內科部住院醫師醫學研究教學--以健保資料庫研究為例

內科部研究中心 研究員 許秋婷

聯絡方式

分機:7388、 code: 179297

位 置: 三期13F 血液透析室旁的討論室

From Bedsides to Bed
From Bed to Benches

Reasons Given for not Writing

Not enough time

Nothing to write about

No one to work with in writing

Lack of secretarial support

No mentor for writing activities

Lack of knowledge as to how to research information

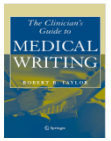
No self-confidence

No motivation

Don't know how to start

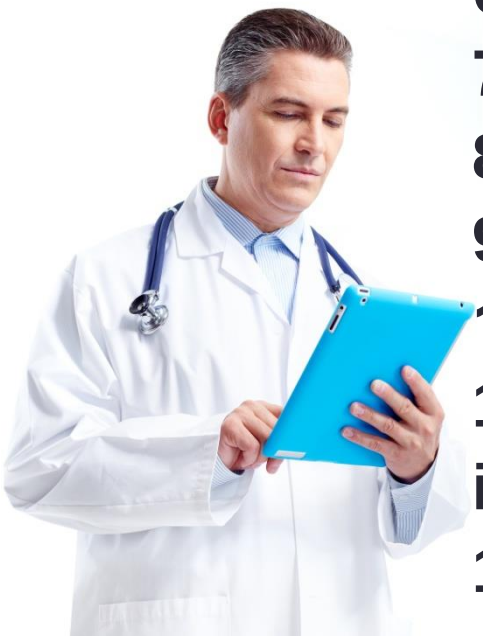
"I hate writing"

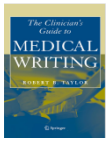
Robert B. Taylor: The Clinician's Guide to Medical Writing



Reasons Why We Write

1. Gain intellectual stimulation
2. Share ideas
3. Report research
4. Express an opinion
5. Generate discussion
6. Advance one's discipline
7. Assert "ownership" of a topic
8. Attain promotion/tenure
9. Report a case
10. Enhance one's personal reputation
11. Achieve some small measure of immortality by publishing our ideas
12. Earn income





JUST DO IT.

醫師為何要執行醫學研究?

老年人可以吃重鹹嗎？

中風與慢性腎臟病的關係?

可以幫我開哪個柯P的神奇藥嗎?

自己連呼吸也會胖?

吃A藥比B藥好嗎?

An apple a day, keep doctor away?

長期吃安眠藥會不會得癌症?

我都是靠這個乙型阻斷劑...才撐過議員的質詢

地表最強的神藥????

我都吃這味乙型阻斷劑..

JAMA Clinical Evidence Synopsis | May 26, 2015

Perioperative Use of β-Blockers in Cardiac and Noncardiac Surgery

Hermann Blessberger, MD[1]; Juergen Kammler, MD[1]; Clemens Steinwender, MD[1]

[+] Author Affiliations

JAMA. 2015;313(20):2070-2071. doi:10.1001/jama.2015.1883.

Text Size: A A A

Article | Figures | References

ABSTRACT

ABSTRACT | SUMMARY OF FINDINGS | DISCUSSION | ARTICLE INFORMATION | REFERENCES

Clinical Question Are β-blockers associated with lower rates of mortality and morbidity after cardiac or noncardiac surgery?

Bottom Line In cardiac surgery, β-blockers are associated with a lower incidence of supraventricular tachycardias (SVTs) and ventricular arrhythmias. In noncardiac surgery, β-blockers are associated with a possible increase in mortality and strokes, a lower incidence of acute myocardial infarctions (AMIs) and SVTs, and an increase in bradycardia and hypotension. If tolerated, long-term β-blocker treatment should be continued perioperatively, whereas the decision to start a β-blocker should be individualized, weighing risks and benefits.

非心臟手術使用乙型阻斷劑可能增加死亡率~~~
研究結果顯示：
(1) 死亡率顯著增加27% (RR 1.27, 1.01-1.59);
(2) 腦血管事件顯著增加109% (RR 2.09, 1.14-3.82);

From: **Association Between Apple Consumption and Physician Visits: Appealing the Conventional Wisdom That an Apple a Day Keeps the Doctor Away**

JAMA Intern Med. 2015;175(5):777-783. doi:10.1001/jamainternmed.2014.5466

一天一顆蘋果，真的就不用看醫生了嗎？

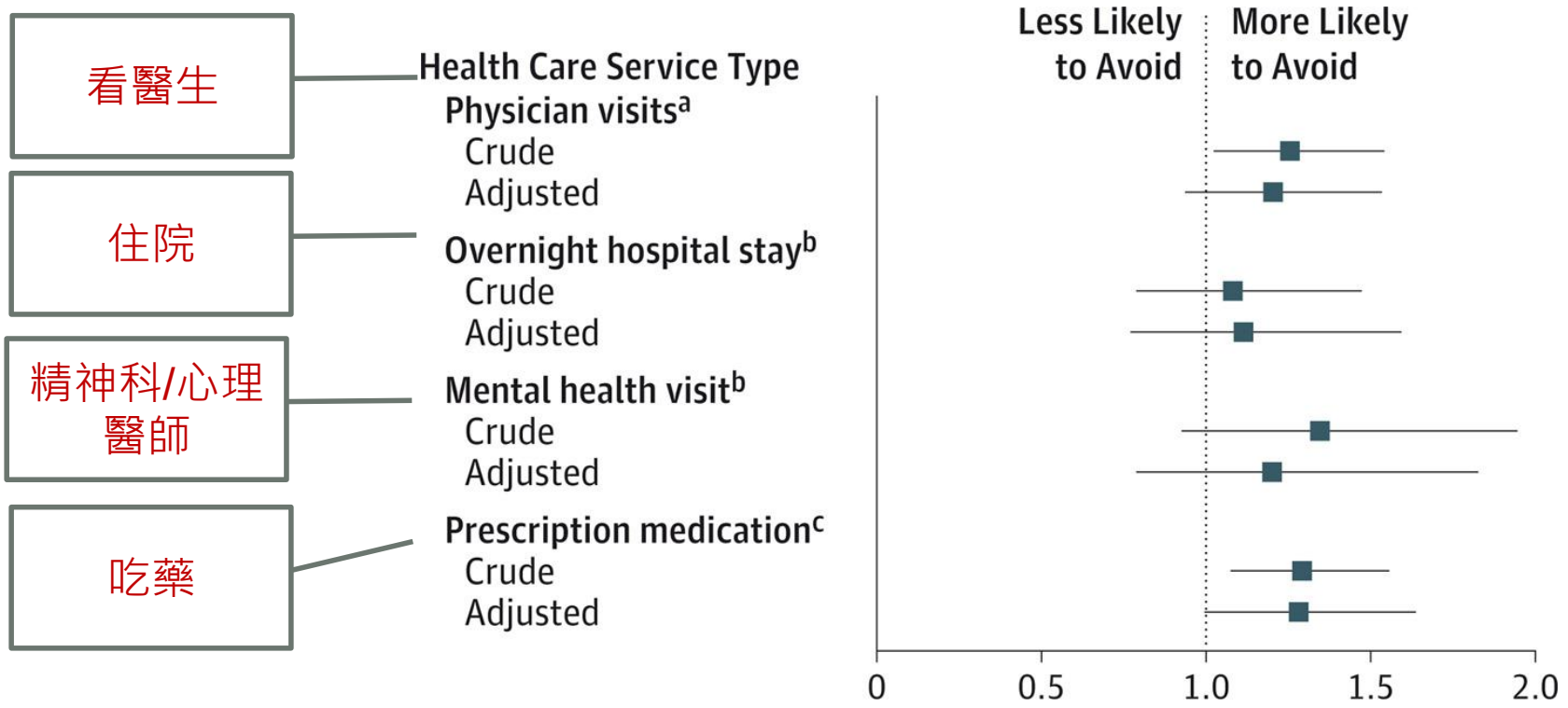
吃了變差　　吃了比較好

看醫生

住院

精神科/心理醫師

吃藥



研究結果顯示: 每天吃蘋果，沒有辦法降低看醫生、住院或吃藥的風險

include covariates for age, sex, race or ethnicity, educational attainment, body mass index, smoking status, and health insurance type.

胖子的悲哀--連呼吸都會胖

ENVIRONMENTAL Science & Technology

Search | Citatic
Search text
Environ. Sci. Techn

Environ. Sci. Technol. | Environ. Sci. Technol. Lett.

Browse the Journal | Articles ASAP | Current Issue | Multimedia | Submission & Review | Op

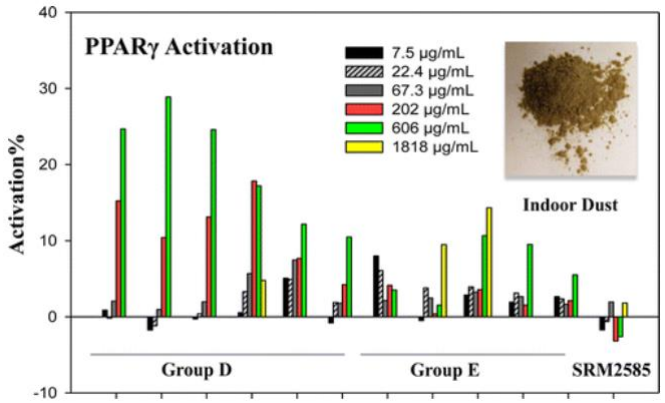
Article

Activation of Human Peroxisome Proliferator-Activated Nuclear Receptors (PPARγ1) by Semi-Volatile Compounds (SVOCs) and Chemical Mixtures in Indoor Dust

Mingliang Fang †, Thomas F. Webster ‡, and Heather M. Stapleton *†
† Nicholas School of the Environment, Duke University, Durham, North Carolina 27708, United States
‡ Department of Environmental Health, Boston University School of Public Health, Boston, Massachusetts 02118, United States

Environ. Sci. Technol., Article ASAP
DOI: 10.1021/acs.est.5b01523
Publication Date (Web): July 14, 2015

*Phone: 919-613-8717. Fax: 919-684-8741. E-mail: heather.stapleton@duke.edu.



吸空氣會胖是真的！美研究：灰塵中的化學物質使人發胖

NOWnews – 2015年8月2日 下午1:51

國際中心／綜合報導

不少長年飽受肥胖所苦的人會宣稱「自己連呼吸都會胖」，不過這可不是他們在誇大其詞，近日國外有項研究發現，這是真的！

美國北卡羅萊納州的杜克大學研究團隊發現，灰塵中含有會使人發胖的化學物質，影響人體的脂肪代謝率、細胞增長與死亡等功能。孩童若在發育期間吸入過量的灰塵，未來將導致肥胖。

灰塵中會使人發胖的化學物質，也存在於塑膠、潤滑油和阻燃劑之中，它與促使人發胖的PPARgamma受體相同，有左右肥胖細胞的作用。

研究人員根據孩童平時會接觸到的灰塵量，在家中、辦公室和健身房收集了25個灰塵樣本，結果他們發現，一半以上都有PPARgamma活躍的跡象。據美國環保署統計，孩童每天大約會接觸到家中50毫克的灰塵。

From: **Dietary Sodium Content, Mortality, and Risk for Cardiovascular Events in Older Adults: The Health, Aging, and Body Composition (Health ABC) Study**

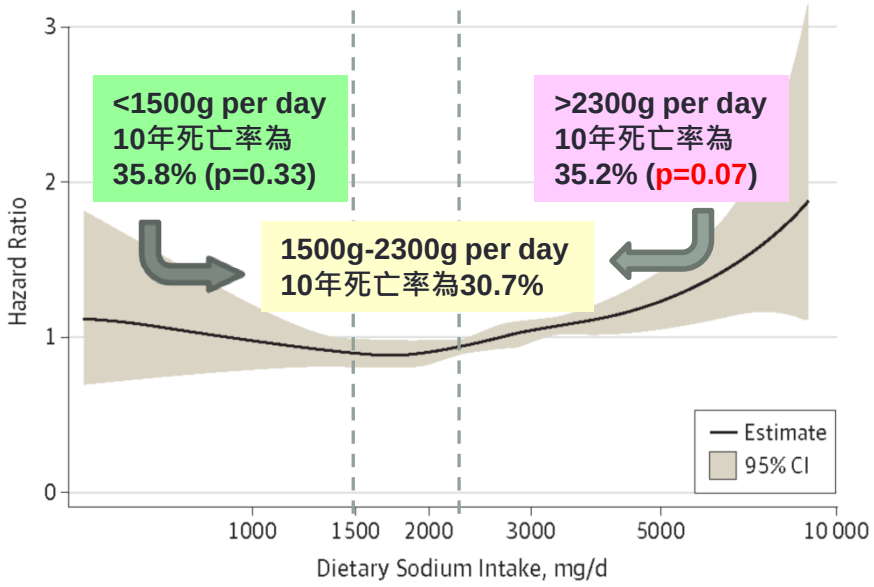
JAMA Intern Med. 2015;175(3):410-419. doi:10.1001/jamainternmed.2014.6278

攝取過多鹽類，會增加高血壓和心血管疾病風險？

一項前瞻性世代研究結果，這項研究針對高齡長者 (年齡71~80歲) (n=2,642)，以飲食問卷的方式調查飲食鈉含量，結果發現：

(1) 飲食鈉含量這檔事，與死亡風險並沒有顯著關係 (HR 1.03 per 1 g, 95% CI 0.98-1.09, p=0.27)

(2) 校正可能的影響因子後，攝取過少與過多的鈉，並沒有顯著增加死亡風險



研究顯示吃重鹹並未增加死亡率！

Figure Legend:

Restricted Cubic Spline Model of Dietary Sodium Intake as a Univariate Predictor of Mortality.The cubic spline model improved the likelihood ratio χ^2 over the linear model (from $\chi^2_1 = 10.71$ to $\chi^2_4 = 12.33$), but the gain in fit did not justify the increased model complexity. The Bayesian information criterion, which penalizes for unnecessary complexity, indicated that the linear model is preferable.

Journal of Hypertension

PP.11.23: ASSOCIATION BETWEEN SALT INTAKE AND INDICES OF MICRO- AND MACROVASCULAR FUNCTION.

Triantafyllou, A.; Anyfanti, P.; Zabulis, X.; Triantafyllou, G.; Karamaounas, P.; Gkolias, V.; Gkaliagkousi, E.; Douma, S.

Abstract

Objective: Multiple studies have linked sodium intake with office blood pressure (BP) levels and increased cardiovascular mortality and morbidity. However, the association between increased salt consumption and 24-hour ambulatory BP monitoring (ABPM) parameters remains underinvestigated. Moreover, it still remains ambiguous whether it promotes subclinical micro- and macrovascular damage independent of BP levels and simultaneously in different target organs.

Design and method: Consecutive newly diagnosed, otherwise healthy, never-treated hypertensive patients and healthy volunteers underwent ABPM and blood sampling. Sodium intake was estimated in 24-hour urine samples. Structural alterations of dermal capillaries (capillary density per visual field) were evaluated using special software analysis of nailfold capillaroscopy images. Functional microvascular alterations of the kidney were assessed by estimation of microalbuminuria. The Sphygmocor device was used to assess arterial stiffness by measurement of pulse wave velocity (PWV), and Aortic augmentation Index (AIx).

Results: The study included 193 participants. Sodium excretion was significantly associated with ABPM ($r = 0.216$, $p < 0.01$), day-time systolic blood pressure (SBP) ($r = 0.207$, $p < 0.05$), and night-time SBP ($r = 0.213$, $p < 0.01$). The association between sodium excretion and 24-hour SBP ($r = 0.170$, $p < 0.05$), as well as night-time SBP ($r = 0.173$, $p < 0.05$) remained significant even after adjustment for other parameters. Although sodium excretion was not associated with PWV or capillary density, a significant correlation was found between sodium excretion and AIx, as well as microalbuminuria. In the multiple linear regression model, 24-hour SBP ($p = 0.008$), albuminuria ($p = 0.019$) and AIx ($p = 0.042$) remained significant predictors of sodium excretion, even after adjustment for age, BMI, office BP, smoking, glomerular filtration rate (GFR), capillary rarefaction and aldosterone levels.

Conclusions: This is the first study demonstrating a significant association between salt intake and indices of functional microvascular (microalbuminuria) and macrovascular (AIx) involvement in a population free from the long-standing effects of essential hypertension and after accounting for several factors including aldosterone. In addition, it was shown that of all 24-hour ABPM parameters, 24-hour and night-time SBP exhibit the most powerful association with salt consumption. Our findings highlight the detrimental effects of excessive dietary salt intake and should serve as a reminder to promote lifestyle changes in hypertensive patients.

Blood Purification

Table of Contents « pre

Vol. 40, No. 1, 2015

Issue release date: August 2015

Section title: Original Paper

Their Relationship to Overhydration in Chronic Kidney Disease Patients

Hallvass A.E.C.[a] · Claro L.M.[a] · Gonçalves S.[a] · Olandoski M.[a] · Nerbass F.B.[a, b] · Aita C.A.M.[a] · de Moraes T.P.[a] · Pecoits-Filho R.[a]

[a]School of Medicine, Pontifícia Universidade Católica do Paraná, Curitiba, and [b]Nutrition Department, Pro-Rim Foundation, Joinvile, Santa Catarina, Brazil

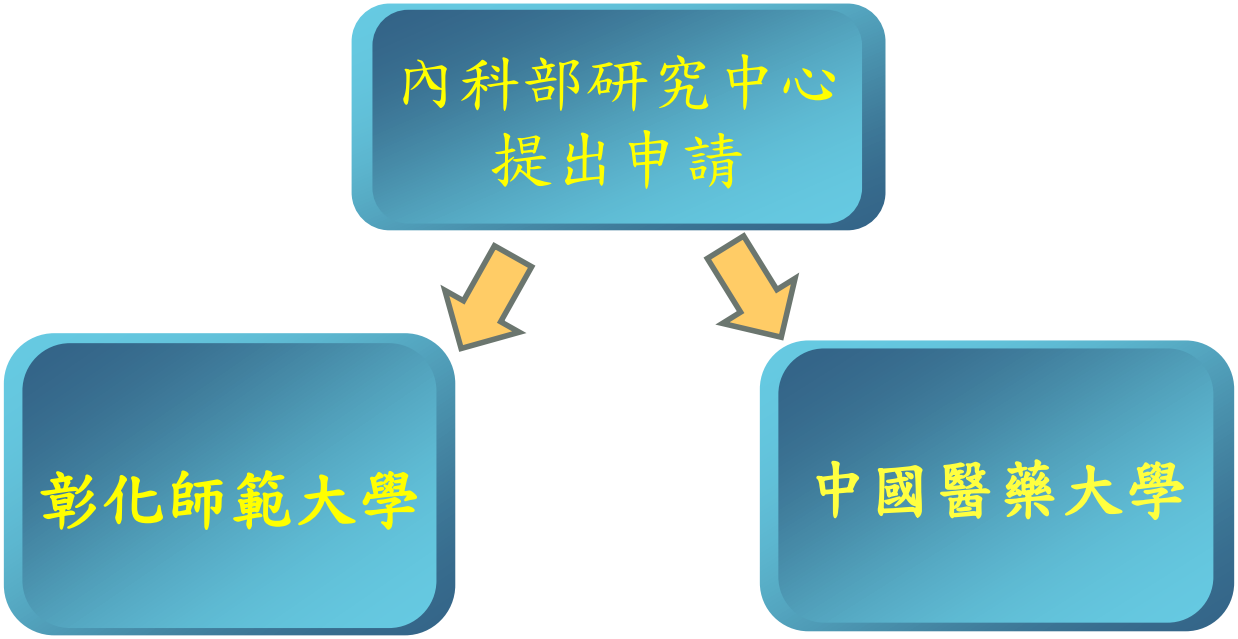
Abstract

The purpose of this study was to estimate sodium intake in a group of patients with chronic kidney disease (CKD) and to correlate the results with the urinary excretion values of sodium and signs of fluid overload. We included patients with CKD in different stages. Urinary sodium was measured in 24 h urine samples. Body composition monitor (BCM) was used to estimate the hydration status. Sixty patients (38 ± 15 ml/min of GFR) presented 4.14 ± 1.71 g/24 h of urinary sodium excretion. Overhydration was detected in 50% of the patients by the BCM. There was a positive correlation between the measured sodium excretion values and BCM, ICW, ECW and TBW. In conclusion, markers of overhydration evaluated by BCM were positively correlated with urinary sodium excretion.


只要有心，人人都可以寫出論文

From Bed to Benches
From Wet-lab to Dry-lab

健保資料庫之合作平台



健保研究資料庫的好，JAMA都知道：

非資料庫研究：Find data bases to fit a research question

資料庫研究：Find research questions to fit existing data sets

萬事起頭難 Turning idea into a research Question (Clear research aim, rationale, hypothesis)

分享第一篇健保資料庫文章的構思過程

- 探討 Stroke 和 Chronic kidney disease 相關性研究

CKD → 長期追蹤 Follow-up → Stroke

定論: CKD as a Risk Factor for Stroke

Stroke and CKD share similar cardiometabolic (心臟代謝) risk factors.

Stroke → 長期追蹤 Follow-up → CKD

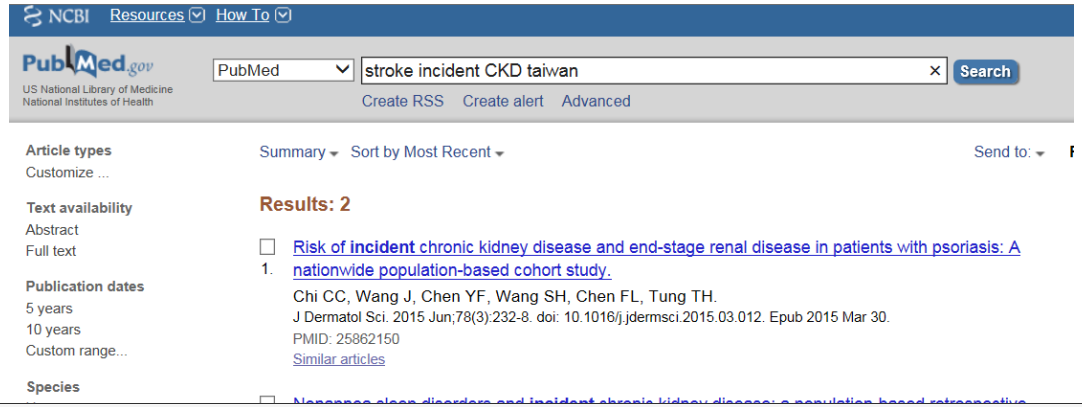
出發總是要有方向—文獻查詢

Start-Up

Systematic review of existing evidence

Searched by ***PubMed*** & ***Google scholar …***

- 先確認 是否有stroke 和 CKD 相關流行病學文章或其他健保資料庫文章



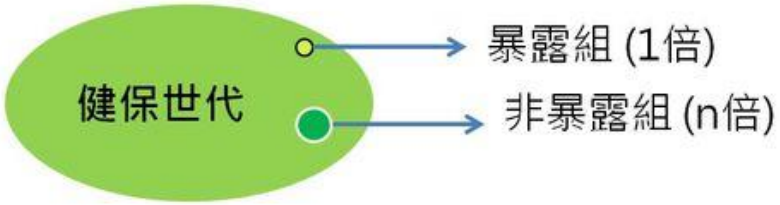
PubMed結果: 0

Google scholar結果: 2

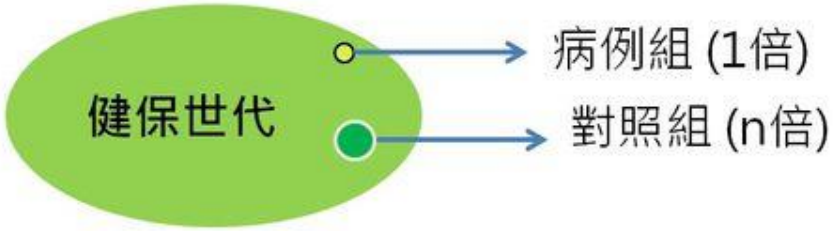
- ***Epidemiology study, cross-section study***
- ***NHILD study, subsequent ESRD (no excluded CKD history)***

How to do?

Develop appropriate design to answer question



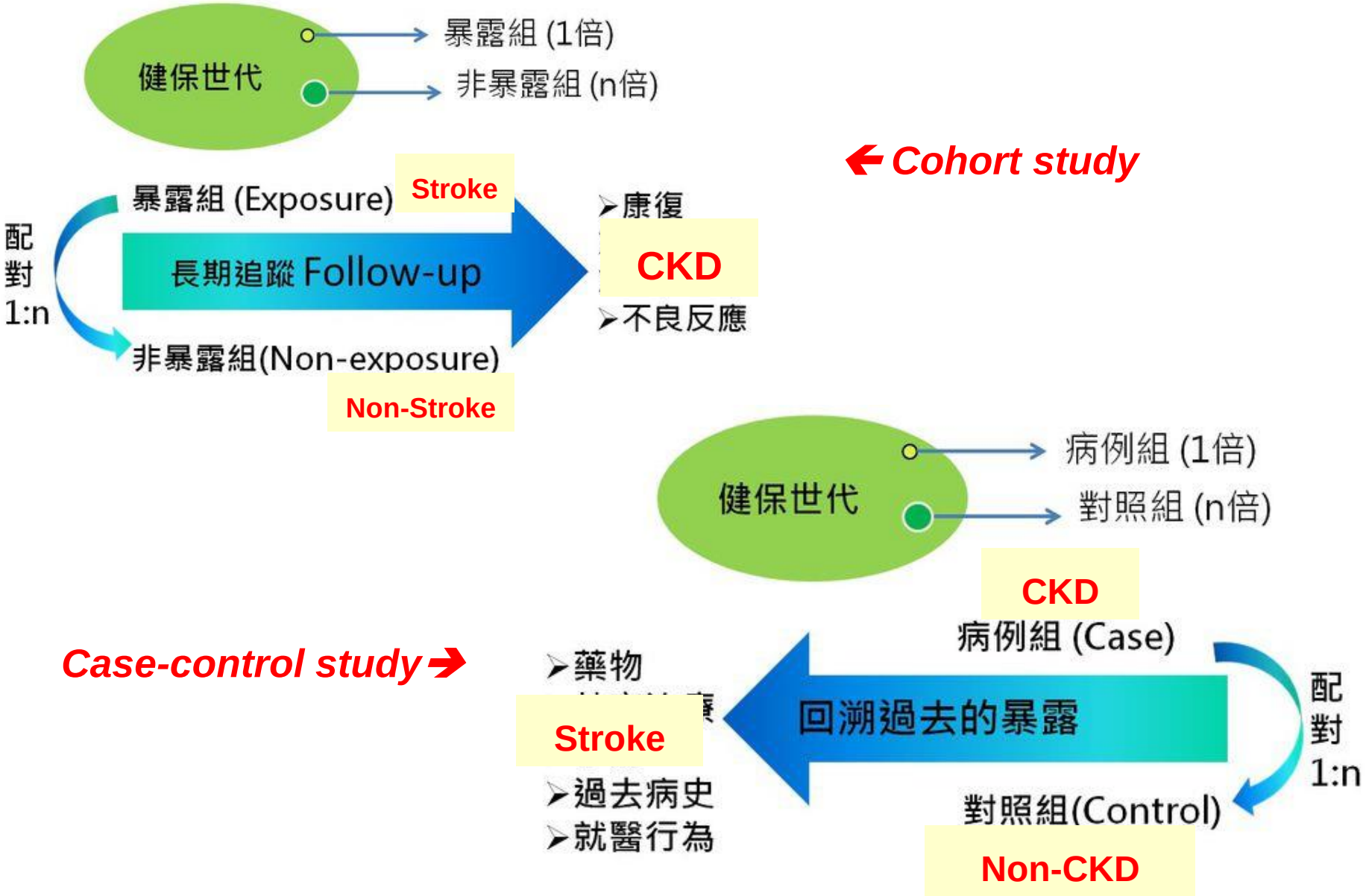
Cohort study



Case-control study

How to do?

Develop appropriate design to answer question



Hypothesis → Qualitative Data

研究對象: Study population

(1) 資料庫:

(2) 納入條件: **(疾病需註明ICD-9 or藥物ATC碼or 處置碼) (頻率定義)**

(3) 排除條件 Exclusion:**(疾病需註明ICD-9 or藥物ATC碼or 處置碼) (頻率定義)**

(4) 自變項或Exposure (X):

I. Exposure:

II. Non-Exposure:

備註:

配對控制變數 Matched case-control: (1:m➔ m=)
(Ex: Age, gender, year of diagnosis….)

備註:

始___年~__年止

統計控制變數Confounder:

Primary Outcome (Y_1):

Secondary Outcome (Y_2):

Third Outcome (Y_3):

(疾病需註明ICD-9 or藥物ATC碼or 處置碼) (頻率定義)

備註:

End-point criteria:

Hypothesis → Qualitative Data

研究對象: Study popu

(1) 資料庫:健保資

(2) 納入條件: (疾病
ATC碼or 處置碼
All population

(3) 排除條件 Exclu
ICD-9 or藥物AT
率定義)

(4) 自變項或Expos
I. Exposure
Stroke:
ischemic
438) hem
CM 430-4
II. Non-Expo
Non-stroke po

備註:

配對控制變數 Matched case-control: (1:m➔ m=)

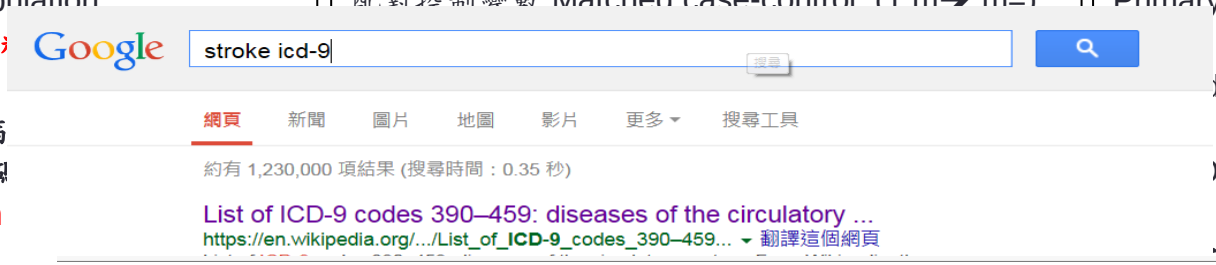
Primary Outcome (Y_1):

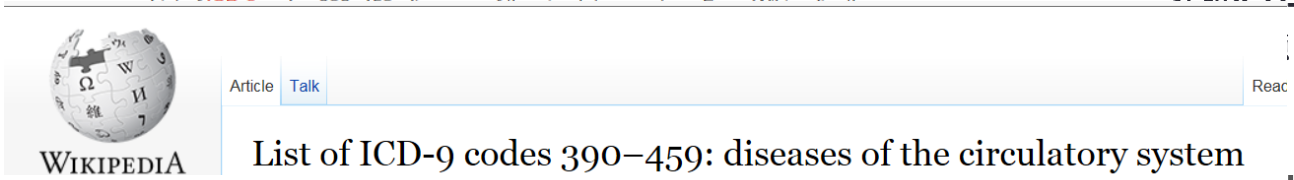
dary Outcome (Y_2):

utcome (Y_3):

-9 or藥物ATC
率定義)

l:





Journal of Clinical Neuroscience 22 (2015) 363–367

Contents lists available at ScienceDirect

Journal of Clinical Neuroscience

journal homepage: www.elsevier.com/locate/jocn

Clinical Study

Increased risk of ischemic stroke in patients with pneumoconiosis

Yuan-Yang Cheng [a,b], Kuo-Hsuan Hsu [c], Yi-Huei Chen [d], Ching-Heng Lin [d,*]

[a] Department of Physical Medicine and Rehabilitation, Taichung Veterans General Hospital, Taichung, Taiwan
[b] Institute of Clinical Medicine, National Yang-Ming University, Taiwan
[c] Department of Chest Medicine, Taichung Veterans General Hospital, Taichung, Taiwan
[d] Department of Medical Research, Taichung Veterans General Hospital, No. 1650, Sect. 4, Taiwan Boulevard, Taichung 40705, Taiwan

ARTICLE INFO

Article history:
Received 12 February 2014
Accepted 3 August 2014

Keywords:
Chronic obstructive pulmonary disease
Pneumoconiosis
Stroke

ABSTRACT

Although past studies have confirmed that chronic dust exposure is a risk factor for cardiovascular disease, the relationship between it and cerebrovascular disease is still unclear. We aimed to determine whether pneumoconiosis is related to increased incidence of ischemic stroke in the following 5 to 11 years. We selected 1238 patients with pneumoconiosis from Taiwan's National Health Insurance database as our study cohort. After matching for age, sex and the date of ambulatory care visit, another 4952 patients without pneumoconiosis were selected as the comparison cohort. Each patient was individually followed up until the end of 2010 to track the incidence of stroke, and Cox proportional hazard regression analysis was performed to compute the relative hazard ratio of stroke. Our results showed 19.6% of pneumoconiosis patients and 15.8% of non-pneumoconiosis patients developed stroke. After statistically

Hypothesis → Qualitative Data

研究對象: Study population

(1) 資料庫:**健保資料庫**

(2) 納入條件: **(疾病需註明ICD-9 or藥物ATC碼or 處置碼) (頻率定義)**
All population

(3) 排除條件 Exclusion:**(疾病需註明ICD-9 or藥物ATC碼or 處置碼) (頻率定義)**

(4) 自變項或Exposure (X):
- I. Exposure:
  Stoke:
  ischemic (ICD-9-CM 433-438) hemorrhagic (ICD-9-CM 430-432)
- II. Non-Exposure:
  Non-stoke population

備註:

配對控制變數 Matched case-control: (1:m➔ m=)
(Ex: Age, gender, year of diagnosis….)
備註:

始___年_年止

統計控制變數Confounder:

Primary Outcome (Y_1):
CKD (ICD-9-CM 580–589)
Secondary Outcome (Y_2):
ESRD (ICD-9-CM 585 585.1)
Third Outcome (Y_3):
Death (ID檔有註明死亡，低估)
Censored: (退保日期)
(疾病需註明ICD-9 or藥物ATC碼or 處置碼) (頻率定義)
備註:

End-point criteria:

Hypothesis → Qualitative Data

研究對象: Study population

(1) 資料庫:**健保資料庫**

(2) 納入條件: **(疾病需註明ICD-9 or藥物ATC碼or 處置碼) (頻率定義)**
All population

(3) 排除條件 Exclusion:**(疾病需註明ICD-9 or藥物ATC碼or 處置碼) (頻率定義)**
- history of CKD (ICD-9-CM codes 580-589) and ESRD (ICD-9-CM code 585) before the index date
- aged less than 18 years

(4) 自變項或Exposure (X):

I. Exposure:
Stoke:
ischemic (ICD-9-CM 433-438) hemorrhagic (ICD-9-CM 430-432)

II. Non-Exposure:
Non-stoke population

備註:

配對控制變數 Matched case-control: (1:m➔ m=)
(Ex: Age, gender, year of diagnosis….)
備註:

始___年_年止

統計控制變數Confounder:

健保局首頁 > 「藥材專區」 > 「藥品」 > 「健保用藥品項」 > 「健保用藥品項104年08月壓縮總檔」
連結以下網址
(http://www.nhi.gov.tw/webdata/webdata.aspx?menu=21&menu_id=713&WD_ID=849&webdata_id=1139)。

Primary Outcome (Y_1):
CKD (ICD-9-CM 580–589)
Secondary Outcome (Y_2):
ESRD (ICD-9-CM 585 585.1+EPO) EPO(ATC:)
Third Outcome (Y_3):
Death (ID檔有註明死亡，低估)
Censored: (退保日期)
(疾病需註明ICD-9 or藥物ATC碼or 處置碼) (頻率定義)
備註:

96年度異動資料

95年度異動資料

3. 健保用藥品項104年08月壓縮總檔--
(1)迄91.01.01健保支付價為$0.00者重新提供
(2)配合代辦計畫品項不提供
(因原檔案資料筆數較多，已拆成2個檔案提供)(104.07.27更新)
4. 健保用藥品項異動檔、壓縮總檔欄位格式說明(103.05.26更新)
5. 全民健康保險特約醫事機構購藥問題反映表(103.02.14更新)
6. 醫事機構反映購藥價高於健保支付價之藥品許可證藥商名單及聯絡窗口(104.03.11更新)
7. 本署配合衛生福利部國民健康署推行「實施二代戒菸治療試辦計畫」之戒菸藥品(104.04.17更新)
8. 本署代辦衛生福利部疾病管制署後天免疫缺乏症候群治療藥品(104.05.28更新)
9. 本署配合衛生福利部疾病管制署辦理流感疫苗接種計畫藥品品項表(103.09.03更新)
10. 『本署配合衛生福利部疾病管制署辦理「流感抗病毒藥劑」藥品品項表』(102.08.05更新)
11. 健保用藥且適用「罕見疾病防治及藥物法」之品項檔(104.06.22更新)

Hypothesis → Qualitative Data

研究對象: Study population

(1) 資料庫:**健保資料庫**

(2) 納入條件: **(疾病需註明ICD-9 or藥物ATC碼or 處置碼) (頻率定義)**
All population

(3) 排除條件 Exclusion:**(疾病需註明ICD-9 or藥物ATC碼or 處置碼) (頻率定義)**
- history of CKD (ICD-9-CM codes 580-589) before the index date
- aged less than 18 years

(4) 自變項或Exposure (X):
I. Exposure:
Stoke:
ischemic (ICD-9-CM 433-438) hemorrhagic (ICD-9-CM 430-432)
II. Non-Exposure:
Non-stoke population

備註:

配對控制變數 Matched case-control: (1:m➔ m=**4**)
(Ex: Age, gender, year of diagnosis….)
Age, gender, year of index

備註:

始___年_年止

統計控制變數Confounder:

Primary Outcome (Y_1):
CKD (ICD-9-CM 580–589)
Secondary Outcome (Y_2):
advanced CKD (ICD-9-CM 585 585.1)+EPO (ATC:)
Third Outcome (Y_3):
Death (ID檔有註明死亡，低估)
Censored: (退保日期)
(疾病需註明ICD-9 or藥物ATC碼or 處置碼) (頻率定義)
備註:

End-point criteria:

Hypothesis → Qualitative Data

研究對象: Study population

(1) 資料庫:**健保資料庫**

(2) 納入條件: **(疾病需註明ICD-9 or藥物ATC碼or 處置碼) (頻率定義)**
All population

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I. Exposure:
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II. Non-Exposure:
Non-stoke population

備註:

配對控制變數 Matched case-control: (1:m➔ m=**4**)
(Ex: Age, gender, year of diagnosis….)
Age, gender, year of index
備註:

始_**1996**__年~_**2012**_年止

統計控制變數Confounder:

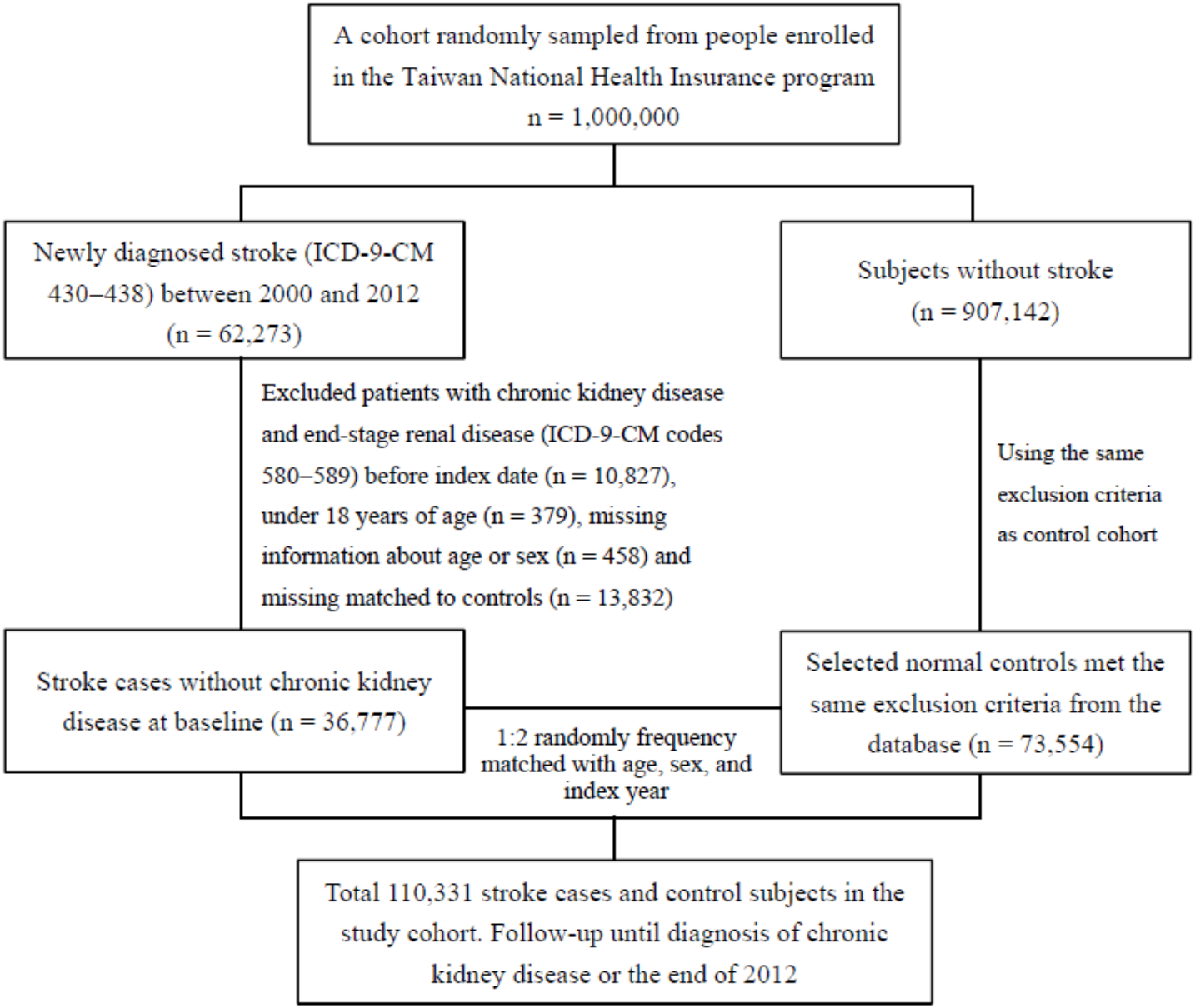
1. **Income**
2. **Urbanization**
3. **Hypertension (ICD-9-CM code 401 to 405)**
4. **diabetes mellitus (ICD-9-CM code 250)**
5. **hyperlipidemia (ICD-9-CM code 272)**
6. **endocarditis (ICD-9-CM codes 063·42, 074·22, 039-20-039·24, 098·84, 112·81, 115·04, 115·14, 115·94, 421·0–421·9, 424·9)**
7. **atrial fibrillation (AF, ICD-9-CM code 427·31)**
8. **ischemic heart disease (CAD)(ICD-9-CM codes 410–414)**
9. **congestive heart failure (CHF; ICD- 9-CM code 428)**
10. **peripheral artery occlusive disease (PAOD; ICD-9-CM codes 443–444).**

Primary Outcome (Y_1):
CKD (ICD-9-CM 580–589)
Secondary Outcome (Y_2):
advanced CKD (ICD-9-CM 585 585.1)+EPO (ATC:)
Third Outcome (Y_3):
Death (ID檔有註明死亡，低估)
Censored: (退保日期)
(疾病需註明ICD-9 or藥物ATC碼or 處置碼) (頻率定義)
備註:

- **Death is a competing risk of Y_1, Y_2**

End-point criteria:

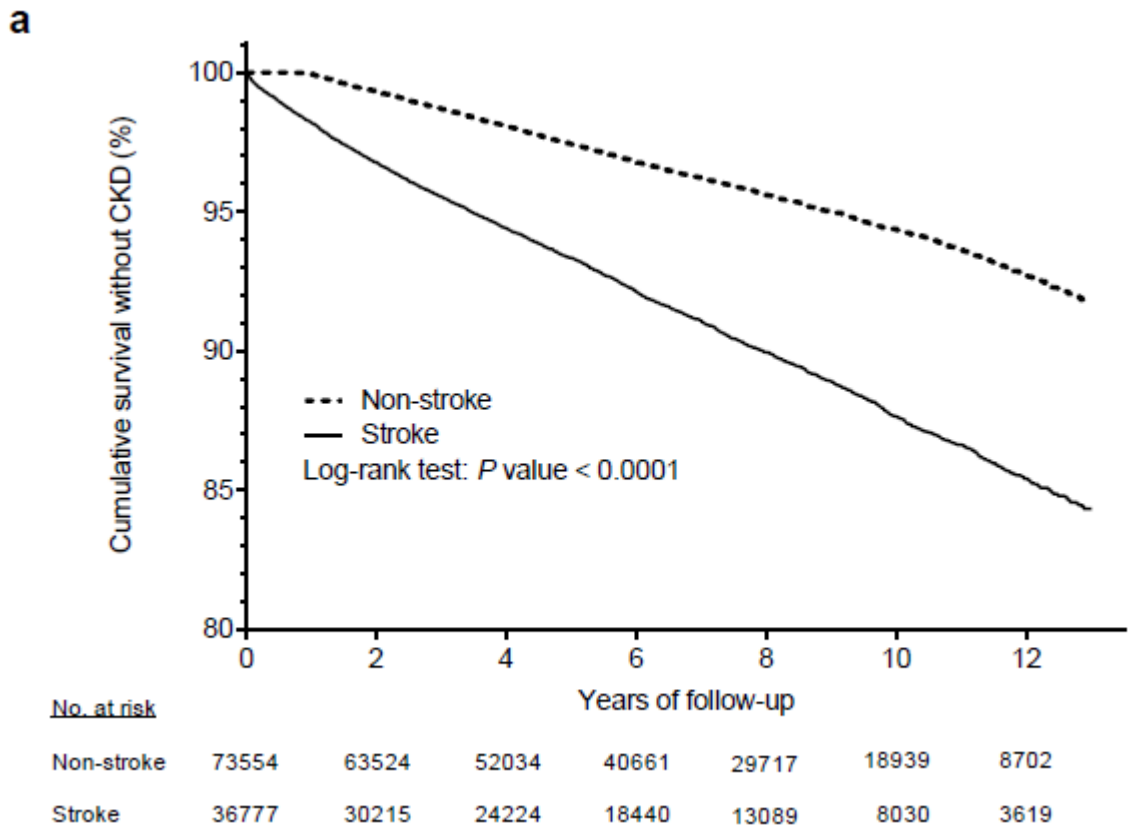
Study flow-chart



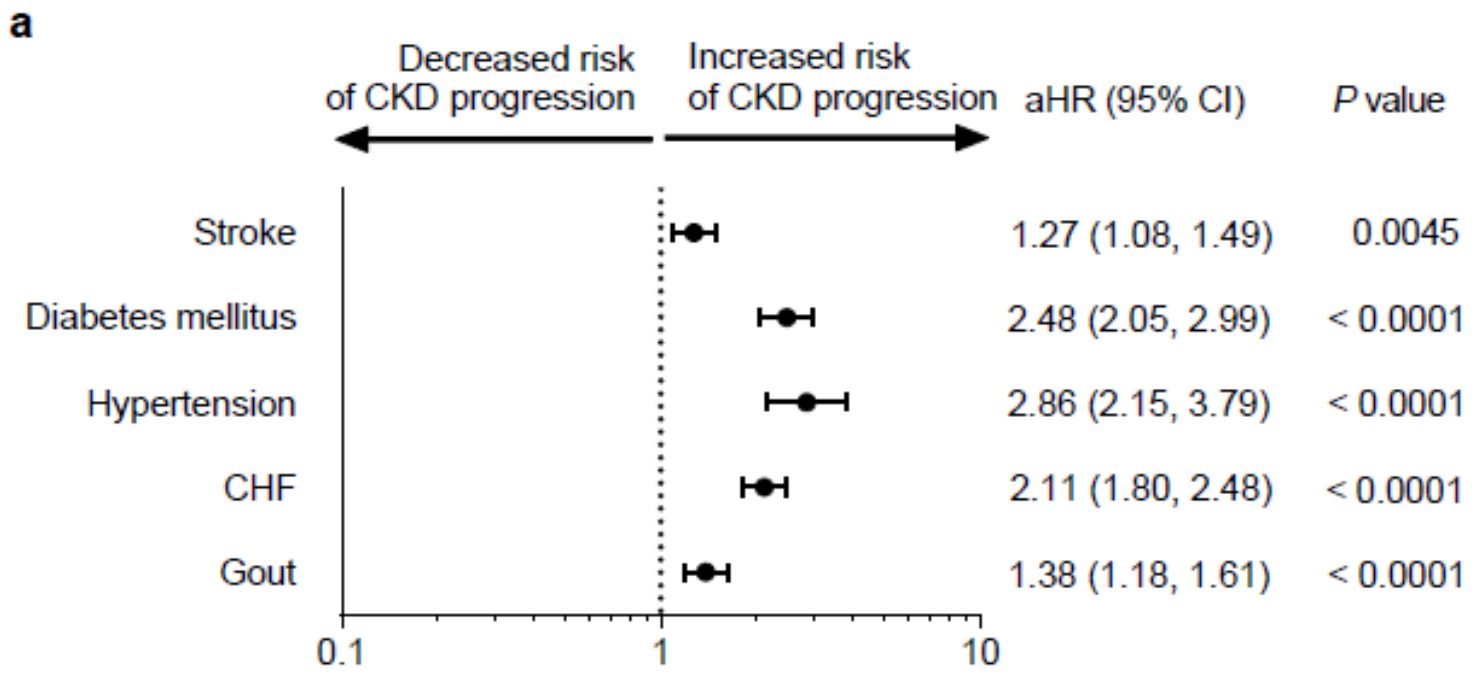
Frequency match

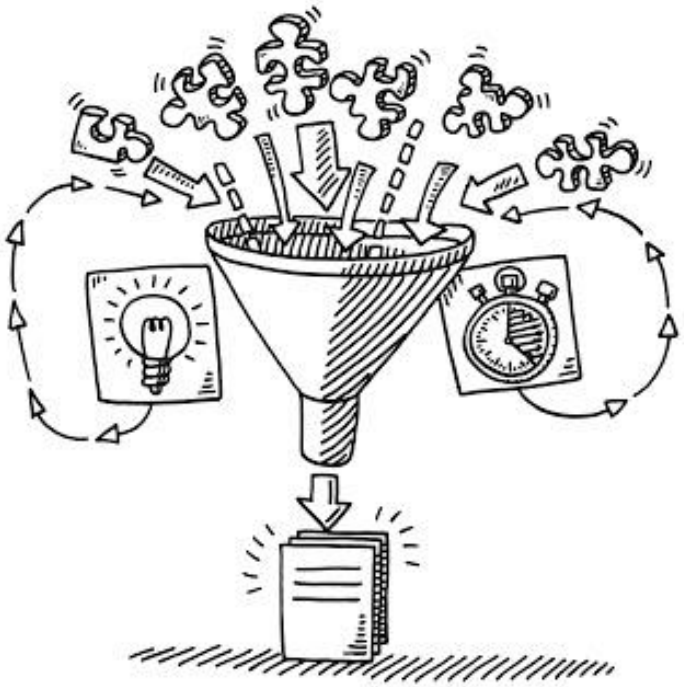
	Non-stroke	Stroke	Total cohort	*P* value*
Number of patients	73,554	36,777	110,331	
Gender, n (%)				
Female	36,060 (49.03%)	18,030 (49.03%)	54,090 (49.03%)	1.000
Male	37,494 (50.97%)	18,747 (50.97%)	56,241 (50.97%)	
Age, mean ± SD, years	58.96 ± 12.32	59.16 ± 12.28	59.03 ± 12.31	0.011
Age stratified, n (%)				
< 50	15,312 (20.82%)	7,656 (20.82%)	22,968 (20.82%)	1.000
50 – 64	34,062 (46.31%)	17,031 (46.31%)	51,093 (46.31%)	
≥ 65	24,180 (32.87%)	12,090 (32.87%)	36,270 (32.87%)	

Kaplan-Meier curve



Multivariate analysis





Thanks for your attention!!!!