Then multiply that process by thousands of cases to make sure all the variations on the theme are included.

For example, machine learning offers the promise of being able to more accurately differentiate between a small melanoma from a choroidal nevus. It could automatically stage retinoblastomas, thus improving novel research and clinical trials. Indeed, there are many potential applications of machine learning. But where do we begin?



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## **Proposed Solution:**

The Eye Cancer Foundation has submitted a request for a proposal to initiate an ophthalmic oncology machine learning project. We are looking for applicants with experience in machine learning to coordinate a multicenter, international effort. The Eye Cancer Foundation will help recruit clinical centers so that “real-world” data will represent “real world” populations as to make the machine learning-based software widely applicable.

## **Evaluation Criteria:**

- Background and experience in performing and building robust strategy
- Able to define data quality standards
- Availability of own resources and how engagement will be sourced
- Track record of innovation and ability to drive continuous improvement
- Best financial value

## **Application/RFP**

This request for proposal is issued to provide the selection process for individuals or entities that can construct a system capable of interpreting the difference between different eye cancers or for tumor staging. Proposals will be accepted from:

1. Individuals operating as independent contractors
2. Non-profit, non-government entities
3. For-profit, private entities
4. Preference given to proposer’s familiar eye cancers and building an AI systems.

Proposers should state their qualifications, understanding/experience relating to the project and offer their methodology for meeting the criteria. The finalists from the RFP Phase will proceed to the Interview Phase and be requested to participate in in-person or Zoom interviews. The Eye Cancer Foundation will cover reasonable travel expenses.



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**Funding/Stipend:** The Eye Cancer Foundation is willing to support \$50,000, \$100,000 or \$250,000 depending on the experience of the investigators and scope of the project. To qualify for funding, a detailed project budget which includes milestones is required. Funding will be dispensed based on milestones achieved.

## **Measures of Success:**

- Achieving time-dated milestones
- Bi-weekly ZOOM or in-person updates on progress and concerns.
- Ease of clinical application
- Patents and trademarks

## **Applicants should submit the following:**

1. Timetable for construction, implementation, and clinical evaluation
2. Qualifications of key personnel
3. Contact person
4. How results will be evaluated or measured
5. Brief history of past accomplishments, projects in the field
6. Examples of prior work
7. Additional materials and supporting documentation

**Initial Approach:** Contact The Eye Cancer Foundation to submit your application.

**Location:** Proximity to New York City would be an advantage, but all world-wide locations acceptable.

## **Proposal Submission & Questions:**

Proposals should be submitted via physical mail to:

**The Eye Cancer Foundation**  
**115 E 61<sup>st</sup> Street, Suite 5B**  
**New York, NY 10065**  
**(212) 832-8170; [deandre@eyecancercure.com](mailto:deandre@eyecancercure.com)**



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Responses to this RFP are due by September 31<sup>st</sup> by 5pm EST. Late submittals will not be reviewed.

## *Questions:*

Any questions should be submitted via phone/email to the above address. Proposers may not contact other executives, managers, or employees of The Eye Cancer Foundation without permission of the manager of the RFP process.

## **Selection Schedule: (TBD!!!)**

**RFP Released – September 12, 2022**

**Proposal Due – October 31, 2022**

**Review – November 1, 2022**

**Notice of Selection – November 7, 2022**

**Complete Contract Negotiations - November 14, 2022**

**Contract Execution - November 14, 2022**