# The NCI Pathway to Independence Award for Early-Stage Postdoctoral Researchers (K99/R00)

*PAR-23-286, PAR-23-287, PAR-23-288*

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# The NCI Pathway to Independence Award for Early-Stage Postdoctoral Researchers (K99/R00)

**The NCI Pathway to Independence Award for Early-Stage Postdoctoral Researchers (K99/R00)** supports 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 (R00). The "Early K99" program is designed to suit the career paths of postdoctoral fellows pursuing careers in Cancer Data Science, Cancer Control Science and Cancer Prevention, who typically require only a short period of mentored research training beyond their doctoral degrees before obtaining independent faculty positions.

***Note:*** *The details on this page are for informational purposes only. Please read and follow all requirements and instructions in the notice of funding opportunity (NOFO) and the Table of IC-Specific Information linked therein before applying for an award. Application review information is described in the funding opportunity. If you have any questions before submitting your application, please contact the relevant NCI program staff listed at the end of this page.*

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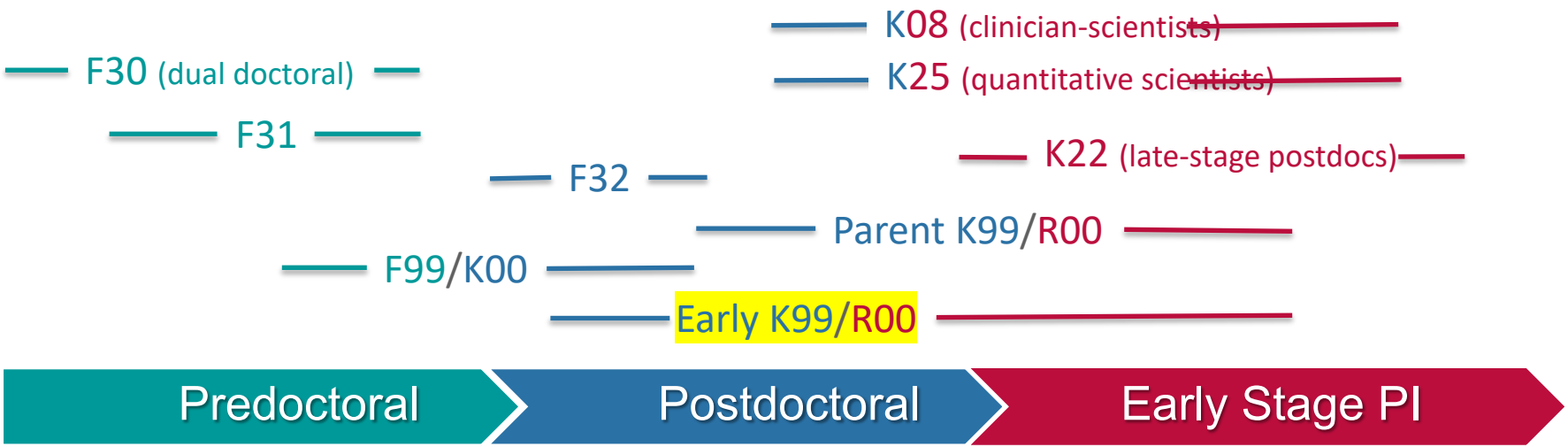
Scan QR code for website or Google "NCI early K99": go.nih.gov/NajtZfO

# NCI CTB: Individual Fellowships and Career Development Awards




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

# Rationale for a New Transition Award for Early-Stage Postdocs

- A significant number of postdocs from data, population, and behavioral sciences obtain tenure-track positions with **< 2 years** postdoc experience
- Early-stage postdocs are not competitive for other available NCI K awards (e.g., parent K99/R00, K22, etc. ), which target those with 3-8 years of research experience and a substantial publication record
- They can therefore be disadvantaged compared with peers who had K transition awards (*e.g.*, parent K99/R00)
  - No protected time from teaching; less competitive startup packages
  - Take longer to get first R01 (~6 years) than parent K99/R00 awardees (~3 years)
- ***Pilot early K99/R00 RFA for early-stage postdocs 2019-2023***
- ***Current new early K99/R00 PARs published in 2023***

# The NCI Pathway to Independence Award for Early-Stage Postdoctoral Researchers aka. the early K99/R00

*PAR-23-286, PAR-23-287, PAR-23-288*

**Objective:** *facilitate a timely transition of postdoctoral fellows from their mentored, postdoctoral research positions to independent tenure-track (or equivalent) faculty positions*

- *This program is designed for postdoctoral fellows with research and/or clinical doctoral degrees who do not require extended periods of mentored research training beyond their original doctoral degrees before transitioning to research independence, which is common for those working in cancer control, cancer prevention and cancer data sciences. Therefore, researchers from these disciplines are particularly encouraged to work with their institutions to apply.*

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

- **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 research experience** (as of submission due date)
  - Postgraduate clinical training not counted against the 2-year cap
  - Extension of one year for childbirth may be approved (contact NCI program director)
  - Extension for parental, medical, military, or other well-justified leave of generally less than 12 months may be approved (contact NCI program director)
- **Candidate must be nominated by applicant institution. Institution may nominate up to 4 candidates per submission due date, one in cancer data science, one in cancer control science, one in cancer prevention and one in other cancer research**
- U.S. citizenship or permanent residency not required - **Individuals on U.S. visas are eligible to apply and receive the award**
- Three submission/resubmission due dates per year. Resubmissions allowed but the candidate must be eligible and re-nominated by the applicant institution

# Institutions limited to Four Applications per Due Date

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

**(A)** **Cancer 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)** **Molecular/Precision Cancer Prevention:** basic research to understand mechanisms of cancer formation, development and progression of cancer precursors, and to translate basic biological knowledge into novel human interventions and human-centered adaption of current interventions with the potential to reduce cancer risk, incidence, and mortality, and improve quality of life. This includes but is not limited to research in molecular and systems biology, diagnostics, vaccine and drug development, pharmacology, and biomedical engineering.

**(D)** **Other Cancer Research:** all scientific fields supported by the NCI that are not included in (A), (B) or (C). Applicants proposing research in (D) "Other Cancer Research" may apply only if it is reasonable to expect their candidates 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:**
  - *Identify one of the four scientific areas* as the candidate's proposed research area of expertise
  - Affirm that *the candidate is the institution's sole nominee in this scientific area for the specified application due date*
  - Affirm the candidate's near-readiness to transition to independence and describe the main factors that identify the nominee as likely to obtain a tenure-track or equivalent research position at an early career stage (i.e., in 1-2 years)

# 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 in review
- Three submission due dates per year
- Resubmissions allowed, but the candidate must be eligible and re-nominated by the applicant institution
- This program is expected to continue for the next 3 years

# Application Sections and Tips for Writing the Early K99 Application

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# Major Components of early K99 Application

| Section of Application | Page Limits |
|---|---|
| Specific Aims | 1 |
| Candidate Information and Goals for Career Development and **Research Strategy** | 12 combined |
| Training in the Responsible Conduct of Research | 1 |
| Plans and Statements of Mentors and Co-Mentor(s) | 6 |
| Letters of Support from Collaborators, Contributors, and Consultants | 6 |
| Description of Institutional Environment | 1 |
| Institutional Commitment to Candidate's Research Career Development | 1 |
| Biographical Sketch (use non-fellowship template) | 5 |
| **Nomination Letter** | **2** |

# Reference Letters

- Required part of the application, but they are 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.
- Reference 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

# K-grant application Review Criteria

- **Candidate**
- **Career Development Plan/Career Goals and Objectives**
- **Research Plan**
- **Mentor(s), Co-Mentor(s), Consultant(s), Collaborator(s)**
- **Environment & Institutional Commitment to the Candidate**

Review criterion

## Candidate

- Potential to become an independent investigator – Will the candidate be competitive for an independent Assistant Professor position in 1-2 years?
- Research productivity, awards
- Background, prior training
- Strong letters of support

## Application Section(s)

- Biosketch (one of the most scrutinized parts of the application)
- Candidate's Background
- Career Goals and Objectives
- Letters of Support
- Letters of Reference

Review criterion

## Career Development Plan/ Career Goals and Objectives

- Justified?
- Relevant to the proposed research/career path?
- Specific training, workshops, etc.
- Professional development (grant writing, lab management, etc.)
- Timeline with milestones of activities, transition to independence
- Advisory committee

## Application Section(s)

- Career Goals and Objectives
- Candidate's Plan for Career Development/Training Activities
- Plans and Statements of Mentor and Co-mentor(s)

Review criterion

## Research Plan

- Strong rationale
- Innovative, hypothesis-driven mechanistic research
- Aims not interdependent
- Pitfalls and alternative solutions
- Clear outline of K99 vs. R00
- Could it form a strong basis for an independent career, eventual R01?

## Application Section(s)

- Specific Aims
- Research Strategy

Remember to address:

- Robust, reproducible, and unbiased approach
- Address biological variables (sex, age)
- Include Data Management and Sharing plan

Review criterion

## Mentor(s), Co-mentor(s), Consultant(s), Collaborator(s)

- All necessary expertise included
- Mentoring track record
- Funding
- *Explicit statement that the project is yours when you become independent*
- Clear outline of their involvement in the project and career development

## Application Section(s)

- Plans and Statements of Mentor and Co-mentor(s)
- Letters of Support from Collaborator(s), Consultant(s), etc.

Review criterion

## Environment & Institutional Commitment to the Candidate

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

## Application Section(s)

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

# Characteristics of a strong K application

- **Candidate:** **publications**, awards, prior training, letters of support, letters of reference
- **Career Development Plan:** relevant to the proposed research and future career; well-justified need for mentored training; specific/detailed (courses, seminars, workshops, conferences, milestones, etc.)
- **Research plan** (*Aims span both K99 and R00 Phases*): innovative, important, hypothesis-driven, strong rationale, high likelihood to significantly advance the field, could form a strong basis for future R01s, experimental details provided, statistical considerations, pitfalls and alternatives addressed
- **Mentor(s), Collaborator(s), etc.:** established investigators with strong mentoring and funding track records, have **all required expertise and experience**; mentors' roles clearly described; mentor's training plan in sync with career development plan; **primary mentor should clearly state that the project is yours when you move to independence**
- **Institutional Support:** institutional support for the candidate and mentor(s) clearly stated; availability of resources, assurance of min. 75% effort

# Pre-application stage: best practices

- Read the NOFO
- Read K-Career Development Instructions (SF424 (R&R) - Version H)
- How to Apply – NIH Application Guide
- If you have any questions about eligibility or other pre-application questions – contact NCI program official
  - Email is the best way of communication with NIH program official
  - Attach your biosketch and a draft of your specific aims

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# Thank You!

cancer.gov/training

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