



齐齐哈尔医学院附属第三医院

The Third Affiliated Hospital Of Qiqihar Medical University

齐齐哈尔市肿瘤医院

Qiqihar Cancer Hospital

# 酒精与癌症

中心实验室  
池涛



# 文献速递

THE LANCET  
Oncology

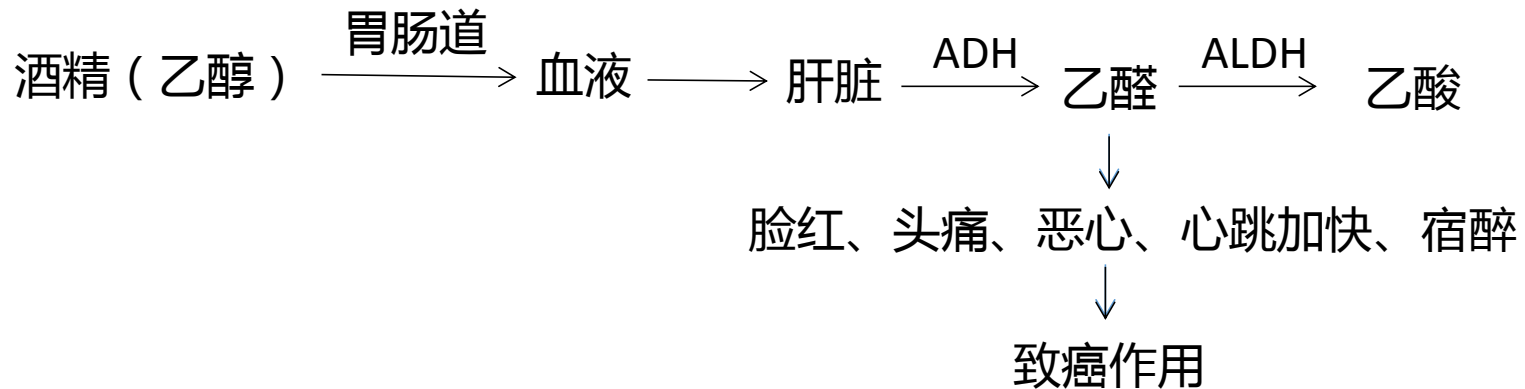
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## Global burden of cancer in 2020 attributable to alcohol consumption: a population-based study

Harriet Rungay, BSc   • Kevin Shield, PhD • Hadrien Charvat, PhD • Pietro Ferrari, PhD •  
Bundit Sornpaisarn, PhD • Prof Isidore Obot, PhD • et al. [Show all authors](#)

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# — Statistical analysis

## 1. Global number of alcohol-attributable cancer cases, population attributable fraction, and age-standardised incidence rate of alcohol-attributable cases in 2020, by cancer site and sex

	Males			Females			Total		
	Alcohol-attributable cases	Population attributable fraction	Age-standardised incidence rate per 100 000 males	Alcohol-attributable cases	Population attributable fraction	Age-standardised incidence rate per 100 000 females	Alcohol-attributable cases	Population attributable fraction	Age-standardised incidence rate per 100 000 people
Lip and oral cavity cancer (C00-C06)	66 700 (40 000-105 300)	25.9% (15.6-40.9)	1.6 (0.9-2.5)	8 200 (4 600-14 300)	7.3% (4.1-12.7)	0.2 (0.1-0.3)	74 900 (44 600-119 600)	20.2% (12.1-32.3)	0.9 (0.5-1.4)
Pharyngeal cancer (C09-C10, C12-C13)	37 000 (15 200-63 400)	25.3% (10.4-43.4)	1.8 (0.7-3.1)	2 500 (940-4 400)	7.4% (2.8-13.4)	0.1 (0.0-0.2)	39 400 (16 100-67 800)	22.0% (9.0-37.8)	0.5 (0.4-1.6)
Oesophageal cancer (C15)*	163 100 (94 200-231 000)	39.2% (22.7-55.6)	3.9 (2.2-5.5)	26 600 (16 700-43 700)	14.3% (9.0-23.5)	0.6 (0.4-0.9)	189 700 (110 900-274 600)	31.6% (18.4-45.7)	2.1 (1.3-3.1)
Colon cancer (C18)	76 900 (57 700-95 400)	13.0% (9.7-16.1)	1.8 (1.3-2.2)	14 600 (10 600-19 100)	2.7% (1.9-3.5)	0.3 (0.2-0.4)	91 500 (68 300-114 500)	8.1% (6.0-10.1)	1.0 (0.7-1.2)
Rectal cancer (C19-C20)	57 300 (42 700-71 800)	13.0% (9.7-16.3)	1.4 (1.0-1.7)	7 800 (5 800-10 300)	2.7% (2.0-3.6)	0.2 (0.1-0.2)	65 100 (48 500-82 000)	9.0% (6.7-11.3)	0.7 (0.5-0.9)
Liver cancer (C22)†	141 300 (39 600-255 000)	22.7% (6.4-40.9)	3.3 (0.9-6.0)	13 400 (4 100-26 400)	5.0% (1.5-9.8)	0.3 (0.1-0.5)	154 700 (43 700-281 500)	17.3% (4.9-31.6)	1.7 (0.5-3.2)
Laryngeal cancer (C32)	26 400 (15 100-41 600)	16.6% (9.5-26.1)	0.6 (0.4-1.0)	1 200 (620-1 700)	4.7% (2.5-7.0)	0.0 (0.0-0.0)	27 600 (15 700-43 300)	15.0% (8.6-23.6)	0.3 (0.2-0.5)
Breast cancer (C50)	..	..	..	98 300 (68 200-130 500)	4.4% (3.0-5.8)	2.2 (1.3-3.2)	98 300 (68 200-130 500)	4.4% (3.0-5.8)	1.1 (0.7-1.6)
All sites excluding non-melanoma skin cancer (C00-C97 excluding C44)	568 700 (422 500-731 100)	6.1% (4.6-7.9)	13.4 (10.0-17.4)	172 600 (135 900-220 100)	2.0% (1.6-2.5)	3.7 (2.7-5.0)	741 300 (558 500-951 200)	4.1% (3.1-5.3)	8.4 (6.2-10.9)

Data in parentheses are 95% uncertainty intervals. Cancer types were defined according to International Classification of Diseases (tenth revision; ICD-10) and International Classification of Diseases for Oncology (third edition; ICD-O-3). \*Alcohol-attributable cases of oesophageal cancer calculated as estimates of squamous cell carcinoma (ICD-10 code C15; ICD-O-3 codes 8050-8078, 8083-8084); the population attributable fraction is of all oesophageal cancer cases (ICD-10 code C15). †Alcohol-attributable cases of liver cancer calculated as estimates of hepatocellular carcinoma (ICD-10 code C22; ICD-O-3 code, 8170-8175); the population attributable fraction is of all liver cancer cases (ICD-10 code C22).

**Table:** Global number of alcohol-attributable cancer cases, population attributable fraction, and age-standardised incidence rate of alcohol-attributable cases in 2020, by cancer site and sex

# 一、Statistical analysis

10g酒精相当于100ml红酒，或一罐375ml啤酒，或30ml40度白酒

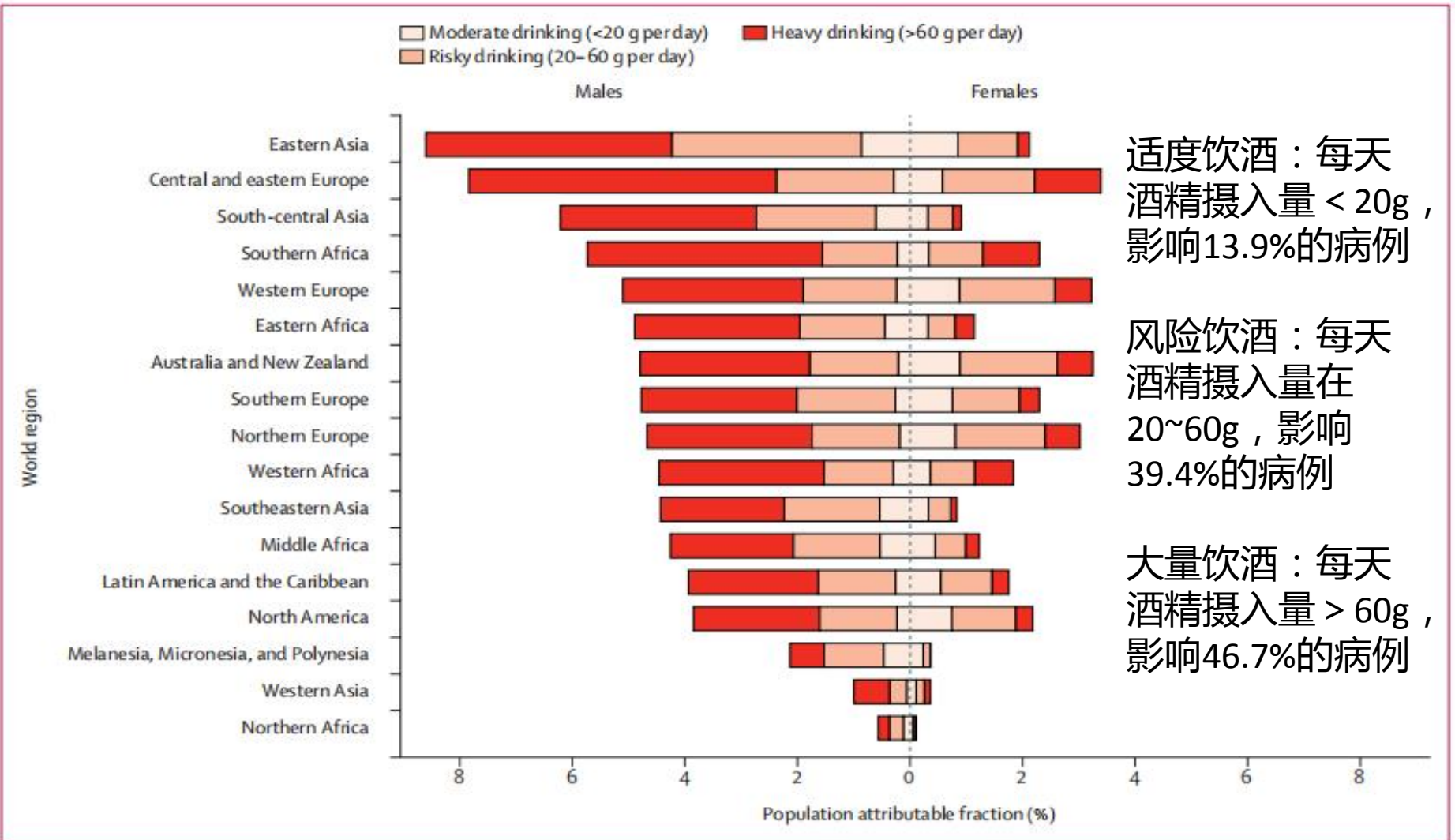
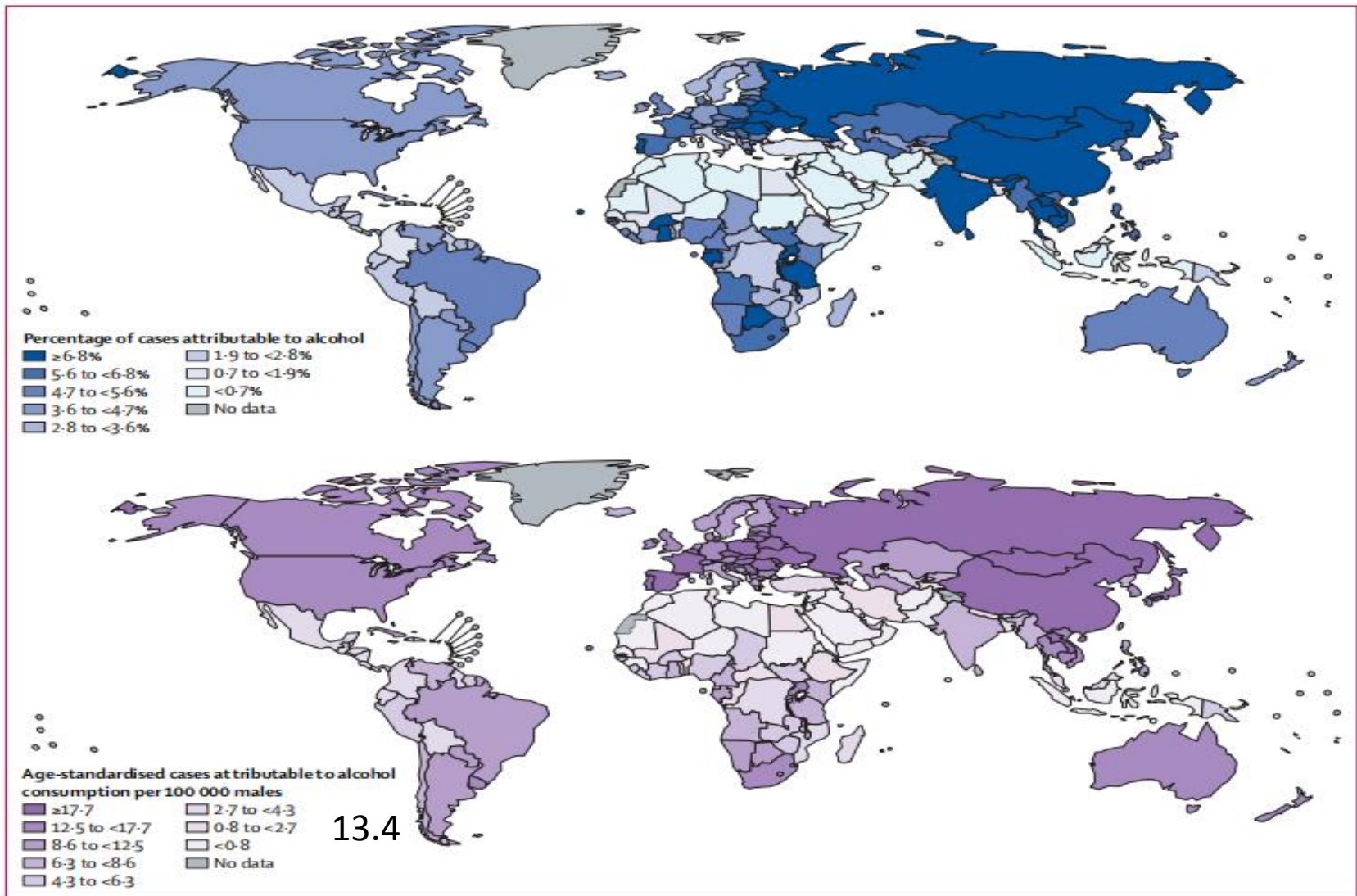


Figure 1: Population attributable fractions, by alcohol consumption category, sex, and world region

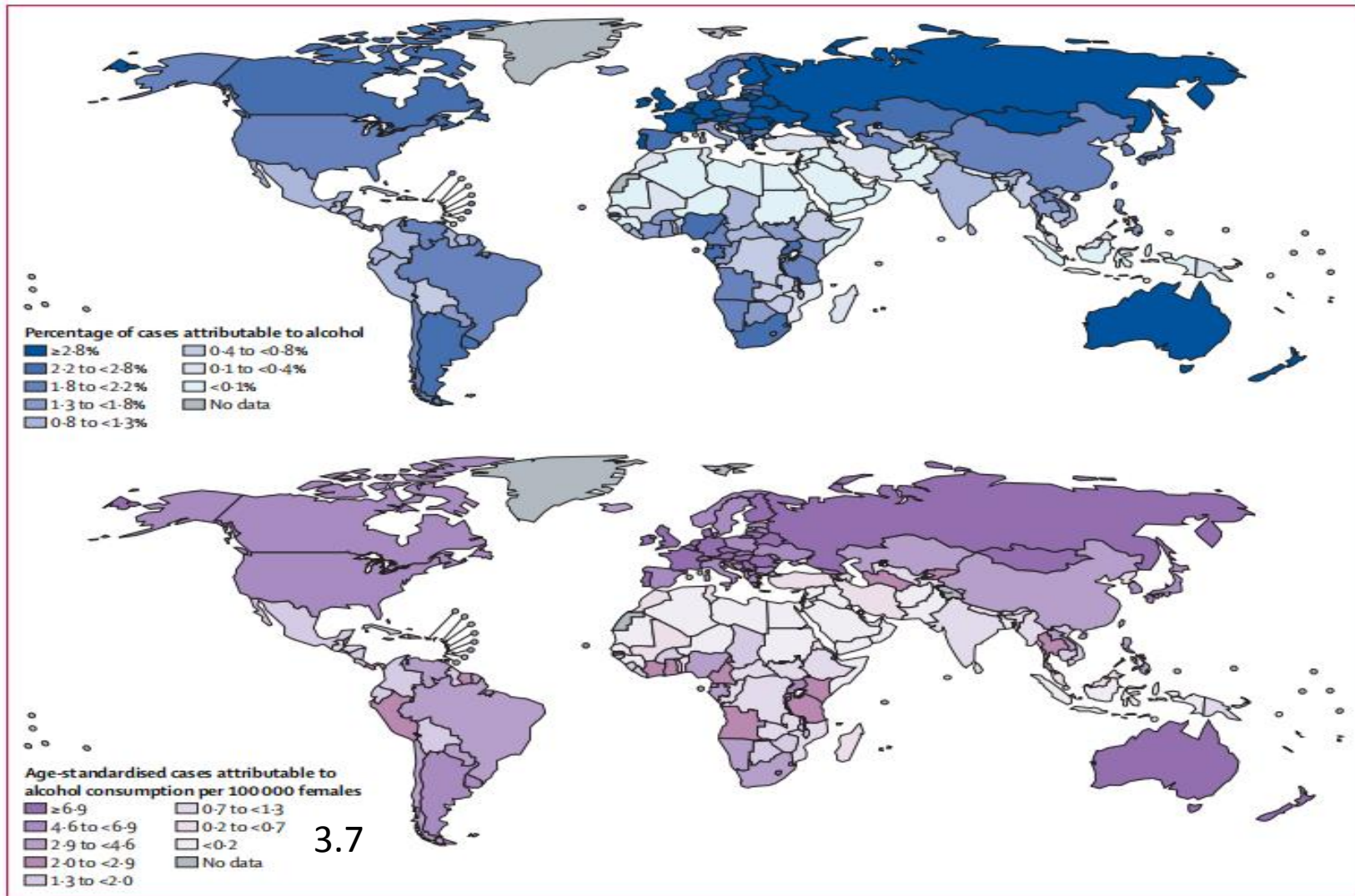
## 二、 Results

### 2. Population attributable fraction and age-standardised incidence rate of alcohol-attributable cancer cases in males in 2020, by country



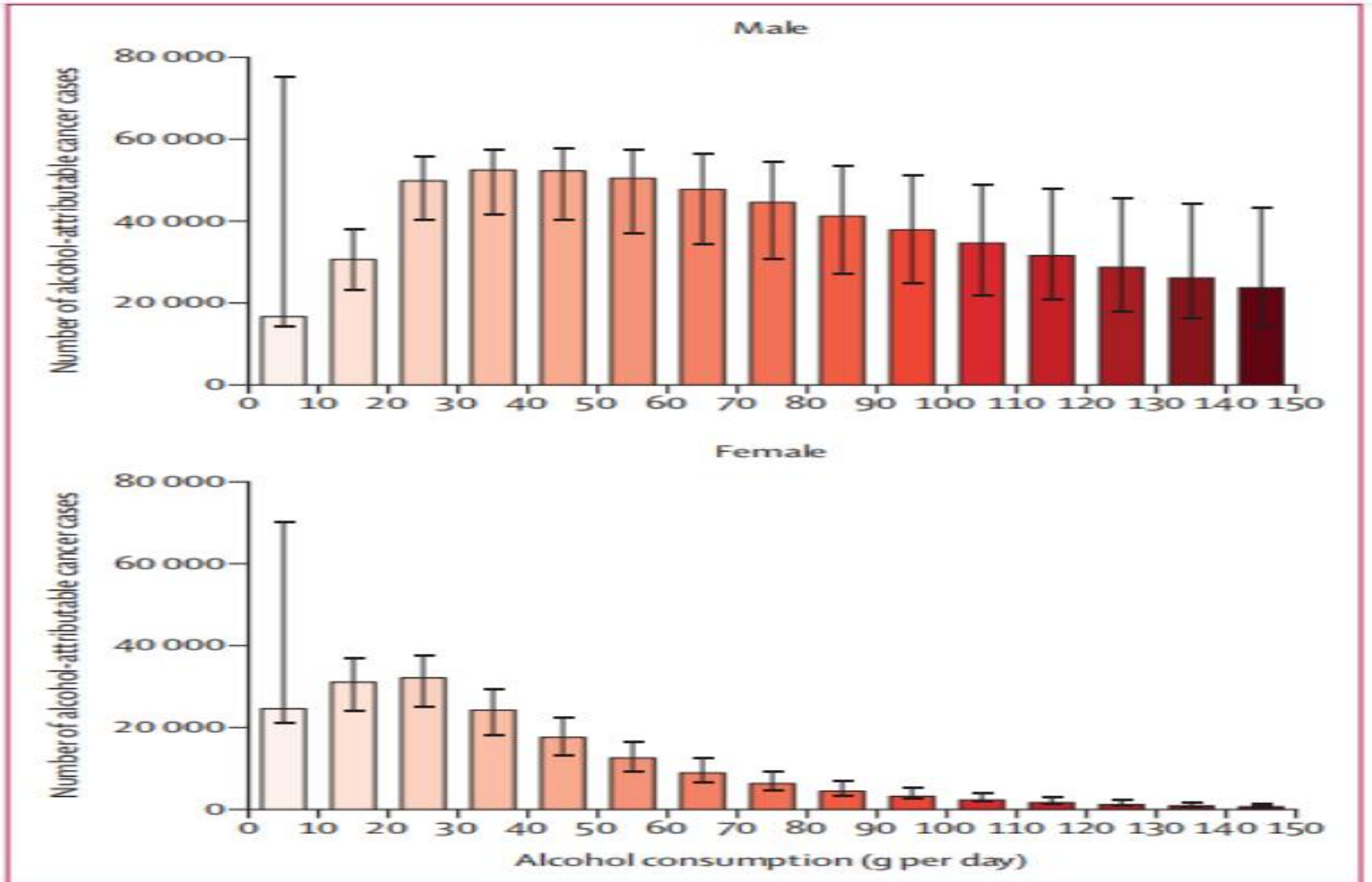
## 二、 Results

### 3. Population attributable fraction and age-standardised incidence rate of alcohol-attributable cancer cases in females in 2020, by country



## 二、 Results

4. Global number of alcohol-attributable cancer cases, by 10 g per day increase in alcohol consumption and sex



## 三、Discussion

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### 1.为什么中国是饮酒致癌的高危人群呢？

因为包括中国在内的东亚人群中，携带乙醛脱氢酶突变等位基因（ALDH2\*2）的更多，高达28%-45%。这种遗传变异导致更容易因为摄入酒精而发生癌症。

### 2.酒精可通过多种生物学途径导致癌症

- 1.DNA损伤和蛋白质、脂质代谢的改变；
- 2.氧化应激；
- 3.雌激素和雄激素等激素调节的改变；
- 4.作为其他致癌物质（如烟草中的化学物质）的溶剂，间接促进癌症的发展。



# 文献速递

➤ [Lancet. 2022 Jul 16;400\(10347\):185-235. doi: 10.1016/S0140-6736\(22\)00847-9](#) <sup>(\*)</sup>.

IF: 202.731

## Population-level risks of alcohol consumption by amount, geography, age, sex, and year: a systematic analysis for the Global Burden of Disease Study 2020

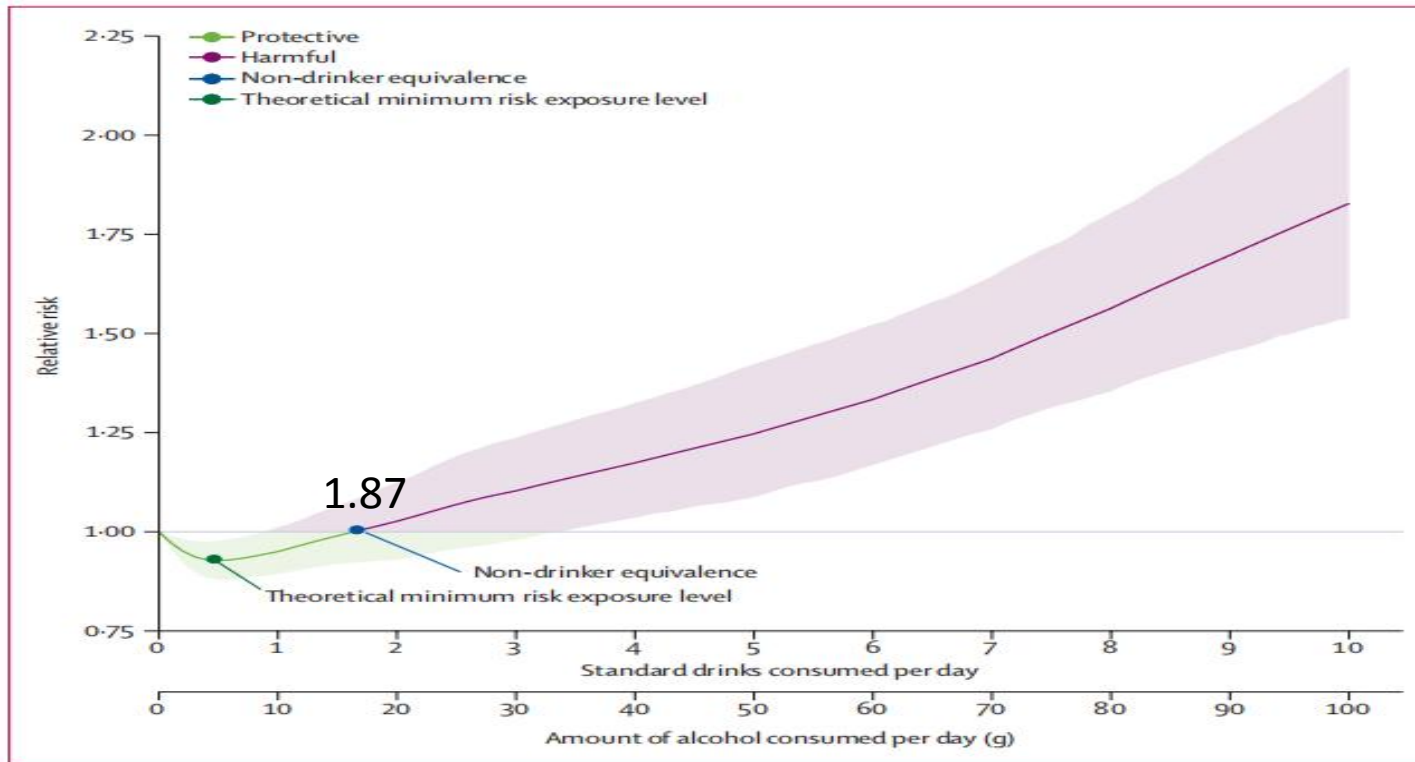
1.与适度饮酒相关的健康风险仍存在争议。少量饮酒可能会降低某些健康后果的风险，但会增加其他健康后果的风险，这表明总体风险部分取决于背景发病率，而背景发病率因地区、年龄、性别和年份而不同。

2.第一个考虑疾病背景发病率对酒精消费水平的影响的研究

3.在通过对饮酒安全值与性别、年龄、地域等方面的分层影响进行了系统研究后，研究指出，40岁以上的成年人每天喝一两杯酒，可能会降低患心脏病、中风和糖尿病的风险，而对于40岁以下的人来说，并没有同样的好处。

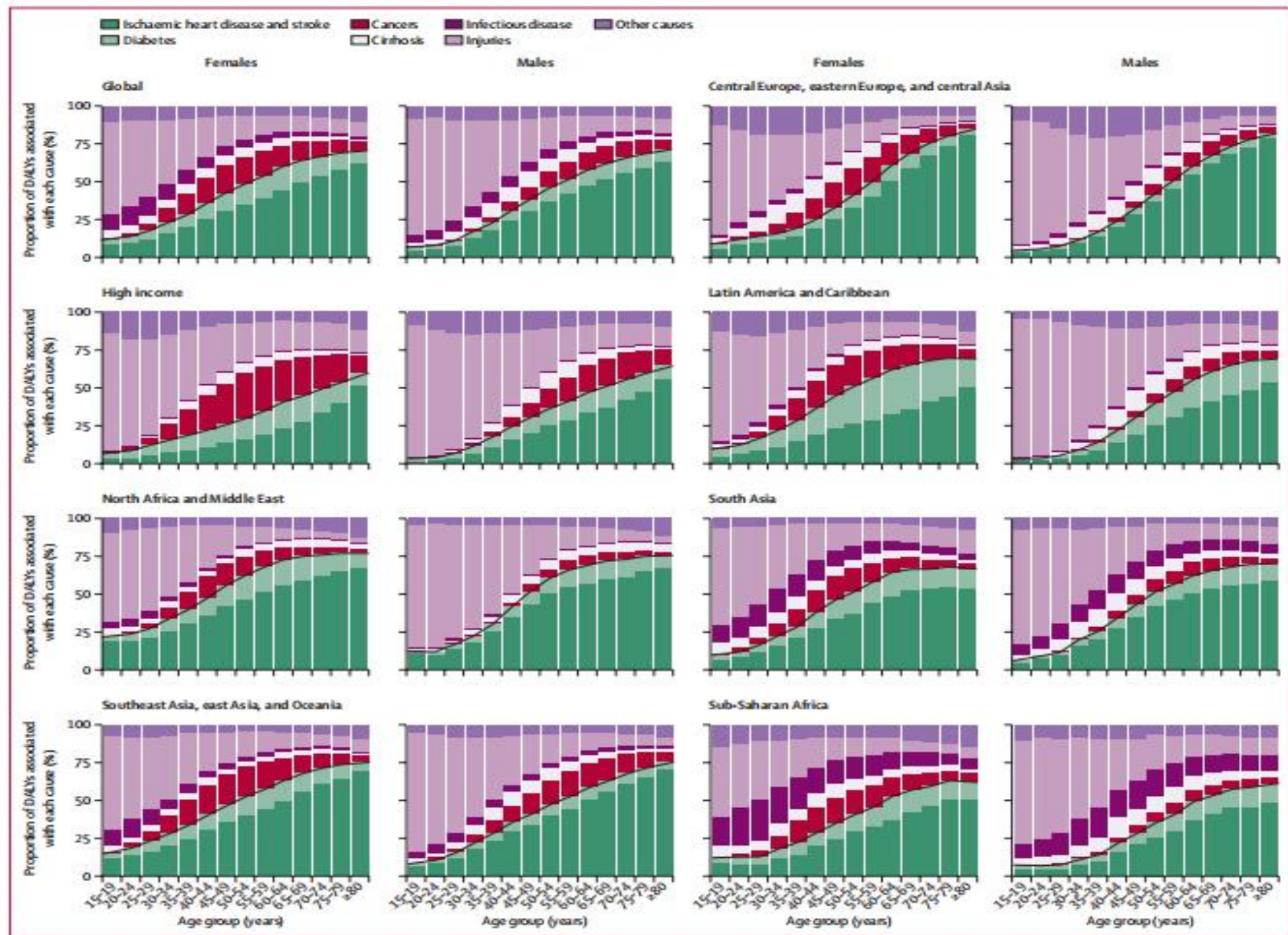
# 一、Statistical analysis

几项研究发现饮酒与全因死亡率或负担之间存在J型关系的证据；在低消费水平下，酒精会降低全因死亡的风险，而超过某个阈值则会增加风险。



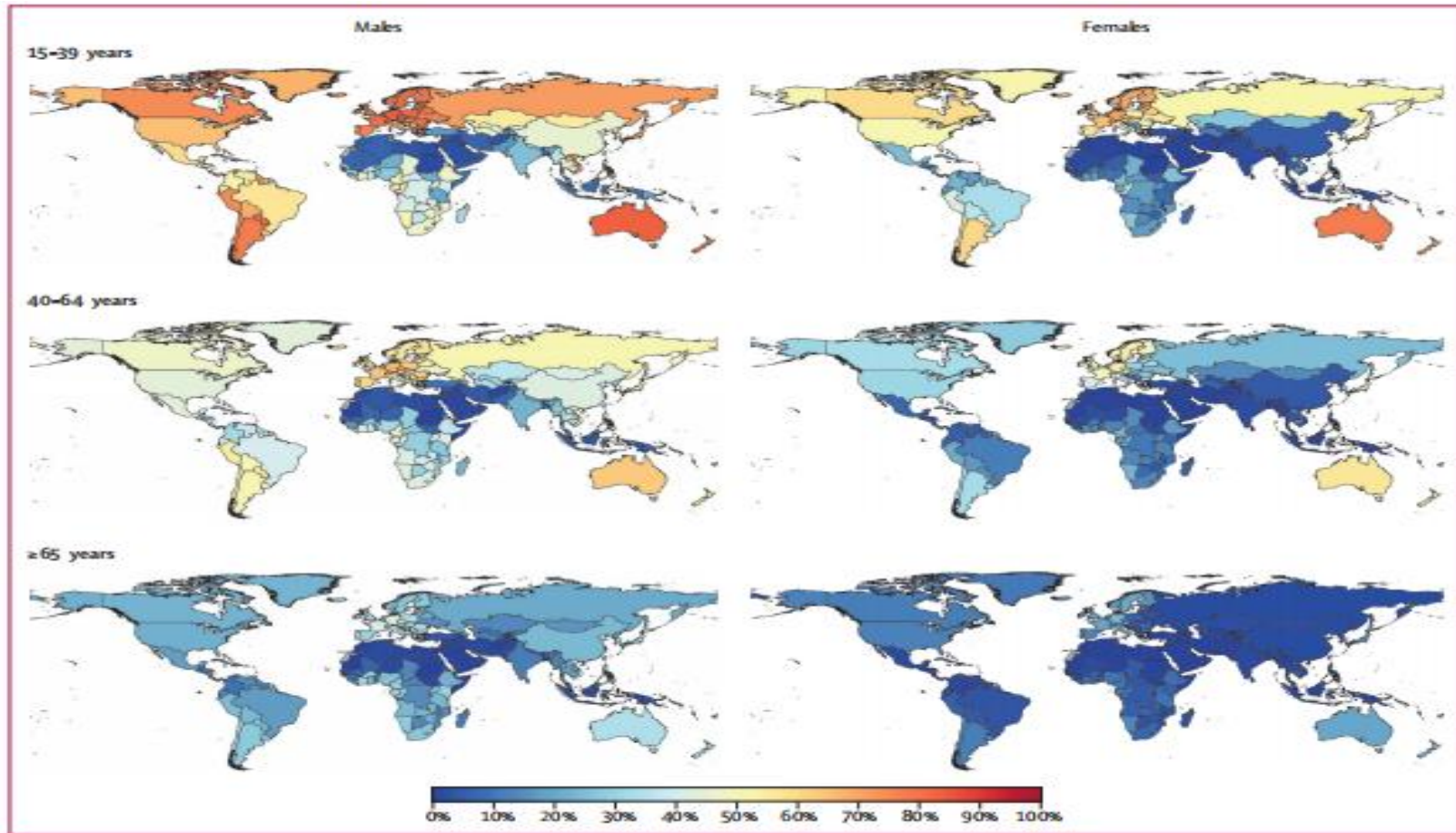
然而，2018年《柳叶刀》上发表“Alcohol use and burden for 195 countries and territories, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016”强调一切酒精消费行为，无论数量多少，都会损害健康。

# 一、Statistical analysis



# 一、Statistical analysis

在饮酒过量的人群中，最常见的年龄段是15-39岁的人群，约占总人数比例的60%，而饮酒过量的男性占比则高达76.9%



Proportion of the population consuming harmful amounts of alcohol, defined as consumption in excess of the mean non-drinker equivalence level, by sex and age group, in 2020

## 二、Results

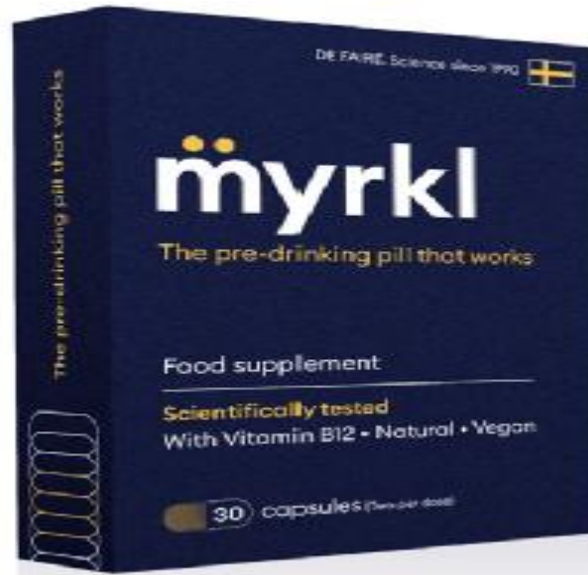
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1. 对于15-39岁的年轻人酒精产生相关健康风险的主要原因是受伤：过量饮酒导致的摔倒，交通事故等；而饮酒对于老年人的疾病负担影响，主要表现为心血管疾病以及癌症风险的影响，因此，在考虑酒精对人体造成健康总危害时，需要考虑人群中现有疾病的情况。
2. 在40岁以上且没有任何潜在健康风险的成年人，少量饮酒可能会健康获益，如降低心脏病、中风以及糖尿病的发生风险。而对于安全饮酒量的阈值也出现了一定的升高，健康风险最小化的酒精消费量每天为0.5到2个标准杯。

# 三、解酒药

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2022年7月4日，由瑞典公司 De Faire Medical 开发的药物Myrkl在英国上市。该药号称首款真正有效的解酒药，是一种能在60分钟内分解70%酒精的益生菌制剂。



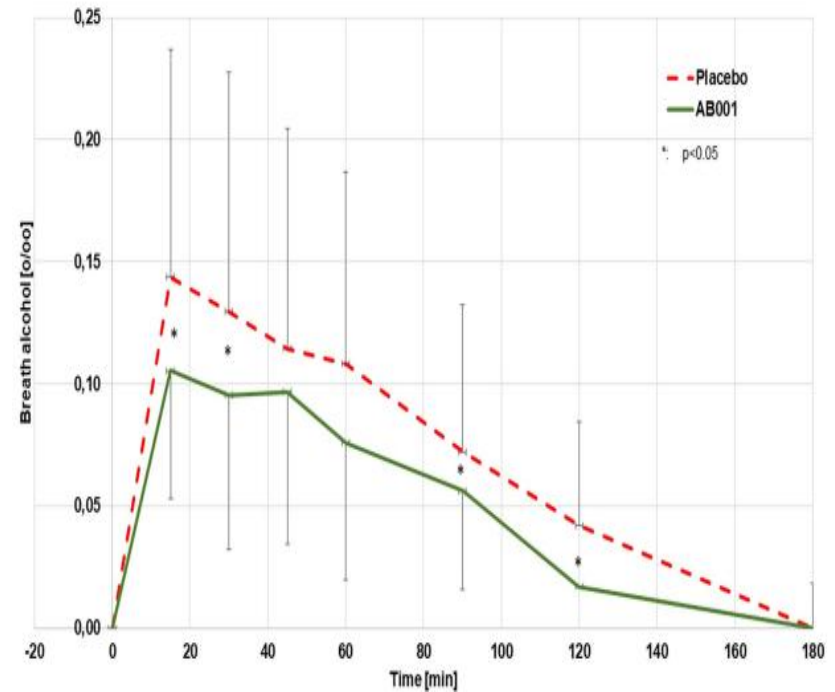
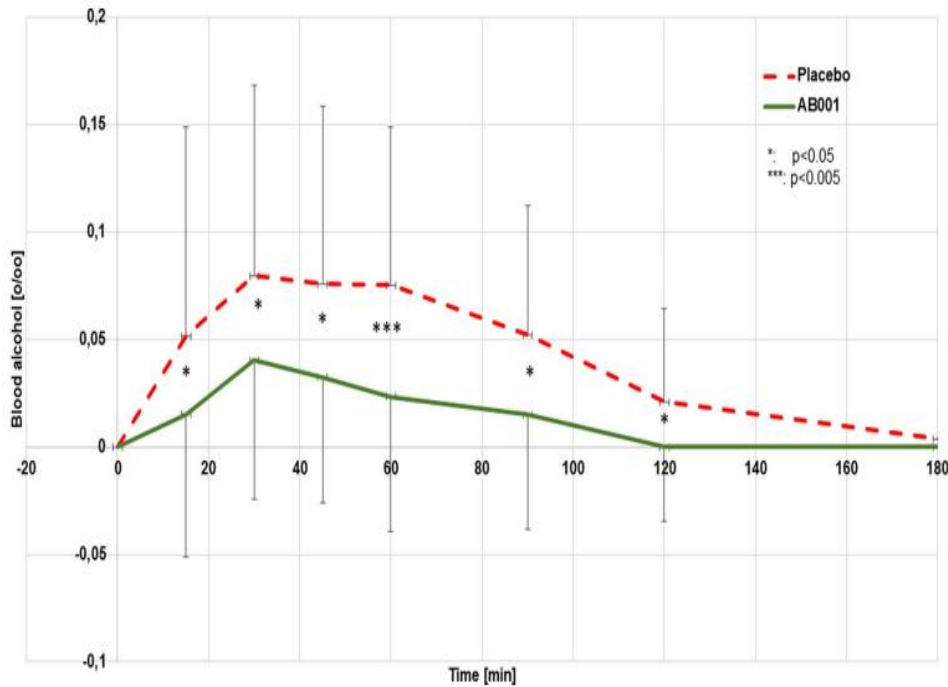
主要成分是两种肠道细菌——枯草芽孢杆菌和凝结芽孢杆菌

# 三、解酒药

## Chronic Uptake of A Probiotic Nutritional Supplement (AB001) Inhibits Absorption of Ethylalcohol in the Intestine Tract – Results from a Randomized Double-blind Crossover Study

Andreas Pfützner<sup>1,2</sup>, Mina Hanna<sup>1</sup>, Yuriko Andor<sup>1</sup>, Daniela Sachsenheimer<sup>1</sup>, Filiz Demircik<sup>3</sup>, Tobias Wittig<sup>3</sup> and Johan de Faire<sup>4</sup>

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## 四、结论

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在部分人群中发现的不饮酒能够将健康损失降至最低的研究结果，并不等同于戒酒建议；同样，适量饮酒能够降低部分人群健康风险的风险，也不等同于建议40岁以上的人群都可以适度地饮酒。



谢谢！