

Laura Esserman, M.D., M.B.A.

2020 Susan G. Komen®

Brinker Award for Scientific Distinction in Clinical Research



Laura Esserman, M.D., M.B.A. is being honored for her seminal contributions in clinical research which are paving the way towards more personalized approaches to breast cancer care. She has led innovative clinical trial programs, notably the I-SPY trials, which have become models to accelerate the development of safe, effective, personalized treatment, detection and prevention options and improve the delivery of clinical care for breast cancer patients.

Dr. Esserman has devoted her career to integrating research and clinical care, conducting science-based, patient-centered clinical trials to personalize care and improve breast cancer patient outcomes. She leads the landmark I-SPY series of clinical trials that are advancing the science of individualizing treatment to improve outcomes. Designed and conducted through a public-private interdisciplinary collaboration of scientists from the NCI, FDA, the pharmaceutical and biotechnology industries, and over 20 major cancer centers, and the not for profit sponsor, Quantum Leap Healthcare Collaborative, these trials represent a total re-engineering of the entire clinical trial process to improve efficiency and accelerate the identification and approval of new breast cancer drugs. One of the first platform trials, I-SPY 2 is a Phase II neoadjuvant treatment trial for locally advanced breast cancer that features the use of early endpoints, adaptive trial design, and imaging and molecular subtyping to independently evaluate multiple drugs in parallel and identify companion biomarkers that would predict treatment success. The I-SPY trials have become a model for translational research that is now being adapted for use in other diseases, including an I-SPY COVID-19 trial.

A thought leader in the field, Dr. Esserman has championed data-driven approaches to tailor treatment based on the biology of each patient's breast cancer. She has studied how tumor biology and gene signatures, rather than tumor stage and grade, can influence how a cancer will respond to treatment. Dr. Esserman and colleagues identified IDLE (Indolent Lesion of Epithelial origin), cancer lesions with excellent prognosis absent systemic therapy. Her ongoing research is focused on better defining these lesions in breast cancer and across cancer types to identify patients who may not need systemic therapy. In other work, she and colleagues have studied the molecular and tumor microenvironment features that define high-risk ductal carcinoma in situ (DCIS) lesions and invasive breast cancers. They demonstrated that the immune system is a key player in the biology of high risk lesions and have developed strategies for prevention (immune-based therapies) that are moving to the clinic. By pioneering active surveillance approaches to low and intermediate lesions she has determined that over half of women likely do not need surgical intervention, and MR imaging may be the key to ascertaining whether a prevention or surgical approach should be taken.

Dr. Esserman also launched the University of California-wide Athena Breast Health Network, a project that is following 150,000 women from screening through treatment and outcomes and is designed as a learning system to integrate clinical care and research. As part of the network, she is spearheading the WISDOM Study testing a personalized, risk-based screening strategy vs. the standard of annual screening in 100,000 women without breast cancer nationwide. This critically important effort is designed to bring innovation to screening, personalizing the approach to screening and prevention based on risk as we do for treatment of breast cancer today. Importantly, it is an opportunity to learn who is at risk for what kind of breast cancer, and how to set the stage to prevent lethal breast cancers. This is a study for all women (age 40-74) without breast cancer that will help everyone have better outcomes (visit Wisdomstudy.org to join).

Dr. Esserman earned her medical degree and completed her oncology fellowship and surgical residency at Stanford University Medical Center. She then served as a Trauma Surgeon at Santa Clara Valley Medical Center and Clinical Assistant Professor of Surgery at Stanford University. In 1993, she received her M.B.A. from Stanford Business School and joined the faculty of University

of California, San Francisco (UCSF). Dr. Esserman currently serves as Director of the Carol Franc Buck Breast Care Center, Alfred A. de Lorimier Endowed Chair in General Surgery, and Professor of Surgery and Radiology at University of California, San Francisco.

Dr. Esserman's cross-disciplinary collaborations and science based, patient centered, innovative trial designs have revolutionized clinical care delivery. As a passionate advocate for patients, she has worked tirelessly to accelerate the development of targeted, less toxic, and effective ways to treat, detect and prevent breast cancer. Her work will continue to move the field forward in innovative ways and help make personalized breast cancer care a reality, benefiting patients worldwide for years to come.