

# 禁煙科学

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**Original Article****Investigation of Current Smoking Status of Dentistry Students  
Among Smoke-Free Premises in Dental University Hospital**Nobutaka Okusa<sup>1</sup>, Kazuya Masuno<sup>2</sup>, Hidenori Matsumoto<sup>2</sup>, Tetsunari Nishikawa<sup>2</sup>, Pao-Li Wang<sup>2</sup>**SUMMARY**

The whole premise of the university hospital has become smoke-free since April 2018.

Anonymous self-administered questionnaire were taken in total of 296 dentistry program students, which includes 137 students from 5th year who underwent dental clinical practices and 159 students from 6th year who terminated the preparation course for National Medical Practitioners Qualifying Examination, to investigate the opinion about smoke-free premises in the university hospital. Main contents of the questionnaire contain age, gender, current smoking status, reason of starting tobacco smoking, reason to quit smoking for a former smoker, and opinion about smoke-free premises in the university hospital. Most students answered that they have start smoking since early age of middle school year with a reason of having their friends or senior year students influencing them. With the result of having 35.6% of students agreeing on having smoke-free premises, 37.5% of students without opinion or leaving the paper blank, and 13 out of 18 students with smoking habit have claimed to return the previous smoking area or newly setting complete separation of smoking area; majority of students did not have opinion about smoke-free area, in other word that most of students have no interest about the issue of secondhand smoke and hospital environment. In order to support student's future as being a medical expert, the repetition of anti-smoking education to expand the knowledge of the negative effects of smoking is suggested before graduation.

**Key words:** smoking, smoke-free premises, Dental University Hospital, Dental student

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## INTRODUCTION

Several studies have reported that tobacco smoking can be a risk factor of cardiac diseases<sup>1)</sup>, pulmonary diseases<sup>2)</sup>, cancers, genital disabilities, and periodontal diseases<sup>3)</sup>. Recently, a measure against secondhand smoke has been already taken based on the health promotion law since 2019. This enforcement is required immediately especially in educational institutions and hospitals by the upcoming date of July 2019. The environment of public area has improved in other countries (exp. US, UK, etc.), where smoking in public area is prohibited by the law. In Japan, public areas such as elementary school, middle school, high school and hospital are common smoke-free premises. However, it is still difficult to establish smoke-free premises in university because students and teachers with smoking habit are against the idea, although the number of university with smoke-free premises has increased yearly in Japan. Many cases about positive effects of having smoke-free premises were reported in the past<sup>4-7)</sup>. Since the Dental University is a place to educate students as future medical experts, it is necessary to provide an environment as educational purpose for the students to learn and understand the harmful effects of tobacco smoking against human body and environment. Smoke-free premises among university hospital were operated since April 2018, and opinions about it were investigated among students in dentistry program to consider the future foresight and approach for non-smoking environment.

## METHODS

### 1: Subjects

In total of 296 dentistry program students were selected as participants of the investigation, which includes 137 students from 5th year who underwent dental clinical practices and 159 students from 6th year who terminated the preparatory course for National Medical Practitioners Qualifying Examination in the university dental hospital lecture hall.

### 2: Study method

In April 2018, anonymous self-administered questionnaire sheets were handed out to the students during their recess time and were collected afterward.

### 3: Study details

The questionnaire contains the age, gender, current smoking status, reason of start smoking, reason of quit smoking for a former smoker, and opinion about smoke-free premises in the university hospital. The questions were written in an open format to write student's free opinion.

## RESULTS

The questionnaire sheets were handed out to 296 participants, and the total number of 216 sheets (73%) were returned with the result of average age of 25.8, 116 male and 100 female, 98 out of 137 students (71.5%) from 5th year and 118 out of 159 students (74.2%) from 6th year.

### 1: Current smoking status (Figure 1)

18 students out of 216 students who answered the questionnaire were current tobacco smokers. Out of these 18 students, 3 students were 5th year and 15 students were 6th year, with the ratio of 16 males and 2 females.



Figure 1. Current smoking status by the grade of students

## 2: Time of start smoking (Table 1)

A time of start smoking were answered by current and previous smokers in 5th and 6th year. The result shows that 7 students started to smoke since their middle school year (25%), 5 students from high school year (17.9%), 2 students from the year of preparatory school for University entrance exam (7.1%), 7 students since the first year of university (25%), 2 students since the second year of university (7.1%), 3 students since the third year of university (10.8%), and 2 students left the answer blank (7.1%).

## 3: Reason of start smoking (Table 2)

The reasons of start smoking were answered in a free text format. Most students answered that they have start smoking because of their friends or senior year students influenced them. Other minority reasons include curiosity, admiration, or for socialization. Some students started smoking without any specific reason.

Table 1. Time of start smoking (5th and 6th year students)

Middle school year	7 students
High school year	5 students
Preparatory school year	2 students
1st year of university	7 students
2nd year of university	2 students
3rd year of university	3 students
Blank	2 students

Table 2. Reason of current/previous smokers start smoking (Selected)

▪ Tobacco seemed tasty when other people were smoking
▪ Influenced by friends
▪ Curiosity
▪ Thought of gaining quality in life by smoking
▪ Admiration
▪ As a fashion

## 4: Reason of success to quit smoking (Table 3)

The reasons of success to quit smoking were answered in a free text format. Students answered various reasons such as increased price of tobacco, increased feeling of unwellness, difficulty of continuing activities in sport club, etc.

## 5: Opinions about smoke-free premises (table 4, 5, 6)

The opinions about smoke-free premises were answered in a free text format. 35.6% of students agreed and showed positive opinions about the smoke-free premises with many of them commenting on awareness against second hand smoking. 37.5% students handed back the questionnaire without any opinion or leaving the answer blank. 13 out of 18 students with smoking habit have claimed to return the previous smoking area or newly setting completely separated smoking areas. Current smoking student has also mentioned disappointment about the fact that people started to smoke tobacco just beside the area after having smoke-free premises.

Table 3. Reason and timing of quit smoking (Selected)

▪ Increased price of tobacco during 3rd year of university. (5th year student)
▪ Because of clinical practices at the hospital starting from 5th year. (5th year student)
▪ Quit smoking three years ago. It wasn't enjoyable to socialize with surrounding smokers. (5th year student)
▪ Quit smoking five years ago. Wanted to focus on studying. (6th year student)
▪ Quit smoking at the age of 27. Feeling of not being a trend of now a days, and because of becoming a dentist.

Table 4. Opinions about Smoke-Free Premises <Current smokers> (Selected)

▪ Opposite effect
▪ Alternative arrangement is required
▪ Want to have smoking area somewhere inside the premises
▪ Complete separation of smoking area
▪ Want previous smoking area to be set back
▪ It is bothering to go out of the premises every time to smoke
▪ There is no choice about having smoke-free premises but it is disappointing to see people start smoking just beside the premises.
▪ Increased littering of tobacco beside the smoke-free premises

Table 5. Opinions about smoke-free premises <non-smokers, previous smokers> (Selected)

▪ I think it is good to have smoke-free premises since I start to dislike the smell of tobacco after quit smoking
▪ It is understandable to have hospital as a smoke-free premises
▪ I was aware of second hand smoke so it is a glad thing to have smoke-free premises
▪ It is appropriate to have smoke-free premises in this time era
▪ Good to have smoke-free premises, especially as being a medical expert
▪ Now a situation is harsh on smokers but good for the hospital environment
▪ I agree of having smoke-free premises, but at the same time I see more people without a manner
▪ It is good to have smoke-free premises, but at the same time bad influences outside the premise is observed
▪ Smoking area has just changed to outside of premise
▪ <i>No comment</i>
▪ <i>Blank</i>

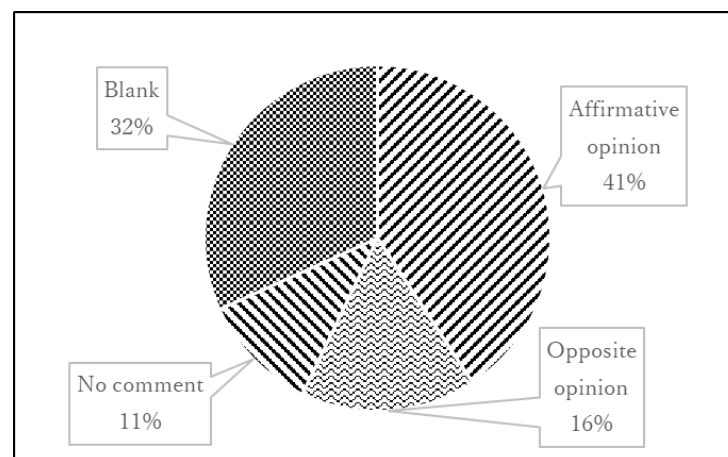


Table 6. Ratio of Opinions about Smoke-Free Premises

## DISCUSSION

After having university hospital as a smoke-free premises, questionnaire targeting 5th and 6th year dentistry students were taken to figure out their opinion about it, which is important to investigate the current smoking situation among students and to consider the method to decrease the number of students smoking. The result of investigation shows percentage of smokers in 5th and 6th year dentistry students of the university were 8.3%, which is lower than percentage of smokers in 1st through 4th year dentistry students (10%)<sup>8)</sup> and also indicates number below the national average. However, with the upcoming events such as Tokyo Olympic in 2020 and Osaka World Expo in 2025, the issue of second hand smoke and law against smoking prohibition is predicted to be immediately enforced. A recent measure against second hand smoke is already been taken based on health promotion law, and smoke-free premises in university hospital are scheduled from July 2019<sup>9)</sup>. Therefore, the fact of collecting students opinion against smoke-free premises through this investigation plays an important role of considering the future educational guidance.

As resulting more than 50% of students including current and previous smokers started to smoke tobacco in their early age of middle or high school, it indicates the importance of having anti-smoking education before the university entrance. Undergoing anti-smoking education immediately after the university entrance may be effective to decrease the smoking rate. Related areas such as periodontal disease, oral surgery and internal medicine often talk about the harm caused by smoking. Therefore, we have to secure time to spend on education.

However, scheduling the class for anti-smoking education is challenging due to the current dentistry curriculum that is already packed with compulsory subjects. Because of the importance of anti-smoking education, the distribution of time for anti-smoking education in the dentistry curriculum is considered as a future task.

Most of the students have answered that they started to smoke tobacco by the influence of their friends or senior year students, especially during second, fourth, or sixth year of university<sup>8)</sup>. The reasons for this could be predicted as students turning into 20 years old, which is a legal age to smoke during their 2nd year, increased stress and time for studying for the exams (CBT : Objectively evaluate the knowledge required for clinical training using a computer) (OSCE : Objectively evaluate basic clinical ability by simulated medical treatment) during the 4th year, and National Medical Practitioner Qualifying Exam at the end of 6th year. As it is written above, the importance of anti-smoking education is suggested and it must be done not only at the time of university entrance but should be repeated each time when students move up to senior classes.

Majority of students can be predicted to have no interest about smoke-free premises in university hospital as the result of questionnaire showed more students without opinion or leaving the answer blank are present than students who agreed on smoke-free premises in university hospital. According to this fact, there could be a high risk of students not warning other students who are smoking on the sly in smoke-free premises or smoking on the street<sup>10)</sup>. A factor of not having done proper anti-smoking education program to students from the time of university entrance can be a cause of this situation.

However, it may be able to change the university environment by approaching those students who are uninterested by teaching correct knowledge about negative effects of tobacco smoking causing on the human body, which lead them to understand the merits of non-smoking and to change their opinions to agree on smoke-free premises. In order to do this, it is necessary to perform anti-smoking education as a curriculum immediately after students move up to the senior year. The investigation was done on 1st year students of dental hygienist college and dental technician college by taking questionnaire before and after the anti-smoking education. The result showed more students answered questionnaire with clearer description about the importance of abstention from tobacco smoking after completing anti-smoking education than before undergoing the anti-smoking education. Therefore, anti-smoking education can be said to play an important role for students to obtain correct knowledge and awareness against tobacco smoking<sup>11)</sup>. Nakajima et al.<sup>12)</sup> have also reported that because smoke-free premises play major role of promoting tobacco smoking abstentions, and it can enhance awareness of students against smoking. No support for smokers has been established at our university. The goal is to establish the direction of support. In order to achieve this goal, it is

important to keep smoke-free premises in the university hospital and academic faculty members should make an effort for student's education about smoking before the graduation.

Health care providers should become a good role model for the society<sup>13)</sup> because they have a knowledge about the negative effects of tobacco smoking on human body. Therefore, dentistry students and faculty members<sup>14)</sup> should also understand and share their awareness against tobacco smoking as being a part of health care providers<sup>15)</sup>. From the point of medical experts, and as the university being a training institution for future dentists, the university must first set the goal of producing quality dentists, who can also support people not to smoke tobacco by satisfying the anti-smoking education program. Spreading awareness against smoking to people will probably be the first step of creating future tobacco-free society.

## CONCLUSION

With the result of collecting opinions from 5th and 6th year dental students about smoke-free premises by the use of questionnaire, setting university hospital as a smoke-free premises can be said to be effective guidance for non-smokers and previous smokers to continue non-smoking, but was turned out to be less effective for smokers to quit tobacco. I think that it is the cause of the lack of explanation of smoking cessation to the student in the university. Therefore, the importance of carrying out anti-smoking education as a program each year when students move up to senior grade and reconstructing supportive care system for the smokers were suggested from the result of investigation.

## ACKNOWLEDGMENTS

In conducting this study, we would like to express our appreciation to the instructors who provided a great deal of advice and guidance, and to all 5th and 6th year students of the School of Dentistry who gave their cooperation.

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# 禁煙科学 最近のエビデンス 2019/04

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本シリーズでは、最近の禁煙科学に関する医学情報を要約して紹介しています。医学論文や学会発表等から有用と思われたものを、あくまで私的ではありますが選別し、医療専門職以外の方々にも読みやすい形で提供することを目的としています。より詳細な内容につきましては、併記の原著等をご参照ください。

## 2019/04 目次

KKE258 「一次・二次喫煙のない人はどこで三次喫煙を受けているか（韓国）」

KKE259 「体重が増えすぎると禁煙による癌防止効果が失われる」

### KKE258

## 「一次・二次喫煙のない人はどこで三次喫煙を受けているか（韓国）」

Moon SY等、Int J Environ Res Public Health. 2019 Mar 8;16(5). PMID: 30857230

<https://www.mdpi.com/1660-4601/16/5/855/htm>

- 残留タバコ煙はサードハンドスモーク（三次喫煙）と呼ばれ、持続的な汚染物質曝露のもとになる。
- 韓国の小児3万人の研究では、三次喫煙曝露がある子は咳嗽関連症状が多かった。
- 副流煙や呼出煙の一時的な曝露に限られる受動喫煙（二次喫煙）と異なり、三次喫煙の汚染物質は1か月以上永続する。
- 公共の場や不特定多数が利用する環境における三次喫煙曝露の研究はなく、三次喫煙を受けやすい社会人口学的要因も不明である。
- 今回、これらに関する解析を行った。
- 2009-2011年の韓国環境健康調査のデータを解析した。
- 調査には20歳以上成人6,311人が含まれ、アンケートや尿中コチニン測定等が行われた。
- 今回の解析では、一次喫煙（能動喫煙）と二次喫煙（受動喫煙）の影響を除くため解析対象を、現在喫煙しておらず、受動喫煙曝露もないと回答した者に限定した。
- また尿中コチニンが測定されなかったり、一次喫煙を示唆する高値（>100ng/ml）の者などを除き、最終的に1,360人のデータを解析した。
- 社会人口学的変数として、性別、年代、婚姻状況、教育レベル、月収、職種、住居の種類、家族内の喫煙者の有無、を用いた。
- 公共施設の使用頻度に関する変数としては、公共交通機関の利用の有無とその種類、週あたりの使用頻度、公共施設の使用頻度（映画館、劇場、事業所、レストラン、サウナ、学術機関、美容室、ネットカフェ、カラオケ店、飲み屋、屋内運動施設、カルチャーセンター、宗教施設）、を用いた。
- 尿中コチニンの測定感度は0.27ng/mlであり、それ未満の場合は0.2ng/mlとした（1,360人のうち146人が相当した）。
- 尿中コチニン値は尿中クレアチニン値で標準化した。
- 正規分布でないことから相乗平均と自然対数変換を用い、t検定、分散分析とシェッフェの事後検定で単変量解析を行った。

- 共変量のうち $p < 0.25$ のものを初期一般化線形モデルに使用し、 $p < 0.05$ のものを後退的選択法に用いた。
- 解析対象者の内訳は81.9%が女性、年代は40-59歳が最多の47.9%、婚姻者が85.1%、職業は主婦が最多の38.2%、アパート住まいが43.2%、一戸建てが36.7%、複合住宅が18.8%、家族に喫煙者なしが71.5%、であった。
- 公共交通機関利用者は54.1%（バスが39.6%と最多）で、週8回以上の利用者は19.9%であった。
- 公共施設のうち、映画館、劇場、学術機関、ネットカフェ、カラオケ店、飲み屋、屋内運動施設、カルチャーセンターの利用者は少なかった。
- 単変量解析では尿中コチニン値は、女性（算術平均0.48ng/mg Cr）の方が男性（0.24ng/mg Cr）より高値であり、離婚や死別した人、教育レベルの低い人、複合住宅居住者、家族に喫煙者ありの者で高かった。
- 公共施設については、飲み屋、サウナ、公共交通機関、の利用頻度が高いと尿中コチニン値が有意に高かった。
- 一般化線形モデルの解析で尿中コチニン値が有意に高値であったのは、公共交通機関の頻用、サウナの頻用、ネットカフェの頻用、飲み屋利用、独身でない、高卒未満の学歴、家族に喫煙者あり、であった。
- 三次喫煙曝露の程度は、公共施設の使用の程度や個人の社会背景によって異なる。

### <選者コメント>

韓国より、日常生活における三次喫煙曝露の報告です。

国民環境健康調査のデータから、現喫煙者と受動喫煙を受けている人を除外し、尿中のコチニン値が比較されました。

一次・二次喫煙のない人の尿中コチニン値は、三次喫煙の指標になると考えられ、その値と日常生活における公共施設や公共交通機関の利用状況、個人の生活背景との関連が調べられました。三次喫煙は、公共交通機関、サウナ（皮膚からのニコチン吸収?）、ネットカフェ、飲み屋、をよく使う人に多くなっており、生活背景としては、離婚や死別した人、低学歴の人、家族に喫煙者がいる人、で多くなっていました。

解析対象者の8割以上が女性であること、約10年前でまだ禁煙化の進む以前の韓国の調査であること、など制約もありますが、三次喫煙の研究は実験室内などで行われることも多い中で、日常生活における広範な調査は貴重と思われ、提示させて頂きました。

### <その他の最近の報告>

KKE258a 「喫煙と白血球・赤血球増加の関係：デンマーク人の解析」

Pedersen KM等、*Arterioscler Thromb Vasc Biol.* 2019 Mar 14. (Epub ahead) PMID: 30866659

KKE258b 「リアルタイムfMRI神経フィードバック訓練で3か月禁煙できた人の脳機能の違い」

Karch S等、*Front Hum Neurosci.* 2019 Mar 4;13:65. PMID: 30886575

KKE258c 「16歳までに虐待を受けた子の21歳時喫煙率は2倍高い」

Kisely S等、*Nicotine Tob Res.* 2019 Mar 15. (Epub ahead) PMID: 30874810

KKE258d 「喫煙妊婦の子は2歳時の精神発達が遅れるが6か月間母乳育児を行っているとは遅れない」

Lee M等、*Environ Health.* 2019 Mar 20;18(1):22. PMID: 30894196

KKE258e 「大気汚染地域では呼気COが高くなり喫煙の影響が分かりにくくなる」

Gregorczyk-Maga I等、*Environ Res.* 2019 Feb 22;172:258-265. (Epub ahead) PMID: 30822558

KKE258f 「ストレスは、禁煙失敗者>現喫煙者>禁煙成功者の順に高かった（韓国の横断調査）」

Kim SJ等、*BMC Public Health.* 2019 Mar 6;19(1):267. PMID: 30841877

KKE258g 「禁煙意志のない喫煙者にはニコチンガム使用のほうがパッチより禁煙を促す」

Engle JL等、*Drug Alcohol Depend.* 2019 Feb 16;197:149-157. (Epub ahead) PMID: 30825795

KKE258h 「再発性歯周炎は喫煙と用量依存性があり禁煙年数と逆相関する：6年間の追跡」

Costa FO等、J Periodontol. 2019 Feb 22. (Epub ahead) PMID: 30801706

KKE258i 「フロリダ州の空港におけるタバコ煙PM2.5の計測」

Zhang M等、J Environ Public Health. 2019 Feb 3;2019:9648761. PMID: 30853997

KKE258j 「喫煙者と同居する中高年女性は中心性肥満のリスクが増える」

Holahan CJ等、Am J Health Promot. 2019 Mar 3;890117119833345. (Epub ahead) PMID: 30827136

KKE258k 「喫煙するアルコール使用障害者へのバレニクリン投与無作為化比較試験」

Bold KW等、Alcohol Clin Exp Res. 2019 Feb 28. (Epub ahead) PMID: 30817018

KKE258l 「小児期に2人以上の喫煙者と住んでいた人は成人期に脳卒中が多い」

Pistilli M等、Ann Epidemiol. 2019 Feb 5. (Epub ahead) PMID: 30799203

KKE258m 「現喫煙者は禁煙者より肺癌になる年齢が6歳若く、予後は2.4か月短い」

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KKE258n 「今後30年のモデルでは禁煙より防煙の介入比率を高めていくと費用対効果が最大化する」

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Arvin MC等、J Neurosci. 2019 Mar 13. (Epub ahead) PMID: 30867261

KKE258p 「尿中ニコチン代謝物によるニコチン摂取量推計はニコチン代謝速度により影響される」

Benowitz NL等、Nicotine Tob Res. 2019 Mar 10. (Epub ahead) PMID: 30852610

KKE258q 「バレニクリンの体内曝露量にはUGT2B7遺伝子多型より体重のほうが影響する」

Glatard A等、Eur J Clin Pharmacol. 2019 Mar 13. (Epub ahead) PMID: 30868192

## KKE259

### 「体重が増えすぎると禁煙による癌防止効果が失われる」

Kim K等、Cancer Epidemiol. 2019 Mar 29;60:86-92. (Epub ahead) PMID: 30933889

→禁煙後の体重増加は半年以内に生じ一定期間持続するが、肥満や過体重は癌リスク上昇とも関連する。

→禁煙後の体重増加が、癌リスクと関連するかは不明である。

→今回、100万人を超える20-30代の韓国人男性のデータをもとに解析を行った。

→2002-2015年の韓国国民健康保険のデータベースから、20-39歳男性の検診および保険請求データを入手した。

→2002-2003年と2004-2005年に隔年検診を続けて受診した全1,357,494人のうち、喫煙状況と体重の情報が揃い、癌の罹患のない1,278,794人を解析対象とした。

→喫煙状況の変化は、初回（2002-2003年）と次回（2004-2005年）の検診時と比較し、継続喫煙者・禁煙者・非喫煙者、に分類した。

→禁煙者のうちこの2回の検診で、体重増加が2kg以上ある者を体重増加禁煙者、体重減少が2kg以上ある者を体重減少禁煙者、体重の増減が2kg以内の者を体重不変禁煙者、とした。

→また5kg以上体重が増加した者を別に分けて感度分析を行った。（2kgはアジア人男性の、5kgは米国コホートの、禁煙後の平均体重増加量から採用した。）

→癌の発症は2006年始から2015年末までの記録をICD-10コード等をもとに調べた。

→癌は、肥満関連癌（食道腺癌、胃噴門部癌、肝臓癌、腎臓癌、多発性骨髄腫、髄膜腫、膵臓癌、大腸直腸癌、胆のう癌）、喫煙関連癌、消化器癌、肺癌、胃癌、大腸直腸癌、肝臓癌、のように分類した。

→喫煙状況と体重変化の群ごとに平均の体重変化を分散分析により比較した。

→継続喫煙者を対照とし、非喫煙者、体重変化の異なる禁煙者の各種癌発症を、Cox比例ハザードモデルで解析した。

→補正因子には、社会背景因子（年齢、居住地、保険料＝社会経済的指標）、BMI、空腹時血糖、総コレステロール値、飲酒量、身体活動度、癌の家族歴、併存疾患（CCI）を用いた。

→また、体重変化0kgを対照に、全癌発症における禁煙と体重変化の関係を、4ノットの制限3次スプライン回帰モデルで解析した。

→継続喫煙者は58.7%（750,060人）、禁煙者8.5%（106,967人）、非喫煙者32.8%（421,767人）であった。

→禁煙者のうち2kgを超える体重増加は42.4%に見られ、2kg以内の増加は47.8%に見られた。

→継続喫煙者と非喫煙者に有意な体重変化はなかった（中央値＝+1kg）。

→10年間の追跡期間に21,494件の癌が発生し、半数は肥満関連癌（10,314人）と喫煙関連癌（12,617人）であった。

→交絡因子の補正後に継続喫煙者と比較すると、体重増加禁煙者では肥満関連癌は有意に減少せず（ハザード比HR＝0.93、95%CI：0.84-1.04）、喫煙関連癌リスクの減少は境界上であった（HR＝0.91、0.82-1.00）。

→体重不変禁煙者では、肥満関連癌は有意に減少し（HR＝0.88、0.79-0.97）、喫煙関連癌（HR＝0.90、0.83-0.98）や消化器癌（HR＝0.86、0.89-0.98）も有意に減少していた。

→これは、追跡初期2年間の癌発症例を除いても同様であった。

→さらに、禁煙者を5kgを超える体重増加の有無で分類すると、5kgを超える体重増加のあった禁煙者（15.6%）では、禁煙による癌リスク減少効果は消失した。

→+5kg以内の体重変化の禁煙者では、肥満関連癌、喫煙関連癌、消化器癌、肝臓癌のリスクが有意に低下していた。

→禁煙後の体重変化で、+5kg以上、+2kgから+5kg、±2kg、-2kg以下、の4群に分けて比較すると、肥満関連癌、喫煙関連癌、消化器癌のリスクは±2kgの体重不変群で最も低かった。

→禁煙後の体重減少が5kgを超える禁煙者では、全癌リスクが有意に増加していた。

→禁煙者だけに絞って禁煙後の体重変化と癌リスクとの関連を見てみると、禁煙後に体重が減少していると癌抑制効果は見られず、5kg以内の体重増加では癌抑制効果が見られた。

→禁煙による癌リスク減少効果には、体重変化も影響する。

### <選者コメント>

KKE258に続き韓国からの報告で、禁煙による癌防止効果と体重変化の関係を調べた珍しい研究です。近年韓国は禁煙政策に力を入れており、禁煙に関する科学論文も増えている印象があります。

20-30代の若い世代の成人男性130万人の検診データをもとに、その後10年間の癌発症を調査しました。調査初期2年間に禁煙した人の約4割は、その2年間に体重が2kg以上増えており、約5割の人は2kg以内の増加でした。このうち後者では継続喫煙者と比べて、10年間の癌発症リスクが有意に低下していた一方で、前者ではリスク低下効果はほぼ見られませんでした。

禁煙した人だけで比較してみると、5kg以内の体重増加の人で癌発症リスクが低下しており、5kg以上増えていたり、逆に5kg以上減っていても、リスクは上昇していました。

禁煙したかどうかや体重の変化を、初期の2年間だけで決定しており、その後10年間の観察期間の状況を問うていない点は今後の課題と思いますが、大規模調査で結果もクリアであり、説得力のある報告と思われます。

結果をまとめると、禁煙後の体重変化は癌発症にも影響する可能性があり、+5kg以内だと癌リスクが減り、+2kg以内であればベスト、というメッセージになると思います。

### <その他の最近の報告>

KKE259a 「アジア諸国における喫煙率と喫煙関連死亡の推移：縦断調査のプールメタ解析」

Yang JJ等、JAMA Netw Open. 2019 Mar 1;2(3):e191474. PMID: 30924901

KKE259b 「各種検査結果の提示は禁煙を促すか（コクラン・レビュー）」

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KKE259h 「禁煙前後2週間での酸化ストレスの変化と摂取栄養素の関連解析」：日本からの報告

Oba S等、Exp Ther Med. 2019 Apr;17(4):2757-2764. PMID: 30930973

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KKE259j 「タバコのハームリダクションを進めるための消費者反応性評価ツールの開発」：PM社

Chrea C等、F1000Res. 2018 Dec 2;7:1878. PMID: 30906527

KKE259k 「加熱式タバコ、電子タバコ、紙巻タバコの主流煙のフリーラジカル比較」

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Houston-Ludlam AN等、Drug Alcohol Depend. 2019 Mar 26;198:168-175. (Epub ahead) PMID: 30939374

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### ふえる笑顔 禁煙ロゴ

筋肉の疾患で体の不自由な浦上秀樹さん（埼玉県在住）が、口に筆を取って書いてくださった書画です。「けんこうなしゃかい ふえるえがお」という文字を使って『禁煙』をかたどっています。

※拡大画像は日本禁煙科学会ホームページでご覧頂けます。  
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