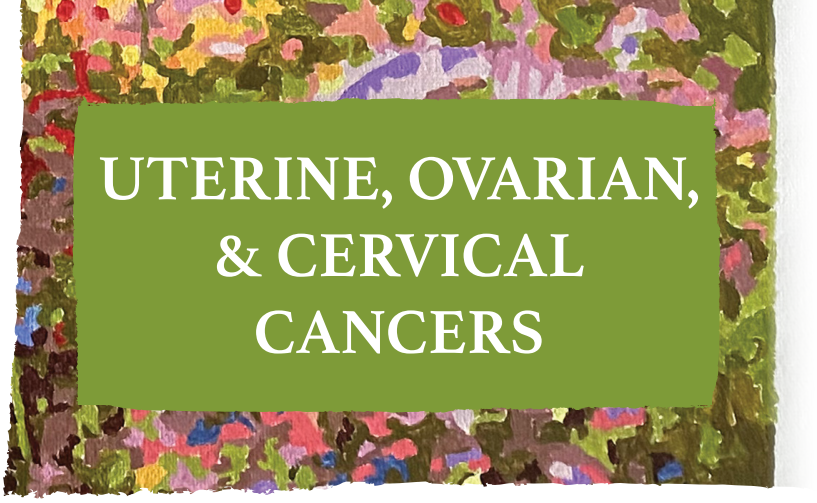
Cleveland's Center for Healing
HYPERION™
Functional Medicine



UTERINE, OVARIAN, & CERVICAL CANCERS

Cervical cancer, ovarian cancer, and endometrial cancer are the most common gynecological cancers. Global cancer data has been studied and cervical cancer among women has the 4th and 6th highest incidence rate and mortality rates, ovarian cancer has the 5th highest mortality rate, topping the list of gynecological malignant tumors[1].

In a 2023 study of 10,000 women, research has demonstrated that women who developed uterine and ovarian cancers have high exposures to chemicals[2]. Including BPA and PFAS (per- and poly-fluoroalkyl substances). Endocrine disrupting chemicals may affect hormone pathways in the pathology of these cancers[3]. These hormone disrupting chemicals, PFAS, are referred to as "forever chemicals". They are found in products such as waterproof clothing, Teflon pans, stain resistant fabrics and carpets, and in food packaging. These toxins are disruptive to the mitochondria and drive cancer[4] . Treatments for advanced and recurrent ovarian cancer remain a challenge due to a lack of potent, and effective cancer therapies. Detoxification of chemicals driving mitochondrial dysfunction in these patients is a priority. More recently, talcum powder has been implicated in causing ovarian and other cancers[5].

Toxins impacting the endocrine system are one of the roots of hormone driven cancers and must be addressed. A detoxification protocol and education about toxins should be initiated at the time of diagnosis but is not standard in care treatment platforms. Changes in mitochondrial DNA are important events related to the progression of ovarian cancer. Mitochondria are highly sensitive to environmental toxicants. When our mitochondria become stressed, they then are metabolically altered and can provide support for cancer cell growth and tumor development[6].

Tumor cells in uterine, ovarian, and cervical cancers are assisted by mitochondria that have been damaged leading to reprogramming of their functions. This reprogramming increases energy needed for the specific cancer cells involved in uterine, ovarian, cervical cancers and other types of cancer cells by switching to a specialized form of metabolism known as the "Warburg Effect" for growing the tumor. These results of reprogramming favor tumor progression, blood vessel growth for the tumor, and suppression of the immune system. This enables cancer cells to survive and multiply more effectively. In addition, reactive oxygen species generated by toxin exposures promote cancer's initiation and progression because of these mutations in mitochondrial DNA. More simply stated, our genetics are modified due to environmental insults that involve mitochondrial dysfunction[7].

All patients in the Hyperion Functional Medicine Phase 1 Functional Oncology Program are educated about their specific toxin exposures, their effects, and patients are placed into a targeted detoxification plan in the first visit. This cancer root must be addressed to decrease cancer progression.

In partnership with healingstrong

[1]Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA Cancer J Clin. 2018 Nov;68(6):394-424. doi: 10.3322/caac.21492. Epub 2018 Sep 12. Erratum in: CA Cancer J Clin. 2020 Jul;70(4):313. PMID: 30207593.
[2]https://www.ucsf.edu/news/2023/09/426136/study-finds-significant-chemical-exposures-women-cancer),
[3]Cathey AL, Nguyen VK, Colacino JA, Woodruff TJ, Reynolds P, Aung MT. Exploratory profiles of phenols, parabens, and per- and poly-fluoroalkyl substances among NHANES study participants in association with previous cancer diagnoses. J Expo Sci Environ Epidemiol. 2023 Sep;33(5):687-698. doi: 10.1038/s41370-023-00601-6. Epub 2023 Sep 18. PMID: 37718377; PMCID: PMC10541322.
[4]Shukla P, Singh KK. The mitochondrial landscape of ovarian cancer: emerging insights. Carcinogenesis. 2021 May 28;42(5):663-671. doi: 10.1093/carcin/bgab033. PMID: 33928357; PMCID: PMC8163040.
[5]https://www.cancer.org/cancer/risk-prevention/chemicals/talcum-powder-and-cancer.html
[6]Lee YG, Park DH, Chae YC. Role of Mitochondrial Stress Response in Cancer Progression. Cells. 2022 Feb 23;11(5):771. doi: 10.3390/cells11050771. PMID: 35269393; PMCID: PMC8909674).
[7]Duarte-Hospital C, Tête A, Brial F, Benoit L, Koual M, Tomkiewicz C, Kim MJ, Blanc EB, Coumoul X, Bortoli S. Mitochondrial Dysfunction as a Hallmark of Environmental Injury. Cells. 2021 Dec 30;11(1):110. doi: 10.3390/cells11010110. PMID: 35011671; PMCID: PMC8750015.