Lung Cancer a unique model – for disease control
A partnership program

Dr G S Bhattacharyya
On behalf of Indian Lung Cancer Task Force
The World Economic Forum named NCDs the third largest economic risk facing the globe in 2010.
Factors that contribute to the rise of NCDs

- Rapid urbanization has led to changes in diet, physical activity, and environmental exposure
- Decreases in the price of animal based products, sweeteners, and oils over the past two decades have contributed to dietary changes
- Increasing availability of tobacco products as a result of expanding markets and lack of protective trade policies
- Lack of knowledge about chronic disease and poor understanding of contributing risk factors
- Shifting patterns of behavior due to globalization and increased media exposure/marketing
Economic impact of NCDs

- NCDs reduce the economic productivity of individuals and cause many families to fall into poverty
  - The long-term nature of treatment and care for chronic disease results in significant household expenditures over prolonged periods of time and inability of the household to accumulate savings
  - Indian households that include a family member with a chronic disease are 40 percent more likely to fall into poverty
- The expense of treatment often deters individuals from seeking treatment
  - In Nigeria, over 60 percent of cancer patients failed to complete their chemotherapy treatments because of the prohibitive cost of the drugs
- NCDs also have a severe impact on the economies of countries
  - Over the next decade, China is estimated to lose over $550 billion in national income due to cardiovascular disease
  - In Central Asia, chronic diseases may reduce workers’ labor effort by 7 to 30 percent
Modus Operandi: The 3Es Model

Education
(Awareness, Early Detection)

Epidemiology
(Data Generation)

Effective Treatment
(Developing Consensus on the Treatment)
## Education – Awareness through Multipronged approach

<table>
<thead>
<tr>
<th>General Public</th>
<th>Patients</th>
<th>Paramedics</th>
</tr>
</thead>
<tbody>
<tr>
<td>• May / November – month for awareness on lung cancer</td>
<td>• Public interest poster campaign on the awareness on the lung cancer – series monthly one through out India all clinics and hospitals</td>
<td>• Improve the management skills and the knowledge on lung cancer</td>
</tr>
<tr>
<td>• Utilizing the youth /School children – Tobacco awareness programs</td>
<td>• Video Presentation to highlight the ill effects of Smoking and Tobacco in any form.</td>
<td>• best supportive care – tips for the management – life styles</td>
</tr>
<tr>
<td>• Utilizing the social networking media platform with the celebrity for the awareness spread</td>
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<tr>
<td>• Linking up with the NGOs which have adopted villages for the screening assistance</td>
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</tbody>
</table>
World No Tobacco Day – Awareness Walks & Educational Events
For Patients Input Snapshots

- Toxins in cigarettes
- Common symptoms of lung Cancer
- Risk factors of lung cancer
- Exercise and diet to avoid lung cancer
- Quit Smoking
- 10 steps to quit Smoking
Lung cancer

4000 chemicals
400 toxins
43 cancer-causing substance

Protect your lungs
Protect your lungs

4,000 chemicals
400 toxins
43 cancer-causing

1 Lung cancer

Major cancer-causing substances

Arsenic
Used in rat poison

Propylene Glycol
Solvent in brake fluid

Ammonia
Found in floor cleaner
Protect your lungs

4,000 chemicals
400 toxins
43 cancer-causing
1 Lung cancer

Arsenic
Used in rat poison

Propylene Glycol
Solvent in brake fluid

Ammonia
Found in floor cleaner
We all share the same air

Think about your little one

**Tips** to quit smoking easily

1. Intake more water or other fluids
2. Take deep breaths once you want to smoke
3. Avoid sugar, coffee, alcohol
4. Go to a gym or have regular exercise
5. Have something in your mouth once you want to smoke
6. Avoid the company of smokers for some weeks
7. Read articles and watch videos about the harmful effects of smoking
8. You save money too!

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10 steps to help you STOP SMOKING

1. Take first step and contact your family physician. They will give you advice and regular support to help you quit smoking.
2. Nicotine replacement therapy—such as nicotine patches, nicotine gums, nicotine inhalers & nicotine nasal sprays will help you to get rid of withdrawal symptoms.
3. Set a date to stop and stick to it—try and pick a relatively stress-free day.
4. Share your experience with your friends who have stopped in the past—peer support can be very helpful.
5. Write down all the reasons you want to stop—keep them handy and look at them when you feel your will power slipping.
6. Get support from your family—they will benefit too from you quit smoking.
7. Learn to relax; your local stop smoking service can help you with simple breathing exercises and distraction techniques.
8. Take it one day at a time—enjoying saying “I don’t smoke.”
9. Reward yourself—treat yourself with some of the money you saved.
10. Remember—once stopped, stay stopped. One cigarette can lead to another—remind yourself of the health and other benefits of staying stopped.

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## Differential Diagnosis of Pulmonary Tuberculosis and Lung Cancer

<table>
<thead>
<tr>
<th>Signs and symptoms</th>
<th>Lung cancer</th>
<th>Tuberculosis</th>
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</thead>
<tbody>
<tr>
<td>Age 40 years or more</td>
<td>Repeated respiratory infections</td>
<td>Any age (usually adolescent, young adults)</td>
</tr>
<tr>
<td>Symptoms of COPD</td>
<td>Unexplained weight loss</td>
<td>Unexplained weight loss</td>
</tr>
<tr>
<td>Shortness of breath/wheezing/chest pain</td>
<td>Dyspnea, hoarseness</td>
<td>Diaphoresis</td>
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<tr>
<td>Persistent cough or worsening of an existing chronic cough</td>
<td>Dysphagia, stridor</td>
<td>Night sweats, weight loss, loss of appetite</td>
</tr>
<tr>
<td>Hemoptysis</td>
<td>Shoulder pain, paralysis</td>
<td>Increased respiratory rate</td>
</tr>
</tbody>
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<tr>
<th>Auscultatory Signs</th>
<th>Lung cancer</th>
<th>Tuberculosis</th>
</tr>
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<tbody>
<tr>
<td>Increased breath sounds</td>
<td>Crackles</td>
<td>Crackles</td>
</tr>
<tr>
<td>Rattle sound</td>
<td>Bronchial breathing</td>
<td>Bronze breath</td>
</tr>
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<tr>
<th>Past history</th>
<th>Lung cancer</th>
<th>Tuberculosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current or past history of tobacco abuse—40 pack years or more</td>
<td>Exposure to radon in non-smokers</td>
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</tr>
</tbody>
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<tr>
<th>Contact history</th>
<th>Lung cancer</th>
<th>Tuberculosis</th>
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<tr>
<th>Global Program on Evidence (GPE)</th>
<th>Lung cancer</th>
<th>Tuberculosis</th>
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<tbody>
<tr>
<td>Signs of Horner syndrome</td>
<td>Superior venacaval syndrome</td>
<td>Thin built</td>
</tr>
<tr>
<td>Lymphadenopathy</td>
<td>Hypertrrophic pulmonary osteoarthropathy (HPOA)</td>
<td>Lymphadenopathy-randy</td>
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<tr>
<th>Systemic examination</th>
<th>Lung cancer</th>
<th>Tuberculosis</th>
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<tbody>
<tr>
<td>Normal/localized bulging</td>
<td>Signs of collapse or pleural effusion</td>
<td>Primary:</td>
</tr>
<tr>
<td>Skeletal pain</td>
<td>Diaphragmatic palsy</td>
<td>Signs of cavitations</td>
</tr>
<tr>
<td>Pancoast syndrome</td>
<td>Primary:</td>
<td></td>
</tr>
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<table>
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<tr>
<th>Chest x-ray</th>
<th>Lung cancer</th>
<th>Tuberculosis</th>
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<tr>
<td>Irregular opacity</td>
<td>Collapse</td>
<td>Primary:</td>
</tr>
<tr>
<td>Central (sun-burst sign)/peripheral mass lesion</td>
<td>Pleural effusion, pancoast tumor</td>
<td>Signs of cavitations</td>
</tr>
<tr>
<td>Mediastinal lymphadenopathy</td>
<td>Diaphragmatic palsy</td>
<td>Upper lobe infiltration-Ghon focus, Effusion</td>
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<th>Sputum examination</th>
<th>Lung cancer</th>
<th>Tuberculosis</th>
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<tr>
<td>Malignant cells—Positive</td>
<td>Acid fast bacilli (AFB)—Positive</td>
<td>Acid fast bacilli (AFB)—Positive</td>
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*Supported through education grant from Panacea Biotec*
For General Practitioners

- Risk factors for lung cancer
- TB Vs Lung Cancer
- Early Detection of Lung Cancer (Booklet)
For consulting Physicians / Respiratory Physicians

- Differential Diagnosis of Lung Cancer
- Differential Diagnosis of Lung Cancer (Booklet)
Lung Cancer awareness
Inputs
## Education – Awareness through Multipronged approach

### General Practitioners (GP)
- Indian family physicians association conference – Dedicated session
- Template card hand over
- Booklet on early detection of lung cancer
- Poster on the early detection - importance
- referral system

### Consulting Physicians
- API conference - dedicated session
- Differential diagnosis of lung cancer
- CME supplement in the newspaper – lung cancer
- Booklet on the best supportive care management

### Respiratory Physicians
- Multidisciplinary management of lung cancer
- Scientific poster on lung cancer vs. tuberculosis
- Booklet on the Early diagnosis of Lung Cancer
Education – Early Detection

- Associating with the Tuberculosis center in the early detection
- To bring together chest physicians and oncologists (Confluence Meets )

**Primary objective** – Early Detection & Diagnosis

**Secondary objective** – Treatment

**Major problem** – *Misdiagnosis of the disease (TB vs. lung cancer)*
Scientific Collaterals for Medical Fraternity
Lung Cancer CMEs
• **Online Data compilation** on ISSLC (Indian Society for Study of Lung Cancer). The Website of ISSLC to have a separate registration on web domain and online CRF would be part of the ILTF.
Effective Treatment – Consensus development

- Capture pan India current management practices in lung cancer
- Review the ESMO, NCCN Guidelines for the Indian setting
- Reporting of the current practice gaps
- Development of recommendation for answering the lacunae through a well planned study