

## Purpose

With much competition for departmental and institutional funds, objective data are needed to support time and resources spent on programs fostering mentorship.

It is the purpose of this study to both describe the prevalence and nature of mentoring relationships among academic radiation oncologists as well as to report objective measures of productivity including number of publications, number of citations, h-index, m-index and NIH funding of those faculty who reported having a mentor compared with those who reported not having a mentor.

## Introduction

Mentorship is often cited as a key component of successful academic career development. The majority of the existing literature on mentorship in academic medicine consists of qualitative studies and structured interviews (1).

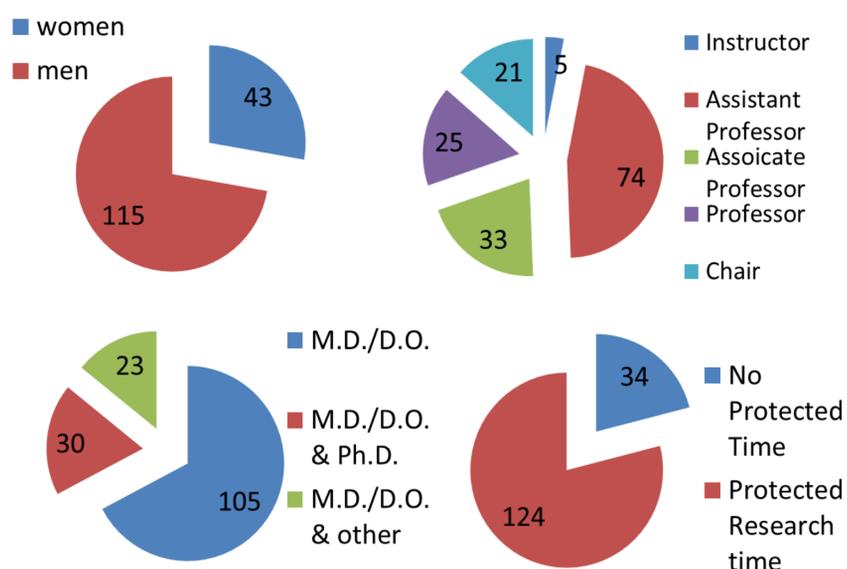
One small qualitative study reported that 98% of faculty identified lack mentoring as the 1<sup>st</sup> or 2<sup>nd</sup> important factor hindering career progress. Respondents in this study cited clout, knowledge and interest as important factors, (2).

Quantitative data has also been sought to provide more objective evidence as to the role of mentorship on the careers and productivity of academic physicians (3)(4).

## Results

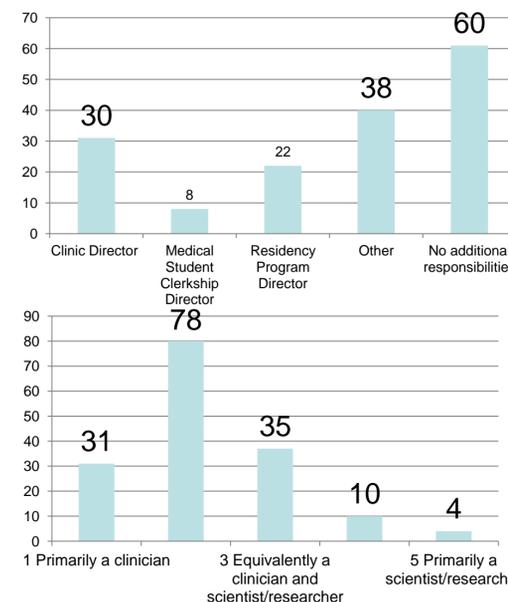
158 academic RO completed the survey, 96 of whom reported having an academic/scientific mentor. Faculty with a mentor had higher numbers of publications, citations, *h*- and *m*-indices. Differences in gender and race/ethnicity were not associated with significant differences in mentorship rates, but those with a mentor were more likely to have a Ph.D. and were more likely to have more time protected for research. Bivariate fit regression modeling showed a positive correlation between a mentor's *h*-index and their mentee's *h*-index ( $R^2=0.16$ ;  $p<0.001$ ). Linear regression also showed significant correlates of higher *h*-index, in addition to having a mentor ( $p=0.001$ ), included a longer career duration ( $p<0.001$ ), and having fewer patients on treatment ( $p=0.02$ ).

### Respondent Demographics



### Productivity Metrics, Degree and Time Allocation

	With mentor Mean (95% CI) N = 96	Without mentor Mean (95% CI) N = 62	P
# publications	102.2 (82.1-122.2)	58.2 (33.2-83.1)	0.042
# citations	2105 (1438-2773)	1122 (292-1953)	0.070
<b>h-index</b>	17.6 (14.4-20.7)	11.2 (7.3-15.2)	0.038
<b>m-index</b>	0.92 (0.80-1.03)	0.63 (0.51-0.77)	0.001
<b>Degree</b>			<0.001
M.D./D.O. (n=105)	53 (50.5%)	52 (49.4%)	
M.D./D.O., Ph.D (n=30)	27 (90%)	3 (10%)	
M.D./D.O., other degree (n=23)	16 (70%)	7 (30%)	
<b>Time allocation</b>			<0.001
Primarily research (n=4)	3 (75%)	1 (25%)	
More research, some clinic (n=10)	9 (90%)	1 (10%)	
Equivalent research and clinic (n=35)	28 (80%)	7 (20%)	
More clinic, some research (n=78)	49 (62.8%)	29 (37.2)	
Primarily clinic (n=31)	7 (22.6%)	24 (77.4%)	



## Methods

An IRB-approved survey for the Radiation Oncology Academic Development and Mentorship Assessment Project (ROADMAP) was sent to 1031 radiation oncologists employed at an ACGME-accredited residency training program and administered using Research Electronic Data Capture (REDCap).

Data collected included demographics, presence of mentorship as well as the nature of specific mentoring activities.

Productivity metrics, including number of publications, number of citations, *h*-index, and date of first publication were collected for each survey respondent from a commercially available online database (Web of Science, Thompson Reuters- v5.9), and m-index was calculated.

## Conclusions

Mentorship is widely believed to be important to career development and academic productivity. These results emphasize the importance of identifying and striving to overcome potential barriers to effective mentorship.

## References

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- 2.) Jackson VA, Palepu A, Szalacha L et al. "Having the right chemistry": a qualitative study of mentoring in academic medicine. *Acad. Med. J. Assoc. Am. Med. Coll.* 2003; 78:328-334.
- 3.) Levy AS, Pyke-Grimm KA, Lee DA, et al. Mentoring in Pediatric Oncology: A Report from the Children's Oncology Group Young Investigator Committee. *J. Pediatr. Hematol. Oncol.* 2013;35:456-461.
- 4.) Ries A, Wingard D, Gamst A etl. Measuring faculty retention and success in academic medicine. *Acad. Med. J. Am. Med. Coll.* 2012;87:1046-1051