

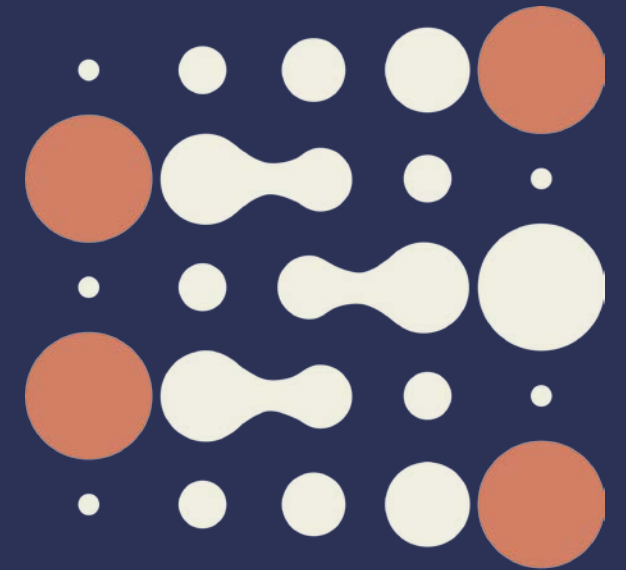
# Global landscape and transitions of cancer according to human development

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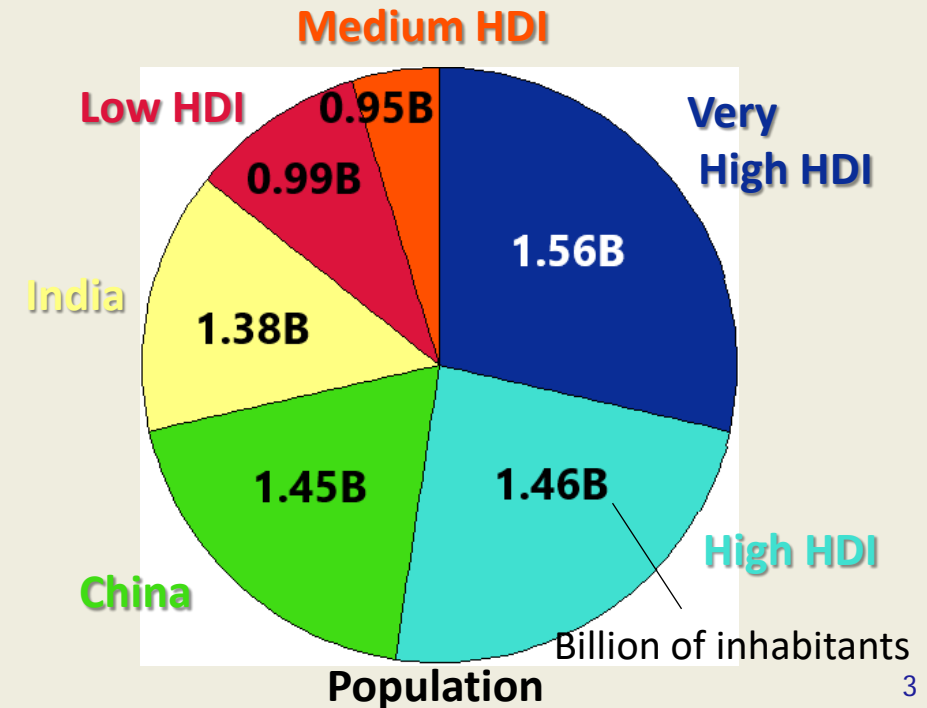
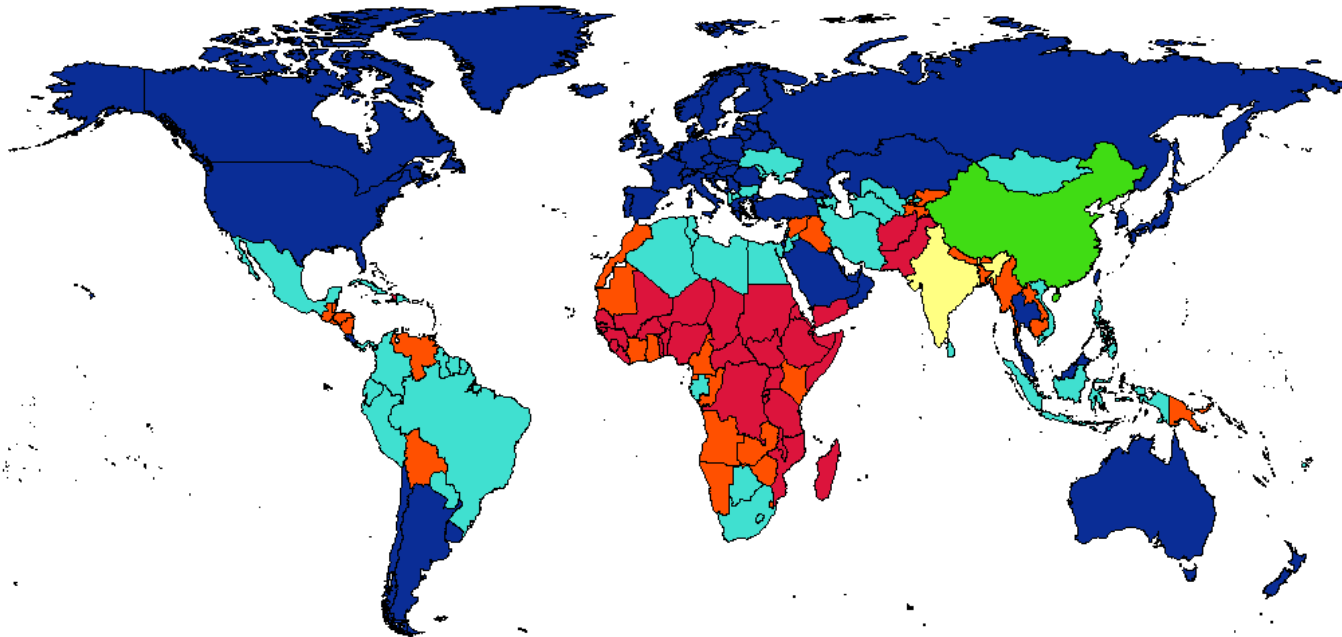


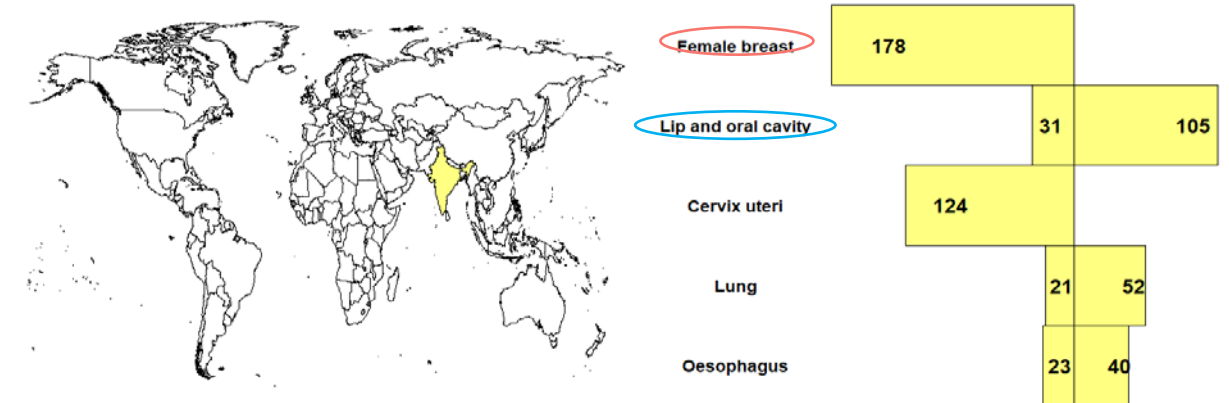
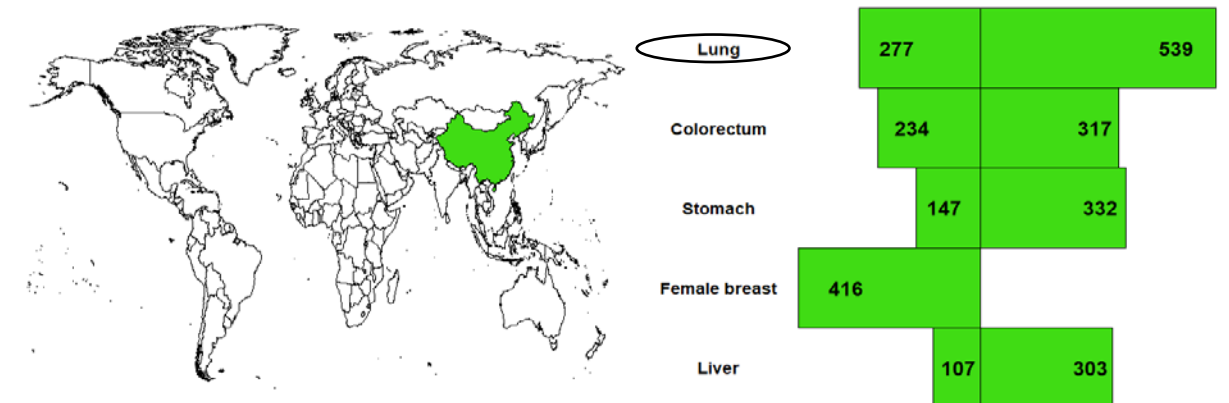
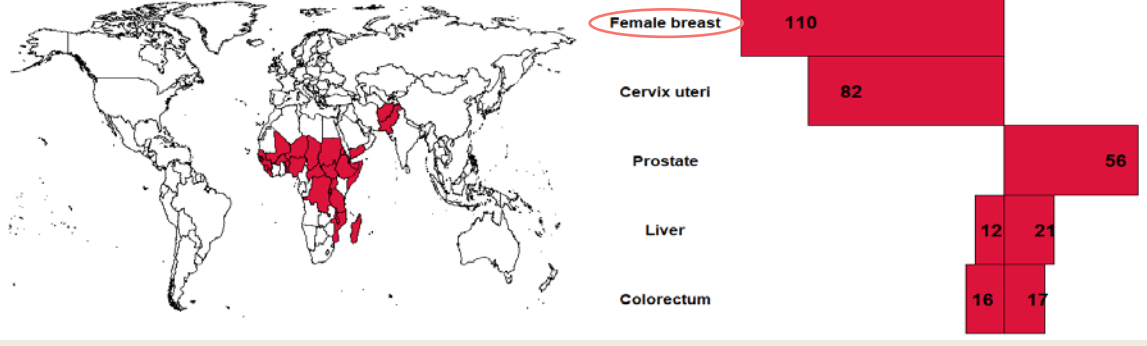
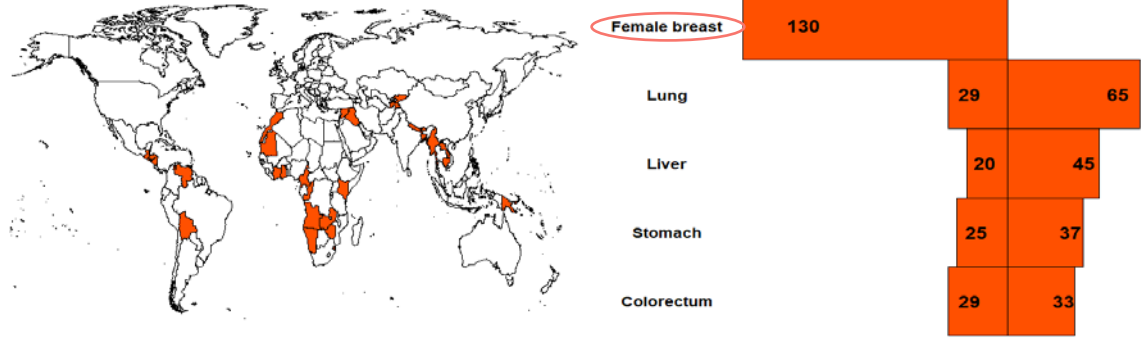
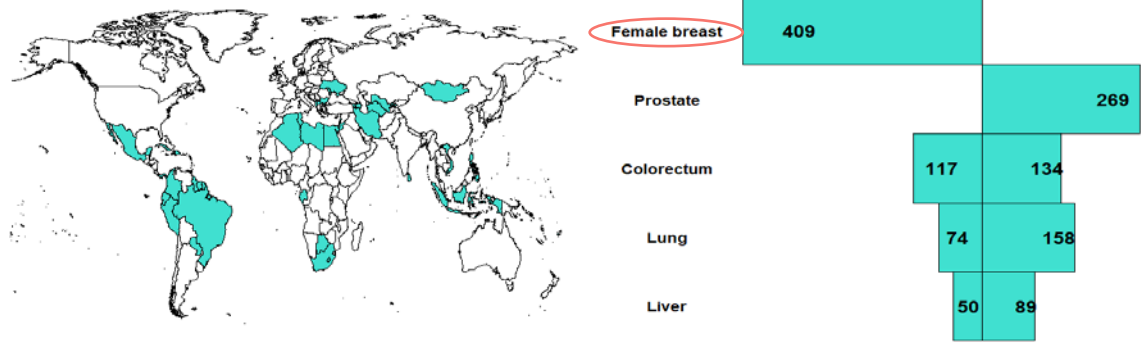
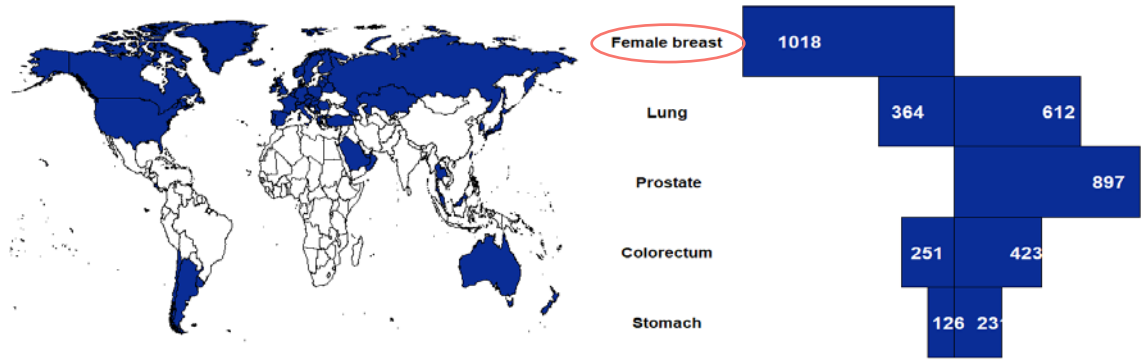
# Background

- The burden of cancer is not equally distributed across countries
  - varies greatly according to **human development**
  - relationship between development and cancer is **complex and often non-linear**, reflecting underlying risk and health systems factors
- Given dynamic nature of cancer's relation with human development, we update & expand previous IARC studies (Bray et al 2012, Lortet-Tieulent et al 2020)
  - offers a perspective on present challenges and the need for targeted, context-specific approaches in combating cancer globally

# Data sources and method

- Use of the 2020 **GLOBOCAN** database
- Examine **33 types of cancer** across **185 countries** and correlating this with the **Human Development Index (HDI)**
- HDI = Statistical measure between 0 and 1 used to assess the social and economic development levels of countries
- 4 categories of HDI : **Low** < **Medium** < **High** < **Very High**
- Cut-off points : **0,55** **0,7** **0,8** calculated using the quartiles of the 2014 population
- **Removal** of China and India from Medium and High categories
- Breakdown of the world's countries into **6 categories**:

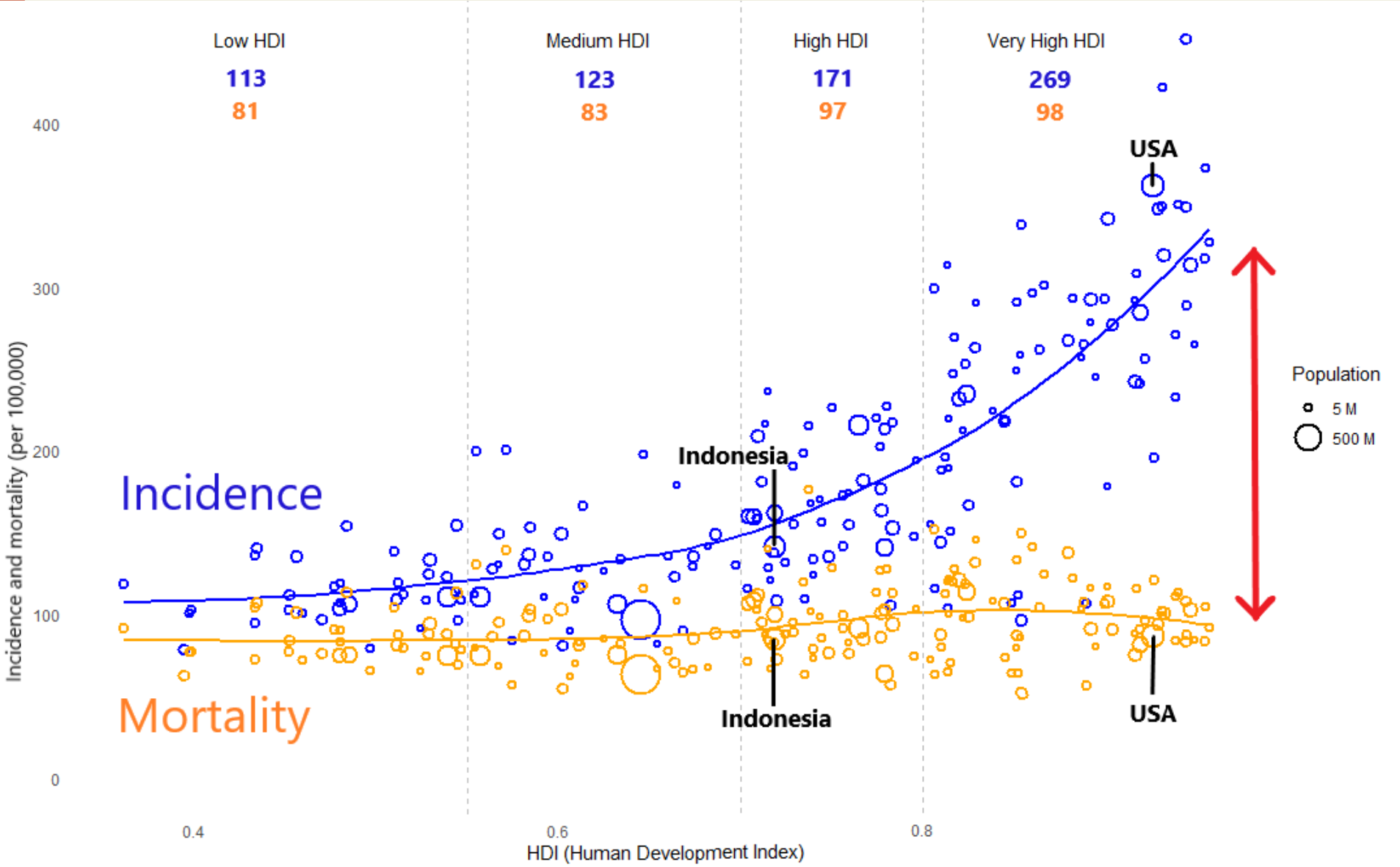




## Five most frequent cancers by HDI group

- Breast cancer is the most common cancer in all regions except China, where it ranks 4<sup>th</sup>
- Lung cancer is the most common cancer in China
- Lip and oral cavity cancer is the second most common cancer in India

# Epidemiological transition of cancer, according to the socioeconomic development



- **Total cancer incidence rates** increase with increasing levels of HDI
- No clear gradient observed for corresponding **mortality rates**
- The difference between incidence and mortality increases with HDI, particularly between the high and very high HDI groups

# Discussion and Conclusions

- Cancer incidence is increasing substantially with HDI
- The association between HDI and mortality is less clear
  - Increasing exposure to risk factors and overdiagnosis with HDI but...
  - Early detection and screening, better access to improved treatments
- Some cancers are widespread throughout the world (breast, colorectum), while others are region-specific (lip and oral cavity, cervix uteri).

## Key take home message:

- These insights are crucial for developing targeted public health strategies and interventions, especially in **low to medium HDI countries** where healthcare resources are often limited, and the incidence could increase significantly with the socio-economic development, which could lead to **problematic increases in mortality**

**Thank you for listening!**

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