NCCN Foundation Announces Fifth 2017 Young Investigator Award

The NCCN Foundation has granted its fifth Young Investigator Award for the 2017 cycle to Liqin Zhu, PhD, St. Jude Children's Research Hospital/The University of Tennessee Health Science Center, for the study titled, "Patient-Derived Tumor Spheroids for High-Risk Hepatoblastoma Drug Discovery." Dr. Zhu joins 4 additional awardees named earlier this year, representing the seventh series of NCCN Foundation Young Investigator Awards—a program initiated in 2011. The grants provide researchers at NCCN Member Institutions with funding over a 2-year period to each awardee.

"NCCN Foundation is happy to provide funding to Dr. Zhu for study of this rare childhood liver cancer. Identification of biological characteristics of high-risk hepatoblastoma indeed has the potential to aid in discovery of new treatment interventions for this understudied disease," said Marcie R. Reeder, MPH, Executive Director, NCCN Foundation. "We congratulate Dr. Zhu on her nomination and award, and look forward to her contributions to the Young Investigator Award program."

The awardees responded to a request for proposals issued by the NCCN Foundation to the NCCN Member Institutions and were nominated by their institutions. All submissions were reviewed by a multidisciplinary panel of oncology experts; the awardees were selected based on several key components, including scientific merit and study design. The studies will be managed and overseen by the NCCN Oncology Research Program (ORP).

The 2017 awardees will have the opportunity to present their findings during a future NCCN Annual Conference General Poster Session and their abstracts will be featured in *JNCCN*.

Since its inception in 2011, NCCN Foundation has provided funding to 36 US researchers through the Young Investigator Awards. On March 23 and 24, 2017, NCCN featured abstracts from the fifth series of Young Investigator Awards recipients during the NCCN 22nd Annual Conference General Poster Session in Orlando, Florida.

The 2017 NCCN Foundation Young Investigator Awards were made possible through support from AbbVie Inc., Amgen Inc., Genentech, Merck & Co. Inc., Novartis Pharmaceuticals Corporation, Takeda Oncology, and Pfizer Inc.

For more information about the NCCN Young Investigator Awards, visit NCCNFoundation.org.

NCCN "Just Bag It!" Campaign Reaches 100 Adopters Nationwide

During the launch of the campaign in November 2016, NCCN called on cancer centers and practices that deliver chemotherapy to commit to Just Bag It: The NCCN Campaign for Safe Vincristine Handling. NCCN has announced that 100 adopters have confirmed their participation in the effort. The full list is available at NCCN.org/justbagit.

As part of its mission to improve the quality, effectiveness, and efficiency of cancer care so that patients can live better lives, NCCN launched the Just Bag It! campaign to encourage healthcare providers across the United States and the world to adopt a policy to always dilute and administer vincristine in a mini IV-drip bag to prevent a deadly medical error.

"NCCN commends the efforts of the 100 cancer centers, including the 27 NCCN Member Institutions, who have demonstrated their commitment to patient safety, and we thank them for pushing our message forward," said Robert W. Carlson, MD, Chief Executive Officer, NCCN. "NCCN hopes the number of pledges will continue to climb as centers become more aware of this small change that indeed saves patients' lives."

Prior to the launch in November, all 27 NCCN Member Institutions had adopted policies in line with the guidelines, which are also recommended by the Institute for Safe Medication Practices, the Joint Commission, the WHO, and the Oncology Nursing Society. Since the press conference that gained local and national attention, NCCN has

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continued its campaign through e-mail and social media outreach, as well as live meetings, including the NCCN Patient Advocacy Summit, NCCN 22nd Annual Conference, and Oncology Nursing Society Annual Congress.

Vincristine is a chemotherapy agent, widely used in patients with leukemia or lymphoma, which should be administered intravenously—directly into the patient's vein. When it enters the blood, it is highly effective at blocking the growth of cancer by preventing cells from separating. However, vincristine is a neurotoxin that causes peripheral neuropathy when given intravenously and profound neurotoxicity if given into the spinal fluid, which flows around the spinal cord and brain.

Many patients who receive vincristine have a treatment regimen that includes other chemotherapy drugs that are administered intrathecally, or injected into the spinal fluid with a syringe. If vincristine is mistakenly administered into the spinal fluid, it is uniformly fatal, causing ascending paralysis and eventual death.

In 2005, NCCN Chief Executive Officer Robert W. Carlson, MD, a medical oncologist, witnessed such a tragedy with a 21-year-old patient with non-Hodgkin's lymphoma named Christopher Wibeto. Wibeto was transferred to Dr. Carlson's care after receiving incorrectly administered vincristine at another hospital. Dr. Carlson watched the young man go from having a treatable condition to deteriorating and dying over the course of 4 days. Motivated by this tragic experience, Dr. Carlson spearheaded a national effort to address this deadly error when he arrived at NCCN, enlisting the help of its Best Practices Committee, which is dedicated to improving cancer treatment protocols.

"The Just Bag It! campaign is the latest of NCCN's long-standing efforts to improve the safe use of drugs in cancer care," said F. Marc Stewart, MD, Medical Director of the Seattle Cancer Care Alliance, Member of the Fred Hutchinson Cancer Research Center, Professor of Medicine at University of Washington, and Co-Chair of the NCCN Best Practices Committee. "For more than 15 years, the Best Practices Committee has worked to ensure the highest standards of safety for patients, and we applaud the 100 adopters of this policy at their treatment centers."

To ensure that vincristine is always administered properly, NCCN has issued guidelines and updated NCCN Chemotherapy Order Templates advising healthcare providers to always dilute and administer vincristine in a mini IV-drip bag and never use a syringe to administer the medication. This precaution renders it impossible to accidentally administer the medication into the spinal fluid and greatly decreases the chances of improper dosage.

MiKaela Olsen, MS, APRN-CNS, AOCNS, an oncology nurse at The Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, one of the NCCN Member Institutions, recently spearheaded a center-wide effort to administer vincristine via mini IV-drip bags, the results of which she presented at the Oncology Nursing Society Annual Congress in May.

"At Johns Hopkins Hospital, our pediatric colleagues made this successful practice change first. After thoughtful design of the step-by-step procedure, policy revisions, and collaboration between nursing and pharmacy, the change was implemented in adult oncology," said Ms. Olsen. "Our staff feel confident that this new procedure is safe and that it is absolutely the right thing to do to prevent patient harm. Once we made the change, we did not look back. Eliminating the risk of harm was our number one priority."

With 125 known cases of accidental death in the United States and abroad since the inception of vincristine use in the 1960s, this error is relatively rare. Still, it is unique in its level of mortality. Improvements in practice over the years, including manufacturer- and pharmacist-issued warning labels, have reduced the number of deaths, but the error continues to occur.

"Every medical center, hospital, and oncology practice that makes the commitment to 'Just Bag It' takes an important step toward patient safety and ensures that this error will never happen again," Dr. Carlson said. "Christopher's memory inspires us to never give up telling his story and remaining vigilant for this cause."

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For more information about Just Bag It: The NCCN Campaign for Safe Vincristine Handling, or to report that a medical facility has adopted a vincristine policy, visit NCCN.org/justbagit.

NCCN Foundation Young Investigator Award Spotlight

This feature article is part of an ongoing installment highlighting the research and accomplishments of past recipients of the NCCN Foundation Young Investigator Awards. In 2017, the spotlight series focuses on the 2015 NCCN Foundation Young Investigator Awardees whose research was presented during the NCCN 22nd Annual Conference.

How Discussing Sexual Dysfunction With Patients Can Lead to Better Overall Quality of Life

For allogeneic hematopoietic stem cell transplant (HCT) survivors—people with blood cancers treated using stem cells from a donor—sexual dysfunction is a common, but rarely discussed, side effect that affects the quality of life (QoL) of patients and their partners. As many as one-third of transplant recipients report sexual dysfunction that leads to distress. Such complications include the inability to obtain an erection, vaginal pain with intercourse, negative body image, and decreased sex drive and arousal.

To combat this issue, Areej El-Jawahri, MD, a transplant oncologist at Massachusetts General Hospital Cancer Center, set out to test the feasibility of screening and intervening on sexual dysfunction in this population with a multimodal intervention. The intervention seeks to also educate and empower patients to address their sexual health concerns.

The Normalcy of Dysfunction

Dr. El-Jawahri and her colleagues screened 150 HCT survivors who were ≥ 3 months out from transplant. To screen them, the researchers used recommendations from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines) for Survivorship to identify patients who have sexual dysfunction. Specifically, patients were asked: 1) “Do you have problems with sexual function?” and 2) “Are these problems causing you distress?” Of the 150 survivors, to date 49 people have screened positive for sexual dysfunction that caused distress. These patients took part in therapeutic interventions aimed at resolving the particular issue they faced.

“We noticed that basically everyone who screened positive wanted to participate and completed the intervention and subsequent follow-up visits. We assessed patient sexual dysfunction at enrollment and at 6-month follow-up, and we saw a definite improvement in overall sexual function and interest and with specific issues such as orgasm, lubrication, and achieving an erection.” Dr. El-Jawahri also found that, “Patients also experienced improvement in their QoL and a trend toward lower depression symptoms after the intervention,” she said.

Importantly, the intervention was delivered by oncology clinicians integrated within the transplant clinic. Following participation in the intervention, most patients did not require referral for additional expertise to address sexual dysfunction. This underscores that many of the issues affecting sexual function in these survivors can easily be addressed with adequate training in the transplant clinic.

To engage patients and encourage them to speak about their individual situations, the team initiated a training protocol for transplant physicians and nurses about how to screen for distress and dysfunction, the proper terminology to use, and how to ask and answer questions.

According to Dr. El-Jawahri, most patients are not comfortable bringing up sexual dysfunction with their transplant team. However, when it is brought up independently, HCT survivors are reassured that what they experience is normal and the issue can be addressed.

“One of the most important aspects of this study actually goes beyond information—it’s educating, normalizing, and empowering patients to talk about sex. Many patients feel

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that their condition is abnormal. Addressing and normalizing sexual dysfunction for a patient makes them more comfortable and at ease,” said Dr. El-Jawahri.

Additionally, for many of the intervention visits, patients’ partners were present. This approach, Dr. El-Jawahri said, allowed patients and their significant others to tackle these issues as a team in a comfortable and nonjudgmental environment.

Moving Beyond the Transplant Clinic

One aspect that makes Dr. El-Jawahri’s study unique is the generally younger age of HCT patients compared with the general cancer population. With an average age of 52, the study cohort represents a potentially spryer patient population; however, participants were as old as 73. She noted that many older patients were eager to participate and indeed benefitted from intervention.

Sexual dysfunction is a side effect that spans beyond the HCT population. As many as 30%–40% of patients and survivors of all cancer types report experiencing side effects that inhibit their sex life.

Dr. El-Jawahri hopes that at the culmination of the study, her team will have demonstrated a model for intervention that can be established easily across the cancer center—not only in the transplant clinic and not only at academic institutions.

“It’s my hope to effectively implement this model across a larger patient population—in a randomized trial—including both autologous and allogeneic HCT survivors. I believe we will show that it enhances sexual function, improves QoL, and increases intimacy between patients and their partners,” said Dr. El-Jawahri.

Guiding the Course of Supportive Care Advancement

In 2015, Dr. El-Jawahri was one of 5 grant recipients through the NCCN Foundation Young Investigator Award program. The NCCN Young Investigator Awards provide vital funding to some of the nation’s top next-generation cancer researchers guiding the course of treatment innovation and advancement. Moreover, the program makes it possible for junior faculty to develop the unique skillset necessary in a today’s competitive research environment by enabling them to balance research and clinical duties early in their careers, as well as introducing them to a network of senior investigators from leading cancer centers.

Through the grant program, young investigators, like Dr. El-Jawahri, are nominated by leaders at NCCN Member Institutions for their dedication to discovering cutting-edge breakthroughs and interventions in cancer care.

“I’m very much committed to continuing to develop supportive, palliative, and psychosocial interventions to help patients with and survivors of cancer. This funding from the NCCN Foundation has enabled me to focus on this aspect of my career and indeed has been a stepping stone for seeking NIH funding designing larger studies in the future,” said Dr. El-Jawahri.

Dr. El-Jawahri credits the grant from NCCN Foundation with allowing her to build the methodology skills in how to develop an intervention, take it to the pilot stage, and, she hopes, into a randomized clinical trial. “In this funding environment, it’s sometimes hard for younger faculty to have the opportunity to pursue their interests, but when you pursue your passion, you get better results. Providing the opportunity and resources to young faculty allows us to build a skillset that leads to successful studies and, most importantly, better outcomes for patients,” said Dr. El-Jawahri.

Dr. El-Jawahri’s study, “A Multimodal Intervention to Address Sexual Dysfunction in Hematopoietic Stem Cell Transplant (HCT) Survivors: A Feasibility Study,” was presented at the General Poster Session during the NCCN 22nd Annual Conference in March 2017.

More information is available at JNCCN.org.