

Innovation in Cancer Treatment

**An Interview with Richard Barakat, M.D.,
Physician-in-Chief and Director of Cancer, Northwell Health Cancer Institute
and Senior Vice President, Cancer Services, Northwell Health**

EDITORS' NOTE *Dr. Richard Barakat leads all cancer services and research at Northwell Health, including its Cancer Institute. He was previously Chief of the Gynecology Service at Memorial Sloan Kettering (MSK) from 2001-2013 and held the Ronald O. Perelman Chair in Gynecologic Surgery. He is a professor of obstetrics and gynecology at the Donald and Barbara Zucker School of Medicine at Hofstra/Northwell, and adjunct professor at Cold Spring Harbor Laboratory. He served as a member and examiner for the American Board of Obstetrics and Gynecology and for five years was vice chair of the Cancer Prevention Committee of the Gynecologic Oncology Group. He was president of the Society of Gynecologic Oncology from 2013-2014 and past president of the International Gynecologic Cancer Society from 2014-2016. From 2013-2017, he served as director of the MSK regional network. Dr. Barakat received his B.A. from Queens College, City University of New York, and his M.D. from SUNY Downstate. He also earned an M.B.A. from the Columbia University School of Business.*



Richard Barakat

What excited me about this was seeing how this healthcare system has grown. The fact that I live in Long Island, that I drove by here for 26 years on my way into the city, and as I started to understand the scale of work this healthcare system does, I knew it was a special place.

There was excellent care being provided here. There are excellent doctors here, but what we needed to do was put together incredible programs and make people feel comfortable that they can get outstanding care

that's convenient and close to their home.

So, as I looked at it, it was the perfect opportunity at the perfect time in my career.

Will you highlight the programs that you are building at Northwell?

The very first program we implemented was the Center for Cancer, Pregnancy and Reproduction. This healthcare system delivers one percent of all of the babies in the United States, over 42,000 deliveries a year. So one percent of births in the U.S. occurs at Northwell. Approximately one in 1,000 women who are pregnant will develop cancer. I can't imagine anything more frightening to an individual who is pregnant than knowing that not only are they dealing with pregnancy and everything that goes along with that, but they now have to deal with cancer as well.

We put together a center that would help patients navigate through the healthcare system, get them to the right doctors, make sure they see all the right consultants and chaperone them through that process because I can't even imagine what's going through their minds when they're facing that challenge.

Since we rolled out the center in November, we've had 21 pregnant cancer patients referred to the cancer center. We are now known as the go-to place for women who are pregnant and have cancer.

The reason it's called the Center for Cancer, Pregnancy and Reproduction is that there's more to it than just cancer during pregnancy. We also take care of patients who have had cancer in the past and want to get pregnant.

Another group of patients is the non-pregnant patient who develops cancer and wants to preserve fertility through egg harvesting or sperm banking. So it addresses all aspects of reproduction and cancer and it was the very first program that we rolled out.

The second program stemmed from our relationship with Cold Spring Harbor. It is a new Pancreatic Cancer Center that we launched recently and it received extensive media coverage. Cold Spring Harbor is a National Cancer Institute designated research center. The head of the cancer center is David Tuveson. David was one of the pioneers in developing organoids.

Basically, the technique involves performing a biopsy on a patient's cancer, then growing an organoid which is a miniaturized and simplified version of an organ. This allows you to form different colonies that can be treated with 10 to 12 different drugs to see what works the best.

In conjunction with Cold Spring Harbor, we're developing an organoid facility which will be able to do the same for ovarian cancer, colon cancer and breast cancer as well as pancreatic cancer.

We then partnered with the Lustgarten Foundation, which is a philanthropic organization that provides funding for pancreatic cancer research.

We used our collaboration with Cold Spring Harbor and the philanthropic arm of the Lustgarten Foundation as a foundation for the launch of our Pancreatic Cancer Center. Pancreatic cancer has increased to 58,000 cases a year and, next year, it will surpass colon cancer as the second leading cause of cancer deaths in the United States. Lung cancer is number one, pancreatic cancer will become number two and colon cancer will move to number three.

How valuable is it for Northwell Health to have the Donald and Barbara Zucker School of Medicine at Hofstra/Northwell?

The people studying there are the leaders of the future and their work is absolutely critical. We are training the heroes of tomorrow. We need to get the best and the brightest and they are the future of healthcare.

I have some very innovative ideas that I want to implement in cancer by incorporating medical students on the formal cancer rotations to get them exposed to, and invigorated about, oncology and to help them understand the vital oncology research that we do with the Feinstein Institute of Cancer Research.

It was very important to me to know that I was joining a healthcare system that had a medical school that is considered one of the most innovative medical schools in the country with really remarkable programs. ●

INSTITUTION BRIEF *Northwell Health (northwell.edu) delivers world-class clinical care throughout the New York metropolitan area; pioneering research at the Feinstein Institute for Medical Research; and a visionary approach to medical education, highlighted by the Zucker School of Medicine at Hofstra/Northwell and Hofstra Northwell School of Graduate Nursing and Physician Assistant Studies. Northwell Health is the largest integrated healthcare system in New York State with a total workforce of more than 68,000 employees – the state's largest private employer. With 23 hospitals, more than 700 outpatient facilities, and a full complement of home care, rehabilitation and long-term care services, Northwell is one of the nation's largest health systems with \$12 billion in annual revenue.*

What excited you about the opportunity to join Northwell Health and to lead Northwell Health's cancer services?

I felt that everything that I had done to this point in my career was preparing me for what I'm doing today. All of the years at Sloan Kettering, rising to the level of being the chief of the GYN service and then ultimately running Memorial's regional network, prepared me for this opportunity.