

The 37th Annual Meeting of the Japan Society of  
Japan Health and Medical Behavioral Sciences

# TRENDS IN THE USE OF A HEATED TOBACCO PRODUCT (*IQOS*<sup>™</sup>) IN THE GENERAL ADULT POPULATION OF JAPAN

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## Smoking-Related Diseases

Smoking is addictive and causes a number of serious diseases and premature death.

1

## Number of Smokers

It is estimated that about 1 billion people worldwide will continue to smoke in the foreseeable future\*

~ **13 million adult smokers in Japan\*\***

2

## Smoke-Free Alternatives

Offering less harmful smoke-free tobacco alternatives to adult smokers is therefore a sensible, complementary addition to existing tobacco control strategies.

3

1,000,000,000

Sources:

\* [WHO global report on trends in prevalence of tobacco use 2000-2025, fourth edition](#)

\*\* [Ministry of Health, Labour and Welfare: Handbook of Health and Welfare Statistics \(mhlw.go.jp\)](#)

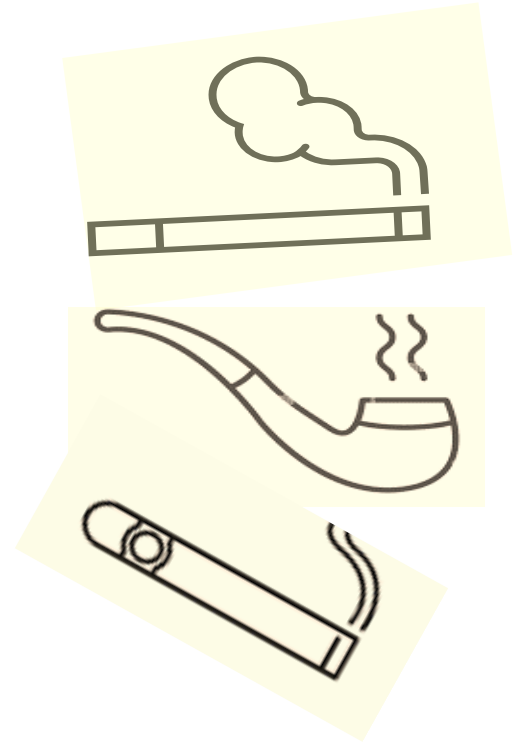


# Tobacco Harm Reduction

By replacing combustible tobacco products (e.g., cigarettes, tobacco pipes, and cigars) with less harmful smoke-free alternative tobacco products (e.g., heated tobacco products and e-cigarettes) among adult smokers who would otherwise continue to smoke ...

... the Tobacco Harm Reduction strategy has a great potential to improve public health.

## Adult Smokers



Combustible Tobacco Products



Smoke-free Tobacco Products



# Tobacco Harm Reduction



=



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**Successful Population  
Harm Reduction**

**Many Smokers  
Switching**

**Reduced-Risk Smoke-Free  
Tobacco Alternatives**

**Successful Population Harm Reduction Can Only Be Achieved When A Large Number Of Smokers Switch To Better Reduced Risk Smoke-Free Tobacco Alternatives**



## Tobacco Harm Reduction

**To bring about smokers switching to better smoke-free tobacco alternatives, adult smokers must accept and use smoke-free products**



**To Ensure Acceptance Of Smoke-Free Tobacco Alternatives And Address The Key Needs Of Smokers, Adult Smokers Must Be Offered A Range Of Different Smoke-Free Products**



# Heated Tobacco Products (HTP) in Japan

## Various Heated Tobacco Product Alternatives available in Japan



### IQOS™ HTP



**In Japan, Heated Tobacco Products (HTP) Are The Most Popular Smoke-Free Tobacco Alternatives**



# Difference between Cigarette Smoke vs. Heated Tobacco Product (HTP) Aerosol



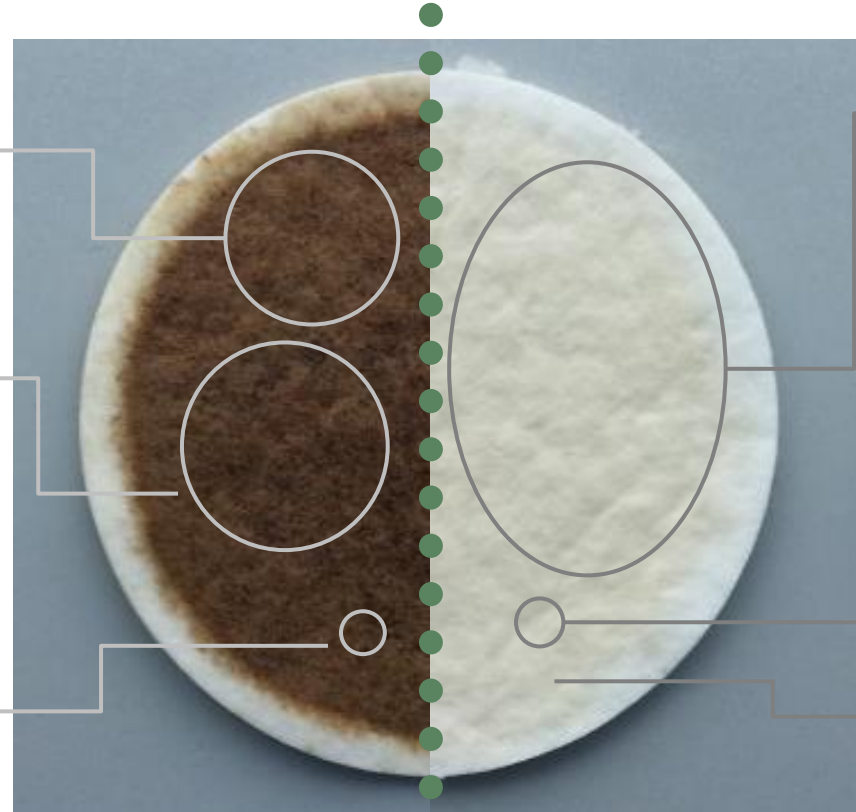
## Cigarette Smoke\*



Are lit, burned, and produce smoke, ash, and tar

Numerous toxicants

Harmful free radicals



## HTP Aerosol\*

*IQOS™* and other HTP are not lit and burned and do not produce smoke, ash, and tar

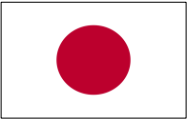
Produce >90% fewer toxicants

Harmful free radicals are not quantifiable



**The HTP Aerosol Contains More Than 90% Less Toxicants Compared To Cigarette Smoke**

# Public Health Concerns about Heated Tobacco Products (HTP)



Although **HTP** have become **accepted alternatives** to cigarette smoking in Japan, there are **concerns** about **whether** the use of these **alternative products** contributes to **tobacco harm reduction**:

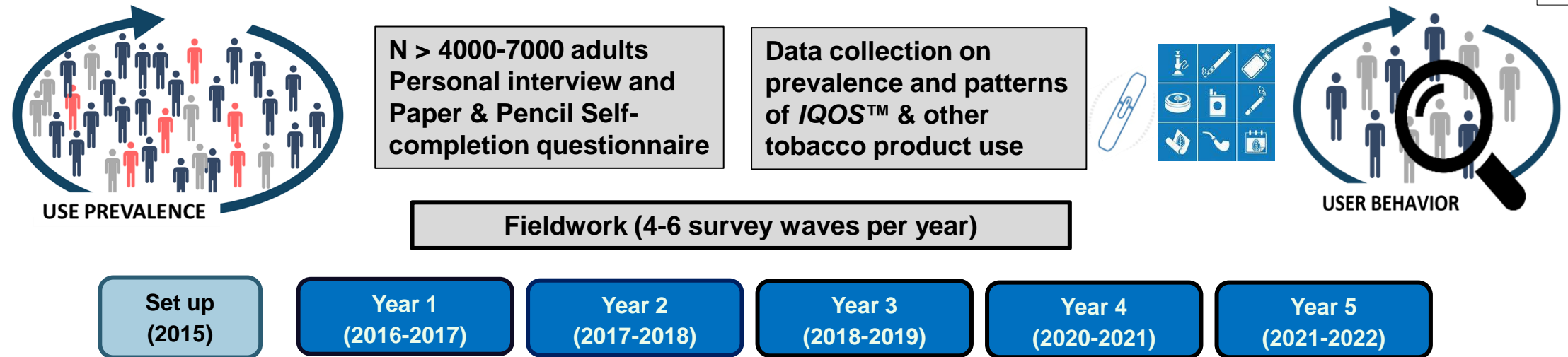


- **Advent of HTP may increase the overall tobacco product consumption and use prevalence in Japan**
- **Use of HTP together with cigarettes may not benefit individual and public health**
- **Never tobacco users may start using HTP**
- **HTP may prevent smokers who want to quit cigarettes or all tobacco products from doing so**

**These concerns will be examined against recent representative trend data (2016-2022) on the use of the HTP IQOS™ and other tobacco products from the Japanese general adult population**



# Representative Yearly Repeated Cross-sectional Study on Tobacco Use Prevalence and Behavior in the Adult Population of Japan (2016-2022)

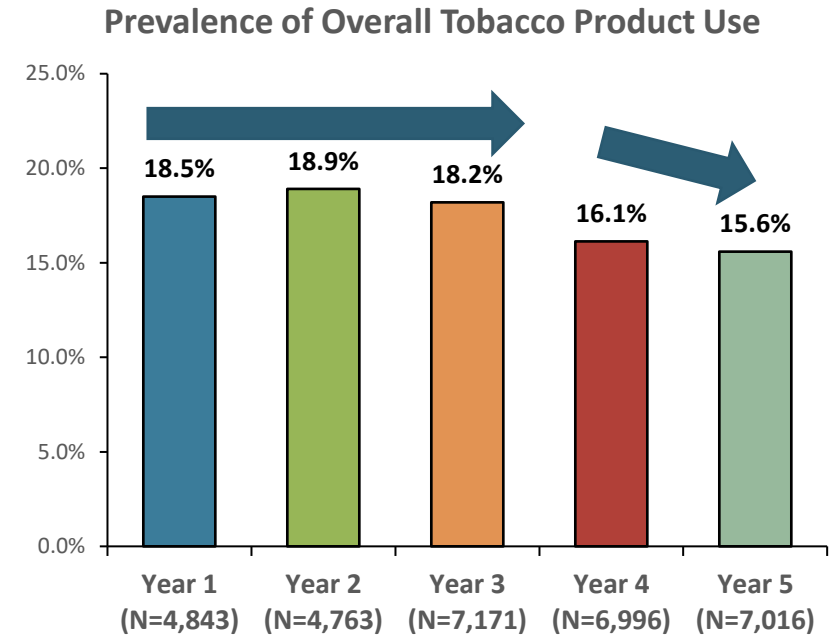
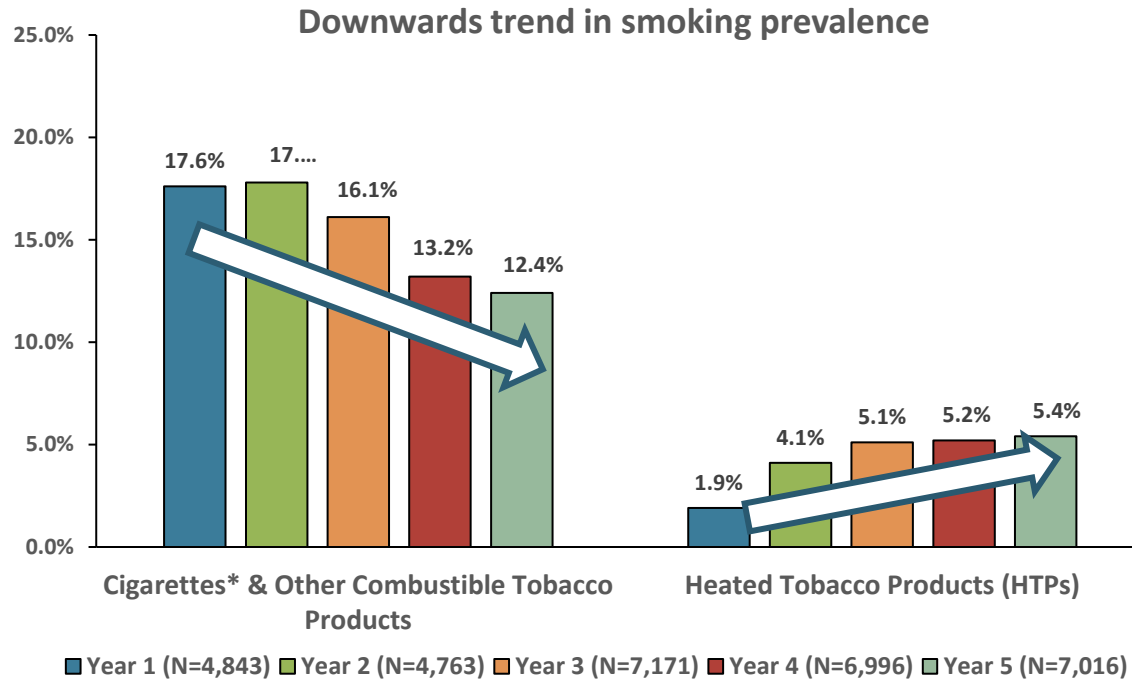


- Study protocol approved by Hakata Clinic Institutional Review Board (Reference ID: J-186) in Fukuoka, Japan
- Design and results similar to the Japan National Health and Nutrition Survey conducted annually by the Japanese Ministry of Health (MoH), Labour, and Welfare
- Study findings supported by various independent data



# Prevalence of Overall Tobacco Product Use in Japan (2016-2022)

## Downward Trend in Smoking Prevalence



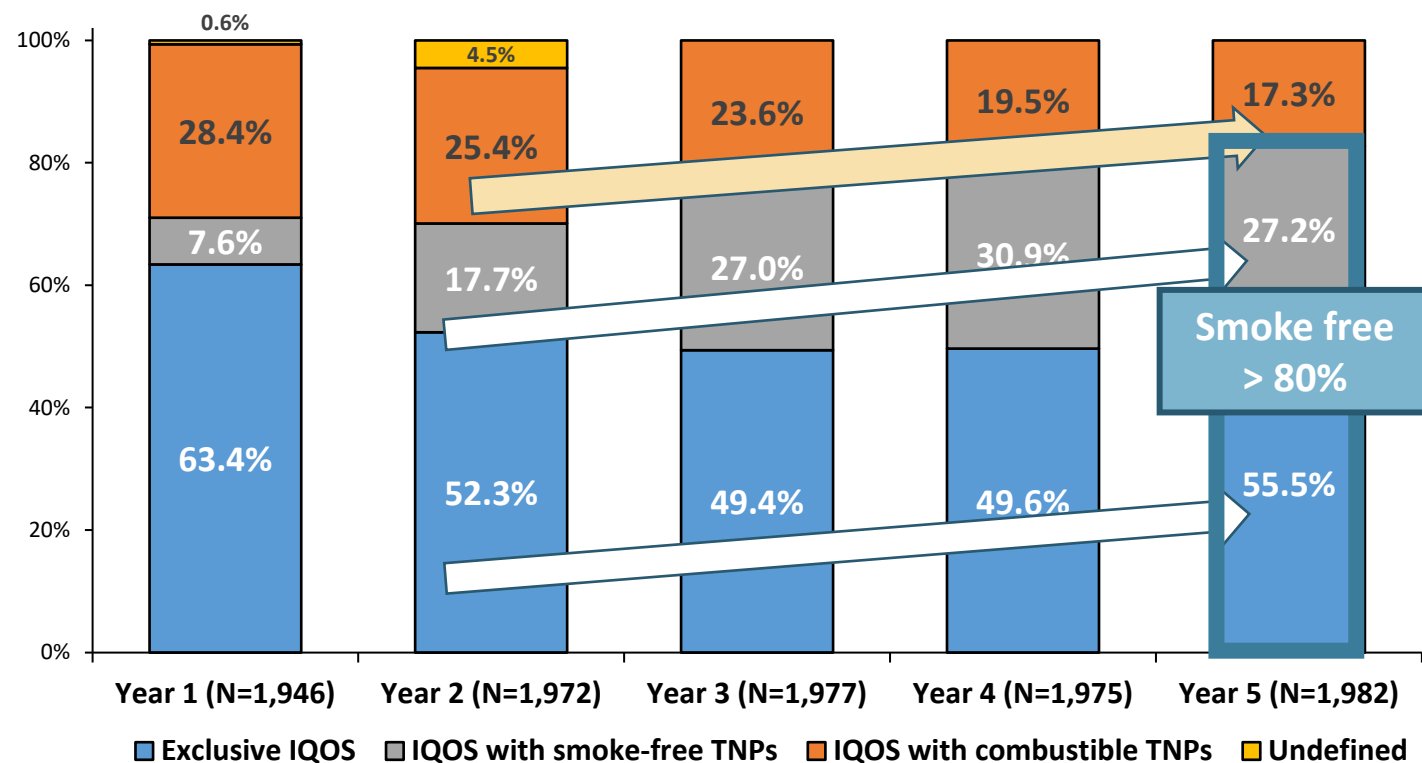
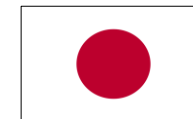
\* The vast majority of combustible products were cigarettes. Exact percentages for cigarettes only: Year 1: 17.6%, Year 2: 17.3%, Year 3: 16.0%, Year 4: 13.2%, Year 5: 12.4%

**The Shift From Combustible To Smoke-free Tobacco Product Use Is In Line With The Japan National Health And Nutrition Survey Data\*\* And Suggests That The Introduction Of Smoke-free Tobacco Products In Japan Has Not Increased Overall Tobacco Product Use But Appears To Have Increasingly Replaced Combustible Tobacco Products**

\*\* Any other tobacco and nicotine-containing products (TNP(s)) are not shown. Any other TNP(s) include any other TNP(s) that were not specified by the participants (i.e., participants could indicate that they use other TNP(s) than those targeted in the questionnaire, but these other TNP(s) were not further specified), and nicotine replacement therapy. The prevalence of any other TNP(s) was Year 1: 1.1%; Year 2: 1.3%; Year 3: 0.9%; Year 4: 0.8%; Year 5: 1.0%.

\*\* Japan National Health and Nutrition Survey home page: [National Health and Nutrition Survey | Health Japan 21 \(nihohj.go.jp\)](https://www.nhi.go.jp/health_japan21/nihohj.go.jp); specifically: Japan National Health and Nutrition Survey (2019). <https://www.mhlw.go.jp/content/10900000/000687163.pdf>. Published in 2020 October 27.

# Patterns of Tobacco Product Use among Adult Users of the HTP *IQOS*<sup>TM</sup> (2016-2022)



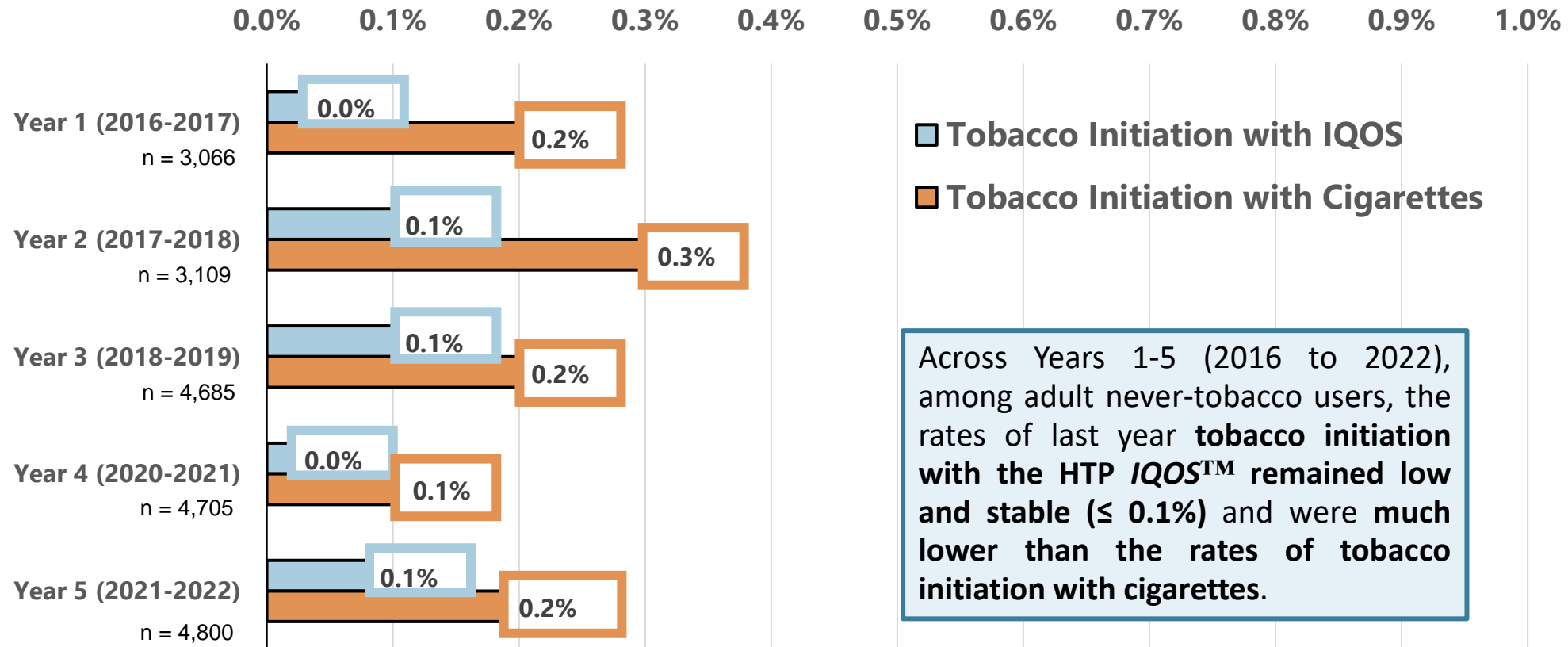
Across Years 1-5 (2016 -2022), among adult *IQOS*<sup>TM</sup> users, the **majority of *IQOS*<sup>TM</sup> users completely switched away from combustible tobacco products to exclusive *IQOS*<sup>TM</sup> use, or in particular in the last four years, to *IQOS*<sup>TM</sup> use together with other smoke-free products.**

Among adult *IQOS* users, this development resulted in **Year 5 (2022)** in an **overall smoke-free tobacco product use proportion of over 80%.\***

**Combined Use Of The HTP *IQOS*<sup>TM</sup> Together With Combustible Tobacco Products Markedly Decreased Over Time And Thus Has Not Become A Major Use Pattern Or Reason For Concern In Japan**

\*These data are not based on General Adult population samples but on *IQOS*<sup>TM</sup> user samples (n =2,000) that are representative of all *IQOS*<sup>TM</sup> users registered in the Japanese *IQOS*<sup>TM</sup> user database (> 1 million users).<sup>11</sup>  
 Undefined: In year 2, 4.5% of current *IQOS*<sup>TM</sup> users could not be classified as exclusive *IQOS*<sup>TM</sup> users, *IQOS*<sup>TM</sup> users who also use combustible products, or *IQOS*<sup>TM</sup> users who also use other smoke-free products.

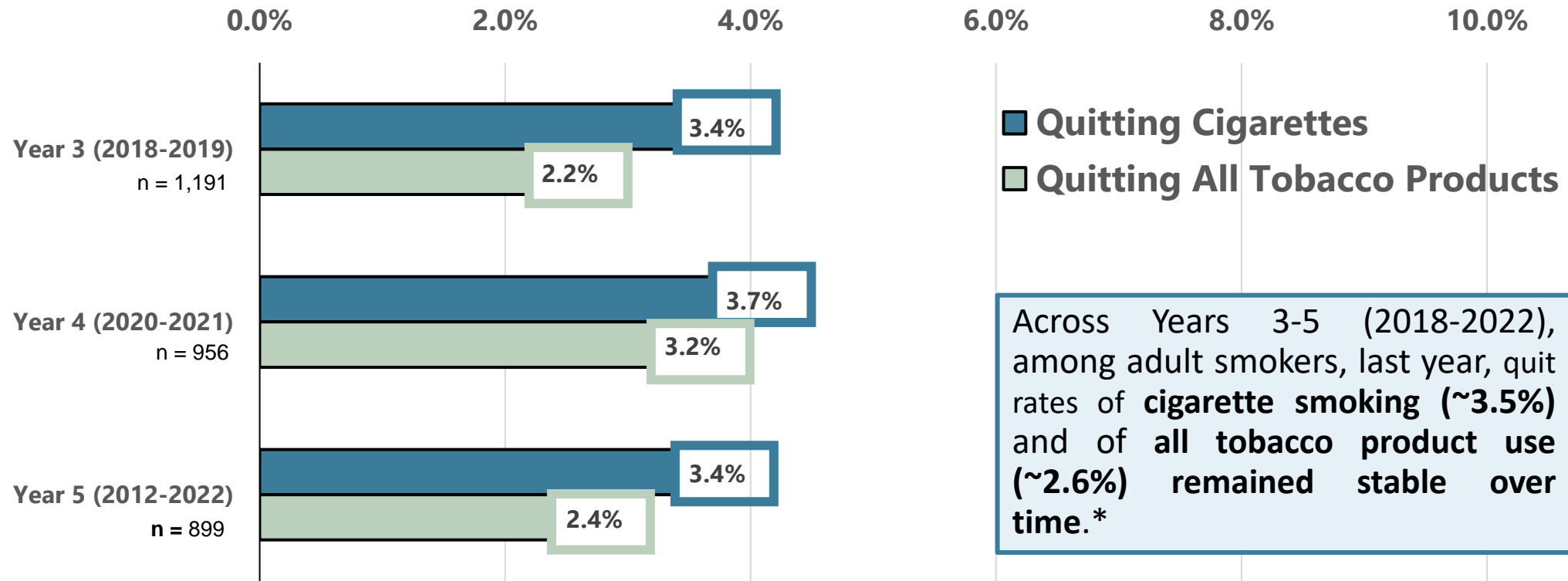
# Last Year Tobacco Initiation Rates (%) with the HTP *IQOS*<sup>™</sup> compared to Cigarettes among adult Never Tobacco Users (2016-2022)



**Tobacco Initiation With The HTP *IQOS*<sup>™</sup> Among Adult Never Tobacco Users Was Stable And Very Low ( $\leq 0.1\%$ ), Suggesting That Nearly All *IQOS*<sup>™</sup> Users Were Cigarette Smokers When They Started Using *IQOS*<sup>™</sup>**



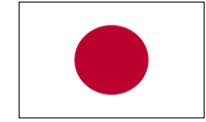
# Last Year Cigarette and All Tobacco Quit Rates (%) among Adult Smokers (2018-2022)



Quitting Rates Among Smokers Remained Stable Over Time Suggesting That The Introduction Of The HTP IQOS™ In Japan Has Not Prevented Adult Smokers Who Wanted To Quit Smoking Cigarettes Or All Tobacco Products From Doing So

\*Data on quitting rate was only collected as of study Year 3 (2018-2019)

## Conclusions



**Trend Data (2016-2022) From A Representative Repeated Cross-sectional Study On Use Prevalence And Use Behavior Of The HTP *IQOS*<sup>™</sup> And Other Tobacco Products In The Adult Japanese Population Suggest:**

- Introduction of the HTP *IQOS*<sup>™</sup> and other smoke-free tobacco products in Japan has not increased overall tobacco product use but appears to have increasingly replaced combustible products.
- Combined use of the HTP *IQOS*<sup>™</sup> together with cigarettes or other combustible tobacco products markedly decreased over time and thus has not become a major use pattern or reason for concern in Japan.
- Tobacco initiation with the HTP *IQOS*<sup>™</sup> was very low, so that nearly all *IQOS*<sup>™</sup> users were cigarette smokers when they started using *IQOS*<sup>™</sup>.
- Quitting rates among smokers remained stable over time suggesting that the introduction of the HTP *IQOS*<sup>™</sup> in Japan did not prevent adult smokers who wanted to quit cigarettes or all tobacco products from doing so.

**Together, These Findings Indicate That The Introduction Of The HTP *IQOS*<sup>™</sup> — And Probably Other HTP — In Japan Is In line With The Principles And Benefits Of Tobacco Harm Reduction**





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**THANK YOU FOR YOUR  
ATTENTION!**

Karina Fischer

THANK YOU FOR YOUR ATTENTION.

Questions?

Answers.



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# Back Up Slides

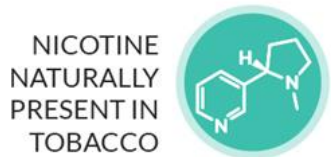


# Difference Heated Tobacco vs. E-Cigarettes

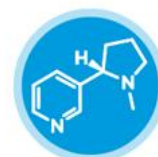
## THE DIFFERENCE

BETWEEN

VS



HEATED TOBACCO



E-CIGARETTE

SMOKE-FREE PRODUCTS ARE NOT RISK-FREE AND ARE ADDICTIVE. THE BEST CHOICE A SMOKER CAN MAKE IS TO QUIT CIGARETTES AND NICOTINE COMPLETELY.

Both HTP and e-cigarettes contain nicotine, are not burned, and do not create smoke, ash, and tar, and thus produce much lower levels (>90% less) of toxicants than cigarettes.

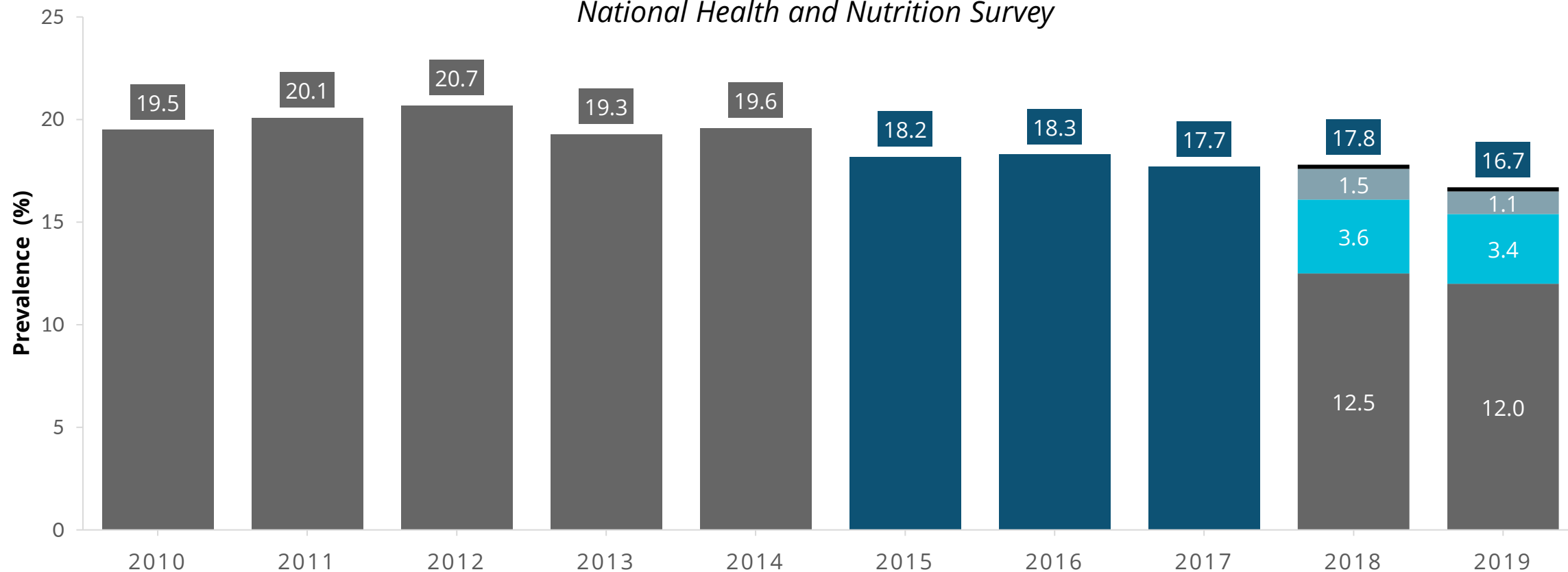
HTP heat real tobacco and produce an aerosol that contains nicotine naturally present in tobacco, while e-cigarettes contain tobacco-derived nicotine that is added to an e-liquid which is vaporized.

# Prevalence / Uptake National Health and Nutrition Survey



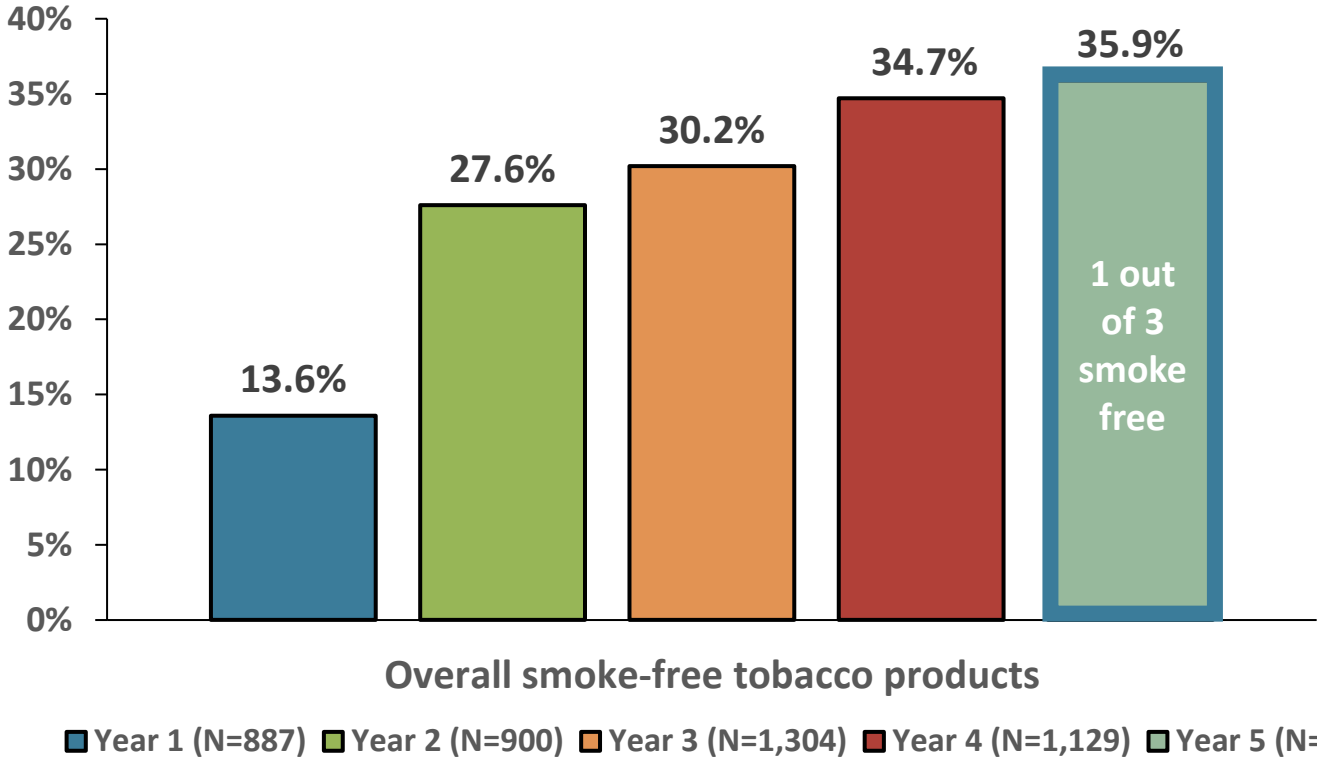
## Japanese Adult ( $\geq 20$ years) Tobacco Use Prevalence

*National Health and Nutrition Survey*



■ Total Tobacco ■ Cigarettes (only) ■ Heated Tobacco (only) ■ Dual Use (Cigarettes + Heated Tobacco) ■ Other

# Uptake of Smoke-Free Products Among Current Tobacco Product Users (2016-2022)



Among current tobacco product users, the use of smoke-free tobacco products markedly increased over time so that in Year 5 (2022):

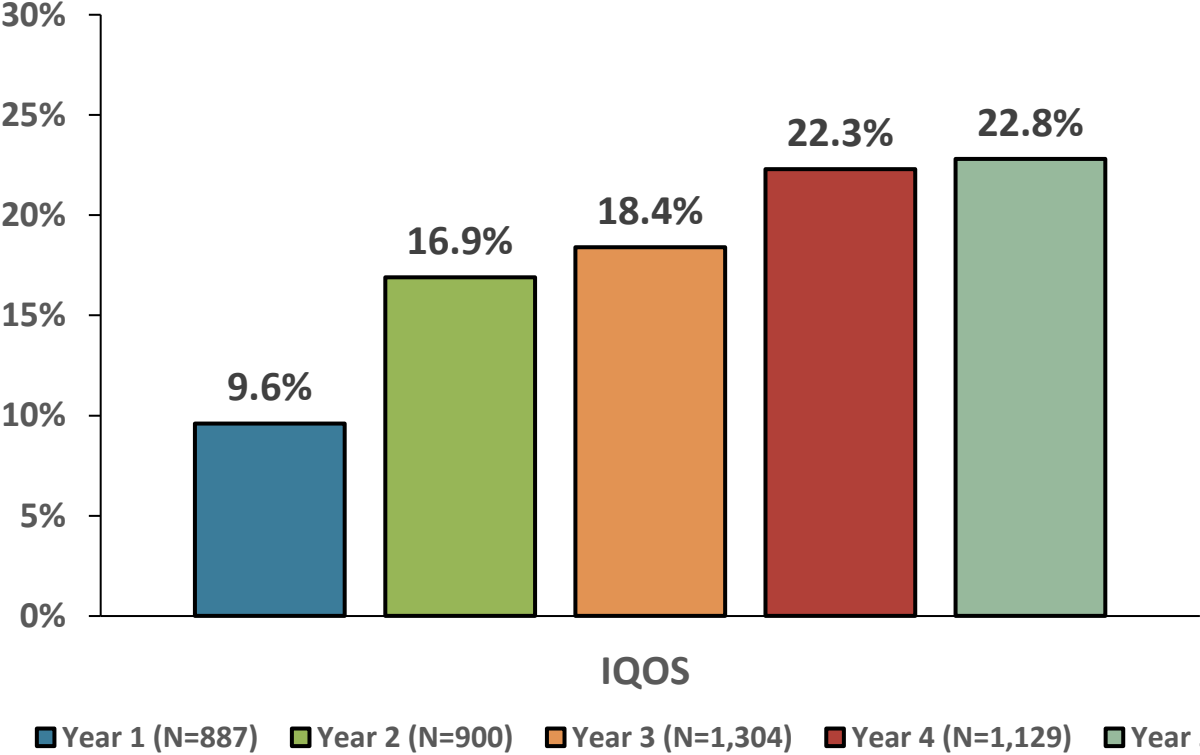
**1 out of 3 tobacco users used smoke-free products, and 1 out of 5 tobacco users used smoke-free products exclusively\***

**The Increase In Smoke-free Tobacco Product Uptake Suggests That Smoke-free Tobacco Products Are Acceptable Alternatives To Combustible Tobacco Products In Japan**

\* In Year 5 (2022), among current TNP users (N=1,094), 36% (1 out of 3) were smoke-free and 19% (about 1 out of 5) were exclusive smoke-free TNP users



# Uptake of the HTP *IQOS*<sup>TM</sup> Among Current Tobacco Product Users (2016-2022)



Among current tobacco product users, the use of the HTP *IQOS*<sup>TM</sup> markedly increased over time.

The Increase In *IQOS*<sup>TM</sup> Uptake Suggests That *IQOS*<sup>TM</sup> And Other HTP Are Acceptable Alternatives To Cigarette Smoking Or Other Combustible Tobacco Products In Japan

# History of Tobacco Product Use – Relapse / Reinitiation



**Table 11** Reinitiation/Relapse Last 12 Months among Current TNP Users – General Adult Population

Relapse/ reinitiation <sup>66</sup>	Year 1 Current TNP Users (N=894)		Year 2 Current TNP Users (N=900)		Year 3 Current TNP Users (N=1,304)		Year 4 Current TNP Users (N=1,129)		Year 5 Current TNP Users (N=1,094)	
	n (%)	[LCL, UCL]	n (%)	[LCL, UCL]	n (%)	[LCL, UCL]	n (%)	[LCL, UCL]	n (%)	[LCL, UCL]
Relapse to <i>IQOS</i> <sup>TM</sup>	0 (0.0%)	[0.0; 0.5]	0 (0.0%)	[0.0; 0.5]	0 (0.0%)	[0.0; 0.3]	0 (0.0%)	[0.0; 0.4]	0 (0.0%)	[0.0; 0.4]
Reinitiation with <i>IQOS</i> <sup>TM</sup>	1 (0.1%)	[0.0; 0.7]	1 (0.1%)	[0.0; 0.7]	1 (0.07%)	[0.0; 0.5]	1 (0.09%)	[0.0; 0.5]	1 (0.09%)	[0.0; 0.6]

**Note:** The sample sizes are based on participants with non-missing information on current TNP use. Relapse/reinitiation with e-cigarettes was not measured as part of the study. LCL, Lower Confidence Limit of 95% CI; TNP, tobacco or nicotine-containing product; UCL, Upper Confidence Limit of 95% CI.

# Totality of Scientific Evidence

Post-Market Studies & Surveillance



Population Harm

Consumer Perception & Behavior



Reduced Exposure & Risk

Clinical Studies



Reduced Risk  
*(in animal models)*

Systems Toxicology



Reduced Toxicity

Standard Toxicology



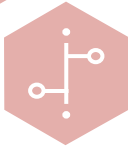
Reduced Formation

Aerosol Chemistry & Physics



Absence of Combustion

Product Design & Control Principles



For Internal Training Use ONLY



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