

## 세포교정영양요법(OCNT)을 이용한 자궁암 수술 후 개선 사례

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## Improvement of Postoperative Outcomes in Uterine Cancer Patients Using Ortho-Cellular Nutrition Therapy (OCNT)

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## ABSTRACT

**Objective:** To report a case of postoperative improvement in a uterine cancer patient using Ortho-Cellular Nutrition Therapy (OCNT).

**Methods:** A Korean woman in her fifties suffering from postoperative complications associated with uterine cancer treatment.

**Results:** Significant improvement in various indicators was noted following the administration of nutritional therapy after uterine cancer surgery.

**Conclusion:** OCNT may aid in alleviating symptoms following uterine cancer surgery.

**Keywords** Ortho-Cellular Nutrition Therapy (OCNT), uterine cancer, cancer surgery, postoperative complications

## INTRODUCTION

Gynecological cancers, ranging from ovarian to vulvar, represent malignant tumors that develop along the female reproductive tract. These cancers account for 15.2% of all global female cancer cases and deaths. According to the 2020 GLOBOCAN report, there are 417,367 new cases and 97,370 deaths from uterine cancer worldwide annually.<sup>1</sup>

Uterine cancer is categorized into endometrial cancer and non-endometrial cancers, such as uterine sarcomas. In Korea, the incidence of uterine cancer increased 3.6-fold from 949 cases in 1999 to 3,437 in 2019. The age-standardized incidence rate of uterine cancer saw an average annual percentage change of 4.7 from 1999 to 2019. The three-year, five-year, and ten-year survival rates for uterine cancer are 89.0% (95% confidence interval, 88.6% to 89.3%), 86.3% (95% confidence interval, 85.8% to 86.7%), and 83.3% (95% confidence interval, 82.8% to 83.8%) respectively.<sup>2</sup>

Obesity is a significant risk factor for endometrial cancer, with other factors including diabetes, hypertension, and polycystic ovary syndrome. Factors such as childbirth,

contraceptive use, and menopausal hormone therapy also influence risk.<sup>3</sup>

The most common types of uterine sarcomas are leiomyosarcoma (LMS, 63%), endometrial stromal sarcoma (ESS, 21%), adenosarcoma (6%), undifferentiated sarcoma (5%), and others (5%). Little is known about the causes of uterine sarcoma.<sup>4</sup>

Treatment options for uterine cancer include hysterectomy, radiation therapy, chemotherapy, targeted therapy, and hormone therapy.

This report follows a uterine cancer patient who experienced a noticeable improvement in postoperative recovery and symptom reduction following nutritional therapy, consented by the patient for case reporting.

## CASE STUDY

## 1. Subject

A single case of a uterine cancer patient.

- 1) Name: Park OO (F/56 years old)
- 2) Diagnosis: Stage II uterine cancer
- 3) Date of diagnosis: February 2023, diagnosed with Stage II uterine cancer (4cm) at Seoul OO Hospital
- 4) Treatment duration: From March 7, 2023, to present
- 5) Main symptoms: Hematuria, loss of appetite, anxiety about surgery and cancer treatment, lethargy
- 6) Past medical history: Uterine bleeding in July 2022, atrophic gastritis, colon polyps, menopause in December 2021

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Received Apr 30, 2024; Accepted Apr 30, 2024; Published Apr 30, 2024

doi: <http://dx.doi.org/10.5667/CellMed.spc.079>

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† This report has been translated and edited by the CellMed editor-in-chief, Prof. Beom-Jin Lee.

- 7) Social history: None
- 8) Family history: Gastric cancer, cardiac arrest
- 9) Current illness and medications: Symbicort

**2. Methods**

**1st OCNT (15-day course):**

Paragon (101, twice a day, one sachet per intake) for five days  
 Bioplex (101, twice a day, one sachet per intake) for five days  
 Cyaplex F (222, three times a day, two sachets per intake)  
 Eufaplex (111, three times a day, one capsule per intake)  
 Betaplex (111, three times a day, one sachet per intake)  
 Enzaplex (111, three times a day, one sachet per intake)  
 Nutaplex (111, three times a day, one sachet per intake)  
 Selenplex (222, three times a day, two capsules per intake)  
 Aqua SAC (10 10 10, three times a day, 10 mL per intake)

**2nd OCNT phases (2nd to 5th):**

Cyaplex F (202, twice a day, two sachets per intake)  
 Eufaplex (101, twice a day, one capsule per intake)  
 Betaplex (101, twice a day, one sachet per intake)  
 Bioplex (101, twice a day, one sachet per intake)  
 Selenplex (202, twice a day, two capsules per intake)  
 Diverol (020, once a day, two capsules per intake)  
 Aqua SAC (10 0 10, twice a day, 10mL per intake)

**6th OCNT phase (September 2023 to January 2024):**

Cyaplex F (101, twice a day, one sachet per intake)  
 Resplex (101, twice a day, one sachet per intake)  
 Eufaplex (101, twice a day, one capsule per intake)  
 Diverol (010, once a day, one capsule per intake)  
 Selenplex (101, twice a day, one capsule per intake)  
 Bioplex (001, once a day, one sachet per intake)

**7th OCNT phase (Starting February 2024):**

Continuing the 6th phase regimen with additions:  
 Enzaplex (101, twice a day, one sachet per intake)  
 Tmplex: (101, twice a day, one capsule per intake)

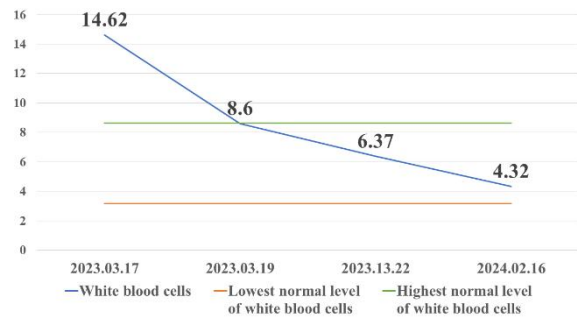
**RESULTS**

The patient was diagnosed with Stage II uterine cancer with a 4cm tumor in February 2023 at Seoul OO Hospital and was scheduled for chemotherapy and radiation therapy after surgery.

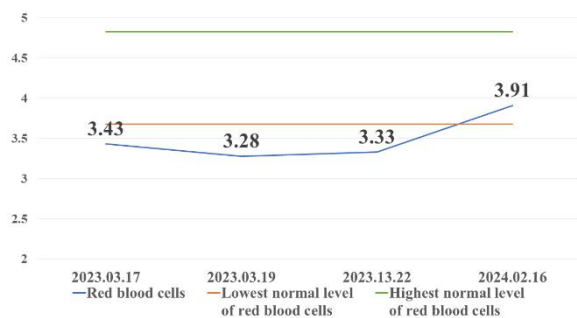
OCNT was initiated pre-surgery to aid in rapid recovery and reduce postoperative complications.

After a single dose of the initial OCNT, the patient experienced significant gas release. After surgery on March 21, the patient was hospitalized for three days and was discharged in good health. The biopsy of the excised tissue indicated that no further chemotherapy or radiation was necessary, and quarterly CT scans were recommended.

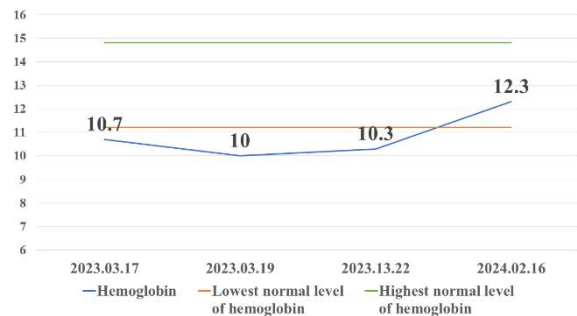
Following OCNT from the 2nd to the 5th phase, a routine check-up in July 2023 showed no abnormalities, and the regular check-up interval was extended to six months starting October 2023. In February 2024, examination results showed that white blood cell counts that were abnormally high before surgery, had normalized (Fig. 1). Also, red blood cell counts and hemoglobin levels, which were bellowed the baseline, were restored to normal (Figs. 2 and 3). The tumor marker CA-125 levels were also within reference ranges at 3.3, 4.3, and 4.1 in three subsequent blood tests after surgery.



**Fig. 1 White Blood Cell Count of the Subject.** After starting OCNT, the white blood cell counts initially exceeded the normal range but returned to normal after consistently applying OCNT.



**Fig. 2 Red Blood Cell Count of the Subject.** Shortly after initiating OCNT, the red blood cell count was below the normal range, but it returned to normal approximately one year later.



**Fig. 3 Hemoglobin Level of the Subject.** Immediately after beginning OCNT, the hemoglobin level was below the normal range but normalized about one year later.

These results demonstrate that consistent OCNT, initiated before and continued after surgery, has significantly improved the patient’s physical and mental quality of life.

## DISCUSSION

The subject of this case study is a Korean woman in her fifties who began experiencing uterine bleeding in July 2022. At that time, no uterine cancer was detected, but in February 2023, a 4cm tumor was identified at Samsung OO Hospital, leading to a diagnosis of Stage II uterine cancer.

The subject initially experienced dyspeptic symptoms, and a five-day regimen of Paragon and Bioplex was started. Ingredients in Paragon, such as fennel<sup>5</sup>, buckwheat<sup>6</sup>, and clove<sup>7</sup>, aid in alleviating indigestion. Additionally, the oat fiber in Bioplex improves gut microbiota and is beneficial for cancer<sup>8,9</sup>, and its fructooligosaccharides enhance mineral absorption and promote intestinal fermentation<sup>10</sup>.

Cyaplex F's anthocyanins modulate anti-inflammatory responses, inhibit mutagenesis, induce differentiation, regulate signaling pathways, and arrest the cell cycle. They also stimulate apoptosis or autophagy in cancer cells, thereby suppressing proliferation, preventing invasion, reversing drug resistance, and enhancing sensitivity to chemotherapy<sup>11</sup>. It has also been shown to induce cell cycle progression and apoptosis in uterine and colorectal cancers<sup>12</sup>.

Eufaplex's oleic acid is beneficial for autoimmune and inflammatory diseases and has been effective against cancer<sup>13</sup>. Linolenic acid is shown to inhibit cancer cell growth and induce apoptosis effectively<sup>14</sup>.

Betaplex's beta-glucans have been shown to significantly reduce the viability of cancer cells with increasing concentrations and incubation time<sup>15</sup>.

Enzaplex, containing a blend of protease, amylase, lipase, bromelain, gingerol, rutin, fucoidan, laminarin, and dietary fibers, not only aids digestion<sup>16-24</sup> but also has anti-cancer benefits. Bromelain also induces apoptosis, reduces cancer cells through autophagy, regulates immunity, and reduces inflammatory edema associated with surgery<sup>25</sup>.

Nutaplex's chlorophyll and spirulina powder possess outstanding antioxidant capabilities<sup>26,27</sup>, with chlorophyll having anti-mutagenic and anti-genotoxic properties and anti-cancer effects<sup>28</sup>. Spirulina also exhibits anti-cancer and antiviral capabilities<sup>29</sup>.

Selenplex's selenium functions in antioxidation, anti-inflammation, reducing cancer incidence, blocking tumor invasion and metastasis, and boosting immunity, thereby naturally preventing cancer recurrence and aiding in pre- and post-surgery management<sup>30</sup>.

Low vitamin D levels and inadequate calcium intake are risk factors for various cancers<sup>31</sup>, hence we added a Diverol and Aqua SAC. Aqua SAC's calcium facilitates the regulation of calcium signaling, which plays a dual role in the survival and death of cancer cells<sup>32</sup>. Diverol's vitamin D supports the absorption of this calcium<sup>33</sup>.

Resplex's resveratrol inhibits the conversion of procarcinogens to carcinogens, thereby suppressing cancer and preventing cancer in various ways<sup>34</sup>.

Finally, Tmplex's micronutrients are essential for immune system function and inflammation control, and they are added

to reduce immune and inflammatory responses before and after surgery for uterine cancer<sup>35</sup>.

This case report represents a single instance and is not universally applicable to all postoperative uterine cancer patients. However, with the patient's consent, it is reported that there was significant improvement after implementing OCNT.

## REFERENCES

- 1 Sung, H. *et al.* Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. *CA Cancer J Clin* **71**, 209-249 (2021).
- 2 Yun, B. S. *et al.* Incidence and survival of gynecologic cancer including cervical, uterine, ovarian, vaginal, vulvar cancer and gestational trophoblastic neoplasia in Korea, 1999-2019: Korea Central Cancer Registry. *Obstet Gynecol Sci* **66**, 545-561 (2023).
- 3 Felix, A. S. & Brinton, L. A. Cancer progress and priorities: uterine cancer. *Cancer Epidemiology, Biomarkers & Prevention* **27**, 985-994 (2018).
- 4 Tropé, C. G., Abeler, V. M. & Kristensen, G. B. Diagnosis and treatment of sarcoma of the uterus. A review. *Acta oncologica* **51**, 694-705 (2012).
- 5 Zafar, S., Khan, M. K., Perveen, S., Iqbal, M. & AL-Huqail, A. A. in *Essentials of Medicinal and Aromatic Crops* 483-514 (Springer, 2023).
- 6 Maksimovic, V. *et al.* *Advances in Buckwheat Research Organised by the Research Institute of Crop Production Prague -Ruzyně under the Auspices of the International Buckwheat Research Association and Ministry of Agriculture of the Czech Republic.* pp. 2004.
- 7 Parle, M. & Khanna, D. Clove: A champion spice. *International Journal of Research in Ayurveda and Pharmacy* **2** (2010).
- 8 Zhu, Y. *et al.* Effects of oat  $\beta$ -glucan, oat resistant starch, and the whole oat flour on insulin resistance, inflammation, and gut microbiota in high-fat-diet-induced type 2 diabetic rats. *Journal of Functional Foods* **69**, 103939 (2020).
- 9 Lattimer, J. M. & Haub, M. D. Effects of dietary fiber and its components on metabolic health. *Nutrients* **2**, 1266-1289 (2010).
- 10 Wang, Y. *et al.* Fructo-oligosaccharides enhance the mineral absorption and counteract the adverse effects of phytic acid in mice. *Nutrition* **26**, 305-311 (2010).
- 11 Lin, B. W., Gong, C. C., Song, H. F. & Cui, Y. Y. Effects of anthocyanins on the prevention and treatment of cancer. *British journal of pharmacology* **174**, 1226-1243 (2017).
- 12 Lazzè, M. C. *et al.* Anthocyanins induce cell cycle perturbations and apoptosis in different human cell

- lines. *Carcinogenesis* **25**, 1427-1433 (2004).
- 13 Sales-Campos, H., Reis de Souza, P., Crema Peghini, B., Santana da Silva, J. & Ribeiro Cardoso, C. An overview of the modulatory effects of oleic acid in health and disease. *Mini reviews in medicinal chemistry* **13**, 201-210 (2013).
- 14 Serini, S., Piccioni, E., Merendino, N. & Calviello, G. Dietary polyunsaturated fatty acids as inducers of apoptosis: implications for cancer. *Apoptosis* **14**, 135-152 (2009).
- 15 Choromanska, A. *et al.* Anticancer properties of low molecular weight oat beta-glucan – An in vitro study. *International Journal of Biological Macromolecules* **80**, 23-28 (2015).
- 16 Ianiro, G., Pecere, S., Giorgio, V., Gasbarrini, A. & Cammarota, G. Digestive Enzyme Supplementation in Gastrointestinal Diseases. *Curr Drug Metab* **17**, 187-193 (2016).
- 17 Agrawal, P., Nikhade, P., Patel, A., Mankar, N. & Sedani, S. Bromelain: A Potent Phytomedicine. *Cureus* **14**, e27876 (2022).
- 18 Hale, L. P., Greer, P. K., Trinh, C. T. & James, C. L. Proteinase activity and stability of natural bromelain preparations. *Int Immunopharmacol* **5**, 783-793 (2005).
- 19 Valussi, M. Functional foods with digestion-enhancing properties. *International Journal of Food Sciences and Nutrition* **63**, 82-89 (2012).
- 20 Kumar, S. *et al.* Effect of rutin against gastric esophageal reflux in experimental animals. *Toxicology Mechanisms and Methods* **24**, 666-671 (2014).
- 21 Abdel-Raheem, I. T. Gastroprotective effect of rutin against indomethacin-induced ulcers in rats. *Basic & clinical pharmacology & toxicology* **107**, 742-750 (2010).
- 22 Song, M. Y., Ku, S. K., Kim, H. J. & Han, J. S. Low molecular weight fucoidan ameliorating the chronic cisplatin-induced delayed gastrointestinal motility in rats. *Food and Chemical Toxicology* **50**, 4468-4478 (2012).
- 23 Satchithanandam, S., Klurfeld, D. M., Calvert, R. J. & Cassidy, M. M. Effects of dietary fibers on gastrointestinal mucin in rats. *Nutrition Research* **16**, 1163-1177 (1996).
- 24 Schneeman, B. O. Gastrointestinal responses to dietary fiber. *New Developments in Dietary Fiber: Physiological, Physicochemical, and Analytical Aspects*, 37-42 (1990).
- 25 Pezzani, R. *et al.* Anticancer properties of bromelain: State-of-the-art and recent trends. *Frontiers in oncology* **12**, 1068778 (2023).
- 26 Hsu, C.-Y., Chao, P.-Y., Hu, S.-P. & Yang, C.-M. The antioxidant and free radical scavenging activities of chlorophylls and pheophytins. (2013).
- 27 Asghari, A., Fazilati, M., Latifi, A. M., Salavati, H. & Choopani, A. A review on antioxidant properties of Spirulina. *Journal of Applied Biotechnology Reports* **3**, 345-351 (2016).
- 28 Martins, T., Barros, A. N., Rosa, E. & Antunes, L. Enhancing Health Benefits through Chlorophylls and Chlorophyll-Rich Agro-Food: A Comprehensive Review. *Molecules* **28**, 5344 (2023).
- 29 Reboleira, J. *et al.* in *Nonvitamin and Nonmineral Nutritional Supplements* (eds Seyed Mohammad Nabavi & Ana Sanches Silva) 409-413 (Academic Press, 2019).
- 30 Kim, S. J., Choi, M. C., Park, J. M. & Chung, A. S. Antitumor Effects of Selenium. *International Journal of Molecular Sciences* **22**, 11844 (2021).
- 31 Peterlik, M., Grant, W. B. & Cross, H. S. Calcium, vitamin D and cancer. *Anticancer research* **29**, 3687-3698 (2009).
- 32 Varghese, E. *et al.* Anti-Cancer Agents in Proliferation and Cell Death: The Calcium Connection. *International Journal of Molecular Sciences* **20**, 3017 (2019).
- 33 Lips, P. Interaction between vitamin D and calcium. *Scandinavian journal of clinical and laboratory investigation* **72**, 60-64 (2012).
- 34 Varoni, E. M., Lo Faro, A. F., Sharifi-Rad, J. & Iriti, M. Anticancer molecular mechanisms of resveratrol. *Frontiers in nutrition* **3**, 8 (2016).
- 35 Weyh, C., Krüger, K., Peeling, P. & Castell, L. The Role of Minerals in the Optimal Functioning of the Immune System. *Nutrients* **14**, 644 (2022).