

NCI Predoc to Postdoc Transition Award (F99/K00)

RFA-CA-17-014

Michele McGuirl, Ph.D.

m McGuirlma@mail.nih.gov

Center for Cancer Training

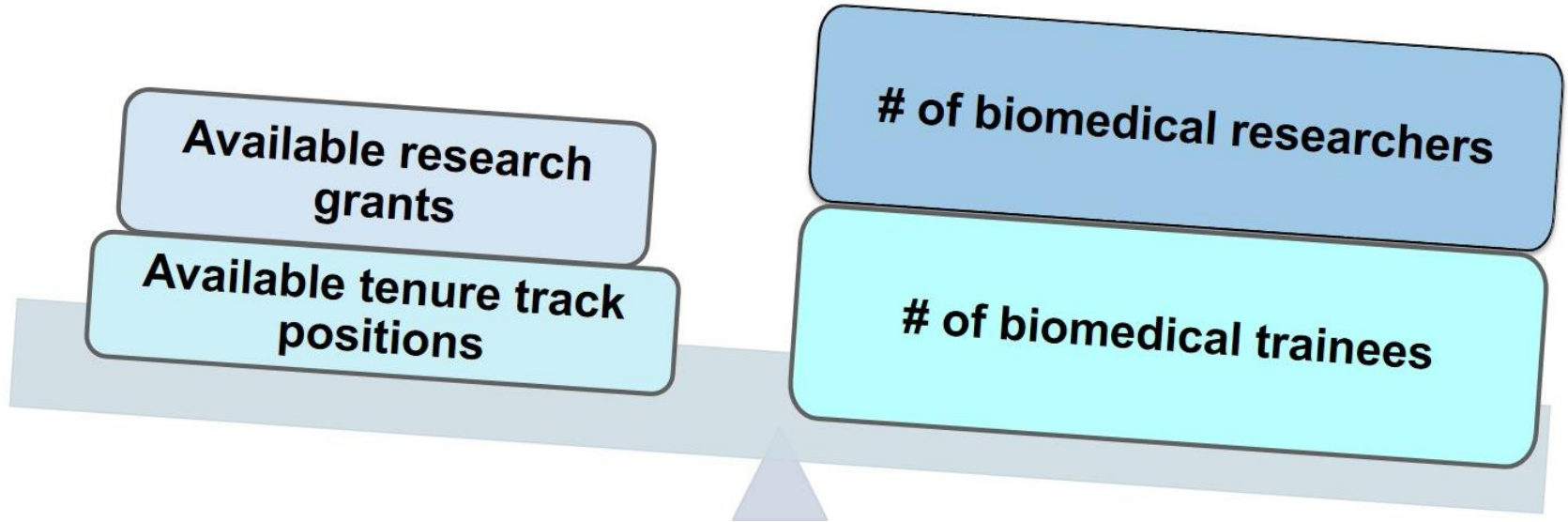
Notes for Slide on page 1

Welcome to the F99/K00 Informational Webinar. My name is Michele McGuirl and I am the Program Director for the F99/K00 mechanism. I will present an overview of the program, then use the majority of the 2 hours to answer your questions. The goal is that, at the end of the webinar, you will have a clear idea on what is needed to put together an application.

We will have a second webinar on January 20th for those who have been selected as nominees and want advice on writing their applications.

Why Offer the F99/K00 Program?

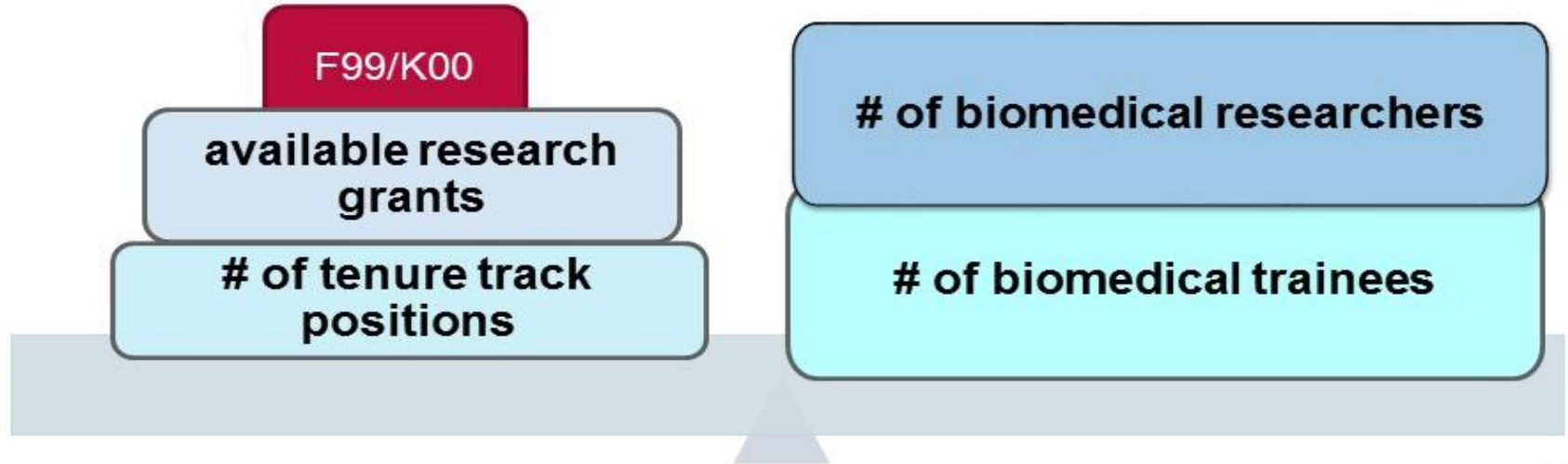
**An independent research career is being viewed
as a less viable career choice**



Notes for Slide on page 3

First, a bit of background information on why NCI is piloting this new funding program. We all know currently there is a significant imbalance between the numbers of biomedical trainees and the available tenure track positions. And there is an imbalance between the numbers of biomedical researchers and available research grants. One of the many consequences of this imbalance is that an independent research career is being viewed as a less viable career choice by some of our best graduate students.

The F99/K00 is a new pathway



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The F99/K00 pilot program is an effort by the NCI leadership to explore innovative ideas to address this problem. NCI hopes that this dual-phase transition award will identify and encourage outstanding graduate students to commit to pursuing independent cancer research careers. More importantly we hope to show to the awardees and their peers that NCI is committed to explore viable and tractable career pathways for the talented and committed.

Webinar Outline



- **Timeline**
- **Eligibility – who may apply**
- **Funding – NCI has committed to funding 5 cohorts (annual awards)**
- **The Nomination Process & Letter of Intent**
- **Information about the FY16 Portfolio of Awards**
- **Special Application Instructions**

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A note about NIH-speak, for newcomers to the NIH system: NCI is the National Cancer Institute, the oldest of the 27 institutes and centers at the NIH.

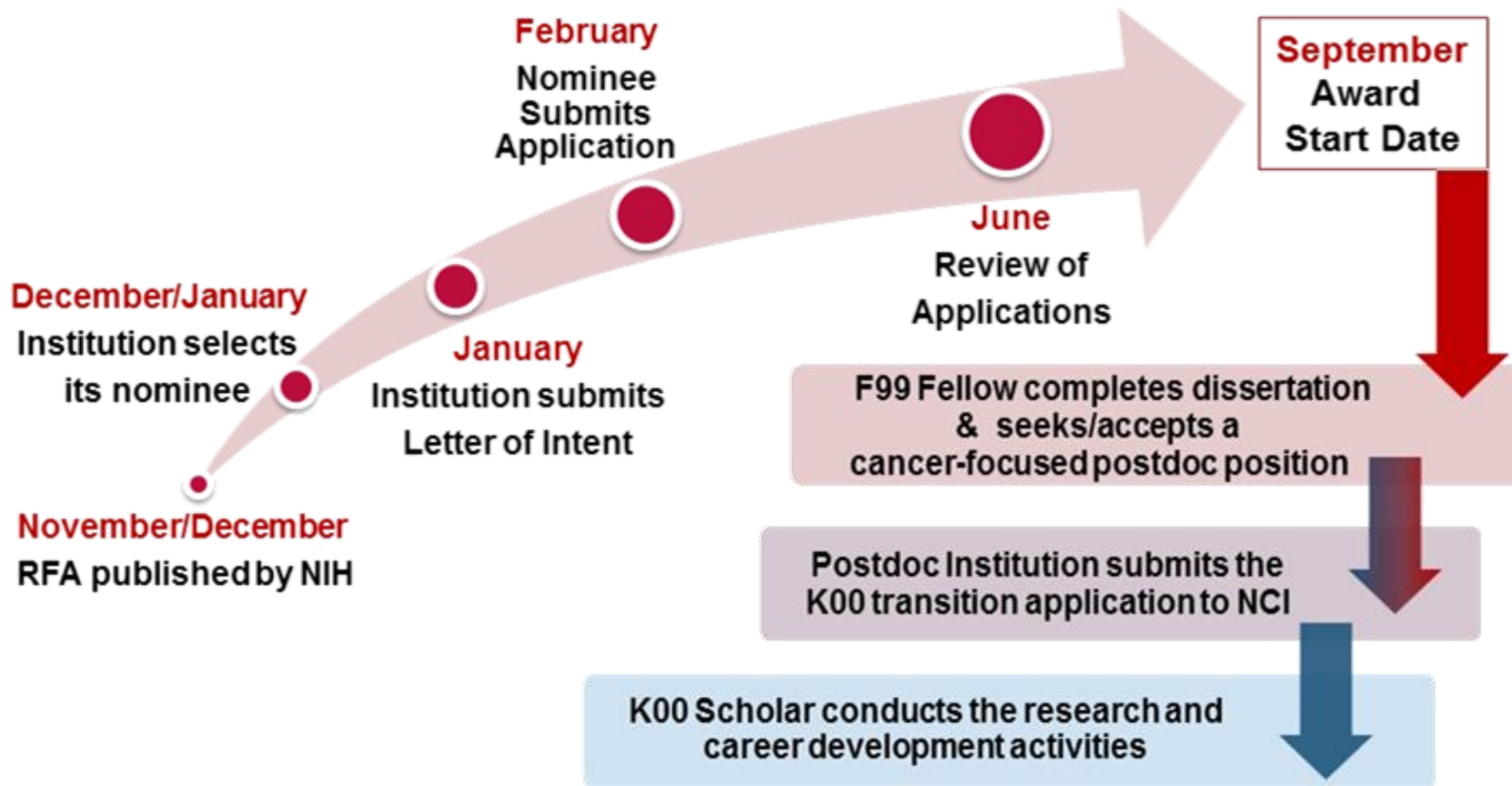
FOA means Funding Opportunity Announcement. FOA is the generic “umbrella” term for all types of funding mechanisms offered by the NIH.

RFA means Request for Applications. The F99/K00 is an RFA. This means it has special terms – like having a Letter of Intent and only having one annual submission date.

NRSA refers to National Research Service Awards – these are the congressionally-mandated fellowships offered by NIH – the F30 is for MD/PhDs, F31 is for graduate students, and F32 is for postdocs.

The NIH Fiscal Year (abbreviated FY) starts on October 1 and ends September 30.

Timeline for the F99/K00



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NCI is committed to renew the F99/K00 for the next 3 years. The FY17 RFA has been fine-tuned from last year, so it's very important to read it carefully and not rely solely on experience with a prior year's announcement.

How does the F99/K00 work?

1. This has one receipt date per year, not like the NRSA fellowships, which have 3.
2. Each institution manages its own nomination process to select its nominee, with the lead time needed to craft a solid proposal.
3. By January 17th, the institution's grants official, not the nominee, will submit a Letter of Intent. This helps to plan for the review and to prevent mix-ups about who the official nominee is.

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4. Applications will be due February 17th. The NCI website has a page devoted to the F99/K00 that will be updated for each new RFA. Applicants and Grants Officials will find helpful Resources and Tips there. Just google F99/K00 and NCI, or wait until my last slide for details on how to find the webpage.
5. Review occurs in May/June and goes to the August Council.
6. Awards must have a start date of September 2017.

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What happens next, if you receive an F99/K00 award:

1. During the F99 phase: You have 2 years to complete your dissertation research and secure a cancer-focused postdoc position. In year 1, you come to an NCI F99 Fellows meeting.
2. NCI will not approve transitions to the K00 phase before Feb 1st of the first award year.
3. Contact your Program Director ~ 4 months before you are ready to graduate and move on, for advice on preparing the K00 transition application, which will be submitted by the postdoc institution. Details are in the RFA.
4. Then you graduate with your PhD, start your new postdoc position, and conduct the research and career development activities planned for the K00 phase, which gives you up to 4 years of support.

Eligibility

Applicant must be nominated by a PhD-granting institution

- **Students earning PhD or other doctoral research degree**
 - **3rd or 4th year PhD students finishing up dissertation research**
- **One nominee per domestic, PhD-granting institution per year**
 - **identified by a single DUNS number or by multiple DUNS numbers for schools/colleges/divisions within the institution**
- **US citizens and international students**
- **Unsuccessful applicants may submit if eligible and re-nominated**
- **Current F31 awardees and applicants* are eligible**

* Check with Program Director

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1. Who can apply? The intended applicants PhD or other research degree students (DrPH, ScD) who are 3rd or 4th year graduate students and are within 2 years of finishing their dissertations.
2. The program year is calculated from the time of initial enrollment and not after you start your dissertation project or pass a candidacy exam.
3. Dual-degree, or professional doctorate/clinical degree students are not eligible. This is because their training timeline is not compatible with this new funding mechanism.
4. One nominee per degree-granting institution per year. One change from last year is that **there is one nominee for all schools/colleges/divisions in an institution, even if they have individual DUNS numbers.**

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5. If you mainly work at a non-academic research center, you must apply through the institution that will confer your degree. But the research center can co-nominate you and contribute to the application
6. International students studying in the US who are here on a visa ARE eligible for the F99/K00.
7. If you are in your second year, but will be graduating within the next 2 years, you may email me to ask for an exception. For example, if you already have an MS degree, you might finish up more quickly than someone entering with a BS degree.
8. If you are beyond year 4, but took a documented and extended leave of absence, you may email me to ask for an exception.
 - No resubmissions are allowed but someone may be nominated two years in a row if the person still meets the eligibility requirements.

Notes for Slide on page 13 regarding F31s

1. F31 applicants and awardees are eligible. Only one fellowship award is allowed – the F99 or F31, but not both. F31 awardees will need to terminate the F31 before accepting an F99/K00.
2. The NIH does not allow 2 overlapping applications to be under review at the same time. This means that if you submitted an F31 this month, let me know as soon as you become the nominee so that I can manage the potential conflict. It is not a big deal as long as I know about it in advance.
3. If you had plans to submit an F31 in April 2017, you cannot. Instead, wait until August 2017 to submit the F31.

Funding

1-2 years of support for completing PhD dissertation (F99)

- **Stipend, Tuition, and Training Related Expenses similar to F31**
- **Funds to attend an F99 Fellows meeting**

Up to 4 years of support for postdoc training (K00) at a US institution

- **Higher salary than F32**
 - **(\$50,000 with \$3,300 annual increase + fringe benefits)**
- **Up to \$4500 for Tuition, plus \$3000 for Research Expenses**
- **8% Indirect Costs allowed for the Institution**
- **Funds to attend a K00 Scholars meeting**

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- This program will provide 1-2 years support for completing the Ph.D. dissertation, that is, the F99 phase. The funding is similar to the F31 fellowship, with an additional \$1500 to attend an NCI-sponsored fellows meeting.
- After completion of the PhD dissertation, the awardee can bring 4 more years of support to postdoctoral training, that is, the K00 phase, to his or her chosen institution and mentor lab. The awardee receives a salary, not a stipend, at a level that is higher than the F32 stipend for a new postdoc. The salary comes with fringe benefits, tuition support may be requested, there is a small research and training expenses budget, and there are travel funds to attend an NCI-sponsored K00 Scholars meeting. The institution collects 8% indirect costs.

Letter of Intent

By 1/17/2017, Grants Official sends an email memo indicating the institution's intent to submit an application to RFA-CA-17-014 to:

Michele McGuirl, Ph.D.

National Cancer Institute (NCI), Cancer Training Branch

Email: m McGuirlma@mail.nih.gov

- **The memo should include:**
 - **Likely title of the application**
 - **Name, address, and telephone number of the nominee**
 - **Name of the primary sponsor/mentor**
 - **RFA number**

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- Letter of Intent (LOI) – Its purpose is to help anticipate and manage the review panel, and for this RFA, to help me to spot any misunderstandings about who was selected to be the institutional nominee, well before the applications are submitted. This happened several times last year, and the LOI serves as a heads up for me to contact the institution and ask for clarification. NIH policy is that letters of intent are non-binding, but I urge you to send one in.

Fiscal Year 2016 Portfolio

Limited dataset from FY16

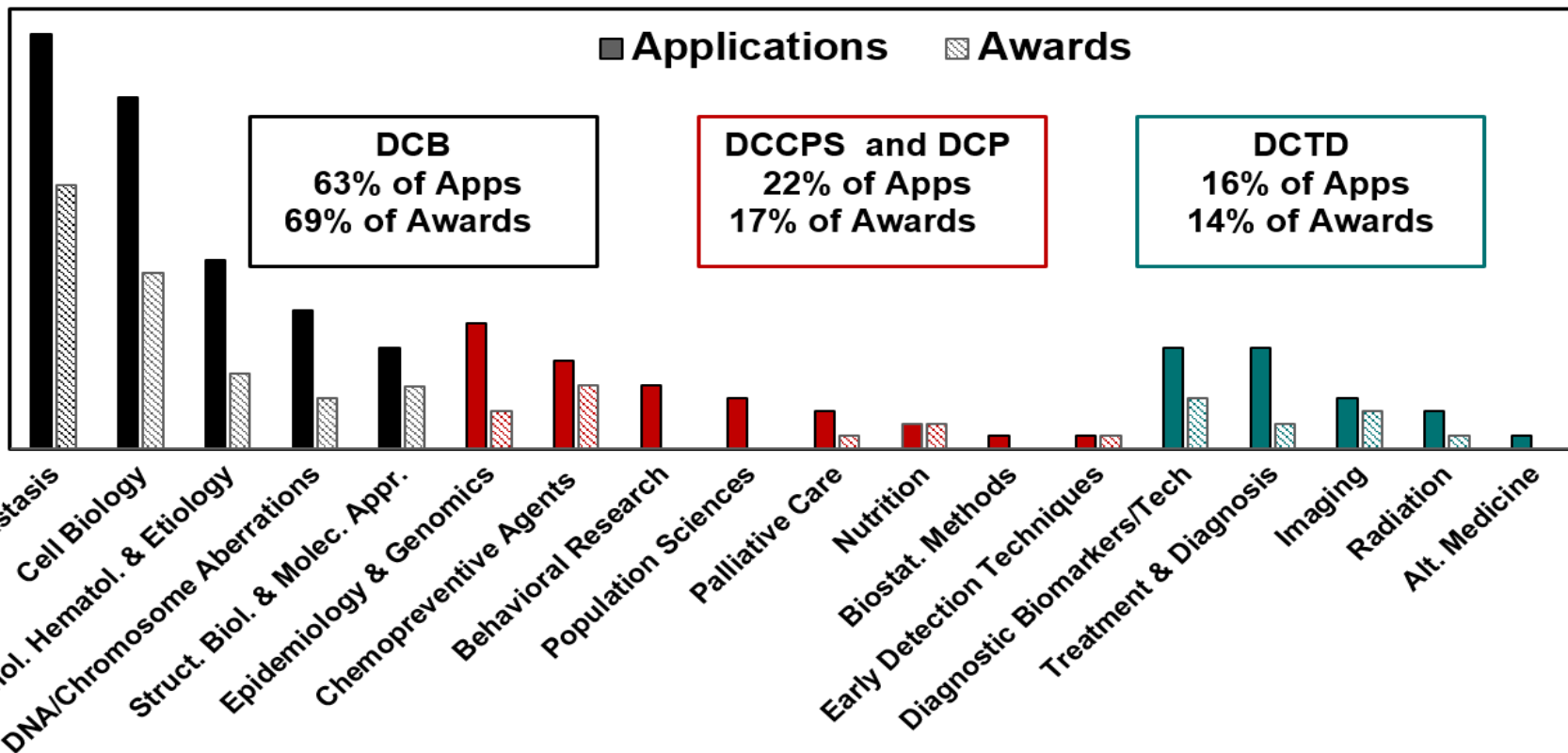
- All areas of research were supported
- No type of cancer was viewed as more important than another

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Next I will discuss the characteristics of the applications and the awards for the FY16 round. Take this information as a general guide – with only 1 round of applications, data are limited and may change as the program takes shape.

- Like NCI's research, career development, and other fellowship grants, the F99/K00 supports all areas of cancer research.

FY16 Applications/Awards by Discipline



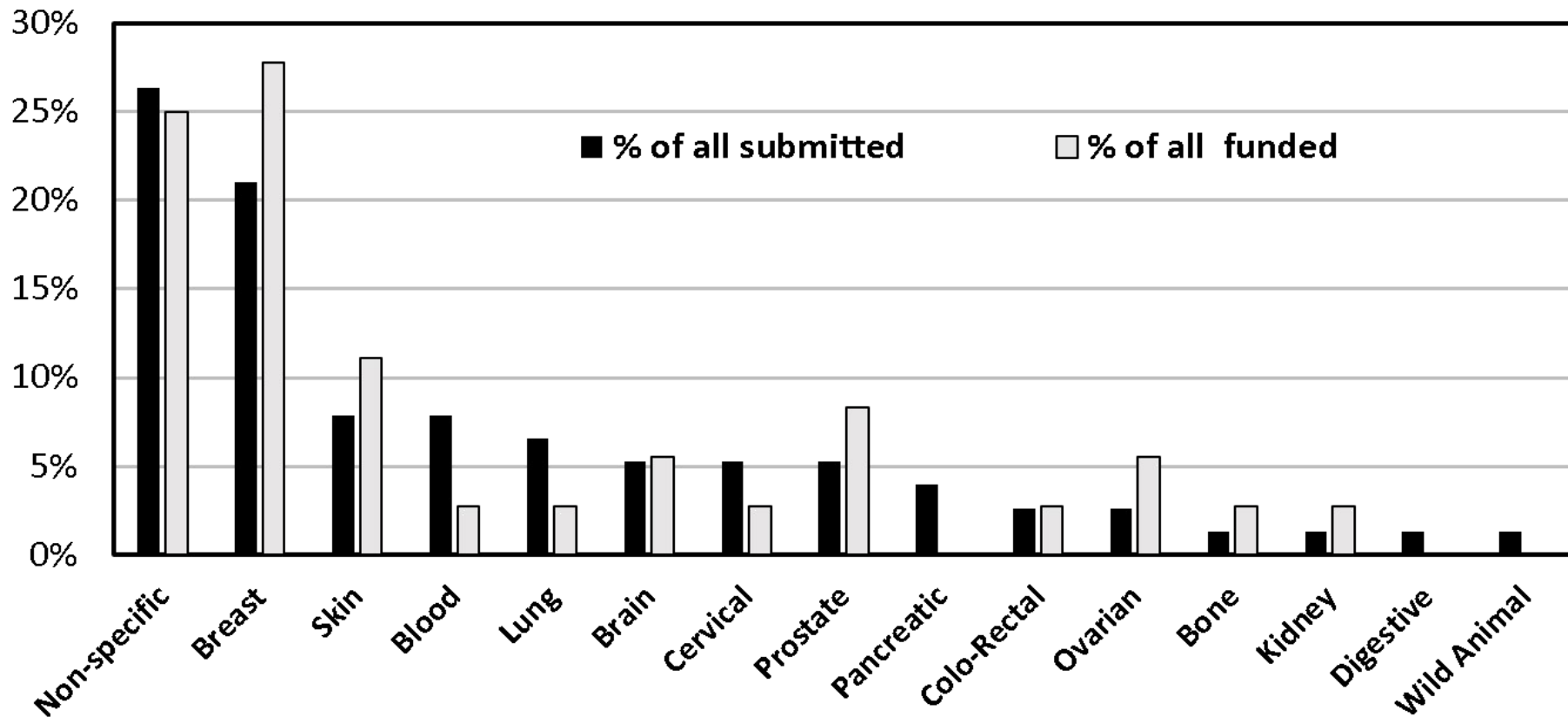
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- The distribution of F99 awards is similar to NCI's R01 and F31 application and award distribution. For convenience, the applications have been categorized by the NCI extramural divisions that handle NCI's R01 grants.
- DCB – Division of Cell Biology covers mechanistic “cell biology” research and some aspects of genomics. This is about 65% of the portfolio.
- DCCPS - Division of Cancer Control & Population Sciences and DCP - Division of Cancer Prevention covers epidemiology, population sciences, behavioral studies, and other aspects of genomics. This is about 20% of the portfolio.
- DCTD - Division of Cancer Treatment & Diagnosis covers imaging, radiation, and biomarkers. This is about 15% of the portfolio.

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- You might have noticed that Behavioral Research & Populations Sciences did not fare very well (no awards) in FY16. But “field” should not be considered a factor for choosing an FY17 nominee, as there were not many FY16 applications in these areas. I can assure you that there was plenty of expertise at the review meeting and that the reviewers scored fairly. I can also provide more specific advice for any nominees working in these areas after the nomination process has occurred.

FY16 F99/K00 Applications/Awards by Cancer Type



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- NCI F99/K00 does not favor one type of cancer over another. In this context, “non-specific” means (a) more than one cancer type being studied and/or (b) general pathways and approaches that apply to more than one cancer type. One caveat – the two applications that proposed to study animal cancer with no link to human health did not do well in review.

FY16 Portfolio: Positive Influences

Limited data from FY16

Publications → higher success rate

- Only 2 applicants had no peer-reviewed publications
 - 1 was scored but not funded, 1 was Not Discussed
- 70% of applicants, 75% of awardees had a first-author publication
- 10 applicants had 1st author pubs in top-tier journals
 - 8 funded, 1 scored but not funded, 1 Not Discussed

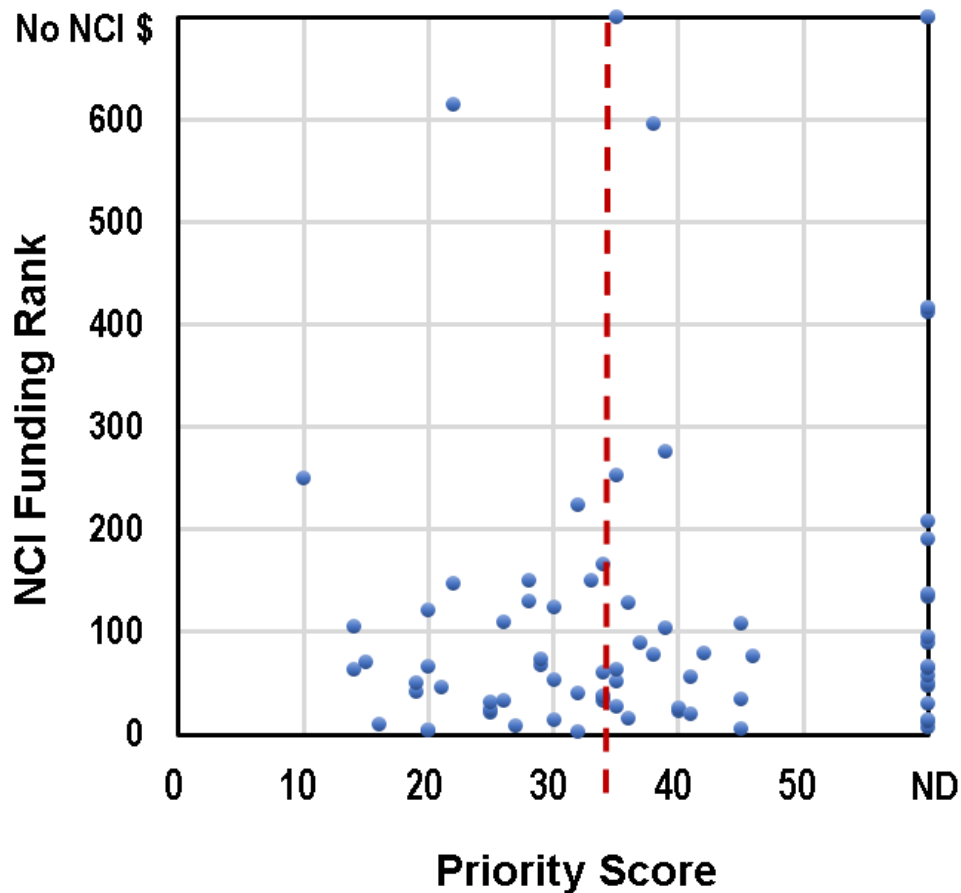
- **Affiliations with Cancer Centers → higher success rate**
- **Prior fellowship awards (F31s) → higher success rate**
- **Demonstrated need for training → higher success rate**

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- The applicant's publication records may have been an influence at the institutional selection stage. Only 2 applicants had no pubs at all.
- Many had 1st AU pubs, and this helped, but only just a bit
 - **(70% Apps → 75% Awards)**
- 10 applicants had 1st author pubs in top-tier journals (e.g., Science, Nature, Cell). Even this was not a guarantee of success – 1 was scored but not funded and another was not discussed.
- Other factors associated with higher success rates were affiliation with a cancer center, having an F31 award, and providing a well-documented need for further training. I'll provide more detail on the next few slides.

FY16 Portfolio Analysis

Category	Apps	Awards	% Success Rate
Total	76	36	47
Women	40	17	43
International	20	7	35
F31 Awardee	6	6	100
F31 Applicant	15	7	47
Cancer Centers	55	31	55



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When gender was inferred by the pronoun used in reference letters, it appears that Women did as well as men. Not that no gender or ethnicity data are collected for this RFA.

About $\frac{1}{4}$ of nominees were international students; about $\frac{1}{5}$ of awards went to international students. One reason the international students may not have fared as well is that this is likely the first fellowship opportunity open to them. So they may be less experienced and need additional mentoring.

F31 awardees were very successful, whereas F31 applicants had average success rates.

Affiliation with a cancer center correlated with funding success. Several cancer centers were involved with more than one award.

Notes for Slide on page 30, continued

One question I am often asked is whether students from institutions with small PhD programs will be competitive. My response is, “Probably.”

- The nomination limit of one per institution means each institution starts on an equal footing.
- The graph shows that reviewers did not show any preference for educational institutions that receive a lot of NCI research funding.
- Institutions from all 3 Carnegie research activity classes* were represented in the applications and awards.
 - The Carnegie classes are “highest research activity,” “higher research activity,” and “moderate research activity.”
 - One award was made to an institution that had no active NIH research funding (the student is doing research at a cancer center).

Take home message: reviewers did a great job considering all aspects of the application. There is no cookie-cutter for success.

FY16 Research Fields: F99 Phase vs. K00 Phase

Category	Apps	Awards	% Success Rate
Non-Cancer F99 → Cancer K00	6	3	50
Cancer F99 → Cancer K00 similar research areas	56	24	43
Cancer F99 → Cancer K00 changes in research areas	14	9	64

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- Applicants are advised to **demonstrate the need for future training**. For FY16, continuing the same project for the K00 phase, if it did not afford new training opportunities, or staying in the same lab for both phases, was not viewed positively by reviewers.
- Those coming from non-cancer backgrounds did okay if they provided a convincing cancer-focused plan for the K00 phase.

Special Instructions for F99/K00 application

Use the Forms D fellowship package with the following modifications:

- **Institutional nomination letter** is required
- **Fellowship Applicant Section** has modified instructions
- **Specific Aims and Research Strategy** follow a non-traditional format

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- Each of these items has been “tweaked” from last year. Also, these are not the same as for the F31 .
- You must read the RFA instructions in **Section IV. Application and Submission Information** very carefully! I will go over these critical parts now.

Nomination Letter (2 pages)

- **Signed by the head of the graduate program and the institutional grants official**
 - **If research involves another institution, submit a joint nomination letter with signatures from both institutions**
- **Names the nominee and the primary sponsor**
- **Describes the nominee and the nomination process**
- **Confirms the eligibility of the nominee**
 - **3rd or 4th year of a PhD program and expected to finish within 2 years**
- **If applicable, describes any exception to eligibility**
- **If applicable, describes the visa status**

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- The letter should be signed by the head of the graduate program and the institutional grants official. Along with the Letter of Intent, this guards against there being multiple nominees from the same place. If the dissertation involves more than one institution, for example if you are doing research at a center that does not offer a formal degree, we encourage you to submit a joint nomination letter from both program heads.
- Nomination Process: is handled by the institution. Most educational institutions have committees that select grad students to receive other fellowships, scholarships, or internal awards. My advice is for institutions to tap into these and sync with the F99 timeline, as possible.

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- The Nomination should confirm eligibility, that the nominee is in the 3rd or 4th year of a PhD program in an appropriate biomedically related field. The nominee is not required to be doing cancer research for the F99 phase, but **MUST** propose doing cancer-focused research for the K00 phase. It is up to the nominee to make a strong case that he/she is committed to pursuing a career as an independent cancer researcher.
- If an eligibility exception was requested and granted, the nomination letter should mention the reason.

More Notes for Slide 37

- To ask about exceptions to 3rd and 4th year eligibility, contact Michele McGuirl. Some examples of acceptable exceptions are for someone who had a documented leave of absence due to health, or for someone applying in Year 2 who has an MS degree and is expected to graduate within 2 years.
- If the nominee is here on a visa, the letter should also give assurance that the candidate's visa status is up to date, that there are no known obstacles for completing the F99 phase, or for obtaining a visa at the time of the K00 transition. One example of a common obstacle for the K00 phase is a home country requirement to return after the PhD is awarded.
Do not include the visa in the application.

Fellowship Applicant Section (6 pages)

This section should address both phases of the F99/K00

- **Doctoral Dissertation and Research Experience**

- **Training Goals and Objectives**
 - **What is the long term career goal? Stress new knowledge, technical expertise, and professional skills, existing strengths as well as gaps**
 - **Include a strategy for identifying a K00 mentor**

- **Activities Planned Under This Award**
 - **Scientific and professional development activities for each phase**
 - **Timeline with scientific, professional development, and career milestones**

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- There are 3 parts to the Fellowship Applicant Section. ***Be sure all 3 parts address both phases of the F99/K00***

1. Doctoral Dissertation and Research Experience: Summarize all of your research experience in chronological order. include the areas studied and conclusions drawn. Place your current field and prior training within the context of your ultimate career goal.

2. Training Goals and Objectives: Describe your long term career goal, the training goals for each phase, and explain how this award will enable the attainment of these goals. Identify the skills, theories, conceptual approaches, etc. to be learned or enhanced during the award. What skills do you have, what is needed for your future independent career? How will you identify a K00 mentor?

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3. Activities Planned Under This Award

Describe the scientific and professional development activities planned for each phase and explain how the activities will facilitate the transition to each subsequent career stage. Include a timeline with scientific, professional development, and career milestones.

Specific Aims (1 page)

All applications **MUST** have these three Specific Aims:

Aim 1: The Dissertation Research Project – progress thus far

Aim 2: The Dissertation Research Project – work to be completed

Aim 3: The Postdoctoral Research Direction

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- Let's turn to the Research Training Plan. The typical nominee is far along in their defined dissertation research project but has yet not committed to a specific postdoc lab. This presents a challenge for writing a traditional Research Training Plan – NCI does not want to prolong the time to degree by having applicants propose additional new experiments for the F99 phase, and applicants are not yet in a position to write a detailed research proposal for the K00 phase.

To address this, **NCI requires that all applications must use these 3 specific aims.**

Research Strategy Section (6 pages)

Significance & Approach: Address the science & the career development activities for both phases.

Aim 1: Describe the overall goal, rationale, hypotheses, and approaches of the dissertation research project; describe progress made thus far; highlight skills and techniques that contribute to the long-term career goal.

Aim 2: Provide a detailed description of the research to be completed in the F99 phase, including experimental design, anticipated results, and potential follow-up studies. Highlight new skills to be learned.

Aim 3: Identify the research direction to be pursued for the K00 phase and explain the rationale for pursuing this direction. Describe the scientific question to be addressed, the approach(es) to be taken, and the scientific goal to be achieved. Identify new scientific and career development skills to be acquired.

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- The Research Strategy has 2 components: Significance and Approach. Innovation is not required for fellowships.
- It's important to address both science and career development for all 3 aims. The combination of plans for the PhD and postdoc phases should prepare the applicant for a career as an independent investigator in cancer research. There should be a logical and compelling connection between the phases and the aims, and they should support the career goal.
- Aim 3: No need for it to be a continuation of the PhD research. In fact, reviewers look for the training potential – the need for **more and different** training.

Finding the NCI F99 Website

cancer.gov/cct



Resources

- [Program Announcement](#)
- [Transition Info/Forms](#)
- Informational Webinar held 12/13/2016 ([slides with transcript](#))
- [Answers to frequently asked questions](#)

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Finally, a PDF of these slides with a transcript of the talking points will be available on the F99/K00 website in the next day or two. If you need it immediately, email me.

- You go to cancer.gov/cct, then click on Funding For Cancer Training in the left-side box, scroll down and then click on the NCI F99 Award.
- Look under Resources, which is where the slides will be posted. There is a lot of other helpful information there, as well. I encourage you to read the Answers to FAQs before emailing me. I'm happy to respond, but the FAQs might be faster.



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