Cancer-related productivity losses in emerging economies

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Cancer in emerging economies

Cancer diagnoses
- Developed countries: 46%
- Developing countries: 54%

Cancer deaths
- Developed countries: 36%
- Developing countries: 64%
BRICS countries

- World's population:
  - Developed countries: 60%
  - Developing countries: 40%

- World's land area:
  - Developed countries: 75%
  - Developing countries: 25%

- World's GDP:
  - Developed countries: 75%
  - Developing countries: 25%
Burden of cancer

Everyone’s work contributes to the economy, and not working represents a loss to society.
Aim

To estimate the value of lost productivity due to cancer-related premature mortality in Brazil, Russia, India, China and South Africa (BRICS)
Methods & Data

• Incidence-based, human capital approach

• GLOBOCAN data
  ➢ Cancer mortality rates

• OECD & ILO data
  ➢ Workforce participation & unemployment
  ➢ Wages & future wage growth
  ➢ Retirement ages
Results by cancer

11 important cancers

- Leukaemia
- Brain & NS
- Prostate
- Cervix
- Breast
- Lung
- Liver
- Colorectum
- Stomach
- Oesophagus

Illustration showing the distribution of these cancers in Brazil, China, India, Russia, and South Africa.
Tobacco related cancers

Brazil

India

Russia

Sth Africa

China

Non-tobacco related cancers

- Lung
- Lip, oral cavity
- Nasopharynx
- Other pharynx
- Oesophagus
- Larynx
Sensitivity Analyses

- Divide Chinese data by urban and rural
- Increase retirement ages in China & Russia
- Changing growth rates & discounting
- Increase workforce participation in India

Base case
- Males, 71%
- Females, 29%

Increased female participation
- Males, 64%
- Females, 36%
Implications

• Prevention activities are important, and need to extend beyond tobacco control

• Earlier detection and improved treatment availability to reduce mortality may be economically efficient

• Potential increase in cancer burden through ageing, urbanisation and westernisation
Conclusions

• Limitations: lack of data, assumptions around employment (informal economies and household production)

• Valuing cancer related lost productivity can provide policy makers with an additional perspective when identifying priorities for cancer prevention and control
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