

SVPHS Report  
Academic Senate Meeting  
March 1, 2021

The rationale for building a Stony Brook University Cancer Center  
and achieving NCI designated status

In response to a robust conversation with the Senate Executive Committee in February, we felt it timely that I share with the Senate the rationale for, and the progress made towards becoming a NCI-designated cancer center at SBU, a “journey” that was supported by former SBU President Stanley, and is strongly supported by President McInnis.

The care for patients with cancer is now highly specialized and dependent on the input of healthcare professionals from a wide range of disciplines, at least 8 different specialties of physicians, several types of specialized nurses, a number of allied health professionals, and healthcare social workers. The reason for this is that as we learn more and more about cancer genetics and cancer biology, the more it becomes clear that every patient’s cancer is unique, and so, every patient’s cancer should be cared for uniquely. In fact, the origins of personalized medicine, something most or all of our faculty and staff have become aware of, has been catalyzed from this understanding of cancer. Thus, for all but the most routine of cancer patients, this takes a team of expertise, which is not found anywhere but a university-based cancer center. But clinical care is not the only mission of, or advantage of being a NCI designated cancer center. The missions of education, research and community outreach are also critical for a NCI-CC, all of which, of course, align with the core missions of our University.

As a research intense university, it is our mission to move our biological understanding of cancer forward, with the goal of increasing the favorable outcomes for patients with cancer. Based upon this new knowledge, we must test new diagnostics, new therapeutics, and new prognostication markers, to give our patients the very best chance for cure, and if we are successful, spread the word so that the standard of care for patients is improved.

This is the business of a university cancer center, especially for NCI-designated cancer centers, since no one else can do this.

Towards this goal, we launched an effort to greatly enhance the Stony Brook University Cancer Center many years ago, for many reasons.

The first is our belief that there were, and still are no major cancer centers on Long Island, a population of 3 million people. Yes, MSK built two clinical satellites, one in Nassau, one in Suffolk, but those patients end up spending much of their time traveling to Manhattan, the “MSKCC mother ship”. And when they need to be hospitalized, they are hospitalized in the local community hospital.

The second reason is because Stony Brook had already developed much, cross campus expertise in cancer biology, pharmacology and cancer care. For example, Iwao Ojima in the Dept of Chemistry had already launched the Institute of Chemical Biology and Drug Development (ICB&DD), which focuses primarily on new treatments for cancer. There were several other outstanding researchers in the CAS, CEAS, and on the health sciences campus, in the SoN, the SHTM, in the Program in Public Health and in the SOM. In fact, at present about 25% of the members of the SBU CC come from main campus schools and departments. So there already was a “nascent critical mass” in cancer, a term that used to mean enough faculty and facilities to grow a world class program.

But we needed more research and clinical space to grow, and since most would agree that bringing clinicians and researchers together is the best way to make the whole greater than the sum of its parts, consolidation of the diverse faculty members into a single site was thought to be very desirable. Hence, the MART building, supported by philanthropic dollars raised specifically for a new building, by NYS capital dollars, and by some of the dollars returned to SBU to support our cancer grant activities, so-called IDC dollars, were used to build the MART.

Let me next explain why we have been pursuing becoming a National Cancer Institute designated cancer center (NCI CC). As many or most of you know, Stony Brook has been pursuing this designation for many years, and now stands on the verge of success.

There are only about 60 NCI CCs in the US, the list of which reads like the who’s who of research-intense Universities that have Medical Centers, including NYU, Sloan Kettering and Mt. Sinai in Manhattan, Dana Farber/Harvard in Boston, Roswell Park/U Buffalo, the Fred Hutch/UW in Seattle, University of Chicago, UCLA, UCSF and UCSD, Michigan, Penn, Utah, Arizona, UT Houston/MD Anderson, and many others. But there are no NCI CCs on Long Island.

Building a NCI CC requires excellence in several areas, basic cancer biology faculty and facilities, a high level of cancer directed federal grants, innovative clinical trials of new drugs or insightful clinical biology, and institutional investment in research, education and outreach activities, as the NCI knows that if granted, the CC Support Grant is insufficient to support the research expected of a designated CC.

The SBU CC now has ~100 members, that span four schools, two on east campus, two on west campus, including numerous departments all across our university. The faculty in the CC now bring in over \$34M per year in grant support, including 43% of all NIH funding provided to SBU. When last measured over a two-year span, the faculty of the CC penned nearly 600 distinct scholarly publications. The research in the SBU CC has focused on three major areas, cancer lipids and metabolism, the drivers of the development of cancer from normal cells, and the imaging and informatics of cancer. Exciting clinical trials currently ongoing at the SBU CC that illustrate these areas include a first in humans trial of engineered immune cells directed to kill a specific type of leukemia, termed CAR-T cells, using a derivative of an anti-inflammatory drug to enhance the diagnostic accuracy of mammograms, and a test of whether the type of anesthesia used for cancer surgery affects overall outcome.

We have been in communication with the NCI for many years, and they have agreed to receive our application to become NCI designated this October, with a site visit in early Spring 2022. The NCI leadership shared they were impressed with our research programs and impact (in fact, our grant portfolio is stronger than about 25% of all the NCI cancer centers), but voiced that support for cancer research is an important component on which we will be evaluated. The senior leadership of Stony Brook Medicine (SVPHS SBU, Dean RSOM, CEO SBUH and CFO SBUH, Board Chair CPMP) are working together to enhance SBM support for cancer research. Hence, we are in the final stages of a many-year process to join the 60 or so NCI CCs, which we anticipate will bring a major support grant to SBU, enhance our competitiveness in recruiting stellar new faculty in many areas of the University, help retain our current cancer faculty and staff, and bring much honor to the University.