

Delays in Referral and Treatment of Oral Cancer Screening for the Vulnerable Population



Wenly Chiu-Wen Su¹, Li-Ju Lin², Chao-Chun Wu²

On behalf of Taiwan Oral Cancer Screening Program

¹ Department of Internal Medicine, National Taiwan University Hospital, Taiwan

² Health Promotion Administration, Ministry of Health and Welfare, Taipei, Taiwan

2023-06-23

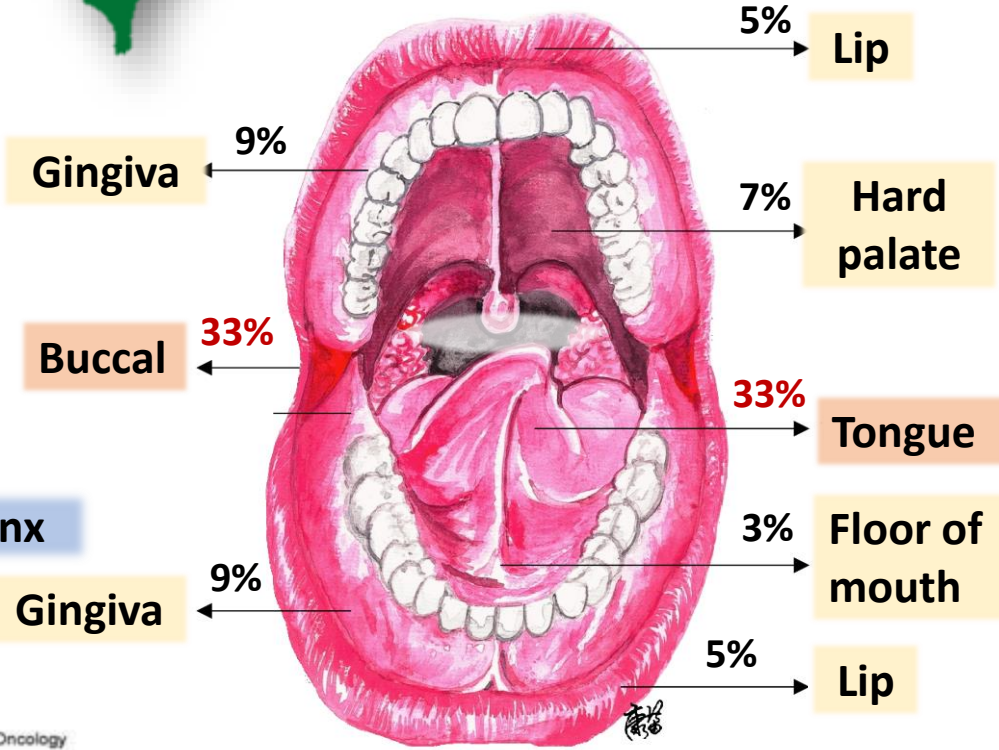
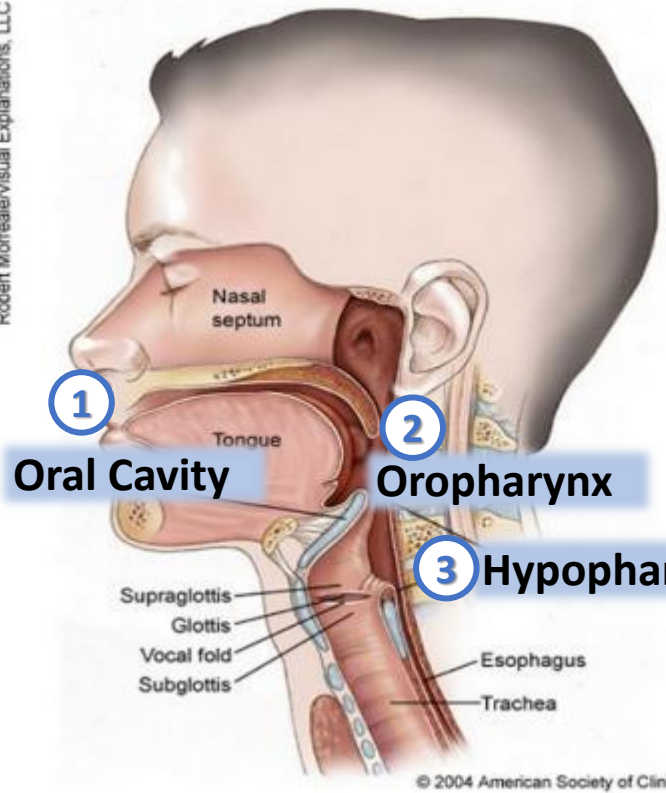


台灣口腔癌篩檢計畫
Taiwan Oral Cancer Screening Program

Categories of Oral Cancer and Risk of Advanced Case by Anatomic Site



Oral Cavity Cancer by Anatomic Site



Risk of advanced oral cancer by anatomic site

Anatomic site	Advanced Cancer	
	aHR	(95%CI)
Lip	reference	
★ Tongue	2.20	(1.92, 2.51)
★ Buccal	2.60	(2.28, 2.97)
Hard palate	2.96	(2.52, 3.47)
Floor of mouth	2.69	(2.21, 3.28)
Gingiva	6.04	(5.17, 7.05)
Oropharynx	10.84	(9.21, 12.76)

Multi-step Disease Progression of OPMD and Oral Cancer

Secondary Prevention

Oral Visual Screening



Lowest risk



Intermediate risk

Highest risk

Normal mucosa

Oral Potentially Malignant Disorder, OPMD

Oral Cancer



Normal



Leukoplakia



Oral submucous fibrosis



Erythro-leukoplakia



Erythroplakia



Exophytic verrucous hyperplasia



Oral Cancer

Annual malignant risk per 1000

5.4

8.6

10.7

11.9

33



IARC Perspective on Oral Cancer Prevention



The NEW ENGLAND JOURNAL of MEDICINE

IARC Perspective on Oral Cancer Prevention



Primary Prevention



Secondary Prevention



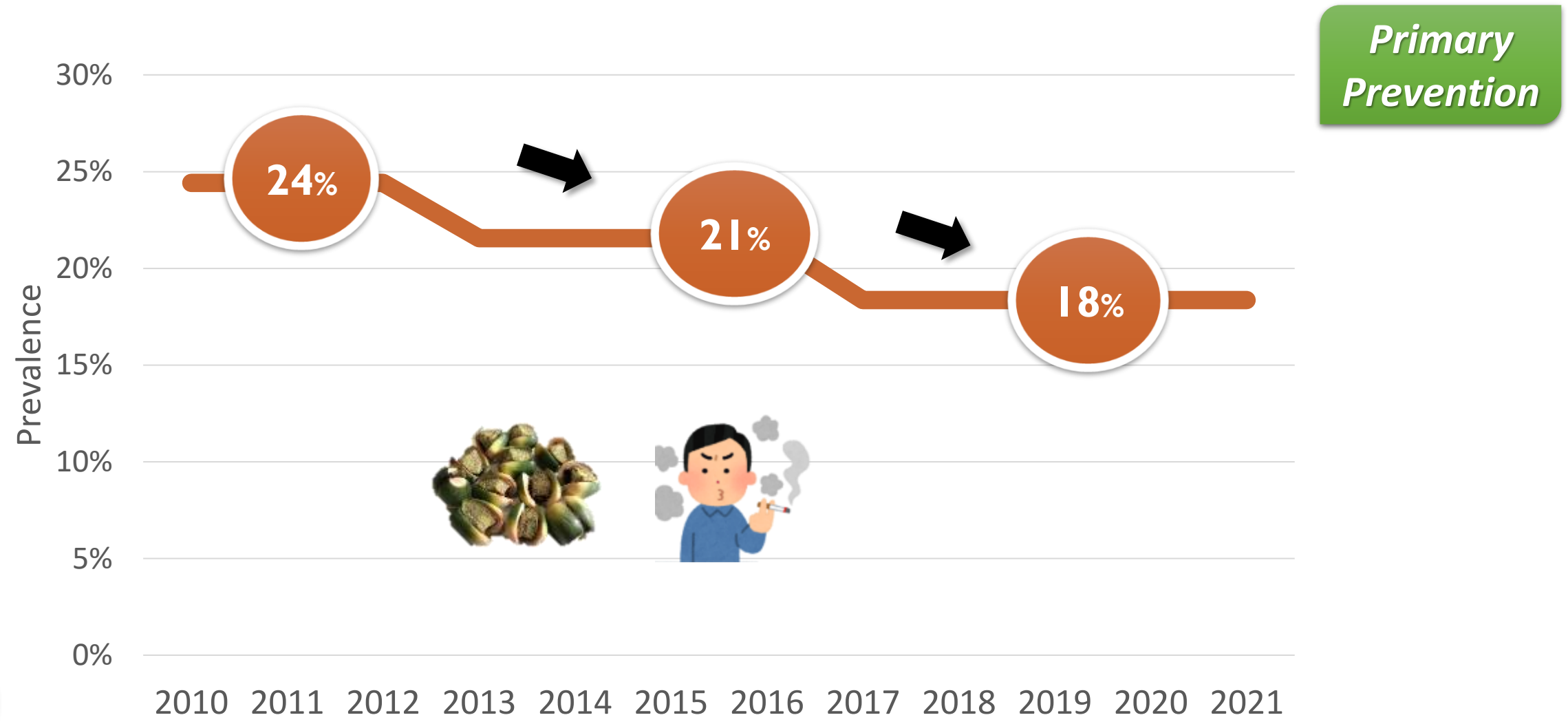
Prevention of Oral Cancer

Evidence of Interventions and Strategies for the Prevention of Oral Cancer

Primary Prevention	
Cessation of exposure to risk factor	
Tobacco smoking	★ Sufficient
Use of smokeless tobacco	Inadequate
Use of areca nut (including betel) with or without tobacco	★ Sufficient
Alcohol consumption	★ Sufficient
Cessation intervention for smokeless tobacco	
Behavioral intervention	Sufficient in adults; limited in youths
Pharmacologic intervention	Limited
Combined behavioral and pharmacologic interventions	Limited
Secondary Prevention	
Clinical oral examination in high-risk populations	★ Group B



Declining Prevalence of Betel Quid Chewing in Taiwan



Primary Prevention





Taiwan Population-based Biennial Oral Neoplasia Screening Program since 2004

Detection rate of OPMD

10%

OPMD

Clinical Surveillance



Target population

High-risk individuals aged 30 years and older with cigarette smoking and/or betel quid chewing



Screening with oral visual inspection by physician or dentist

Negative

Next screen after two years

Positive

9%

Referral to hospital

Confirmatory diagnosis

80%

Secondary Prevention

Oral cancer

Treatment

Detection rate of OC

2%

口腔癌篩檢

定期檢查多注意

口腔健康又美麗



遠離口腔癌 你我逗陣來



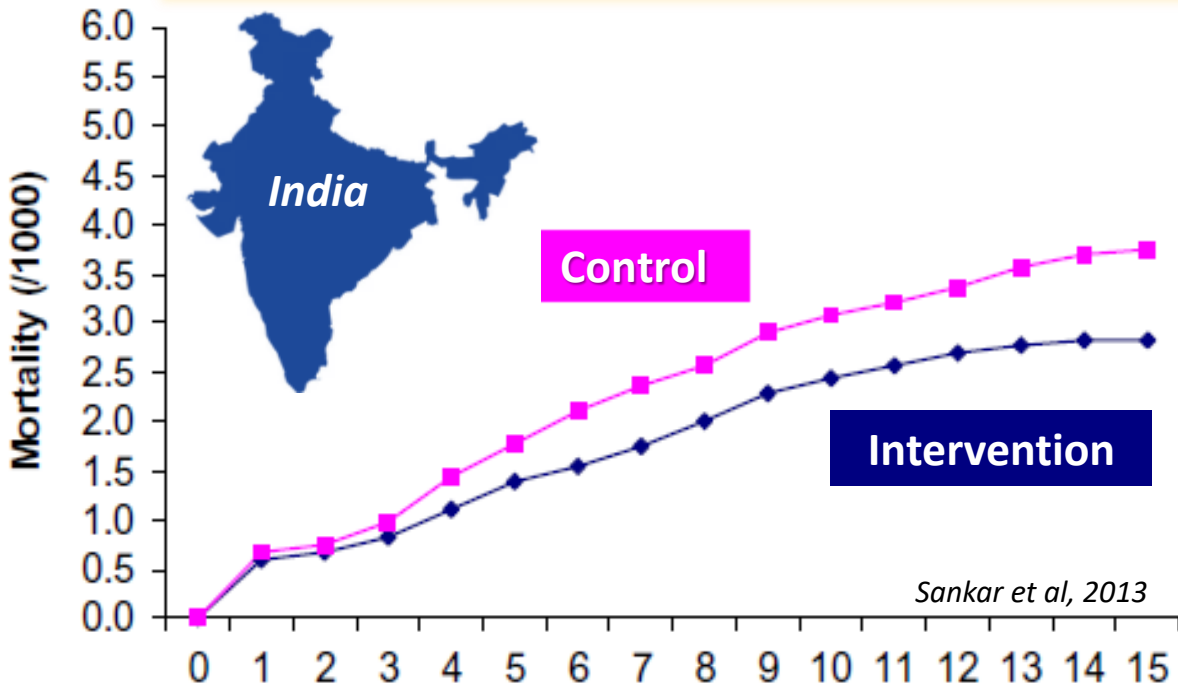
- ✓ Total number of participants: **6.5 million**
- ✓ Total number of screens: **13 million**



Effectiveness of Oral Cancer Screening



A RCT with long-term effect in India



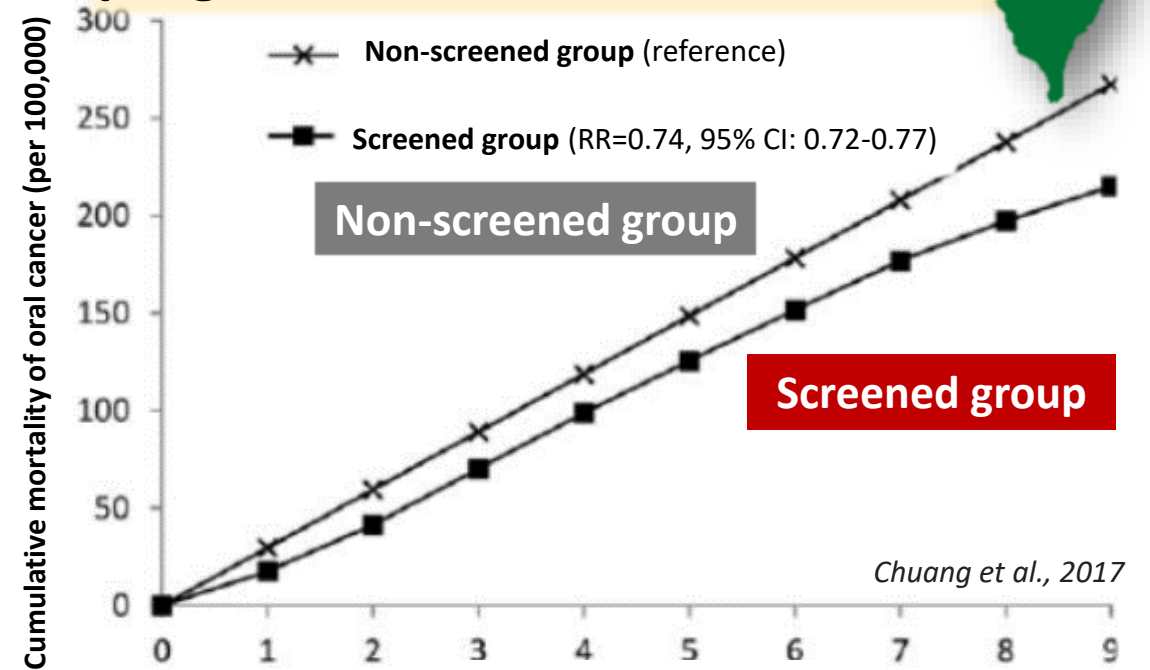
- Oral visual inspection by trained health workers at 3-year interval

- ✓ Mortality Reduction by **24%**



Cancer

A population-based screening program in Taiwan



- Oral visual inspection by physician and dentist at 2-year interval

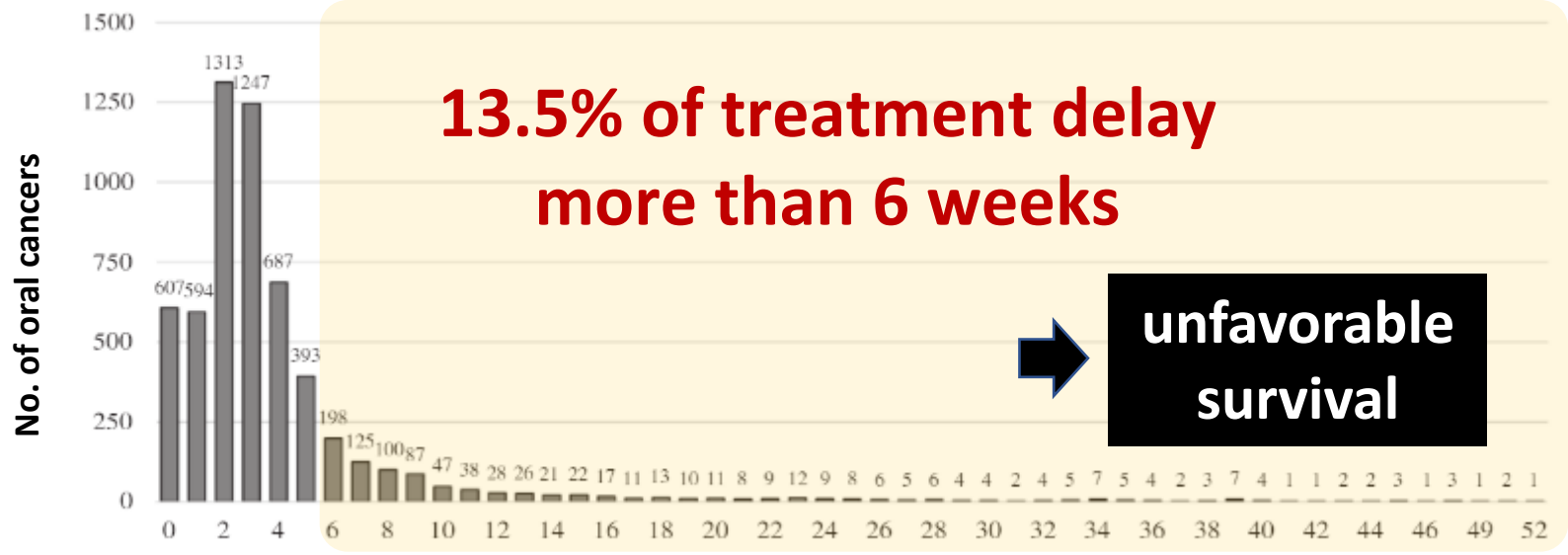
- ✓ Mortality Reduction by **26%**



Treatment Delay on Survival of Oral Cancers

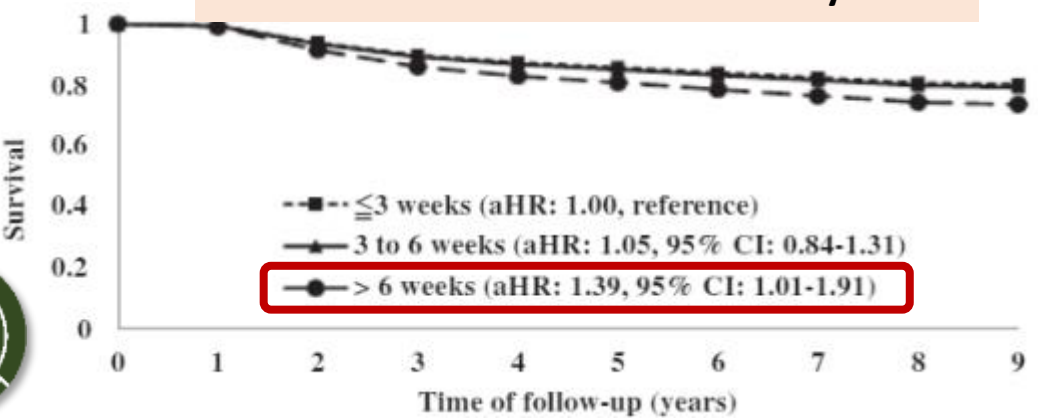


Su et al., 2021



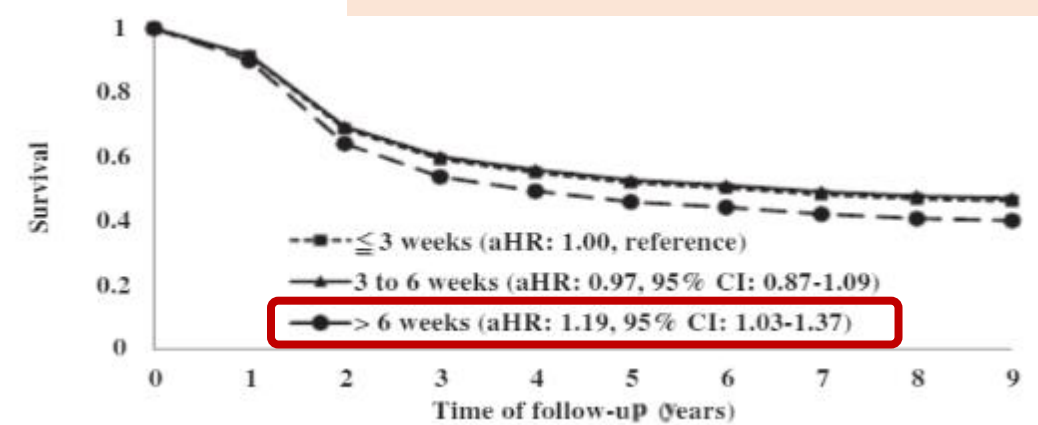
Early stage

Subjects with early stages
 Treatment delay of more than 6 weeks:
 Oral cancer death rate increased by **39%**



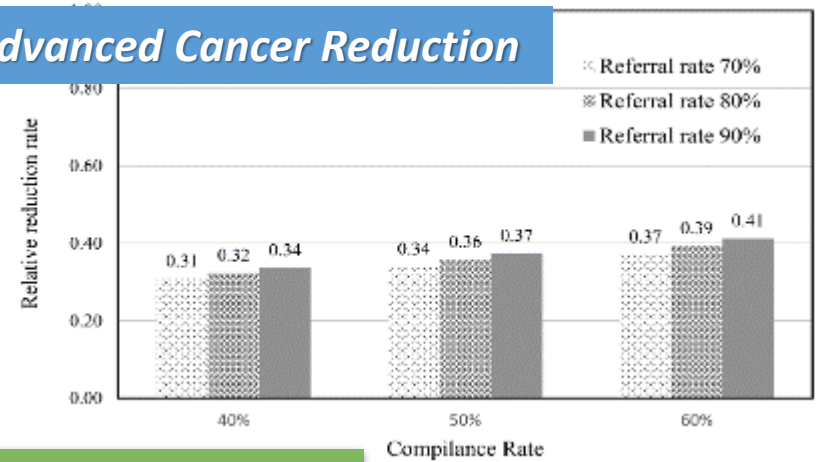
Advanced stage

Subjects with advanced stages
 Treatment delay of more than 6 weeks:
 Oral cancer death rate increased by **19%**



Delays in Referral and Treatment of Oral Cancer Screening and Associated Factors for the Vulnerable Population

Advanced Cancer Reduction



✓ **10% increase in the referral rate led to 2% reduction of advanced oral cancer**

Technology in Cancer Research & Treatment
Su et al., 2022

Positive Cases

lower referral rate

Referral to Hospital

delay treatment

Treatment

Significant factor

- Severe oral habits
- Limited medical resources
- Lower education
- Males
- Younger age
- Limited medical resources
- Lower education



Impacts of Delayed treatment and Referral on Sustainable Development Goals (SDGs)

Environmental

Social



Lose Job

low SES

✓ Elucidating the delays in referral and treatment play an important role in **the equitable policy in reducing the barrier of accessibility to continued services for these vulnerable populations** after the uptake of oral cancer screening

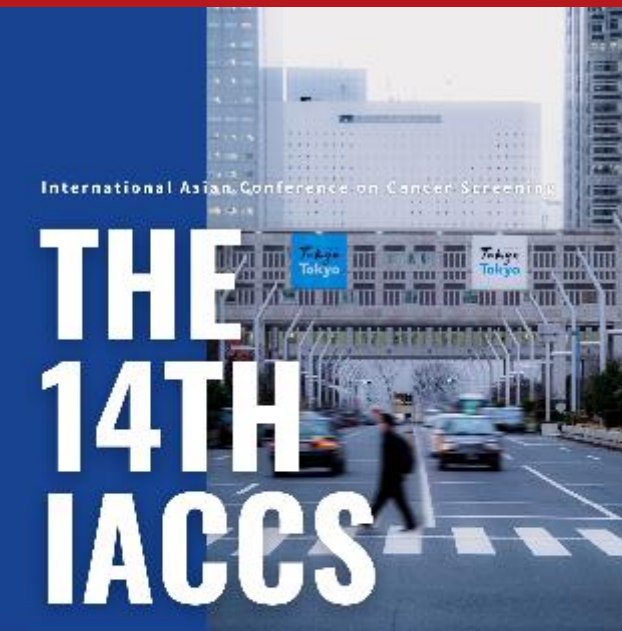


Thank You

for Your Attention



International Asian Conference on Cancer Screening



THE 14TH IACCS

15-16 DEC, 2023 Precision Cancer Screening with AI Perective
TOKYO, JAPAN

WELCOME TO JOIN US



<https://www.iaccs.asia/>

International Asia Conference on Cancer Screening, IACCS

15-16 Dec, 2023
TOKYO JAPAN

