SWIM ACROSS AMERICA
MAKING WAVES TO FIGHT CANCER

SAA-NASHVILLE IMPACT REPORT



SWIM ACROSS AMERICA 2024 GRANT AMOUNT*

$100,000

**Grant includes matching gift*

OUR LOCAL BENEFICIARY

VANDERBILT-INGRAM CANCER CENTER

SUPPORTED SINCE 2022

SAA-NASHVILLE HAS RAISED MORE THAN **$275,000** TO FIGHT CANCER SINCE 2022

RESEARCH EMPHASIS

- BREAST CANCER
- SOLID TUMORS
- 3D SCANNING
- SURGERY
- LUNG CANCER

2024 GRANT RECIPIENT: SAMIRA SHOJAEE, MD, MPH



This research project aims to improve the diagnosis of malignant pleural effusion (MPE), a condition where cancer—most commonly breast cancer in women—spreads to the pleural space around the lungs. MPE is often difficult to diagnose using standard fluid cytology, as cancer cells may be sparse or undetectable, leading to invasive and potentially harmful procedures. The study will analyze pleural fluid samples from patients with and without MPE, isolating extracellular vesicles (EVs) to examine the microRNAs they contain. By identifying specific microRNA patterns associated with MPE, the researchers hope to develop a reliable, minimally invasive biomarker to distinguish malignant from non-malignant pleural effusions.

The overarching goal is to enhance early and accurate MPE diagnosis, reduce reliance on invasive procedures, and expedite appropriate cancer treatment.

2023 GRANT RECIPIENT: JENNIFER DUKE, MD



Patients in this study will undergo a robotic-assisted bronchoscopy to collect samples from a lung nodule. If the nodule is found to be cancerous, the area will then be treated with a cryoprobe that freezes the lesion and causes the cells to die. At a follow-up surgery, the tumor will then be removed and evaluated to determine the impact of the cryotherapy on the tissue. Blood samples will also be taken at the time of the bronchoscopy and at the time of surgery to compare the changes in the immunesystem related to the treatment with the cryoprobe.

The results of the study will help determine if cryotherapy from within the airways on early-stage lung cancer should be used to treat tumors. This could pave the way for a possible future where patients can undergo a biopsy of a lung nodule followed by treatment in a single procedure.

2022 GRANT RECIPIENT: MICHAEL TOPF, MD



Dr. Topf developed a protocol to 3D scan and annotate resected cancer specimens and plans to build on this protocol by creating intraoperative, mixed reality holograms. He hypothesizes that the hologram of the virtual 3D resected specimen can be aligned with the surgical resection site to accurately map positive margins. This will allow for a more precise re-resection of any residual disease. The use of this visual aid in oncologic surgery will no doubt greatly improve the standard of care, which currently involves communication of frozen section results via telephone calls between surgeons and pathologists.

The overarching goal of this research is to improve the accuracy of technology, protocols, and quality improvement processes that can be used in other solid tumors and change surgical oncology practice in general, and ultimately improve oncologic outcomes.

SAA-NASHVILLE BY THE NUMBERS

250+ TOTAL PARTICIPANTS

20+ VOLUNTEERS

30+ TEAMS

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