IASLC 18TH WORLD CONFERENCE ON LUNG CANCER
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MA 18 - Global Tobacco Control and Epidemiology II

10 Discussion of:

06 Ganti et al.: Clinical **Prognostic** Model for **Older** Patients with advanced NSCLC

07 Tantraworasin et al.: **Prognostic** Factors After Resection of NSCLC in **Asian** and **White**

08 Mendoza et al.: **Baseline Symptom** Burden in Treatment-Naive Patients with LC

09 Duma et al.: Enrollment of **Minorities**, the Elderly, and Women in LC **Clinical Trials**

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MAIN CAUSES OF HUMAN LUNG CANCER

Agent	Attributable Fraction	Reference(s)
Tobacco smoking	70-90%	ALS (2013); Parkin et al. (2011); WHO (2013)
Residential radon	3–14%	Brand et al. (2005); Menzler et al. (2008); WHO (2013)
Particulate air pollution	5-13%	Evans et al. (2013); Veneis et al. (2007); WHO (2013)
Diesel emissions	6%	Vermeulen et al. (2013)
Other occupational exposures	3-15%	ALS (2013); Parkin et al. (2011)
Environmental tobacco smoke	3%	ALS (2013)
Radiation	<1%	Parkin et al. (2011)

Krewski 2014

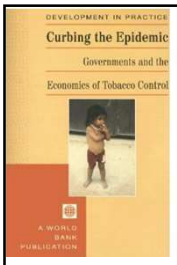
Some combined effects overadditive (smoking & radon, smoking & amphibole asbestos)

⇒ attributable risks sum up to > 100%
high decrease of risk by elimination of one factor

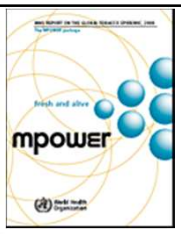
e.g. occupational (industry, males)
environmental (Turner et al. 2014)

U.S. cohort 1982-88: 14% of lung cancer mortality in smokers with high PM2.5 due to interaction

Future: Developing countries: active & passive smoking, outdoor & indoor poll. (females: cooking)



†Tax (80% of retail price)
publish health effects
prominent warning labels
comprehensive ad bans
smoke-free (work, public)
access to cessation therapies



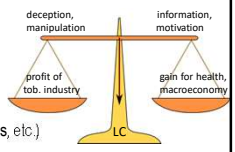
Monitor tobacco use and prevention policies
Protect people from tobacco smoke
Offer help to quit tob. use
Warn about the dangers
Enforce bans on tob. ads, promotion, sponsorship
Raise taxes on tobacco

Implementation of FCTC (art.5.3)
Responding to new challenges
Reshaping social norms
Support by member states + WHO
assessing progress, gaps, trends, ...
working together: partnerships, coop.

Lung cancer **decrease** expected from:

- **Tobacco control** according to WHO Framework Convention (FCTC)
- Reduction of $PM_{2.5}$ in ambient air (outdoor and indoor)
- Ban of occupational (asbestos) & reduction of environmental (Rn, soot) carcinogens

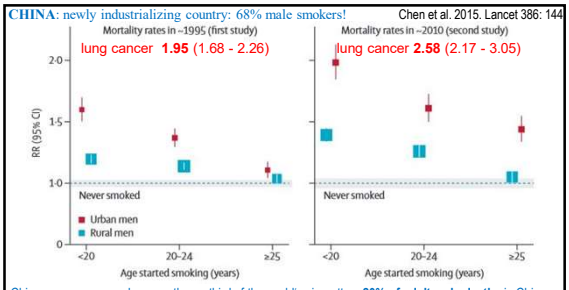
Lung cancer **increase** expected from:



- Tobacco marketing, affordability
- Gateways to nicotine addiction (shisha, e-cigarettes, etc.)
- Earlier start of regular smoking (additives, advertisement, deregulation)
- Undermining of cessation (alternatives: reduction, dual use)

Cigarette **vending machines**: electronic age control and advertising ban failed, no warning, easy availability (highest density of cigarette vending machines in Japan: 1 per 23 inhabitants)

CHINA: newly industrializing country: 68% male smokers! Chen et al. 2015. Lancet 386: 144



Chinese men now smoke more than a third of the world's cigarettes: **20% of adult male deaths** in China

One third of young men in China likely to die from smoking, unless they quit

Annual deaths from tobacco 2010: 840,000 men, 130,000 women ⇒ 2030: 2 million ⇒ 2050: 3 million
Total deaths 4,578,000 3.144,000

Urgent need of smoking **cessation** for men and smoking **prevention** for women

Women: 3% smokers, but SHS (home, workplace) and indoor pollution (heating, cooking)

Background of tobacco industry influence on government and media

- close connections to ministry of **finance**: important tax payer, "helper" to save budget, common interest to combat smuggling and to raise legal sales (disregarding macro-economy) price of cigarettes included in basket of representative goods measuring inflation
- close connections to ministry of **economy**, chamber of commerce, etc., liberal, national and conservative parties supporting free trade (WTO stronger than WHO)
- sponsoring of political **parties** (election campaigns), business for marketing & **advertising**
- approaching **smoking leaders** of political parties, unions, etc., offering help (smoking rooms,...)
- sponsoring of **media**, events, journalists, and pressure groups (effect on politicians)
- control of distribution system for **newspapers** via tobacco shops
- hiring handicapped as **tobacconists** (reversal of victim – offender relationship)
- make the hospitality industry to speaker of the tobacco industry

Main obstacles against tobacco control

Tobacco industry & trade: **corruption** of politicians and media
manipulation of public opinion with help of addicts
Reactionary policy, intimidation (lobbies) and neglect
Resignation of experts !

Lung cancer **screening** needs to be combined with smoking cessation

Misperceptions:

- Everyone who participates in screening will benefit
- Screening offers protection from lung cancer
- CT yields the same health benefits as smoking cessation
- A cancer-free test result indicates absence of personal harms of smoking
- Cancer is the only consequence of smoking
- Low personal susceptibility to the harms of tobacco

In 49% these beliefs were reinforced and potentially exacerbated by screening and lowered the motivation to participate in smoking cessation programs.

Zeliadt et al. 2015. JAMA Intern Med 175:1530-7

CT screening only is a poor motivation to quit:

controls	21% quit rate
screened	24%
pos. result	30%
neg. result	15%

Brain et al. 2017. Thorax 72 (10): 912-8
http://thorax.bmj.com/content/72/10/912.responses

THANK YOU FOR YOUR ATTENTION