

# Medical and Complementary Therapy in Women with Cervical Cancer

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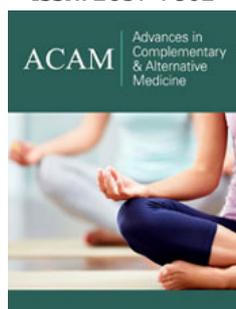
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## Abstract

**Objective:** To know the complementary therapy in patients with cervical cancer and to evaluate the reported effects according to scientific evidence.

**Methods:** Systematic review of the literature in scientific journals with the level of evidence II-IV in the PubMed portal, about the use of complementary therapy in cancer patients. Duplicates were excluded, if they included full-text articles, made in humans, with less than five years old related to cervical cancer and alternative therapy.

**Result:** The use of complementary therapy in cancer patients was found in 10 articles with a frequency of use of 16.4% to 87%, the most used was biological therapy, followed by body practices. It was better reported in 78% and decreased the effects of the use of conventional therapy for 75% of people.

**Conclusion:** Complementary therapy is used to improve the quality of life of patients with cervical cancer. Complementary therapy of biological type is the most used. The use of this treatment is related to the idea of having an improvement in personal well-being. More studies are needed to complement the benefit of the use of this therapy on cancer.

**Keywords:** Alternative therapy; Complementary therapy; Cancer; Cervical cancer

## Introduction

Cervical cancer (CaCu) is considered a global public health problem, the detection of CaCu in early stages is highly curable, has a recurrence rate of 8 to 25% and even parity can be preserved in young patients with carcinoma of the stage 0 to IA2 [1-4].

The World Health Organization (WHO) of 2012 reports that Mexico is in the second place of incidence in women with a total of 13,960 (17%), represents the second cause of death in women with a total 4,769 (12%) with a prevalence in women of 11,168 (20%). In five years, the prevalence will increase to 47,000 (21%). The entities with the highest mortality from cervical cancer in Mexico Colima (17.7%), Chiapas (17.6) Guerrero (15.6%), Veracruz (15.4%) and Oaxaca (15.2%) [1-3]. CaCu when not detected and treated in the early stages, expands from the cervix to the lower segment of the myometrium, paracervical nodes, lymph nodes and structures adjacent to the parametrium [5]. The early invasive stages reach 39%, or in young patients in which good hormonal functioning and the possibility of conservation of reproductive capacity must be maintained [4].

CaCu is associated with a state of immunosuppression and increased malignancy, especially in women with AIDS, with organ transplantation, end-stage chronic kidney disease, an autoimmune disease in immunosuppression or smoking history. Immunotherapy can have greater progress in these cases and includes adoptive cell therapy, therapeutic vaccines and monoclonal antibodies against inhibitors [6].

Cabinet studies are used to plan treatment based on the International Federation of Gynecology and Obstetrics (FIGO), who accepts the use of computed tomography, magnetic resonance imaging, and positron emission tomography [7]. The latest guidelines indicate that all patients with histopathologically documented risk factors (E3, L1 or V1 or B) management

began with surgery followed by adjuvant chemotherapy and radiotherapy however they currently recommend that the treatment is with chemotherapy and radiotherapy avoiding surgical management [5].

The treatment is based on the stage, size and shape of the tumor, age, clinic and desire to have children of the woman. Depending on this, it will be the management that will be given and will be classified in initial stages (I to IIA) or advanced (from IIB, with invasion to parametria) with a low intermediate or high risk for recurrence [4]. WHO defines traditional medicine as the total sum of knowledge, skills, and practices based on indigenous theories, beliefs and experiences of different cultures whether explained or not used for health maintenance and prevention, diagnosis, improvement and Treatment of physical and mental diseases [8]?

The terms of complementary, alternative, integrative and unconventional medicine are interchangeable with traditional medicine in some countries. However, according to the last modification made in June 2016 of the NCCIH (National Center for Complementary and Integrative Health), it indicates that they have different meanings. Complementary medicine is unconventional medicine used in conjunction with conventional medicine, alternative medicine is unconventional medicine used instead of conventional medicine and integrative medicine is used to refer to the use of complementary and alternative medicine jointly and in a way coordinated [9].

The NCCIH is the leading Federal Government agency for scientific research in the alternative and complementary medicine approach. It classifies it into two large groups [9]:

- A. Natural products: Herbs (or botany), probiotics and vitamins and minerals. They are widely sold as dietary supplements.
- B. Mind and body practices: techniques or procedures administered or taught by a coach or teacher.
- C. Other complementary medicine approaches traditional healers, Ayurvedic medicine, traditional Chinese medicine, homeopathic and naturopathy.

Complementary and integrative medicine (MCI) in Mexico is commonly used together with medical treatment to improve the quality of life with the belief of reducing the disease and/or avoiding the effects and complications of the disease and the medical treatment used. Until now no law or sanction endorses or penalizes this type of therapy. So, it is still used [10].

In Mexico, the Secretary of Health during the administration of 1989-1994 established the following Mexican Classification of Traditional Medicine to define regulations, by systematized criteria and following sanitary rules [11]:

- A. Traditional medicine: Midwives, herbalists, and healers
- B. Parallel medicines: Acupuncture, homeopathy, and chiropractic

Associations and acupuncturists were integrated into the

program, human resources for education were formed and in 2002, NOM 172 SSA1 1998 "Provision of health services was published. Auxiliary activities Operation criteria for the practice of human acupuncture and related methods" [12]. The purpose of this study is to conduct a systematic review of the use of complementary therapy in patients with different types of cancer and the results reported in the world scientific literature with a minimum level of evidence of II.

## Methods

This study was registered with the Local Committee of Ethics and Research 2301 of the Regional General Hospital No.3 of the City of Cancun, Quintana Roo, licensed to the Federal Commission for Protection against Health Risks in Mexico. It was held in 2017.

During the period from June to September 2017, a review and evaluation of the scientific literature was carried out, considering as inclusion criteria for the studies a maximum of five years old, minimum level of evidence of II, in the PubMed portal, Cochrane, Science Direct The descriptors in English were used complementary therapy, cancer, alternative therapy and cervical cancer. Only studies conducted in humans and reported in full text were included.

Duplicate articles were used as elimination criteria, or that did not meet the criteria previously stated. The critical analysis of each article was carried out to integrate, the number of patients, the study design, the evaluation of the methodology and the results obtained.

## Result

Plants have been used to cure multiple diseases over time. Medicinal plants contain chemical therapeutic components that produce a physiological action in the human body, many of which are antitumor [13]. Currently, the trend is in making natural products based on medicinal plants, which have been reported as effective, chemically balanced and with fewer side effects. 60% of this therapy is based on extracts from marine plants, microorganisms, and organisms [13].

Among the mind and body practices are yoga, chiropractic and osteopathic manipulation, meditation and massage therapy which are the most popular. There is also acupuncture relaxation techniques (breathing exercises, guided images, progressive muscle relaxation), tai chi, qi gong, therapeutic touch, hypnosis therapy and movement therapy (Feldenkrais method, Alexander technique, pilates, Integration Structural Rolfing and Psychophysical Integration Trager) [9]. Spiritual techniques are defined as the deep search for meaning and purpose in life and drive people to seek a connection with others and with an element greater than life [14].

Traditional Chinese medicine relies on two aspects to holistically control chronic degenerative diseases with Chinese herbalism and energy points. Its main focus is the various objectives involved in a particular disease by applying various modalities; With this, each condition is treated individually. Focused on cancer, they are based on chronic inflammation alterations resulting from the oxidative

stress of the endoplasmic reticulum which activates factors that cause cancer. Western medicine is reluctant to traditional Chinese medicine because of the lack of clinical trials that prove its efficacy with products of international quality [15-17].

Homeopathy is based on substances that can cause diseases or symptoms in healthy people, even taken in small amounts. In 2015, the National Health and Medical Research Council (NHMRC) published a statement where they state that there is no sustainable evidence for which homeopathy is effective. They indicate that it should not be used to treat chronic, serious or potentially serious conditions. People can put their health at risk if they refuse or delay the conventional treatment for which there is safe and effective

evidence. For those who consider its use, they should first go to a certified doctor and those who already use it should go to their doctors and start using prescribed medications [18-24].

The provenance of the articles was reviewed with three from India, two from Germany, two from China and one from each of the following countries: Trinidad, Korea, Brazil, Australia, France, Turkey, United States, and Mexico. Among these studies, various types of cancer were studied, including breast cancer in three studies, gynecological cancer in three studies, childhood cancer in one study, lung cancer in one study and cancer in general without specifying its origin in Six studies (Table 1).

**Table 1:** E studies about alternative therapy.

Nombre del artículo	Year	Author (Country)	Journal Article Design				% Benefits
			Therapy Type	# Patient			
Herbal remedies and functional foods used by cancer patients attending onco-clinics in Trinidad [22]	2016	Yuri et al. [22]	BMC complementary and alternative medicine	Cross-sectional	MCI in cáncer	150	14.7% more effective than conventional treatment. 80.7% soursop was the most used remedy for cancer.
Tea consumption and mortality of all cancers, CVD and all causes: a meta-analysis of eighteen prospective cohort studies [23]	2015	Tang et al. [23]	British Journal of Nutrition	Meta-Analysis	Green Tea in cáncer	18 articles	There is no relationship between dose and mortality in cáncer.
Biologically based therapies are commonly self-prescribed by Brazilian women for the treatment of advanced breast cancer or its symptoms [24]	2013	Callado et al. [24]	Support Care Cancer	Cross-sectional	MCI in cáncer	126	50% reported the use of at least one MCI. Biological therapy was the most used to treat symptoms, the use was not related to anxiety, depression o quality of life.
Complementary and Alternative Medicine Use in Women with Gynecologic Malignancy Presenting for Care at a Comprehensive Cancer Center [25]	2015	Reem et al. [25]	International Journal of Gynecological Cancer	Cross-Sectional	MCI in gynecologic cáncer.	2508	Use of MCI en 21.3%. 87% use at least one type of MCI. 83.5% use biological therapy
Use of non-conventional medicine two years after cancer diagnosis in France: evidence from the VICAN survey [26]	2017	Sarradon et al. [26]	J Cancer Surviv	Cohort	MCI in cáncer	4349	16.4% use MCI, the most used was homeopathy in 64%
Use of complementary and alternative medicine by patients with cancer: a cross-sectional study at different points of cancer care [27]	2016	Kleine et al. [27]	Med Oncol	Cross-sectional	MCI in cáncer	506	51% use MCI, 35% told heri-oncologist, the most used was vit D 17%. 57% to strengthen the immune system
Use of Complementary and Alternative Medicine in Patients with Gynecologic Cancer: A Systematic Review [19]	2015	Dercan et al. [19]	Asian Pacific Journal of Cancer Prevention	Cross-sectional	MCI in ginecologyc cáncer	12 articulos	40 to 97% mostly herbal medications and vitamins and minerals were used.
Complementary and Alternative Medicine Use in Cancer Patients in Rural Australia [20]	2015	Aimee et al. [20]	Integrative Cancer Therapies	Cross-sectional	MCI in cáncer	142	68% used MCI

Uso de la medicina alternativa y complementaria (MAC) en cáncer infantil: encuesta de 100 casos en un instituto del tercer nivel de atención [21]	2016	Gabriela et al. [21]	Gac Med Mex	Cross sectional	MCI in child cáncer	100	51% used MCI, biological therapy was the most used, 73% felt satisfied.
Online Survey of Cancer Patients on Complementary and Alternative Medicine [29]	2014	Jutta et al. [29]	Oncology Research and Treatment	Cross sectional	MCI in cáncer	170	77% use MCI, 71.2% was biologic therapy, 75% 75% or more use to reduce side effects
Complementary and alternative medicine use among the cancer patients in Northern India [30]	2016	Dinesh et al. [30]	South Asian Journal of Cancer	Cross-sectional	MCI in cáncer	1117	38.7% use MCI, the most used was yoga 86.5%, 78.4% felt improvement
Effects of Acupuncture, Tuina, Tai Chi, Qigong, and Traditional Chinese Medicine Five Element Music Therapy on Symptom Management and Quality of Life for Cancer Patients: A Meta-Analysis [17]	2015	Wei et al. [17]	Journal of Pain and Symptom Management	Metaanálisis	Acupuncture in gynecological cáncer	67 articles	71% had improvement of symptoms and improvement in lifestyle

According to the year in which the last modification of the definitions of complementary, alternative, integrative and unconventional therapy was established, during the search, it was necessary to alternately use these terms, especially in articles before 2016 to perform a broader search. A frequency of the use of complementary therapy was determined from 16.4% to 87%, being in France the place where it was last used and in the United States where it was most used. The type of therapy most used was the biological one found in seven articles, followed by mind-body therapy in two articles, which includes a study conducted in India where they report using yoga in 86% and in China where they used acupuncture and finally an article in France where they refer to the use of homeopathy in 64% [17,25-30].

When investigating the reason why they used complementary therapy, they reported in five articles an improvement in symptoms ranging from 73% to 78%, as well as a decrease in side effects associated with the use of conventional therapy in 75 % of people. Articles were found about the use of different types of complementary therapy, among which were green tea, soursop, resveratrol, *Basella rubra* and *Moringa oleifera*. In an article from China they say that the use of green tea was not related to the quality of life or mood. Two studies carried out mention the effect of the use of extracts on cervical cancer cells. In an article from Korea, they report that the extract of the leaf of the *Moringa oleifera* reduces the proliferation of cervical cells and they have cytotoxic activity and in a study carried out in India in 2014 they mention that the extract of the bark has anticancer activity on the cells.

A study carried out in India in 2015 reports having found 81% in the extract of *Basella rubra* cytotoxic activity against cervical cancer. Unlike the other articles that focus on the results obtained in people, these studies do not mention the results obtained in people with a diagnosis of cancer [22,23,28,31-36]. The number of participants in the studies reviewed had a minimum of 100 patients, which was the study conducted in Mexico and a maximum of 4349 patients that was the study conducted in France [21,26].

Among the limitations found in the studies was the lack of

information about the person who recommended the use of complementary therapy, as well as whether the patient told his treating doctor that they were using this type of therapy. A study in Germany was found where they mention that 51% of people who used complementary therapy, only 35% had informed their doctor. None of the studies found mention the use of complementary therapy from a bioethical point of view, so a study with this type of approach would be important [27]. A common denominator of all the studies was the conclusion they reached, where they refer it is necessary to carry out more studies in patients with cancer and a focus on the use of complementary therapy to know the frequency and effects it has on the person and about cancer.

## Conclusion

In this review of articles, we find multiple studies focused on different types of cancer where we look for the frequency of the use of complementary therapy, the type of therapy used and if they had any benefit on the patient's symptomatology. We found that there was a frequency of the use of complementary therapy from 16.4% to 87% in seven articles. It was determined that of the articles that mentioned the use of complementary therapy, the most used type was biological in seven articles, followed by mind-body therapy in two articles and one that focuses on homeopathy. It can be determined that the use of complementary therapy ranges from 73% to 78% and is used to improve symptoms, have physical well-being and strengthen the immune system. With this, we can see that most patients did not use this therapy for managing your cancer, but to feel good. It is important to mention that, of the articles found, all patients already had an established medical treatment.

There were limitations on the terms used by various studies, among which they used complementary and alternative therapy as synonyms and interchangeable words. When conducting a more specific search on cervical cancer along with the use of complementary treatment, no studies were found that contained these characteristics. Therefore, there is a need for more studies with a high level of evidence that complement the benefit of the use of complementary therapy in women with cervical cancer.

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