

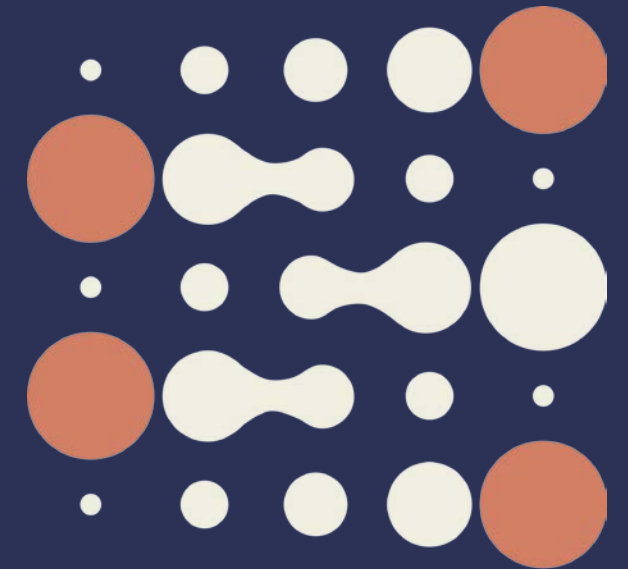
# Impact of smokeless tobacco and areca nut consumption on the global burden of oral cancer

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# Background

Consuming smokeless tobacco and/or areca nut increases the risk of oral cancer.

IARC Handbook of Cancer Prevention Volume 19 evaluated primary prevention strategies for oral cancer and called for better surveillance of oral cancer risk factors.

Our cross-branch collaboration (CSU & ESC) aims to:

- Estimate the public health impact of smokeless tobacco and areca nut use on oral cancer incidence to inform oral cancer prevention strategies.

Primary prevention – Impact of quitting exposure to risk factor on risk of oral cancer			
 <b>Tobacco smoking</b>	 <b>Smokeless tobacco</b>	 <b>Areca nut (including betel quid) with or without tobacco</b>	 <b>Alcohol consumption</b>
<b>Sufficient</b>	<b>Inadequate</b>	<b>Sufficient</b>	<b>Sufficient</b>
The elevated risk due to tobacco smoking decreases with increasing time since quitting smoking. Studies suggest that the risk of leukoplakia also decreases after quitting smoking.	The Working Group noted the paucity of studies, particularly the absence of studies from countries with highest use of smokeless tobacco, and of studies of smokeless tobacco products other than moist snuff.	In addition to the risk of oral cancer, the elevated risk of oral potentially malignant disorders (OPMDs) due to use of areca nut products (including betel quid) with or without tobacco also decreases after quitting.	The elevated risk due to alcohol consumption decreases with increasing time since quitting alcohol consumption. The reduction in risk becomes more apparent after 10 years of quitting and is greater in former heavy drinkers (≥ 3 drinks per day).

IARC Handbooks of Cancer Prevention vol. 19

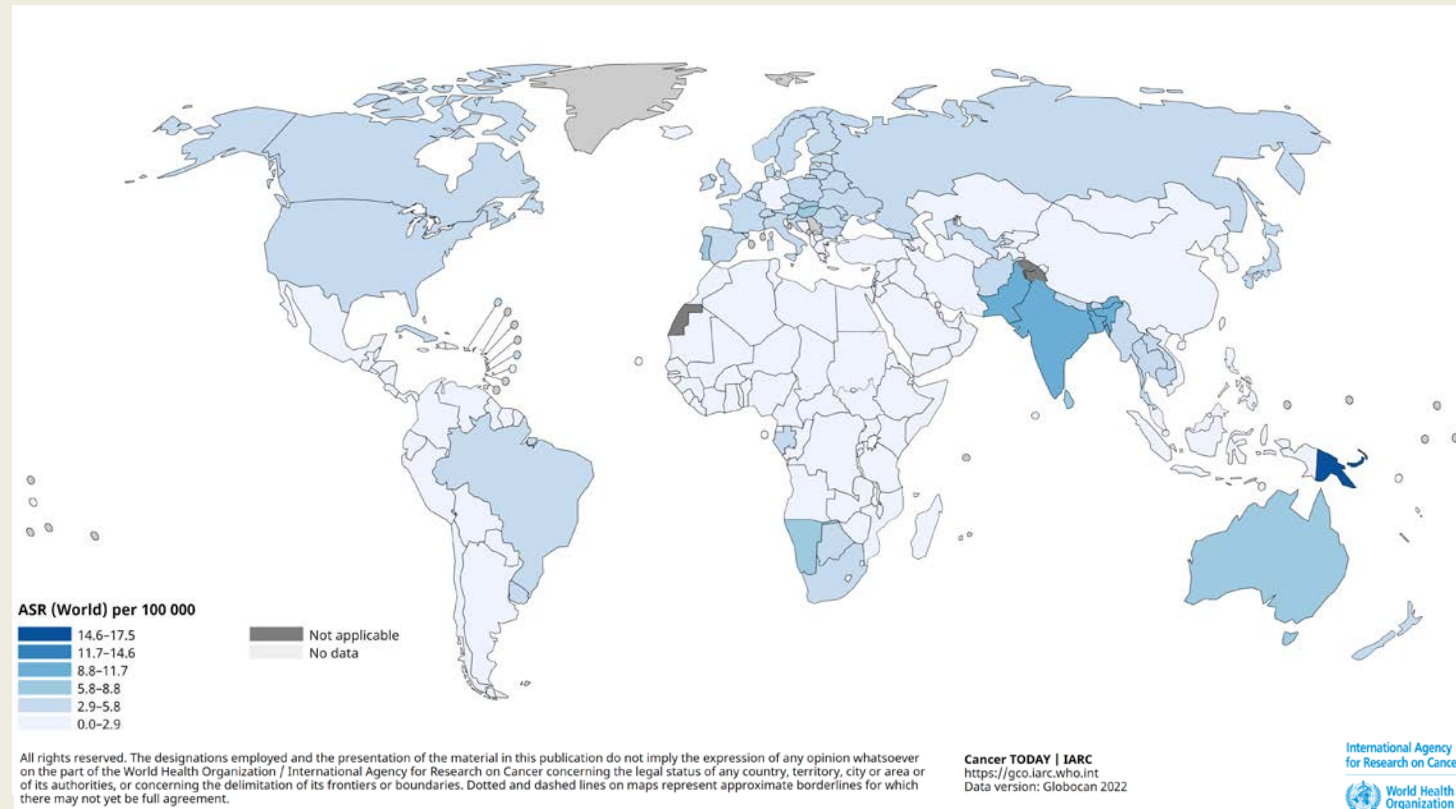


# Design

Use population attributable fractions (Levin-based) approach to calculate proportion and number of oral cancer cases attributable to smokeless tobacco and areca nut consumption.

Collected 3 types of data:

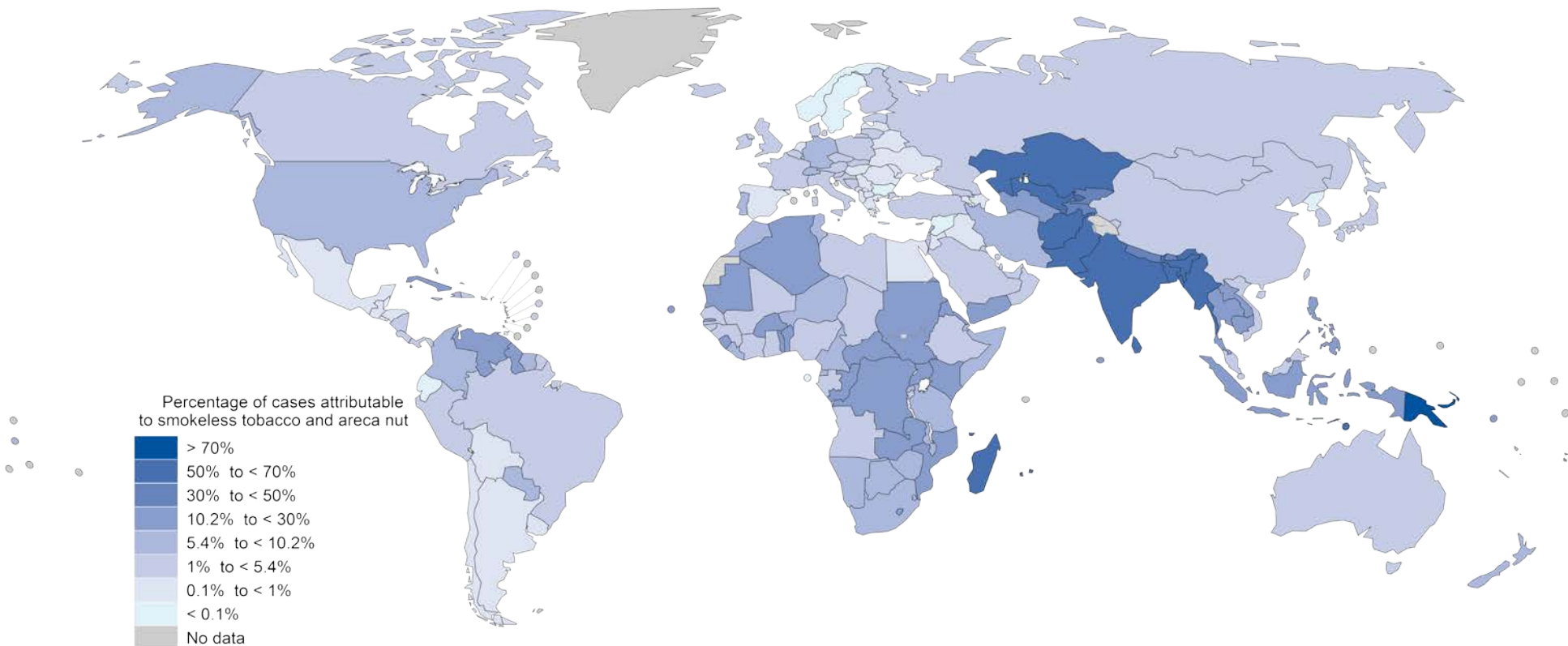
1. Population prevalence of smokeless tobacco and areca nut use (*National surveys*)
2. Relative risk of oral cancer from smokeless tobacco and areca nut use (*Meta-analyses, pooled analyses, cohorts, case-control studies*)
3. Number of cases of oral cancer in 2022, per sex, age group, country (*Global Cancer Observatory – Cancer Today*)



# Preliminary results

- Globally, nearly a third (30%) of oral cancer cases in 2022 were attributable to smokeless tobacco and areca nut consumption
- 22% of oral cancer cases among women, 34% among men
- 130,000 cases of oral cavity cancer: 101,000 cases among men and 29,000 cases among women

Percentage of oral cavity cancer cases in 2022 attributable to smokeless tobacco and areca nut



- Up to 50-85% of oral cancer cases in countries in South Asia & Western Pacific
- More than 90% of attributable cases were in low- and middle-income countries



# Discussion and Conclusions

More than 130,000 cases of oral cancer are caused by smokeless tobacco and areca nut globally every year.

More than 90% of the burden of oral cancer attributable to smokeless tobacco and areca nut is in low- and middle-income countries.

Need to tackle inequalities in tobacco control: smokeless tobacco and areca nut prevalence has not significantly decreased in major consuming countries due to global focus on control of tobacco smoking.

Oral cancer risk differs by type of smokeless tobacco product: secondary analysis by product type to provide evidence for product-specific policies and public awareness.

## **Related publications**

IARC Handbooks of Cancer Prevention Volume 19: Oral Cancer Prevention

<https://publications.iarc.who.int/617>

## **Acknowledgements**

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WHO colleagues, Working group

## Key take-home messages



Globally, nearly a third (30%) of oral cancer cases per year are caused by smokeless tobacco and areca nut consumption (130,000 cases.)

The impact of smokeless tobacco and areca nut increases to between 50% and 85% of oral cancer cases in South Asia & Western Pacific where consumption is most prevalent and where we find the highest burden of oral cancer.

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**Thank you for listening!**

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