



The next frontier in advancing THR: **Oral nicotine pouches**

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AGENDA



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- 2 TOXICANT PROFILE
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- 5 PK COMPARISON
- 6 CLINICAL BIOMARKERS
- 7 THE SWEDISH EXPERIENCE
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ORAL NICOTINE POUCHES

USE



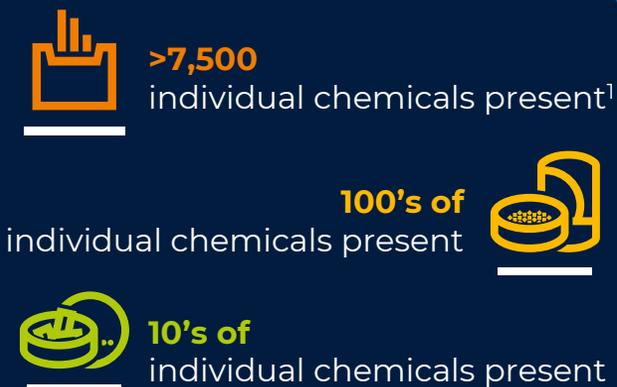
Consumers place the pouch between their gum and upper lip

COMPOSITION



It contains water, plant-based materials, flavourings, sweeteners and nicotine. All prepacked in small pouches

COMPLEXITY



No heat or tobacco makes Oral Nicotine Pouches BAT's **simplest Smokeless Product**

NO TOBACCO

NO COMBUSTION

NO SMOKE

NO TAR

¹IARC Working Group on the Evaluation of Carcinogenic Risks to Humans, Tobacco smoke and involuntary smoking (No. 83). World Health Organization and International Agency for Research on Cancer, 2004. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK316407/>

ONPs TOXICANT PROFILE

TobReg 9 reference product comparison¹



Oral Nicotine Pouches* had

>99 – 99.8%

reduction in toxicants compared to 1R6F
reference cigarette 30-day average

*11 products tested



BAT ONPs** had

42 – 92%

reduction in toxicants compared to
snus reference product

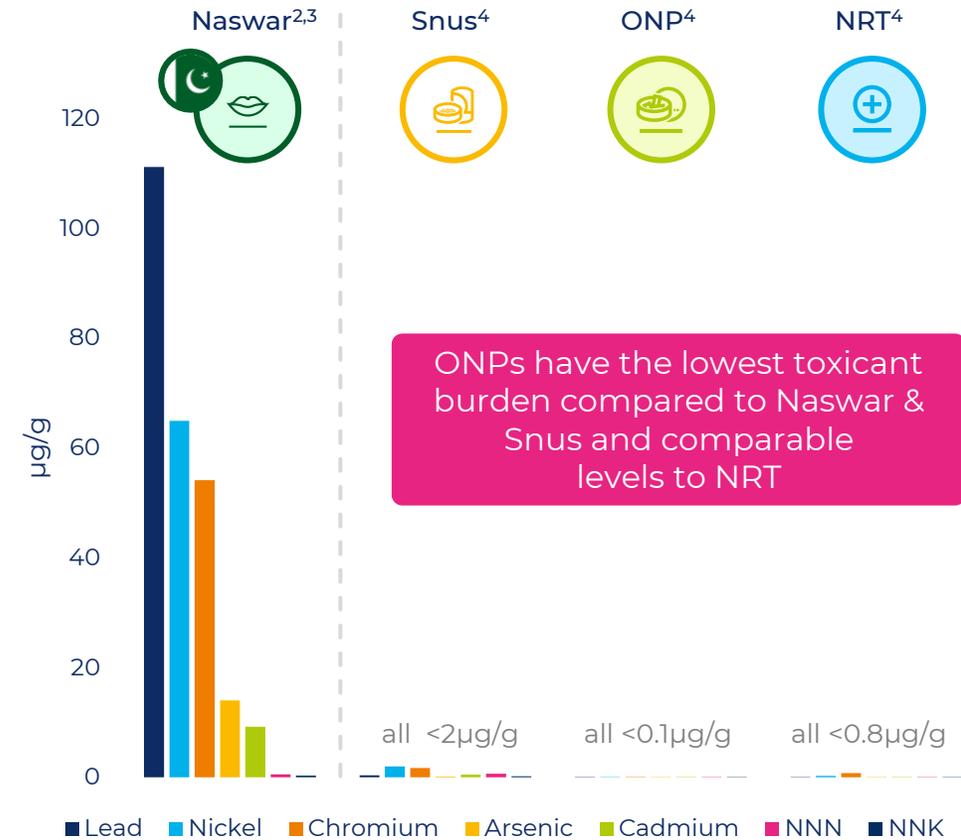
**9 products tested



All samples were lower than the
Gothiatek standard for analytes tested



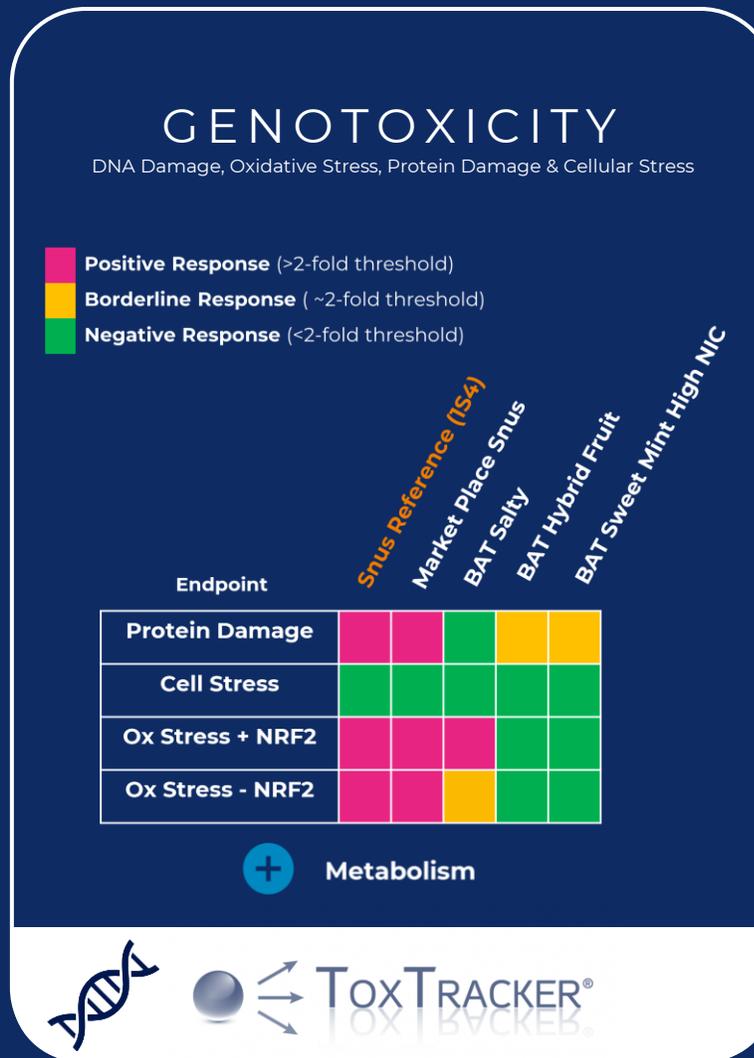
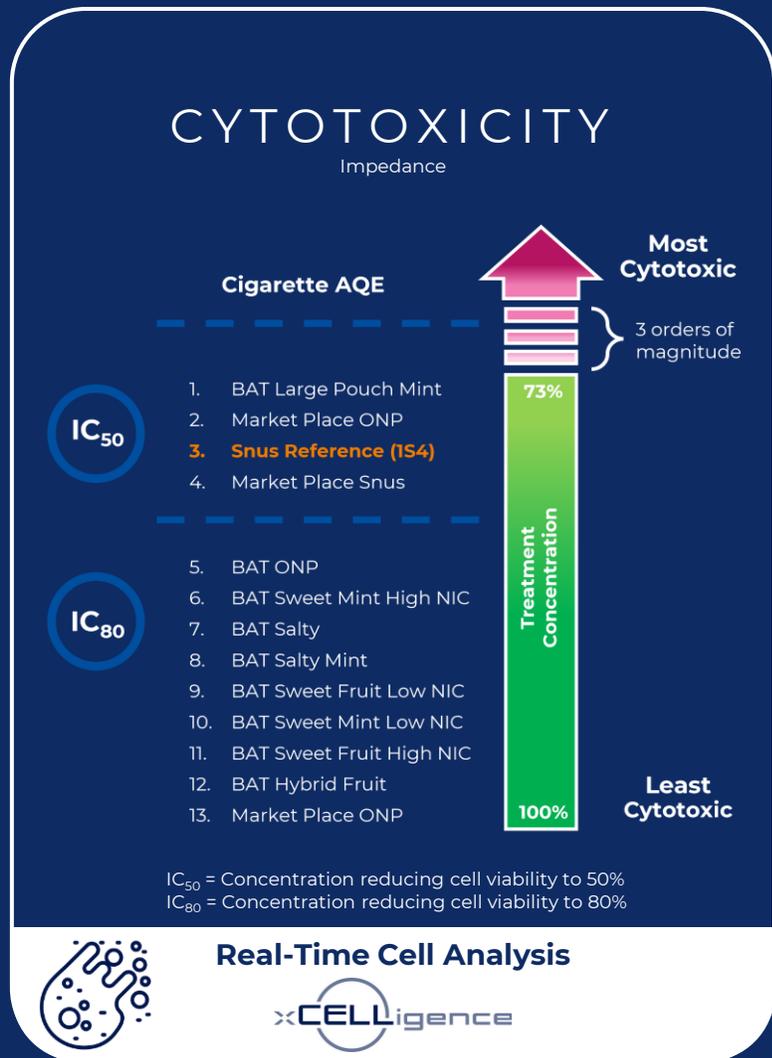
Global comparison to Oral Products



¹Hadley, S., et al., Toxicant contents of oral nicotine pouches: comparative quantitative analysis with Swedish snus and cigarette smoke. [Unpublished Manuscript]. British American Tobacco (BAT), 2025. ²Saeed, M., et al., 2012. DOI: 10.1136/tc.2010.042630. ³Stanfill, S.B., et al., 2011. DOI: 10.1136/tc.2010.037465. ⁴Azzopardi, D., et al., 2022. DOI: 10.1080/01480545.2021.1925691.

TOXICOLOGICAL ACTIVITY OF ONPs

ONP nicotine levels range from 6 mg/pouch to 20 mg/pouch



- None of the BAT Oral Nicotine Pouches were more potent than the **reference snus (154)**
- Data suggests nicotine and flavours **are not** drivers of cytotoxicity
- Differences in cytotoxicity between SKUs appear to be due to osmotic stress
- Use of Contemporary Tox supports a lower genotoxicity profile associated with ONP

CONSUMER USE OF ONPs



AVERAGE DAILY CONSUMPTION

Loose Snus
12.3 ± 6.6 portions¹

Pouch Snus
11.7 ± 6.5 pouches¹

Oral Nicotine Pouch
10.4 ± 4.7 pouches²



MOUTH HOLD TIME

Loose Snus
69.2 ± 41.6 minutes¹

Pouch Snus
65.2 ± 49.8 minutes¹

Oral Nicotine Pouch
33.3 ± 24.6 minutes³



NICOTINE EXPOSURE

Loose Snus
3.38 ± 1.92 mg⁴

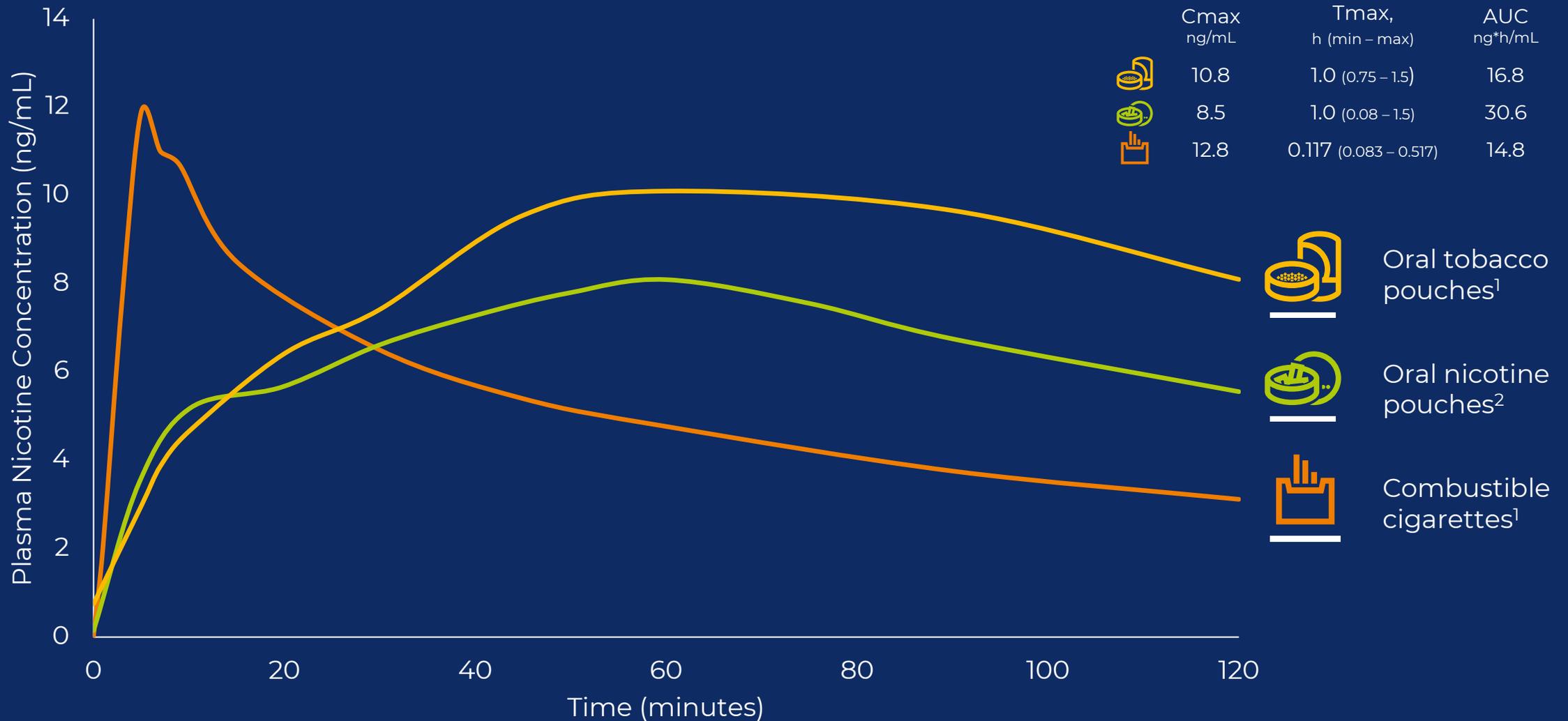
Pouch Snus
3.45 ± 1.42 mg⁴

Oral Nicotine Pouch
2.30 ± 1.43 mg³

Adult consumers use **ONPs at comparable-to-lower levels than snus** and are exposed to **comparable-to-lower levels of nicotine**

¹Digard, H., et al., 2009. DOI: 10.1093/ntr/ntp118. ²McEwan, M., et al., 2023. DOI: 10.2478/cttr-2023-0016. ³Azzopardi, D., et al., 2023. DOI: 10.1080/1354750X.2022.2148747. ⁴Digard, H., et al., 2013. DOI: 10.1093/ntr/nts123

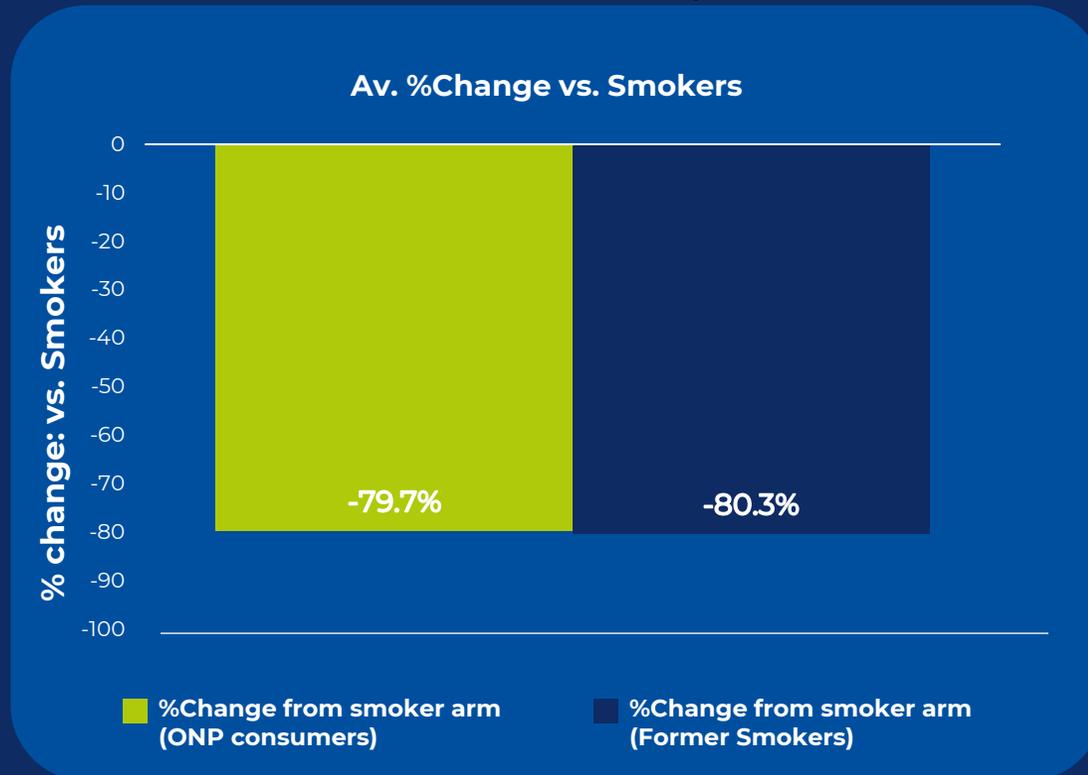
ONPs PK PROFILE SIMILAR TO SNUS



¹Digard, H., et al., 2013. DOI: 10.1093/ntr/nts123. ²Azzopardi, D., et al., 2022. DOI: 10.1038/s41598-022-10544-x.

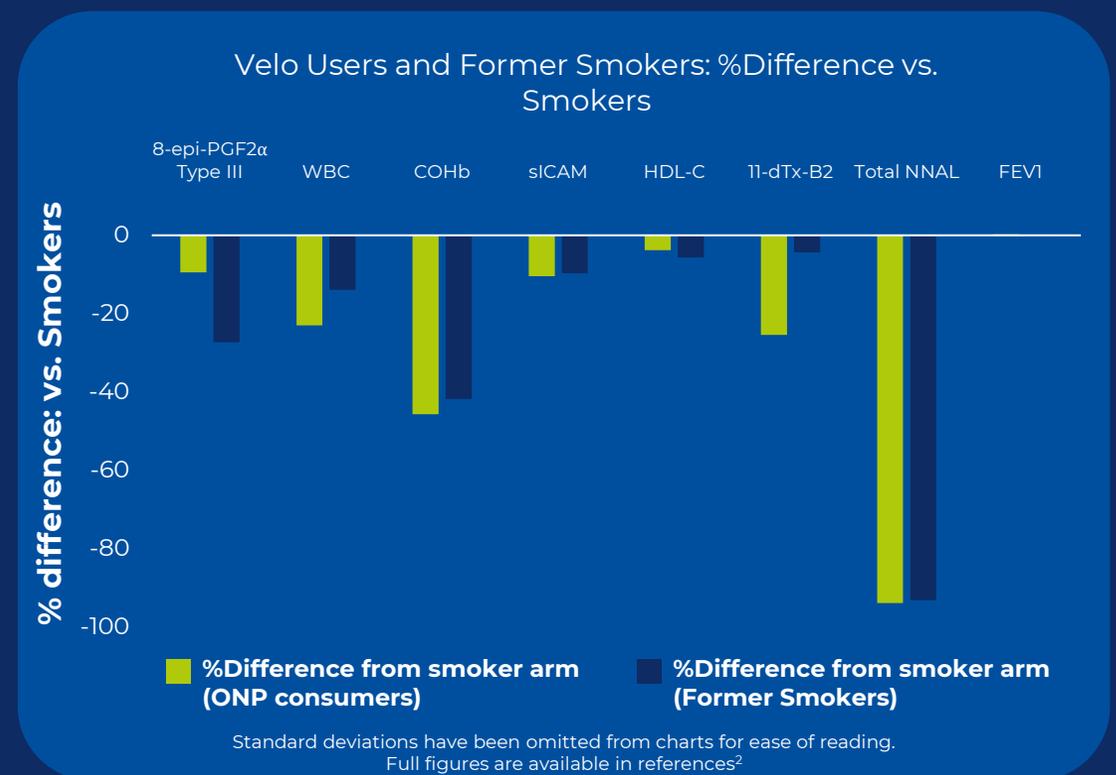
ONPs CLINICAL BIOMARKERS SIMILAR TO FORMER SMOKERS

Biomarkers of Exposure



ONP consumer's exposure reduction similar to former smokers on average^{1,2}

Biomarkers of Potential Harm



Smokers who switch completely to ONPs have favourable changes in these BoPH – with some comparable to former smokers²

¹Average of 7 biomarkers of exposure related to smoking related diseases. ²Azzopardi, D., et al., 2022. DOI: 10.1080/1354750X.2022.2148747.



THE SWEDISH EXPERIENCE



Smoking prevalence in Sweden is approaching the **WHO's definition of a non-smoking nation** (≤5%)

Statistics Sweden, ages 16 - 84 years. Folkhälsomyndigheten, Tobacco and nicotine use (self-reported) by age, sex and year. Percentage. (Accessed: 29 July 2024)

Swedish mortality rate* (21 per 100,000) is **35% lower than the EU average** (32.8 per 100,000)

WHO & IARC. Available at: <https://gco.iarc.who.int/today/en> (Accessed: 04APR2025)

Swedish epidemiological data shows switching from cigarette smoking to snus use are at **3x lower risk** for oral cancer

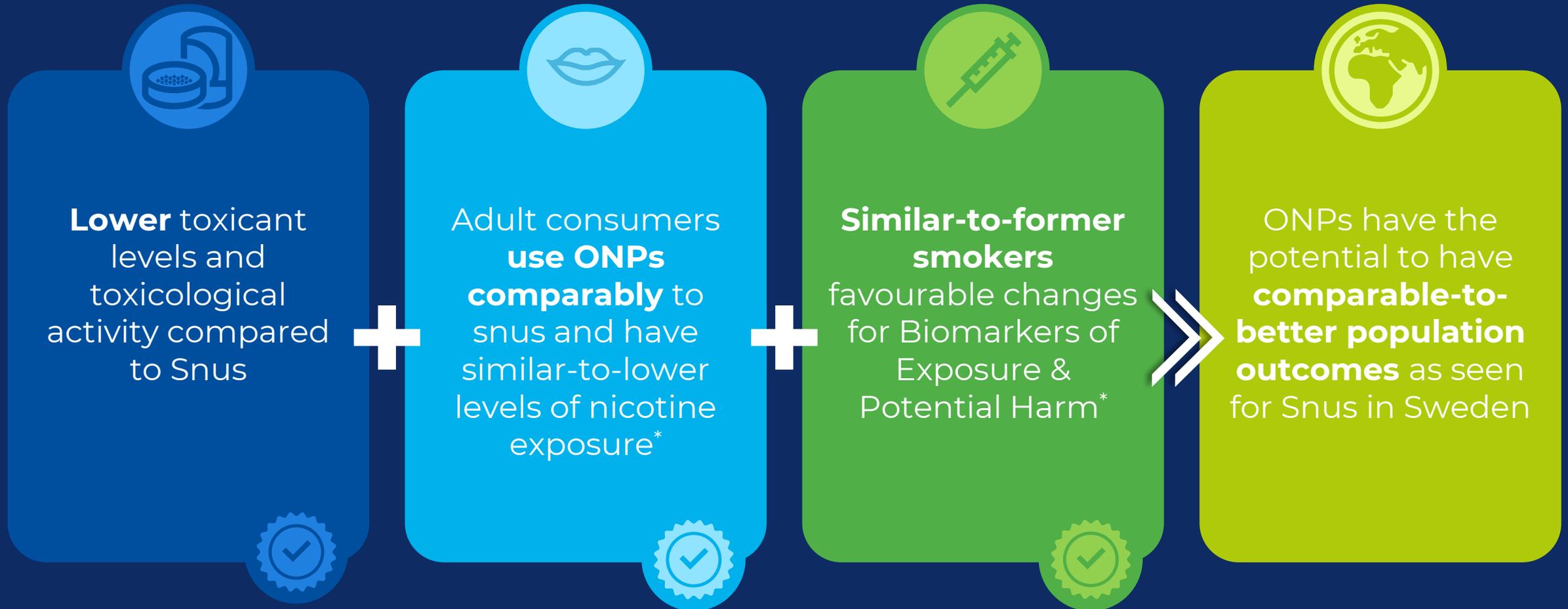
Schildt EB, et al. 1998. Oral snuff, smoking habits and alcohol consumption in relation to oral cancer in a Swedish case-control study. Int. J. Cancer 77, 341-346.

Estimated that if Swedish tobacco-related mortality rates could be applied in other countries, **more than 3.5M lives could be saved** in the EU over the next 10 years

www.smokefreesweden.org (Report: SAVING LIVES LIKE SWEDEN 02082023 WEB & Report: The Swedish Experience EN)

* Age-Standardized Rate (ASR) per 100,000 in 2022 for lip, oral cavity, trachea, bronchus and lung cancer, dataset inc both sexes

POPULATION OUTCOMES: POTENTIAL OF ONPs



*Based on the weight of evidence and assuming a complete switch from cigarette smoking. These products are not risk free and are addictive.

THANK YOU FOR YOUR TIME



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On social
media

www.asmokelessworld.com

[@smokelessworld](https://twitter.com/smokelessworld)

Review the evidence...
join the conversation

