Nutraceuticals for Integrative Cancer Treatment

Oroma B Nwanodi
Locum Tenens, USA

Statement of Purpose: Although 75% of breast cancer patients may use integrative medicine, only 11.5% early-stage breast cancer patients believe integrative medicine has anticancer activity. The gap in users of, and firm believers in integrative medicine indicates a need to increase awareness of integrative medicine's applicability to curative cancer treatment. As diet, dietary supplements, herbal medicine, and traditional Chinese medicine are used by up to 82% of cancer patients who use integrative medicine, this paper focuses on nutraceuticals. As female cancer patients are most likely to use integrative medicine, nutraceuticals specific to breast, cervical, endometrial, and ovarian cancer are reviewed.

Methods: PubMed searches in September 2016 and January 2017, and google scholar searches in August 2016 were performed with search terms “nutraceuticals or phytochemicals cancer treatment,” and “nutraceuticals or phytochemicals breast or cervical or endometrial or ovarian cancer treatment,” from 2012 onwards. Curative nutraceutical treatments were taken from these searches. Supplemental hand searches were performed as needed.

Findings: Integrative nutraceutical therapies are based on biologic plausibility. Individual nutraceuticals are frequently comprised of numerous phytochemical types, and have multiple mechanisms of action. Agonist-antagonist mechanisms are not exclusive to phytoestrogens, complicating which derivative or whole nutraceutical to use. Research on breast and cervical cancer inhibitors has seemingly outpaced that for endometrial and ovarian cancer. Breast cancer inhibitors include terpenes, isoflavones organosulphurs, organoselenium compounds and withanolides.

Conclusion & Significance: Potential nutraceutical candidates for curative cancer treatment abound. Discerning which constituents, which extraction method, and which delivery method to use for an efficacious treatment is a lengthy process. If nutraceuticals such as limonene and Kahalalide F move forward to Phase III trials a nutraceutical cancer treatment pipeline may be established. Withaferin-A for breast and ovarian cancer, and 3-azido Withaferin A for breast cancer, appear to be the gynecologic cancer nutraceutical drug candidate front runners.

Biography
Oroma B Nwanodi graduated from Meharry Medical College of Nashville, Tennessee in the United States of America as a Medical Doctor in 2001. She specialized in Obstetrics and Gynecology at The University of Massachussets and Maimonides Medical Center. In 2013 and 2014, she obtained specialization in Integrative Holistic Medicine. In 2016, she completed the Doctor of Health Science program at A T Still University, Mesa, Arizona. She has practiced in California, Missouri, Minnesota, and Wyoming.

O.nwanodi@juno.com

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