

Research Retreat 2012

Each year our faculty come together to collaborate on research efforts. This multidisciplinary collaboration encourages conversations to help our research efforts evolve while strengthening the faculty fellowship.



Pictured from left to right (first row): Ruby Meredith, M.D., Ph.D., Jennifer De Los Santos, M.D., Lee Burnett, M.D., John Fiveash, M.D., James A. Bonner, M.D., Xingen Wu, Ph.D., Robert Kim, M.D., Eddy Yang, M.D., Ph.D. (second row) Christopher Dobelbower, M.D., Ph.D., Sui Shen, Ph.D., Kimberly Keene, M.D., Markus Bredel, M.D., Ph.D., Jun Duan, Ph.D., Christopher Willey, M.D., Ph.D., Richard Popple, Ph.D., Sharon Spencer, M.D., Rojymon Jacob, M.D.

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Going Global with the Chairman

Nicaragua



he Bonner family went to Nicaragua over Spring Break. They joined a group from Briarwood School that went to Nicaragua to deliver primary medical care in several clinics in underprivileged areas. Patrice, Drew and Jim Bonner went on the trip. Dr. Bonner saw patients each day, as the group moved from one small rural community to another. Patrice helped in the pharmacy and the eye glasses area, as well as coordinated the meals for the group. Drew participated in playing sports with the young kids from the local communities until he broke his arm halfway through the trip. Following this breakage, Drew spent the rest of the time helping in the eye glasses clinic. The Bonners felt that the experience was very rewarding and cherished being able to give a little bit of help to these folks who have minimal access to healthcare. The group was mostly composed of students, and it was very inspiring to see the students work with the young kids in the area. It is truly sad to see so many people that have almost no access to healthcare. However, the people were extremely grateful for anything that they could do.

Going Global with the Chairman

Wolfsberg Castle, Switzerland

hree translational research faculty participated in the biannual International Wolfsberg meeting in June! We interacted with some of the top scientists in our field and it was in a relaxed environment except for the German scientist who grilled Dr. Yang and Dr. Bonner (more Bonner than Yang) on their posters. She basically found fault with every comment made. Other than her interrogation of our group, the meeting was awesome with intense biology all day! The retreat atmosphere bred great discussions. Norm Coleman chatted with us about his work and our projects. He lamented the current funding situation - it was great to commiserate with the head of the radiobiology unit at the NCI. He also discussed the NCI's outreach to third world countries which was fascinating. With Dick Hill of the Princess Margaret Hospital, we discussed the extreme sorrow we were experiencing regarding Dr. Kian Ang's untimely death - a sentiment that everyone at the meeting was feeling. This feeling certainly made one realize Dr. Ang's research and personal contributions to the field. He will be greatly missed. We discussed new U.S. and DAHANKA trials with Jens Overgaard -Editor of the green journal. He is also quite the comedian! All and all, we grew closer to many colleagues in our small field and we developed new ideas for collaborations and future projects.



CLINICAL TRIALS: RESPONDING TO CHANGE

JENNIFER DE LOS SANTOS, M.D.

he execution of large randomized clinical cancer research trials in the United States occurs, in general, through two groups: the pharmaceutical industry and the government. The pharmaceutical industry sponsors and conducts studies of drugs they are developing for approval from the Food and Drug Administration (FDA). The government conducts cancer trials through the National Cancer Institute (NCI). Over the past 50 years, nine adult cancer cooperative research groups have emerged and been funded by the NCI.





The clinical trials these groups perform remain one of the primary ways we define the benefit of new cancer treatments in patients.

The clinical trials these groups perform remain one of the primary ways we define the benefit of new cancer treatments in patients. However, in recent years stakeholders have expressed concern that the existing system was falling short of "its potential to conduct the timely, large-scale, innovative clinical trials needed to improve patient care." Thus, the NCI asked the Institute of Medicine to review its existing program and make recommendations about improving the system. In April 2010, the Institute of Medicine issued a report that recommended changes aiming to transform the Cooperative Group Program into a dynamic system that efficiently responds to emerging scientific knowledge; involves broad cooperation of stakeholders; and leverages evolving technologies to provide high-quality, practice-changing research. The program should maintain a robust, standing cancer clinical trials network by preserving its historical strengths while improving components that are not working well. Four overarching goals should guide improvement efforts:

- Improving the speed and efficiency of the design, launch, and conduct of clinical trials
- Making optimal use of scientific innovations
- Improving selection, prioritization, support, and completion of clinical trials
- Fostering expanded participation of both patients and physicians

In response, the NCI announced its plan to consolidate the program to a maximum of four adult groups. The four new groups formed through mergers of the previous nine are as follows:

- "NRG" [as in NSABP (National Surgical Adjuvant Breast and Bowel Project), RTOG (Radiation Therapy Oncology Group), and GOG (Gynecologic Oncology Group) and pronounced "energy"]
- "Alliance" [ACOSOG (American College of Surgical Oncology Group), NCCTG (North Central Cancer Treatment Group), and CALGB (Cancer and Leukemia Group B)]
- ECOG (Eastern Cooperative Oncology Group) –ACRIN (American College of Radiology Imaging Network)
- SWOG (Southwest Oncology Group).

CLINICAL TRIALS: RESPONDING TO CHANGE

JENNIFER DE LOS SANTOS, M.D.

The existing nine groups will continue their work through their separate entities until March of 2014, when funding for the new merged groups takes place. The new network will be renamed the National Clinical Trial Network (NCTN), and while operations and culture from the existing nine groups will merge, ongoing clinical cancer studies will continue within the new network.

In which groups has UAB been an active participant?

UAB was a founding member of GOG and currently performs studies through RTOG, GOG, ECOG, SWOG, and ACRIN. They have also had previous affiliations with ACOSOG and NCCIG. While most institutions have previously held main member affiliations with only one of the major medical oncology groups (either CALGB, SWOG, NCCTG, or ECOG), one of the goals of the new system is to encourage collaborative accrual across all four groups. UAB has recently increased its main member affiliations to include both SWOG and ECOG. To enhance accrual to NCTN trials at major academic medical centers, the NCI provided the opportunity to apply for additional grant funding for patients enrolled on NCTN trials. Approximately 30-40 grants will be funded across the country and applicants, including UAB, will receive notification of award status in June.

Which cooperative groups address trials of patients treated with radiation therapy?

RTOG is the only adult clinical cancer research group that focuses on treatment of cancer with radiation therapy. This will remain a focus through the new NRG group. UAB has been an active full member institution of RTOG for 26 years and a major contributor in accrual to trials as well as scientific leadership and developing and leading national clinical trials. Currently, we have 17 RTOG studies opened across all tumor sites (head and neck cancer, breast cancer, GI cancer, lung cancer, brain tumors, etc). We have seen a steady increase in accrual to RTOG protocols across our group since 2009 when we enrolled 19 patients on radiation studies. Numbers for 2010, 2011, and 2012 were 22, 22, and 31 respectively, and we have already enrolled 9 this year, with a goal of enrolling 40 patients onto cutting edge radiation treatment protocols by year's end. Several exciting new protocols recently opened including RTOG 3501, the TRYHARD study, which is a phase II, randomized study of lapatinib (TYKERB®) for non-HPV locally advanced head and neck cancer with concurrent chemoradiation. This study opened March 20, 2013. RTOG 1119, a phase II randomized study of whole brain radiotherapy in combination with concurrent lapatinib in patients with brain metastasis from HER2-positive breast cancer, also opened November 2, 2012.



SPOT LIGHT: SOCIAL SERVICES









Our interest goes beyond just the patient's physical care.

ancer treatment can affect all aspects of a person's life. Each person accepts this challenge in a unique way. UAB Radiation Oncology Social Services is part of the multidisciplinary team that provides support services to our patients and their families. Our interest goes beyond just the patient's physical care. We also want to provide There is a Radiation Oncology Support Group for emotional support and promote social well-being for the patient as well as the patient's family. Social worker Janie Rothe can aid patients assessing their personal situation, providing emotional support, and determining which local and national resources are available to the patient and family. Social Services can also assist in navigating the medical system and other very practical matters to ensure completion of radiation therapy.

Preserving a patient's emotional and mental health is critical to preserving a patient's physical health. Social services coordinate with many different programs that can provide support and encouragement while the patient undergoes radiation therapy. In some cases, lodging and transportation resources are available.

Among the resources available are:

The Resource Library

At the Hazelrig-Salter Radiation Oncology Center, a treatment resource library is located just off the main waiting area. The library is qavailable to everyone and contains educational material provided by the American Cancer Society. Janie is also available to answer specific questions or requests regarding these materials.

The American Cancer Society

We are delighted to have an American Cancer Society volunteer available to meet with the patient and family to provide support and information regarding the programs offered at the American Cancer Society. Our local American Cancer Society volunteer visits twice each month.

Hand-in-Paw

Hand-in-Paw is another volunteer organization that visits daily to provide encouragement through the soft touch of trained animals.

Support Groups

patients and families. This group meets monthly and can also help provide educational information and ongoing support information to ensure a successful journey through radiation therapy.

Social services may also be able to help by:

- Reviewing lodging options for out of town/state guests.
- Assisting with transportation for those who qualify.
- Assisting with medical devices, prescriptions, and outside referrals for those who qualify.
- Providing information on advanced directives and other forms related to planning and managing your care.
- Offering guidance with insurance and financial assistance programs, including social security disability.

You may contact Janie Rothe, Social Services, by phone at (205) 975-5628 or by email at irothe@uabmc.edu to learn more about the programs and other resources available that may be beneficial to the patient.

WHAT IS MEDICAL DOSIMETRY?

HEATHER SMITH, MS, CMD, RT, (R) (T)

fter your simulation visit but before you start treatment, a medical dosimetrist will help your radiation oncologist develop a treatment plan designed specifically for you. Although medical dosimetrists are behind the scenes, they are an integral part of your radiation oncology team. The medical dosimetrist will receive data regarding your treatment plan from a number of sources and translate that data into a unique treatment plan. In

members of your radiation oncology

turn, they will coordinate with various Pictured left to right: Kim Herring, Heather Smith, Jill Caranto, Kim Dempsey, Traci Lumpkin

team to ensure you receive the absolute best care at all of our UAB Cancer Centers. With experience and technology to aid them, the medical dosimetrists will determine the best path for your battle against cancer.

Your radiation oncologist will write a prescription for your treatment plan, much like he or she would write a prescription the treatment plan could be adjusted for better outcomes, the for medication. Following that analogy, the medical dosimetrist would act much as a pharmacist would to help you get that prescription filled. Using the imaging from the simulation CT scan and the radiation oncologist's prescription, the medical dosimetrist will use a computer to help design your treatment plan. That plan will deliver the prescribed dose of radiation while making sure other parts of your body are spared exposure to radiation. Based on the type and location of a tumor, the radiation doses may be delivered either internally or externally. The treatment may also be curative or help manage pain.

An important aspect of creating the treatment plan is preventing injury to adjacent organs while delivering an effective dose of radiation to the treatment site. In the early years of medical dosimetry, medical dosimetrists used x-rays to determine the areas to treat. Because the dosimetrist was not able to adjust the treatment area to help spare surrounding organs and since organs have different tolerance levels, the treatment would have to be delivered at lower doses to prevent injury to those organs. Now medical dosimetrists can use a three dimensional rendering of the simulation CT scan and digital reconstructions of the patient's body to determine the treatment area. The dosimetrist can control the dose of radiation going to the treatment site as well as the organs and adjust the radiation fields based on that patient's anatomy and organ dose tolerances.

Once the dosimetrist has created the treatment plan, the plan will be reviewed in a treatment planning conference. The medical dosimetrist along with physicists, physician faculty and resident physicians, attends this conference in which treatment plans are reviewed. If the review determines that

With over 150 years of accumulated experience, the medical dosimetrists at the UAB Cancer Centers stand ready to help you in your fight against cancer.

plan will go back to the dosimetrist for revision. If the plan is approved, the treatment plan is forwarded for treatment delivery.

As treatment technologies advance, medical dosimetrists have to continuously learn new treatment planning skills. Continuing education is a vital part of maintaining certification. All of the dosimetrists are certified by the Medical Dosimetrist Certification Board. Although it is not a requirement, all of the medical dosimetrists at UAB are also nationally certified radiation therapists. These certifications ensure the individuals have a thorough understanding of the significant aspects of treatment planning and delivery such as characteristics and clinical relevance of treatment machines, radiation doses, dose calculations, and tissue tolerances.

The patient's best interest is always the focus of developing a treatment plan. The advanced technology at UAB Cancer Centers helps the medical dosimetrist develop a highly customized treatment plan for the patient. These advances also allow the medical dosimetrist to design a plan with the patient's health and safety at the center of treatment. With over 150 years of accumulated experience, the medical dosimetrists at the UAB Cancer Centers stand ready to help you in your fight against cancer.

TARGETING DNA DAMAGE TO MAXIMIZE THERAPEUTIC RATIO

EDDY YANG, M.D., PH.D

urrent standard therapies for cancer patients, such as chemotherapy and radiation, act by inducing DNA damage in cells which subsequently leads to activation of cell death processes. Unfortunately, these therapies do not distinguish between normal and cancer cells. However, with the advent of targeted therapies, more specific killing of cancer cells may be achieved while minimizing treatment-related side effects. To this end, the major goals of the Yang Laboratory research program are to find novel combinations of targeted therapies that specifically kill tumors by altering the DNA repair pathways, to ultimately improve the therapeutic ratio (enhance tumor cell kill while protecting normal tissues, thereby increasing patient quality of life).



These basic and translational projects have wide applicability and rapid translation to improve outcomes and protect quality of life for many cancer patients.

Specifically, the lab has been studying cancer promoting signaling such as the epidermal growth factor receptor (EGFR) pathways that we and others have shown to regulate the DNA damage and repair processes that ultimately lead to resistance to therapy. Importantly, the Yang Laboratory has shown that by targeting the EGFR, we can enhance tumor sensitivity to DNA damaging agents using rational combination approaches to kill multiple cancer types. Additionally, we are also investigating novel ways to protect normal brain cells from radiation-induced death by augmenting DNA repair capacity in neurons without protecting cancers. This has obvious clinical impact to alleviate radiation-induced cognitive decline in patients who undergo brain radiation.

These basic and translational projects have wide applicability and rapid translation to improve outcomes and protect quality of life for many cancer patients. As evidence that these research projects are significant and with clear clinical impact, we have been awarded a number of highly competitive extramural grants, including Department of Defense, American Association of Cancer Research, Sidney Kimmel Foundation, and Gabrielle's Angel Foundation. We have also reported the results of our successful primary and collaborative research efforts in respected journals including Cancer Research, Clinical Cancer Research, Neuro-Oncology, PLoS One, Radiotherapy and Oncology, and others. Ultimately, these findings could offer a novel combination of well-tolerated targeted therapies for patients with aggressive cancers and thereby improve the therapeutic ratio and patient quality of life. If successfully translated, the overall impact of this research will be very high.

Reduce DNA repair to kill tumors

One major successful concept in the Yang laboratory involves the PARP inhibitors, a very well tolerated class of drugs taken by mouth that has been shown to target DNA repair deficient tumors. This is due to the concept of synthetic lethality: Two pathways serve as backup for each other. Inhibiting one pathway is not effective, but if the other pathway is defective such as in cancers with BRCA mutations, then tumor kill ensues while normal tissues are protected. Our goal is to broaden the utility of PARP inhibitors by inducing a contextual synthetic lethality, as only 5-7% of cancers have BRCA mutations. In particular, we demonstrated that the novel combination of EGFR and PARP inhibition has been very effective in killing multiple tumor types. Because many tumor types such as breast, ovarian, lung, head and neck, cervix, and esophagus exhibit aberrant EGFR signaling, this research has great potential to

TARGETING DNA DAMAGE TO MAXIMIZE THERAPEUTIC RATIO

EDDY YANG, M.D., PH.D.

significantly impact many cancer patients, and positive results can be rapidly translated into clinical trials.

In fact, translation to the clinic of our positive findings with lapatinib (EGFR/HER2 inhibitor) and veliparib (PARP inhibitor) in triple negative breast cancer is occurring in the very near future. In collaboration with Dr. Andres Forero, a phase I/II trial concept investigating this novel combination of ORAL drugs (without chemotherapy) in triple negative breast cancer patients has been approved by both AbbVie Oncology and GlaxoSmithKline, and funding for the trial has been secured. We are currently refining details of the trial. This is an important trial with the potential to change treatment paradigms for patients with the highly aggressive triple negative breast cancer without the use of chemotherapy. Several other clinical trials are currently "in the works." We have found novel determinants of sensitivity to PARP inhibitors without impacting DNA repair, suggesting new roles of PARP inhibitors in cancer treatment, which we are actively investigating. This is an exciting time for potential novel therapies in cancer as personalized medicine and targeted therapies are refined such that therapeutic ratio is maximized.

Enhance DNA repair to protect normal tissue

As part of maximizing the therapeutic ratio, minimizing normal tissue toxicity is also imperative. This is the other major focus of the Yang Laboratory. One organ with significant radiation-induced toxicity is the brain. Brain irradiation is standard therapy for children with brain tumors as well as with leukemias. Unfortunately, long-term survivors experience detrimental neurocognitive defects, such as memory loss, drop in IQ, and poor performance in school. One mechanism by which this brain injury may occur is damage to the hippocampal neurons, a site of learning and memory. Interestingly, we have found that lithium and inhibitors of glycogen synthase kinase-3 β (GSK-3 β) may augment DNA repair pathways and protect hippocampal neurons from radiation-induced death. The Yang Laboratory is actively investigating the mechanisms by which GSK-3 β acts to regulate DNA damage response and why inhibition of GSK-3 β enhances DNA repair without impacting tumor response to DNA damage. In fact, some reports suggest the potential of GSK-3 β inhibitors in augmenting brain tumor kill. These findings suggest GSK-3 β inhibitors can potentially be a powerful therapeutic to not only kill brain tumors but also protect normal brain. Importantly, we are designing a clinical trial to test GSK-3 inhibitors in patients receiving cranial irradiation as the first step to bringing this concept to the clinic.

Summary

In summary, the Yang Laboratory strives to understand the basic DNA repair pathways with a focus to further develop novel therapeutic combinations that can be ultimately translated rapidly to the clinic. Additionally, biomarkers of response and resistance to such combinations will be discovered with the goal to implement this into the clinic to dictate which patients are eligible for such novel therapies. Importantly, strategies to protect normal tissues will also be developed such that therapeutic index is maximized.



DR. YANG'S LABORATORY





<u>Tiffiny Cooper, MS:</u> Manager of the Yang laboratory and the animal research program. Involved in all aspects of Yang laboratory research.

<u>Anusha Anjagala, MS:</u> Research Assistant in the Yang laboratory. Involved in various aspects of Yang laboratory research.





<u>Monicka Wielgos:</u> PhD student, Cancer Biology Program. Investigating the DNA repair independent mechanisms of tumor susceptibility to PARP inhibition.

Marcela Rodriguez: UAB PREP Scholar student. Investigating the mechanisms of enhanced sensitivities of HPV associated head and neck cancers to DNA damaging agents.



Not pictured:

<u>Alexander Whitley, MD, PhD:</u> Holman Research Pathway Resident (first at UAB Radiation Oncology). Investigating novel combination DNA damaging therapies in esophageal cancers.

<u>Lisa Klepczyk, MD:</u> Clinical and Translational Science Pathway Resident. Investigating novel biomarkers of breast tumor sensitivity to DNA damaging agents.

<u>Amanda Swindall, PhD:</u> Post-doctoral fellow. Investigating the mechanisms by which GSK-3 β regulates the DNA damage response in neurons.

<u>Jennifer Stanley:</u> MD/PhD student, Cancer Biology Program. Investigating the mechanisms by which EGFR regulates homologous recombination repair in triple negative breast cancer.

CHANGING THE WORLD WITH R.O.A.R.

SARAH MOSELEY

he Southeast Cancer Foundation was founded in 2009 to fund cancer research at local and regional cancer centers. At that time, ROAR (Regional Oncology Active Research), the Foundation's volunteer fundraising committee, was eight women in the Birmingham area brought together by a common hope, a world without the devastating effects of cancer. Today, ROAR is many caring and dedicated men and women and hundreds of patrons throughout the Southeast who believe the investment we are making is already extending and improving the quality of life for cancer patients, leading to the elimination of chemotherapy, and curing cancer.

The statistics are alarming: cancer will strike 1 out of 2 men and 1 out of 3 women in their lifetime. Research dollars are critical to finding the cure. Within 4 years, ROAR has raised well over \$750,000.00 for cancer research. ROAR has funded research equipment for the new Hazelrig -Salter Radiation Oncology research labs and the ROAR Southeast Cancer Endowed Professor at the UAB Department of Radiation Oncology for personalized cancer medicine research.

ROAR is unique in that every dollar donated to the Foundation may be matched dollar for dollar by the physician/scientists in the UAB Department of Radiation Oncology. In addition, every dollar may then be leveraged for up to \$16 from federal or other external funding sources, such as pharmaceutical companies, foundations, corporations, or individuals. Our gifts are truly an investment in life-saving discoveries.

ROAR is grateful to its members and donors who have made this possible and to its honorees who have championed the cause at the four fundraising events:

"An Evening of Miracles" Honoring Coach Pat Sullivan Fleming's Prime Steakhouse August 29, 2010

"A View to a Cure"
First Annual James Bond Gala
Honoring Dr. David Bronner
Country Club of Birmingham
April 16, 2011

"The Spy Who Cured Me" Second Annual James Bond Gala Honoring Barbara Dooley The Club, February 11, 2012



Sarah Moseley, R.O.A.R. Volunteer

"GoldenCure"
Third Annual James
Bond Gala
Honoring Jerry Duncan
The Club, February 9, 2013

ROAR began with hope for a world without the devastating effects of cancer—in our lifetime.

ROAR members are planning the Fourth Annual James Bond Gala, "Diamonds and Cures Are Forever." Regular monthly meetings are generally held the 4th Thursday of every month at 11:30 a.m. Throughout the year, members enjoy the boot camp for the Gala's live auction, the membership coffee, the Christmas party, and other special events. In addition, members meet with the research scientists to learn of their progress. Several ROAR members and their friends are already benefiting first-hand from the results of their funded research.

ROAR began with hope for a world without the devastating effects of cancer – in our lifetime. We open our hearts to you and invite you to join us in all areas of our endeavors. With your support, there is no limit to what we can achieve together!

For more information, please visit www.southeastcancer.org



FACULTY ACHIEVEMENTS



Robert Kim, M.D.

Intraoperative ultrasound guided during intracavitary brachytherapy applicator placement in cervical cancer:

Schaner PE, Caudell JJ, De Los Santos JF, Spencer SA, Shen S, Kim RY. International Journal of Gynecological Cancer, 23: March 2013

In this large series, intraoperative ultrasound (IUS) guidance substantially increased the rate of successful applicator placement and diminished the rate of uterine perforation relative to historical controls. We strongly recommend the use of IUS guidance during operative intrauterine tandem placement for cervical cancer.



Eddy Yang, M.D. Ph.D.

Drs. Bonner and Yang have been awarded a preclinical grant from Bristol Myers Squibb to study a new targeted agent against the JAK/STAT pathway for head and neck cancer. Dr. Bonner has previously established in a landmark clinical trial that cetuximab in combination with radiation should be used as a standard therapy for patients with head and neck cancer rather than radiation alone. However, head and neck cancers often find ways to gain resistance to this treatment. One pathway of resistance involves the activation of the JAK/STAT Thus, they will investigate the combination of pathway. cetuximab and radiation with the addition of this novel JAK/STAT inhibitor in hopes to improve outcomes for patients with head and neck cancer.



James A. Bonner, M.D.



Ruby Meredith, M.D.

Dr. Ruby Meredith was recognized for 25 years of service at UAB.

Dr. Meredith also made the first scientific meeting presentation regarding UAB 0801 intraperitoneal therapy study to advance gynecological cancer treatments.

COMPREHENSIVE CANCER CENTER RESEARCH RETREAT

Be sure to save the date for UAB Comprehensive Cancer Center's Annual Research Retreat.

The retreat will take place **Tuesday, November 5, 2013** at the Sheraton Hotel Ballroom in Downtown Birmingham.

CAPTAIN ALBERT J. HARDY, JR. RETIRED, MONTGOMERY POLICE DEPARTMENT

Letter dated March 23, 2013

"... My wife made contact with Dr. Fiveash's executive assistant, Donell McCurdy, who went out of her way to set up an appointment for me. She is professional, efficient, very personable and we appreciate her for all of her help. Dr. Fiveash discussed my options which included watching and waiting or radiation treatment and surgery ... Upon arrival at UAB, we recognized your hospital to be the best managed / organized facility we have ever visited, and it started with the parking attendants at the Women / Infant's Facility (Warren, John and Julie), and at the Hazelrig-Salter Radiation Oncology Center (Darrell, Tina and Jeremy). These employees are so very professional, personable, and go above and beyond their duties to make each patient's experience as comfortable as possible. The check-in personnel (Ruth, Lisa and India) are professional, helpful; each have a warm smile and comfort each person they meet. We cannot say enough wonderful things about the Radiation Therapists (Karen Kirksey, Freddie Ray, Nathan Jordan, Danielle, Shashank Singh, Ronnie Hathorne, Chrystie, Debra, Jason, Pat, Leesa, Brandon, and Neatherland) and the nurses (Thomas Courtney, Sue and the others); they are all so professional, caring, courteous, and filled with compassion for each and every person whether he or she is a patient, caregiver, family member or friend. Dr. Fiveash, his attending physicians and his nurse, Thomas, are to be highly commended for their professionalism with personable and caring attitudes for each and every patient and caregiver. And last but not least, Janie Rothe, our Social Worker, is a true asset to your hospital. She is another one of your staff who truly cares about everyone she comes in contact with, and again, goes above and beyond the call of duty to help in every way possible..."

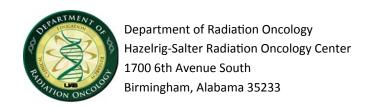
QUOTEABLE

Patients who place their trust in our care is our greatest priority. And so it is our mission to combine excellence in clinical care, research, and education toward the pursuit of curing cancer for our patients. Our experienced and knowledgeable physicians, physicists, and staff utilize the most advanced technology and techniques available to deliver a nationally recognized quality of patient care."

James A. Bonner, M.D.

Merle M. Salter Professor and Chairman

President of UA Health Services Foundation



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