

# Role of Integrative Medicine in Oncology for longevity and Quality of life: A Case Report

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## KEY WORDS

Adenocarcinoma of lungs  
Back pain  
Breathlessness  
Imbalance in walking Yoga therapy  
Quality of life (QOL)

## ABSTRACT

A patient with Adenocarcinoma of lungs diagnosed in (Sep 2014) without any co-morbidity like –DM-2, HTN. Patient received 5 cycles of Chemotherapy and 10 sessions of Radiotherapy followed by oral hormonal therapy for 2 yrs which shows significant reduction in size of nodule in lungs. In 2016 PET scan showed lung nodules have increased in size and new lesions were found in brain, shoulder and L5 region with symptoms of pleural effusion, imbalance in walking, difficulty in breathing and pain in left shoulder and lumbar region. In Dec 2016, he underwent naturopathy treatment like mud therapy and acupressure with vitamin supplements B17, B15, zinc, Tibetan medicine and Ayurveda medications significant improvement in symptoms. In Sep 2017 participant was admitted in Oncology Department of Arogyadhama with present history of generalized weakness, severe shoulder and back pain as well as change in walking gait due to weakness of lower limbs, breathlessness, insomnia and anorexia. He was advised Integrative Oncology treatment module which consists of yoga, Naturopathy, Ayurveda and Holistic Diet along with conventional medicine. There was significant improvement in breathlessness, muscular strength in lower limb, quality of life (QOL) and reduction in pain in shoulder and back, Improvement in walking gait after the 1 month of treatment. The present case study is an attempt to provide integrative medicine (yoga Ayurveda, Naturopathy, Conventional Medicine) for the promotion of positive health and management of pulmonary Adenocarcinoma.

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## Introduction

Cancer is one of the leading causes of death worldwide, with an incidence of 14 million new cases per year, with about 1 million diagnosed in India. The prevalence of cancer has increased over the past decade and is expected to rise by 8% in the next 5 years. Regular screening, early detection, and improved therapies have increased the 10-year survival from 61% to 77% in the past decade. However, advancements in cancer treatment have not changed mortality rates (1).

### *Role of Yoga in Cancer*

Several factors play a role in the onset of Cancer. Increasing importance is being given to inflammation. While acute inflammation is healing and beneficial, chronic inflammation has the opposite effect. Chronic inflammation triggers NF-kappa-B (NFkB), the protein complex which influences DNA transcription among other functions. NFkB activates a pathway resulting in the expression of pro-inflammatory genes such as cytokines, adhesion molecules and other chemicals. At this stage there is certain evidence that yoga and positive changes in one's lifestyle can reverse this process (2).

### *Stress and Cancer*

Stress associated with diagnosis and treatment of cancer, affects not only quality of life but also leads to poorer prognosis and shorter survival. Adverse effects of stress on prognosis occur through following mechanisms: 1. Suppression of natural killer (NK) cells and their cytotoxicity (3). 2. Poorer repair of damaged DNA (4). 3. Modulation of apoptosis (5) and 4. Oxidative stress: aggravated by psychological stress (6). NK cell activity increases by relaxation methods. Patients with malignant melanoma (Skin cancer), who underwent relaxation program for 6 weeks had significant increase in the percentage of NK cells, as well as increase in NK cell cytotoxicity, as also lower rates of recurrence and death. Similarly, supportive group relaxation methods led to longer survival and better quality of life among women with advanced breast cancer. Yoga, meditation and pranayama are century old processes known to relax mind and energize the body. SK Yoga, a rhythmic breathing process, introduced by Sri Sri Ravishankar ji, is known to eliminate stress, anxiety and depression and increase enthusiasm. Fall in blood lactate, increase in glutathione, superoxide Dismutase (SOD) and catalase and increase in natural killer (NK) cells indicate relaxation, better antioxidant and better immune effects of

SKY in normal individuals and those with cancer. Further confirmation of better antioxidant defense was available through studies conducted using reverse transcriptase – polymerase chain reaction (RT-PCR), at AIIMS. This was accompanied by better stress regulation and better immune status due to prolonged life span of lymphocytes by up regulation of anti-apoptotic genes and pro-survival genes. Qu et al observed rapid and significantly greater effect of SKY on gene expression in peripheral blood mononuclear cells (PBMCs). Other positive effects of SKY included reduction in tobacco addiction and reduction in side effects of chemotherapy. Hence, SKY appears useful adjunct to cancer management (7), however the effect of hyperventilation needs to be carefully evaluated.

Lung malignant growth is the main source of disease spreading in the United States and around the globe. A greater part of lung malignant growth spread can be ascribed to cigarette smoking, and analysing the pace of cigarette smoking. Understanding the study of disease transmission and causal elements of lung malignant growth, can give insights. This revolves around modifiable factors, including tobacco smoking, work-related malignant growth, causing operators, diet, and ionizing radiation. It is akin to nuclear and innate pieces of lung carcinogenesis (8).

## Case Presentation

A 54 years old male 'Mr XXX from Delhi was enrolled as a participant in Prashanti Kutiram (Arogyadhama) on 3rd of September 2017 and was admitted in integrative medicine for Oncology, therapy started with mild yoga practices for a week and slowly Naturopathy and Ayurveda therapies were added for ailments. Second week onwards, integrated therapy started and patient has marked a positive change in health such as weakness in limbs, reduced, and gait was indicative normancy. Integrated medicine such as Yoga therapy, twice in a day, Naturopathy and Ayurveda Therapy once in a day was followed. Diet therapy was administered whole day from morning to evening and according to symptoms, change in Diet protocol was allowed. Daily routine checkup includes vital parameters, dietary intake, practices follow up, as well as other symptoms related to bowel movement and gait. Result was taken before treatment and after treatment with a follow up having undergone an integrative therapy since 3 years.

### IAYT Protocol (9)

Treatment Regimen: (Intervention is 3 months)

**Table 1:** Yoga protocol followed by participants

	Rounds	Duration	Time
<b>1. Loosening Practice (10,11)</b>			
Hand Stretch Breathing	10	Twice a day	1 min
Hands in & out Breathing in sitting Position	10	Twice a day	1 min
Ankle Stretch Breathing in sitting position	10	Twice a day	1 min

Tiger Breathing	10	Twice a day	1 min
Strait leg raising alternate leg	10	Twice a day	1 min
Setubandhasana Breathing	10	Twice a day	1 min
Folded leg lumber stretch	10	Twice a day	1 min
Bhujangasana Breathing	10	Twice a day	1 min
<b>2. Shakti vikasaka practice (12,13)</b>			
Manibandha Sakit Vikasaka (Wrists)	10	Twice a day	1 min
Karaprasta Aakti Vikasaka (Back of Hand)	10	Twice a day	1 min
Kaphonoi Sakti Vikasaka (Elbows)	10	Twice a day	1 min
Griva Sakti Vikasaka (Neck)	10	Twice a day	1 min
<b>3. Pranayama (14)</b>			
Sectional Breathing	15	Once in a day	10 min
Cooling Pranayama	9	Once in a day	3 min
Nadisuddhi	15	Once in a day	3 min
Chandranuloma Vilama	15	Once in a day	3 min
Bhamari	9	Once in a day	3 min
<b>4. Kriya (15)</b>			
Kapalabhati	30-40 stroke	Once in a day	1 min
<b>5. Meditation</b>			
OM Meditation (16)	1 round	Once in a day	35 min
Cyclic Meditation (17)	1 round	Once in a day	30 min
Mind sound resonance technique (16)	1 round	Once in a day	30 min
Pranic Energising Techniques (18)	1 round	Once in a day	45 min
Steps: The following are the eight steps of PET			
1. Opening prayer "pranasedam vase sarvam"			
2. Breath Awareness or Balancing of Breath			
3. Recognition of Vyana			
4. Movement and Rotation of Vyana			
5. Balancing and Energisation			
6. Silence			
7. Resolve ... 9 rounds			
8. Closing prayer "sarvebhavantu"			

### Diet Plan

**Table 2:** Diet chart

	Breakfast (8:00 am)	Juice (11 am)	Lunch (1:00 pm)	Dinner (7:30 pm)
Friday	Khichadi/Daliya	Sprout juice	1 chapati + 1 cup dal + 1 cup rice + 100 gm	1 chapati + 1 cup dal + 1 cup rice + 100 gm
Saturday	Poha/Boiled Sprouts/Upma	Sprout juice	boiled veg + Butter	boiled veg + Vegetable soup/ Butter milk with jeera powder
Sunday	Veg khichadi/Daliya	Sprout juice	boiled veg + Butter	boiled veg + Vegetable soup/ Butter milk with jeera powder
Monday		Sprout juice	boiled veg + Butter	boiled veg + Vegetable soup/ Butter milk with jeera powder
Tuesday		Sprout juice	boiled veg + Butter	boiled veg + Vegetable soup/ Butter milk with jeera powder
Wednesday		Sprout juice	boiled veg + Butter	boiled veg + Vegetable soup/ Butter milk with jeera powder
Thursday		Sprout juice	boiled veg + Butter	boiled veg + Vegetable soup/ Butter milk with jeera powder

**Table 3:** Details about Sprout Juice ingredients

<b>Sprout juice (19)</b>	
Recipe:	
Javegodhi (native wheat) – 1 kg	
Unpolished rice – 1 kg	
Fox tail – 1 kg	
Little millet – 1 kg	
Ragi – 1 kg	
Green gram – 150 g	
Bengal gram – 100 g	
Horse gram – 100 g	
Alfalfa – 100 g	
Ground nut – 100 g	
Black eyed peas (alasanade) – 100 g	
Peas – 100 g	
Broad beans – 100 g	
Amaranth seeds (not sprouted) – 100 g	
Proportion of carbs to protein should be 60:15. Accordingly, grains and legumes have been divided.	
<ul style="list-style-type: none"> <li>• Make it in small quantity first and check the taste and then standardize it</li> <li>• All need to be washed, soaked for 12 hours and sprouted for 12 hours</li> <li>• Soak nuts, seeds, dry fruits 12 hours</li> <li>• Grind sprouts and (nuts, seeds &amp; dry fruits) separately</li> <li>• Add organic unrefined jaggery, if required</li> <li>• Bring it to thin consistency and bring it to a boil to make kanji</li> <li>• Now add ground nuts, seeds and dry fruits</li> <li>• Mix &amp; serve 10. Three times/meals per day</li> <li>• Approximately 60 g (sprouted grains) quantity per meal (not very sure, this is the theoretical measure, you need to make it &amp; see if it is ok for 1 meal)</li> </ul>	

**Integrative Therapy Time table**

Friday Schedule:

- 01:00 pm- Lunch Annapurna Hall
- 03:00 pm- Consultation/Parameters (Respective section)
- 05:00 pm- Integrated Approach of Yoga Therapy Introduction Lecture
- 06:00 pm- Bhajan (Sampurna Hall)
- 06:30 pm- Tratak/CM (Sampurna Hall)
- 07:30 pm- Dinner (Annapurna Hall)
- 08:00 pm- Kit collection

Time	Schedule	Venue
5:30 am	Om Meditation	**Language wise
6:00 am	Special Technique	Section wise
7:00 am	Maitre milan	Mangal Mandir
8:00 am	Juice Therapy/Naturopathy Treatment	Surabhi
9:30 am	Parameters	Section wise
10:30 am	Juice/Pranayama/Naturopathy Treatment	Surabhi/ **Language wise
11:30 am	Lunch	Annapurna Hall
12:30 pm	Lecture	**Language wise
1:00 pm	Lunch	Annapurna hall
2:30 pm	Ayurveda Treatment	Surabhi

3:00 pm	MSRT	**Language wise
3:45 pm	Special Technique	Section wise
4:45 pm	Juice therapy	Annapurna Hall
5:00 pm	Tuning to Nature/ Acupuncture/Pranayama	Sampurna hall
6:00 pm	Bhajan	Sampurna Hall
6:30 pm	Tratka/CM	**Language wise
7:30 pm	Dinner	Annapurna Hall
8:30 pm	Kashayam	Annapurna Hall

\*\*English: Sampurna Hall; \*\*Hindi: Prajwal Hall; \*\*Kannada: Vimarsha Hall

**Vital data: Intervention (3 months)**

**Table 4:** Vital data in Numerical form before and After treatment

Parameters	Pre therapy	Post therapy	Percentage
Pulse Beats/min	80 bpm	70 bpm	0.12
BP (Systolic) mmHg	126 mm/Hg	110 mm/Hg	0.12
BP (Diastolic)	77 mm/Hg	68 mm/Hg	-11.68
Respiratory Cycles/min	18 cpm	12 cpm	-33.33
Bhramari Time (Sec)	6 sec	19 sec	50
Symptoms score	07	01	-85.71
Medication score	12	01	-91.66
Weight in Kg	58.5	63.3	8.20
Height in Cm	174	174	-

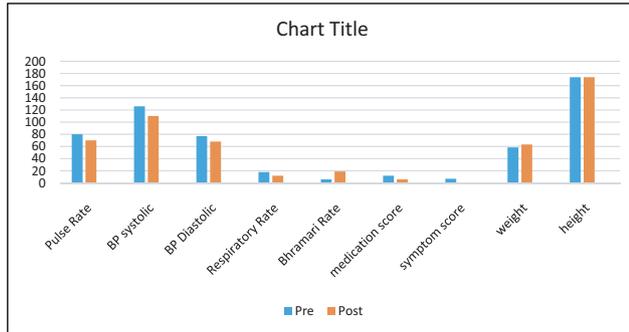
Graphical presentation shows that there is an marked positive reduction in symptom score. Positive reduction in all vital signs. Bhramari rate shows a positive improvement and more specifically, Bhramari rate has increased which can be considered as a positive improvement.

**Discussion**

Several factors play a role in the onset of Cancer. Increasing importance is being given to inflammation. While acute inflammation is healing and beneficial, chronic inflammation has the opposite effect. Chronic inflammation triggers NF-kappa-B (NFkB), the protein complex which influences DNA transcription among other functions. NFkB activates a pathway resulting in the expression of pro-inflammatory genes such as cytokines, adhesions molecules and other neuro transmitter. At this stage, there is certain evidence that yoga and positive changes in one’s lifestyle can reverse this process.

3 months of intervention and 3 years of follow up case of Adenocarcinoma of lungs was observed. The patient was able to maintain a healthy living adopting IAYT (Integrated approach of Yoga therapy) which helped improving the symptoms score including reduction in fatigueless in limbs so that participant is able to walk without support and attaining day to day activity without care taker, reduction in shoulder pain and provided a quality of sleep as well as reduction in medication. During his stay he had undergone yoga technique

practice, meditation, relaxation techniques, Naturopathy treatments there will be marked positive changes in all vitals including Blood pressure, Respiratory rate as well as increased in Bhramari rate which shows the good capacity of lungs, Marked change in weight of Participants with healthy food habits able to achieve healthy weight gain.



**Fig. 1:** Graphical presentation of Vital data before and after treatment.

## Conclusion

Integrative medicine is very much effective in symptomatic reduction and maintain healthy life style if IAYT Protocol adopted prolong or made as a routine.

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## Authorship contribution

RJ has analyzed data and written the paper.

RN has conceptualized the integrative module for Oncology management – guided in writing a article.

AS has implemented treatment protocol and taken the clinical parameters.

## Informed consent

Yes.

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## Conflict of interest

Nil.

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