

# So You Want to Fund a Medical Physics Residency Program

Work Group Overview and Residency  
Funding Basics

Susan Richardson

# Residency program status

- There are currently approximately 100+ medical physics residency programs in existence in the US and Canada, with around 80 being CAMPEP approved.
- The majority are therapeutic medical physics programs, with around 11 more being either imaging or nuclear medicine.

# Purpose of working group

- There is a large need for more residency programs in the imaging and nuclear medicine fields. There is also need for therapy programs.
- The mechanism for funding the residency programs are widely variable including backing from CMS, AAPM and related entities such as RSNA, self-funded, and vendor supported.

# Additional Rationale

- Most CAMPEP approved residency programs are associated with an academic university. Acquiring funding outside of the university setting has additional complexities.
- There exists confusion over which avenues of funding are appropriate.

# Purpose of report & talk

- The purpose of this report will be to examine the various mechanisms for funding medical physics residency programs
- Encourage more residency programs to be established and maintained.



# Why more residencies?

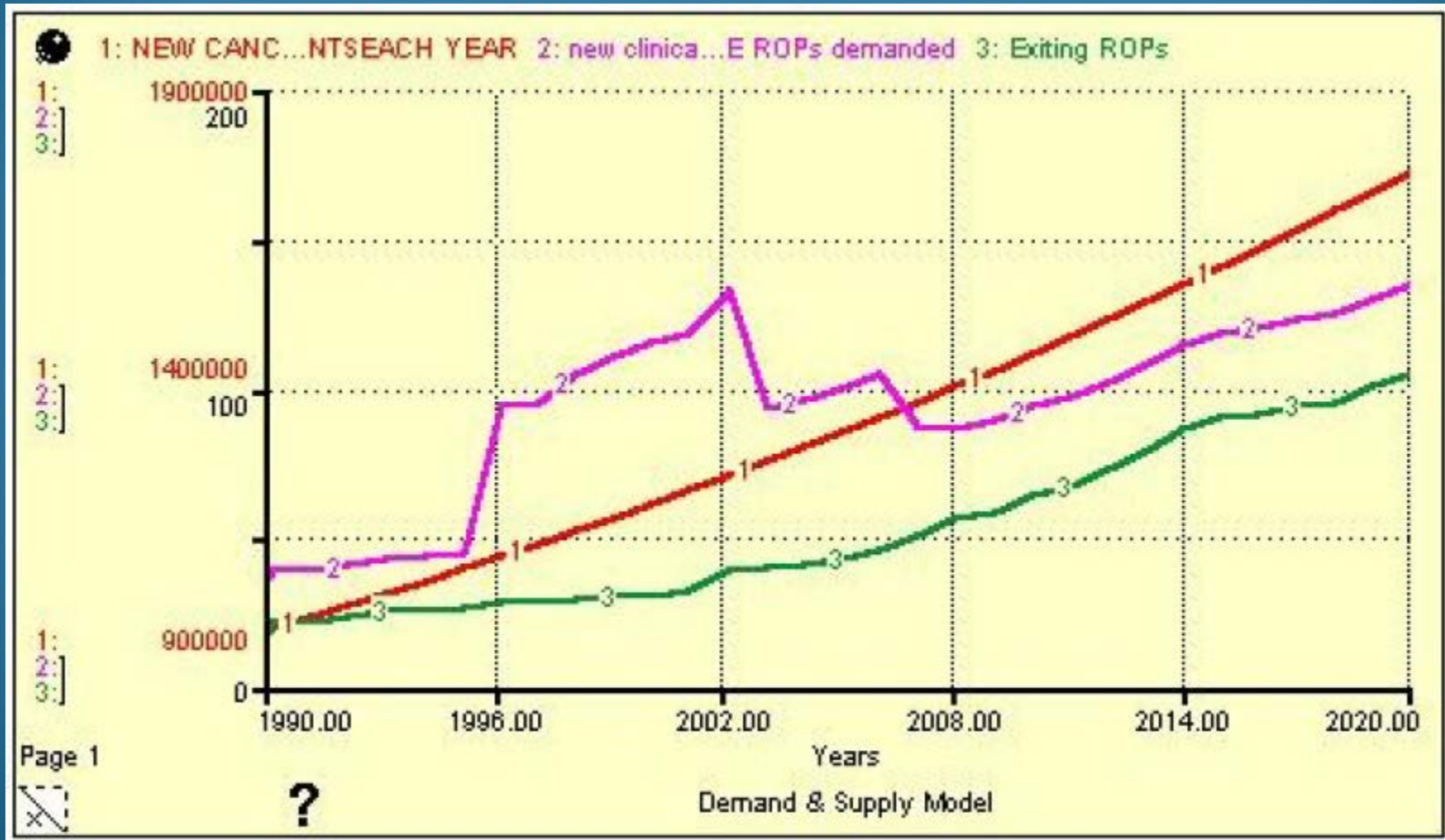
- “Despite the current oversupply, current capacity in CAMPEP therapy physics residency programs must double by 2020.”

JOURNAL OF APPLIED CLINICAL MEDICAL PHYSICS, VOLUME 11, NUMBER 2, SPRING 2010

## **Future trends in the supply and demand for radiation oncology physicists**

Michael D. Mills,<sup>1a</sup> Judah Thornewill,<sup>2</sup> Robert J. Esterhay<sup>2</sup>  
*Department of Radiation Oncology,<sup>1</sup> University of Louisville School of Medicine,  
Louisville, KY, USA; Department of Health Management and Systems Sciences,<sup>2</sup>  
University of Louisville School of Public Health and System Sciences, Louisville,  
KY, USA.*  
*Mdmill03@gwise.louisville.edu*

# Need for more RO physicists



# Why do I want a residency?

- Residency programs can save you money
- Residency programs can improve the quality of care at your institution
- Residency programs can help the institution grow both financially and academically



# What's in a budget?

- Drained resources at first, including need for space, computers, administrative services and support ,etc.
- Time from the faculty and staff
- Plan it from a business model stand-point
- The cost of supporting two residents is approximately equivalent to supporting one CMD\*
- The 1 FTE of Resident labor “costs” 0.5 FTE from faculty\*

# Residency Program models

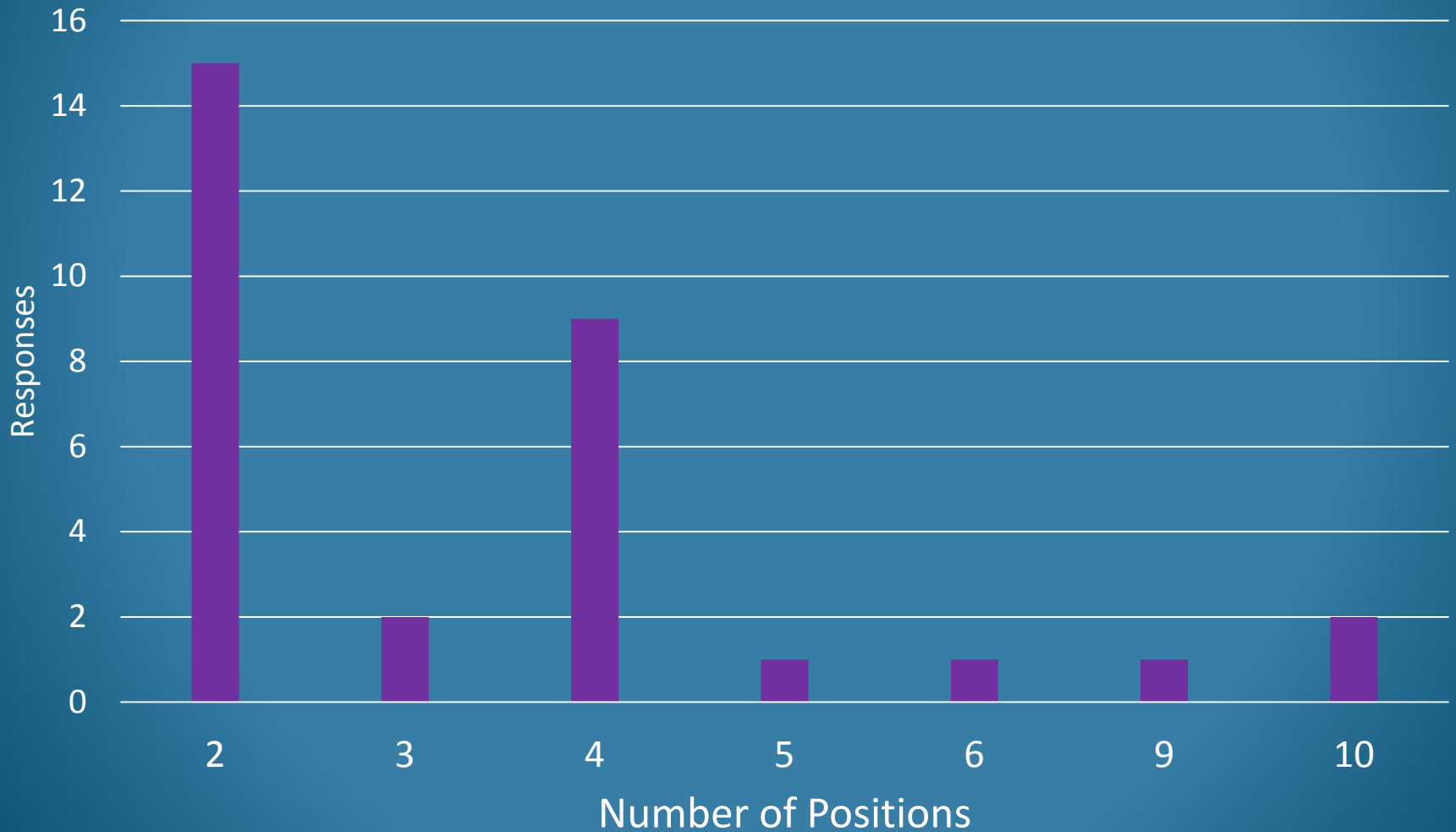
- Classic Academic Center
- Academic Center with Medicare (CMS) support
- Hub and Spoke
- Private Provider Organization
- Private Physics Group
- DMP Program
- AAPM/RSNA/ASTRO, etc.

# Different Models

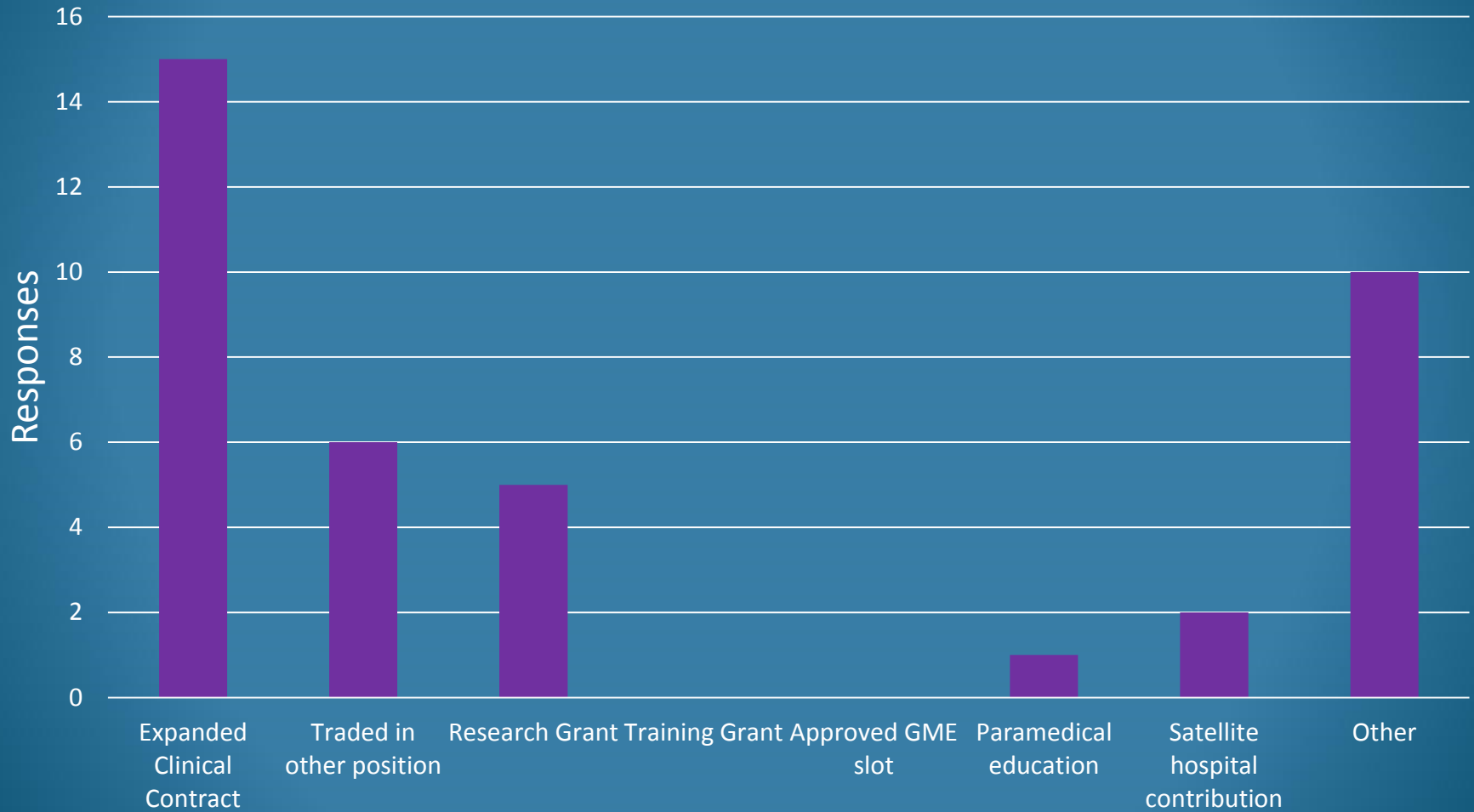
- I will talk about Vendors and collaborations
- Bruce Libby will discuss CMS
- Stephan Both will discuss private/internal funding

# INFORMAL SURVEY RESULTS

# How many residency positions?



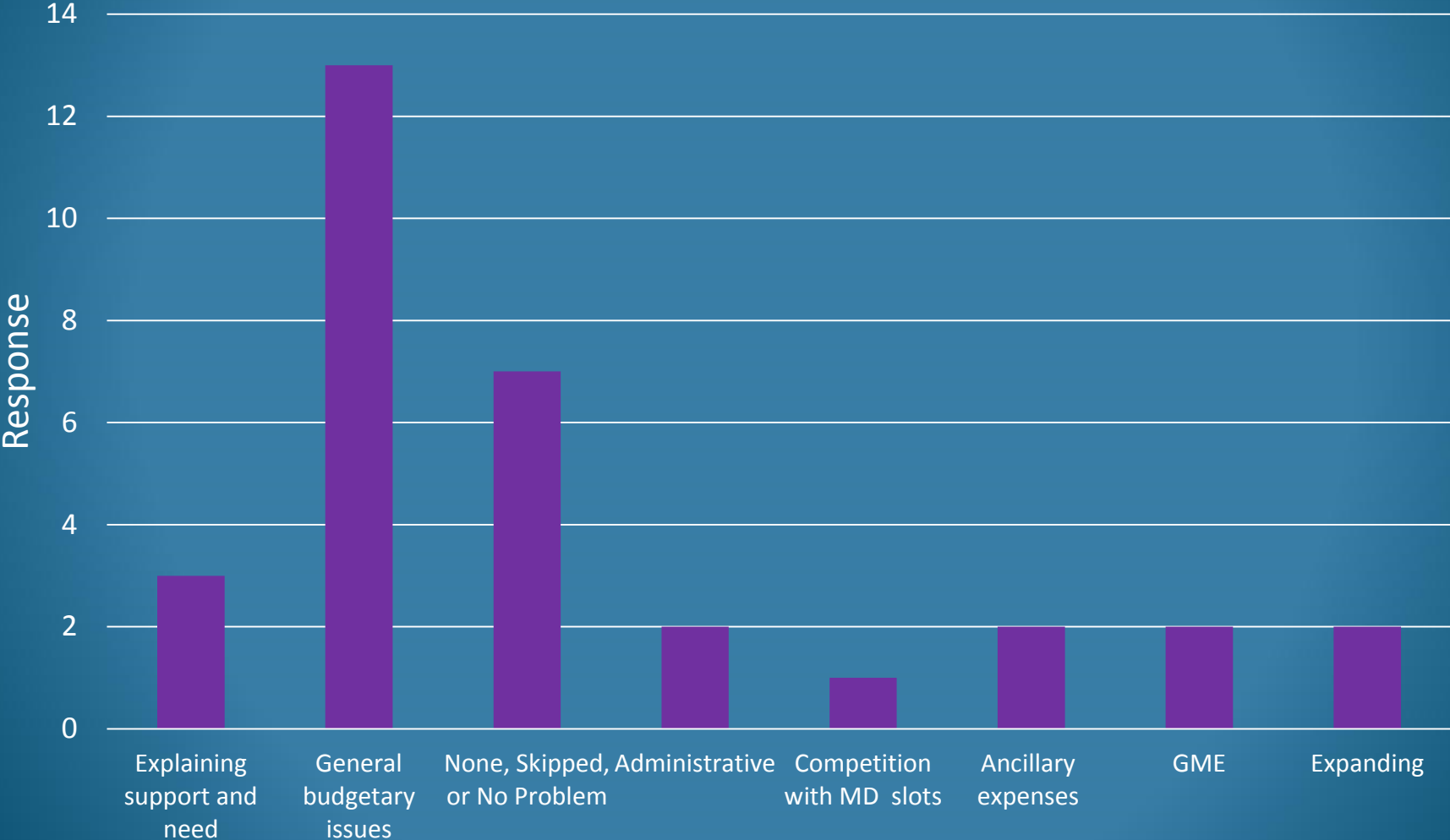
# Mechanism of funding



# Mechanism of funding

- Others:
  - Armed services contract
  - Trading in of graduate student assistantships
  - Physician practice plan
  - Hybrid of research money and clinical funds
  - Industry contacts
  - Professional society educational grant
  - Chair's discretionary funding

# Greatest Challenges to funding





# Key words

- Justification
- Declining reimbursement
- Negotiation
- Explanation (of what a physicist is)
- Commitment
- Support
- Expenses (for travel, books, etc.)
- Managerial skills and conversations

# AAPM funding

- Starting in 2005, the AAPM has awarded research seed grants from the E. & R. Fund, and have so far made 14 such awards.
- A total of 73 Residents and 19 pre-doctoral Fellows have now received support from these programs.
- A total of 45 different hospitals and academic institutions have participated in these programs.
- All Residencies are supported by matching funds from the host institution.

<https://www.aapm.org/payment.aspx/edfund.aspx>



# AAPM/RSNA partnership



Advancing the Science,  
Education & Professional  
Practice of Medical Physics

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## AAPM GRANT AND FELLOWSHIP OFFERINGS

### AAPM/RSNA Imaging Physics Residency Grant (2014)

#### Description:

##### AAPM/RSNA Imaging Physics Residency Grant

On November 28, 2012, the AAPM Board of Directors approved \$560,000 in funding for new imaging physics residencies, either diagnostic or nuclear medicine. RSNA is partnering with AAPM on this program and will provide an additional \$560,000. With this funding, it will be possible to provide matching support for 8 new imaging residencies.

Each institution will receive \$35,000 per year for 4 years in matching support of 2 residents.

The purpose of the AAPM/RSNA funding is to provide 50% support of a resident's salary for 8 imaging physics residencies that are not currently CAMPEP accredited. The awardee institutions will provide the other 50% support. After the period of the award is over, the intent is that the awardee institutions will continue to fully support the imaging physics residencies.

#### Eligibility Criteria:

Only those imaging physics residency programs that have not previously submitted an application to CAMPEP (prior to Nov 28, 2012) for accreditation are eligible.

Programs that have received Prior AAPM/RSNA Imaging Physics Residency Grant Funding are not eligible.

**Type:** grant

**Year:** 2014

# AAPM/RSNA partnership

## **RSNA and AAPM Announce Recipients of Imaging Physics Residency Grants**

OAK BROOK, Ill. (February 17, 2014) – The Radiological Society of North America (RSNA) and the American Association of Physicists in Medicine (AAPM) have announced the recipients of the 2014 AAPM/RSNA Imaging Physics Residency Grants.

They are:

- University of Chicago, Zhengfeng Lu, Ph.D., Program Director; David Paushter, M.D., Chair of Radiology
- Duke University Medical Center, Ehsan Samei, Ph.D., Program Director; Erik Paulson, M.D., Chair of Radiology
- Emory University, Jonathon A. Nye, Ph.D., Program Director; Carolyn C. Meltzer, M.D., Chair of Radiology
- Indiana University School of Medicine, Yun Liang, Ph.D., Program Director; Valerie P. Jackson, M.D., Chair of Radiology
- University of Oklahoma Health Science Center, Jagadeesh R. Sonnad, Ph.D., Program Director; Anthony M. Alleman, M.D., Chair of Radiology

# Emory model

- Resident 1:
    - 50% AAPM/RNSA
    - 50% Industry Affiliation Contract
  - Resident 2:
    - 50% Department chair
    - 50% Industry Affiliation Contract
- Smart use of blending funds to make more residency slots happen!

# Vendor funding

- ASTRO: supported two residencies in Clinical Radiation Oncology from 1992 until 2006.
- Varian Medical Systems supported two residencies in Clinical Radiation Oncology from 1993 until 2007.
- Elekta Oncology supported one residency in Clinical Radiation Therapy per year from 1998 until 2002.

# Conclusions

- There are opportunities for funding that exist from outside entities
- These are rare and competitive
- There might be easier ways....