



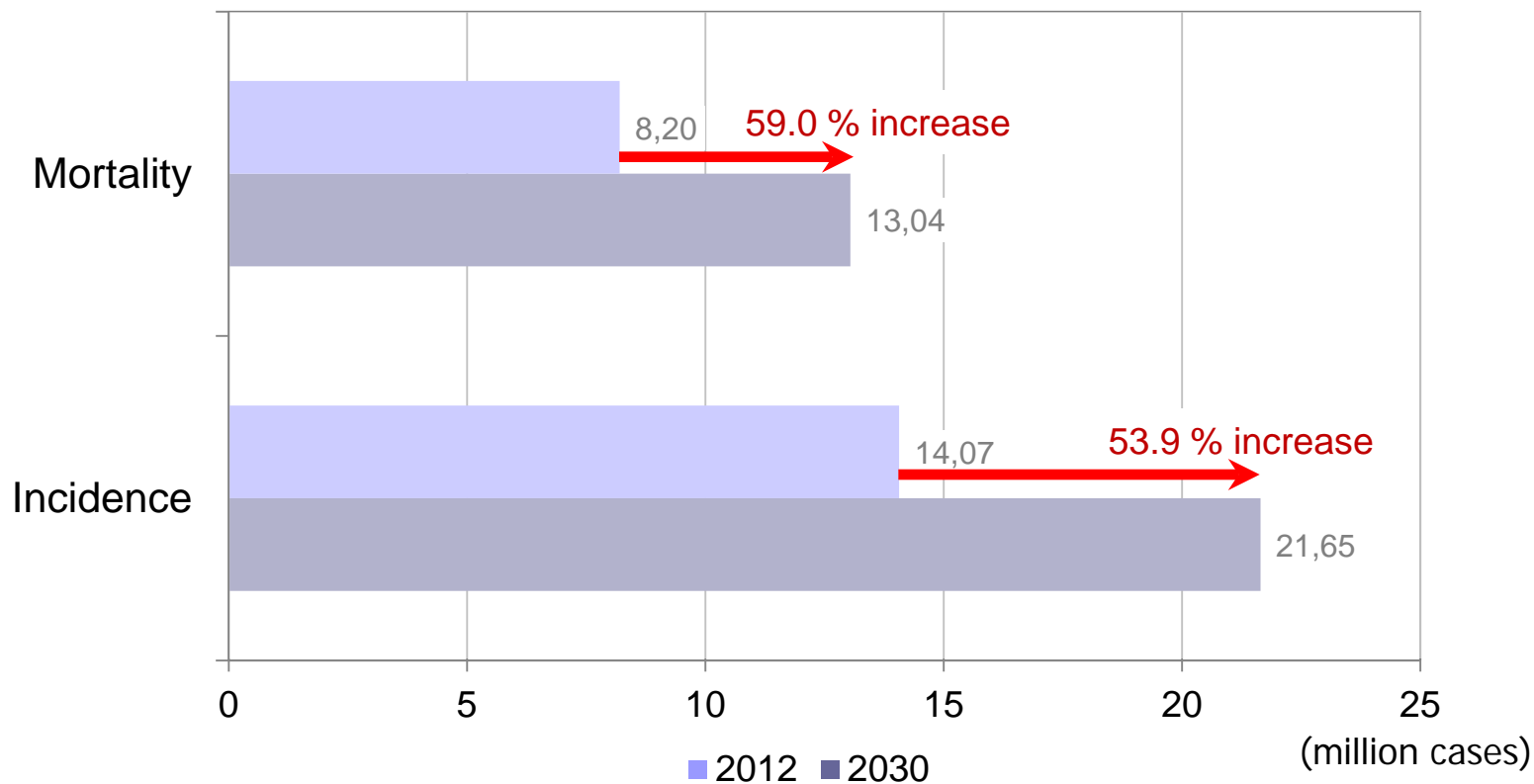
Towards the elimination of occupational cancers in the Russian Federation: cancer research for cancer prevention

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[International Agency for Research on Cancer](https://www.iarc.fr/)

Projected burden of cancer: World (2012-2030)

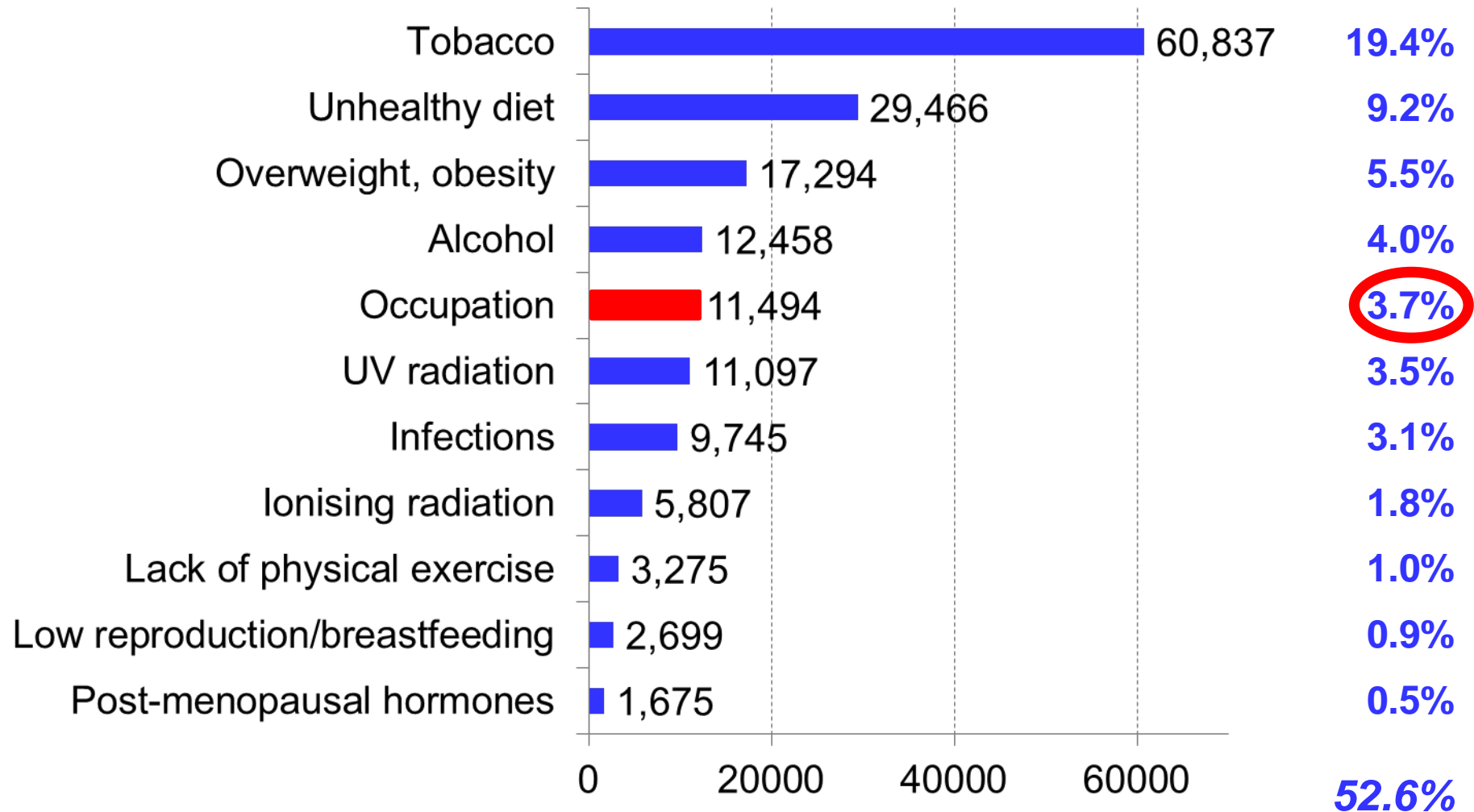


Assuming no change in underlying incidence

Why cancer prevention?

- Most cancers only curable in early stages
- Several cancers come with severe suffering
- Cancer treatment has severe side effects and often late effects
- Cancer treatment has high economic burden
- Reduction of the cancer burden by primary prevention

Attributable cancer risks (UK)



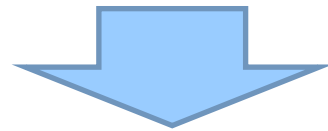
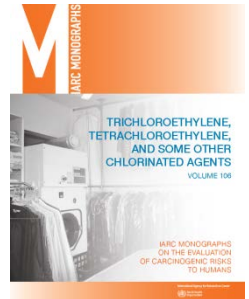
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Why cancer prevention in occupational and environmental health?

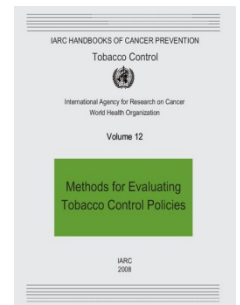
- Several carcinogens at the workplace or in the environment have been identified and most of them are modifiable risk factors
- ILO* estimate:
 - >650,000 cancer deaths per year worldwide due to occupation (50-75% of them due to lung cancer)

Occupational cancers (1)

- Human (epidemiology) and toxicology research and exposure characterisation complementing each other
- Global evidence synthesis for classification of carcinogenicity, e.g. by IARC Monograph Program
- Definition of global prevention framework

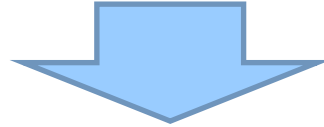


- Absolute cancer burden must account for local situation
 - baseline cancer risk and competing risks
 - work situation (exposure levels, protection measures)
- Preventive action to be tailored to local situation

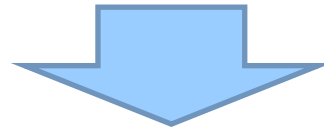


Occupational cancers (2)

- Majority of research from North America/Western Europe



- Situation in Russia
 - Very large work force in various large scale industries
 - Good documentation of working situation and exposures
 - Distinct exposures by type, duration and levels
- Utilise for:
«Russian Research Initiative into Occupational Cancer»



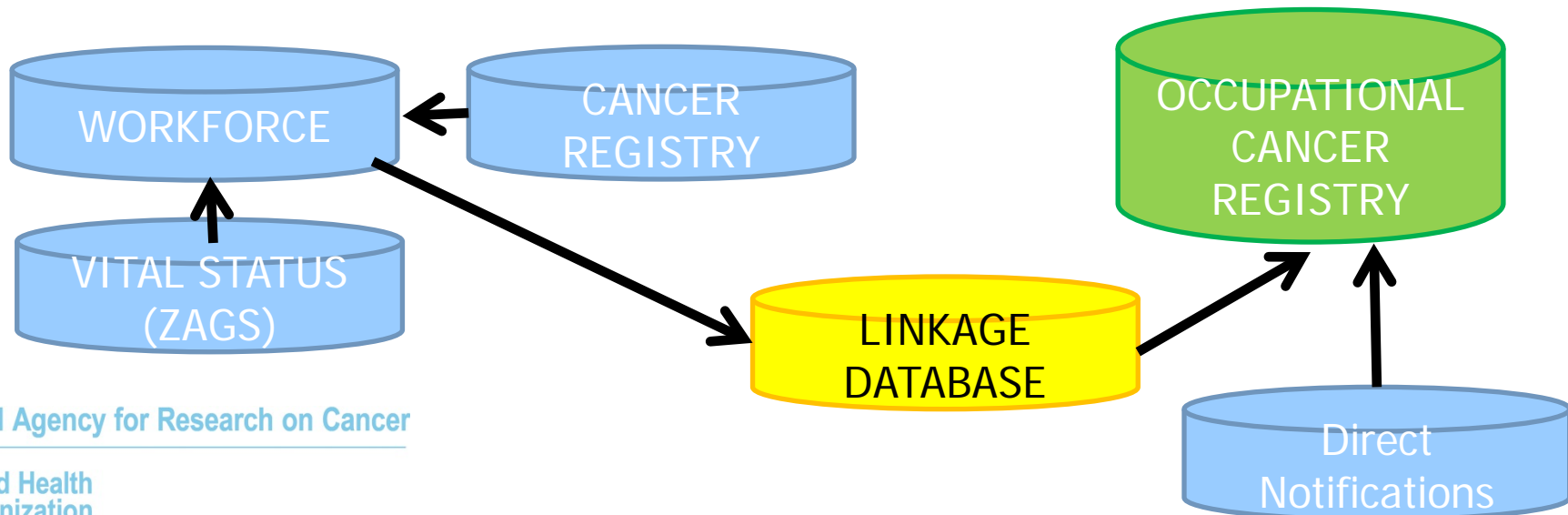
- Essential for prevention program to eliminate occupational cancer in Russia
- Informative on global scale for occupational cancers

Russian Research Initiative on Occupational Cancer - Initial steps -

- I) Registry of occupational cancers
- II) Multi-site case-control study on occupational risk factors
- III) Prospective follow up of chrysotile workers

Registry of occupational cancers

- Population based cancer registries
- Create legal framework for record linkage between registries
- Linking workforces with cancer registry and vital status for registry of potential occupational cancer cases
- Notification of cancer cases in workforce accepted as being cancer case due to their occupation



Multi-site case-control study (1)

Launched in Rostov oblast because

- Availability of population based cancer registry
- Various industries with known or potential carcinogenic exposures
- Model region for developing core protocol for Russian Federation

Cases:

Multi-site three year incident diagnosis of cancers of the lung, head and neck, bladder, and stomach

Controls:

Frequency-matched recruited through local poli-clinics

Multi-site case-control study (2)

Exposure assessment:

- Questionnaire / Interview (Lifestyle, occupation)
- Workbook
- Residential and occupational history

Potential industries:

- Coal mining, agricultural, heavy metal, textile

Partnership:

RIOH, IARC, Occupational Health Center Rostov, Cancer Registry at Oncology Dispensary, Poli-Clinics

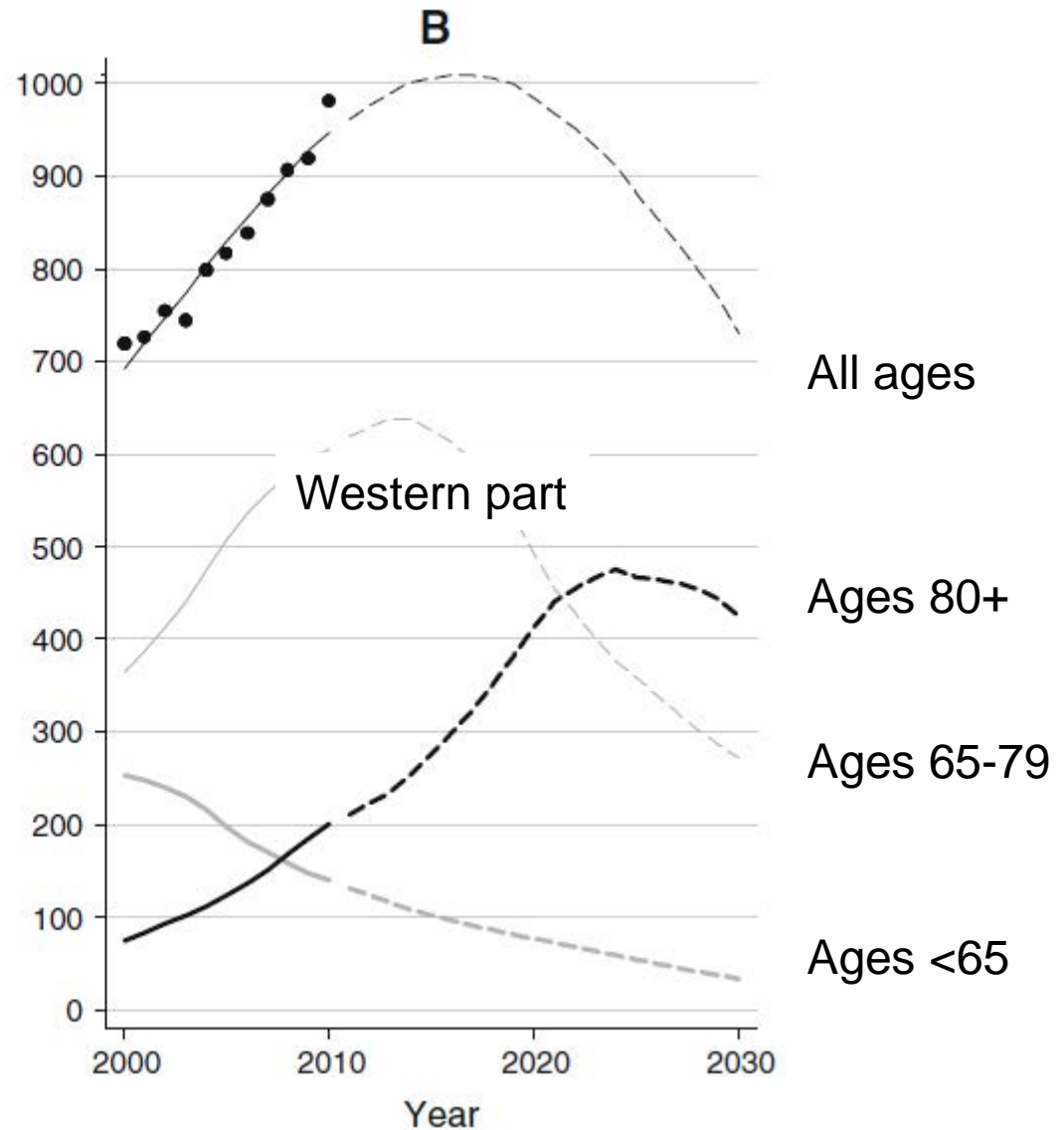
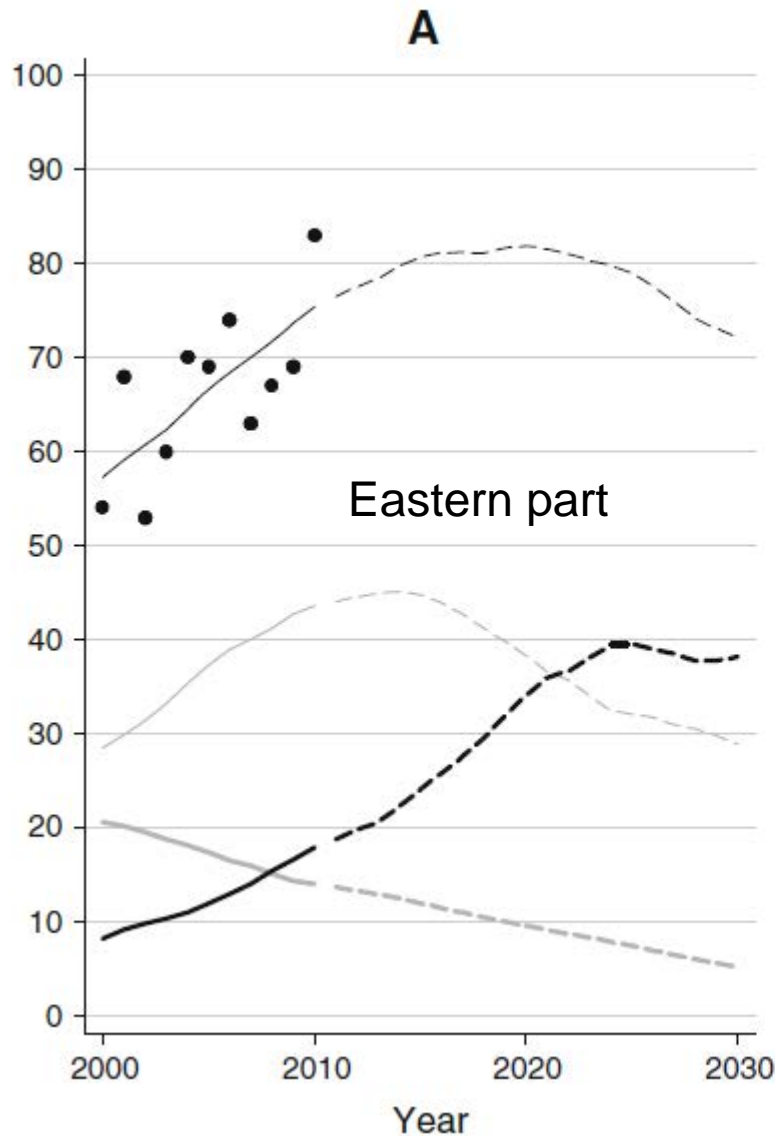
Prospective follow up of chrysotile workers

- Enrolment of world-wide largest cohort of workers in chrysotile mines and factories in Asbest (N=37000)
- Largest female workforce of chrysotile workers
- Retrospective study of workforce 1975-2010 followed up for cancer mortality

- Prospective follow up
 - 1) Cancer incidence
 - 2) Individual co-factors
 - 3) Biological samples

= > Presentations by E. Kovalevskiy and D. Hashim

Cancer prevention? NOW



Mesothelioma mortality in Germany

Conclusions (1):

Towards the elimination of occupational cancers in the Russian Federation

- Cancer Prevention Potential:
Between 1 in 10 to 1 in 20 cancers are currently due to occupational (modifiable) exposures
- Several workplace agents established as carcinogenic
- As cancer develops slowly prevention needs to be implemented as early as possible
- Russia has longstanding tradition in successful protection of workers health and respective medical infrastructure and networks operate very well

Conclusions (2):

Towards the elimination of occupational cancers in the Russian Federation

- Epidemiology to optimise and monitor and explore the unknown:
Russian Research Initiative into Occupational Cancer to:
 - 1) inform preventive measures adapted to local situation
 - 2) enhance global knowledge on occupational cancer
- Utilise wealth of existing data and start targeted epidemiological studies on occupational cancers with:
 - Registry of occupational cancers
 - Multi-cancer case-control study
 - Continuation of prospective follow up of chrysotile workers

Acknowledgements

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