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**"M**y dad was the smartest man I ever knew," says William Small, Jr., MD, FACRO, "but he worked 20 hour days driving trucks because he wasn't able to get an education." Dr. Small's father grew up during the Great Depression, joined the U.S. Army at 17 and fought in both World War II and Korea. He then settled in Chicago and went to work to support his family. Small says his father's experience influenced his career choice. Small loved science and thought medicine would provide both interesting work and job security. "From my earliest memories, I always thought I was going to be a doctor," he says.

Small graduated magna cum laude from the University of Illinois in 1986 and went on to earn his MD with distinction from Northwestern University in 1990. His academic success is especially remarkable because he achieved it while juggling course work with a full-time job. Among other jobs, he served as a mental health worker for Northwestern Memorial Hospital's Institute of Psychiatry, where he monitored patients during the week and took them on outings on weekends. In addition, he got married during medical school and shares credit with his wife for helping him survive those challenging years.

In 1994, Small joined the faculty of the Feinberg School of Medicine, where he now serves as Professor and Vice Chairman of the Department of Radiation Oncology. He is also Associate Medical Director of the Lurie Cancer Center, attending physician and Chairman of

the Cancer Committee for Northwestern Memorial Hospital. He is considered a national leader in the field of radiation oncology. While Small says he spends most of his time taking care of patients, his research is a priority, as well. "Clinical work and research go hand-in-hand," he asserts. "To be a really good oncologist, part of your work must be in research."

#### Improving Patient Outcomes

Small is committed to advancing the understanding and treatment of gynecologic, breast and gastrointestinal malignancies, and to reducing the toxicity of radiation treatments in an effort to improve patient outcomes. Much of his research is focused on unique combinations of radiotherapy with systemic therapies such as biological agents. He recently served as Principal Investigator (PI) for two Radiation Therapy Oncology Group (RTOG) studies investigating the use of cytoprotective agents to reduce radiation toxicity. He also acts as Co-Chair of the RTOG's gynecologic working group .

Small says radiation is an important part of the oncologist's arsenal. "It can cure almost any localized cancer—if you can give enough," he says. "And we treat a lot of cancers with radiation alone." However, treatments come with serious side effects, such as painful burns that can occur soon after treatment, as well as problems that can appear much later, such as bowel obstructions, mucositis and sexual dysfunction. "Any time you turn a radiation beam on, you will have toxicity," says Small. Developing ways to administer more radiation with fewer side effects and produce better patient outcomes are among his goals.

Small's efforts are global in scope. In addition to his work at Northwestern and with the RTOG, he chairs the cervical cancer committee for the Gynecologic Cancer Intergroup (GCIG), an international organization of clinical trials groups tasked with promoting clinical research and furthering international collaboration in the area of gynecologic malignancies. One of the important efforts of the GCIG is to increase enrollment in clinical trials. According to Small, only about five percent of adults currently participate in such trials and many studies have closed because researchers were unable to recruit enough subjects. "Lack of participation in trials makes it hard for us to make progress," he says. "It takes

forever to test new treatments."

Small is also a member of the National Cancer Institute's steering committee for gynecologic cancers and is proud of the work he's done to help guide gynecologic research both here and abroad. He cites the group's efforts in cervical cancer, a disease that is well controlled in the US but remains a menace in much of the rest of the world. "It's a huge international problem and we're working on different ways to move that science forward," he says.

Small credits his mentor, Bharat Mittal, MD, Professor of Radiation Oncology and Chair of the Department of Radiation Oncology at Northwestern's Feinberg School of Medicine, with teaching him valuable research skills. While Small was a medical student, he worked on his first oncology paper with Mittal. "Dr. Mittal helped me become aware of all the questions there are in this field and gave me important advice on my first real research project."

#### The Best Profession

With one foot in research and another in patient care, Small's hours are long, and include as much time as possible with his wife and two daughters. "I always laugh when someone asks me to break up my 40 hour week. Break up my 100 hour week you mean?" But, despite a challenging schedule, Small says he's glad he chose to become a physician. "There's no greater profession." The best part is "when I've done something that has made a difference in patients' lives, such as enrolling an individual in a clinical trial, or the times when taking a chance and not giving up on a patient leads to a good outcome that they may not have had if they hadn't come to me." He is gratified when he learns that other physicians' treatment plans were influenced by his research. "With research, you want to improve therapies, and sometimes I think I've done that, which is very fulfilling."