

ABOUT THE GALA

Bears Care is a proud supporter of NorthShore Hospitals Foundation, Northwestern Medicine, Rush University Medical Center, and University of Chicago Medicine in advancing the fight against breast and ovarian cancer. The success of the annual Bears Care Gala enables continued investment in our partners' critical work in 2025, outlined below, which includes the development of innovative research and therapies and reducing barriers to equitable cancer care for women in Chicago.

- Improve ovarian cancer prognosis by leveraging the immune system to achieve durable responses to therapeutics. Single-cell mass cytometry will be used to identify immune cell populations present in tumors both before and after chemotherapy. A 3D tumor model from the same patient will then be used to identify medications or combinations thereof that enhance the cancer-killing capacity of immune cells, to deliver therapy tailored to the individual patient.
- Develop a reproductive tissue cell atlas as part of a reference library for gene expression and regulation that includes data from black and brown women to foster a more comprehensive understanding of gynecologic disease development and disparity in outcomes.
- Findings indicate plitidepsin, a synthetic anti-cancer drug, shows remarkable toxicity against some TNBC cell lines which express high levels of a protein translation gene signature. Test hypotheses that a subset of TNBC tumors depend on protein translation for survival, can be identified by their high levels of gene signature and targeted by plitidepsin.
- Use artificial intelligence to identify survival phenotypes in high-grade serous ovarian cancer (HGSOC) and establish an international data common platform centered around histopathological images of ovarian cancer.
- Further the growth of a recently convened Chicago area consortium developed to lessen breast cancer mortality rates and disparities in outcomes, with goals to increase visibility of clinical trials, improve access to novel treatments, diversify trial participation, and boost research efforts across partner institutions. Support physician-researcher initiated and led clinical trials including a current trial for patients with metastatic ER+HER2-breast cancer and the ESR1 mutation studying the efficacy of adding a previously approved medication to current standard therapy.
- Detailed study of risk-reducing effect of hormonal birth control has resulted in identification of progestin as a key substance in both ovarian cancer prevention as well as clearance of genetically damaged cells. Translate additional research combining progestin with vitamin D into a highly effective pharmacologic strategy for prevention.
- Elucidate the mechanism by which ovarian cancers develop and spread through study of the role the fat mass obesity (FTO) gene has in HGSOC, as changing the activity of FTO is a promising new target for prevention and treatment of ovarian cancer. Examine the effects of FTO on the fallopian tube epithelium and expand the existing cancer tissue bank to include samples from patients with normal and high-risk conditions associated with HGSOC.
- Research the efficacy of scalp cooling in a diverse population, who may not have insurance or means to access this approach to hair salvage during chemotherapy for breast and ovarian cancer.
- Study cellular signaling between normal bone and skeletal metastases, via interaction of endosomes and tubulin (TUBB) proteins. Investigation of changes in TUBB subtypes which facilitate cancer cell migration and adhesion during bone metastases, with the goal of introducing novel therapies to target TUBB and reduce metastasis-related morbidity and mortality.
- Provide resources to help deliver free high-quality mammography to women residing in Chicago's economically disconnected and disinvested neighborhoods which face disparities in health status and access to care.
- Mass produce a glycoengineered therapeutic (IL15-Ra-Fc) for large scale mouse experiments in TNBC model incorporating state of the art imaging to visualize the therapeutic in vivo. Elucidate novel mechanisms of cancer therapy through observing the tumor microenvironment transition from cold tumor to treatable hot tumor.
- Better understand the cellular and molecular changes that occur as fallopian tube lesions develop, demonstrated to be where many ovarian cancers originate, as well as identify how progestin and vitamin D inhibit these lesions by affecting the cell genetic landscape.