

# Heat-not-burn products: representative data on consumer behaviour and associated factors in the German population (the DEBRA study)

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# Conflicts of interest

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Medizinische Fakultät

# Heat-not-burn (HNB) products / Heated tobacco products



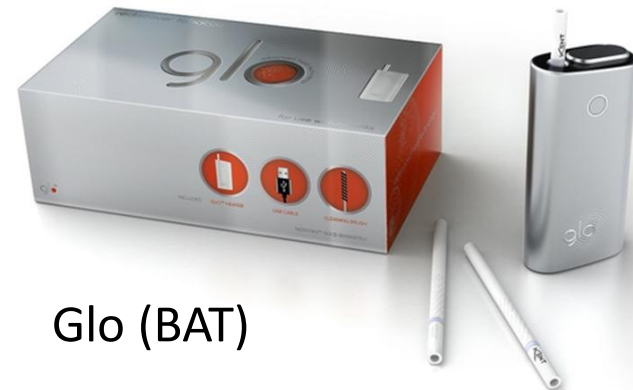
IQOS (Philip Morris)

AP



tobaccoreporter.com

Ploom Tech (Japan Tobacco)



Glo (BAT)

tobaccobusiness.com

# Heat-not-burn (HNB) products / Heated tobacco products



IQOS (Philip Morris)

AP

**Recent systematic review:**  
Simonavicius et al. Heat-not-burn tobacco products: a systematic literature review. Tobacco Control 2018

# IQOS marketing Germany

IQOS

WAS IST IQOS IQOS TESTEN HILFE HÄNDLERSUCHE SHOP MEIN IQOS ANMELDEN

IQOS

Das neue IQOS 2.4+  
Jetzt auch in PINK & BLUE erhältlich.

JETZT KAUFEN

Nur solange der Vorrat reicht.  
Möchten Sie IQOS kennenlernen?

Sie können IQOS direkt online bestellen oder testen.

ZUM SHOP JETZT TESTEN

# IQOS marketing Germany



# IQOS marketing Germany



90% WENIGER  
SCHADSTOFFE

DURCHSCHNITTlich IM VERGLEICH ZU ZIGARETTEN\*

IQOS

Nach unseren bisherigen Untersuchungsergebnissen ist ein kompletter Wechsel zu IQOS daher voraussichtlich weniger schädlich als weiter Zigaretten zu rauchen.

**Wichtige Information: IQOS ist jedoch keinesfalls unschädlich oder ohne Risiko.**

\* Durchschnittliche Reduktion der Konzentration (Gewicht pro Raucherstück) einzelner schädlicher Substanzen (von der WHO identifiziert, sog. „priority toxicants“) bei IQOS im Vergleich zum Rauch einer repräsentativen Auswahl von in Deutschland erhältlichen Zigaretten. Erfassung mit dem Intense Smoking Regime (Interim-Rauch-Regime) von Health Canada ohne Berücksichtigung von Nikotin, Glycerin, TPM und Wasser.

Rauchen ist tödlich

STRÖER

# Harm reduction?

Compared with conventional cigarette IQOS emissions contain ...

- 65-83% nicotine [Simonavicius, Tobacco Control 2018]
- volatile organic compounds, polycyclic aromatic hydrocarbons, carbon monoxide, most in lower concentrations  
[Auer R, JAMA Intern Med 2017]
- **lower levels of several** (potentially) harmful constituents, **higher levels of many others**  
[St.Helen, Tobacco Control 2018]





# European Respiratory Society

## ERS position paper on heated tobacco products

A statement prepared by the ERS Tobacco Control Committee

[www.ersnet.org/advocacy/eu-affairs/ers-position-paper-on-heated-tobacco-products](http://www.ersnet.org/advocacy/eu-affairs/ers-position-paper-on-heated-tobacco-products)

**"ERS cannot recommend any product that is damaging to the lungs and human health."**

### Heated tobacco products ...

1. Are harmful and addictive
2. Undermine smokers' wish to quit
3. Undermine ex-smokers' wish to stay smoke-free
4. Are a temptation for non-smokers and minors
5. Impose a risk of re-normalisation of smoking
6. Impose a risk of dual use with conventional cigarettes

# Study aims

In the German population ...

- proportion of smokers and recent ex-smokers using HNB (IQOS)
- associated factors
- perceived health risks (among ever users)

# Methods: data source



German Study on Tobacco Use (DEBRA)

[www.debra-study.info](http://www.debra-study.info)

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# Methods: protocol & registration

Kastaun et al. *BMC Public Health* (2017) 17:378  
DOI 10.1186/s12889-017-4328-2

BMC Public Health

STUDY PROTOCOL

Open Access



## Study protocol of the German Study on Tobacco Use (DEBRA): a national household survey of smoking behaviour and cessation

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Study registration: DRKS00011322

# Methods: sampling

- Multi-topic omnibus survey by market research institute Kantar Health
- Multi-stage, multi-stratified random probability sampling of German population 14+
- Bi-monthly representative sample  $N \approx 2,000$ , wave 1 = start of DEBRA: June 2016
- Weighting of data according to official census

# Methods: items

- Items on HNB were added in wave 7 and 8
- General introduction:

*"The next questions are about so-called HNB products (Tabakerhitzer). These are not e-cigarettes, but products which heat real tobacco without burning it. Known brands are IQOS and Marlboro HeatSticks"*

# Methods: items

Added in wave 7 of DEBRA, asked to current smokers + recent (<12m) ex-smokers:

*"Have you ever used a HNB product (Tabakerhitzer) like IQOS, HeatSticks?"*

- Yes, I've used them until to date **[current]**
- Yes, I used them regularly, but not any more **[past-regular]**
- Yes, I tried them in the past, but don't use them any more **[past-tried]**
- No, I have never used them **[never]**

# Methods: items

Added in wave 8 of DEBRA, asked to

**ever HNB users:** [current + past-regular + past-ried]

*"How harmful to your health do you think HNB products are, compared with conventional cigarettes?"*

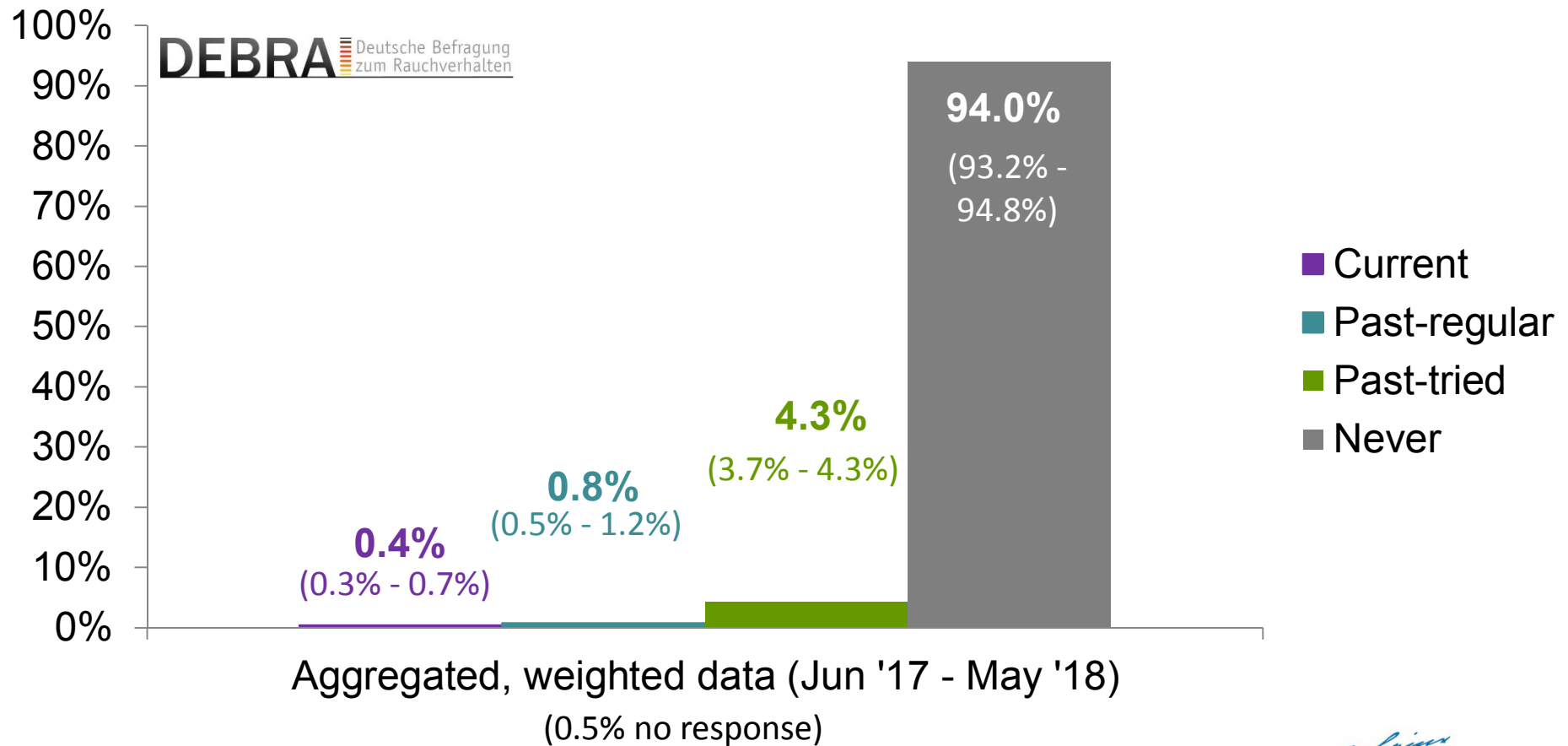
- Much less harmful than cigarettes*
- Somewhat less harmful than cigarettes*
- Equally harmful as cigarettes*
- Somewhat more harmful than cigarettes*
- Much more harmful than cigarettes*



# Methods: samples size current analysis (unweighted)

- 6 waves (covering a 12-month period)
  - 2017: June/July + August/September + Oct./Nov.
  - 2018: January + February/March + April/May
- N = 12,239 total
  - N = 3,555
    - current + recent (<12m) ex-smokers
    - **N = 3,546**
      - responded to HNB question (99.7%)
      - **N = 199 ever users**
      - **N = 155 ever users (waves 8-12)**

# Use of HNB among smokers and recent (<12m) ex-smokers



# Rough (unscientific) estimation number of current users in Germany

N population 15+ = 70,688,000<sup>1</sup>

% current + recent ex-smokers 15+ = 0.292669<sup>2</sup>

% current HNB users, lower bound = 0.002555<sup>2</sup>

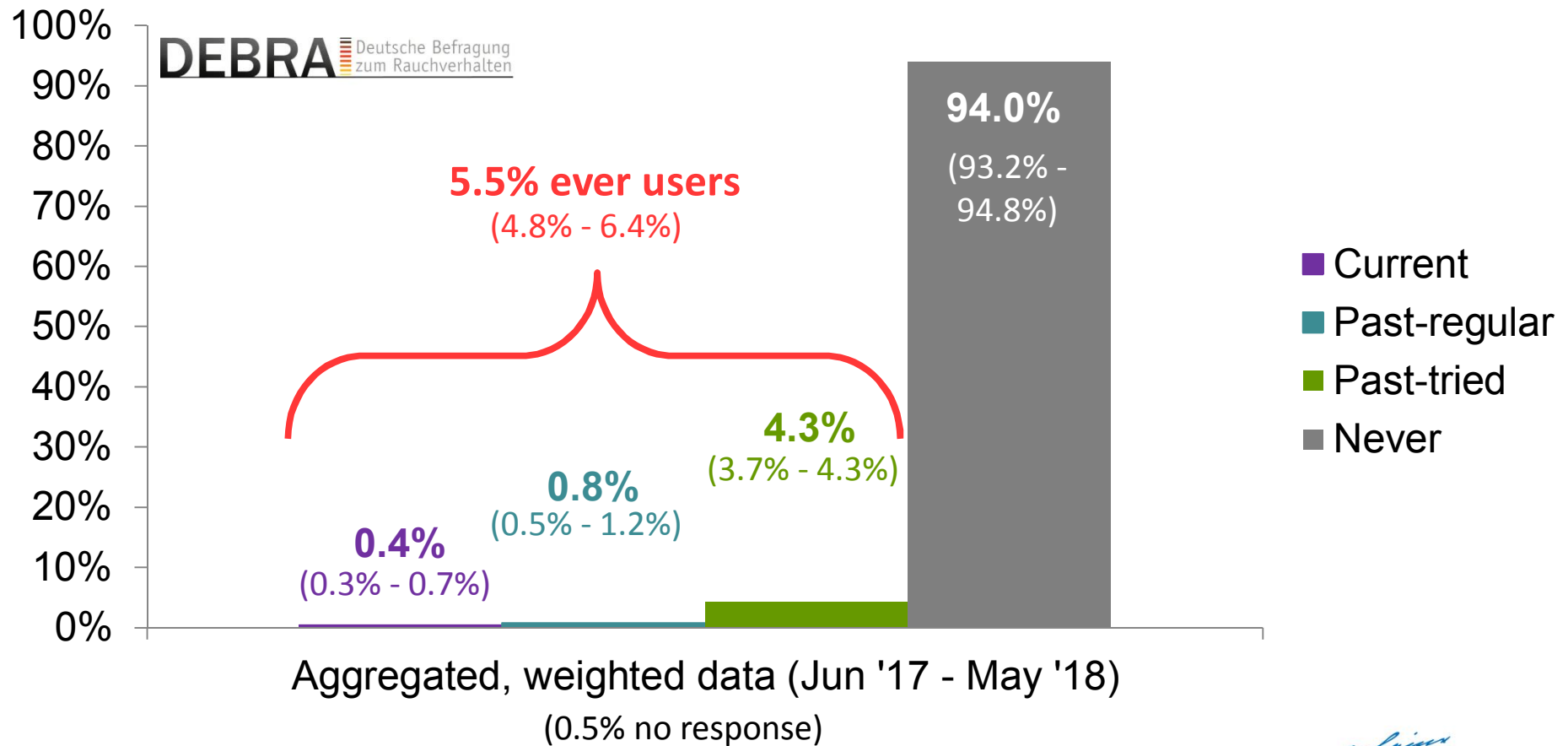
% current HNB users, upper bound = 0.007243<sup>2</sup>

➤ **approximately 53,000 to 150,000 current users  
in Germany**

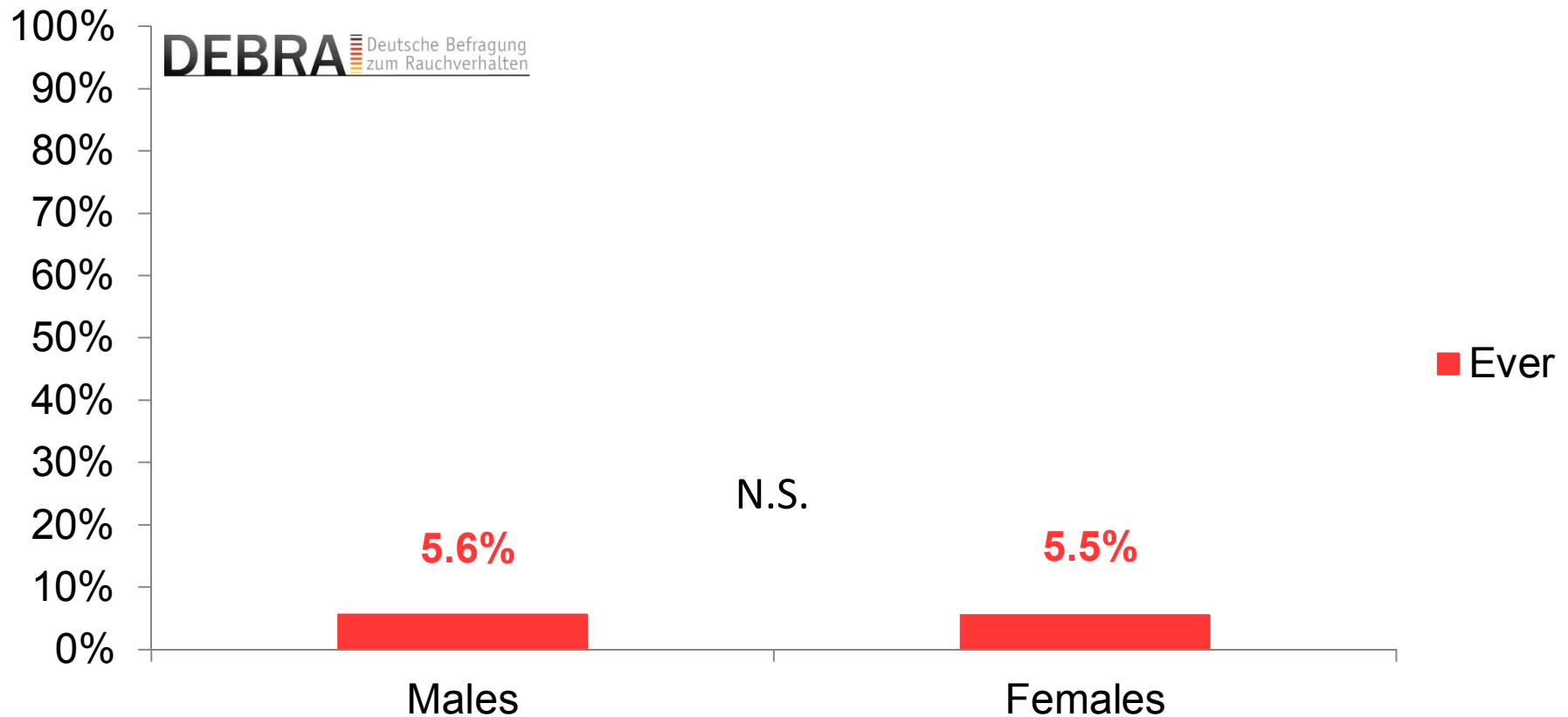
<sup>1</sup>Federal Statistical Office / Destatis

<sup>2</sup>DEBRA

# Use of HNB among smokers and recent (<12m) ex-smokers



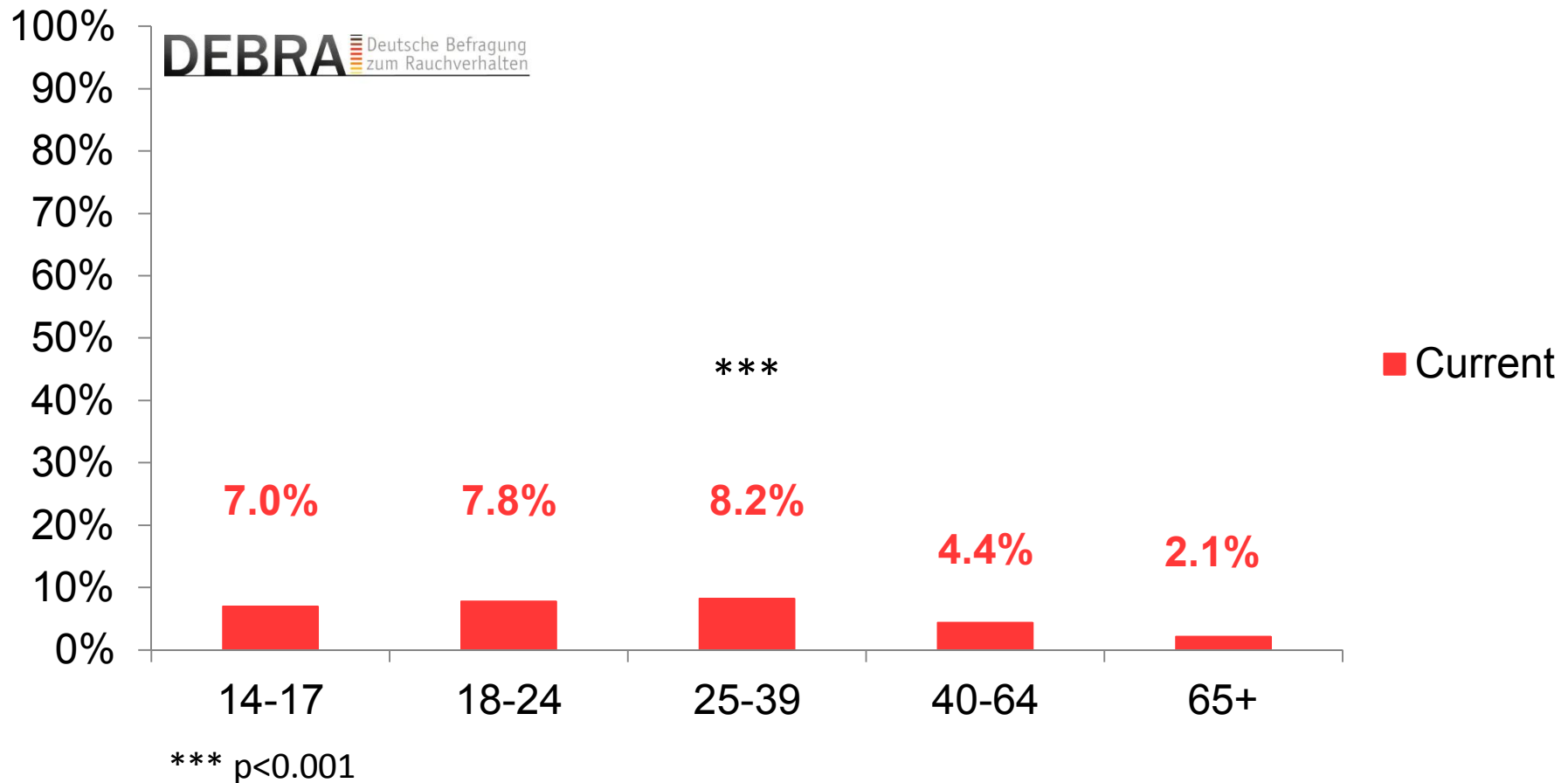
# Ever use of HNB by sex



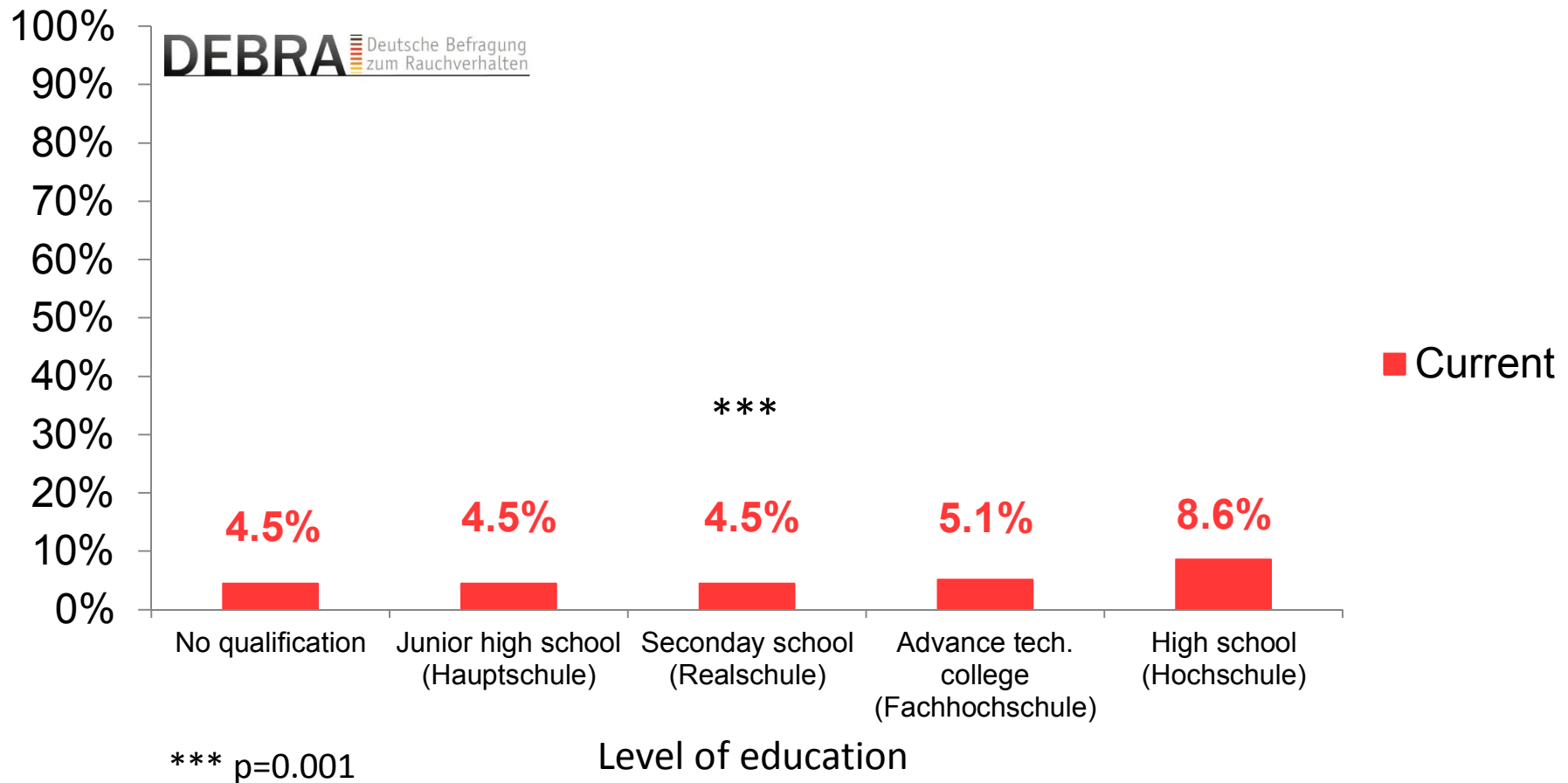
N.S.

N.S. = statistically not significant

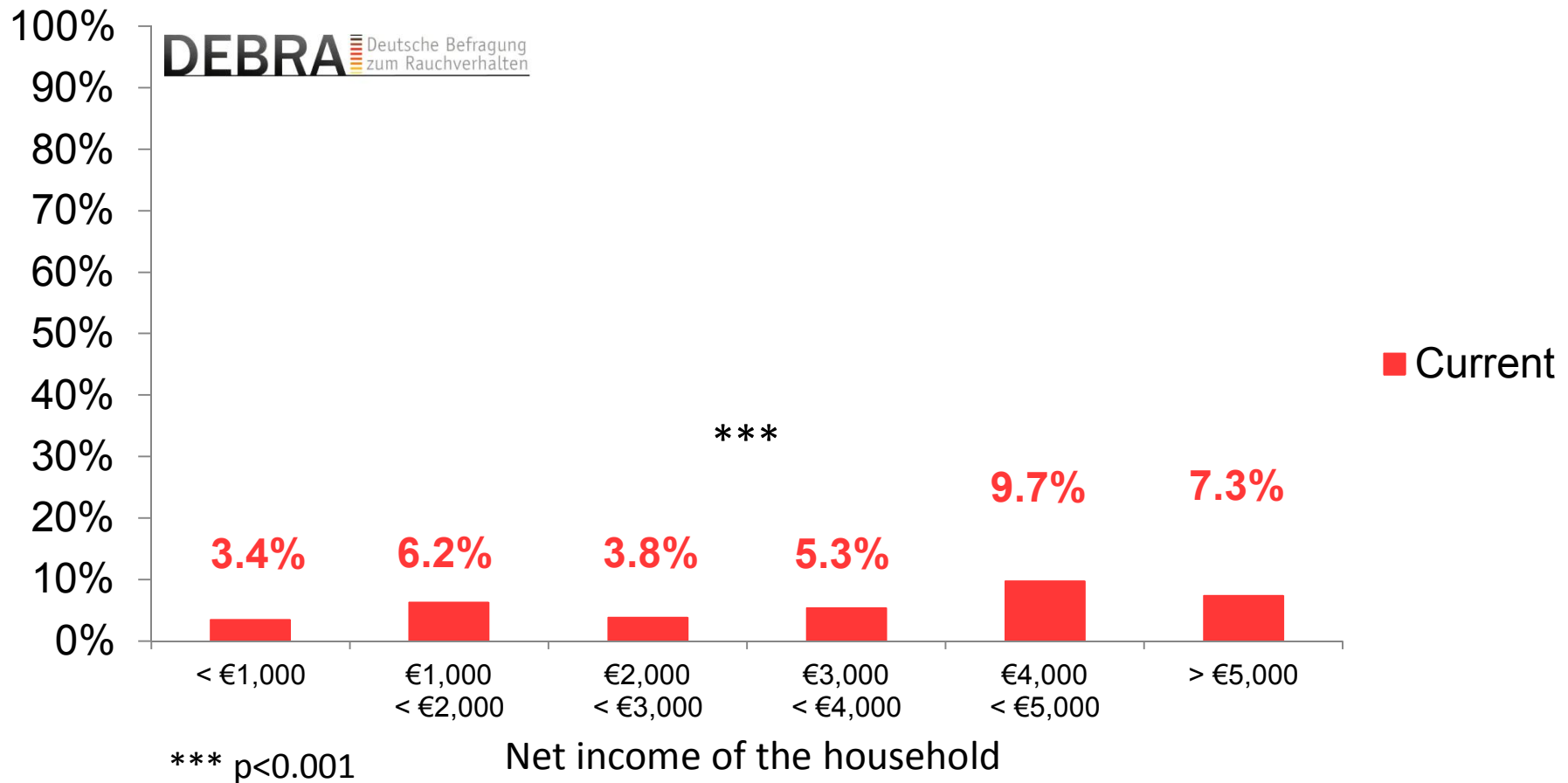
# Ever use of HNB by age categories



# Ever use of HNB by education



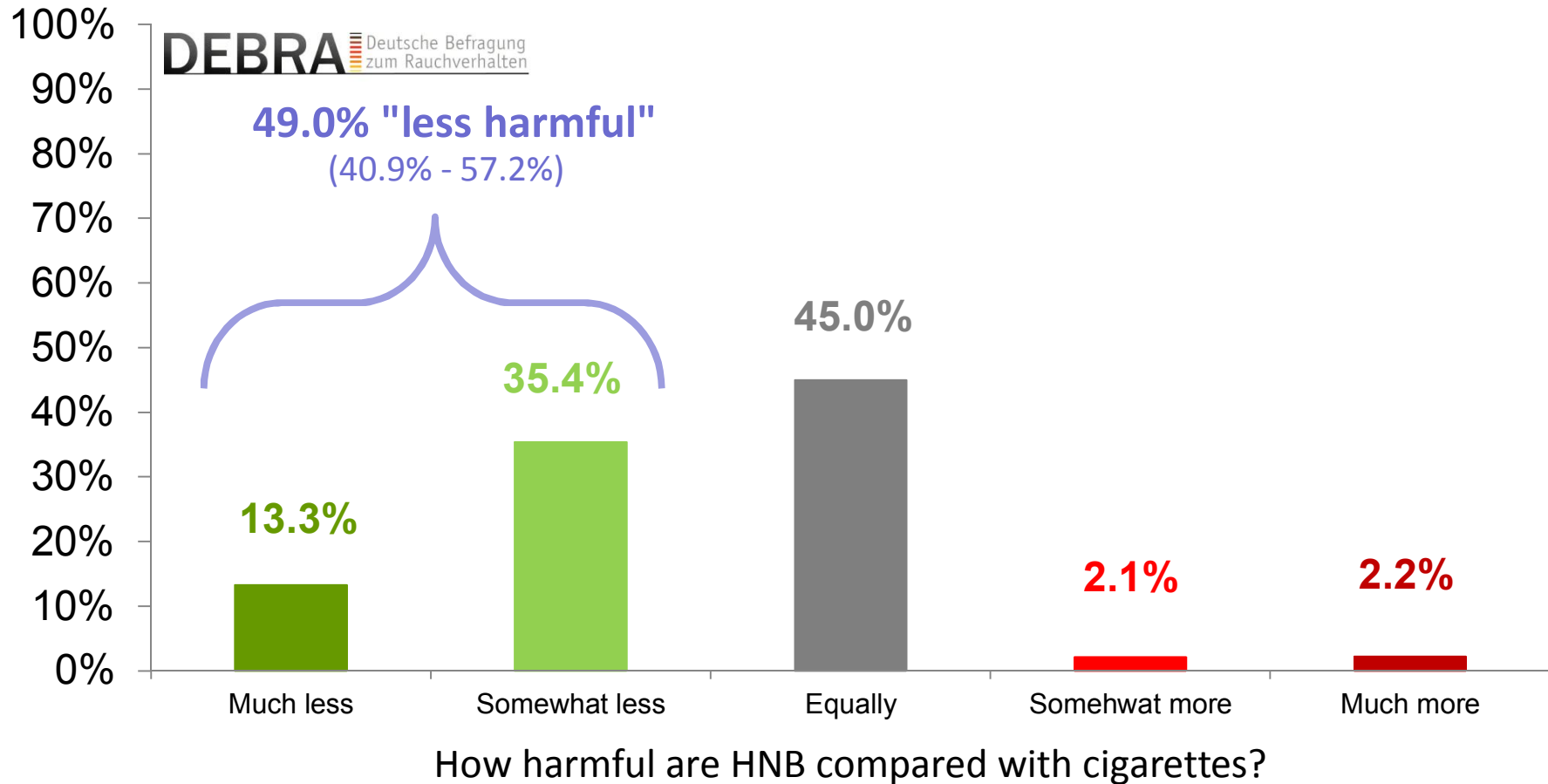
# Ever use of HNB by income





# Perceived health risks HNB vs. cigarettes

[N = 155 current + recent ex-smokers who ever used HNB]



# Discussion of key findings

In Germany, current use of HNB seems relatively low: 0.4% (0.3%-0.7%) among current and recent ex-smokers

- lower than in Japan (3.6% of population, >10% of smokers), available since 2014 [Tabuchi, Tob Control 2017]
- lower than in GB (0.8% of population), available since 2016 [Brose, Tob Reg Sci 2018]

# Discussion of key findings

In Germany, HNB seem to be used more frequently by people who are younger, higher educated and have higher incomes

- difficult to compare with other studies (sample of current + recent ex-smokers)
- potential explanations:
  - marketing strategy (trendy lifestyle product)
  - diffusion theory: people from higher social background more open to innovations / more resources [Pamper, Soc Sci Res 2005]
- if true: higher socioeconomic people benefit from this "harm reduction product" – for the moment

# Discussion of key findings

- Approximately half of ever users think HNB are less harmful than conventional cigarettes
  - other studies on HNB?
  - recent study from Germany: [Eichler, Dtsch Arztebl Int 2016]  
vs. cigarettes, e-cigarettes perceived by  
21% as less dangerous  
16% as more dangerous

# Acknowledgements

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Dr. Sabrina Kastaun

**KANTAR HEALTH**