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EVAPE

Correlates of perceived addiction and relative addictiveness of e-cigarettes

V. Lohner, A. McNeill, S. Schneider, S. Vollstädt-Klein, M. Andreas, D. Szafran, N. Grundinger, G. T. Fong, U. Mons

*Faculty of Medicine and University Hospital Cologne
University of Cologne, Germany*

Disclosures

Conflicts of interests

- Nothing to declare.

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Background and Aim

- Electronic cigarettes (e-cigarettes) associated with symptoms of addiction
 - Severity of addiction likely lower than for tobacco cigarettes
- EVAPE project: Evaluating the Addictive Potential of E-cigarettes
 - Neurobiological perspective
 - Sociological perspective
 - Epidemiological perspective



Background and Aim

- Utilisation of markers of addiction to tobacco cigarettes in e-cigarette research
 - Time to first cigarette after waking
 - Craving
 - Nicotine strength



- Aim: To examine correlates of perceived addiction to and relative addictiveness of e-cigarettes
 - Markers of addiction
 - Smoking and vaping characteristics

Methods

Study population

- ITC 4CV survey – England 1st wave (July – September 2016)
- Daily or weekly e-cigarette use for at least 4 months (incl. both exclusive and dual use)
- Aged 18 years and above

Perceived addiction and addictiveness

- Perceived addiction (Not/ Somewhat vs Very addicted)
- Relative addictiveness (Less vs Equally/ More addictive than smoking)

Markers of addiction: Time to first vape, urge to vape, nicotine strength

Vaping and smoking characteristics: Type, frequency, duration, enjoyment, satisfaction, intent to quit

Statistical data analysis

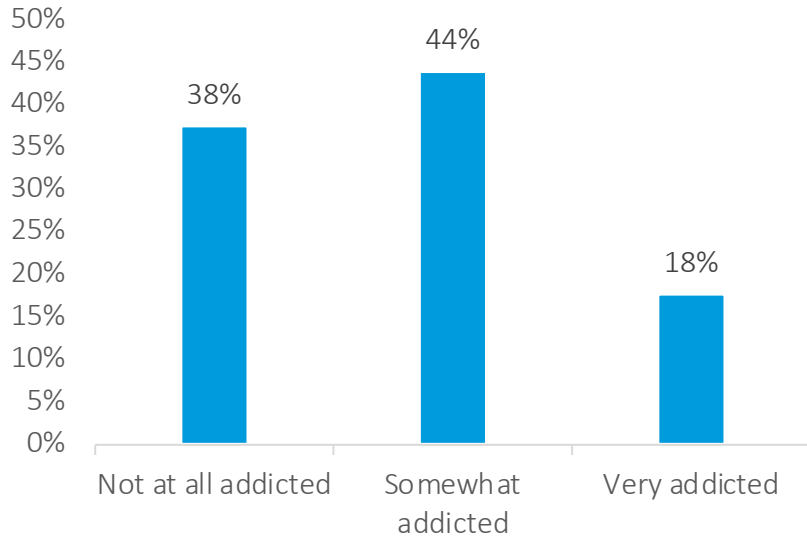
- Logistic regression models
- Adjusted for age, gender, education, and tobacco smoking status
- FDR-adjustment

Characteristics of the study sample (n = 832)

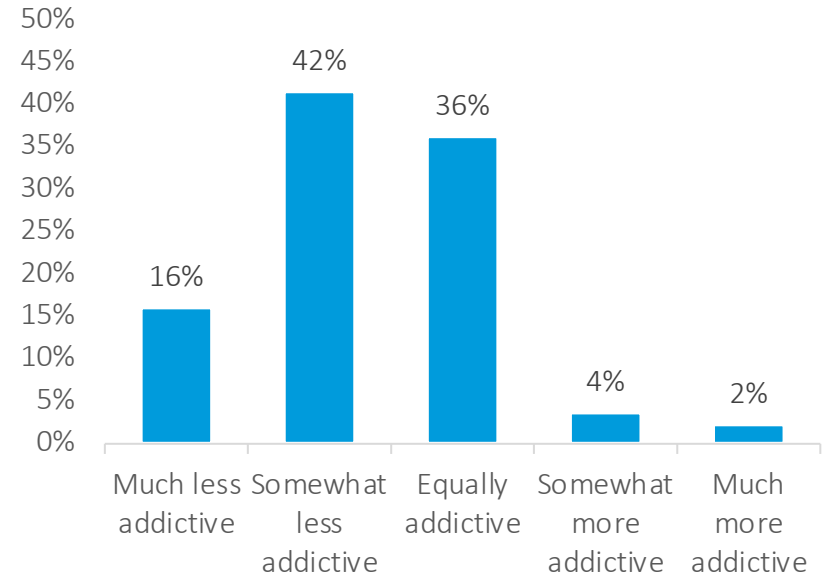
Age	18-24 years	234 (28.1)
	25-39 years	228 (27.4)
	40-54 years	158 (19.0)
	55+ years	212 (25.5)
Gender	Women	297 (35.7)
	Men	531 (63.8)
	Other	4 (0.5)
Education level	Low	170 (20.8)
	Moderate	340 (41.5)
	High	309 (37.7)
Tobacco cigarette smoking status	Non-smoker	165 (19.8)
	Occasional smoker	86 (10.3)
	Regular smoker	581 (69.8)
Frequency of vaping	Daily	534 (64.2)
	Weekly	298 (35.8)

Distributions of perceived addiction and perceived relative addictiveness

Perceived addiction (n=769)



Relative addictiveness (n=787)



Associations of perceived addiction and perceived relative addictiveness

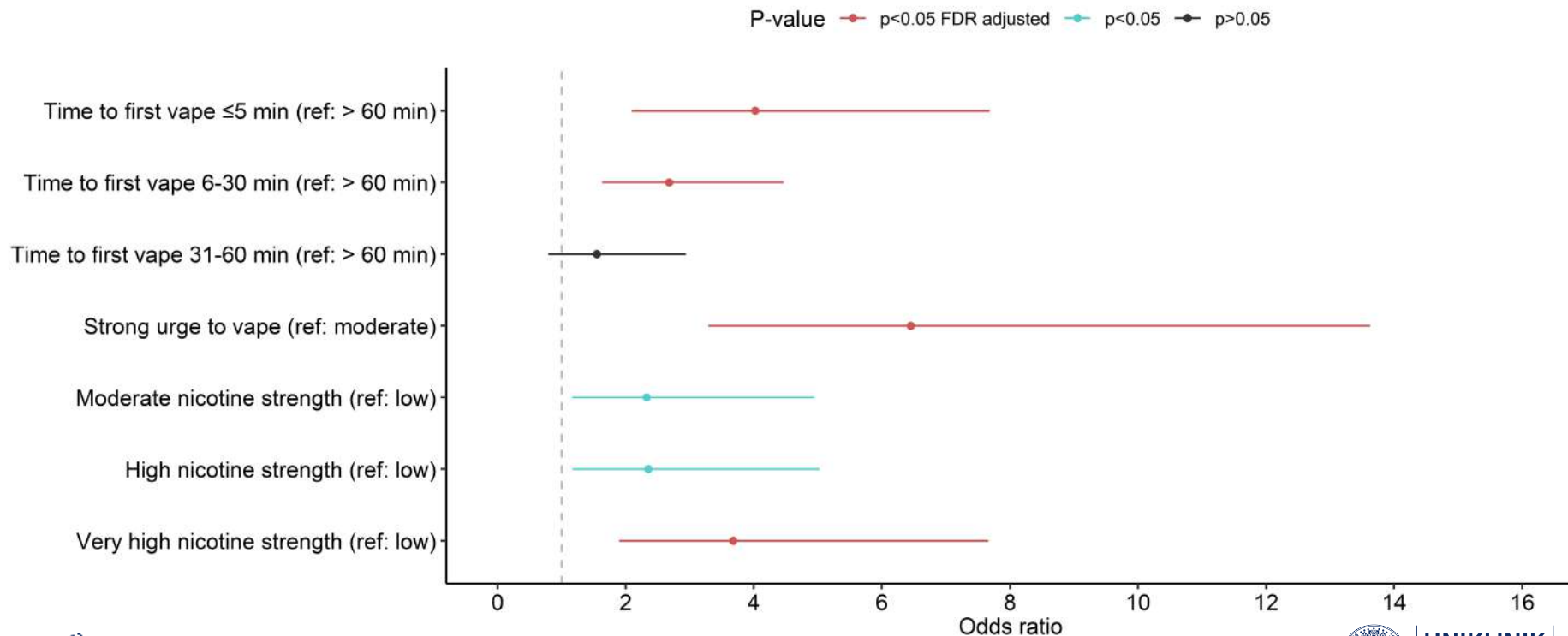
		Relative addictiveness		
		Less addictive than smoking	Equally/ More addictive than smoking	Σ
Perceived addiction	Not/ Somewhat addicted	382	224	606
	Very addicted	44	90	134
	Σ	426	314	730

Adjusted OR: 3.4 (95% CI: 2.3 - 5.1)

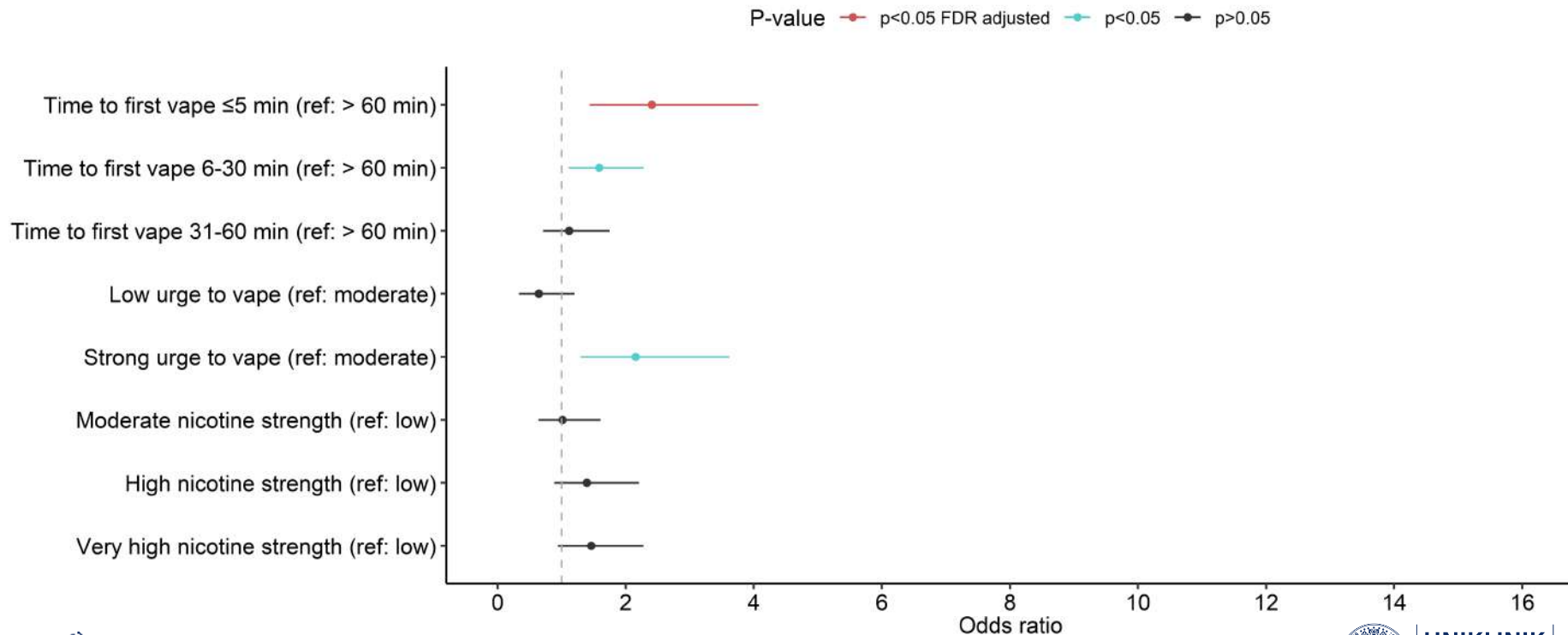
Markers of addiction

Time to first vape	5 minutes or less	83 (10.8)
	6-30 minutes	254 (33.0)
	31-60 minutes	117 (15.2)
	More than 60 minutes	316 (41.0)
Urge to vape	Low	82 (22.3)
	Moderate	119 (32.3)
	Strong	167 (45.4)
Nicotine strength	0 mg/ml	25 (3.0)
	1-8 mg/ml	329 (40.1)
	9-14 mg/ml	211 (25.7)
	≥15 mg/ml	256 (31.2)

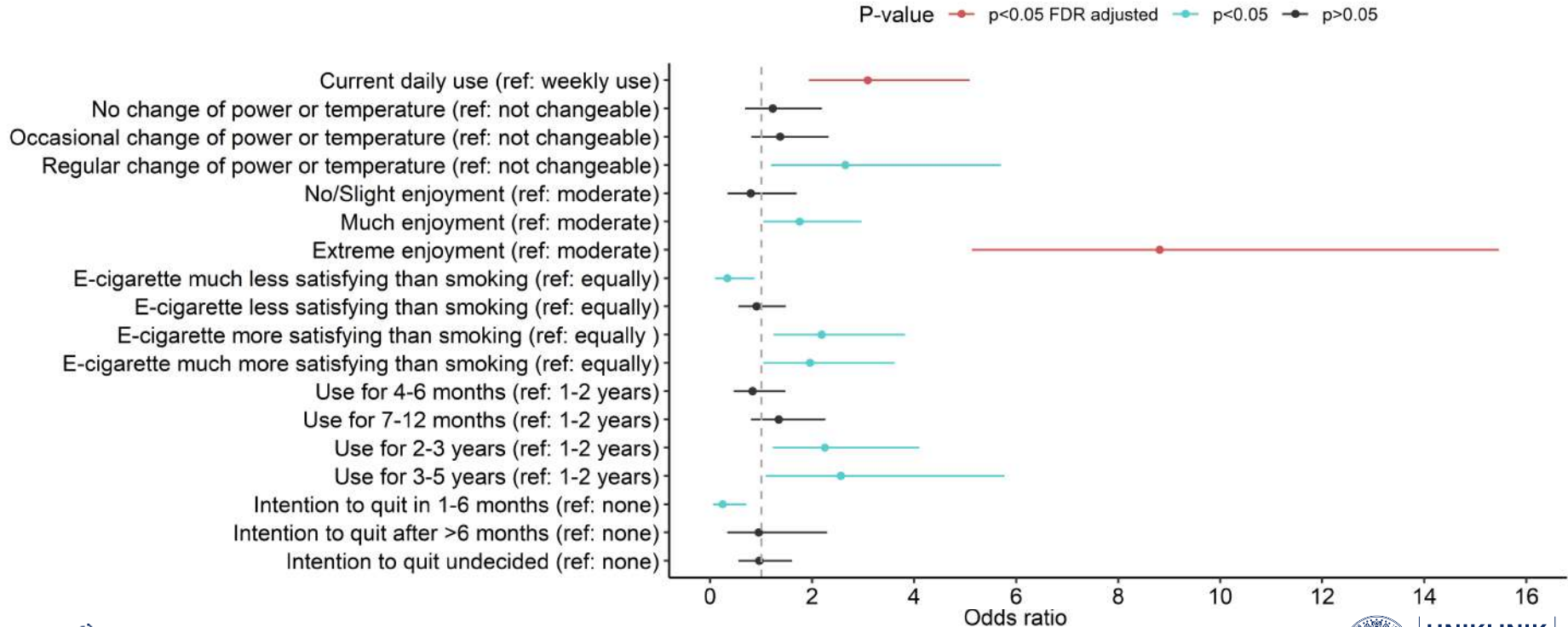
Associations of markers of addiction with perceived addiction



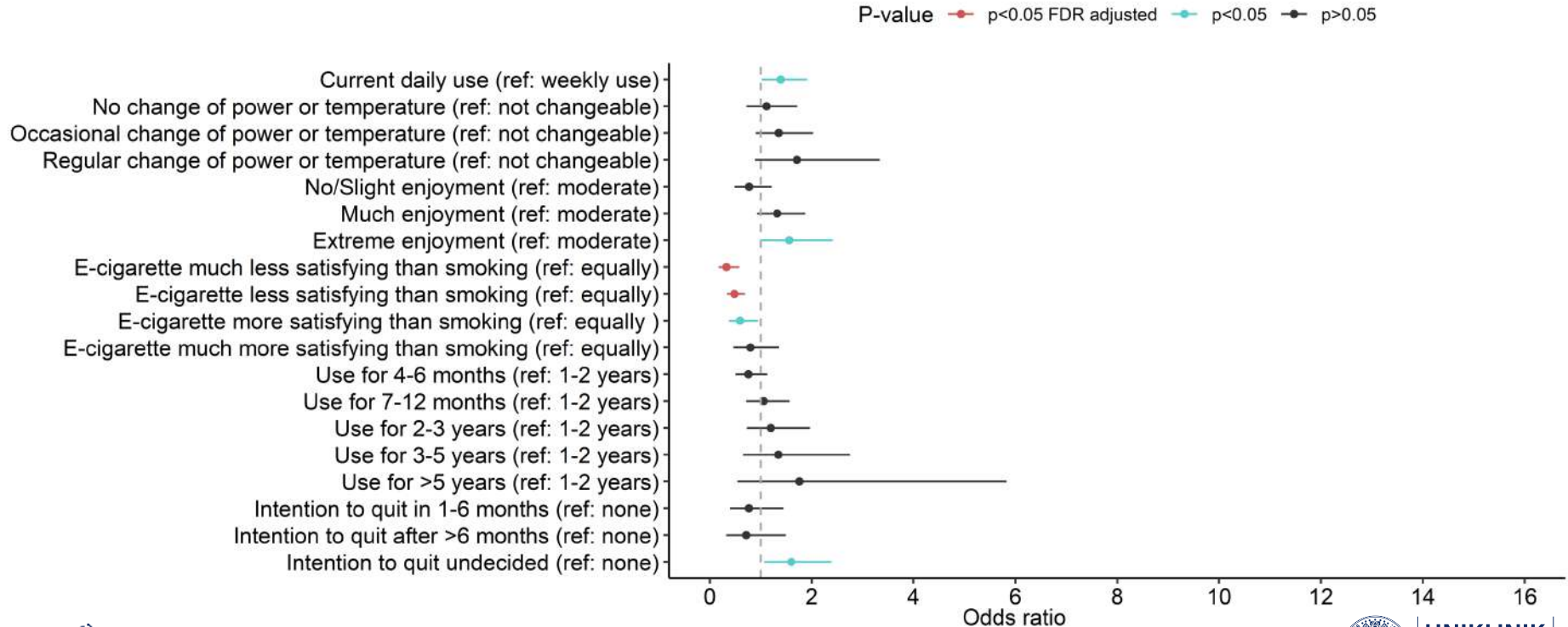
Associations of markers of addiction with relative addictiveness



Associations of smoking and vaping characteristics with perceived addiction



Associations of smoking and vaping characteristics with relative addictiveness



Summary

- Less than 1/5 respondents considered themselves very addicted to e-cigarettes
- Less than 1/10 respondents indicated that vaping is more addictive than smoking
- Levels of perceived addiction and relative addictiveness correspond
- Markers of addiction and perceived addiction prevalent in a relevant proportion of e-cigarette users
- Enjoyment and relative satisfaction associated with perceived addiction and relative addictiveness

Discussion

- Data were self-reported and of cross-sectional nature
- Self-reported level of perceived addiction could reflect nicotine addiction from (previous) long-term use of tobacco cigarettes

Conclusions

- Self-reported measures of perceived addiction might be an indicator of addiction
- Support of research indicating that an addictive potential of e-cigarettes is present, but lower than that of tobacco cigarettes
- Positive and negative reinforcement seems to play a role in perceived addiction and perceived relative addictiveness of e-cigarettes
- Longitudinal follow-up studies warranted



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Contact:
Valerie.Lohner@uk-koeln.de
 @ValerieLohner