

CANCER ALTERNATIVE THERAPY HUMA: A CLINICAL PERSPECTIVE

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Abstract:

Many patients with cancer use complementary and alternative medicine (CAM) in conjunction with conventional oncology treatments. Many types of CAM approaches for cancer are popular through the world. Among them, herbal medicines have a substantial place in cancer treatment and palliation. Cancer patients in the western world use CAM in conjunction with conventional care. However, in a developing country like India which is having some of the highest cancer rates in the world the situation is quite grim. Lack of early screening and treatment facilities coupled with high cost of treatment often compels patients to seek something alternative. Ayurveda and herbal medicines are one of the most sought after therapies for cancer treatment. In this article, I describe the evolution of one of the popular herbal therapy called 'HUMA'. This alternative cancer therapy was first advocated by Dr. S M Atiq of Lucknow in mid 1980s. This poly herbal therapy was derived from various important Ayurvedic herbs viz. *Azadirachta indica*, *Curcuma longa*, *Embelica officinalis*, *Ocimum sanctum*, *Semecarpus anacardium*, *Tinospora cordifolia* etc. Over the years the popularity of this therapy has increased many folds and the conventional medical world now have the positive opinion about this therapy.

Key words: HUMA, CAM, alternative cancer therapy, Ayurveda

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Introduction

Patients with cancer increasingly use complementary and alternative medicine (CAM) in conjunction with conventional oncology treatments^[1]. Many types of CAM are popular in patients with cancer^[2]. Among them, herbal medicines have a substantial place. Plants and herbs are mainly used to reduce adverse effects of anticancer treatments and for specific anticancer properties^[3]. Though it is now clear that the use of CAM in cancer patients is a globally phenomenon^[4]. However, many of these CAM practices/therapeutic procedures are not a part of official practice^[5]. Moreover, patients frequently fail to disclose the use of CAM to their health professionals for reasons emanating from both sides of the dyadic patient-doctor relationship^[6]. Herbal remedies are believed by the general public to be safe, cause less side-effects and less likely to cause dependency^[7]. There

are reports that certain herbs and dietary supplements are unlikely to be beneficial, and might be problematic or dangerous when taken during cancer treatment^[8].

Rising longevity, alterations in life styles and progressive control of communicable diseases has led to emergence of cancer and non-communicable diseases as an important health problem in India and other developing countries^[9]. Cancer scenario in India is quite grim. India has some of the highest cancer rates in the world^[10]. According to an estimate the total cancer cases are likely to go up from 979,786 cases in the year 2010 to 1,148,757 cases in the year 2020^[11]. Majority of Indian cancer patients have late stage incurable disease when first diagnosed^[12] and many are not seen in a hospital^[13]. Lack of early screening and treatment facilities coupled with high cost of conventional treatment often compels patients to seek something alternative^[14]. Ayurvedic medicines are often considered effective for treating chronic and lifestyle-related diseases

^[15]. Both Ayurveda and herbal medicines are very popular with cancer patients in India ^[2]. There are many types of CAM therapies that are popular with cancer patients in India ^[14]. In this article, the evolution of one of the popular herbal therapy called ‘HUMA’ is described.

Evolution of HUMA Therapy: The advocate of this herbal therapy was Ayurvedic Vaidya Dr. S M Atiq of Lucknow. Vaidya Atiq lost his mother to cancer in his childhood and hence, decided to find a cure for this agonizing scourge. His childhood imagination took shape after he completed his formal studies in Ayurveda. He then took-up an extensive literature search of various important anti-cancer Ayurvedic herbs mentioned in the Ayurvedic texts. He later experimented his ideas on some terminal cancer patients. Finally, in 1986 he was successful in treating a cancer patient with his herbal concoction. He call this herbal mix as ‘HUMA’, which was derived from various important Ayurvedic herbs viz. *Azadirachta indica*, *Curcuma longa*, *Embelica officinalis*, *Ocimum sanctum*, *Semecarpus anacardium*, *Tinospora cordifolia* etc. However, as the formulation could not be patented, hence, the composition was not made public. Over the years the popularity of HUMA kept on increasing as cancer patients mostly with advanced disease was benefited with this therapy in palliative setting. The herbal medicines are orally administered, well tolerated, inexpensive and was having no adverse side effects. The dose of the medicines is not fixed; it is titrated according to the condition of the patient. The media (print and television both) sceptically covered the news about this

alternative cancer therapy ^[16,17]. However, the conventional medical fraternity rejected the idea of HUMA as an alternative cancer medicine as it was not clinical tested and proven. Few cases that were presented were best judged as anecdote. So, Dr. Atiq kept on collected more evidences about the effectiveness of this therapy, names of the some benefited patients were later published ^[18]. In early 1990’s LD₅₀ studies of HUMA carried out at Central Drug Research Institute, Lucknow indicated that the dose of herbal medicine given to patients is quite safe.

The Huma Cancer Society in Lucknow was founded by Dr. Atiq in 1989. Despite all odds Vaidya Atiq tried his level best to convince the scientific community of his time that HUMA can cure cancer till he expired in 1994 due to brain haemorrhage. His daughter who just completed her studies in Ayurveda, Dr. S. Hina Fatima then took over from where her father had left the scene. She started treating cancer patients and meticulously compiled the results. Gradually, within few years she could gather enough evidence about the effectiveness of this alternative herbal therapy. In 1999, one of her high-status cancer treatment failure patient who was later immensely benefited with this alternative therapy went to the press and told her story. Immediately, HUMA therapy became the cover page article of ‘Times of India’, one of the most circulated news papers in India ^[19]. The popularity of HUMA skyrocketed immediately and cancer patients coming to the Huma Cancer Society (HCS) increased many folds (Figure 1).

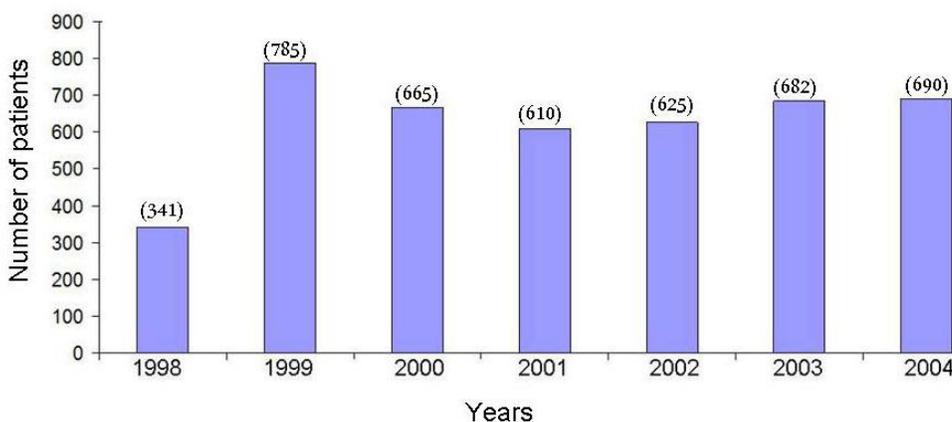


Figure 1: Popularity of HUMA over the years from 1998

Popularity of HUMA: After the Times of India publication [19] the story about HUMA was covered by many other news papers across the nation. This produced a huge interest among cancer patients from all over India and even some from abroad. As the herbal medicines can be couriered, so the cancer patients from the far reaches of the country could also get easy access to this therapy. Hence, the popularity of this herbal therapy has not declined since. This alternative therapy is popular among all types of cancer patients (Figure 2) and every year roughly 600 – 700 patients are trying HUMA. However, the patients who came for this alternative cancer therapy have various problems. One hundred and sixty four patients were interviewed to know the motive behind their decision. Financial difficulties (27.4%) and treatment failure (19.5%) were the two major reasons cited by the patients or their care givers. The other difficulties faced by patients is summarised in Figure 3. Any alternative therapy just cannot sustain itself for long if it is not effective. The benefited patients of HUMA therapy are the one who encouraged other needy patients to try this therapy. A

website has also been created [www.humacancer.com] to underline the true potential of this therapy. Many patients who are now coming to the HCS are now fully aware about this therapy in advance.

My association with this therapy started from 2002, when I was working in the department of Gastroenterology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow. I noticed improvement in the clinical condition of some terminal cancer patients with advanced gastro-intestinal malignancies who were trying HUMA. Surprised with these developments I got associated with the HCS to know more about this therapy. After preliminary study on the various benefited patients, it was discovered that though many cancer patients are getting some response with this herbal therapy; however, profound effect were observed repeatedly in patients with oral and rectal carcinoma [20]. Documentation and record keeping of all treated patients is a big challenge for any Ayurvedic practitioner. Most of the aspects of scientific clinic research is not covered in the course curriculum of Ayurvedic studies, and hence, awareness levels

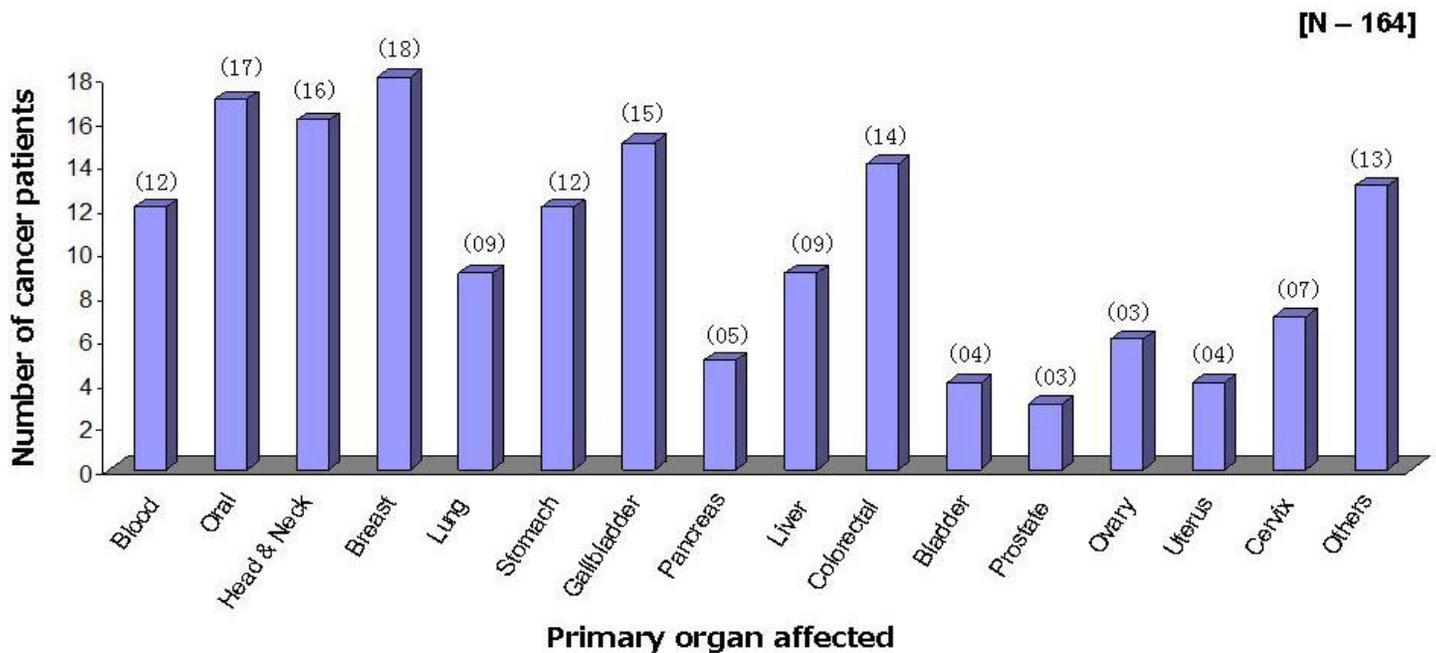


Figure 2: Patients with various types of cancer who have tried HUMA

Pal Sanjoy Kumar : Cancer Alternative Therapy HUMA

about these aspects are generally low. However, Dr. Hina carefully kept the records of patients she treated. This was of much help as details about the response can be studied

and case reports can be compiled for scientific evaluation. Figure 4 depicts an oral patient benefited by HUMA.

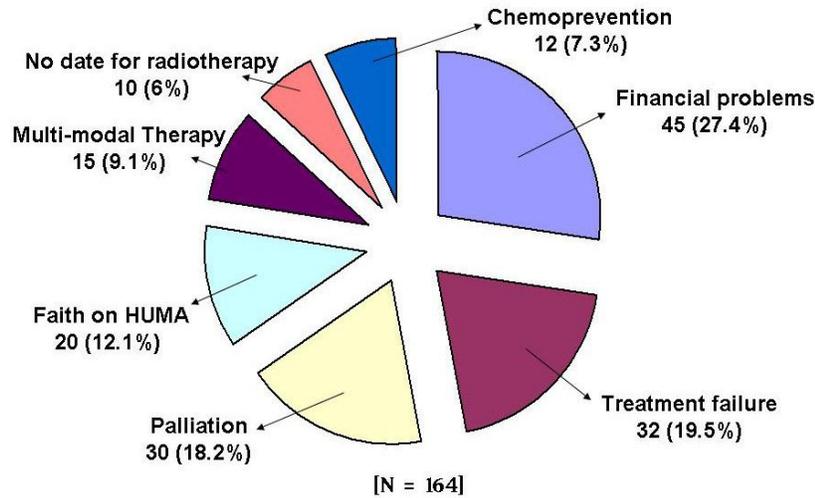


Figure 3: Reasons cited by patients why they choose HUMA

HUMA & Best Case Series: A Best Case Series (BCS) review process has been used at the US National Cancer Institute (NCI) to assess the available case report documentation of unconventional cancer approaches [21]. Program is used as a vehicle to evaluate retrospective case reports of cancer patients treated with unconventional therapies. The Office of Cancer Complementary and Alternative Medicine (OCCAM) in NCI is now exclusively responsible to carry out the evaluation work. Currently, it is administered by the Case Review and Intramural Science

Program (CRISP) of the OCCAM. What makes the program unique is that it uses the same rigorous scientific methods employed in evaluating treatment responses with conventional medicine. In this program the practitioner of alternative cancer medicines are encouraged to submit their “best cases” for an independent, retrospective review and validation of medical records, imaging, and pathology. Specifically, the case reports include information from primary source documents confirming the diagnosis, treatment, and outcome (tumor shrinkage or stability)[22].



Figure 4: A patient of oral carcinoma benefited by HUMA

After a comprehensive review of all materials presented, the CRISP program designates each case as “persuasive” (P), “supportive” (S), or “not evaluable” (NE). P cases have a pathologic confirmation of cancer, evidence of tumor regression, absence of confounders, and confirmation that the patient used the unconventional therapy in question. S cases meet all program criteria except that the tumor response is stable at best. Additionally, in some S cases, there is inadequate radiographic follow-up but an unexpectedly long survival. In some instances, the pathology reports were available, but the microscopic slides of the pathology specimen were not available for review by National Institutes of Health (NIH). Detailed information about the NCI BCS program can be found on the OCCAM Web site (http://www.cancer.gov/cam/best_case_series_program.html).

I was able to compile reports of 20 cancer patients (Table -1), who were immensely benefited by this therapy and submitted for the BCS evaluation^[21,23]. As stringent scientific procedures are adopted by the OCCAM, it was too challenging to fulfil the complete requirements as advised. As most of the cases presented were retrospective in nature, tracing the biopsy slides was not always possible. This was the most important necessity to cross examine and verify the diagnosis. In most of the cases submitted for evaluation the biopsy slides were not available and this was one of the chief reasons for many of the case submitted to OCCAM to become NE. However, out of 20 cases submitted 3 cases were found as ‘persuasive,’ and 5 were ‘supportive’^[23]. The experience that was gained from this exercise was that there is enough objective evidence to support the idea that this alternative therapy works for some cancer patients.

Table 1: Details case reports presented for Best Case Series

Patient	Age / Gender	Tumor Type / Organ	Prior Conventional Treatment	NCI-OCCAM Report
01.	42/M	Adenocarcinoma [Rectum]	Yes	Supportive
02.	59/M	Adenocarcinoma [GI tract]	No	Not evaluable
03.	33/M	Adenocarcinoma [Rectum]	No	Supportive
04.	15/F	Adenocarcinoma [Rectum]	No	Not evaluable
05.	22/F	Osteogenic sarcoma [Femur]	No	Supportive
06.	70/M	Verrucous cell carconima [Oral]	No	Supportive
07.	58/M	Squamous cell carcinoma [Oral]	No	Persuasive
08.	60/M	Squamous cell carcinoma [Oral]	Yes	Not evaluable
09.	30/M	Squamous cell carcinoma [Tongue]	No	Supportive
10.	45/M	Squamous cell carcinoma [Oral]	No	Persuasive
11.	60/M	Squamous cell carcinoma [Oral]	No	Persuasive
12.	50/F	Peripheral nerve sheath tumor	No	Not evaluable
13.	21/M	Spindle cell sarcoma [Forearm]	No	Not evaluable
14.	35/M	Multiple myeloma	Yes	Not evaluable
15.	43/M	Pancreatic cancer	No	Not evaluable
16.	40/F	Adenocarcinoma [Gallbladder]	No	Not evaluable
17.	40/M	Adenocarcinoma [Stomach]	Yes	Not evaluable
18.	74/F	Squamous cell carcinoma [Esophagus]	No	Not evaluable
19	76/M	Adenocarcinoma [Rectum]	Yes	Not evaluable
20.	40/M	Adenocarcinoma [Colon]	No	Not evaluable

Discussion: India is a country with diverse societies with a variety of cultural beliefs and traditional medicine practices that have evolved over thousands of years [24]. The cancer curing potential of Ayurveda is well known [25, 26, 27, 28, 29]. Ayurvedic medicine and some forms of herbal therapy to treat cancer are widespread in all corners of India. In cancer patients with advanced disease conventional medical care have very little to offer. These patients generally go to practitioner of alternative medicine in search of cancer cure and palliation. This is the time when the patients are most likely to be cheated and waste money. With most alternative cancer therapy practiced in India very little is known about their clinical efficacy and potential harm they cause. Hence, most oncologists have a notion that all CAM pertaining to cancer is quackery. However, effective therapy like HUMA is also a part of this diversify CAM niche. The efforts of Vaidya SM Atiq who believed in his own research and challenged the scientific world of his time that cancer can also be cured with his herbal formulation should be acknowledged. It was his sheer determination and far-sightedness that made HUMA evidence based popular alternative cancer therapy today.

No therapy be it conventional or alternative cannot stand the test of time if it is not effective [30]. The popularity of HUMA therapy has only increased with time. One of the chief reasons behind this may be its effectiveness without any adverse toxicity. As the medicines are titrated according to the condition of patients, this may be one the main reasons for not having adverse side effect. However, some side effects like vomiting and diarrhoea have been noted in few patients. It is not very strange why cancer regression was observed in some patients with this alternative herbal therapy. All the herbs that are used in this therapy are known potential anticancer agents. The anticancer potential of various herbs viz. *Ocimum sanctum* [31], *Azadirachta indica* [32], *Embelica officinalis* [33], *Semecarpus anacardium* [34], *Tinospora cordifolia* [35], *Curcuma longa* [36,37] are well proven in the experimental studies. Aqueous extracts of *E. officinalis* at 100 micro g/ml can significantly modulate the basal levels of oxidative markers and enhance antioxidant defences of the HepG2 cells [38]. Limonoid present in leaves

and flowers of *Azadirachta indica* have shown to induce apoptosis by both the intrinsic [Bax, bad, Bcl-2, Bcl-xL, Mcl-1, XIAP-1 and caspase-3, 9] and extrinsic pathways [TRAIL, FasL, FADD and Caspase-8] in estrogen dependent (MCF-7) and estrogen independent (MDA-MB-231) human breast cancer cell lines [39]. Extracts of *Ocimum sanctum* leaves inhibited the proliferation, migration, invasion, and induce apoptosis of pancreatic cancer (PC) cells *in vitro*. The expression of genes that promote the proliferation, migration and invasion of PC cells including activated ERK-1/2, FAK, and p65 (subunit of NF- κ B), was downregulated in PC cells after *O. sanctum* treatment [31]. Curcumin from *Curcuma longa* has shown to suppress TNF-induced NF- κ B activation and NF- κ B-dependent reporter gene expression. Such TNF-induced NF- κ B-regulated gene products involved in cellular proliferation (COX-2, cyclin D1, and c-myc), antiapoptosis (IAP1, IAP2, XIAP, Bcl-2, Bcl-xL, Bfl-1/A1, TRAF1, and cellular cFLIP), and metastasis (VEGF, MMP-9, ICAM-1) were also downregulated by Curcumin [36]. Octacosanol isolated from *Tinospora cordifolia* has shown to downregulate VEGF gene expression by inhibiting matrix metalloproteinases and nuclear translocation of NF- κ B and its DNA binding activity [36].

Some forms of cancer herbal medicine are found in most areas of the world. Although many herbal remedies are claimed to have anticancer effects, only a few have gained substantial popularity as alternative cancer therapies. In past many years, lots of debate centred on few alternative cancer therapies like: Gerson diet, Laetril, Essiac, Mistletoe, Shark cartilage etc. [40]. Essiac is one of the most popular herbal cancer alternatives in North America. It was popularized by a Canadian nurse, Rene Caisse. Essiac comprises of four herbs burdock root (*Arctium lappa*), Indian rhubarb (*Rheum palmatum*), Sheep sorrel (*Rumex acetosella*), and the inner bark of slippery elm (*Ulmus fulva* or *U. rubra*) [2]. PC-SPES is one of the most studied herbal therapies in prostate cancer. A combination of eight herbal compounds: *Ganoderma lucidum*, *Scutellaria baicalensis*, *Rabdosia rubescens*, *Isatis indigotica*, *Dendranthema morifolium*, *Serenoa repens*, *Panax pseudoginseng*, and *Glycyrrhiza*

uralensis. PS-SPES appeared to have estrogenic activity [2]. Chinese herbs are also popular in treatment of cancer. A report indicates that a 51-year old lady patient with squamous cell carcinoma of the lung (T₂N₂M₀) survived for 8 years after receiving treatment with Chinese herbal medicine. The herbal prescription consisted of nine Chinese medicinal herbs. These herbs have been reported to possess anti-tumor and immune enhancing effects [41].

Carctol an alternative herbal cancer therapy developed by Dr. Nandal Tiwari is also very popular in India and abroad [42,43]. This herbal therapy is composed of 8 different herbs viz. *Hemidesmus Indicus*, *Tribulus Terrestris*, *Piper Cubeba* Linn, *Ammani Vesicatoria*, *Lepidium Sativum* Linn, *Blepharis Edulis*, *Smilax China* Linn and *Rheumemodi* Wall. Clinical studies have shown that Carctol is excellent when used during radiotherapy and chemotherapy, as it prevents patients from becoming neutropenic. However, many believe that there is insufficient scientific evidence to support this claim [40]. Maharishi Amrit Kalash [MAK] produced by the 'Maharishi Ayurvedic Products' is a poly herbal preparation of many important Ayurvedic herbs [44,45]. Clinical studies have shown that MAK administered patients had high incidence of complete remission of cancer as opposed to patients who received only chemotherapy. Patients who took MAK had drastic reduction of side effects like loss of appetite, weight loss and nausea, while there was lowering of the incidence of fever, pain and ulceration of the mouth [46]. Lab studied also verified the anti cancer effect of MAK [44]. A dietary regimen 'Sarvapasti' developed by the scientist of D S Research, Varanasi has also become very popular alternative therapy for cancer patients. Sarvapasti contains many important medicinal herbs [47] and is given to patients mainly for palliation [46].

Propaganda alone cannot sustain any alternative therapy if it is not effective. However, not all patients trying alternative cancer therapies are benefited, but their popularity has not gone down, rather has increased with passage of time. Further research studies can enlighten us why certain therapy becomes so popular among patients.

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