

**2014 CaRES Evaluations Completed by Interns
N=43 (98% of 44 Interns) Responded**

How many CaRES internships have you done with us at UAB prior to this summer?

Responses	Frequency	N=43
0	34	
1	08	
2	01	

Please rate how well your preceptor...

5=Excellent 4=Good 3=Neutral 2=Fair 1=Poor

	Mean	N
Gave you the orientation and assistance you needed to do your internship.	4.49	43
Showed interest in your progress learning research in this area.	4.42	43
Was available to supervise, assist, or advise you.	4.37	43
Demonstrated an understanding of the goals and objectives of the CaRES program.	4.47	43
Made clear his/her expectations of you as an intern.	4.53	43

Please rate how well the CaRES administrators and staff...

5=Excellent 4=Good 3=Neutral 2=Fair 1=Poor

	Mean	N
Explained to you how the program was to work.	4.65	43
Responded to your questions or concerns.	4.60	43
Clearly outlined expectations for you as an intern.	4.63	43

Please tell us how much the CaRES program helped you to...

5=Excellent 4=Good 3=Neutral 2=Fair 1=Poor

	Mean	N
Build your overall knowledge of the particular research area you worked in.	4.35	43
Build your overall knowledge of scientific methods and the research process.	4.44	43

Please give us your overall assessment of our program.

5=Excellent 4=Good 3=Neutral 2=Fair 1=Poor

	Mean	N
How would you rate the quality of your overall educational, research, and training experience provided by the CaRES program?	4.42	43

Please tell us whether you agree or disagree with the following statements...

5=Strongly Agree 4=Agree 3=Neutral 2=Disagree 1=Strongly Disagree

	Mean	N
Based on your prior education, experience, and skills, you were well-matched with your research project.	4.33	43
You had a positive research relationship with your preceptor.	4.67	43
Your preceptor should be approved again to oversee a CaRES intern.	4.67	43
Your stipend was adequate.	4.67	43
Your hours were flexible.	4.67	43
Your internship was an effective way to obtain a short training experience in cancer research.	4.42	43

The CaRES seminar was an effective way for you to communicate your research activities.	4.09	43
The CaRES seminar keynote presentation was a valuable component of the seminar.	4.02	43
The CaRES seminar keynote speaker was effective in providing useful information.	4.00	43
You interacted with people with whom you could collaborate on future research.	4.12	43
You are likely to pursue a career in cancer research once you leave school.	3.88	43

The CaRES program helped me to _____ my career plans or path when it comes to cancer research. (Choose all that apply)

	Frequency	N
	n (%)	
“identify”	10 (23.3)	43
“solidify”	10 (23.3)	43
“refine”	12 (27.9)	43
“narrow”	10 (23.3)	43
“eliminate options from”	10 (23.3)	43
“decide to change”	1 (02.3)	43

State the degree to which your CaRES internship experience helped you improve . . .

3=Greatly enhanced 2=Moderately enhanced 1=Somewhat enhanced 0=Did not enhance

	Mean	N
Your general writing skills	1.47	43
Your scientific writing skills	1.70	43
Your ability to perform laboratory procedures	2.09	43
Your knowledge of research design	2.42	43
Your data analysis skills	2.09	43
Your knowledge about doing research in an academic setting	2.37	43
Your knowledge about acquiring grants and funding	1.70	43

How will you disseminate the results of your CaRES research project?

3=Already Submitted 2=In Progress 1=Being Planned 0= Not Applicable / No Reply

	3	2	1	0
Use your project as the basis for a thesis or dissertation.	0	1	3	39
Make an oral presentation at a professional meeting.	2	3	9	29
Present a poster at a professional meeting.	9	3	12	19
Draft and submit a manuscript for publication.	1	15	16	11

End of Statistical Summary

Please see a summary of themes of student intern comments on the following pages.

2014 CaRES Intern Commentary for Selected Questions

For the statement, “The CaRES program helped me to _____ my career plans or path when it comes to cancer research,” the students were asked to choose one or more of these words or phrases to fill in the blank: **identify, solidify, refine, narrow, eliminate options from, or decide to change**. The distribution of responses was quite uniform (see above), with the exception of “decide to change” which was chosen by only one student. The students were also asked to explain their choices. The student intern commentary for this question is presented *verbatim* other than for the deletion of identifiers.

*The project I participated in helped me **solidify** how much I enjoy research, and its steps increased my eagerness to know the outcome and how to apply it. It helped me **eliminate some options** and made my path choices more clear.*

I have always been interested in cancer research, but the CaRES program truly helped me strengthen my interest in cancer research.

Now that I have more experience with bench work, I'd like to try clinical research and see if it is more appealing.

Doing research through CaRES increased my interest in cancer research, and it's an area that I can see myself doing more studies in as a future physician.

*I had originally **eliminated** cancer research from my idea of my career path. However, with CaRES as well as with other experiences I am now **reconsidering** cancer research as an option.*

*I believe the CaRES program helped me **identify** my interest in cancer research because it allowed me to learn about the research that not only my preceptor does but what other students participating in the program as well were doing.*

*I think that the CaRES program helped me **narrow down** my career plans because it provided me with an insight into the field of dermatology and immunology, and I think that this is something that, if at all possible in the future, a field I would like to pursue because I enjoyed my research experience.*

Having the opportunity to be involved in clinical cancer research has been a great motivator for me as I progress through medicine. Being able to meet and interact with our patients at UAB makes me want to choose a field of medicine in which I can be helping treat them for the rest of my life.

After this summer I would definitely prefer to pursue a career in cancer research, but beggars can't be choosers with the job market the way it is.

I am going on with my MPH to become a Physician Assistant. I would love to continue working with cancer research as well as working with cancer clinically. I am really interested in working with HPV and cervical cancer along with global health impacts.

Prior to CaRES, I did not have any experience with cancer research and CaRES allowed me the opportunity to get experience in cancer research which I would like to continue in.

After participating in a research setting, I have a better idea of the types of tasks or research projects I would like to be involved in.

If I participate in cancer research in the future, it will likely be clinical research rather than bench-top research.

*Working with [my preceptor] and her team opened my eyes to a whole new area of cancer research and I enjoyed the learning experience. This opportunity **solidified** my career plans in cancer research.*

While the research I conducted was interesting, I realized during my internship that it does not fit my personality and that I am much more suited to medicine practiced in a clinic setting rather than an academic setting.

I know I would like to do some form of research in my career, but I do not want to solely be a researcher. I want to have patient interaction as a physician.

My part in the research for this internship was enjoyable and I would like to include this type of research in my future scientific goals.

Before working in the CaRES program, I had not had any experience performing bench work research. This summer gave me valuable experience in bench work research and I have a great appreciate for the effort that goes into bench top research. However, if I continue to do research in cancer, I would prefer to work more directly with patients/people.

*It helped **refine** my choice.*

I've been working with prostate cancer for a couple of years. This year is another step towards seeing what urology pertains to.

I am not certain how cancer research will play into my future, but CaRES allowed me to see how research in general will fit in my future plans of being an academic physician. I'm pretty certain that I prefer the clinical side of research more than the wet lab after this experience, but I feel like I need some more time to decide exactly what I want to do with my future.

*This experience reinforced my desire to better understand biological mechanisms and led to me **switching** into a master's program that better fit my interests and goals. I am very happy that I made the decision to change programs.*

*The program helped me to **identify** that doing cancer research is highly compatible with my interest in research on social support and caregiver issues.*

I realized how important the environmental researcher is in the realm of cancer research. I have looked into opportunities to join the team at various cancer research centers; however no openings have appeared yet. I will continue to look into these centers. [I am] unsure on details at this time.

*Being a part of the CaRES program helped me further **narrow** my career plans when it comes to cancer research. After conducting research on breast cancer, prior to the CaRES program, and conducting research with glioblastomas, I have become more interested in both types of cancers. However, the program helped me **eliminate the option** of conducting research that is heavily focused on bioinformatics or other computer science related fields.*

I've always been interested in potentially marketable biomedical discoveries. I am hopeful that this summer project allows me to have the chance for that.

I know I want to be a physician, but I was not sure what type. Doing cancer research with CaRES sparked my interest in potentially being an oncologist and doing research in older cancer patients/survivors.

I am considering primary research more as it is involved in cellular pathways that may relate to cancer.

I had an interest in radiation oncology upon entering medical school, primarily because of my interest in cancer and in physics. This was a great project that definitely furthered my interest in radiation oncology and research.

*I have always been interested in cancer but wasn't quite sure from what particular discipline in medicine. This experience helped me **refine** this idea.*

After this experience, I want to further explore clinical research in general to determine if I could incorporate it into my career plans.

*It helped **narrow** my career plans since it provided insight on potential careers that dealt with investigating environmental contaminants and cancer rates.*

I already planned to pursue a career in cancer research. I now know that it will not be in radiation oncology.

*The CaRES experience is flexible in that it allows one to "sample" different types of cancer research projects. It also allows (as in my case) one to **focus** specifically on one well defined area of research, and serves more like project funding.*

Based on my experience within the CaRES program I am pretty sure that I want to do some form of cancer research in the future. I am not really sure what field it will be in, but the treatment and research of cancer is pretty firmly in my plans.

Disciplines such as oncology have become an interest.

I believe I will be better suited to work in the clinical field of research. I think the help given by my preceptor as well as the PhD students working in my lab was exceptional.

*While I enjoyed my project this summer, I was able to **identify** other related areas of cancer research which piqued my interest.*

I really enjoy clinical research.

The CaRES experience this past summer was amazing. I learned much new information regarding clinical research in the field of gynecology-oncology and I was able to meet some amazing faculty members within the department.

Please provide details regarding disseminating your CaRES research project results by means of a thesis or dissertation, a presentation at a professional meeting; or a publication (give the citation if available).

None of this year's students mentioned plans for using CaRES data for a master's thesis or dissertation. Many students stated that they planned to make a poster presentation at the UAB Comprehensive Cancer Center Annual Research Retreat, at UAB Medical Student Research

Day, or at a professional meeting such as the International Cancer Education Conference, the AMA Interim Meeting, or the ASTRO meeting. Several students stated progress on preparing a peer-reviewed manuscript for publication. [When these citations are available CaRES will add them to our website lists.]

What do you consider to be the STRENGTHS of your internship? Please mention learning experiences that were especially useful or outstanding.

In descending order, four areas of strength were mentioned by many respondents: the excellent mentorship they received; the excellent way in which the CaRES program was run; the camaraderie they developed with fellow members of the research team, making them feel that they were truly part of the team; and the new scientific techniques or procedures they learned on the job. Some students commented on the wide diversity of cancer research projects available through CaRES, and stated that they intentionally chose a CaRES project in an area of cancer research outside their comfort zone. Other strengths mentioned were having important expectations made of them; learning how to meet hard deadlines; flexibility of work hours; learning to communicate effectively about their projects; bonding with their preceptors; the opportunity to work on all phases of their project; learning to cope with results that were unexpected or with experiments that did not turn out right; the opportunity to polish their skills in data analysis; and working long hours (said by two students to be a strength!).

What do you consider the WEAKNESSES of your CaRES internship? Please mention anything that you were asked to do that you should not have been asked to do; and comment about things that you wanted to learn or expected to learn but did not learn.

The most common response was that there were no weaknesses to speak of. When weaknesses were mentioned, the most common response was frustration that their term of work was too short, limiting what they could accomplish. Three students did not like the “rolling enrollment” process used by the CaRES program, and two others stated that their project turned out to be not exactly what they wanted (i.e., it was “too clinical” or “too much basic science”) although they realized that they willingly matched to their projects. A few students stated that their summer work was monotonous and that they were under-utilized, and a few others complained about having to work on multiple projects instead of just one. Two students were upset that the primary mentor was sometimes too busy to spend time with them, but were pleased that a co-investigator had been assigned to shepherd them [as CaRES requires as a “back-up”], and did a great job. A few students stated too little structure in their duties; and a few others stated that there was too much structure! Two students wanted to learn grant proposal writing but understood that most CaRES projects are underway before the summer begins so that there is no immediate need to write grant proposals. Only two students stated concerns about a payroll issue, an area that had been problematic two years ago.

What SPECIFIC RECOMMENDATIONS do you have to improve the CaRES internship program regarding publicity, website organization, the interview process, the self-matching process, payment method, or evaluation process?

The most common response was that there were no changes needed, that the program worked fine as is. A few students recommended that the program be publicized earlier in the academic year, or that social media be used to publicize CaRES. A few students recommended re-organizing the CaRES Research Day, suggesting that the activities be split into two half-day sessions instead of holding a full-day seminar. A few students suggested that all project descriptions be posted on the CaRES website on a common date (say, February 1) so that all students could read about all projects at once, rather than having to decide whether to wait to see any late-submitted projects that might dribble in. Two students stated that they accepted the offer of a specific CaRES project, and then a week later a new project was posted on the website that they thought they may have preferred. However in both instances the students said that the project that they did turned out fine and that they enjoyed it. One student suggested that CaRES offer a writing workshop and more detailed poster presentation instructions.

What are your career plans? Do you plan to practice medicine, practice public health, do research, do cancer research in particular?

All participating medical students stated their intentions to practice medicine, with about one-third of them stating the desire to incorporate research into their career plans (with a few specifying cancer research plans in particular). Participating public health students plan to finish their degrees and enter medical school or another clinical program, and if possible do some research, possibly cancer research. Several students stated interest in health disparities research.

THE END