The Early K99:
A Funding Mechanism Designed for the Career Paths of Data and Cancer Control Scientists
(RFA-CA-21-060, RFA-CA-21-061 and RFA-CA-21-062)

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Cancer Training Branch, Center for Cancer Training

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TRAINING

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The NCI Pathway to Independence Award for Outstanding Early Stage Postdoctoral Researchers (K99/R00)
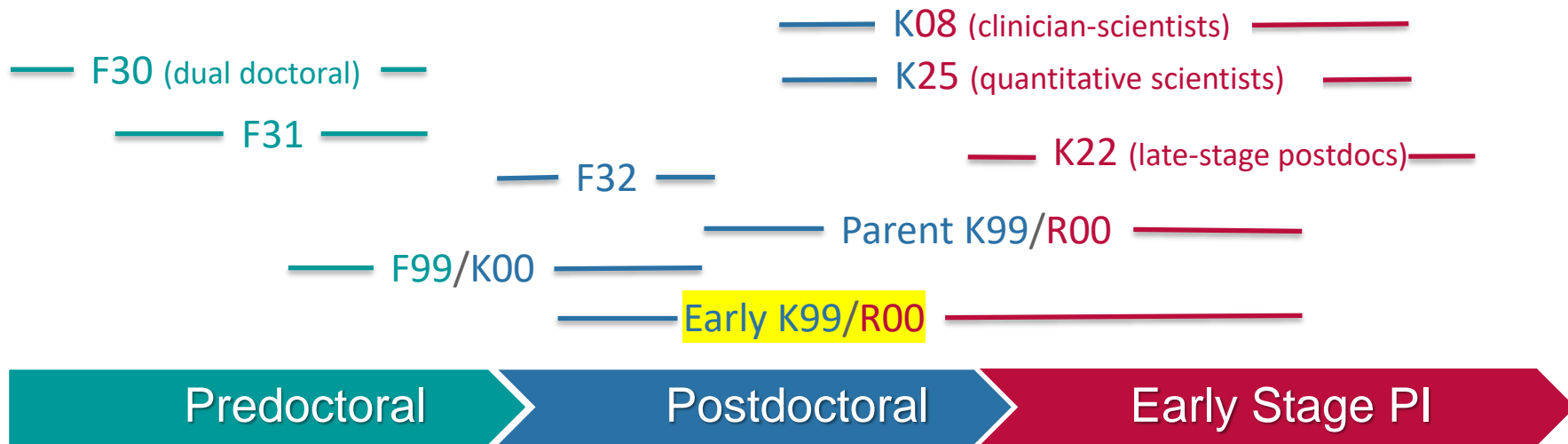
The NCI Pathway to Independence Award for Outstanding Early Stage Postdoctoral Researchers (K99/R00) supports outstanding postdoctoral researchers who do not require extended periods of mentored research training beyond their doctoral degrees before transitioning to research independence. This "Early K99" award will help these researchers to complete needed mentored training and transition in a timely manner to independent, tenure-track or equivalent faculty positions. The "Early K99" program is designed to suit the career paths of postdoctoral fellows pursuing careers in Data Science and Cancer Control Science, who typically require only a short period of mentored research training beyond their doctoral degrees before obtaining independent faculty positions.

Each eligible institution (defined as having a unique DUNS number or NIH IPF number) may submit up to a combined total of three applications (**one in Data Science, one in Cancer Control Science, and one in Other Sciences as defined below**) to any companion RFA or any combination of companion RFAs RFA-CA-21-060

Join the Pre-Application Webinar for Early K99/R00 Award on December 14, 2021, 2:00-3:00 PM ET

GOOGLE: early K99 NCI

NCI CTB: Individual Fellowships and Career Development Awards

K08 (clinician-scientists)

F30 (dual doctoral)

K25 (quantitative scientists)

F31

K22 (late-stage postdocs)

F32

Parent K99/R00

F99/K00

Early K99/R00

| Predoctoral | Postdoctoral | Early Stage PI |

- K08, K25 - Highly specialized; K08 applicants on average 8 years post-degree
- K22 - Late-stage postdocs (2-8 years of postdoc); Most applicants in 7th year of postdoc
- Parent K99/R00 – up to 4 years of postdoc; Most applicants in 3-4th year of postdoc
- F32 – not as successful as K-grants for establishing an independent research career

Early K99/R00 – Rationale for a New Transition Award for Early-Stage Postdocs

A significant number of outstanding early-stage postdocs, mostly from **data sciences**, **population** and **behavioral** sciences, get independent research positions after 1-2 years of postdoctoral training

- Usually, they are not competitive for K awards that typically target those with 4-8 years of research experience (e.g., parent K99/R00, K08, K22) and a substantial publication record

- They are, therefore, disadvantaged compared with peers who had K transition awards

  - No protected time from teaching

  - No assurance of a competitive startup package

  - **Takes longer on average to get first R01 (~6 yrs) than parent K99/R00 awardees (~3 yrs)**

Early K99/R00: The NCI Pathway to Independence Award for Outstanding Early Stage Postdoctoral Researchers

**Objective:** _**facilitate a timely transition of outstanding early-stage postdocs to independence**_

- **Two-stage award:** **K99 phase** – up to 2 years of mentored training (1 year minimum);

  R00 phase – up to 3 years of support as an independent scientist

- **K99 to R00 transition is not automatic - tenure-track assistant professor position (or equivalent) must be offered and accepted**

- **The award provides:**

  - **K99 phase:** Salary up to $100,000/year + fringe benefits; R&D funds up to $30K/year

  - **R00 phase:** up to $249,000/year in total costs

Early K99/R00 – Eligibility

- Postdocs with **less than 2 years of postdoctoral <u>research</u> experience** (as of submission due date); postdocs in **data science** or **cancer control science** especially encouraged to apply

  - Postgraduate clinical training not counted against the 2-year cap

  - Extension of one year for childbirth may be approved (<u>contact NCI program director</u>)

  - Extension for parental, medical, military, or other well-justified leave of generally less than 12 months may be approved (<u>contact NCI program director</u>)

- **Candidate must be nominated by an institution. Institution may nominate up to 3 candidates, one in data science, one in cancer control science, and one in other sciences**

- U.S. citizenship or permanent residency not required - **Individuals on visas are eligible to apply**

- No resubmissions allowed but may apply again next year if still eligible and re-nominated

Institutions limited to Three Applications per Due Date

EACH application MUST be in a different scientific area, as defined here:

(A) **Data Science:** an interdisciplinary field of inquiry in which quantitative and analytical approaches, processes, and systems are both developed and used to extract knowledge and insights from increasingly large and/or complex sets of data. This includes cancer-focused data integration and visualization, systems biology, artificial intelligence, machine learning, informatics, genomics, precision oncology, and developing analytics for epidemiological or biostatistical studies.

(B) **Cancer Control Science:** basic and applied research in the behavioral, social, and population sciences to create or enhance interventions that, independently or in combination with biomedical approaches, reduce cancer risk, incidence, morbidity, and mortality, and improve quality of life. This includes research in epidemiology, behavioral sciences, health services, surveillance, cancer survivorship, and healthcare policy.

(C) **Other Sciences:** all scientific fields supported by the NCI that are not included in (A) or (B). Applicants proposing research in (C) "Other Sciences" may apply if it is reasonable to expect them to transition to independence with an abbreviated period of mentored research training beyond their original doctoral degrees.

Early K99: Special Instructions - Nomination Letter

- **Institutional Nomination Letter is required. Applications without Nomination Letters will be withdrawn**

- Must be written and signed by the head of the candidate's department or program

- Submitted under "Other Attachments"

- The letter is limited to **2 pages**

- The letter must include the following information:

  - **Must identify one of the three scientific areas**: (A) Data Science, (B) Cancer Control Science or (C) Other Sciences

  - Must affirm that the candidate is the institution's **sole nominee in the specified scientific area for the specified application due date**

  - Should describe the main factors that identify the nominee as likely to obtain a tenure-track or equivalent research position at an early career stage

  - Should describe the institutional commitment to supporting the candidate's search for a tenure-track or equivalent position
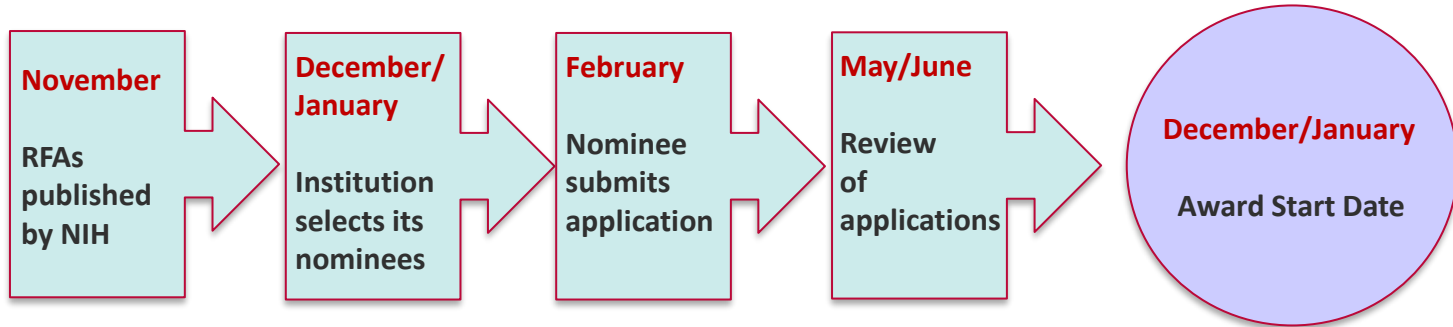
Early K99/R00: Distinct Features affecting review of the early K99/R00

- Publications from postdoctoral training are **not** required

- Preliminary data are **not** required. Reviewers evaluate creativity and potential of research to launch and sustain a career rather than extensive preliminary data

- Applications reviewed by an "early K99" Special Emphasis Panel – they don't compete with "regular K99" (parent K99) applications

- One receipt per year, no resubmissions allowed

- This is *a pilot program* – up to 16 awards/year

- This pilot program is expected to continue for the next 2 years

Early K99/R00 RFAs have been re-issued

Submission due date: February 28, 2022

RFA-CA-21-060 (Independent Clinical Trial NOT Allowed)   NOT-CA-22-015

RFA-CA-21-061 (Independent Clinical Trial Required)   NOT-CA-22-016

RFA-CA-21-062 (BESH)   NOT-CA-22-017

November

RFAs published by NIH

→

December/January

Institution selects its nominees

→

February

Nominee submits application

→

May/June

Review of applications

→

December/January

Award Start Date

The Early K99/R00 Timeline

Early K99/R00: Submitted Applications, Awards and Success Rates
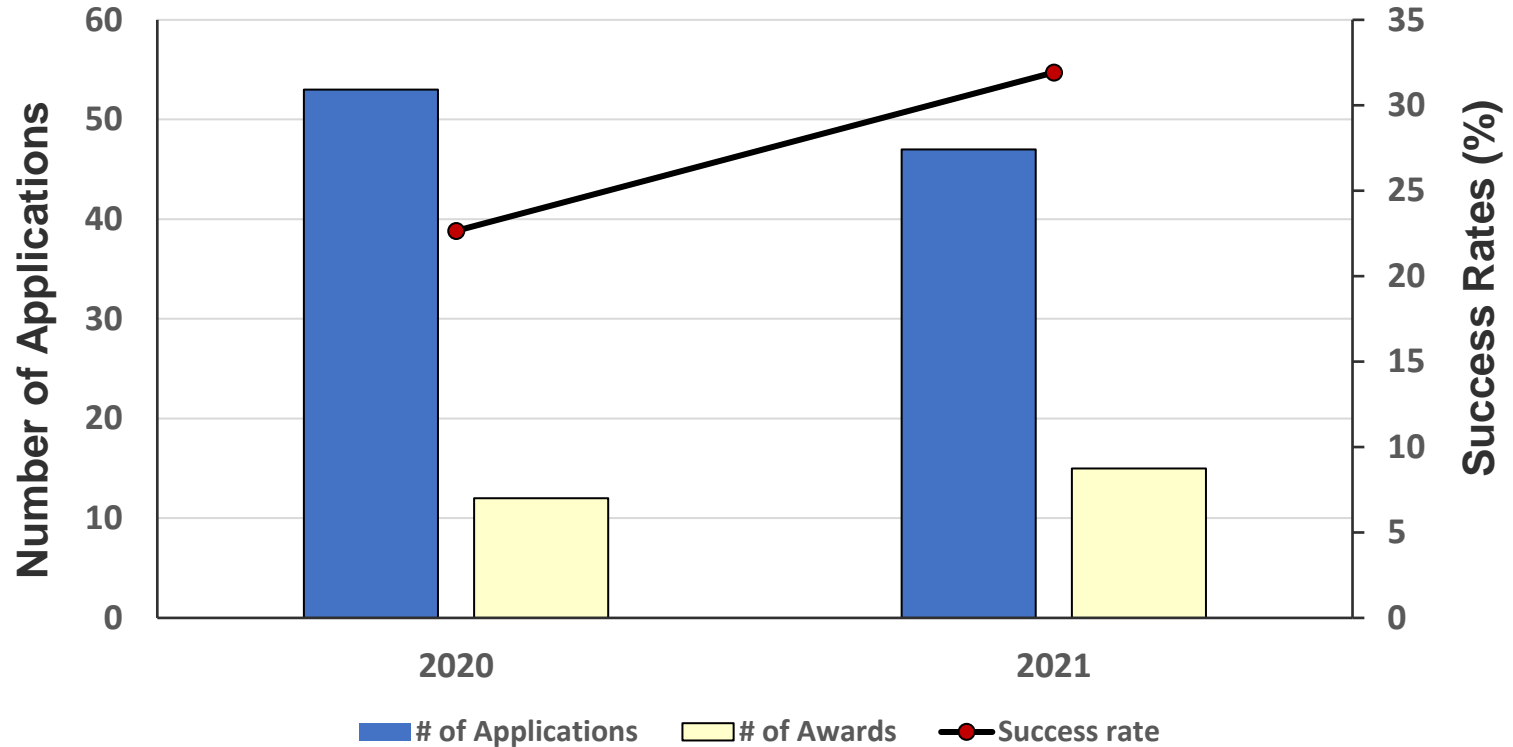
First 2 years: <Success Rate> = 27%   Number Awardees = 27

Application Sections and Tips for Writing the Early K99 Application

Application Sections	Page Limits
Candidate's Background	12
Career Goals and Objectives	
Candidate's Plan for Career Development/Training Activities	
Research Strategy	
Specific Aims	1
Training in the Responsible Conduct of Research	1
Plans and Statements of Mentor and Co-mentor(s)	6
Letters of Support from Collaborators, Contributors, etc.	6
Description of Institutional Environment	1
Institutional Commitment	1
Biographical sketch	5
Nomination Letter	**2**

Reference Letters

- Required part of the application, but submitted separately; applications without adequate number of reference letters considered incomplete and will be withdrawn

- 3 – 5 letters of reference are required

- Referees submit reference letters **directly** to NIH via eRA Commons, applicants do not see them

- Should be provided by individuals **not directly involved in the application**, but who are familiar with the applicant's qualifications, training, etc.

- Letters from mentors, co-mentors, collaborators, etc. **do not count**

- Include a list of referees (name, departmental affiliation, and institution) in the cover letter of the application

If you have any issues with Reference Letters: Contact the eRA Service Desk

Review criteria: **Candidate**

(what reviewers are looking for)

Application section(s)

(where reviewers are looking for it)

- **Potential to become an independent investigator** – Will the candidate be competitive for an independent Assistant Professor position in 1-2 years?

- Research productivity, awards

- Strong letters of support

- Letters of reference

- Prior training

- Biosketch

- Candidate's Background

- Letters of Support

- Letters of Reference

Review criteria: CDP

(what reviewers are looking for)

Application section(s)

(where reviewers are looking for it)

- Justified?

- Relevant to the proposed research/career path?

- Timeline with milestones of activities, transition to independence

- Advisory committee
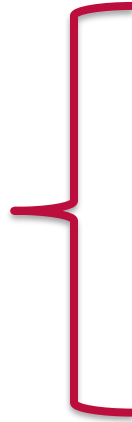
- Career Goals and Objectives

- Candidate's Plan for Career Development/Training Activities

- Plans and Statements of Mentor and Co-mentor(s)

Review criteria: **Research Plan**

(what reviewers are looking for)

- Strong rationale

- Innovative, hypothesis-driven mechanistic research

- Pitfalls and alternative solutions

- Clear outline K99 vs. R00

- Could it form a strong basis for an independent career, e.g., future R01?
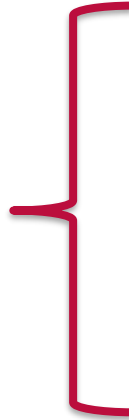
Application section(s)

(where reviewers are looking for it)

- Specific Aims

- Research Strategy

Review criteria: Mentor(s)
(what reviewers are looking for)

Application section(s)
(where reviewers are looking for it)

- Expertise

- Mentoring track record

- Funding

- **Clear statement that the project is portable with the candidate**

- Clear outline of their involvement in the project and career development

- Plans and Statements of Mentor and Co-mentor(s)

- Letters of Support from Collaborator(s), Consultant(s), etc.

Review criteria: Environment
(what reviewers are looking for)

Application section(s)
(where reviewers are looking for it)

- Min. 75% effort assurance
- Clearly stated support for the candidate and mentor(s)
- Availability of resources for research and training

- Description of Institutional Environment
- Institutional Commitment to Candidate's Research Career Development
- Facilities and Other Resources

Tips for the Mentor and Candidate Sections

- **The primary mentor:** strong track record of funding and mentoring similar young investigators

- **The mentoring team:** encompass **all the areas of expertise** needed for you to achieve your research and career development goals

- **Plans for career development:**

  - Your plans and mentor's plans should be in sync and personalized

  - **Mentor should clearly state that the project is yours when you move to independence**

  - Coursework, seminars, workshops, conferences, meeting with mentors

  - Describe roles of mentors, collaborators in training and research

  - State whose ideas are in the application

  - Describe future plans for publications and grant applications

  - Show relationship between the specific aims and other activities

Tips for Writing the Early K99 Research Strategy

- **Develop a research plan feasible to carry out in 5 years**

- Aims should span both K99 and R00 phases. Identify which aims will be done in the K99 phase vs. R00 phase

- Preliminary data not required – may be based on literature to show feasibility

- Address Significance, Innovation, and Approach, including Rigor & Reproducibility

- Reviewers typically like hypothesis-driven innovative research

- Good foundation to establish independence – can lead to R01

General Tips

- **Read the Funding Opportunity Announcement**

- **Follow the instructions in the Application Guide**

  - Include everything that is requested and nothing that is not

- **Apply before the due date and take advantage of the 2-day application viewing window**

- **If you have any questions before submitting your K99/R00 application contact:**

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      sradaev@mail.nih.gov

www.cancer.gov   www.cancer.gov/espanol