



臺北醫學大學
TAIPEI MEDICAL UNIVERSITY

整合平台醫療資訊 共同模式之建立與運用

臺北醫學大學

許明暉教授

2020/12/15



TMU60
1960-2020

北醫六十 邁向榮耀

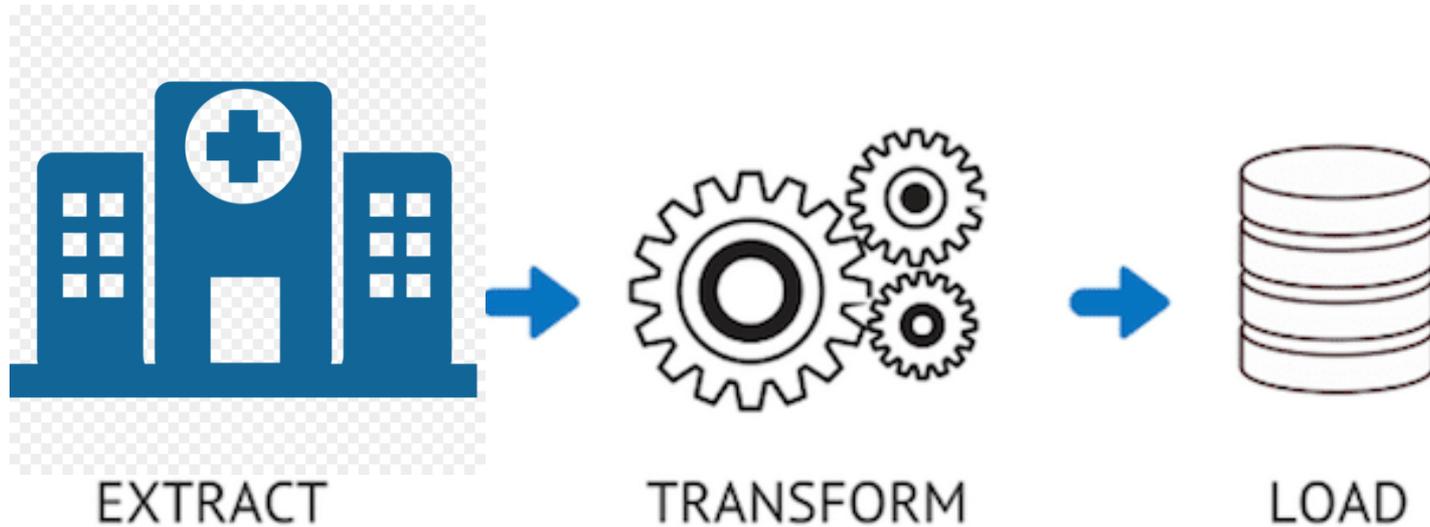
Common Data Model

藍色上傳健保署資料, 紫色上傳國健署, 紅色自費項目

- 門診醫療申報檔案總表 (TOTFAE)
- 門診醫療申報檔案健保給付醫令 (TOTFAO1)
- 門診醫療申報檔案自費項目醫令 (TOTFAO2)
 - 自費項目以癌症藥品為主, 如附件:自費項目.pdf
- 住院醫療申報檔案總表 (TOTFBE)
- 住院醫療申報檔案健保給付醫令 (TOTFBO1)
- 住院醫療申報檔案自費項目醫令 (TOTFBO2)
 - 自費項目以癌症藥品為主, 如附件:自費項目.pdf
- 檢驗檢查資料檔格式(包含健保給付及自費項目) (LABH1 & LABH2)

- 癌症登記長表資料檔 (檔案代碼:CRLF)
- 癌症登記短表資料檔 (檔案代碼:CRSF)
- 死亡資料檔 (檔案代碼:DEATH)
- 癌症個案管理追蹤資料檔 (檔案代碼:CASE)

ETL Process



電子病歷成為重要研究材料

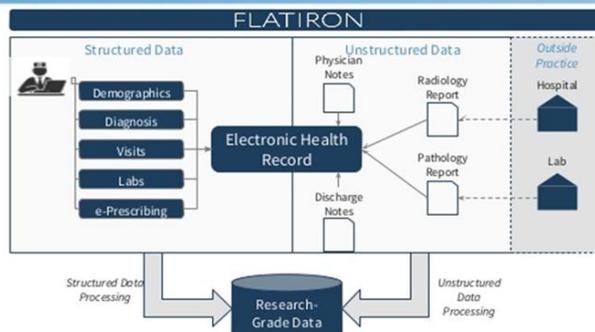
Real world data. Real world evidence.



電子病歷已成主流



Flatiron Processes EHR Data At Scale



FLATIRON

© 2016 Flatiron Health, Inc. Proprietary and confidential.

2018羅氏藥廠19億美金併購案

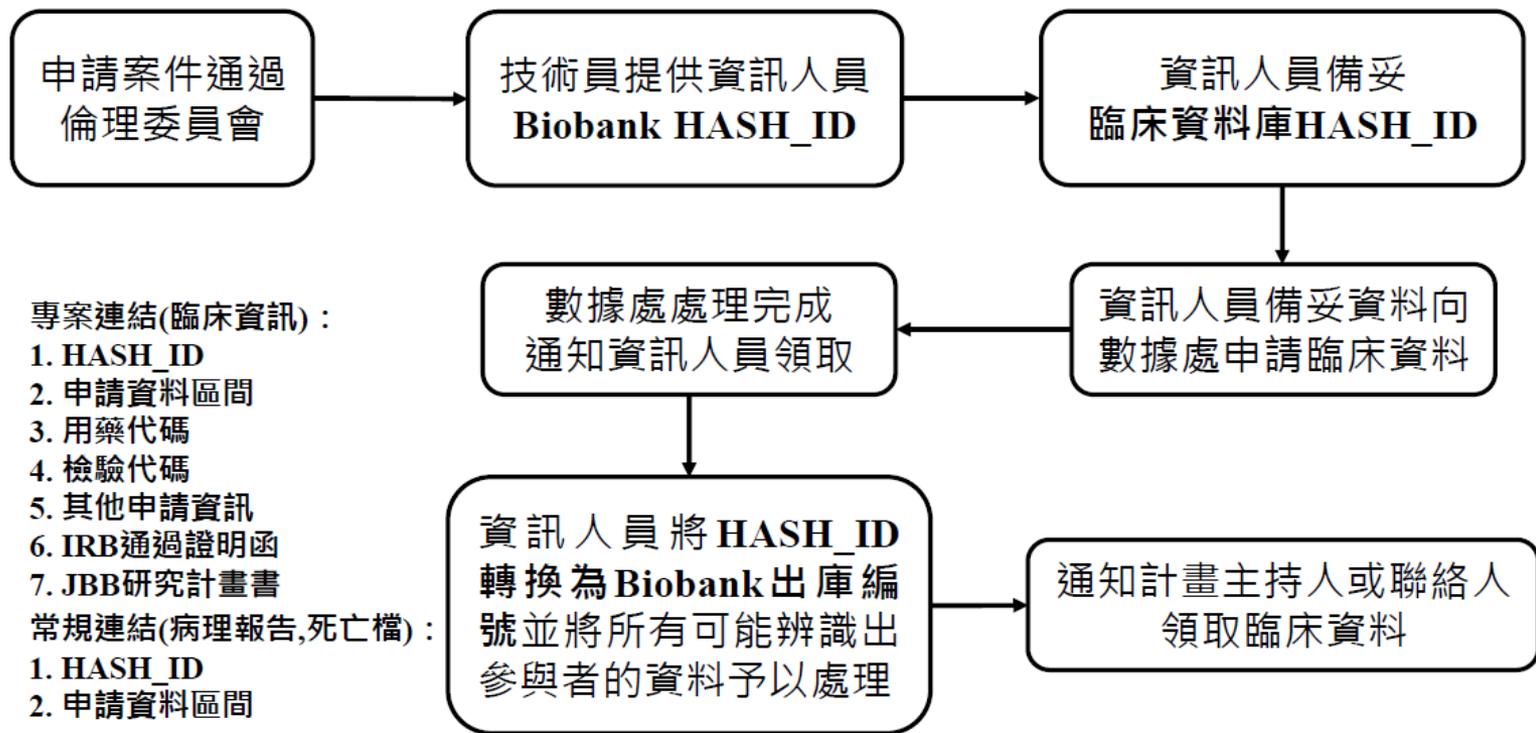
Use of Electronic Health Record Data in Clinical Investigations

Guidance for Industry

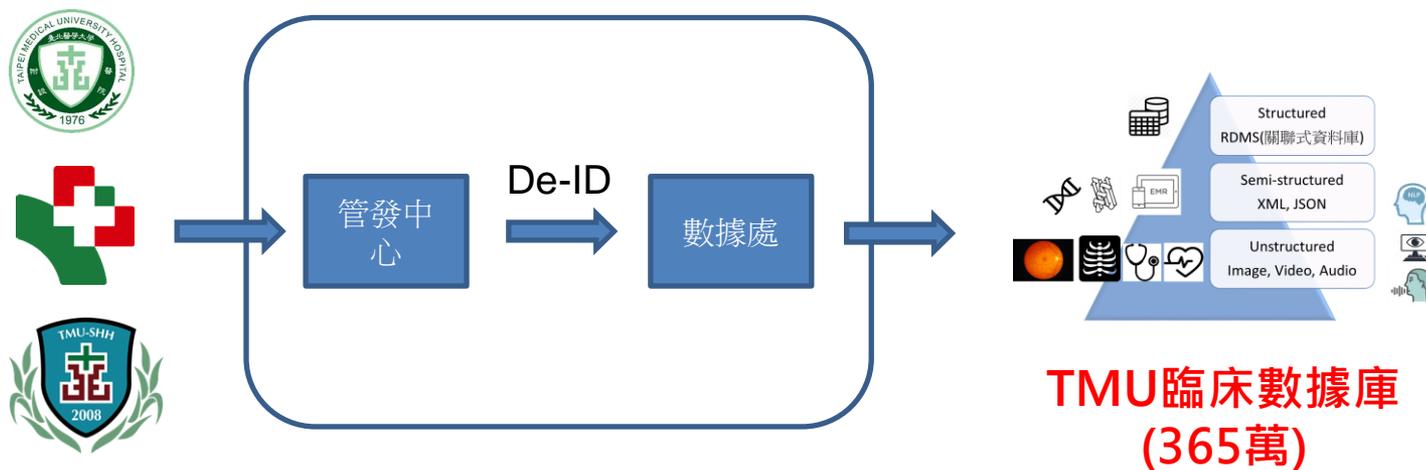
美國FDA公布指引

TMU JBB臨床數據申請流程

由管發中心取得Biobank HASH_ID及臨床資料庫HASH_ID對照表



TMU臨床數據庫



- 與醫院資料庫同步更新
- 串聯癌登檔與死亡檔
- 申請通過後快速提供資料集
- 視覺化查詢介面(dBI)-免IRB



dBI

健康數據聯盟

OBSERVATIONAL HEALTH DATA SCIENCES AND INFORMATICS



OHDSI's global research community

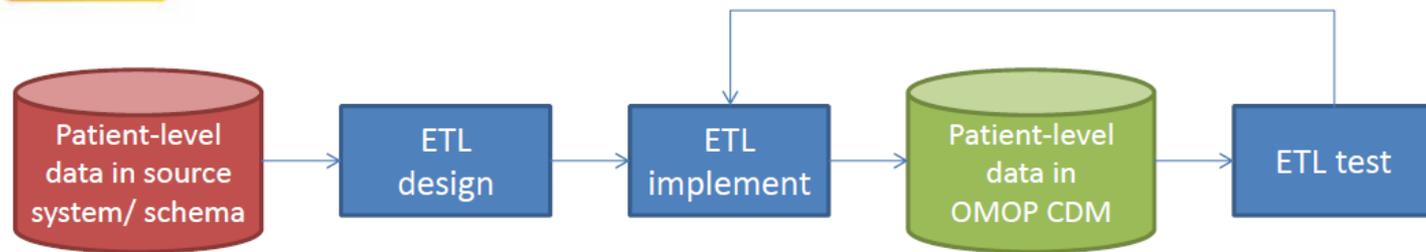


- >140 collaborators from 20 different countries
- Experts in informatics, statistics, epidemiology, clinical sciences
- Active participation from academia, government, industry, providers
- Currently 600 million patient records in 52 databases

<http://ohdsi.org/who-we-are/collaborators/>



Tools to help you map data



OHDSI tools built to help

WhiteRabbit:
profile your source data

RabbitInAHat:
map your source structure to CDM tables and fields

ATHENA:
standardized vocabularies for all CDM domains

Usagi:
map your source codes to CDM vocabulary

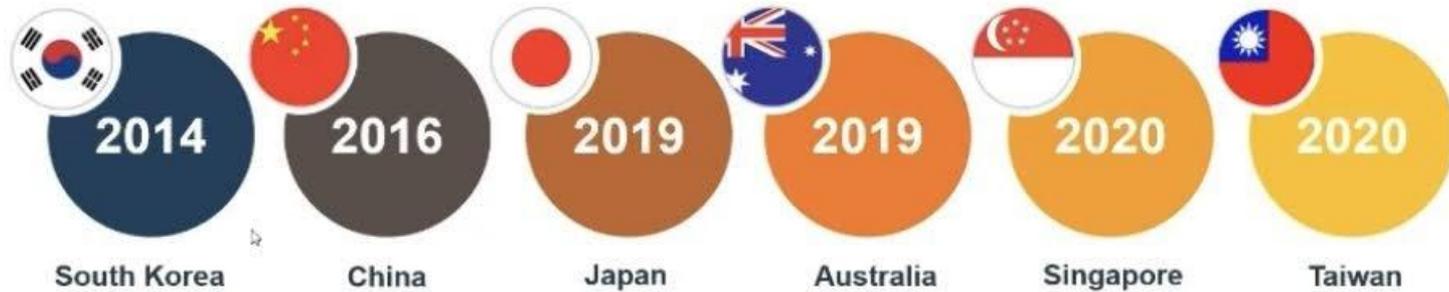
CDM:
DDL, index, constraints for Oracle, SQL Server, PostgreSQL; Vocabulary tables with loading scripts

ACHILLES:
profile your CDM data; review data quality assessment; explore population-level summaries

OHDSI Forums:

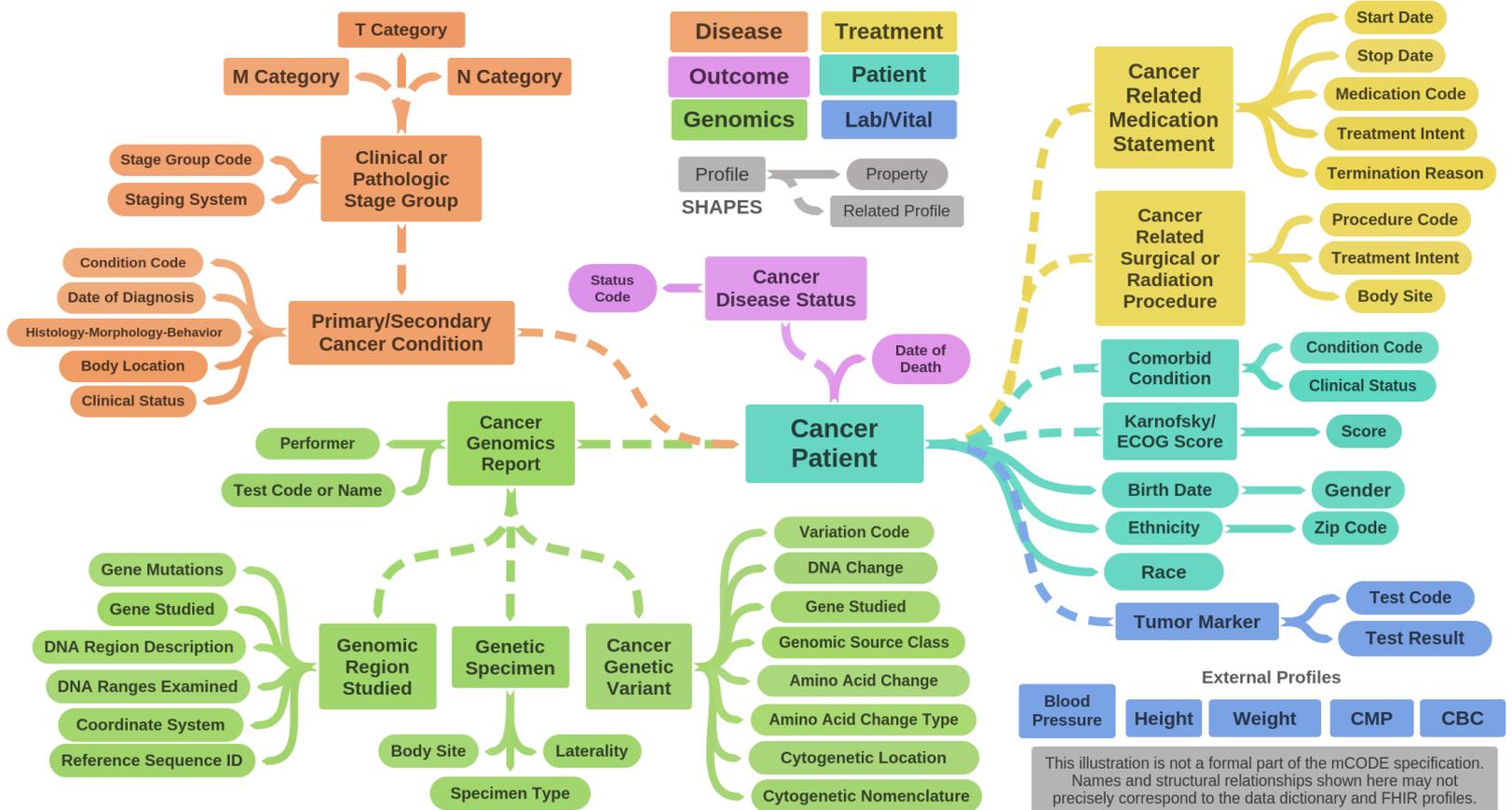
Public discussions for OMOP CDM Implementers/developers

OHDSI Taiwan Chapter



coggle

mCODE v1.0



我們與Lancet的距離



THE LANCET

Meta-Analysis Lancet. 2019 Nov 16;394(10211):1816-1826.

doi: 10.1016/S0140-6736(19)32317-7. Epub 2019 Oct 24.

Comprehensive comparative effectiveness and safety of first-line antihypertensive drug classes: a systematic, multinational, large-scale analysis

Marc A Suchard¹, Martijn J Schuemie², Harlan M Krumholz³, Seng Chan You⁴, Ruijun Chen⁵, Nicole Pratt⁶, Christian G Reich⁷, Jon Duke⁸, David Madigan⁹, George Hripcsak¹⁰, Patrick B Ryan¹¹

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PMID: 31668726 PMCID: PMC6924620 (available on 2020-11-16)

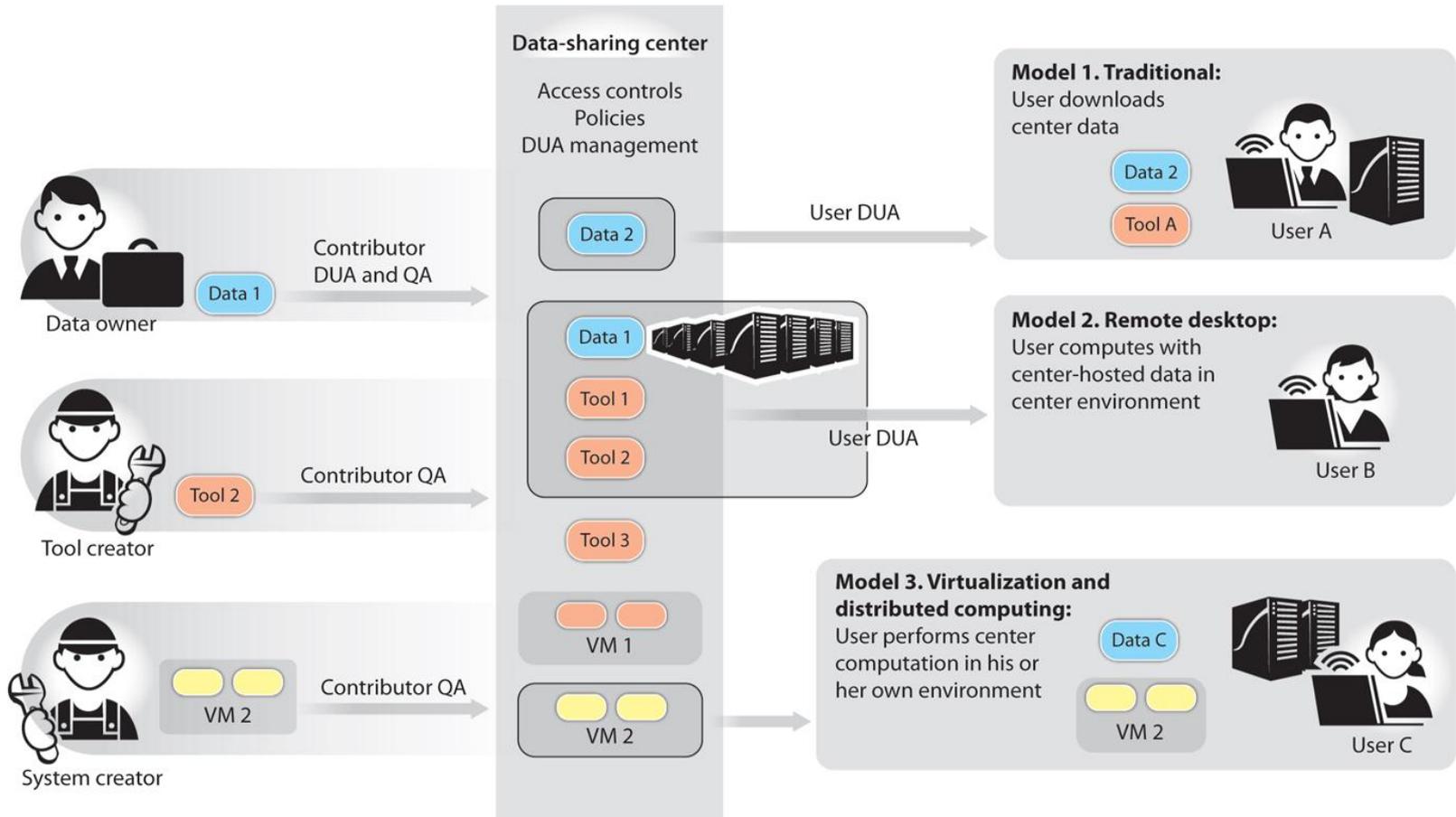
DOI: 10.1016/S0140-6736(19)32317-7



A Comprehensive Comparative Effectiveness and Safety Study of the Second Antihypertensive Agent after Monotherapy at scale using the OHDSI AP Network

Yuan Lu^{1,2}, Jing Li^{1,3}, Sang Youl Rhee^{1,4}, Hua Xu^{1,5}, Nicole Pratt^{1,6}, Seng Chan You^{1,7}, Mui Van Zandt^{1,3}, Mengling Feng^{1,8}, Lei Liu^{1,9}, Ian Chi Kei Wong^{1,10}, Rae Woong Park^{1,7}, Jiyoung Hwang^{1,7}, Tatsuo Hiramatsu^{1,11}, Usman Iqbal^{1,12}, Yu-Chuan Li^{1,13}, Min-Huei Hsu^{1,13}, Jitendra Jonnagaddala¹⁴, Christian Reich^{1,3}
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資料共享模式



MIMIC III-開放的價值



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PubMed.gov

Mimic iii

Advanced Create alert Create RSS

Filters Timeline

3,402 results

1 A Visualisation and Extraction Tool for Time Series in the **MIMIC III Database**.
Festag S, et al. Stud Health Technol Inform. 2019. PMID: 31483265
We developed a tool based on the KNIME analytics platform for the extraction and visualisation of medical time series stored in the Medical ...
Cite Share

2 Prolonged Elevated Heart Rate and 90-Day Survival in Acutely Ill Patients: Data From the **MIMIC-III Database**.
Scaife M, et al. Intensive Care Med. 2019.

NIH National Library of Medicine Log in

PubMed.gov

Taiwan national health insurance

Advanced Create alert Create RSS

Filters Timeline

5,304 results

1 Disease and economic burden for rare diseases in **Taiwan**: A longitudinal study using **Taiwan's National Health Insurance Research Database**.
Hsu JC, et al. PLoS One. 2018. PMID: 30240449 Free PMC article.
Little attention has been given to the prevalence of rare diseases and their health-related economic burden in **Taiwan**. OBJECTI
Cite Share

2 Perioperative medicine and **Taiwan National Health Insurance Research Database**.



感謝聆聽
敬請指教
