

Yuanyuan Z.

MORBIDITY ACROSS BORDERS: A COMPARATIVE STUDY OF LUNG CANCER IN CHINA VS. BELARUS

Tutor: associate professor Shepetko M.N.

*Department of Oncology with Advanced Training and Retraining Course
Belarusian State Medical University, Minsk*

Introduction. Lung cancer remains a significant global health challenge, with varying incidence and mortality rates influenced by environmental, behavioral, and healthcare factors. This study compares the epidemiological trends and risk factors of lung cancer in China and Belarus, two countries with distinct patterns of disease burden.

Aim: the study aims to analyze the differences in lung cancer incidence, mortality, histological subtypes, and risk factors between China and Belarus, and to explore the implications for targeted interventions and treatment strategies.

Materials and methods. Data were extracted from global cancer reports, national health statistics, and peer-reviewed studies (2011–2024). Key metrics included age-standardized incidence and mortality rates (ASIR, ASMR), histological subtype distribution, and risk factor prevalence (e.g., smoking, air pollution, radiation exposure). Comparative analysis was conducted to highlight disparities and trends.

Results and their discussion. China reported an ASIR of 40.8 per 100,000 (1.06 million new cases in 2022), driven by smoking (54% male prevalence) and severe air pollution (PM_{2.5}), with adenocarcinoma dominating (55–60% of cases). Belarus exhibited a lower ASIR (26.0 per 100,000) but extreme gender disparity (male ASIR: 56.5 vs. female: 5.5), linked to heavy smoking (50.8% male prevalence), with squamous cell carcinoma prevailing (40–50%). Rural populations in both countries faced higher mortality rates.

Conclusions. Lung cancer trends in China and Belarus reflect distinct risk profiles, necessitating tailored interventions. China must prioritize pollution control and smoking cessation, while Belarus requires enhanced screening and occupational safety measures. Collaborative strategies, leveraging each country's strengths in treatment innovation, could mitigate the growing global lung cancer burden.