

Clinical Investigation: Education

A Profile of Academic Training Program Directors and Chairs in Radiation Oncology

Lynn D. Wilson, MD, MPH,* Bruce G. Haffty, MD,[†] and Benjamin D. Smith, MD[‡]

*Department of Therapeutic Radiology, Yale University School of Medicine, Smilow Cancer Hospital, New Haven, Connecticut, [†]Department of Radiation Oncology, The University of Texas MD Anderson Cancer Center, Houston, Texas, and [‡]Department of Radiation Oncology, UMDNJ-RWJMS, Cancer Institute of New Jersey, New Brunswick, New Jersey

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Summary

The data provided offer basic information characterizing several factors that are associated with the program directors and chairs in addition to information regarding training programs from which they received their training. The information may be of interest to individuals considering leadership positions, and programs interested in establishing benchmarks for leadership positions. These findings facilitate evaluation of leadership trends over time and between specialties

Purpose: To identify objective characteristics and benchmarks for program leadership in academic radiation oncology.

Methods and Materials: A study of the 87 Accreditation Council for Graduate Medical Education radiation oncology training program directors (PD) and their chairs was performed. Variables included age, gender, original training department, highest degree, rank, endowed chair assignment, National Institutes of Health (NIH) funding, and Hirsch index (H-index). Data were gathered from online sources such as departmental websites, NIH RePORTER, and Scopus.

Results: There were a total of 87 PD. The median age was 48, and 14 (16%) were MD/PhD. A total of 21 (24%) were female, and rank was relatively equally distributed above instructor. Of the 26 professors, at least 7 (27%) were female. At least 24 (28%) were working at the institution from which they had received their training. A total of 6 individuals held endowed chairs. Only 2 PD had active NIH funding in 2012. The median H-index was 12 (range, 0-51) but the index dropped to 9 (range, 0-38) when those who served as both PD and chair were removed from the group. A total of 76 chairs were identified at the time of the study. The median age was 55, and 9 (12%) were MD/PhD. A total of 7 (9%) of the chairs were female, and rank was professor for all with the exception of 1 who was listed as "Head" and was an associate professor. Of the 76 chairs, at least 10 (13%) were working at the institution from which they received their training. There were a total of 21 individuals with endowed chairs. A total of 13 (17%) had NIH funding in 2012. The median H-index was 29 (range, 3-60).

Conclusions: These data provide benchmarks for individuals and departments evaluating leadership positions in the field of academic radiation oncology. Such data are useful for evaluating leadership trends over time and comparing academic radiation oncology with other specialties. © 2013 Elsevier Inc.

Reprint requests to: Lynn D. Wilson, MD, MPH, Department of Therapeutic Radiology, Yale University School of Medicine, PO Box 208040, Smilow LL 507, New Haven, CT 06510. Tel: (203) 737-1202; FAX: (203) 785-2673; E-mail: Lynn.wilson@yale.edu

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Introduction

Radiation oncology has experienced enhanced popularity over the past 15 years, with expansion in the number and size of academic departments with training programs, but relatively little has been published regarding variables associated with departmental leadership (1). Understanding more about these details could potentially provide information for comparison between radiation oncology and other specialties, and could be of use to those aspiring to or considering such leadership positions. We sought to describe the basic characteristics and variables related to the training PD and chairs of academic departments with training programs, for descriptive informational purposes.

Methods and Materials

At the time of the study (2012), there were a total of 87 residency training programs approved by the Accreditation Council for Graduate Medical Education (ACGME) “for current academic year and those newly accredited programs with future effective dates (year ending June 30, 2013)” (2). Each program had a PD identified by the ACGME. Information regarding age, gender, original training department, highest degree, rank, and endowed chair assignment for PD and chairs was evaluated from online searches of departmental websites and other sites available to the public, and freely available. Information regarding National Institutes of Health (NIH) funding was obtained through the NIH RePORTER system (3), and Hirsch index (H-index) (4) was obtained through the author search feature on Scopus (5).

H-index is the number of manuscripts that have been cited at least that many times and is considered an indication of academic productivity. For example, if 10 manuscripts have each been cited at least 10 times, the H-index would be 10. If 10 manuscripts have each been cited at least 20 times, the H-index is still only 10. If 20 manuscripts have each been cited only 10 times, the H-index is 10.

The data and information were then tabulated, and descriptive statistics were evaluated for PD and chairs of the ACGME training programs. If a program included multiple hospitals and potentially multiple chairs, only 1 chair was selected to be associated with the training program for the purposes of this study. In this case, if the PD was also 1 of the chairs, then this person was designated as the overall chair of the program.

A request for exemption was granted by the institutional Human Investigation Committee.

Results

Program directors

There were a total of 87 PD, and information regarding the variables just described was available for at least 80%, depending on the variable under study. A total of 10 of the 87 PD also served as chair of the department. The median age was 48, all had an MD degree or the equivalent, and 14 (16%) were MD/PhD. A total of 21 (24%) of the PD were female, and rank was distributed as follows: instructor, 2; assistant professor, 21; associate professor, 22; and professor 26. Of the 26 professors, at least 7 (27%) were female. Of the 87 PD, at least 24 (28%) were working at the institution from which they had received their training, and at least

8 (9%) had the additional roles of vice chair, associate chair, or medical director. A total of 6 individuals held endowed chairs as identified by departmental websites. Only 2 PD had active NIH funding in 2012 (Table 1).

The median H-index was 12 (range, 0-51) but dropped to 9 (range, 0-38) when those who served as both PD and chair were removed from the group.

Regarding the institution where PD received their training, and using a minimum of 2 PD from a given institution, the following 17 training programs represented the institutions that trained 59% of the PD at the time of the study: Harvard (Massachusetts General Hospital in combination with the former Joint Center Program, now the combined Harvard Radiation Oncology Training Program), 7; University of Chicago, 5; University of California, San Francisco, 4; University of Florida, 4; Cleveland Clinic Foundation, 3; Loyola University, 3; University of Pennsylvania, 3; Washington University, 3; Yale-New Haven Medical Center, 3; Albert Einstein College of Medicine, 2; William Beaumont Hospital, 2; University of Cincinnati, 2; Thomas Jefferson University, 2; Mayo Clinic College of Medicine, 2; Medical College of Wisconsin, 2; University of Virginia, 2; and University of Wisconsin, 2.

Chairs

A total of 76 chairs were identified. Three departments were conducting active searches for chairs, and identification of the current chair was not publicly available for several departments. Information regarding the variables just described was available for at least 80% of chairs, depending on the variable under study. The median age was 55, all had an MD degree or the equivalent, and 9 (12%) were MD/PhD. A total of 7 (9%) of the chairs were female, and rank was that of professor for all with the exception of 1, who was listed as “Head” and was an associate professor. Of the 76 chairs, at least 10 (13%) were working at the institution from which they had received their training. A total of 21 individuals held endowed chairs as identified by departmental websites. A total of 13 (17%) had NIH funding in 2012. The median H index was 29 (range, 3-60).

Regarding the institution where chairs had received their training, and using a minimum of 2 chairs from a given institution, the following 14 training programs represented the institutions that trained 62% of the chairs at the time of the study: Harvard (Massachusetts General Hospital in combination with the former Joint Center Program, now the combined Harvard Radiation

Table 1 Chair and program director characteristics

Characteristic	Program directors	Chairs
Total	87	76
PD and chair	10	10
Female	21 (24%)	7 (9%)
Median age (y)	48	55
MD/PhD	14 (16%)	9 (12%)
Working at institution of training	24 (28%)	10 (13%)
Endowed position	6 (7%)	21 (28%)
NIH funded	2 (2%)	13 (17%)
Median Hirsch index	9	29

Abbreviations: NIH = National Institutes of Health; PD = program director.

Oncology Training Program), 13; National Cancer Institute, 6; Thomas Jefferson University, 4; University of Chicago, 3; University of California, San Francisco, 3; University of Arizona, 2; Cleveland Clinic Foundation, 2; Duke University, 2; Mayo College of Medicine, 2; University of Pennsylvania, 2; Stanford University, 2; University of Washington, 2; Washington University, 2; and Yale-New Haven Medical Center, 2.

Chair and program director institution of training

Institutions that trained at least 2 chairs and 2 PD (note that chair and PD are the same individual in some cases) are as follows: Harvard (Massachusetts General Hospital in combination with the former Joint Center Program, now the combined Harvard Radiation Oncology Training Program), 13 chairs/7 PD; University of Chicago, 3/5; University of California, San Francisco, 3/4; Thomas Jefferson University, 4/2; Cleveland Clinic Foundation, 2/3; University of Pennsylvania, 2/3; Washington University, 2/3; Yale-New Haven Medical Center, 2/3; and Mayo College of Medicine, 2/2 (Table 2).

Discussion

These data provide basic information regarding some of the characteristics of current PD and department chairs. The data serve only as a simple “snapshot” for those currently in leadership positions and by no means take into consideration other objective factors or more intangible attributes. Programs grow, may change in quality, and have changes in leadership and philosophy. Leadership is often a dynamic process, with departments taking different directions based on the perceived needs of the department and institution at a given time.

The data provide several interesting findings. A total of 10 individuals serve the dual role of PD and chair, and 16% of the PD versus 12% of the chairs were MD/PhD. Women constituted a higher proportion of the PD, at 24%, compared with 9% for chairs. Rank was relatively evenly distributed among the PD. Age was lower for PD than for chairs, and this would likely be expected, given the experience usually required of those considered for chair positions.

The H-index is used by many in an effort to more objectively document the productivity of a faculty member. It is often considered in the promotions process or in the endeavor to make a direct comparison between 2 faculty members' productivity.

There are several issues with the H-index, though, that should be considered. The index does not take into account the subject matter at hand and the contribution of any particular author, and authorship position is not accounted for. Despite these issues, it remains an objective benchmark for academic productivity within and across specialties.

In a study published in 2009 by Choi et al (6), the H-index was evaluated for faculty at radiation oncology training programs in the United States. The 50th percentile H-index for all faculty was 6, the median for 11 female chairs was 15, and the median for male chairs was 19. The authors also found that there was a “breakpoint” between senior and junior faculty, with the breakpoint being an H-index of 15. In our analysis, the median chair H-index seems significantly higher at 29. This is likely a function of the period of time under study. Scopus analyzes H-index based on publications from 1996 onward, so 5 additional years in total are captured in the current report, compared with the report by Choi et al (6) that reviewed the H-index with a sample through 2007. A study more recently published by Svider et al (7) reveals interesting comparisons. The authors analyzed the H-index for otolaryngology, and the sample was inclusive of 2012, which provides a similar time reference to our study. A random sample of 50 residency programs was used, and the H-index calculated for otolaryngology faculty from these programs. The authors found the following H-index by rank: assistant professor, 4.62; associate professor, 8.13; professor, 15.6; and chairperson, 16.4. The authors then selected 20 chairpersons from the same “set” of institutions used in their otolaryngology analysis. The H-index was then determined for chairpersons from neurosurgery, otolaryngology, orthopedic surgery, general surgery, internal medicine, anesthesiology, and radiology at 20 institutions, which were selected randomly. The H-index for the chairpersons was as follows: general surgery, 27.8; internal medicine, 24.6; neurosurgery, 20.3; orthopedic surgery, 19.4; otolaryngology, 15.8; radiology, 15.2; and anesthesia, 12.3. Our data, from a larger sample, and not randomly selected, reveal a median H-index of 29 for radiation oncology chairs. The mean from our data for comparison purposes was 28. Hence, the mean H-index for chairs of radiation oncology likely tracks very closely with those chairs from general surgery and slightly higher than chairs of internal medicine.

Gender inequality remains an important issue, and the gap in gender equity for the leadership positions in our study is substantial. This may change in the future because there is somewhat more gender equity among current trainees and recent graduates (8).

Conclusions

The information may be of interest both to individuals considering leadership positions and to programs interested in establishing benchmarks for leadership positions. These findings also facilitate the evaluation of leadership trends over time and between specialties.

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Table 2 Institutions that trained at least 2 chairs and 2 program directors

Institution	Chairs	Program directors
Harvard	13	7
University of Chicago	3	5
University of California, San Francisco	3	4
Thomas Jefferson University	4	2
Cleveland Clinic	2	3
University of Pennsylvania	2	3
Washington University	2	3
Yale School of Medicine	2	3
Mayo College of Medicine	2	2

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