

如何設計健保資料庫研究及 應用—實例分享

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



全民健康保險研究資料庫

National Health Insurance Research Database



ENGLISH

非學術界研究類

學術界研究類

非學術界研究類

行政院衛福部102年11月19日通知「行政院衛生署及所屬機關提供產業界衛生相關資料庫使用作業要點」自即日起停止適用(文號:1020109741號函)。

National Health Insurance Research Database

最佳瀏覽效果800x600

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全民健康保險研究資料庫

National Health Insurance Research Database



最新消息

電子報

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意見箱

ENGLISH

- 簡介
- 資料庫內容
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 - 資料清單
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- 相關規定
- 申請作業
- 成果
- 學術活動
- 常見問題
- On-site服務

最新消息

- ▶ **重要** 「全民健康保險研究資料庫」 加值服務對外開放申請期間至104年11月30日截止。(健保企字第1040038443號函,104年9月8日) 2015-09-08
(一) 如有申請需求請於期限內提出，逾期不受理。
(二) 在本公告前已取得資料者，如資料有任何問題，應於104年11月30日前提出，逾期不受理；在本公告以後取得資料者或提出之申請案，按現行規定，如資料有任何問題應於收到資料後一個月內提出，逾期不受理。
特別說明：申請案之提出必須備齊資料，我們方可受理，包括上傳完整申請書表、以及寄達IRB審查通過證明及計畫書乙份、簽署完成之使用同意書。由於11/30日之後我們無法受理申請案，故請大家務必配合在11/30(郵寄之文件以郵戳為憑，線上系統以上傳之時間為憑)前備齊資料提出申請，謝謝!
- ▶ 2008-2013精神疾病住院病患歸人檔及肺癌病人歸人檔，自即日起發行，歡迎提出申請！ 2014-12-26

內科部研究中心購置之健保資料庫內容

內科部購置之資料庫已到達，歡迎有興趣之醫師一起討論。

購置項目

2005年承保抽樣歸人檔 (1996-2013年)

基本資料檔

承保檔(ID)

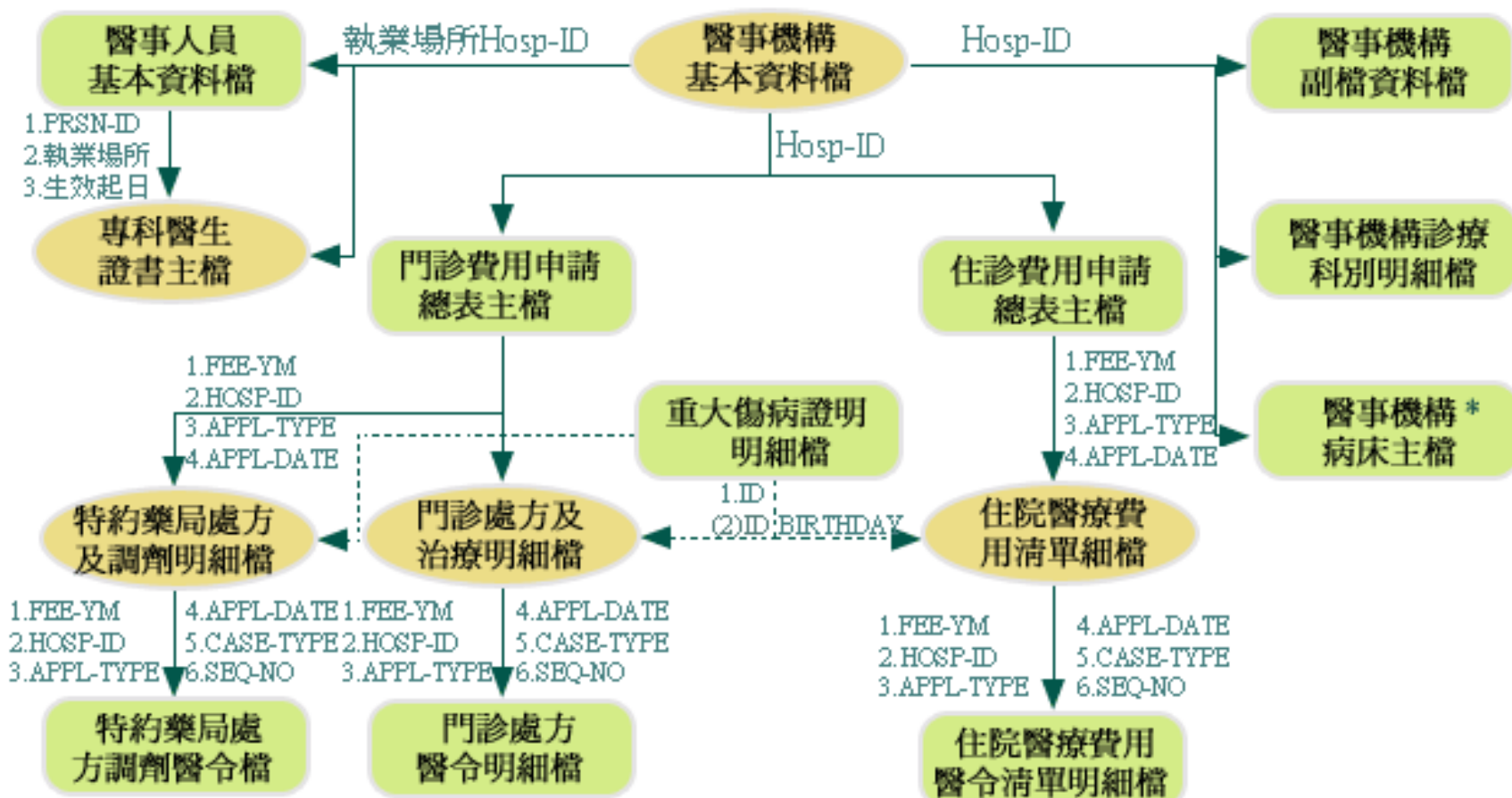
重大傷病醫療資源使用(HV)

癌症

糖尿病(DB)

2005年100萬抽樣檔 (1996-2013年)

各檔案間串檔變項說明



註:*須注意生效起訖日期
(2)可由ID+BIRTHDAY串檔

➔ 各檔案間由所註明變項串檔可獲得對應資訊
➔ 各檔案間可由所註明變項串檔,但未必獲得對應資料



全民健康保險研究資料庫

National Health Insurance Research Database



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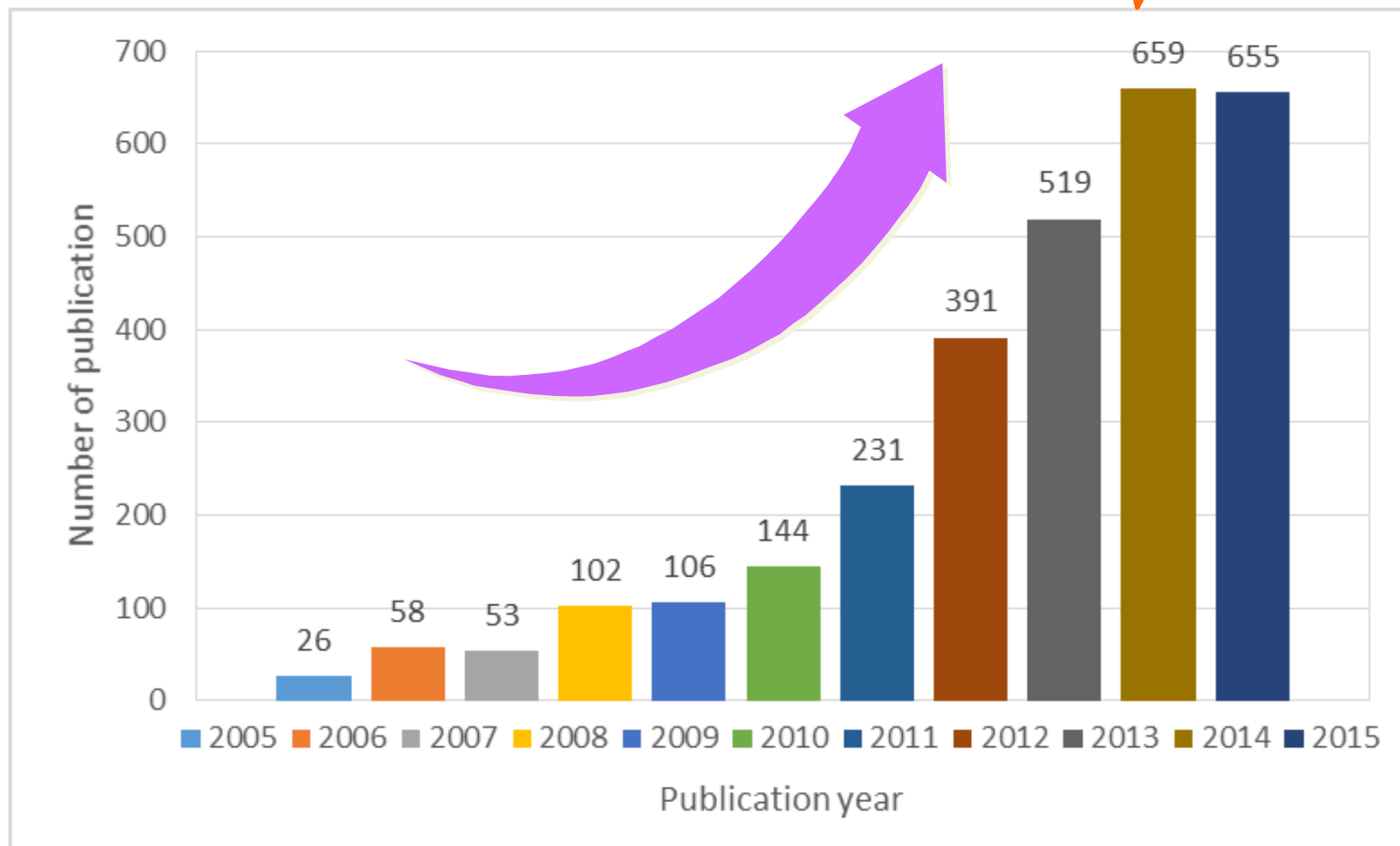
- [簡介](#)
- [資料庫內容](#)
 - 說明
 - 譯碼簿
 - 資料清單
 - 檔案英文譯名
- [相關規定](#)
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譯碼簿

- 各檔案之完整譯碼簿如下列：
 1. 資料描述(完整資料下載 )
 2. 代碼說明(完整資料下載 )
 3. 各檔案間串檔變項說明，請按此 (GIF 檔，37 KB)
 4. 練習用[虛擬資料檔](#)(97/08/29上線)
 5. 健保其他相關業務說明，請參考[中央健康保險署](#)網站。

健保資料庫的神奇魔力

2944



數據來源為國衛院http://nhird.nhri.org.tw/talk_07再編製成圖

健保研究資料庫的好，JAMA都知道：

The JAMA Network Journals > Collections Store Physician Jobs About Mobile

JAMA Internal Medicine

Formerly *Archives of Internal Medicine*

[Home](#) [Current Issue](#) [All Issues](#) [Online First](#) [Collections](#) [CME](#) [Multimedia](#)

[Online First >](#)

Invited Commentary | July 20, 2015

Nationwide Population Science Lessons From the Taiwan National Health Insurance Research Database **ONLINE FIRST**

Ann W. Hsing, PhD^{1,2,3}; John P. A. Ioannidis, MD, DSc^{2,3,4,5}

[\[+\] Author Affiliations](#)

JAMA Intern Med. Published online July 20, 2015. doi:10.1001/jamainternmed.2015.3540

Text Size: **A** A A

Article

Tables

References

Comments

外國學者近日投書，指控台灣有教授量產灌水論文。



Contents lists available at ScienceDirect

European Journal of Internal Medicine

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



Letters to the Editor

Carbon monoxide poisoning and risk for ischemic stroke

Keywords:
Carbon monoxide
Poisoning
Cohort study

To the Editor

As specialists in carbon monoxide (CO) poisoning, we are interested in the paper in *European Journal of Internal Medicine* by Kao and co-workers examining the association between an episode of CO poisoning [1]. The authors conducted a population-based, cohort study utilizing the National Health Insurance Database. In essence, patients exposed to CO poisoning during a 13-year period were identified, matched to controls, and the database searched for subsequent new diagnoses that occurred in the CO-poisoned population in excess to those seen in the cohort. The paper reported an increased risk for ischemic stroke following CO poisoning.

We subsequently identified four more CO publications from Kao's group in other journals published in 2015, using the same research model and database [2-5]. One reported increased risk of thromboembolic disease following CO poisoning, one cardiac arrhythmia, one Parkinson disease, and one peripheral artery disease. All of the papers had similar formatting.

It seemed unusual that one would query the same database in the

same way, find five conditions associated with CO poisoning, and report them in five individual manuscripts. The findings would be combined in one paper. Kao, is the same person. The journals are different, coming from different departments: Health Services Administration, Pathology/Oncology, and Internal

這個坑還值得跳嗎？

Medicine. A search performed December 31, 2015 revealed that Kao had published at least 151 papers in 2015 from the same database, each describing the association of two different conditions. Examples of the associations include gall bladder polyp/stroke, irritable bowel syndrome/erectile dysfunction, neonatal urinary tract infection/childhood allergic rhinitis, COPD/dementia, and allergic rhinitis/intracranial hemorrhage. Kao served as senior author to sixty different primary authors in 2015, each of whom published from one to twelve

papers. The primary author's departmental affiliation was often unrelated to the organ system discussed.

This research appears to be templated and not hypothesis-driven. It seems unhelpful to the clinician trying to read the literature to have an investigator publish 150 manuscripts from one study model, each describing two conditions that were associated in an insurance database, often with no apparent connection. Across all of these CO association papers noted, we are wary of the data supporting these specific conclusions.

111 Lin CW, Chen WK, Hsueh DZ, Chen YW, Lin CL, Sung FC, et al. Associa 基本符號

JUST DO IT.

成長

是從我們經歷的失敗
和磨難來的



From Bed to Benches

From Wet-lab to Dry-lab

健保資料庫研究平台

內科部研究中心
提出申請

成功，團隊合作是關鍵、實力展現的開始

健保資料庫研究申請單---下載路徑

認識彰基 About Us

- 彰基簡介
 - 大事紀要
 - 組織系統
 - 階段性發展計劃
 - 國際醫療
 - 人文特色
 - 全面品質管理
 - 全院資訊系統
 - 實證醫學中心
- 最新消息
- 聯絡我們
- 次專科簡介
- 部主任的話
- 內科部組織
- 教學資料專區
- 數位演講廳
- 學術活動
- 醫學研究專區**
- 知識管理系統(KM)
- 住院醫師學習護照
- 內部網站(科內專區)
- 醫療品質
- 回首頁

各科介紹 About Us [首頁](#) [認識彰基](#) [各科介紹](#)

內科部

- 內科部** (1)
- 感染科
- 心臟血管內科
- 胸腔內科
- 胃腸肝膽科
- 腎臟內科
- 血液腫瘤科
- 內分泌新陳代謝科
- 過敏免疫風濕科
- 內科部重症醫學科
- 一般醫學內科
- 老人醫學科

醫學研究專區

醫學研究新知

- 內科部住院醫師醫學研究教學 2015.8.11
- 醫學研究中統計分析應用及常犯的錯誤 2015.4.13
- 競爭風險存活資料分析(Competing risks analysis) 2015.1.27

表單下載 (3)

- 內科部研究中心研究諮詢單
- 內科部研究中心研究諮詢單_回覆
- 內科部研究中心研究提案單(1)
- 內科部研究中心研究提案單(2)
- 內科部研究中心權利與義務宣告表

統計諮詢，資料分析 (自備資料)

健保資料庫研究專用

f 讚 0

彰基內科部研究中心
健保資料庫研究提案單

個案編號：

申請日期：

姓名：

職稱：

科別：

Email：

聯絡電話：

研究主題概述：

文獻研究情形：

本研究能發揮或補足之特點：

重要的 Reference：

申請人員 簽章	申請單位主管 核章	承辦人員 簽章	內科部部長 核章

彰基內科部研究中心

Drylab 研究提案單

Case-control study Cohort study Cross-sectional study Repeated measure study Longitudinal study Others _____

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):(疾病需註明 ICD-9 or 藥物 ATC 碼 or 處置碼)(頻率定義)

i. Exposure:

ii. Non-Exposure:

備註: 疾病盛行率=_____

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

備註:

追蹤____年 或 始____年~____年止

統計控制變數 Confounder:(Ex: comorbidity, number of visit.....):(疾病需註明 ICD-9 or 藥物 ATC 碼 or 處置碼)(頻率定義)

備註:

Primary Outcome (Y₁):

Secondary Outcome (Y₂):

(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:

備註:

疾病盛行率=_____

義務宣告:

1. 內科部研究中心無償提供健保資料之分析，並對提案者之資料予以保密。
2. 提案者再提案前需要先做文獻回顧(建議至少 10 篇)，研究題目有學理依據和確認無健保資料庫相關研究發表。
3. 提案者至內科部研究中心討論提案想法，內容和抓取原則，以提升論文準備效益，並減少不必要的分析作業。
4. 每次諮詢、討論並確認分析資料完整後，內科部研究中心將會逐步提供資料抓取進度，預計於 1.5 月給予完整初步分析結果；若提案之分析困難度較高(可能要給"分析困難度較高"下定義，如多種(兩種以上)疾病；多種藥物分析；多層分析方式等)，則不受一個月內回覆之限制。
5. 資料分析結束後，可與內科部研究中心協商討論微調分析結果或再做進一步分析。

權益宣告:

1. 提案者收到內科部研究中心分析之初步結果後，須於二個月內給予完成論文初稿，否則內科部研究中心有權將結果收回，並給予其他有能力撰寫之醫師使用。提案者也會增加輪值一班之處分或罰款五千元整。
2. 提案者須將內科部研究中心研究員列入論文作者群中，不得低於第二作者。若有實質參與指導、資料庫分析建議、修改文章或回覆審查意見應列為共同第一或共同通訊作者。
3. 新提案不可與已提案之主題重複，有前述狀況者，內科部研究中心會在沒有分析前即先予以告知。
4. 因內科部研究中心純屬服務性質，故投稿過程之衍生費用應由提案者自行負擔。

提案題目：_____

提案者簽名：_____ 日期：_____

今天，我要訴說 一個從 0到1的故事

從無到有的過程

一個研究概念到發表的過程

RESEARCH ARTICLE

Stroke and Risks of Development and Progression of Kidney Diseases and End-Stage Renal Disease: A Nationwide Population-Based Cohort Study


Chia-Lin Wu^{1,2,3,4}, Chun-Chieh Tsai^{1,2}, Chew-Teng Kor⁴, Der-Cherng Tarn^{3,5,6}, Ie-Bin Lian⁷, Tao-Hsiang Yang⁸, Ping-Fang Chiu^{1,2,4*}, Chia-Chu Chang^{1,2,4,8*}

1 Division of Nephrology, Department of Internal Medicine, Changhua Christian Hospital, Changhua, Taiwan, 2 School of Medicine, Chung-Shan Medical University, Taichung, Taiwan, 3 Institute of Clinical Medicine, National Yang-Ming University, Taipei, Taiwan, 4 Internal Medicine Research Center, Changhua Christian Hospital, Changhua, Taiwan, 5 Division of Nephrology, Department of Medicine, Taipei Veterans General Hospital, Taipei, Taiwan, 6 Department and Institute of Physiology, National Yang-Ming University, Taipei, Taiwan, 7 Graduate Institute of Statistics and Information Science, National Changhua University of Education, Changhua, Taiwan, 8 Environmental and Precision Medicine Laboratory, Changhua Christian Hospital, Changhua, Taiwan

* 27509@cch.org.tw (PFC); 68505@cch.org.tw (CCC)



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 OPEN ACCESS

Citation: Wu C-L, Tsai C-C, Kor C-T, Tarn D-C, Lian I-B, Yang T-H, et al. (2016) Stroke and Risks of Development and Progression of Kidney Diseases and End-Stage Renal Disease: A Nationwide Population-Based Cohort Study. PLoS ONE 11(6): e0158533. doi:10.1371/journal.pone.0158533

Editor: Emmanuel A Burdmann, University of Sao Paulo Medical School, BRAZIL

Received: May 7, 2016

Accepted: June 17, 2016

Abstract

Background

There is little information about the association between stroke and kidney diseases. We aimed to investigate the impact of stroke on long-term renal outcomes.

Methods

In this large population-based retrospective cohort study, we identified 100,252 subjects

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

- 大家都知道的事情:

Stroke 和 Chronic kidney disease 相關性研究



定論: **CKD as a Risk Factor for Stroke**

反向思考:



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



出發總是要有方向—文獻查詢

Systematic review of existing evidence

Searched by **PubMed** & **Google scholar** ...

- 先確認、請確認、再確認

是否有stroke 和 CKD 相關流行病學文章或其他健保資料庫文章

NCBI Resources How To

PubMed.gov
US National Library of Medicine
National Institutes of Health

PubMed Search

Create RSS Create alert Advanced

Article types Summary Sort by Most Recent Send to

Text availability Abstract Full text

Publication dates 5 years 10 years Custom range

Results: 2

[Risk of incident chronic kidney disease and end-stage renal disease in patients with psoriasis: A nationwide population-based cohort study.](#)

1. Chi CC, Wang J, Chen YF, Wang SH, Chen FL, Tung TH. J Dermatol Sci. 2015 Jun;78(3):232-8. doi: 10.1016/j.jdermsci.2015.03.012. Epub 2015 Mar 30. PMID: 25862150

PubMed結果: 0

Google scholar結果: 2

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

Google

學術搜尋 約有 3,500 項結果 (0.07 秒)

文章 您是不是要查: [stroke incidence CKD taiwan population](#)

我的圖書館 提示: 如只要搜尋中文 (繁體) 的結果, 可使用學術搜尋設定. 指定搜尋語言。

不限時間 2015 以後 2014 以後 2011 以後 自訂範圍...

按照關聯性排序 按日期排序

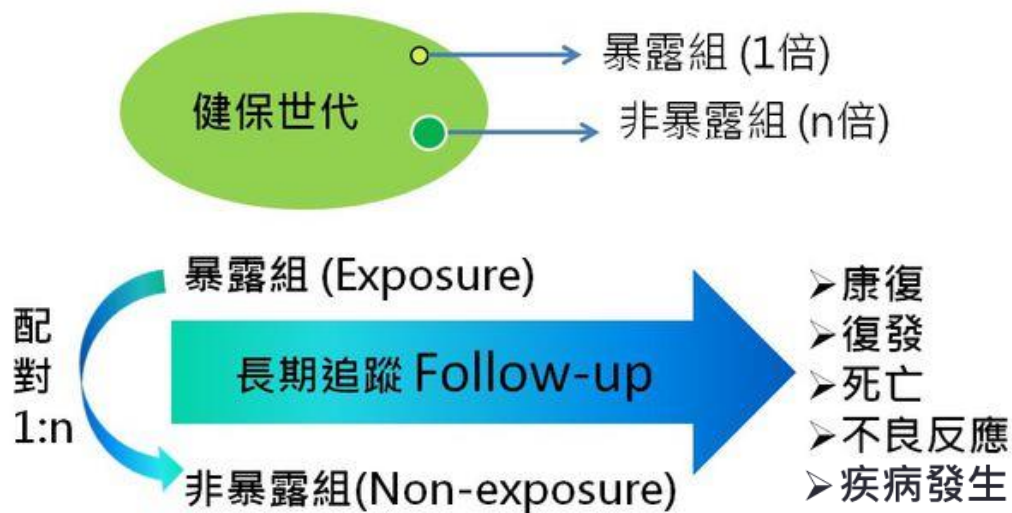
搜尋所有網站 搜尋所有中文網頁 搜尋繁體中文網頁

Risk factors and incidence of ischemic stroke in Taiwanese with nonvalvular fibrillation—a nation wide database analysis
LY Lin, CH Lee, CC Yu, CT Tsai, LP Lai, JJ Hwang... - *Atherosclerosis*, 2011 - Elsevier
... plays a more important role in ischemic stroke in Taiwanese with AF and the incidence is lower. A substantial number of ischemic strokes cannot be accurately predicted by current risk schemes ... The aim of the present study was to assess the risks that causing stroke in a group of ...
被引用 73 次 相關文章 全部共 6 個版本 引用 儲存 顯示更多服務

Association of estimated glomerular filtration rate and albuminuria with all-cause and cardiovascular mortality in general population cohorts: a collaborative meta- ...
Chronic Kidney Disease Prognosis Consortium - The Lancet, 2010 - Elsevier
... Cardiovascular mortality was defined as death due to myocardial infarction, heart failure, or stroke, or sudden ... cause of death since it is the leading cause of death in individuals with chronic kidney disease. 7. ... Taiwan 3, Taiwan, 367 093, 42, 50%, 0, 24%, 3%, 14%, 18%, 5%, 84, NA ...
被引用 1263 次 相關文章 全部共 12 個版本 引用 儲存 顯示更多服務

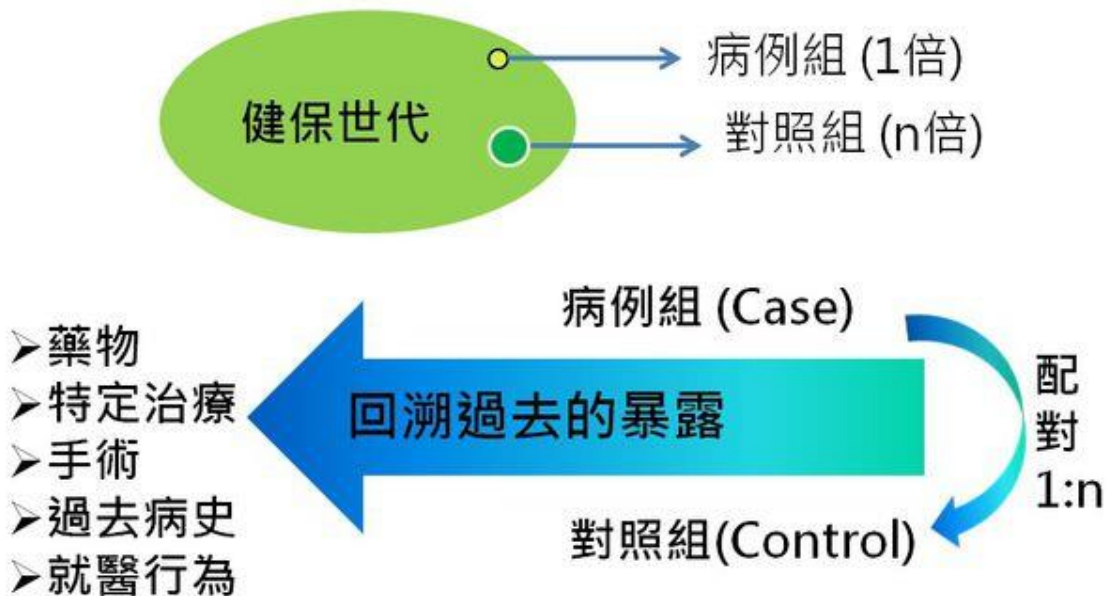
Chronic kidney disease and cardiovascular disease in a general Japanese population: the

資料庫常用的研究設計?

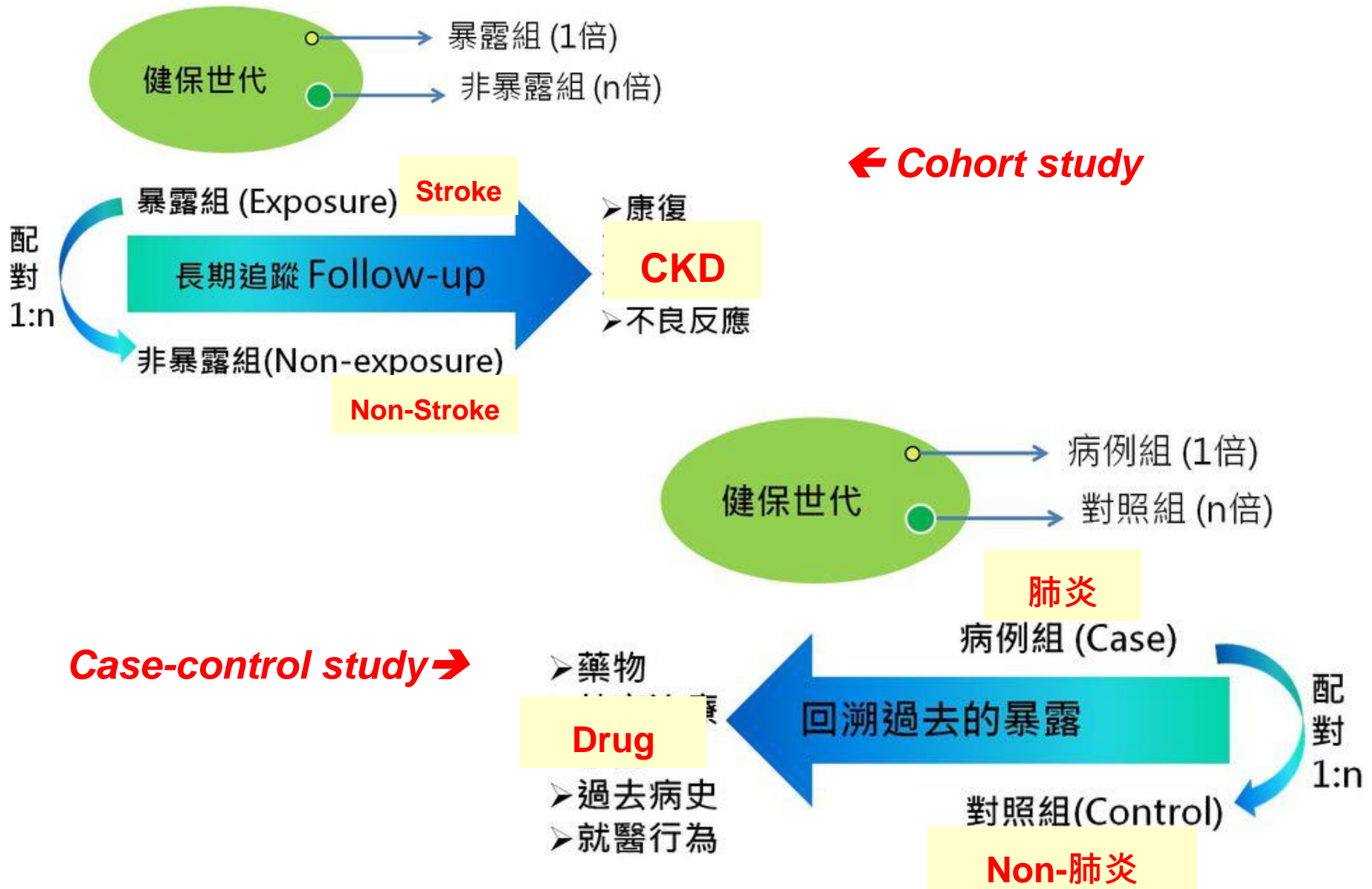


← Cohort study

Case-control study →



Example:



Hypothesis



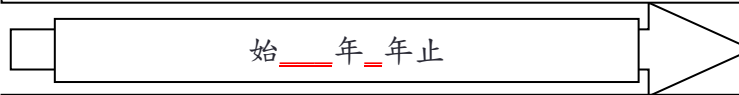
Qualitative Data

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)
100萬歸人檔
- (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-stroke population

備註:

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



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:

長期追蹤 (2000年-2012年)

Stroke

門診+住院 ICD9: 430-438

頻率: 門診出現 ≥ 3 次或住院1次



Total stroke \rightarrow 62,273 cases

CKD

門診+住院 ICD9: 580-589

頻率: 門診出現 ≥ 3 次或住院1次



Total ckd \rightarrow 64,371 cases



Exclusion criteria:

Stroke

門診+住院 ICD9: 430-438

頻率: 門診出現 ≥ 3 次或住院1次

長期追蹤 (2000年-2012年)

Newly diagnosis
CKD

CKD before than
stroke



eligible stroke
patients



Total stroke:
62,273 \rightarrow 50,857 cases

Aged < 18 or > 100

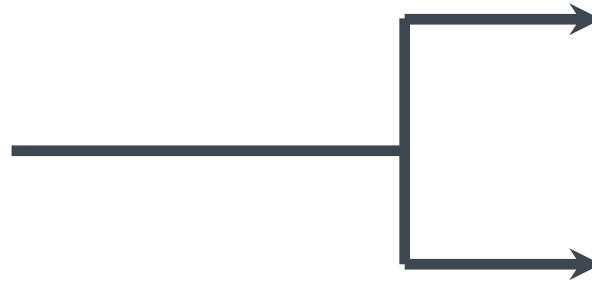


Cohort follow-
up < 30 days



Cohort Study:

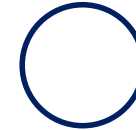
Stroke cohort
(N=50,857)



Chronic
kidney
disease



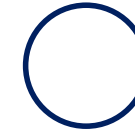
7,725
(15.19%)



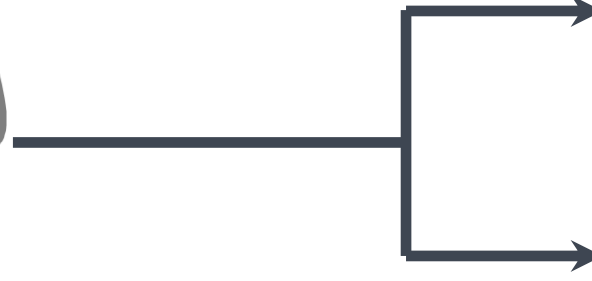
Chronic
kidney
disease



14,359
(2.26%)



Non-stroke cohort
(N = 636,098)



這樣就能證實stroke會增加CKD risk嗎?

→ adjusted confounder

Risk factor for CKD:

Chronic
kidney
disease



Age, Gender, Visit frequency
.....

DM, HPT, Hyperlipid, Gout, CAD, CHF, CCI
.....

ACEI/ARB, NSAIDs, Chinese herb
.....

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-stroke 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 2000 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 (Y₁):

CKD (ICD-9-CM 580-589)

Secondary Outcome (Y₂):

advanced CKD (ICD-9-CM 585 585.1)+EPO (ATC:)

Third Outcome (Y₃):

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)

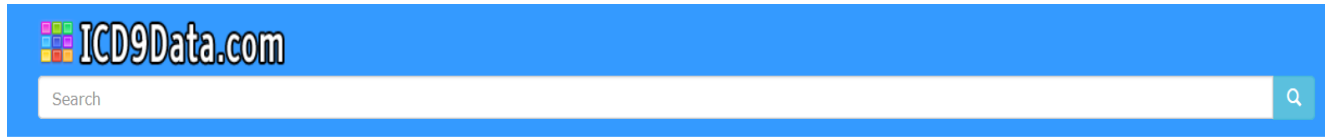
備註:

- **Death is a competing risk of Y₁, Y₂**

End-point criteria:

疾病 ICD-9-CM:

<http://www.icd9data.com/>



The Web's Free 2015 Medical Coding Reference

ICD9Data.com takes the current ICD-9-CM and HCPCS medical billing codes and adds 5.3+ million links between them. Combine that with a Google-powered search engine, drill-down navigation system and instant coding notes and it's easier than ever to quickly find the medical coding information you need.

Wikipedia:



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Article [Talk](#)

List of ICD-9 codes

From Wikipedia, the free encyclopedia

The following is a list of codes for [International Statistical Classification of Diseases and Related Health Problems](#).

- [List of ICD-9 codes 001–139: infectious and parasitic diseases](#)

reference:

Metformin use and mortality in patients with advanced chronic kidney disease: national, retrospective, observational, cohort study



Szu-Chun Hung, Yu-Kang Chang, Jia-Sin Liu, Ko-Lin Kuo, Yu-Hsin Chen, Chih-Cheng Hsu, Der-Cherng Tarng
evidence supporting existing precautions was inadequate, metformin was prescribed to patients in Taiwan without renal contraindication until 2009, when its use was restricted by the Taiwan Food and Drug Administration to men and women with serum creatinine concentrations of less than 133 $\mu\text{mol/L}$ and less than 124 $\mu\text{mol/L}$, respectively. This delay in changing guidance provides a unique opportunity to assess the

Thus, we selected patients with type 2 diabetes and a primary diagnosis of chronic kidney disease (ICD-9 codes 016.0, 042, 095.4, 189, 223, 236.9, 250.4, 271.4, 274.1, 403–404, 440.1, 442.1, 446.21, 447.3, 572.4, 580–589, 590–591, 593, 642.1, 646.2, 753, and 984) and those who were receiving erythropoiesis-stimulating agents covered by health insurance (indicating that serum

e 2 diabetes. However, use of e of the perceived risk of lactic derate chronic kidney disease. c kidney disease are lacking. nced (approximately stage 5)

Lancet Diabetes Endocrinol 2015
Published Online
June 18, 2015
[http://dx.doi.org/10.1016/S2213-8587\(15\)00123-0](http://dx.doi.org/10.1016/S2213-8587(15)00123-0)
See Online/Comment

你的醫療常規，習慣不是醫學研究的依據標準 (科學scientific)

藥物 ATC:

衛生福利部中央健康保險署
NATIONAL HEALTH INSURANCE ADMINISTRATION, MINISTRY OF HEALTH AND WELFARE

回首頁 | 網站導覽 | English | 兒童圖地 | 人才招聘 | 友善連結 | RSS | FAQ | 雙語詞彙 | 廉政區

認識健保署 健保法令 資訊公開 e化圖書館 主題專區 資料下載 意見信箱 訂閱專區 QR-CODE

健康存摺、補充保費、健保卡

1

2. 《軟體下載》
單機版預檢程式停用，將在健保資訊網（vpn或interent）提供網路版預檢作業，待預檢作業上線時，會在健保資訊網公告，造成不便，敬請見諒，若有預檢程式之相關問題請洽轄區業務組醫療費用網路申報連絡窗口。（94.01.07新增）

3. 《全民健康保險醫療服務給付項目及支付標準》

4. 《用藥品項》
檔案更新日期：每月二十五日資料擷取時間：每月十五日（若為已收載品項申復健保支付價格案件，其新價格上網時間依其新價格生效日期提早二個月上網；個案特別處理案件則依其新價格生效日期提早一個月上網）

5. 《藥物給付項目及支付標準相關法令規定》

6. 《藥品建議收載之相關規定》

3. 健保用藥品項105年6月壓縮總檔--
(因原檔案資料筆數較多，拆成2個檔案提供)(105.05.26更新) 📁
A. 健保用藥品項壓縮總檔欄位格式說明(103.05.26更新) 📄
B. 配合代辦計畫品項不提供
C. 壓縮總檔自105年6月起不再提供，僅提供下列健保用藥品項查詢檔。

4. 健保用藥品項105年7月查詢檔--
(因原檔案資料筆數較多，拆成2個檔案提供)(105.06.30更新) 📁
A. 健保用藥品項查詢檔欄位格式說明(105.04.25更新) 📄
B. 配合代辦計畫品項不提供

5. 健保用藥品項異動檔、壓縮總檔欄位格式說明(103.05.26更新) 📄

6. 全民健康保險特約醫事機構購藥問題反映表(103.02.14更新) 📄 📄

7. 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) 📄 📄

2

3

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	新口服錠	藥品代碼	參考價	有效期間		英文名稱	規格量	規格單位	成份名稱	成份含量	成份單位	劑型	藥理分類代碼	製造廠名稱	ATC CODE
2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3	N	A003941421	30	840301	960831	NARPINA EYE DROPS		5 ML	NAPHAZOLINE NITRATE	0.03 MG/ML		點眼液劑	523200	綠洲化學	S01GA01
4	N	A003941421	17.2	960901	980930	NARPINA EYE DROPS		5 ML	NAPHAZOLINE NITRATE	0.03 MG/ML		點眼液劑	523200	綠洲化學	S01GA01
5	N	A003941421	12.7	981001	9991231	NARPINA EYE DROPS		5 ML	NAPHAZOLINE NITRATE	0.03 MG/ML		點眼液劑	523200	綠洲化學	S01GA01
6	Y	A003994421	20	840301	960831	CON-N EYE-DROPS		5 ML	CHONDROITIN SULFATE SODIUM	30 MG/ML		點眼液劑	523299	綠洲化學	S01GA51
7	Y	A003994421	18.5	960901	980930	CON-N EYE-DROPS		5 ML	CHONDROITIN SULFATE SODIUM	30 MG/ML		點眼液劑	523299	綠洲化學	S01GA51
8	Y	A003994421	15.2	981001	1030630	CON-N EYE-DROPS		5 ML	CHONDROITIN SULFATE SODIUM	30 MG/ML		點眼液劑	523299	綠洲化學	S01GA51
9	Y	A003994421	14.7	1030701	9991231	CON-N EYE-DROPS		5 ML	CHONDROITIN SULFATE SODIUM	30 MG/ML		點眼液劑	523299	綠洲化學	S01GA51
10	N	A007973421	30	840301	980930	NEOSINICIN EYE DROPS 5% "OASIS"		5 ML	PHENYLEPHRINE HCL	50 MG/ML		點眼液劑	523200	綠洲化學	S01FB01
11	N	A007973421	29.9	981001	9991231	NEOSINICIN EYE DROPS 5% "OASIS"		5 ML	PHENYLEPHRINE HCL	50 MG/ML		點眼液劑	523200	綠洲化學	S01FB01
12	Y	A014320435	37	840301	960831	NAZAMINE NASAL DROPS "PATRON"		15 ML	NAPHAZOLINE HCL	0.5 MG/ML		點鼻液劑	523299	臺灣派頓	R01AB02
13	Y	A014320435	34.2	960901	1030630	NAZAMINE NASAL DROPS "PATRON"		15 ML	NAPHAZOLINE HCL	0.5 MG/ML		點鼻液劑	523299	臺灣派頓	R01AB02
14	Y	A014320435	32.1	1030701	9991231	NAZAMINE NASAL DROPS "PATRON"		15 ML	NAPHAZOLINE HCL	0.5 MG/ML		點鼻液劑	523299	臺灣派頓	R01AB02
15	N	A014620435	90	840301	890331	OXYMETAZOLINE SPRAY "CURIE"		15 ML	OXYMETAZOLINE HCL	0.5 MG/ML		鼻用氣化劑	523200	居禮化學	R01AA05
16	N	A014620435	82.47	890401	900331	OXYMETAZOLINE SPRAY "CURIE"		15 ML	OXYMETAZOLINE HCL	0.5 MG/ML		鼻用氣化劑	523200	居禮化學	R01AA05
17	N	A014620435	43.88	900401	920228	OXYMETAZOLINE SPRAY "CURIE"		15 ML	OXYMETAZOLINE HCL	0.5 MG/ML		鼻用氣化劑	523200	居禮化學	R01AA05
18	N	A014620435	43.8	920301	960831	OXYMETAZOLINE SPRAY "CURIE"		15 ML	OXYMETAZOLINE HCL	0.5 MG/ML		鼻用氣化劑	523200	居禮化學	R01AA05
19	N	A014620435	17.5	960901	990131	OXYMETAZOLINE SPRAY "CURIE"		15 ML	OXYMETAZOLINE HCL	0.5 MG/ML		鼻用氣化劑	523200	居禮化學	R01AA05
20	N	A014620435	7	990201	1001130	OXYMETAZOLINE SPRAY "CURIE"		15 ML	OXYMETAZOLINE HCL	0.5 MG/ML		鼻用氣化劑	523200	居禮化學	R01AA05
21	N	A014620435	6.8	1001201	9991231	OXYMETAZOLINE SPRAY "CURIE"		15 ML	OXYMETAZOLINE HCL	0.5 MG/ML		鼻用氣化劑	523200	居禮化學	R01AA05
22	Y	A015762435	36	840301	960831	KASULO NASAL SPRAY "C.S.P."		15 ML	NAPHAZOLINE HCL	0.5 MG/ML		鼻用噴液	523299	嘉信藥品	R01AB02
23	Y	A015762435	35.6	960901	980930	KASULO NASAL SPRAY "C.S.P."		15 ML	NAPHAZOLINE HCL	0.5 MG/ML		鼻用噴液	523299	嘉信藥品	R01AB02
24	Y	A015762435	33.2	981001	1030630	KASULO NASAL SPRAY "C.S.P."		15 ML	NAPHAZOLINE HCL	0.5 MG/ML		鼻用噴液	523299	嘉信藥品	R01AB02
25	Y	A015762435	32.2	1030701	1040630	KASULO NASAL SPRAY "C.S.P."		15 ML	NAPHAZOLINE HCL	0.5 MG/ML		鼻用噴液	523299	嘉信藥品	R01AB02
26	Y	A015762435	32.2	1040701	1040731	KASULO NASAL SPRAY "C.S.P."		15 ML	NAPHAZOLINE HCL	0.5 MG/ML		鼻用噴液	523299	嘉信藥品	R01AB02
27	Y	A015762435	32.2	1040801	9991231	KASULO NASAL SPRAY "C.S.P."		15 ML	NAPHAZOLINE HCL	0.5 MG/ML		鼻用噴液	523299	嘉信藥品	R01AB02
28	Y	A016222435	0	840301	860731	SUBICIN NASAL SPRAY "WINSTON"		15 ML	NAPHAZOLINE HCL	0.5 MG/ML		鼻用噴液	523299	溫士頓醫	R01AB02
29	Y	A016222435	30	860801	890331	SUBICIN NASAL SPRAY "WINSTON"		15 ML	NAPHAZOLINE HCL	0.5 MG/ML		鼻用噴液	523299	溫士頓醫	R01AB02
30	Y	A016222435	27.16	890401	900331	SUBICIN NASAL SPRAY "WINSTON"		15 ML	NAPHAZOLINE HCL	0.5 MG/ML		鼻用噴液	523299	溫士頓醫	R01AB02
31	Y	A016222435	23.38	900401	920228	SUBICIN NASAL SPRAY "WINSTON"		15 ML	NAPHAZOLINE HCL	0.5 MG/ML		鼻用噴液	523299	溫士頓醫	R01AB02
32	Y	A016222435	23.3	920301	9991231	SUBICIN NASAL SPRAY "WINSTON"		15 ML	NAPHAZOLINE HCL	0.5 MG/ML		鼻用噴液	523299	溫士頓醫	R01AB02
33	N	A016353435	26.2	840301	890331	EPHRINE NASAL DROPS (OXYMETAZOLIN) "GCPC"		15 ML	OXYMETAZOLINE HCL	0.5 MG/ML		點鼻液劑	523200	人人化學	R01AA05
34	N	A016353435	24.01	890401	900331	EPHRINE NASAL DROPS (OXYMETAZOLIN) "GCPC"		15 ML	OXYMETAZOLINE HCL	0.5 MG/ML		點鼻液劑	523200	人人化學	R01AA05

醫療處置碼:

全民健康保險醫療服務給付項目及支付標準

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附表 2.1.2	醫院申報門診診察費 4 歲以下兒童加成及科別加成支付點數之計算	第二部第一章第一節-11
附表 2.1.3	基層院所申報門診診察費 3 歲以下不分科及 4-6 歲兒童專科醫師加成 20% 之點數計算	第二部第一章第一節-12
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附表 2.1.5	基層院所申報婦、兒、外、內專科醫師別加成併兒童加成第一段門診診察費支付點數之計算	第二部第一章第一節-22
		第二部第一章第一節-23

肺功能檢查:

17006B, 17007B,17019C, 30010B,
.....

透析治療Dialysis Therapy:

58001C, 58019C, 58020C, 58021C,
.....

http://sc-dr.tw/health_form/files/form4-001.pdf

Study flow-chart

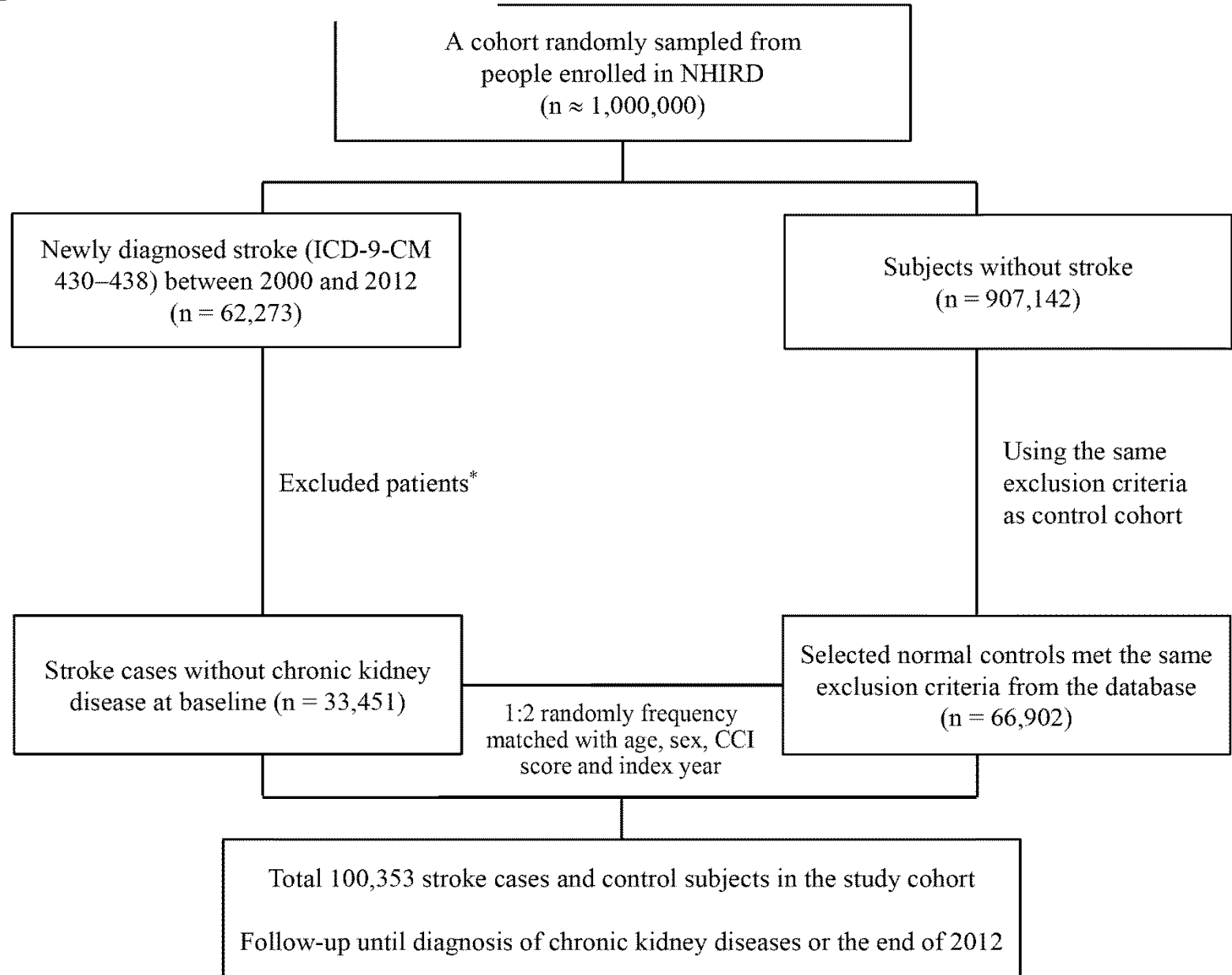


Table 1. Comparisons in demographic characteristics, comorbidities, medications and clinical outcomes in subjects with and without stroke.

Variables ^a	Before frequency matching			Frequency matched				
	Non-stroke (n = 636,098)	Stroke (n = 50,857)	P value ^b	Non-stroke (n = 66,902)	Stroke (n = 33,451)	Total cohort (n = 100,353)	P value ^b	StD ^c
Sex								
Female	330,567 (51.97%)	24,221 (47.63%)	<0.001	32,104 (47.99%)	16,052 (47.99%)	48,156 (47.99%)	0.99	0.00
Male	305,530 (48.03%)	26,636 (52.37%)	<0.001	34,798 (52.01%)	17,399 (52.01%)	52,197 (52.01%)	0.99	0.00
Age, years	40.76 ± 14.95	64.53 ± 13.76	<0.001	58.71 ± 12.78	58.71 ± 12.78	58.71 ± 12.78	1.00	0.00
Age stratified								
<50	472,524 (74.28%)	7,682 (15.11%)	<0.001	14,760 (22.06%)	7,380 (22.06%)	22,140 (22.06%)	0.99	0.00
50–64	116,514 (18.32%)	16,045 (31.55%)	<0.001	29,622 (44.28%)	14,811 (44.28%)	44,433 (44.28%)	0.99	0.00
≥65	47,060 (7.4%)	27,130 (53.35%)	<0.001	22,520 (33.66%)	11,260 (33.66%)	33,780 (33.66%)	0.99	0.00
Clinic visit frequency ^d , visits per year	2.87 ± 9.59	15.75 ± 20.93	<0.001	20.05 ± 25.66	27.75 ± 25.25	22.61 ± 25.78	<0.001	0.30
Comorbidities at baseline								
Hypertension	75,033 (11.8%)	25,456 (50.05%)	<0.001	18,813 (28.12%)	15,447 (46.18%)	34,260 (34.14%)	<0.001	0.38
Diabetes mellitus	49,704 (7.81%)	14,515 (28.54%)	<0.001	11,978 (17.9%)	7,548 (22.56%)	19,526 (19.46%)	<0.001	0.12
Hyperlipidemia	86,218 (13.55%)	18,499 (36.37%)	<0.001	18,205 (27.21%)	12,114 (36.21%)	30,319 (30.21%)	<0.001	0.19
Gout	59,657 (9.38%)	11,266 (22.15%)	<0.001	10,678 (15.96%)	6,947 (20.77%)	17,625 (17.56%)	<0.001	0.12
CAD	32,589 (5.12%)	14,276 (28.07%)	<0.001	9,359 (13.99%)	7,317 (21.87%)	16,676 (16.62%)	<0.001	0.21
CHF	8,386 (1.32%)	4,590 (9.03%)	<0.001	2,462 (3.68%)	1,773 (5.3%)	4,235 (4.22%)	<0.001	0.08
AF	2,059 (0.32%)	1,830 (3.6%)	<0.001	685 (1.02%)	758 (2.27%)	1,443 (1.44%)	<0.001	0.098
Endocarditis	388 (0.06%)	170 (0.33%)	<0.001	68 (0.1%)	90 (0.27%)	158 (0.16%)	<0.001	0.04
PAOD	7,132 (1.12%)	2,320 (4.56%)	<0.001	1,676 (2.51%)	1,211 (3.62%)	2,887 (2.88%)	<0.001	0.06
Charlson's comorbidity index score								
0	460,351 (72.37%)	22,600 (44.44%)	<0.001	37,756 (56.43%)	18,878 (56.43%)	56,634 (56.43%)	0.99	0.00
1–2	143,069 (22.49%)	21,864 (42.99%)	<0.001	26,554 (39.69%)	13,277 (39.69%)	39,831 (39.69%)	0.99	0.00
≥3	32,678 (5.14%)	6,393 (12.57%)	<0.001	2,592 (3.87%)	1,296 (3.87%)	3,888 (3.87%)	0.99	0.00

Table 2. Incidence and hazard ratios of chronic kidney disease for stroke patients compared with non-stroke cohort by demographic characteristics and comorbidities.

Variables	Subjects without stroke			Subjects with stroke			Stroke cohort vs. Non-stroke cohort					P value for interaction ^g
	Event, n	Person-years	Incidence ^b	Event, n	Person-years	Incidence ^b	cHR (95% CI)	P value	aHR (95% CI) Model 1 ^{c,d}	aHR (95% CI) Model 2 ^{e,e}	P value	
Overall for CKD	3,865	426,512.8	9.06 (8.78–9.35)	3,578	204,460.1	17.5 (16.93–18.07)	1.92 (1.84–2.01)	<0.001	1.43 (1.36–1.50)	1.45 (1.38–1.52)	<0.001	
Sex												0.13
Female	1,699	210,346.4	8.08 (7.69–8.46)	1,504	102,142.7	14.72 (13.98–15.47)	1.82 (1.69–1.95)	<0.001	1.37 (1.28–1.48)	1.40 (1.30–1.50)	<0.001	
Male	2,166	216,166.4	10.02 (9.6–10.44)	2,074	102,317.4	20.27 (19.4–21.14)	2.01 (1.89–2.14)	<0.001	1.46 (1.37–1.56)	1.49 (1.39–1.58)	<0.001	
Stratify age												<0.001
<50	375	102,855.6	3.65 (3.28–4.01)	468	50,101.0	9.34 (8.49–10.19)	2.53 (2.21–2.9)	<0.001	1.61 (1.37–1.88)	1.62 (1.40–1.89)	<0.001	
50–64	1,679	200,869.4	8.36 (7.96–8.76)	1,589	95,519.8	16.64 (15.82–17.45)	1.98 (1.85–2.12)	<0.001	1.42 (1.32–1.53)	1.44 (1.34–1.55)	<0.001	
≥65	1,811	122,787.7	14.75 (14.07–15.43)	1,521	58,839.2	25.85 (24.55–27.15)	1.75 (1.64–1.88)	<0.001	1.35 (1.25–1.45)	1.36 (1.27–1.46)	<0.001	
Comorbidities at baseline ^f												0.03
0	1,437	233,189.1	6.16 (5.84–6.48)	815	64,662.6	12.6 (11.74–13.47)	2.04 (1.87–2.22)	<0.001	1.47 (1.33–1.62)	1.50 (1.37–1.64)	<0.001	
1–2	1,666	145,171.4	11.48 (10.93–12.03)	1,773	100,156.8	17.7 (16.88–18.53)	1.53 (1.43–1.63)	<0.001	1.36 (1.26–1.46)	1.37 (1.28–1.47)	<0.001	
≥3	762	48,152.3	15.82 (14.7–16.95)	990	39,640.6	24.97 (23.42–26.53)	1.58 (1.43–1.73)	<0.001	1.48 (1.34–1.63)	1.49 (1.35–1.64)	<0.001	

Abbreviations: ACEI, Angiotensin-converting-enzyme inhibitor; AF, atrial fibrillation; aHR, adjusted hazard ratio; ARB, Angiotensin II receptor blocker; CAD, coronary artery disease; CCI, Charlson's comorbidity index; CHF, congestive heart failure; cHR, crude hazard ratio; CI, confidence interval; CKD, chronic kidney disease; NSAIDs, Non-steroidal anti-inflammatory drugs; PAOD, peripheral artery occlusive disease.

^aMultiplicative Cox hazards model.

^bIncidence rate, per 1,000 person-years.

^cMultivariate analysis including age, sex, comorbidities (hypertension, diabetes mellitus, hyperlipidemia, CAD, CHF, endocarditis, PAOD, AF and gout) and CCI score, visit frequency and long-term use of medications (including ACEIs, ARBs, NSAIDs and Chinese herbal medicine), where comorbidities and medications were considered time-dependent covariates.

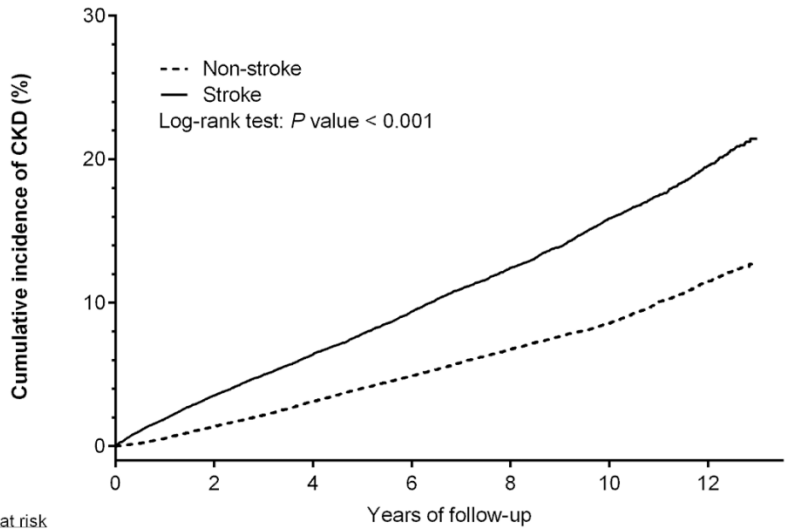
^dFine and Gray competing risks regression model.

^eCause-specific hazards regression model.

^fPatients with any of the comorbidities, including hypertension, diabetes mellitus, hyperlipidemia, CAD, CHF, endocarditis, PAOD, AF and gout, were classified as the comorbidity group.

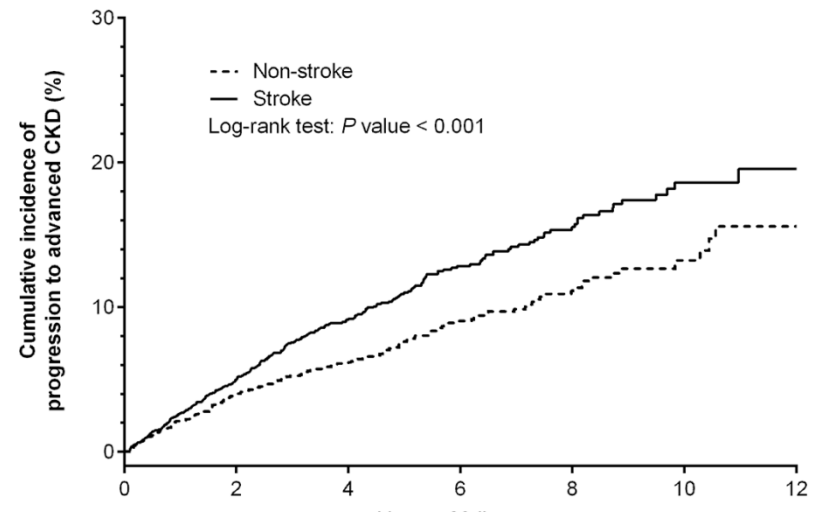
Wu CL, Tsai CC, Kor CT, Tarn DC, Lian IB, et al. (2016) Stroke and Risks of Development and Progression of Kidney Diseases and End-Stage Renal Disease: A Nationwide Population-Based Cohort Study. PLoS ONE 11(6): e0158533. doi:10.1371/journal.pone.0158533 <http://journals.plos.org/plosone/article?id=info:doi/10.1371/journal.pone.0158533>

A



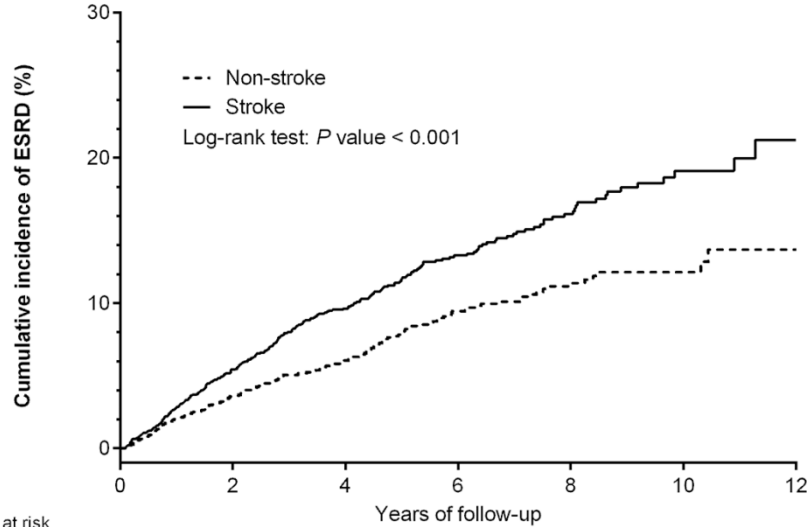
No. at risk	Years of follow-up						
	0	2	4	6	8	10	12
Non-stroke	66902	54959	44741	34742	25401	16218	6976
Stroke	33451	27138	21584	16365	11659	7167	3073

B



No. at risk	Years of follow-up						
	0	2	4	6	8	10	12
Non-stroke	3397	1814	1193	748	412	143	3
Stroke	3166	1868	1244	743	426	173	25

C



No. at risk	Years of follow-up						
	0	2	4	6	8	10	12
Non-stroke	3396	1818	1191	745	410	144	3
Stroke	3167	1860	1235	737	425	173	23

Wu CL, Tsai CC, Kor CT, Tarng DC, Lian IB, et al. (2016) Stroke and Risks of Development and Progression of Kidney Diseases and End-Stage Renal Disease: A Nationwide Population-Based Cohort Study. PLoS ONE 11(6): e0158533. doi:10.1371/journal.pone.0158533 <http://journals.plos.org/plosone/article?id=info:doi/10.1371/journal.pone.0158533>

Reviewer comments: 見招拆招rebuttal

Comment 1. Misclassification is always a concern when using databases collected for general administrative purposes. Has an investigation been conducted verifying the definition of stroke and CKD

Reply:

S5 Table. Risks of incident CKD with respect to defining CKD at intervals of 90, 180 and 365 days

	Subjects without stroke			Subjects with stroke			Stroke cohort vs. Non-stroke cohort			
	Event, n	Person-years	Incidence ^a	Event, n	Person-years	Incidence ^a	cHR (95% CI)	<i>P</i> value	aHR ^b (95% CI)	<i>P</i> value
90 days	2,530	430,056.0	5.88 (5.65–6.11)	2,225	209,117.1	10.64 (10.2–11.08)	1.82 (1.72–1.93)	<0.001	1.71 (1.60–1.82)	<0.001
180 days	3,486	425,909.2	8.18 (7.91–8.46)	2,733	206,493.4	13.24 (12.74–13.73)	1.62 (1.54–1.71)	<0.001	1.53 (1.45–1.61)	<0.001
365 days	3,697	408,631.3	9.05 (8.76–9.34)	2986	193,015.5	15.47 (14.92–16.03)	1.62 (1.54–1.70)	<0.001	1.44 (1.37–1.52)	<0.001

Comment 2: Using codes for CKD has issues with validity and reliability. Without measures of serum creatinine (for estimated GFR) or albuminuria, this study is quite limited to investigate this problem.

Reply:

彰化基督教醫院病人病歷資料申請表

申請人： 吳家麟 單位科別： 腎臟內科 申請窗口： 疾病分類暨申報組 分科
 職稱： 主治醫師 聯絡電話/MVPN： 7388/66318
 取件形式： 1. 電腦檔案，outlook(員工代碼 143843) 2. 書面列印，親自領取

一、所需資料類別、年度：

資料類別： 住院資料 門診資料 急診資料 健檢資料(如需健檢資料，需會簽健康管理中
 資料期間： 2013.01.01 ~ 2015.12.31

二、設定資料條件

1. 疾病名稱：

慢性腎臟病, ICD9: 016.00, 095.40, 189.00, 189.90, 223.00, 236.91, 250.40, 271.40, 274.10, 284.03, 403.01, 403.11, 403.91, 404.02, 404.12, 404.92, 404.03, 404.13, 404.93, 440.10, 442.10, 447.30, 572.40, 580.40, 580.80, 580.81, 580.89, 580.90, 581.00, 581.10, 581.20, 581.30, 581.80, 581.81, 581.89, 581.90, 582.00, 582.10, 582.20, 582.40, 582.80, 582.80, 582.89, 582.90, 583.00, 583.10, 583.20, 583.40, 583.80, 583.81, 583.89, 583.90, 584.00, 584.50, 584.60, 584.70, 584.80, 584.90, 585.00, 586.00, 588.10, 588.90, 591.00, 642.10, 642.20, 753.12, 753.13, 753.14, 753.15, 753.16, 753.17, 753.19, 753.20, 753.21, 753.22, 753.23, 753.24, 753.25, 753.26, 753.27, 753.28, 753.29, 753.30, 753.31, 753.32, 753.33, 753.34, 753.35, 753.36, 753.37, 753.38, 753.39, 753.40, 753.41, 753.42, 753.43, 753.44, 753.45, 753.46, 753.47, 753.48, 753.49, 753.50, 753.51, 753.52, 753.53, 753.54, 753.55, 753.56, 753.57, 753.58, 753.59, 753.60, 753.61, 753.62, 753.63, 753.64, 753.65, 753.66, 753.67, 753.68, 753.69, 753.70, 753.71, 753.72, 753.73, 753.74, 753.75, 753.76, 753.77, 753.78, 753.79, 753.80, 753.81, 753.82, 753.83, 753.84, 753.85, 753.86, 753.87, 753.88, 753.89, 753.90, 753.91, 753.92, 753.93, 753.94, 753.95, 753.96, 753.97, 753.98, 753.99

Lin, M. Y., Chiu, Y. W., Chang, J. S., Lin, H. L., Lee, C. T. C., Chiu, G. F., ... & Hwang, S. J. (2015). Association of prescribed Chinese herbal medicine use with risk of end-stage renal disease in patients with chronic kidney disease. *Kidney International*, 88(6), 1365-1373.

彰基院內資料的 validation:

		2013-2015 icd-9=580-585		Total
		CKD according icd-9 code		
		yes	no	Total
eGFR	>=60	5970	68	
	<60	3581	1179	4760
Total		9551	1247	10798

Sensitivity= 24.77% (1179/4760)

Specific= 98.87% (5970/6038)

positive predictive value =94.55%(1179/1247)

negative predictive value=62.51% (5970/9551)

Chronic kidney disease

The CKD cohort comprised patients who were newly diagnosed with CKD between 2000 and 2005, identified by following the approach of a previous study that classified patients with ICD-9-CM codes for one or more inpatient visit or two or more outpatient visits within 1 year as having CKD.³⁷ To ensure the accuracy of the CKD diagnostic codes, we validated them by using the standard definition of CKD (estimated glomerular filtration rate < 60 ml min⁻¹ per 1.73 m², microalbuminuria, or overt proteinuria) and a data set from one regional hospital. We studied 800 patients with CKD diagnosis codes from January 2010 to December 2010 and verified the codes of 790 of these patients by examining serum creatinine and urine protein data. The positive predictive value of using the ICD-9-CM codes for CKD was 90.4 (714 of 790), and the CKD of most patients was categorized as stage 3–5 (99.6%, 711 of 714). The date of the first

Comment 3. Without Propensity score match

Reply: Propensity score analysis

Variables	Stroke cohort vs. Non-stroke cohort			
	aHR ^a (95% CI)	<i>P</i> value	aHR ^b (95% CI)	<i>P</i> value
Overall for CKD	1.5(1.43,1.57)	<.0001	1.49(1.42,1.57)	<.0001
Sex				
Female	1.46(1.36,1.57)	<.0001	1.45(1.35,1.56)	<.0001
Male	1.53(1.43,1.63)	<.0001	1.53(1.43,1.63)	<.0001
Stratify age				
<50	1.64(1.41,1.91)	<.0001	1.68(1.44,1.94)	<.0001
50–64	1.46(1.35,1.57)	<.0001	1.46(1.36,1.57)	<.0001
≥65	1.46(1.36,1.57)	<.0001	1.46(1.36,1.56)	<.0001
Comorbidities at baseline				
0	1.59(1.48,1.7)	<.0001	1.6(1.49,1.71)	<.0001
1 and 2	1.51(1.41,1.62)	<.0001	1.49(1.39,1.6)	<.0001
≥3	1.51(1.23,1.85)	<.0001	1.5(1.22,1.83)	0.0001
Stratify propensity score				
Q1	–	–	2.47(2.07,2.93)	<.0001
Q2	–	–	1.58(1.35,1.84)	<.0001
Q3	–	–	1.7(1.49,1.94)	<.0001
Q4	–	–	1.39(1.3,1.5)	<.0001
Q5	–	–	1.36(1.25,1.48)	<.0001

Comment 4a: it is possible that stroke is serving as a good proxy of better ascertainment of incident CKD because of more frequent contact with health care providers than any true association of stroke with CKD.

Comment 4b: Matching patients from the stroke group with those of the control group based on a wide range of age threshold (5 years) is prone to carry bias.

Reply 4a& 4b:

- We have changed the age threshold of frequency matching from 5 years to the narrowest range (identical age, Table 1).
- the visit-frequency were adjusted in multivariate Cox's analysis.

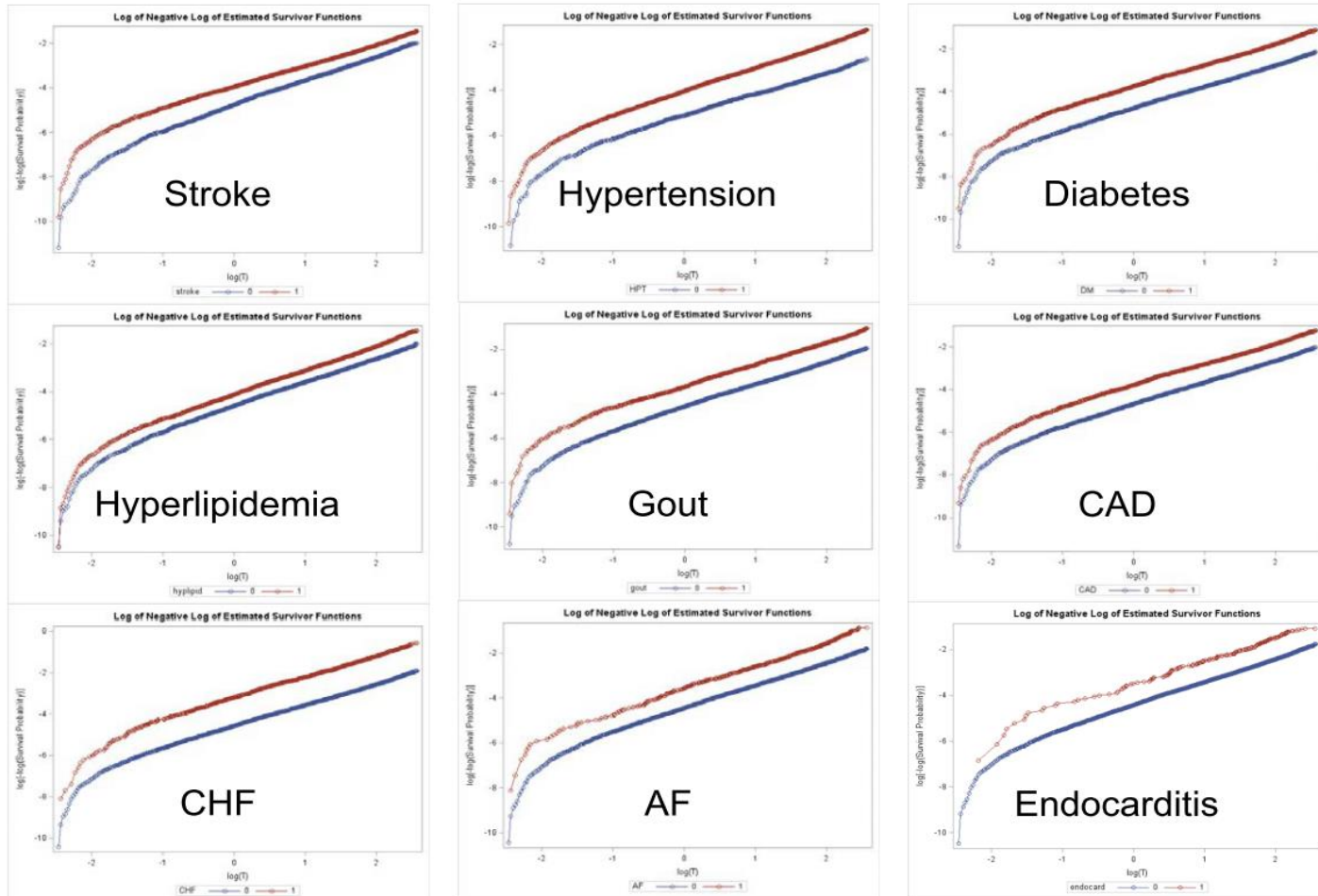
Comment 5: *Is it possible in the cohort study to adjust for illness severity (Charlson index for example), medication use, BMI and smoking?*

Reply:

- CCI, medications use(NSAIDs, ACEi/ARBs and Chinese herbal) are considered confounders for adjustment.
- Limitation for BMI and smoking ~~~~巧婦難為無米之炊

Comment 6: For the Cox model, was the proportional hazards' assumption assessed? Were interactions among the covariates considered?

Reply: Plots of log-negative-log survival curves:



Homework 你若想做，你會找一個方法！

身為第一線臨床醫師，我發現.....

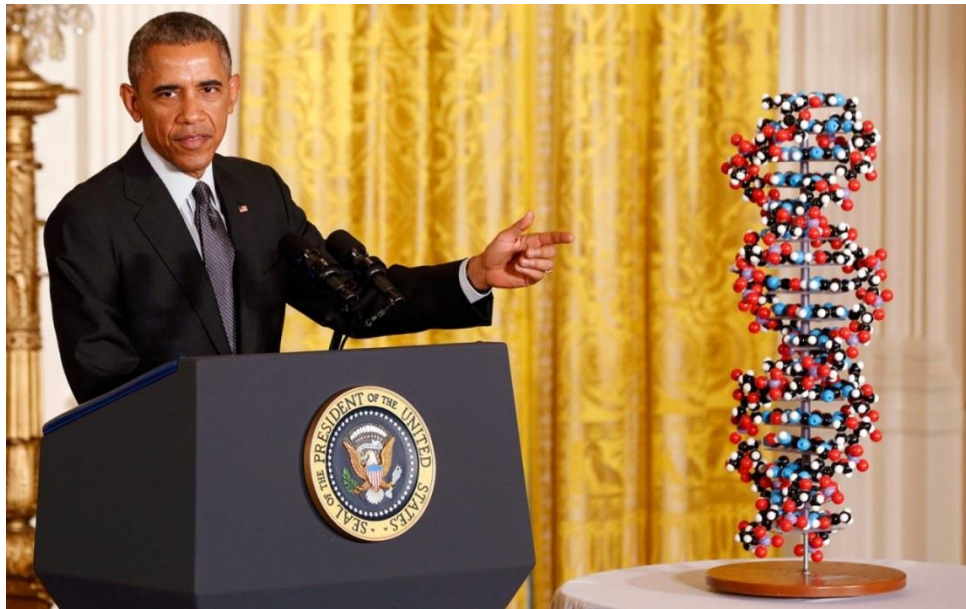
自己構思一個研究主題和假設，試著填寫研究設計~~

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:	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:
	始 年 年止	統計控制變數Confounder:

聯絡方式

分機:7388、code: 179297

位置:三期13F 血液透析室旁的討論室



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And to give all of us access to the personalized information we need to keep ourselves and our families healthier.”

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總統當選人陳建仁2016/05/15出席台灣癌症聯合學術年會時指出，台灣未來應倡議「P4醫學」，將病毒、家族史、環境暴露等因子數據化，預測風險高低及治療效果後，再予個人化治療。

這也就是「精準醫療」，可降低不必要的健保支出，提升癌症病人存活率



摘錄自聯合報

小人物的心聲

- 研究向下扎根，培育新生代醫師進行醫學研究，提升醫療品質。



Thanks for your attention!!!!