SWIM ACROSS AMERICA
MAKING WAVES TO FIGHT CANCER

# Swim Across America Baltimore

## A Timeline of Accomplishments and Advances Against Cancer

**2010 – ESTABLISHED A LAB FUNDING EQUIPMENT & STAFF**
With funds raised in the inaugural Swim Across America Baltimore, the Swim Across America Laboratory was established at the Hopkins Kimmel Cancer Center, dedicated to understanding human cancers and formulating effective patient care. The primary objective of the lab is to translate laboratory science "from the bench to the bedside" and bring the science closer to the patient. Appointed to direct the lab is Luis Diaz, M.D.

**2011 – RESEARCHED BRAIN & PANCREATIC TUMORS PLUS HELD A SURVIVORSHIP CLINIC & END STAGE COUPLES RETREAT**
Monies raised in the 2011 Swim Across America Baltimore funded, among numerous projects, an important therapeutic trial for patients suffering with pancreatic cancer. Also, genomic sequencing was accomplished on pediatric brain tumors. A colon cancer survivorship clinic was established that helps patients through their journey with cancer. Additionally, the first couples retreat for patients with metastatic cancer took place that allowed couples to connect and share with each other, and learn from Johns Hopkins experts.

**2012 – DISOVERY OF THE PAPGENE TEST**. (EARLY DETECTION OF OVARIAN CANCER) Monies raised funded groundbreaking research in endometrial and ovarian cancers that garnered worldwide attention. The Papgene Test study was a significant advance that promises early detection of these two deadly cancers. It is based on the Pap test, routinely performed since the 1950's in gynecologists' offices across the country to detect and prevent cervical cancer. The PapGene test captures DNA that is shed from cancer cells that have been determined to lead to endometrial and ovarian cancers, according to Dr. Diaz and his colleagues. There are currently no screening tests for these cancers, and the new test could one day make it possible to test for three female cancers at once, at a woman's wellness exam.

**2013 –DISCOVERY OF CIRCULATING TUMOR DNA (EARLY DETECTION OF CANCER & WHETHER TREATMENTS WORKED).** Swim Across America Lab Director Luis Diaz, M.D., was a senior author on an international study that provides strong evidence that that circulating tumor DNA (ctDNA) can be used as a "personalized biomarker" test and cancer screening tool. It is an extrapolation of the PapGene Test study which was made possible in part through funding from Swim Across America last year. According to results of the study, certain fragments of DNA shed by tumors into the bloodstream can potentially be used to non-invasively screen for early-stage cancers, monitor responses to treatment and help explain why some cancers are resistant to therapies. "The study provides a wealth of information on the potential utility and limitations of ctDNA measurements to assess patients with various cancers," according to Diaz.

**2015 – DISCOVERY OF COMPANION DIAGNOSTICS TEST FOR IMMUNOTHERAPY DRUG PD-1**
Our team of researchers has identified a genetic malfunction that predicts the effectiveness of response to a groundbreaking immunotherapy. The results of the clinical trial reveal that tumors whose cells are deficient in repairing mismatched DNA sequences--and so preventing mutations--are far more susceptible to the "checkpoint inhibitor (also known at PD-1) than those that retain this ability. As the drug is expensive, this predictive test saves money, time and more lives. Recently announced at the Annual ASCO conference, Forbes was quoted as saying this was the most exciting finding announced at the conference of oncologists.

All of the discoveries are/or will help save thousands of lives through early detection or monitoring of cancer.