Integrative Tumor Board: A Case Report and Discussion From East-West Cancer Center

Hyo-Min Park¹, Seo-Yeon Kim, MD¹, In-Chul Jung, OMD, PhD¹, Yeon-Weol Lee, OMD, PhD¹, Chong-Kwan Cho, OMD, PhD¹, and Hwa-Seung Yoo, OMD, PhD¹

Abstract

Aim. To introduce the application of wheel balance cancer therapy (WBCT) in cancer treatment through an intensive study of a representative patient. Method. A 59-year-old, female patient who was a secondhand smoker and who carried no significant medical and family history was diagnosed with T1N0M1 (stage 4) lung adenocarcinoma. Immunohistochemistry was positive for thyroid transcription factor-1, CK7, cyclin D1, p53, and Ki-67 on both lung biopsy specimens. An open lobectomy with mediastinal nodal dissection followed. The patient was transferred to East-West Cancer Center (EWCC) suffering from exertional dyspnea (NYHA [New York Heart Association] grade 2) with thoracic pain and pain in both upper limbs because of the decreased ventilatory capacity and reduced exercise capacity after a pulmonary resection. She also complained of emotional stress. EWCC provided WBCT, a multimodality alternative protocol based on the theory of traditional oriental medicine. Physicians regularly monitored whether metastasis or recurrence existed through blood and radiation tests. Observations and dialogues with the patient were used to record the changes in symptoms such as thoracic pain, dyspnea, anxiety, and fear. Results. Treatments at EWCC led to a disease-free survival of 28 months without adjuvant chemotherapy. Neither metastasis nor recurrence occurred during this period. Exertional dyspnea recovered to NYHA grade 1. Other physical and psychological symptoms were alleviated. Conclusion. This report suggests that WBCT may have the potential for extending life expectancy, controlling symptoms, and improving quality of life in cancer patients.

Case Scenario

EHP, a 59-year-old Korean housewife, was admitted to a local hospital in early October 2007 for evaluation of general health status without any specific symptoms. She had 2 children and no significant medical history except exposure to secondhand smoke. Her only notable family history was that her uncle was diagnosed with lung cancer, but her genetic profile later showed normal methylation in 2 genes, p16 and H-cadherin, located in both tumor tissue and a lymph node distant from the original tumor site. Her physical examination was unremarkable. Chest radiography showed an ill-defined nodule in the right lower lobe. CT of the chest revealed a 2-cm lesion in the lower lobe of the right lung and multiple ground-glass opacities in the bilateral lungs.

A video-assisted wedge resection of right upper and lower lobes was used in the diagnosis of pulmonary nodules and staging of mediastinal lymph nodes on October 19, 2007.

The histological examination revealed a moderately differentiated adenocarcinoma. Fluorodeoxyglucose-positron emission tomography and CT scanning was performed on October 30, 2007 to detect extrapulmonary metastatic disease. The image showed that a nodular lesion with fluorodeoxyglucose uptake was located in the left upper lobe, with the maximum standardized uptake value of the nodular lesion. A second video-assisted wedge resection biopsy of the left upper lobe was performed on November 6, 2007, and the histological examination revealed an atypical adenomatous

1East-West Cancer Center, Dunsan Oriental Medical Hospital of Daejeon University, Daejeon 302-122, Republic of Korea

Corresponding Author:
Hwa-Seung Yoo, East-West Cancer Center,
Dunsan Oriental Hospital of Daejeon University, 1136 Dunsan-dong,
Seo-Gu, Daejeon, Republic of Korea
Email: altys@duj.kr
hyperplasia. Open lobectomy with mediastinal nodal dissec-
tion was performed, and the final pathological diagnosis of the
left upper lobe ground-glass opacity was a well-differentiated
adenocarcinoma. Immunohistochemistry was performed on
formalin-fixed, paraffin-embedded tissues. Specimens from
the right lower lobe and the left upper lobe showed the same
immunopositivity of thyroid transcription factor-1, CK7,
cyclin D1, p53, and Ki-67. The patient was diagnosed to
have c-stage T1N0M1 (stage 4) disease.

Lung cancer is one of the most prevalent cancers with the
highest mortality rate of all types of cancers. Although surgery,
chemotherapy, and radiotherapy are routinely used for the
treatment of lung cancer, little progress has been made in the
treatment of this condition over the past 20 years. Pulmonary
resection usually results in decreased ventilatory capacity and
reduced exercise capacity,2,3 which leads to a low quality of
life (QOL). EHP also began to have a discussion with her
family about her exertional dyspnea with thoracic pain. Reha-
bitation was needed to address her continuing fear of disease
relapse, dyspnea, and feelings of suffocation as well as the
psychological problems associated with lung cancer.4 EHP
and her family decided to receive complementary and alter-
native medicine therapies for rehabilitation. So in late
November 2007, they visited East-West Cancer Center
(EWCC) in Daejeon, Korea.

At EWCC, the patient had consultations with several members
of the hospital, including the integrative oncologist (mostly
oriental medical doctors), physical therapist, phytopharma-
cist, oncology nurse, psychiatrist, and nutritionist. Established
in 1991, EWCC is one of the major integrative cancer clinics
using traditional oriental medicine (TOM) in Korea. The
integrative cancer treatment program at EWCC, called wheel
balance cancer therapy (WBCT), incorporates traditional
oriental treatments with conventional cancer treatments.
EWCC’s WBCT program includes (1) anticancer diet,
(2) metabolism activation, (3) antiangiogenic and immu-
noenhancing herbal therapy, and (4) meditation and exercise.
In Korea, the National Health Insurance Cooperation’s public
insurance system applies to patients with serious diseases
like cancer. In this case, the country’s public insurance covers
95% and the personal insurance or the individual covers
5% of the patient’s treatment fee. Of the WBCT programs,
acupuncture, cupping, moxibustion, physical therapy, and
herbal medicine in granular form are the representative treat-
ments paid for by the public insurance. In the instance of
hospitalization, cost of the room and food are also included.
Anything else is paid by the personal insurance company or
the individual. Personal insurance has a flat rate system,
which, for instance, pays 50 to approximately 150 US dollars
a day for 120 to approximately 180 days per year, and the
individual pays for the rest when a patient is hospitalized.

Environmental factors, including diet and physical
activity, play an important role in modulating individual
susceptibility and are linked to the EWCC’s WBCT treatment
program. The aim of this review is to introduce EHP’s daily
therapy program included in WBCT at EWCC. Clinical
notes were documented in the electronic medical record every
treatment session.

Every morning, the patient was weighed. Body weight
and weight change can impact cancer patients’ health and
their prognosis. During the follow-up of 28 months, no sig-
nificant weight change was observed. EHP’s height is 5 feet
2.20 inches (158.00 cm), and her weight was 119.05 pounds/
54 kg. She often suffered from insomnia, so the doctors sug-
gested herbal aromatherapy (lavender and marjoram) to
relieve it. Behavior and lifestyle changes were needed but
were challenging. She also took hypnotic medication, zolpi-
dem tartrate (Stillnox).

She then had breakfast and drank green vegetable juice.
Her usual diet consisted of 3 meals a day provided by the
hospital, with some fruits for snacks between meals. The
patient tried to apply the food information given by the nutri-
tionist. She changed her dietary habits by eating traditional
Korean food based on whole grains like brown rice and beans,
instead of having noodles and bread made of wheat flour.
Fortunately, her favorite food was Doenjang Chigae (soybean
paste stew),6 which was good for her health from the perspec-
tive of integrative oncology. However, EHP’s preference for
salty foods still had to be altered.

The phytopharmacist of EWCC also gave her some edu-
cational materials regarding a phytoneutrient-rich diet, healthy
snack ideas, tips for getting adequate amounts of protein on
a daily basis, and more resources for reliable nutrition infor-
mation. The role of specific phytonutrients in disease preven-
tion and health promotion and the food-based sources for
maximum benefit were emphasized.7 The recommendation
was for 3 to 5 (1/2 cup) servings per day of phytonutrient-rich
fruits and vegetables (approximately 200 g) and whole grains
in place of refined carbohydrates and sugars. Two cups of
green vegetable juice (each cup being approximately 250 mL)
a day were given to her by EWCC. Physicians responded to
the patient’s questions about ginseng, mistletoe, Lentinus
edodes (shiitake), vitamins, and so on. All the guidelines
were given based on the Natural Standard natural products
information system.8

To prevent the metastasis or recurrence of cancer, she was
asked to take herbal medicines. Her main prescription was
the Hang-Am Plus formula (Korean word for anticancer) or
Myun-Yuk Plus formula (Korean word for immunity) 3 times
a day. These medications were taken orally daily to obtain
an antiangiogenic effect and for immune system stimulation.
Other herbal medicines (Sosiho-tang [Xiaochaihu tang] for
fever caused by common cold, Soyo-san [Xiaoyao san] for
emotional stress, Dohongsamul-tang [Taohongswu tang]
for blood circulation problems, Banhasasim-tang [Banxia
Xiexin tang] for dyspepsia, etc) were also prescribed
Table 1. Acupoint Prescriptions Using Saam Acupuncture

<table>
<thead>
<tr>
<th>Description</th>
<th>Acupoint</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tonifying Spleen Meridian</td>
<td>SP02 (+)</td>
<td>On the medial side of the big toe, inferior to the first metatarsal digital joint in a depression at the juncture of the red and white skin</td>
</tr>
<tr>
<td></td>
<td>HT08 (+)</td>
<td>When a loose fist is made where the tip of the little finger rests between the 4th and 5th metacarpal bones</td>
</tr>
<tr>
<td></td>
<td>SP01 (-)</td>
<td>On the medial side of the big toe, 1 cun posterior to the corner of the nail</td>
</tr>
<tr>
<td></td>
<td>LR01 (-)</td>
<td>On the lateral side of the big toe, 1 cun from the corner of the nail</td>
</tr>
<tr>
<td></td>
<td>SP03 (+)</td>
<td>Proximal and inferior to the head of the first metatarsalphalangeal joint in a depression at the junction of the red and white skin</td>
</tr>
<tr>
<td>Alternative option for physical fatigue</td>
<td>LU09 (+)</td>
<td>At the wrist crease on the radial side of the radial artery</td>
</tr>
<tr>
<td></td>
<td>TE06 (-)</td>
<td>3 Cun above TE 4 between the radius and ulna on the radial side of the extensor digitorum muscle on the TE 4 and tip of the olecranon line</td>
</tr>
<tr>
<td></td>
<td>KI02 (-)</td>
<td>Anterior and inferior to the medial malleolus in a depression on the lower border of the tuberosity of the navicular bone</td>
</tr>
<tr>
<td>Alternative option for mental fatigue</td>
<td>LU08 (+)</td>
<td>1 Cun above LU 9 on the line joining LU 5 and LU 9</td>
</tr>
<tr>
<td></td>
<td>SP03 (+)</td>
<td>Proximal and inferior to the head of the 1st metatarsalphalangeal joint in a depression at the junction of the red and white skin</td>
</tr>
<tr>
<td></td>
<td>HT 08 (+)</td>
<td>When a loose fist is made where the tip of the little finger rests between the 4th and 5th metacarpal bones</td>
</tr>
<tr>
<td></td>
<td>CV 06 (-)</td>
<td>Midway between CV 5 and CV 7, 1.5 cun below CV 8 (umbilicus)</td>
</tr>
<tr>
<td></td>
<td>BL15 (-)</td>
<td>1.5 Cun lateral to GV 11, level with T5</td>
</tr>
</tbody>
</table>

*A cun is a practical measurement used by acupuncturists equivalent to the greatest width of a patient’s thumb at the distal phalanx.

depending on the changes in her symptoms based on the TOM pattern identification.

The patient had been recommended by medical doctors in the local hospital to receive adjuvant chemotherapy for survival benefit, but she decided not to have any of the chemotherapy because of fear of its side effects. At one time, she was diagnosed with varicella zoster during her stay at EWCC and took an antiviral agent. Indications for acyclovir (and other antiviral agent) treatment are individuals who have suffered from severe forms of varicella and those who belong to the high-risk group of patients (adults, viral complications, immunocompromised host). Acyclovir worked well for EHP, and no other treatment was needed. Soon after, in her usual progress test, abnormal liver function was noted. The following liver enzymes were elevated: aspartate transaminase (AST)/alanine transaminase (ALT), 136/129 unit/L; r-glutamyl transpeptidase (r-GTP), 67 unit/L. Sonography showed increased parenchymal echogenicity, which was a reliable criterion for diagnosing fatty liver. Doctors asked her to take Chung-Gan (Korean word for liver cleaning) plus, and they stopped administration of other herbal prescriptions until the liver enzymes were normal (from September 23 to September 27, 2008). Currently, she is being prescribed Hang-Am plus and Myun-Yuk plus.

To relax her mind and body and to increase the response to acutherapy, soy bean paste pack therapy was started for her lower abdomen and was done for 15 minutes. She did not complain of its smell and reported that it felt good. It was planned for the patient to receive acupuncture therapy for dyspnea. Naive to acupuncture, she was a little nervous. Practicing breathing techniques to ease tension, she lay supine on her bed with legs and arms exposed. After following routine skin preparation and sterile precautions, stainless steel acupuncture needles, AsiaMed No.16 30 mm × 0.30 mm, were inserted into the following acupuncture points, 0.5 cm to 1.0 cm in depth (Table 1): SP02 (+), HT08 (+), SP01 (-), LR01 (-)/SP03 (+), LU09 (+), TE06 (-), KI02 (-)/LU08 (+), SP03 (+), HT 08 (+), CV 06 (-), BL15 (-). The points of acupuncture are described in Table 1. An infrared heat lamp was shone on acupuncture points. The needles were removed after 20 minutes of needling time. As is common in traditional acupuncture therapy, practitioners attempted to elicit de qi (needling sensation) to help determine the exact point location. The patient received acupuncture therapy every morning to obtain the maximum possible benefit.

After acutherapy, she went to the moxibustion therapy room. EWCC is equipped with a separate room for moxibustion therapy because of its smoke issues. Indirect moxa is considered to induce a gradual localized vasodilatation response. In addition to increasing the local blood flow, skillful indirect moxibustion is extremely comforting and can create a deep relaxation response. Moxibustion was done on CV12 and KD1 (Table 2); the patient fell asleep on the treatment table for about 20 minutes and reported being completely relaxed.

She moved to the physical therapy room to take physiotherapy. At first, the patient had a cupping glass therapy for 5 minutes. Dry cupping therapy is a congestion remedy...
alternative to acupuncture. It helps the circulation of qi and blood by vasodilation and muscle stimulation. After that, she received transcutaneous electrical nerve stimulation (TENS) for 15 minutes to help with her back pain and right arm discomfort. TENS is a noninvasive, safe method to reduce pain, both acute and chronic. Although controversy exists as to its effectiveness in the treatment of chronic pain, a number of systematic reviews or meta-analyses have confirmed its effectiveness for postoperative pain and chronic musculoskeletal pain. Patients feel a tingling or buzzing on their skin where the electrodes are placed. Some people find this sensation unpleasant. Our patient was also treated with full-spectrum visible ray therapy to her feet using a carbon arc during TENS therapy.

She then received massage therapy, including cervicothoracic manipulation connected with her breathing rate to relax chronic tension in the neck, shoulders, and back, in a quiet place, by a physiotherapist for 10 minutes. This massage therapy resulted in a notable improvement in her range of motion. She received light to moderate pressure and a general massage at slow speed. She felt that the massage made her feel good, and it was suggested that she should continue to receive this therapy with exercises. After massage therapy, her body was definitely more relaxed.

Next, she rode a stationary bicycle for 15 minutes at a heart rate equivalent to 70% of peak power output. Stationary bicycles are a safe and effective means of exercise. They provide a means of low-impact cardiovascular exercise, are generally quiet in operation, and are efficient with their use of space. The patient was interested in finding out specific ways to improve her chest discomfort with mild exertional dyspnea (NYHA [New York Heart Association] class 2), upper-limb pain, low appetite, and the effectiveness of her physical therapy with exercise.

At noon, she received foot bath herbal-massage therapy, with the water being heated up to 41°C, for 20 minutes. Foot bath massage therapy can stimulate the autonomic nervous system. She said later that it could have helped in easing her anxiety and increasing her confidence before hiking.

After having lunch at noon, she was expected to go out for climbing. EWCC’s WBCT program included daily climbing, which later became one of her favorite courses. For an hour and a half, she climbed the mountain near the hospital with chaperones. At her first climbing session, she could not perform well, which depressed her very much. Her comment was, “I want to go to the mountain without any difficulties just like before the operation.” Encouragement from her family and members of EWCC helped her. She and the other cancer patients in her room prayed often. She said that this helped her have a willingness to go through rehabilitation, as did her meditation therapy. She was also taught ways to relax her mind as well as breathing and meditation techniques.

After coming back from the mountain, a hot hip bath was taken for about 20 minutes with water at 40°C to 45°C. The patient was made to sit in a chair to which heat generators were attached. Hip baths are one of the widely used hydrotherapy treatments. EHP received this therapy to ease her pain. After the therapy, the patient ate some fruits with water to help in preventing dehydration.

The patient also received pharmacopuncture therapy. Pharmacopuncture involves the injection of a subclinical dose of drugs into acupoints. EHP received this therapy for musculoskeletal pain and deficiency of Lung–Kidney Yin. Bee venom and placenta pharmacopuncture were used in turns on the acupoints CV12 and GV3 (Table 2), respectively. Pharmacopuncture therapy was given every 2 days.

Next, the patient participated in supportive therapy, one of the WBCT programs at EWCC. This therapy has been held once a week in EWCC. It has been observed that it improves patient compliance and adherence to medical treatment and helps reduce fears and phobias related to treatment procedures. Supportive therapy can help reduce anxiety and depression, and help patients communicate better with their physicians. The patient senses a supportive environment and experiences a better QOL. The group setting is particularly good for focusing on relationship problems and providing a safe area to practice new behaviors, which will hopefully lead to a lasting change.

After dinner, charcoal pack therapy was done for 20 minutes for a detoxifying effect. After her last scheduled activity, she went back to her room and rested in bed. Through all the interventions, EHP continued to progress in her rehabilitation. She increased her exercise levels and was better able to balance her work life and family life. She received a

<table>
<thead>
<tr>
<th>Acupoint Prescriptions for Pharmacopuncture and Moxibustion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>Pharmacopuncture</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Moxibustion</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

*A cun is a practical measurement used by acupuncturists equivalent to the greatest width of a patient’s thumb at the distal phalanx.*
total of 6 WBCT admission treatments (3 weeks per admission) followed by outpatient clinic visits. The results were a decrease in thoracic and upper-limb pain and dyspnea. During the follow-up of 28 months, there was no recurrence or metastasis, despite the fact that no adjuvant chemotherapy was provided. The rate of postoperative decrease of a relevant marker can provide an indication of patient outcome. During follow-up care, serum carcinoembryonic antigen (CEA) was determined preoperatively and at every postoperative visit. The serum CEA concentration of her most recent test was in the normal range (0.9 ng/mL), although it must be mentioned that her immediate postsurgery serum CEA concentration was also within normal limits.

Presently, she continues to feel well with diminishing dyspnea, increasing energy, a balanced diet, and regular, daily exercise. She appears to be coping well emotionally and mentally.

Case Discussion

TOM theories view the body’s physiology as networks of interdependent organ systems. Therefore, health is defined as a condition of stable balance among these networks, where the metabolism of each organ system occurs in harmony with others. TOM therapies focus on restoring homeostasis by synchronizing networks of metabolic pathways and thus creating a favorable environment for the immune system to function properly. Based on the TOM theories, WBCT aims to bring physical, emotional, and social balance to cancer patients. There have been 2 cohort studies of WBCT used for lung and gastric cancers.15,16 Conventional modes of cancer treatments mostly target tumors, whereas WBCT is an indirect approach that targets physiological environments to induce cancer regression and tumor dormancy.17,18

When a patient begins cancer treatment at EWCC, a complete review of patient history and physical examination are completed by a physician within 2 weeks after cancer diagnosis and/or conventional treatment. Physical examination includes an electrocardiogram, laboratory studies (complete blood count, platelet count, differential, tumor markers, and liver and renal function tests), and radiology tests. After these examinations, oriental medical doctors interpret the symptoms of the patient using examination methods such as pulse diagnosis, tongue diagnosis, and listening diagnosis. Based on results of these studies, patients are entered into the following 4 subprograms of the WBCT.

Anticancer Diet

The World Health Organization (WHO) reported that at least one third of cancer cases that occur annually throughout the world could be prevented by a healthy diet, and a poor diet is second only to tobacco as a preventable cause.19 EWCC believes that environment plays a major role in the development of cancer and therefore offers specific diet guidelines for cancer patients.

There are 2 major anticancer diets at EWCC: (1) diet for patients who are receiving Eastern therapy and chemotherapy (or radiotherapy) at the same time or have just finished chemotherapy (or radiotherapy) and (2) diet for preventing metastasis and recurrence.

First of all, the chemotherapy diet is designed to help patients with severe physical weakness and loss of energy. Small amounts of meats such as beef, bone soup, and loach fish soup are provided. An adequate amount of meat keeps the patients healthy and strong enough to enable them to withstand chemotherapy. Patients undergoing radiation treatment complain of dry mouth and tongue inflammation. This dehydration because of intense heat can be allayed when patients replenish their body fluids by eating sweet and cold foods. Practitioners at EWCC instruct the patients to stay away from hot and spicy foods, cigarettes, and alcohol. Drinking apricot tea and tea made from the roots of various shrubs in the Araliaceae (ginseng) plant family while receiving radiation therapy can help reduce these side effects.

EHP followed the second type of anticancer diet for preventing metastasis and recurrence. Because EHP visited EWCC after a lobectomy, she was initially prescribed a liquid diet consisting of easily digestible foods such as rice gruels and kimchi soup. Most liquid diets may not be suitable in the long term because they lead to excessive weight loss. They are, however, of benefit for certain types of procedures, both preoperatively and postoperatively. The following week was focused on healing scars, so light food with high protein content such as bean pastes and bean curds were given. Later, foods made of beans keep the patient’s diet sufficiently high in protein levels, thus, enabling the patient to stay on a vegetarian diet. the patient had to avoid red meat and processed meat, because they increase the risk of esophageal, colorectal, liver, and lung cancers. Along with the protein diet, vegetable juice was prescribed to EHP in order to help regain strength and shorten the recovery time from the lung cancer.20 After a sufficient dose of vegetable-only diet, the physicians can decide the right timing for the patient to start taking a common Korean meal mainly consisting of steamed rice. Although EHP began with the common Korean meal, her gastric motility was not in a perfect condition. Doctors at EWCC explained this situation by Sasang constitutonal medicine,21 a unique system of medicine in Korea, in which people are categorized into 4 body types. Of the 4 constitutions, EHP was diagnosed as a “lesser yin (so-eum) person.” The lesser yin person naturally has a low bowel movement and, therefore, eats only a small amount of food. EHP was instructed to avoid foods with too much oil and foods that are too cold for their possible effects on the digestive functions, which lead to diarrhea and functional gastrointestinal symptoms.
Antiangiogenic Agents and Immunoenhancing Herbal Therapy

Hang-Am Plus, Myun-Yuk Plus, and Chung Gan Plus were medications first developed at EWCC, and have been routinely used for cancer patients. Along with these medications, other medications were prescribed to EHP for management of other symptoms based on the TOM pattern identification. Sosiho tang, Soyo-san, Dohongsamultang, Banha sasimtang, and Oryungsan were the main prescriptions additionally made to EHP.

Hang-Am Plus. For the past decade, Hang-Am Plus has been routinely prescribed to solid tumor patients at EWCC. Hang-Am Plus is a medication in capsule form used to inhibit angiogenesis. Inhibiting angiogenesis prevents the formation of blood vessels around the tumor. Hang-Am Plus is produced by grinding 9 herbal ingredients (Coix lachryma-jobi seed, Panax notoginseng root, Hippocampus kelloggi, Cordyceps militaris, Cremastra appendiculata tuber, Panax ginseng root, Bos taurus calcula, Pteria martensi, and Moschus moschiferus). The antiangiogenic effect of Cordyceps militaris has been reported. Other publications have demonstrated the anticancer effect of Hang-Am Plus in nude mice as well as the apoptotic effects of Panax notoginseng and Cordyceps militaris. This prescription was an important intervention in the Best Case Series Program conducted at EWCC, which was recognized as containing a persuasive case by the United States National Cancer Institute Office of Complementary and Alternative Medicine. Hang-Am Plus was prescribed daily to EHP.

Myun-Yuk Plus. Even after a successful surgery, there is always a chance of metastasis or recurrence. Myun-Yuk Plus was prescribed to EHP to assist in withstanding cancer therapies and preventing metastasis, recurrences, or early termination of treatment as a result of physical weakness. Myun-Yuk Plus is thought to stimulate the immune system through the actions of Astragalus membranaceus, Salvia miltiorrhiza, Hericium erinaceum, and Panax ginseng. In particular, Hericium erinaceum works to activate macrophages and increase nitric oxide production, and to induce NK cell activation via production of interleukin-12. Several research findings suggest that taking angiogenesis-inhibiting medicines and immunoenhancing medicines together works more efficiently in inhibiting cancer metastasis. EHP also took this medication for treating her chronic fatigue.

Chung-Gan Plus. Chung-Gan Plus was the medication used to decrease EHP’s elevated ALT, AST, and r-GTP levels. Chung-Gan plus is generally used for treating the liver. It comprises Artemisia capillaris, Trionyx sinensis, Raphanus sativus, Atractyloides macrocephala, Poria cocos, Alisma orientalis, Atractyloides chinensis, Salvia miltiorrhiza, Polygonum umbellatus, Poncirus trifoliata, Amomum villosum, Glycyrrhiza uralensis, and Aucklandia lappa. This remedy inhibits hyperlipidemia (high cholesterol), and activates the enzymes that break down alcohol, and suppresses liver fibrosis. When EHP’s liver function test was abnormal, she was asked to take Chung-Gan Plus, discontinuing all the other medicines until the liver function test was back to normal. It took 5 days to safely stabilize the ALT, AST, and r-GTP levels of EHP.

Sosiho tang (Xiao chaihu tang). Sosiho tang treats shaoyang diseases. Shaoyang disease refers to the illness caused by pathogenic factors located neither in the exterior nor in the interior but in between. Fullness in the chest, hypochondriac discomfort, anorexia, dysphoria, retching, bitterness in the mouth, dry throat, and dizziness could be the symptoms of shaoyang diseases. This medication is composed of Bupleurum sp. root, Scutellaria sp. root, Pinellia ternata rhizome, Panax ginseng root, Glycyrrhiza sp. root, Zingiber officinale root (fresh), and Zizyphus jujuba fruit.

Soyo san (Xiao yao san). Soyo san soothes the liver to disperse the depressed qi and invigorates the spleen to nourish the blood. The indications are stagnation of the Liver Qi with deficiency of the blood marked by hypochondriac pain, headache, dizziness, bitter mouth, dry throat, mental weariness, poor appetite, and other symptoms. It is composed of Poria cocos, Paeonia alba root, Glycyrrhiza sp. root, Bupleurum sp. root, Angelica sinensis root, Atractylodes macrocephala rhizome, Menthia sp. herb, and Zingiber officinale root (fresh).

Dohongsamul tang (Taohong-siwi tang). Dohongsamul tang is a representative herbal medication that nourishes and regulates the blood. The indications for use of this medication include syndromes of deficiency and stagnation of blood with symptoms such as menstrual disorders, abdominal pain, metrorrhagia, and metrostaxis accompanied by blood masses and frequent pain. It is composed of Prunus persica seed, Carthamus tinctorius flower, Rehmannia glutinosa root, Angelica gigas root, Cnidium officinale rhizome, and Paeonia sp. root.

Banhasasim tang (Banxia Xiexin tang). Banhasasim tang regulates the stomach and purges the adverse flow of qi, relieving stagnation and flatulence. Indications are disorder of the stomach caused by stagnation of qi, marked by loss of appetite, epigastric fullness sensation without pain, retching or vomiting, excited intestinal gurgling sounds, and diarrhea. It is composed of Pinellia ternata rhizome, Scutellaria sp. root, Panax ginseng root, and Glycyrrhiza sp. root.

Metabolism Activation

Most conventional anticancer treatments focus on destroying cancer cells, and the side effects of a low metabolic rate are easily neglected. EWCC emphasizes the importance of metabolic activation by a variety of treatments. The key idea of boosting metabolism is to improve general body condition and build a healthy body state in which cancer cells cannot survive. Therapies EHP received to activate metabolism at EWCC are the following.
Acupuncture. Acupuncture is one of the basic treatments in TOM that is provided to most patients in the expectation of pain relief and therapeutic effect. Its use in cancer treatment too is now becoming common. Many patients experience improvement of their overall QOL and ability to function, with this therapy. Cancer patients with neuropathic pain that did not respond to conventional treatment reacted significantly improved with acupuncture. High satisfaction was observed in reducing both chemotherapy-related nausea and radiation-induced nausea when using acupuncture bands.

In Korea, unlike in Western countries, oriental medical doctors at Oriental medical clinics are in charge of this therapy and decide the style, sites, and duration of the therapy, depending on the patient’s variable conditions. Both prescription of acupoints and practice of the therapy are done by oriental medical doctors. The prescription usually consisted of acupoints based on Saam acupuncture, a unique acupuncture style in Korea. Saam acupuncture is also known as the 4-needle technique because it only involves 4 acupuncture points at each treatment session. Furthermore, there is a concept of tonifying deficiency and sedating excessiveness, which can be done by changing the directions of needle injection and other techniques.

Several acupoint prescriptions could be used for post-conventional therapy treatment. Conventional treatments do damage to the yin fluids and the visceral energy (qi). Of all the visceral energy, Spleen Qi is most affected; tonifying Spleen therefore can help in fatigue relief.

Pharmacopuncture. Pharmacopuncture is a new therapy derived from traditional Korean medicine theories of acupuncture, herbology, and meridianology. The therapy basically involves an injection of minute amounts of herbal extract to certain meridian points. Some may correlate this therapy with homeopathy in Europe and water-acupuncture in China.

The following are the strong points of pharmacopuncture therapy. (1) It is quick in effect: pharmacopuncture works faster than oral medication because it is directly injected into the viscera in question. (2) It is usable when oral administration is difficult: patients suffering from conditions such as low digestive functions, schizophrenia, coma, and other such conditions can benefit from this treatment. (3) It is economical: Only a fraction of herbs is used, but the effect is powerful. (4) It is effective in various incurable diseases, including ankylosing spondilitis, trigeminal neuralgia, chronic hepatitis, multiple sclerosis, pulmonary tuberculosis, chronic nephritis, and others.

In the case of EHP, bee venom and placenta pharmacopuncture were used alternately. Lung cancer patients like EHP lack Lung Yin. In TOM, placenta can compensate the loss of Lung Yin. Human placenta helps in treating qi deficiency of the 5 viscera and the 6 entrails, has nourishing and antistress effects, and also helps in hormone production. The constituents of human placenta are nucleic acids (adenine, uridin, xanthine, hypoxanthine, uracil, guanine, cytosine, and thymine), amino acids (lysine, aspartic acid, glutamic acid, etc), minerals (sodium, calcium, and magnesium), mucopolysaccharides (hyaluronic acid, chondritin, and sulfate) and others (interleukins, immunoglobins, hormone precursors, enzymes, phospholipids, and polysaccharides). However, pregnant women, people with dermal allergy and mental disorders, and those who are hypersensitive to medication or who have consumed an excessive amount of alcohol should avoid human placenta pharmacopuncture.

Bee venom extract is venom from honey bees extracted by electrostimulating methods. There are approximately 4 different types of bee venom, and they are known to have anti-inflammatory effects and also alleviate pain. Not only is bee venom therapy commonly used to treat inflammatory diseases, including tendinitis, bursitis, rheumatoid arthritis, and osteoarthritis, but it is thought to have effective antitumor action. Bee venom basically works by causing apoptosis and activating immunity. Bee venom and melittin have been shown to be effective in cell death in the neuroblastoma cell line. These effects of bee venom suggested that EHP would be a good candidate for the therapy.

Thermontherapy. Several studies suggest that thermotherapy may increase the curative effect in treating advanced lung cancer and yield a longer survival time. Moxibustion therapy is a major thermotherapy used at EWCC. In the case of EHP, moxibustion was done on CV12 and KD1. CV12 is the acupoint where meridians of the Small Intestine, Triple Heater, and Stomach meet, and therefore, it is commonly used for various diseases of the stomach, liver, and gallbladder. KD1 is an acupoint used to cool the Heat of the Kidney and tonify Yin of the Kidney and Heart.

Another kind of thermotherapy is the hot pack therapy. Hotpack at EWCC is a kind of an external medicine treatment using either soybean paste or charcoal by wrapping it up in gauze and then placing it on the stomach. Bean paste has long been used in Asian medicine for warming the stomach and stimulating the digestion. EWCC expects the heat to be better controlled by adding the bean paste. The mechanism of charcoal pack involves its detoxifying effect. Numerous small holes in the charcoal and absorptive power arising in the process of their formation enables charcoal to extract the atoms that can fill the holes. Detoxification with charcoal uses this absorptive power to stimulate the formation of gas from the body surface.

Massage. EHP was prescribed massage treatment daily for both physical and psychological reasons. Massage therapists discussed the patient’s symptoms, medical history, and results with the patient and physicians prior to the therapy. Massage sessions were recommended for EHP to diminish symptoms by manipulating the muscles and other soft tissues.
of the body. Her physical symptoms were postoperative muscle tension and pain in both shoulders. The fear of recurrence, anxiety, guilt, and resentment are thought to lessen through daily massage sessions. Massage seemed to work very well for EHP. The patient was greatly satisfied and even said that this therapy was her favorite treatment. She experienced a decrease in both muscle discomfort and psychological problems after each therapy.

**Physical therapy.** In the physical therapy room, cupping was done on EHP’s body. Therapists adhered 16 cups over the acupuncture points of the back and heated those areas using infrared rays to maximize the effects of cupping. Once the heating was ready, physicians left it for 15 minutes. Cupping is said to alleviate pain by improving the blood and qi circulation, and the marks left after the treatment also work as a useful diagnostic tool. In EHP’s case, darker marks appeared on her shoulders, the parts where she complained of pain the most. The refreshing feeling after this physical therapy satisfied the patient. TENS is another physical therapy that uses low-voltage electrical currents to relieve pain. The gentle electrical current is passed through electrodes that are taped to the skin near the site of the pain. EHP was also treated with the full-spectrum visible-ray therapy to her feet using a carbon arc during TENS therapy.

**Hydrotherapy.** There are 2 kinds of hydrotherapy at EWCC: hip bath and foot bath. A hip bath is supposed to promote healthy circulation and stimulate the digestive tract. The bath also involves a vigorous rub down with water flow, which helps to slough off the dead skin while encouraging surface circulation. A hip bath can also be used to treat hemorrhoids and other painful inflammations and infections in the lower regions of the body. Typically, a hip bath is taken with warm water, and the bather soaks for 20 to 30 minutes. A bag of herbs, comprising *Lindera* sp. root, *Amomum* sp. root, *Corydalis turtschaninovii*, *Cyperus rotundus*, *Inula helenium*, and *Artemisia argyi* leaf was added to the water for EHP, to help pain relief. A foot bath generally has similar effects. Foot bath sessions for EHP were to promote blood circulation (*Angelica gigas*, *Cnidium officinale*, *Carthamus tinctorius*) in addition to those effects.

**Meditation and Exercise**

The concept of meditation and exercise therapy covers mind control and activation of cell metabolism through light hiking and meditation. Meditation particularly aims at tension release and image training. Meditation is a reasonable strategy in decreasing mood disturbances and stress. EWCC encourages patients to follow the basic meditation method: (1) focus the mind on the body parts from head to feet, reminding yourself to relax the muscles of each part; (2) imagine that you are resting under a quiet tree or by a brook, relaxing even more; (3) picture vividly the image of cancer that made you sick, and then, imagine the process of the cancer cells being removed from the body by medication therapy; (4) visualize the cancer cells being excreted through the kidney and liver.

EHP’s questions about meditation and other ways to improve her body state were answered through a session called “conversation with cancer patients.” Conversation with cancer patients is a program at EWCC held once a week, where all the cancer patients and the medical team (doctors, nurses, physical therapists, nutritionists, and psychiatrists) get together for an open dialogue. Most of the time, psychiatrists lead the discussion. Patients freely ask questions about the treatment, talk about their feelings about the treatments, and make suggestions to the hospital. There is a short lecture after the discussion. The medical team picks one of the topics that was brought up by the patients the week before. This way, members at EWCC are able to give more in-depth information to the patients.

In the case of EHP, when asked which treatment she would like to recommend to other cancer patients the most, she answered that it was hiking. EWCC runs a bus to a nearby mountain every weekday for cancer patients. Patients choose the climbing intensity according to their physical condition. Chaperones accompany them at all times. One hiking session takes about 2 hours. EHP remembers the time she first joined the climbing. At that time, she had to settle for a short walk around the entrance. Now, 2 years after the first hike, she finishes a 1 hour and 30 minutes course without much difficulty. As this case shows, aerobic exercise itself is also associated with significant improvements in QOL and selects cardiopulmonary end points. Climbing is also a perfect answer for a potential vitamin D deficiency.

**Summary**

Advances in medical care over the past years have transformed many types of cancer from fatal to chronic illnesses. Although tumor removal is still the primary concern of the cancer treatment, patients with cancer are faced with low QOL issues as they survive longer. It is important for cancer patients to be able to speak with and receive guidance from their medical team about integrative therapies, so that the best of available therapies can be safely and effectively offered as part of the patient’s care plan for better QOL, and disease control and prevention. A major benefit of integrative therapies is their potential to improve QOL. Evaluation of QOL is now a standard clinical investigation that is routinely used in addition to the measurement of tumor response. Integrative therapies emphasize the therapeutic relationship and make use of all appropriate therapies. WBCT at EWCC provides integrative therapies and places emphasis on the roles of complementary therapies, such as herbal medicine (including dietary therapy), meditation and other mind-body approaches, massage and other touch therapies, acupuncture,
thermotherapy, fitness therapies, and more. WBCT reaffirms the importance of the relationship between practitioner and patient, focuses on the whole person, is informed by evidence, and makes use of all appropriate therapeutic approaches, health care professionals, and disciplines to achieve optimal health and healing. Being encouraged to take responsibility for their health, patients at EWCC take an active role in their care, and goals are achieved by means of dialogue between the patient and practitioner. As it is hoped that more cancer survivors will benefit from integrative therapies, an appropriate set of outcome measures is required because the evaluation of integrative health care models is becoming more important. WBCT may lead to more enhanced clinical safety and efficacy as part of integrative medicine and may provide an important clinical guideline that takes into account an individual’s temperament in the use of various complementary and alternative medicine therapies.

Authors’ Note
Hyo-Min Park and Seo-Yeon Kim contributed equally.

Declaration of Conflicting Interests
The author(s) declared no potential conflicts of interest with respect to the authorship and/or publication of this article.

Funding
The author(s) received no financial support for the research and/or authorship of this article.

References


