

Title: Impact of Advanced Clinical and Translational Research Educational Programs on Oncology Specialties and Career Development

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Background: The Clinical and Translational Science Award (CTSA) Program supports more than 50 US medical research institutions with aims of training, promoting and developing future translational science researchers with particular emphasis on advanced Clinical and Translational Research (CTR) education. No prior studies have evaluated career development in oncologists who have completed CTR training.

Methods: With IRB approval, we conducted a survey study of U.S.-based Hematology/Oncology (H/O), Radiation Oncology (RO), and Surgical Oncology (SO) members of the American Society of Clinical Oncology who completed CTR training. Data was anonymized and collected through Research Electronic Data Capture (REDCap). Outcomes were compared using Chi-square test for frequency data.

Results: We received 225 survey responses (62.1% H/O, 23.3% RO, 13.2% SO, 1.4% others). About 28.4% (n=64) of the respondents had PhD/Master's degree in CTR (Group A) compared to 71.6% (n=161) with graduate certificate/non-degree granting courses in CTR (Group B). Specialty ratio was equally distributed between groups. Overall, 79.7% vs 57.5%; P<0.001 of respondents worked in academia (55.2% with tenure track positions). 49 different CTSA Programs throughout the U.S. were represented. In terms of impact with new research projects, ability to secure funding and opportunities for multidisciplinary collaboration, satisfaction with CTR training was higher among Group A compared with Group B (P<0.001; P<0.01; P<0.01 respectively). In terms of research output, higher satisfaction was seen in Group A (67.2% vs 47.4%; P<0.01), however total publications per year were not statistically significant (P=0.135). Usefulness of a CTR degree on career advancement, a difference of 50.0% vs 19.1%; P<0.001 was noted. Similarly, usefulness regarding new job opportunities and return-on-investment also favored Group A (P<0.001). Overall satisfaction with training was significantly higher in Group A (73.4% vs 48.7%; P=0.004).

Conclusions: The study is first to report satisfaction ratings for CTR training among oncology specialties. Although no significant difference was observed in publication output, those with higher levels of advanced degrees were more satisfied with their CTR training, and viewed it as more impactful to career advancement and research productivity. The evidence presented is useful for informing career development for oncology residents and fellows offered CTR degrees during their training.