

# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer

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# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer

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## INDIA IS CONSIDERED AS ORAL CANCER CAPITAL OF THE WORLD

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### Calls for action in the 'oral cancer capital of the world'


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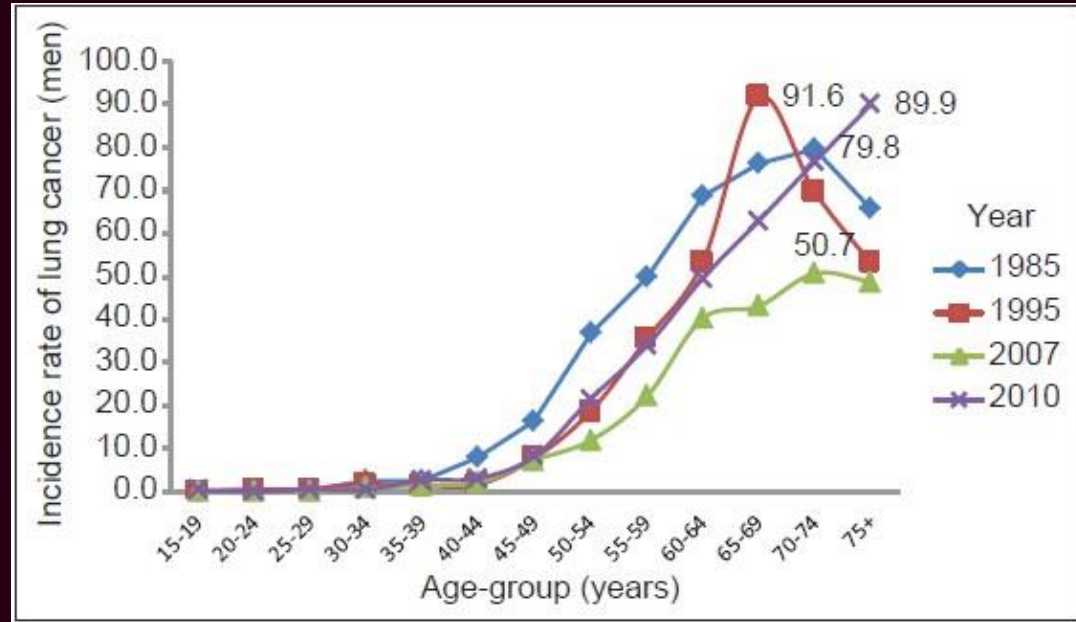
May 3, 2019—Oral cancer is on the rise in India, with more than 100,000 new cases in 2018, according to the Global Cancer Observatory. At a recent symposium hosted by Harvard T.H. Chan School of Public Health's India Research Center, experts from India and Harvard's Longwood Medical Area came together to share the latest research on preventing, diagnosing, and treating oral cancer. Much of the program focused on how to address the disease in India, which speakers said is known as the



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Source: <https://tinyurl.com/vcja9cp6>



PC Gupta et al. Rising incidence of oral cancer in Ahmedabad city  
Indian J Cancer 2014; 51 (5): 67-72

AS per the GLOBOCAN statistics, the rate of new cases being diagnosed has increased by a staggering 68% in the past two decades alone, making it a real public health crisis.



# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer

THIS STORY IS FROM FEBRUARY 5, 2020

## '1 in 10 Indians to get cancer in lifetime'

Sushmi Dey / TNN / Updated: Feb 5, 2020, 11:45 IST

f in [email] [print] [font-size]

### ARTICLES

NEW DELHI: One in 10 Indian will develop cancer during their life-time and one in 15 Indians will die of cancer, says the World Cancer Report released by World Health Organization (WHO) which has pointed out 'socio-economic inequalities' as a major cause for the rapid increasing burden of the disease in the country.

Lower socio-economic status is associated with oral and cervical cancer while urbanization, improvement in education and increasing disposable income with higher overall scio-economic status are associated with an increasing risk of breast and colorectal cancer cases beside such life-style related types.

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## CANCER BURDEN IN 2018

➤ Socio-economic inequalities a major cause for rapid rise in cancer cases in India, says a study

NEW CASES	DEATHS
1.16 million	7,84,800



### Number of cases of six most common types of cancer

Breast cancer	1,62,500
Oral cancer	1,20,000
Cervical cancer	97,000
Lung cancer	68,000
Stomach cancer	57,000
Colorectal cancer	57,000

**In men** | Oral, lung, stomach, colorectal and oesophageal cancer accounted for **45%** of new cancer cases

**In women** | Breast, cervical, ovarian, oral and colorectal cancer account for **60%** of cases

Source: WHO's World Cancer Report



# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer

business-standard.com/article/health/india-spent-rs-2-386-cr-in-2020-on-oral-cancer-treatment-study-121062000437\_1.html

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## India spent Rs 2,386 cr in 2020 on oral cancer treatment: Study

India spent approximately Rs 2,386 crore in 2020 on oral cancer treatment, paid for by insurance schemes, government and private sector, spending out of pocket, donations or combination of both.

**Topics**  
Oral cancer | cancer treatment

IANS | New Delhi  
Last Updated at June 20, 2021 16:26 IST

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Multiplying the cost per unit of early and advanced cancer as per the results of a study, India spent approximately Rs 2,386 crore in 2020 on oral cancer treatment, paid for by insurance schemes, government and private sector, spending out of pocket payments and charitable donations or a combination of these.

This is a significant portion of the healthcare budget allocation the government made in 2019-20, towards a single disease. Without any inflation in costs, this will result in an economic burden on the country of Rs 23,724 crore

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**COVID-19**  
INDIA  
CASES: 34,344,683

ENG 18:21 06-11-2021 19


# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer

THIS STORY IS FROM JUNE 21, 2021

## 50% oral cancer patients die within a year: Tata study

Prithvijit Mitra / TNN / Updated: Jun 21, 2021, 09:55 IST



- ARTICLES**
-  50% oral cancer patients die within a year: Tata study
  -  Despite Covid stigma, private MBA students get better job offers
  -  Here's how you can get the best of technology with the latest...



**MERCK**

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KOLKATA: A first-of-its-kind study on the 'cost of illness analysis of oral cancer', conducted by Tata Memorial Centre in Mumbai, reveals that half of oral cancer patients in India die within a year of diagnosis and are aged between 30-50 years, leading to a huge productivity loss for the country.



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WEATHER POLLUTION NEWS UP ELECTIONS

NEWS / CITY NEWS / VARANASI NEWS / Cost Of Oral Cancer Treatment is Rising Steadily, Warns Tata Memorial Centre's Study

THIS STORY IS FROM JUNE 24, 2021

### Cost of oral cancer treatment is rising steadily, warns Tata Memorial Centre's study

Binay Singh / TNN / Jun 24, 2021, 04:30 IST



Varanasi: The Tata Memorial Centre (TMC), which operates two cancer hospital – Mahamana Pandit Madan Mohan Malviya Cancer Centre (MPMMCC) and Homi Bhabha Cancer Hospital (HBCH) – in Varanasi, has conducted first of its kind study on the cost of oral cancer treatment in India. The study was published in the medical journal 'ecancer' on June 17.

TMC director Dr. RA Badwe said, "According to the World Health Organization (WHO), cancer is the second leading cause of death globally, with approximately 70% cases being reported in low and middle income countries.

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# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer

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## Can poor oral hygiene cause cancer?

"Tobacco chewing, areca nut, alcohol consumption, and poor oral hygiene (POH) may have contributory effects," says a doctor

By: **Lifestyle Desk** | New Delhi | July 29, 2021 2:00:56 pm



Oral cancer is one the most common cancers in India among men (11.28 per cent of all cancers), and the fifth most frequently occurring cancer among women (4.3 per cent of all cancers). (Photo: Getty/Thinkstock)

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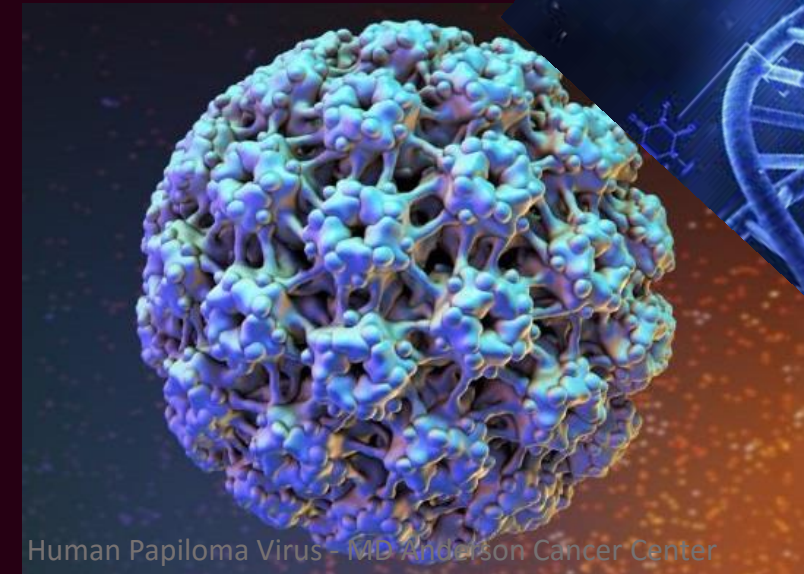
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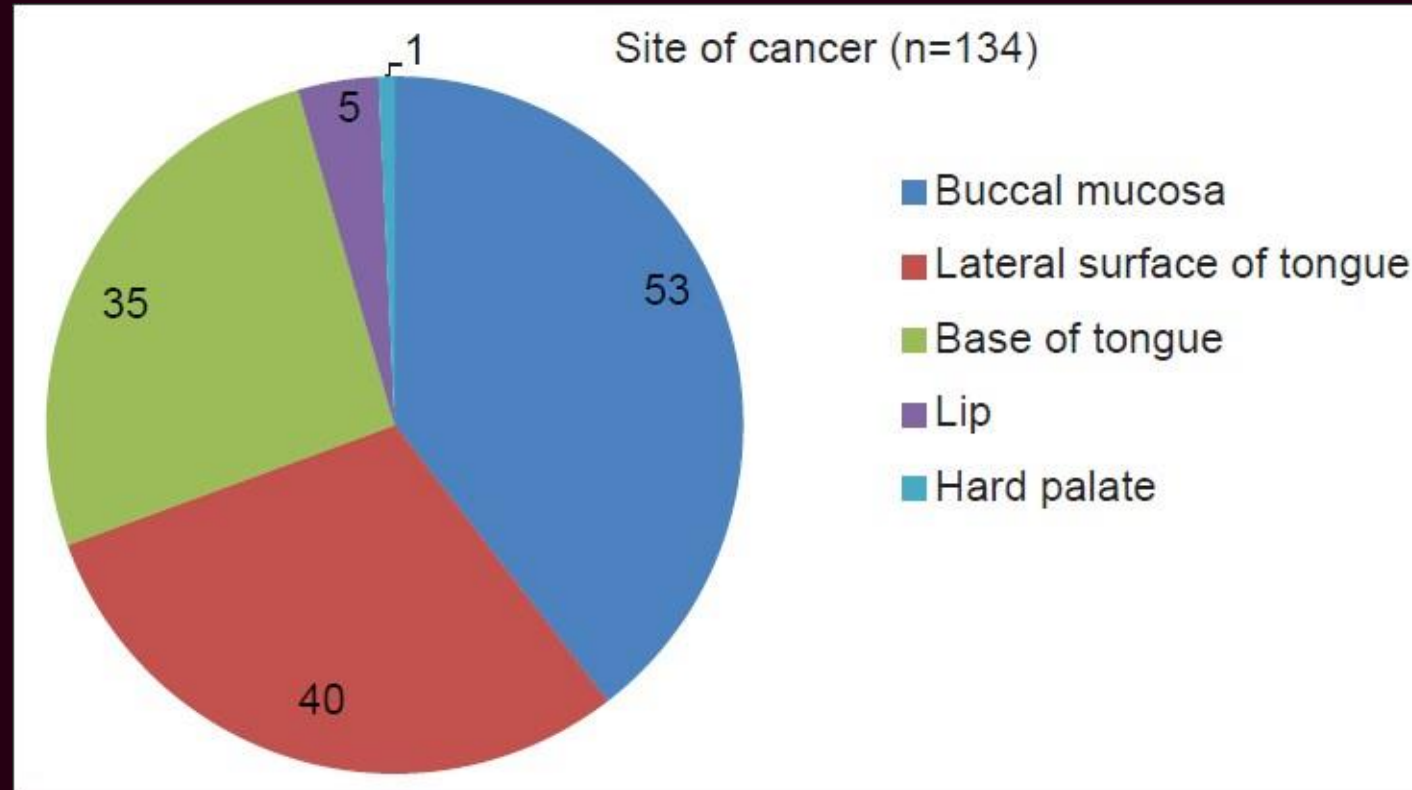
## Causes For Oral Cancer



Source: The Independent



# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



**Risk of oral cancer associated with gutka and other tobacco products: A hospital-based case-control study.**

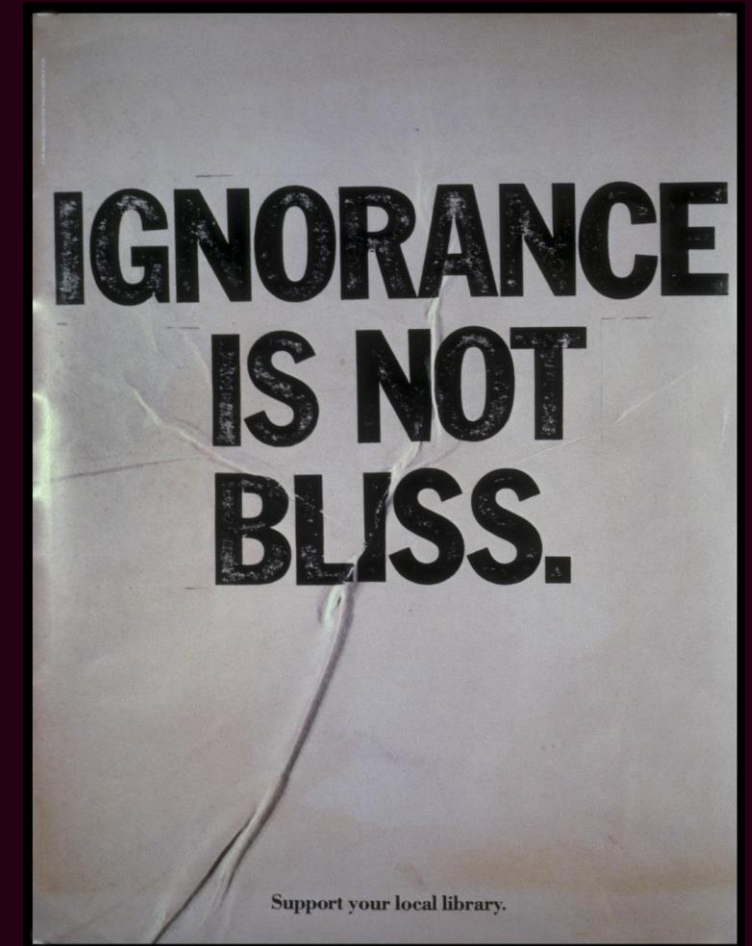
Sandeep Mahapatra, Ramachandra Kamath, Bharatesh K Shetty, VS Binu.

Journal of Cancer Research and Therapeutics. 2015 | Volume : 11 | Issue : 1 | Page : 199-203



# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer

**50% of Oral  
Cancer can  
be Prevented**



Majority of Indian Cancer patients report to a clinic with advanced malignancy, where initiation of curative therapy is difficult.

# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



Source: The Financial Express



Warning signs of harmful effects of tobacco is now displayed on cigarette packets and gutka pouch



# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



As long as smoke less tobacco products are available in the market the incidence of oral cancer is bound to increase



# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



Though great advances have been made in the treatment of some cancer and new advances in surgery, radiotherapy, and chemotherapy have led to an increase in cure rates. But the price of conventional care is often out of reach for majority of cancer patients living in developing world.



# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



## Complementary and Alternative Medicine (CAM)

- Meditation
- Hypnosis
- Guided Imagery
- Biofeedback
- Relaxation Therapy
- CBT
- Prayer and Spirituality
- Homeopathy
- TCM
- Bodywork and Movement Therapy
- Acupuncture
- Ayurvedic Medicine
- Physical Medicine
- Chiropractic Therapy
- Energy Medicine
- Dietary Medicine
- Herbal Medicine
- Massage Therapy
- Naturopathy
- Neural Therapy
- Magnet Therapy

© 2007, Steven L. Saenger, DDS, DMed

Globally, a substantial number of cancer patients are dependent on various complementary and alternative medicines / therapies (CAM)

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With her majesty The Queen of England, September 1961

fifth day. It is the 17th instance of  
"King of Channel"  
Brojen Das ailing  
CALCUTTA, (PTI): Veteran Bang-  
ladeshi swimmer Brojen Das, who  
had created a record of sorts by  
successfully conquering the English  
Channel six times, is suffering from  
throat cancer. Das, who was the  
first Asian to cross the English Chan-  
nel in the late 50's, had recently  
come to Calcutta for treatment and  
the ailment was detected after in-  
vestigations in a city hospital. Fam-  
ily sources said that doctors had  
advised the swimmer to get the treat-  
ment done in Mumbai. He will be  
leaving for the city in a week's time.



- I turned to cancer research after my Father-in-law Mr. Brojen Das was diagnosed with cancer and conventional chemotherapy was not successful
- Tried certain herbal therapy and got benefit
- Moved to Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow in 2000
- Got Lady Tata Memorial Fellowship – genetic studies of gallbladder cancer
- ICMR Fellowship to study various cancer alternative therapy in northern Indian



# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer

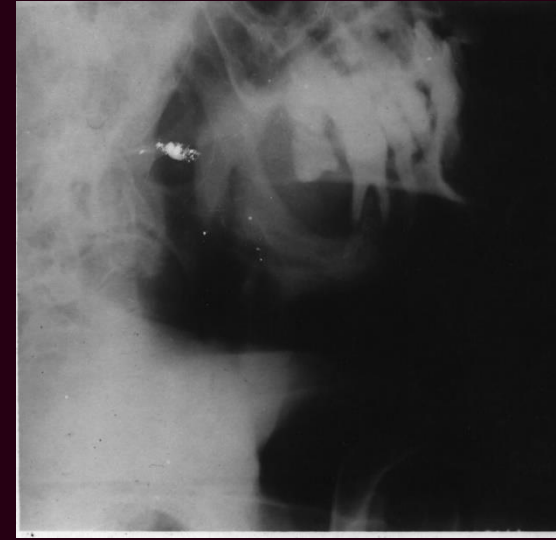
**Table 1. Patient response when asked why they were using an alternative “anticancer” medicine**

Rank	Categories	Response	Number of patients = 200
1	No treatment Options	Advice of oncologists No specific treatment recommended by oncologist Not responding to conventional treatment	40 (20%)
2	Financial	Financial and economic problems No health insurance Treatment in private clinic too costly Already invested a considerable amount in conventional treatment	32 (16%)
3	Quality of Life	Patient too weak to undergo or continue chemotherapy Too old for conventional treatment Adverse side-effect to radiotherapy	30 (15%)
4	Advertisement	Advice of a friend who used a certain therapy Read in newspaper	25 (12.5%)
5	Pain Management	Like to use this therapy primarily for palliation	23 (11.5%)
6	Patient Management	Live near the clinic and easy to manage the patient at home Availability of doctor at all times of the day and night	15 (7.5%)
7	Multimodal Therapy	Like to use alternative medicine along with the conventional treatment	14 (7%)
8	Frustration	Not convinced with oncologist's advice Need further information about cancer and options	10 (5%)
9	Faith	Belief that homeopathic medicine can cure cancer	8 (4%)
10	Experimental	Suffering from pancreatic cancer; would like to try an experimental therapy	3 (1.5%)

# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



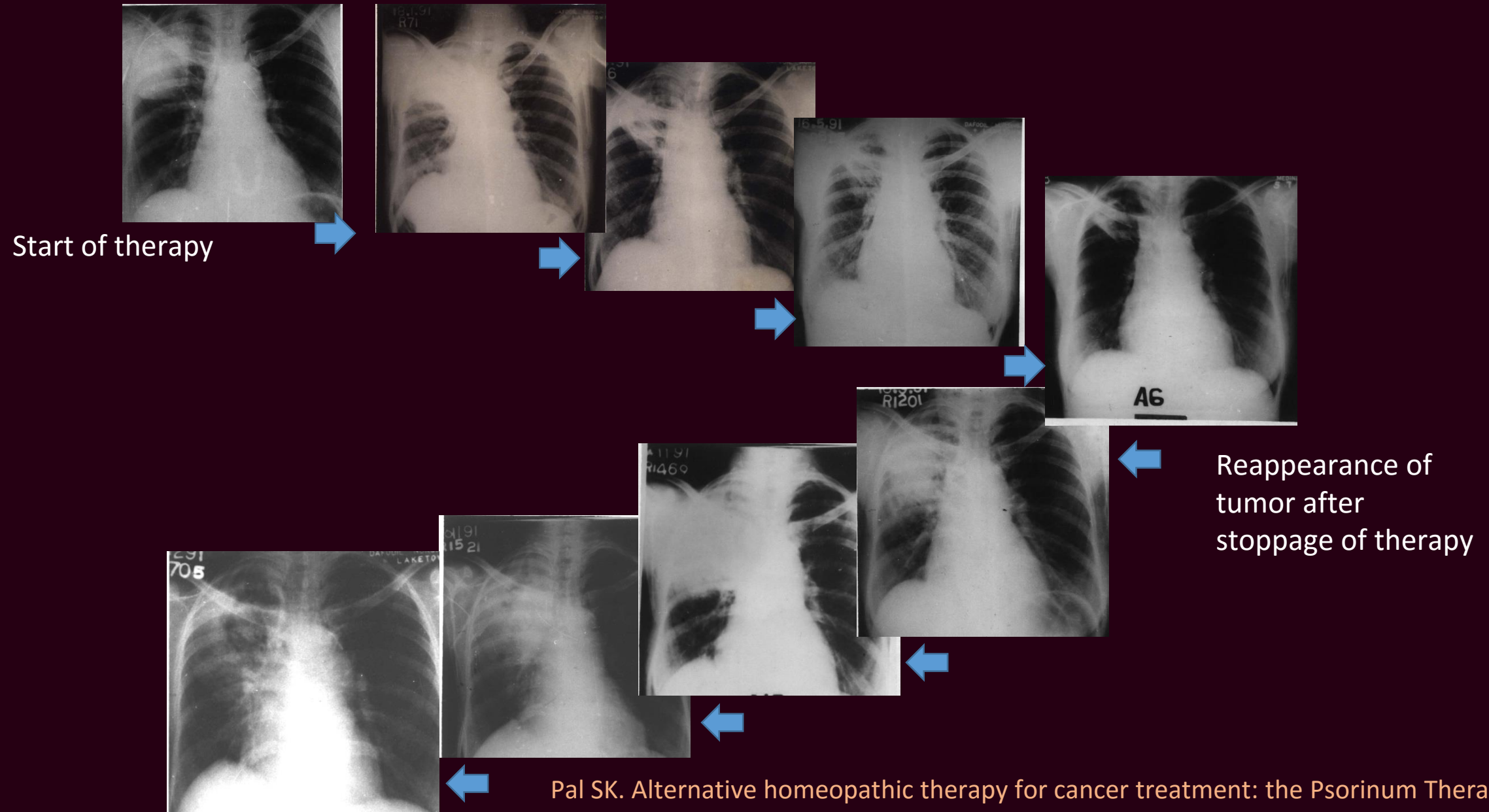
Dr. Ashim Chatterjee



- Psorinum therapy is an alternative approach of treating cancer with homeopathic mother tinctures.
- This method of treatment was proposed by Dr. Ashim Chatterjee in Kolkata in the mid 80s.
- Radical cure of cancer was reported in many biopsy confirmed cancer patients. Was a popular therapy, but stopped by Govt. for irregularities.

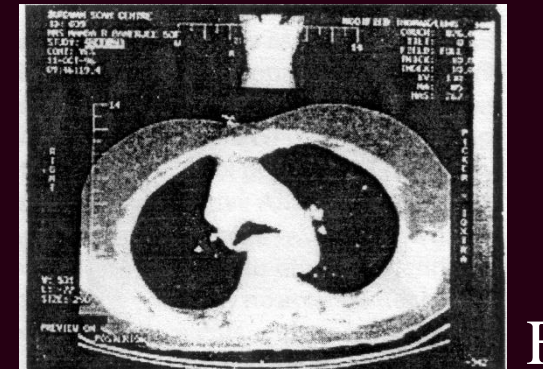
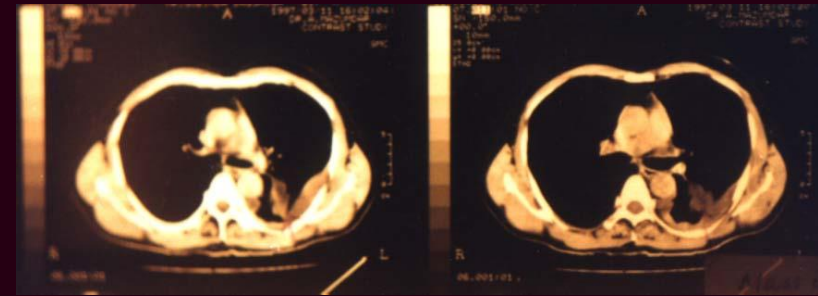
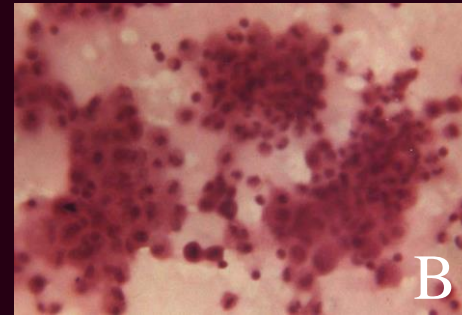
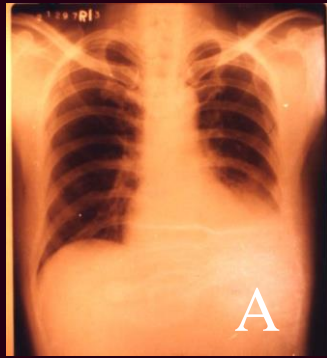


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Pal SK. Alternative homeopathic therapy for cancer treatment: the Psorinum Therapy. International Journal of Interdisciplinary and Multidisciplinary Studies, 2014; 1 (8): 1-10.

# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



A- X ray chest at Presentation  
B- FNAC  
C- CT Scan dated 11.03.1997  
D- Liver secondaries  
E- X ray Chest after 1 year  
F- CT scan a dated 09.04.2001  
G – Patient after recovery

## Clinical Details:

Name : Mr. G D Ghosh

Age : 69 M

Diagnosis : Ca Lung

Response: +++++

Duration : 4 years

Disease free survival: 10 Years

Side effects: Suffered Stroke once



# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



- In SGPGIMS, I started my research work on genetic analysis on gallbladder cancer. Getting samples was extremely difficult as most of the patients were too advanced for surgery
- However, few patients did reported to our clinic after 6 months
- They admitted to have taken some herbal therapy



# Chemopreventive Potential of Certain Herbs in Preparations on Oral Cancer

**Lucknow Times**  
 Evening  
 Newspapers  
 Culture &  
 Education  
**EVERY DAY**  
**THURSDAY & SATURDAY**  
**THE TIMES OF INDIA**

Lucknow, Saturday, March 6, 1999 • 16 Pages

**NEWS DIGEST**  
 Bihar: Members of Bihar House locality staging a road blockade to demand compensation for the finalised members of the Bihar Legislative Council.  
 Bihar: Members of Bihar House locality staging a road blockade to demand compensation for the finalised members of the Bihar Legislative Council.  
 Bihar: Members of Bihar House locality staging a road blockade to demand compensation for the finalised members of the Bihar Legislative Council.

**Plea in Bhagwat case dismissed**  
 NEW DELHI: The High Court has today dismissed the plea of the accused in the Bhagwat case, who had sought a stay on the execution of the death sentence.

**FM dismisses Guruswamy's charges**  
 NEW DELHI: The Union Minister for External Affairs has today dismissed the charges against the former minister of the Government of Karnataka.

**Microbit alert**  
 MICROBIT Software giant Microsoft has today issued an alert to its users about a security vulnerability in its Windows 95 and Windows 98 operating systems.

**MARKETS**  
 BSE SENSEX: 10,174.74  
 NSE NIFTY: 1,232.00  
 BSE 100: 10,174.74  
 NSE 100: 1,232.00

**THE WEATHER**  
 Lucknow: 14°C - 24°C  
 Delhi: 10°C - 22°C  
 Mumbai: 28°C - 32°C

**THE TIMES OF INDIA**  
 FOR TODAY'S NUMBER  
 SEE PAGE 15

## RESULTS OF THE 1998 NATIONAL ANGIOLOGY CONGRESS

### BJP once again seeks Cong support on Bihar

#### Vajpayee authorised to make the next move

The House of India New Service Bureau (NSB) has today announced that the government will support the Bihar government's request for a road blockade to demand compensation for the finalised members of the Bihar Legislative Council.

### FM dismisses Guruswamy's charges

The Union Minister for External Affairs has today dismissed the charges against the former minister of the Government of Karnataka.

### Lucknow doctor provides hope for cancer patients

Dr. Huma, who has been successful in curing many cancer patients, has today announced that she has developed a new method of treating cancer patients.

## RESULTS OF THE 1998 NATIONAL ANGIOLOGY CONGRESS

### BJP out to protect trigger-happy MP

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## NATIONAL SEMINAR ON PROGRESS IN ONCOLOGY

### DIRECTIONS FOR THE NEXT MISSION

### Oncology simplified

Majority of cancers have high rate of successful cure and long term survival if detected and treated in early stages. This should be an incentive for taking early treatment, says Prof. ID Sharma.

### New technology helps detect cancer

Modern biological tests can now detect cancer at an early stage, before it has spread to other parts of the body.

### Medi Claim Insurance

Medi Claim Insurance provides financial support to cancer patients during their treatment.

## NATIONAL SEMINAR ON PROGRESS IN ONCOLOGY

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## Surgical Oncology at KGMU

The Department of Surgical Oncology at KGMU has today announced that it has started a new program to treat cancer patients.

## Doctor's Protection Shield

A unique insurance package for those who care for the health of common man.

## Complete your Health Plan with MEDICLAIM POLICY

Medi Claim Insurance provides financial support to cancer patients during their treatment.

## THE HINDUSTAN TIMES

### Message

The Department of Surgical Oncology at KGMU has today announced that it has started a new program to treat cancer patients.

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Late Dr. S M Atiq



Late Dr. S Hina Fatima

**HUMA is an Poly-herbal Alternative Cancer Therapy tried by patients mostly with advanced malignant disease where conventional therapy is not possible**

# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer

Some important Ayurvedic herb from which HUMA Therapy evolved

*Azadirachta indica*

*Acacia catechu*

*Asparagus recemosus*

*Curcuma longa*

*Calotropis procera*

*Catharanthus roseus*

*Embelica officinalis*

*Ocimum sanctum*

*Plumbago xylanica*

*Semecarpus anacardium*

*Tinospora cordifolia*

*Tiliacora racemosa*

*Withania sominifera*



At presentation

4798 PHARMACOLOGY DIVISION CENTRAL DRUG RESEARCH INSTITUTE LUCKNOW. 4793

Name: Syed Mohd. Atiq A.I.D. No. (entry) / (OS) 000g/kg L.S. Pharmacology No. HU-518

Code Observation (Month)	Cardiovascular											Inhaled (Cont. in mg/ml)			Special Tests (Month)																							
	Dose (mg/kg/Day) or (mg/kg/Day) (Intravenous) (Days)											Astoria	Stress	Therms	C. N. E.						Other																	
Dose (mg/kg/Day)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36		
400mg/day																																						
1000mg/day																																						
2000mg/day																																						
Toxicity test																																						

Reference and further notes: 2750 > 1000 mg/kg/day



6 months after therapy



# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



*Azadirachta indica*



*Curcuma longa,*



*Tinospora cordifolia*



*Ocimum sanctum*



*Embellica officinalis*



*Semecarpus anacardium*

# **Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer**

## **Some Facts about HUMA Therapy**

**This poly-herbal preparation do not contain any heavy metals.**

**The medicines are in liquid and powdered form.**

**The medicines are orally administrated and are titrated time to time depending on the condition of the patient.**

**Along with HUMA therapy the patients also receive conventional life support care.**

**Adverse side effects are less because of individualized dosing.**

**Medicines are prepared by the Huma Cancer Society & checked for batch to batch variations.**

**Marked regression of cancer / tumor were observed in some patients suffering from oral and rectal malignancy.**



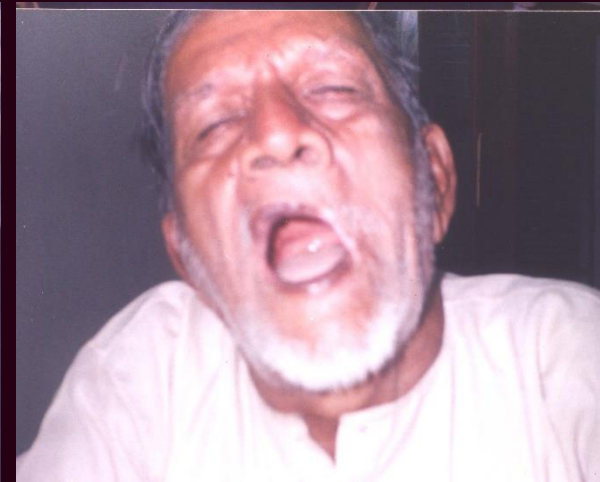
# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



At Presentation



1 month after therapy



6 months after therapy

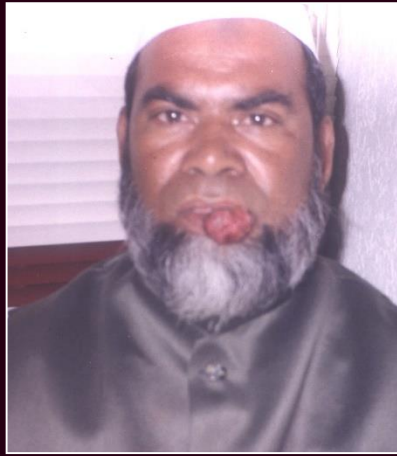


One year after therapy

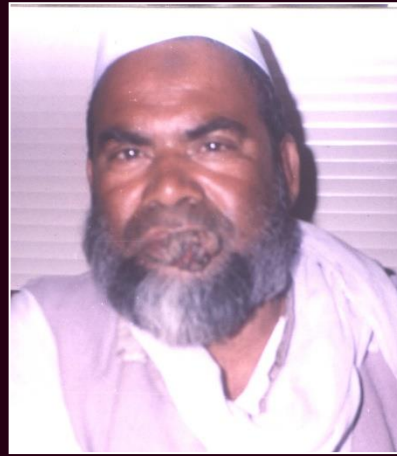
## Clinical Details:

Age : 70 Years  
Histology : Verrucous Carcinoma  
Stage : T<sub>4</sub> N<sub>3</sub> M<sub>x</sub>  
Conventional therapy: Refused because of old age  
Response to HUMA : ++++  
Present status : Stable and Alive  
Relapse free survival : 6 years

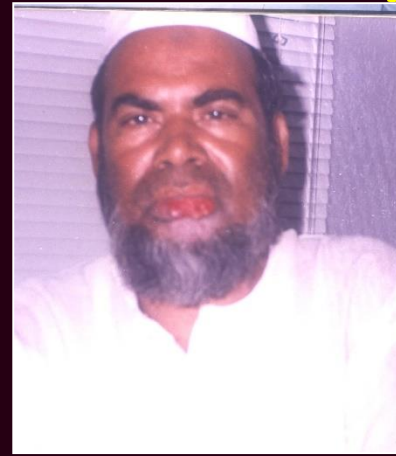
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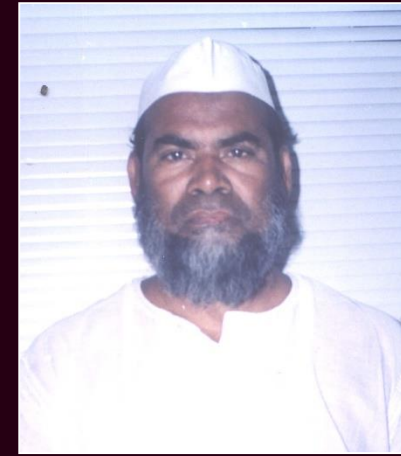
**A**



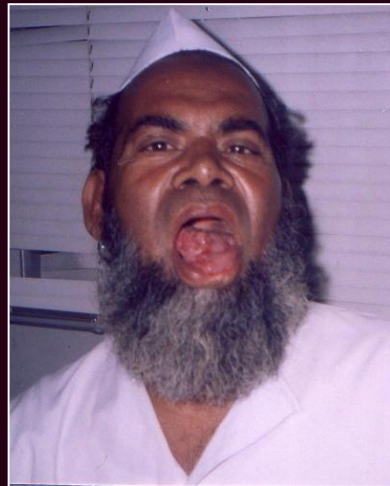
**B**



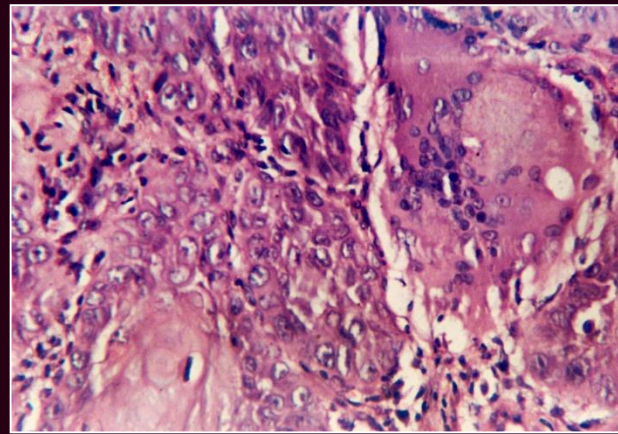
**C**



**D**



**E**



**F**



**G**

**Figure:** **A** – At presentation; **B** – 3 months after therapy; **C** – 6 months after therapy; **D** – 1 Year after therapy; **E** – Relapse of disease after stoppage of therapy ; **F** – Histopathology ; **G** - 3 months after restart of therapy



# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



At Presentation



6 months after therapy



6 months after therapy



9 months after therapy

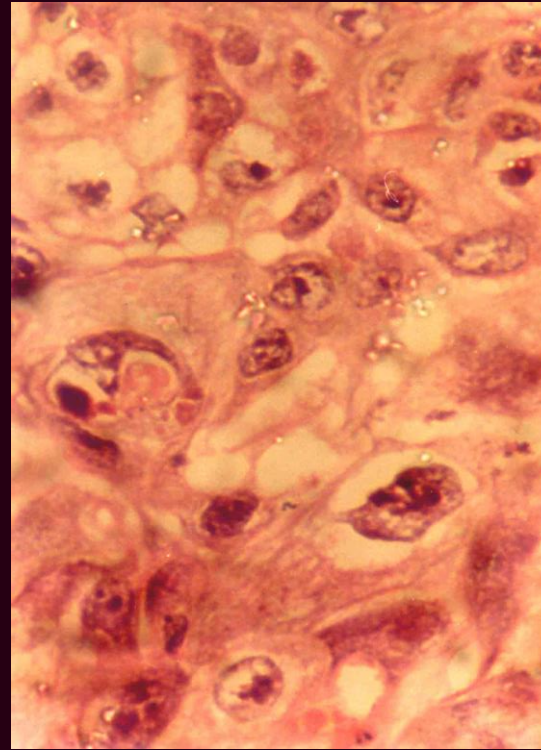
## Clinical Details

Age : 32 Years  
Histology : Sq Cell Carcinoma  
Stage : T<sub>4</sub> N<sub>3</sub> M<sub>x</sub>  
Conventional therapy: Nil  
Response to HUMA : +++  
Present status : Dead  
Survival : 12 months

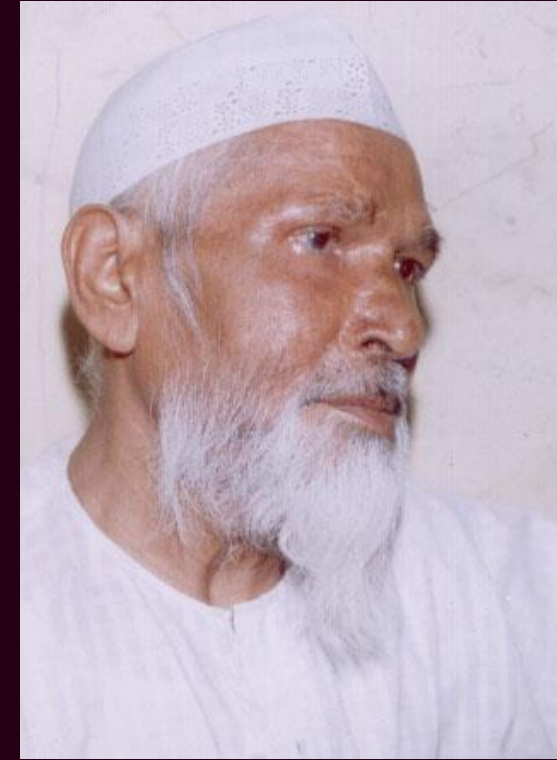
# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



At Presentation



Histopathology



9 months after therapy

## **Clinical Details:**

Diagnosis: Sq Cell Ca

Response: +++

Present Status: Dead

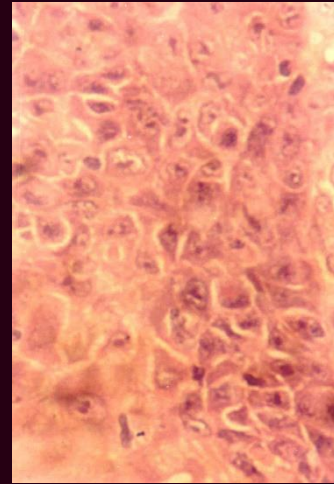
Survival : 14 months



# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



At Presentation



Histopathology



3 months after therapy



5 months after therapy



8 months after therapy

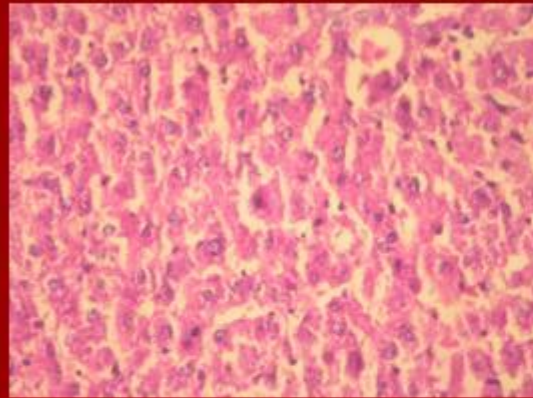


Recurrence of the disease after FNA was done

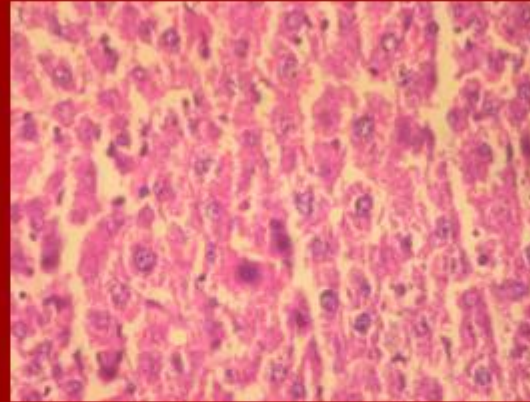
## Clinical Details

Age	60 Years
Histology	Sq Cell Carcinoma
Stage	T <sub>3</sub> N <sub>1</sub> M <sub>0</sub>
Conventional therapy	Nil
Response to HUMA	+++
Present status	Dead
Survival	11 months

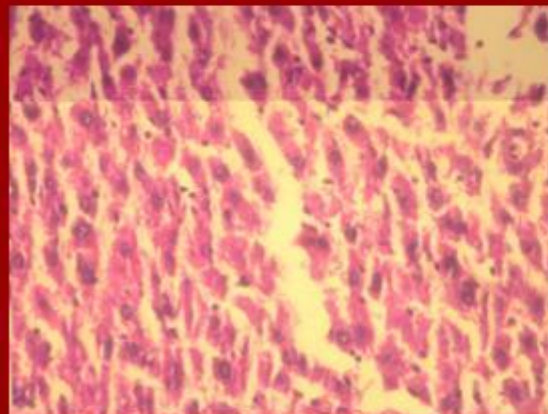
# Sub Acute Toxicity Study in Rats Following OECD Guidelines



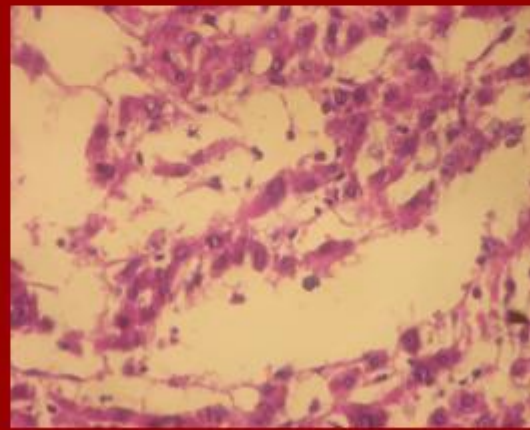
Normal Control



CCl<sub>4</sub> + Liv 52



HUMA



CCl<sub>4</sub>

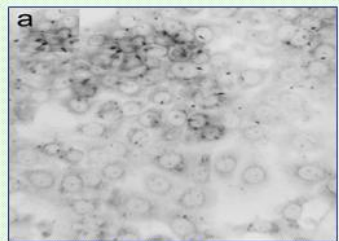


HUMA produced mild toxicity in rats

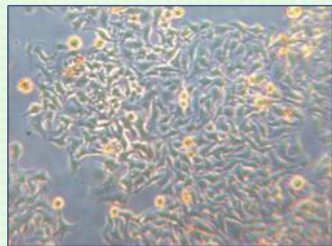


# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer

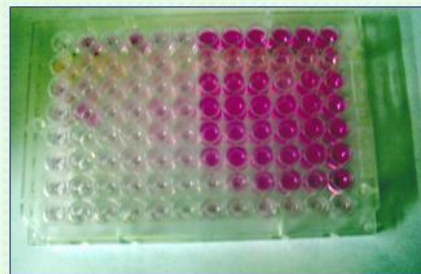
## In Vitro Studies Cyto-toxic Studies of HUMA



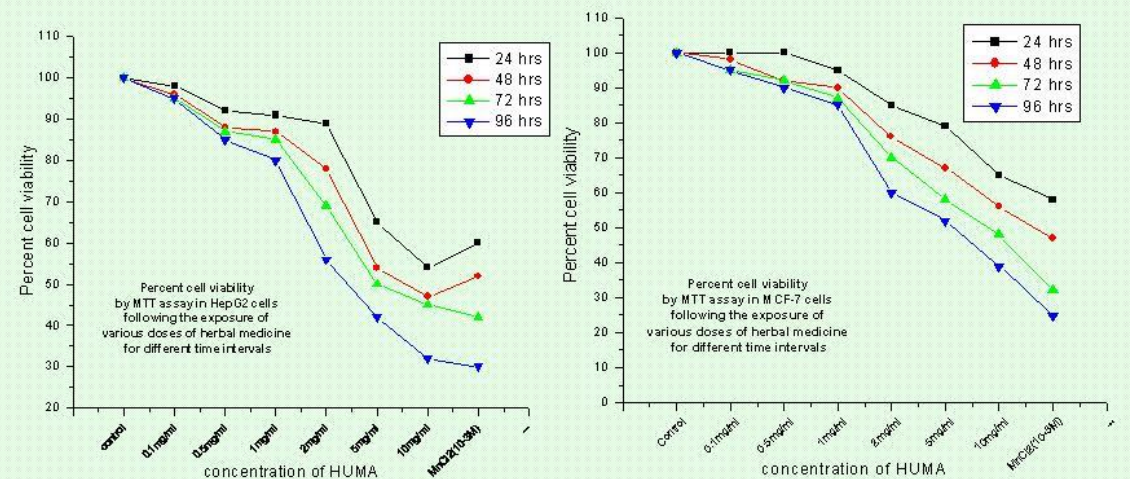
MCF - 7



HepG - 2



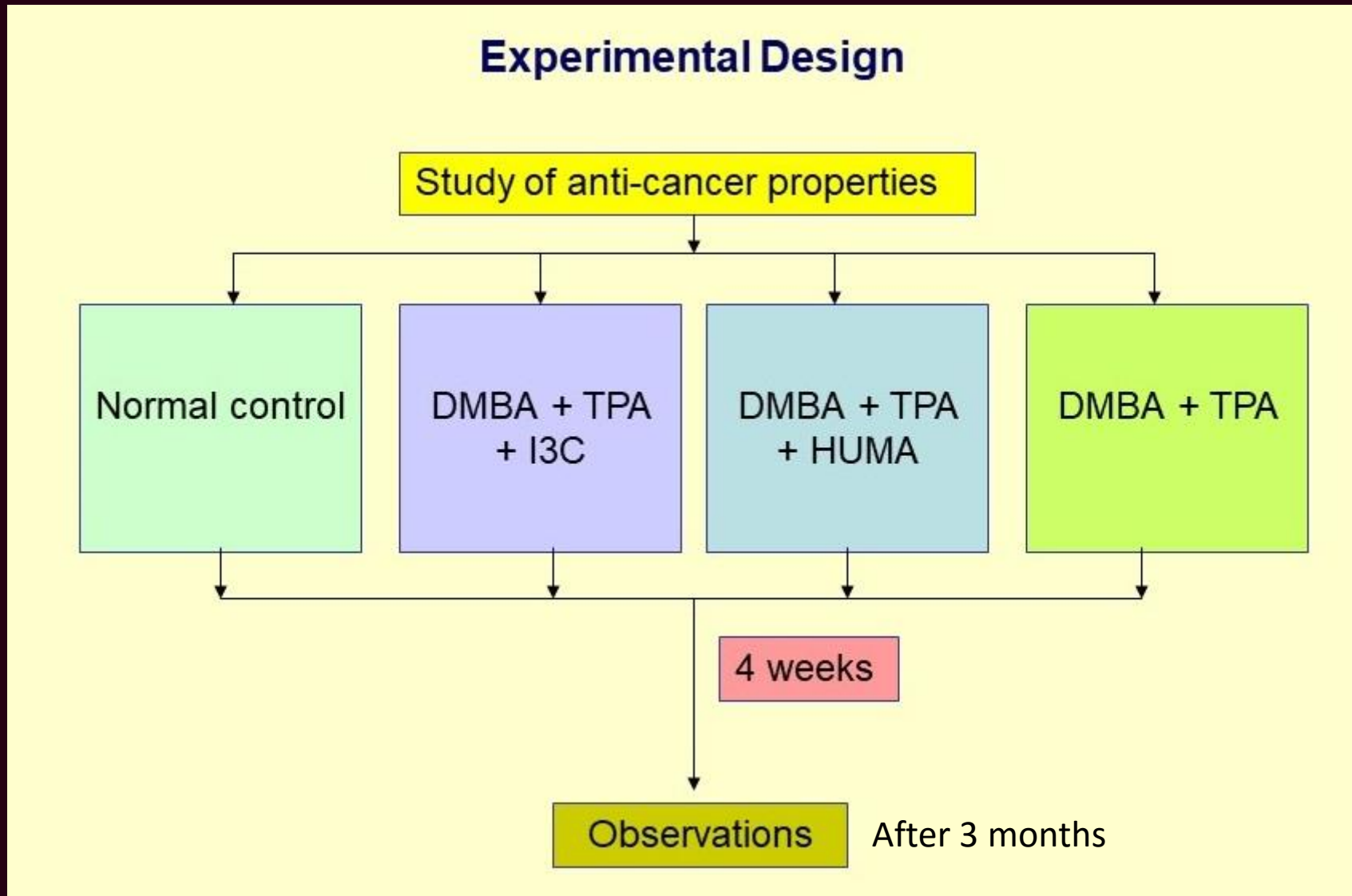
The 2 assay that was use were MTT and NRU



MTT assay on HepG-2 cell line and MCF-7 cell line

The liquid medicine of HUMA was found to be very toxic in cancer cell lines. The study was done at Indian Institute of Toxicology Research, Lucknow.

# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



7,12-dimethylbenz[a]anthracene (DMBA)

I3C - Indole-3-carbinol

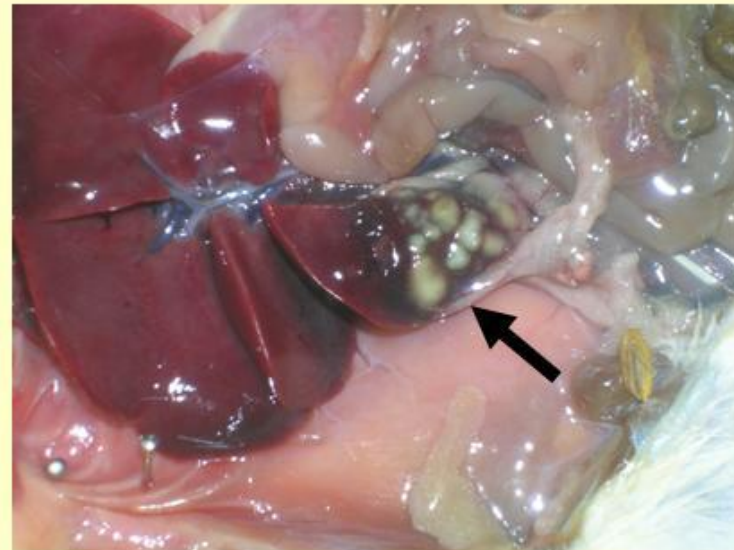
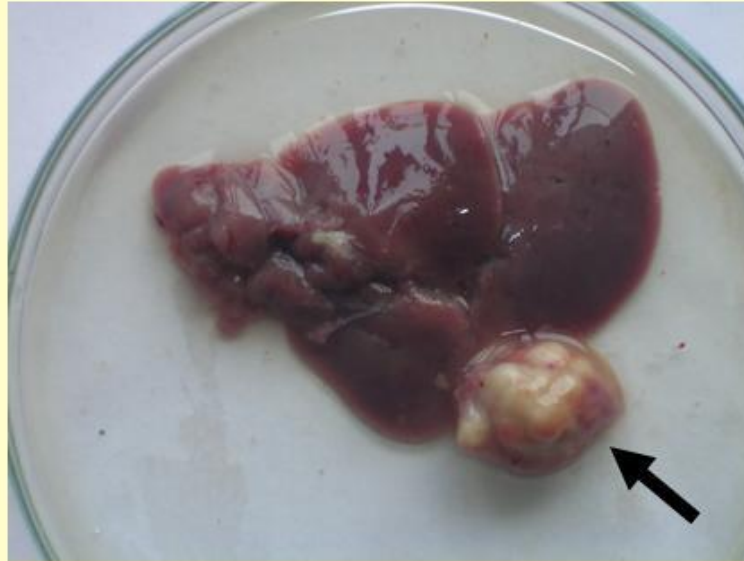
12-O-tetradecanoylphorbol-13-acetate (TPA)



# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



All DMBA + TPA treated rats developed malignant tumors



# Best Case Series Submission To NCI - NIH

Therapy	No. of Cases	Persuasive	Supportive	Not Studied
Psorinum	25	02	08	15
HUMA	20	03	05	12
Ayurveda*	13	08	02	03

\* Vaidya Balendu's Protocol

- Olaku O, Zia F, Santana JM, White JD. The National Cancer Institute best case series program: a summary of cases of cancer patients treated with unconventional therapies in India. *Integrative Cancer Ther.* 2013; 12(5): 385-92.
- Pal SK. Best Case Series Program: Submission of unconventional therapies from India. *Integrative Cancer Therapies* 2013;12(6): 453.

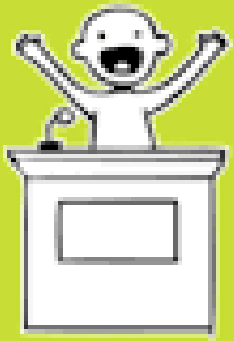


# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



We were invited to present our research findings' in the NCI's Office of the Cancer Complementary and Alternative Medicine, Bethesda, USA

# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



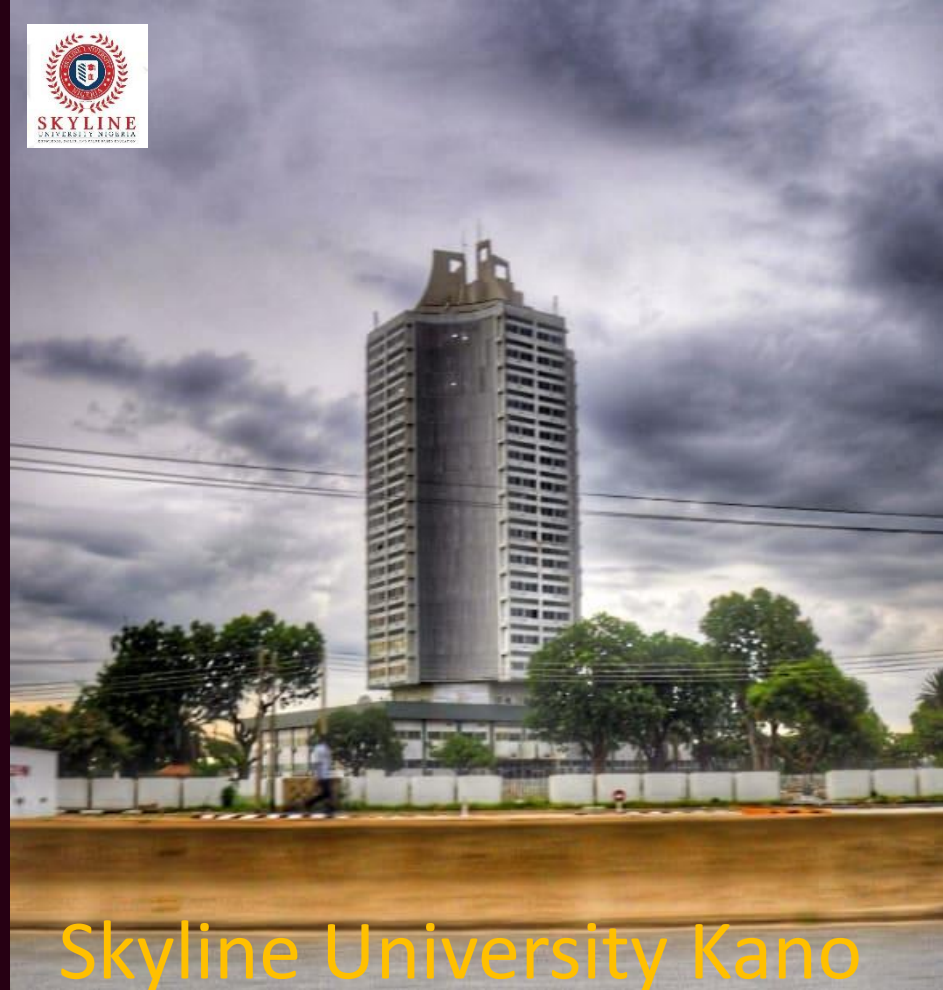
THE

## TAKE-HOME MESSAGE

- Certain herbal preparations such as HUMA and Psorinum may have a good chemoprotective potential
- Proper design clinical trial can strengthen this claim
- Many chemotherapeutic drugs have a herbal origin



# Chemopreventive Potential of Certain Herbal Preparations on Oral Cancer



*Acknowledgement: All my postgraduate students. ICMR Fellowship provided to me in SGPGIMS.*

Thank you for your Attention