

西醫治療急性中風的最 新發展



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Director of Master Programme in Stroke and Clinical Neurosciences

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中風—中國第1號殺手

Rapid health transition in China, 1990–2010: findings from the Global Burden of Disease Study 2010

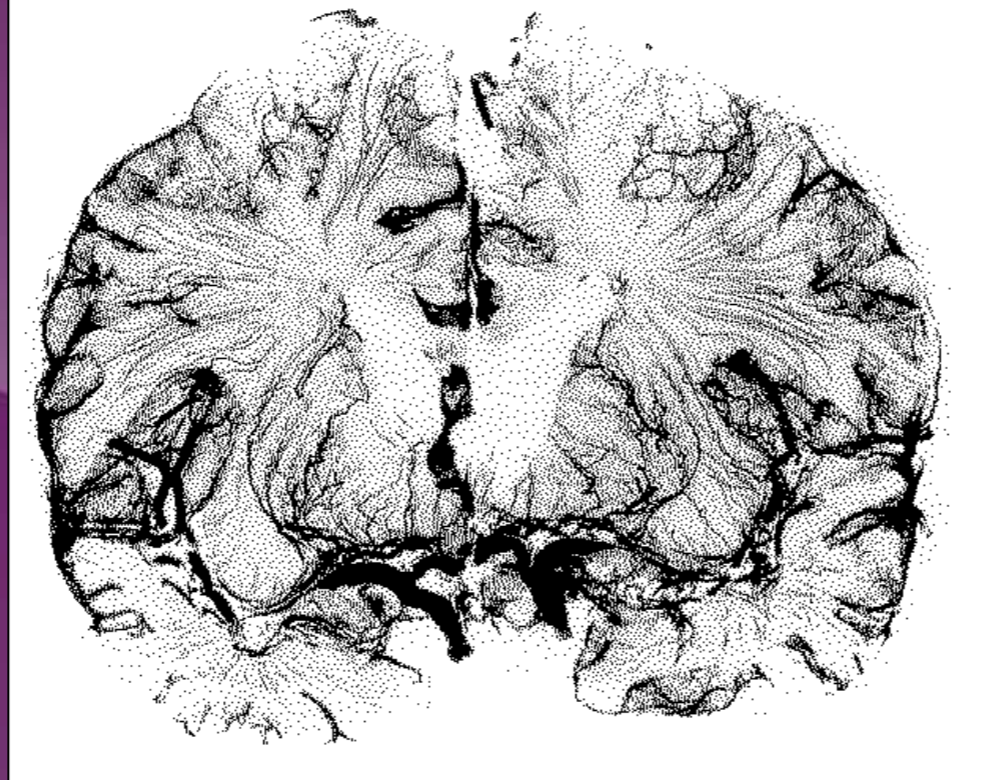


Gonghuan Yang*, Yu Wang*, Yixin Zeng, George F Gao, Xiaofeng Liang, Maigeng Zhou, Xia Wan, Shicheng Yu, Yuhong Jiang, Mohsen Naghavi, Theo Vos, Haidong Wang, Alan D Lopez, Christopher J L Murray

Lancet 2013; 381: 1987–2015

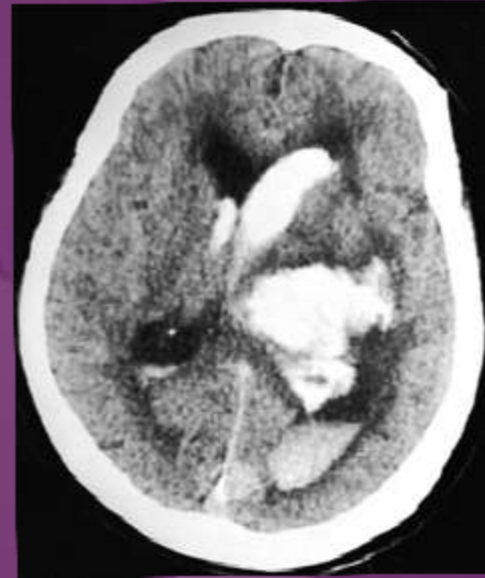
	All ages deaths (thousands)		Median %Δ
	1990	2010	
Cardiovascular and circulatory diseases	2167.5 (2054.9–2462.4)	3136.2 (2827.1–3274.6)	47.4
Rheumatic heart disease	131.4 (120.1–147.3)	57.1 (49.8–63.0)	–56.4
Ischaemic heart disease	450.3 (409.2–594.5)	948.7 (774.5–1024.6)	120.3
Cerebrovascular disease	1340.6 (1237.6–1623.2)	1726.7 (1463.2–1848.6)	34.5
Ischaemic stroke	426.4 (304.4–639.7)	609.6 (478.3–808.4)	44.7
Haemorrhagic and other non-ischemic stroke	914.2 (657.9–1146.4)	1117.2 (887.1–1359.1)	22.1
Hypertensive heart disease	133.7 (106.7–174.0)	172.9 (136.4–210.6)	31.5
Cardiomyopathy and myocarditis	32.6 (20.4–48.1)	35.2 (24.5–49.5)	8.8
Atrial fibrillation and flutter	4.8 (1.9–10.3)	12.9 (5.6–26.6)	175.1
Aortic aneurysm	36.3 (12.9–62.6)	58.2 (30.7–90.3)	61.4
Peripheral vascular disease	3.3 (1.2–6.6)	9.1 (4.1–17.2)	180.4
Endocarditis	9.5 (6.8–12.8)	12.4 (9.8–15.8)	31.6
Other cardiovascular and circulatory diseases	25.0 (20.1–31.1)	103.0 (94.5–112.6)	318.5

原因



脑缺血

80%



脑出血

20%

缺血性中風



Large Artery
Disease

大动脉疾病

33%



Small Vessel
Disease

小血管疾病

33%



Cardioembolism

心源性栓塞

15%

治疗- 不同层面

急性卒中

预防再次卒中

康复治疗

预防首次卒中

急性治疗



治疗- 不同层面

急性
卒中

预防再次卒中
康复治疗

预防首次卒中

急性治疗



急性治疗

急性中風單位

溶栓治療
< 3 (4.5) 小时

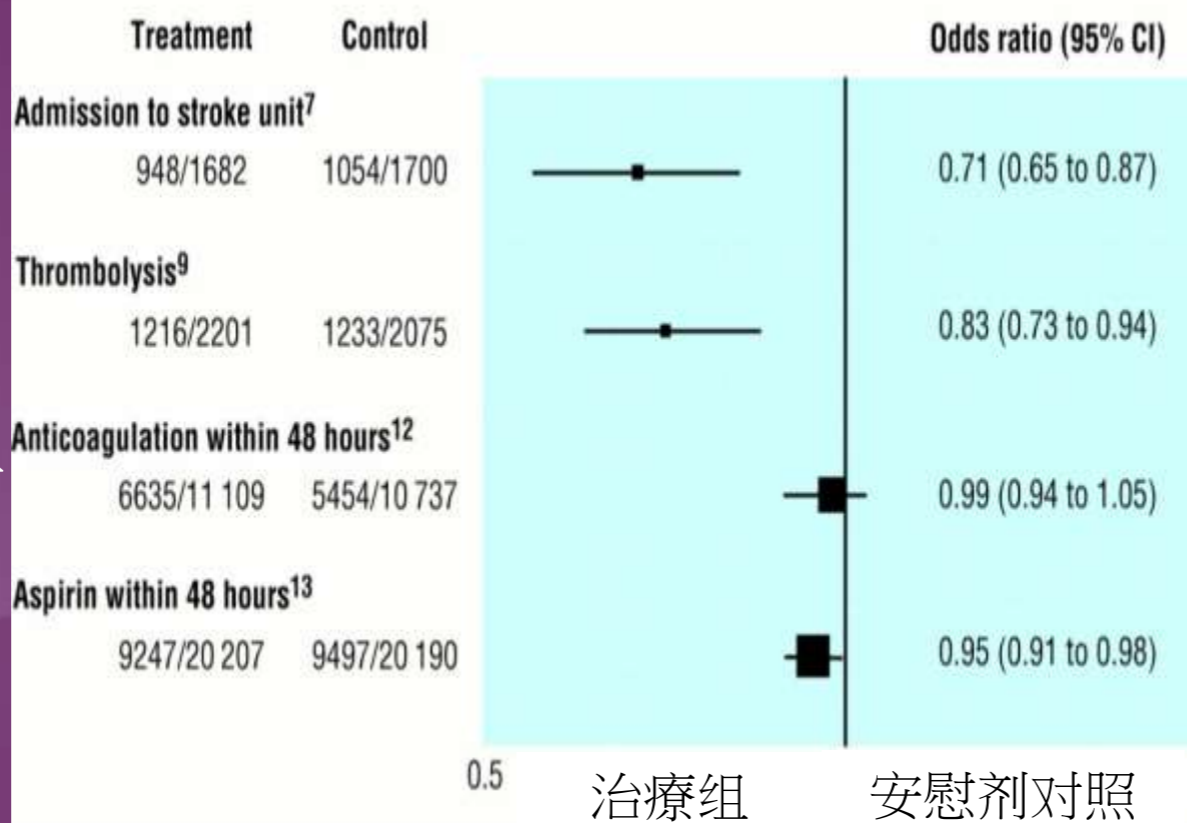
阿士匹靈
< 48 小时

急性中風
單位

溶栓治療

抗凝血

阿士匹靈



抗凝血:
低分子肝素
肝素钠

BMJ, 2000; 320: 692 - 696.

急性中風單位

成功原因

同一处的病房
专业的团队
经常的会议
统一治疗的方案
不段的学习 / 训练

專業的團隊

脑神经内科
放射性科
脑卒中护士
物理治疗师
积业治疗师
语言治疗师

急性中風單位

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积业治疗师
语言治疗师

+ 中醫師

Hong Kong Institute of Integrative Medicine

香港中西醫結合醫學研究所

Clopidogrel with Aspirin in Acute Minor Stroke or Transient Ischemic Attack

Yongjun Wang, M.D., Yilong Wang, M.D., Ph.D., Xingquan Zhao, M.D., Ph.D., Liping Liu, M.D., Ph.D., David Wang, D.O., F.A.H.A., F.A.A.N., Chunxue Wang, M.D., Ph.D., Chen Wang, M.D., Hao Li, Ph.D., Xia Meng, M.D., Ph.D., Liying Cui, M.D., Ph.D., Jianping Jia, M.D., Ph.D., Qiang Dong, M.D., Ph.D., Anding Xu, M.D., Ph.D., Jinsheng Zeng, M.D., Ph.D., Yansheng Li, M.D., Ph.D., Zhimin Wang, M.D., Haiqin Xia, M.D., and S. Claiborne Johnston, M.D., Ph.D., for the CHANCE Investigators*

ABSTRACT

BACKGROUND

Stroke is common during the first few weeks after a transient ischemic attack (TIA) or minor ischemic stroke. Combination therapy with clopidogrel and aspirin may provide greater protection against subsequent stroke than aspirin alone.

METHODS

In a randomized, double-blind, placebo-controlled trial conducted at 114 centers in China, we randomly assigned 5170 patients within 24 hours after the onset of minor ischemic stroke or high-risk TIA to combination therapy with clopidogrel and aspirin (clopidogrel at an initial dose of 300 mg, followed by 75 mg per day for 90 days, plus aspirin at a dose of 75 mg per day for the first 21 days) or to placebo plus aspirin (75 mg per day for 90 days). All participants received open-label aspirin at a clinician-determined dose of 75 to 300 mg on day 1. The primary outcome was stroke (ischemic or hemorrhagic) during 90 days of follow-up in an intention-to-treat analysis. Treatment differences were assessed with the use of a Cox proportional-hazards model, with study center as a random effect.

RESULTS

Stroke occurred in 8.2% of patients in the clopidogrel–aspirin group, as compared with 11.7% of those in the aspirin group (hazard ratio, 0.68; 95% confidence interval, 0.57 to 0.81; $P < 0.001$). Moderate or severe hemorrhage occurred in seven patients (0.3%) in the clopidogrel–aspirin group and in eight (0.3%) in the aspirin group ($P = 0.73$); the rate of hemorrhagic stroke was 0.3% in each group.

CONCLUSIONS

Among patients with TIA or minor stroke who can be treated within 24 hours after the onset of symptoms, the combination of clopidogrel and aspirin is superior to aspirin alone for reducing the risk of stroke in the first 90 days and does not increase the risk of hemorrhage. (Funded by the Ministry of Science and Technology of the People's Republic of China; CHANCE ClinicalTrials.gov number, NCT00979589.)

非心源性 性栓塞

From Beijing Tiantan Hospital (Yongjun Wang, Yilong Wang, X.Z., L.L., Chunxue Wang, Chen Wang, H.L., X.M.) and Xuan Wu Hospital (J.J.), Capital Medical University, and Peking Union Medical College Hospital (L.C.), Beijing; Huashan Hospital of Fudan University (Q.D.) and Renji Hospital of Shanghai Jiaotong University (Y.L.), Shanghai; First Affiliated Hospital of Jinan University (A.X.) and First Affiliated Hospital of Sun Yat-Sen University (J.Z.), Guangzhou; Taizhou First People's Hospital, Taizhou (Z.W.); and Taiyuan Iron and Steel Group, General Hospital, Taiyuan (H.X.) — all in China; Illinois Neurological Institute Stroke Network, Sisters of the Third Order of St. Francis Healthcare System, University of Illinois College of Medicine, Peoria (D.W.); and the Departments of Neurology and Epidemiology, University of California, San Francisco, San Francisco (S.C.J.). Address reprint requests to Dr. Yongjun Wang at No. 6 Tiantanxili, Dongcheng District, Beijing 100050, China, or at yongjunwang1962@gmail.com; or to Dr. Johnston at the Departments of Neurology and Epidemiology, University of California, 505 Parnassus Ave., M-798, San Francisco, CA 94143-0114, or at clay.johnston@ucsfmedctr.org.

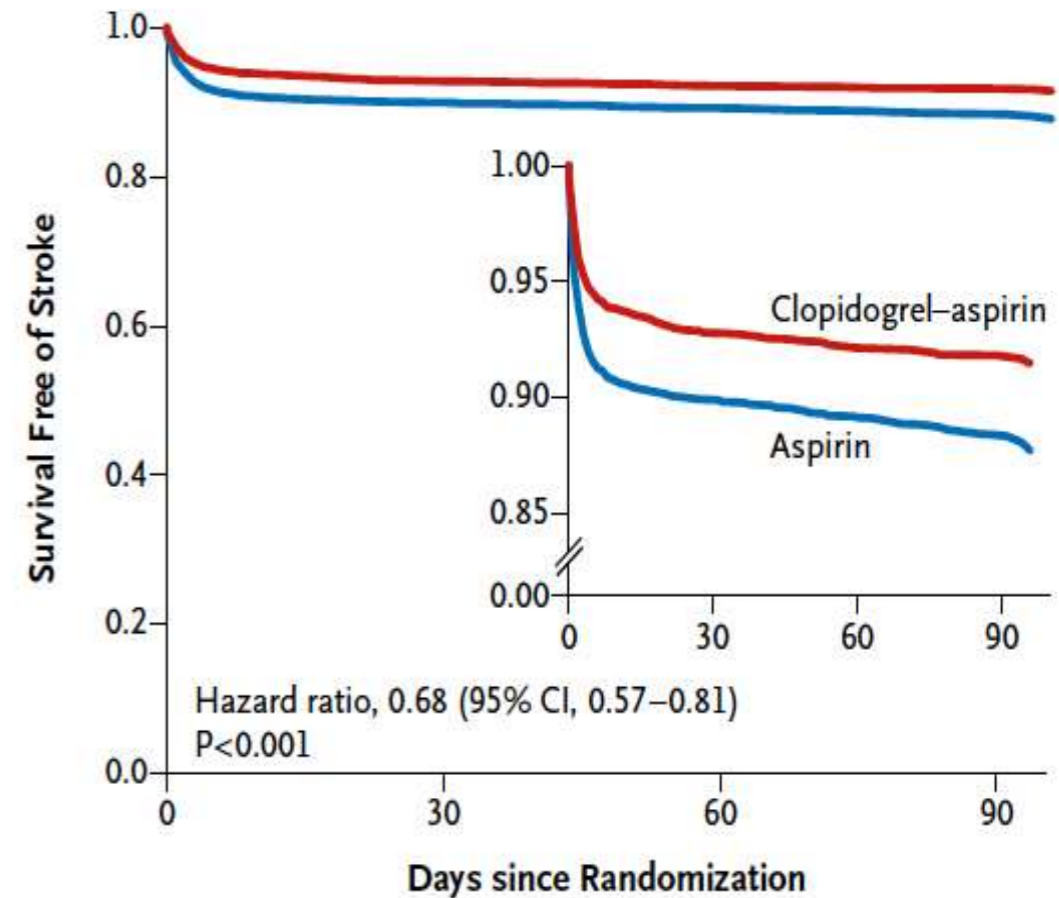
*A complete list of investigators and institutions participating in the Clopidogrel in High-Risk Patients with Acute Nondisabling Cerebrovascular Events (CHANCE) trial is provided in the Supplementary Appendix, available at NEJM.org.

This article was published on June 26, 2013, at NEJM.org.

N Engl J Med 2013;369:11-19.
DOI: 10.1056/NEJMoa1215340

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中風後 24 小時內
氯吡格雷 (90 天) + 阿士匹靈 (21 天)
比
單用阿士匹靈好
(減小再次中風機會 32%)



No. at Risk

Aspirin	2586	2307	2287	1906
Clopidogrel–aspirin	2584	2376	2361	1989

Figure 1. Probability of Survival Free of Stroke.

The primary outcome was ischemic or hemorrhagic stroke. The inset shows the same data on an enlarged segment of the y axis.

TPA 溶栓治療 - 20載

3 (4.5) 小時内

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TISSUE PLASMINOGEN ACTIVATOR FOR ACUTE ISCHEMIC STROKE

THE NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKE rt-PA STROKE STUDY GROUP*

Abstract *Background.* Thrombolytic therapy for acute ischemic stroke has been approached cautiously because there were high rates of intracerebral hemorrhage in early clinical trials. We performed a randomized, double-blind trial of intravenous recombinant tissue plasminogen activator (t-PA) for ischemic stroke after recent pilot studies suggested that t-PA was beneficial when treatment was begun within three hours of the onset of stroke.

Methods. The trial had two parts. Part 1 (in which 291 patients were enrolled) tested whether t-PA had clinical activity, as indicated by an improvement of 4 points over base-line values in the score of the National Institutes of Health stroke scale (NIHSS) or the resolution of the neurologic deficit within 24 hours of the onset of stroke. Part 2 (in which 333 patients were enrolled) used a global test statistic to assess clinical outcome at three months, according to scores on the Barthel index, modified Rankin scale, Glasgow outcome scale, and NIHSS.

Results. In part 1, there was no significant difference between the group given t-PA and that given placebo in

the percentages of patients with neurologic improvement at 24 hours, although a benefit was observed for the t-PA group at three months for all four outcome measures. In part 2, the long-term clinical benefit of t-PA predicted by the results of part 1 was confirmed (global odds ratio for a favorable outcome, 1.7; 95 percent confidence interval, 1.2 to 2.6). As compared with patients given placebo, patients treated with t-PA were at least 30 percent more likely to have minimal or no disability at three months on the assessment scales. Symptomatic intracerebral hemorrhage within 36 hours after the onset of stroke occurred in 6.4 percent of patients given t-PA but only 0.6 percent of patients given placebo ($P < 0.001$). Mortality at three months was 17 percent in the t-PA group and 21 percent in the placebo group ($P = 0.30$).

Conclusions. Despite an increased incidence of symptomatic intracerebral hemorrhage, treatment with intravenous t-PA within three hours of the onset of ischemic stroke improved clinical outcome at three months. (N Engl J Med 1995;333:1581-7.)

O R I G I N A L
A R T I C L E

Is stroke thrombolysis safe and efficacious in Hong Kong?

CME

Edward HC Wong 王浩中
Alexander YL Lau 劉玉麟
Yannie OY Soo 蘇藹欣
Deyond YW Siu 蕭容媛
Venus SW Hui 許詩韻
Colin A Graham 簡家簾
Thomas WH Leung 梁慧康
Lawrence KS Wong 黃家星

- Objective** To investigate the safety and efficacy of stroke thrombolysis in a local hospital.
- Design** Historical cohort study.
- Setting** A tertiary hospital in Hong Kong.
- Patients** The outcome of acute ischaemic stroke patients treated with intravenous tissue plasminogen activator between October 2008 and May 2011 was compared to those admitted during the same period who were thrombolysis-eligible, but treated conservatively due to unavailability of the thrombolysis service after-hours.

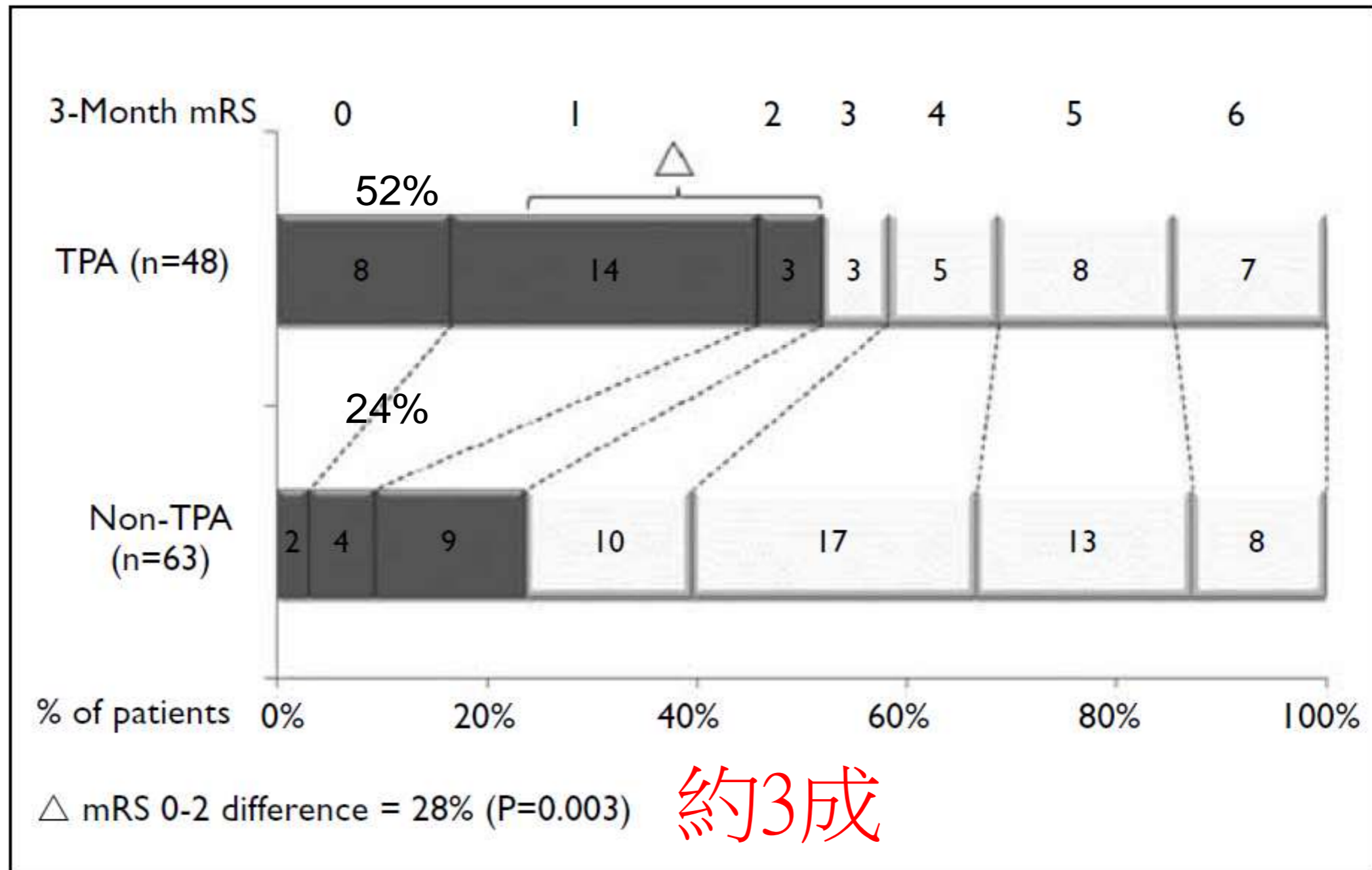
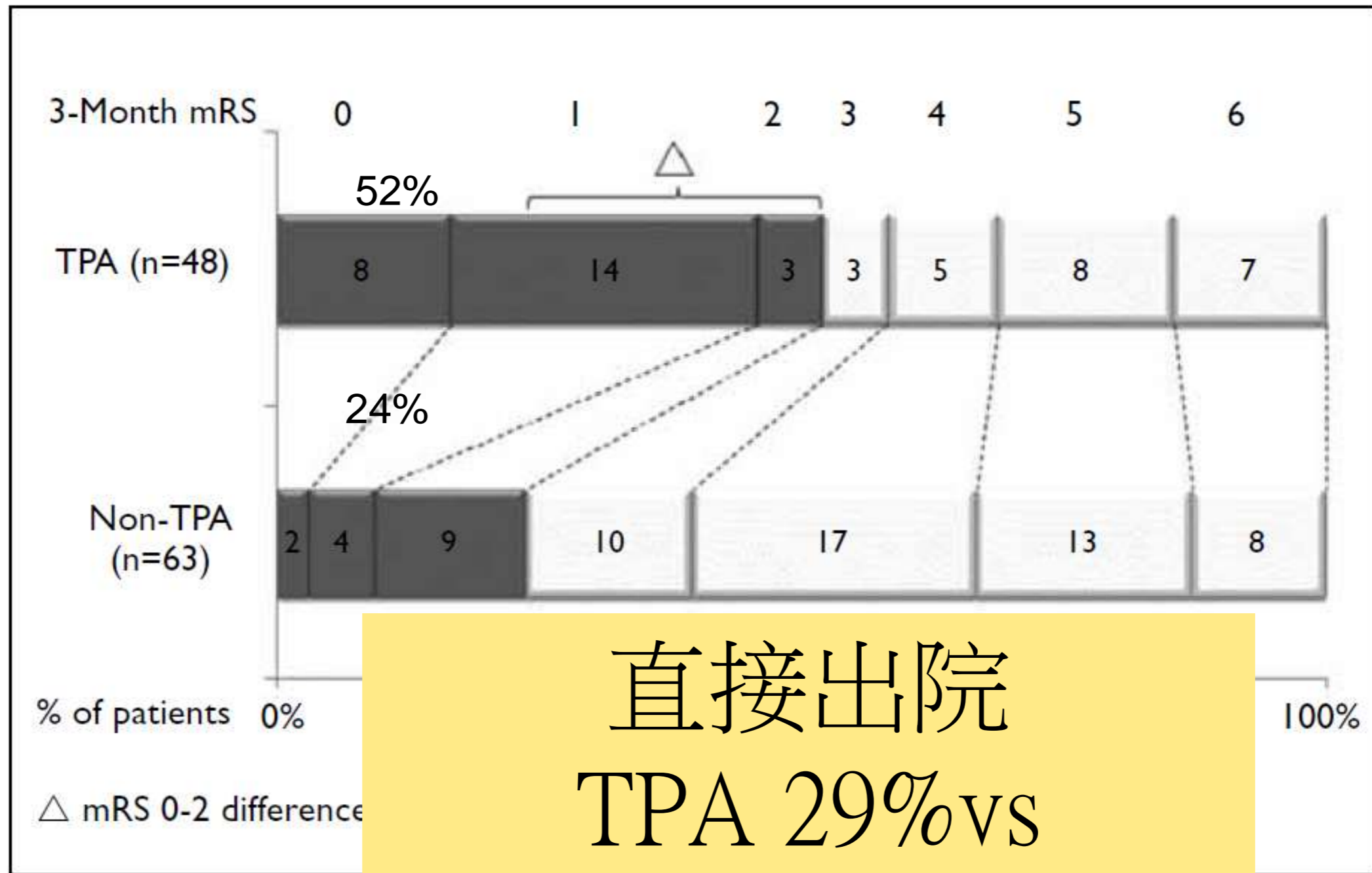


FIG 1. Comparison of 3-month modified Rankin Scale (mRS) scores in the thrombolysis and non-thrombolysis groups
 Bar chart numerals denote number of patients, and TPA tissue plasminogen activator

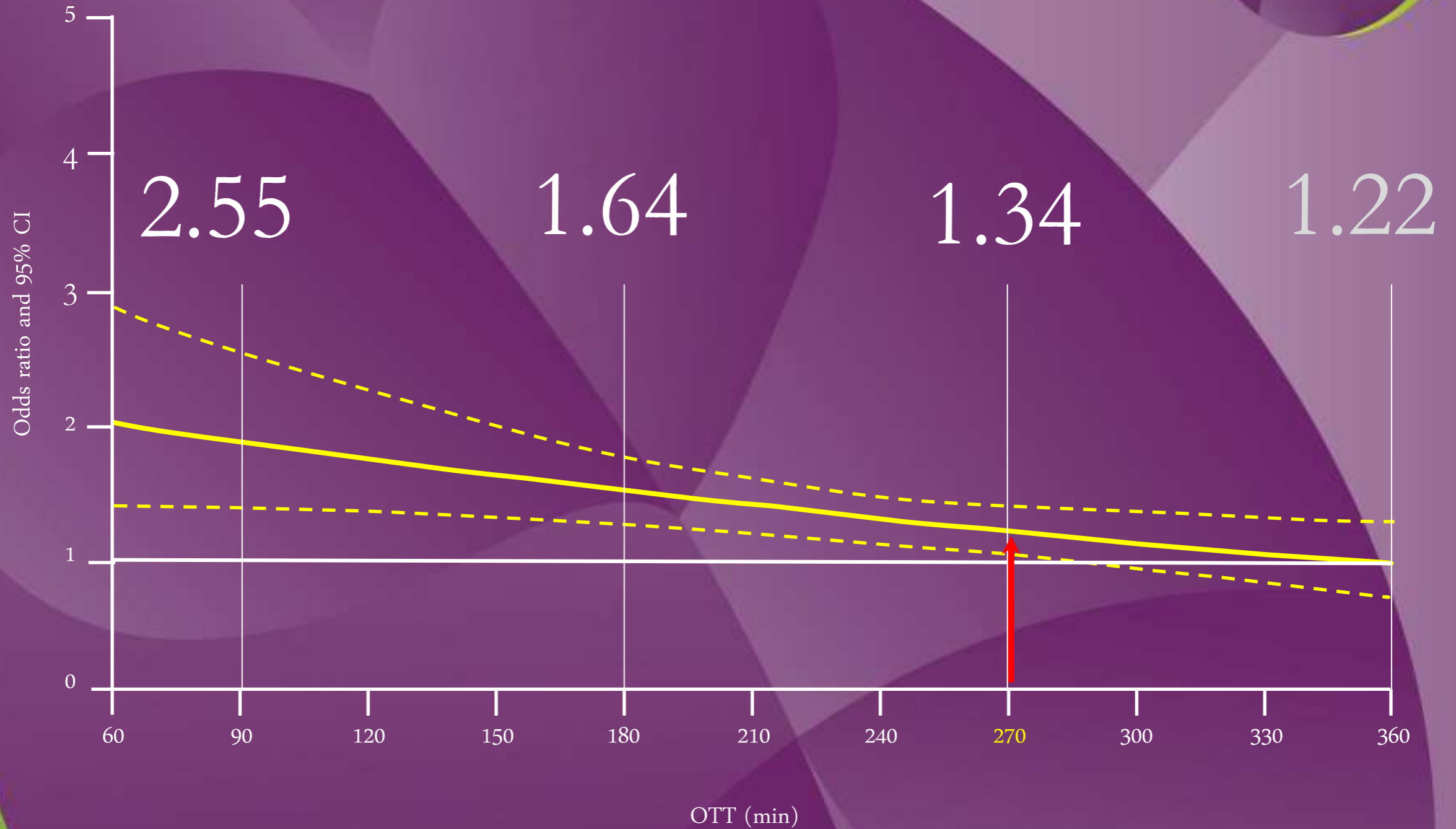


直接出院
 TPA 29% vs
 沒有 TPA 6%
 (p<0.001)

FIG 1. Comparison of thrombolysis and non-
 Bar chart numericals de

rator

越早越好



TPA不能廣泛應用



香港當前tPA治療現況，

大約 2% 的患者接受TPA溶栓治療

外國 > 10%

不能廣泛應用

CU
Medicine
HONG KONG



病人

醫護

對付中風 謹記：

對付中風

談笑用兵



表達或說話有困難



面部表情不對稱



手或腳無力



盡快致電999求助

如有以上中風徵狀，請盡快致電999求救

中風（缺血性）患者若能於黃金3小時內
接受中風急救治療，可有效減輕
中風後遺症對患者的傷害



麻痺・失去知覺



死亡



語言障礙



記憶力與思考力受損



視野障礙

若對中風徵兆及疾病有任何疑問，歡迎致電朋友心熱線：2794 8811



香港中風學會
THE HONG KONG STROKE SOCIETY



CU
Medicine
HONG KONG

來自德國的NeuroLogica and MEYTEC 開發了中風專門救護服務 — VIMED STEMO



JAMA. 2014;311(16):1622-1631. doi:10.1001/jama.2014.2850

Specialized Ambulance Improves Treatment Time For Stroke

專門救護縮短中風治療時間 25 分鐘

Rate of tPA treatment in ischemic stroke was higher after STEMO deployment (33 percent) than during control weeks (21 percent).

而接受tPA治療的比例增高33%（對照組為21%）

Traffic in Hong Kong 香港的交通

CU
Medicine
HONG KONG



醫管局缺乏神經專科醫生
(60名神經科醫生)，很難有24小
時專科駐院服務



TeleStroke with Security-enhanced Mobile Imaging Distribution System (SEMIDS)

遠程中風治療系統



*Department of Medicine and Therapeutics, Prince of Wales Hospital;
Department of Diagnostic and Interventional Radiology, CUHK
Department of Health Technology and Informatics, The Hong Kong
Polytechnic University & Department of Information Tech*

香港中文大學醫學院

Faculty of Medicine

The Chinese University of Hong Kong

香港和其他國家遠程中風治療的分別



西方國家



District Hospital
(Spoke Hospital)
區級醫院



Specialty Hospital
(Hub Hospital)
專科醫院



香港中文大學醫學院

Faculty of Medicine

The Chinese University of Hong Kong

香港和其他國家遠程中風治療的分別



西方國家

香港



District Hospital
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Specialty Hospital
(Hub Hospital)
專科醫院



Specialty Hospital
(Hub Hospital)
專科醫院



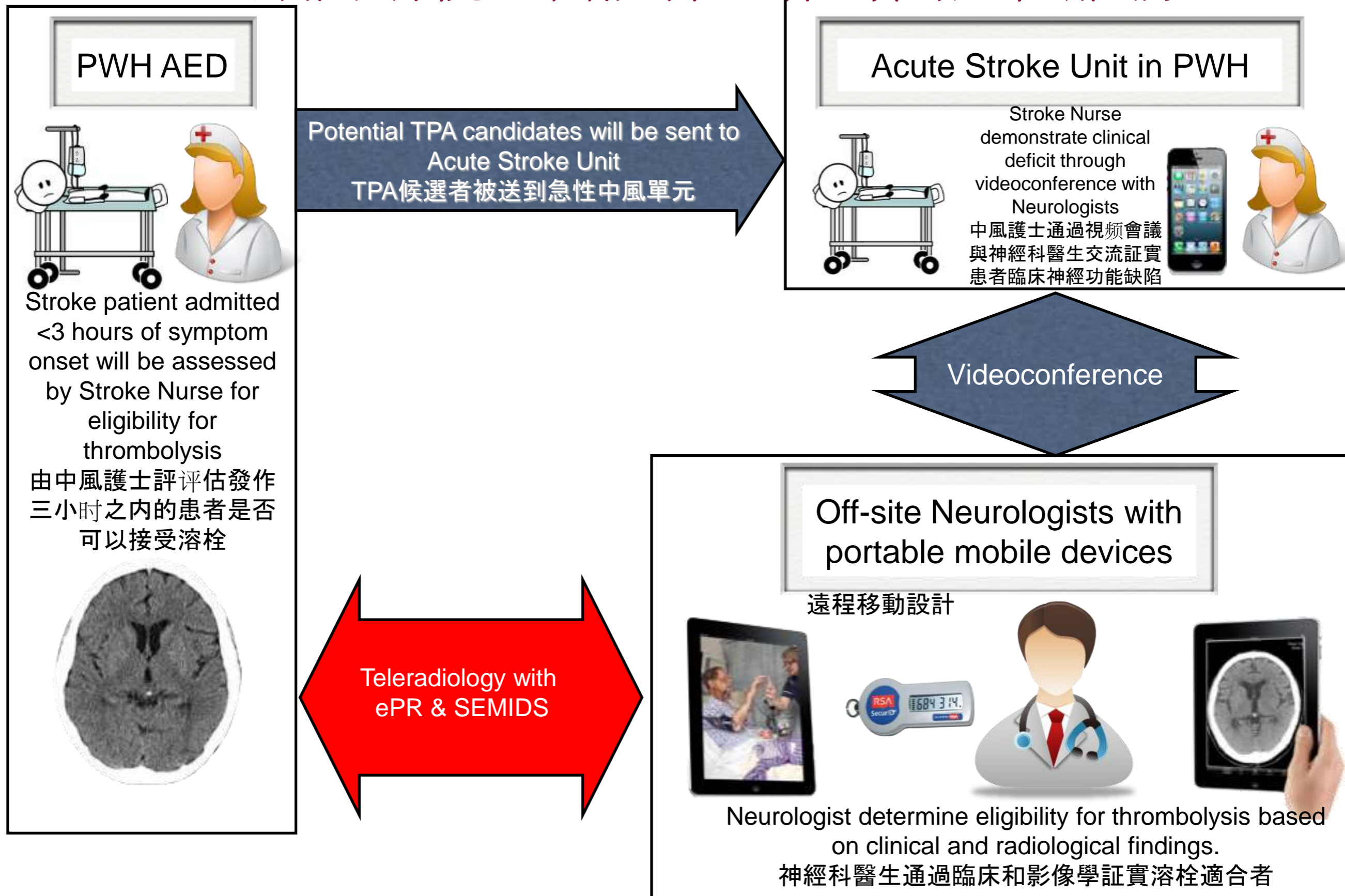
香港中文大學醫學院

Faculty of Medicine

The Chinese University of Hong Kong

TeleStroke in PWH during Nonworking Hours

威爾斯親王醫院非工作時間遠程服務



1



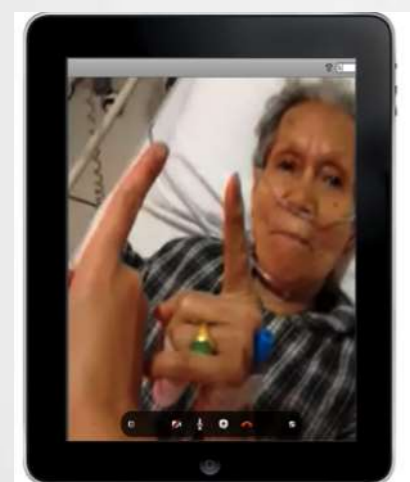
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3



4



5

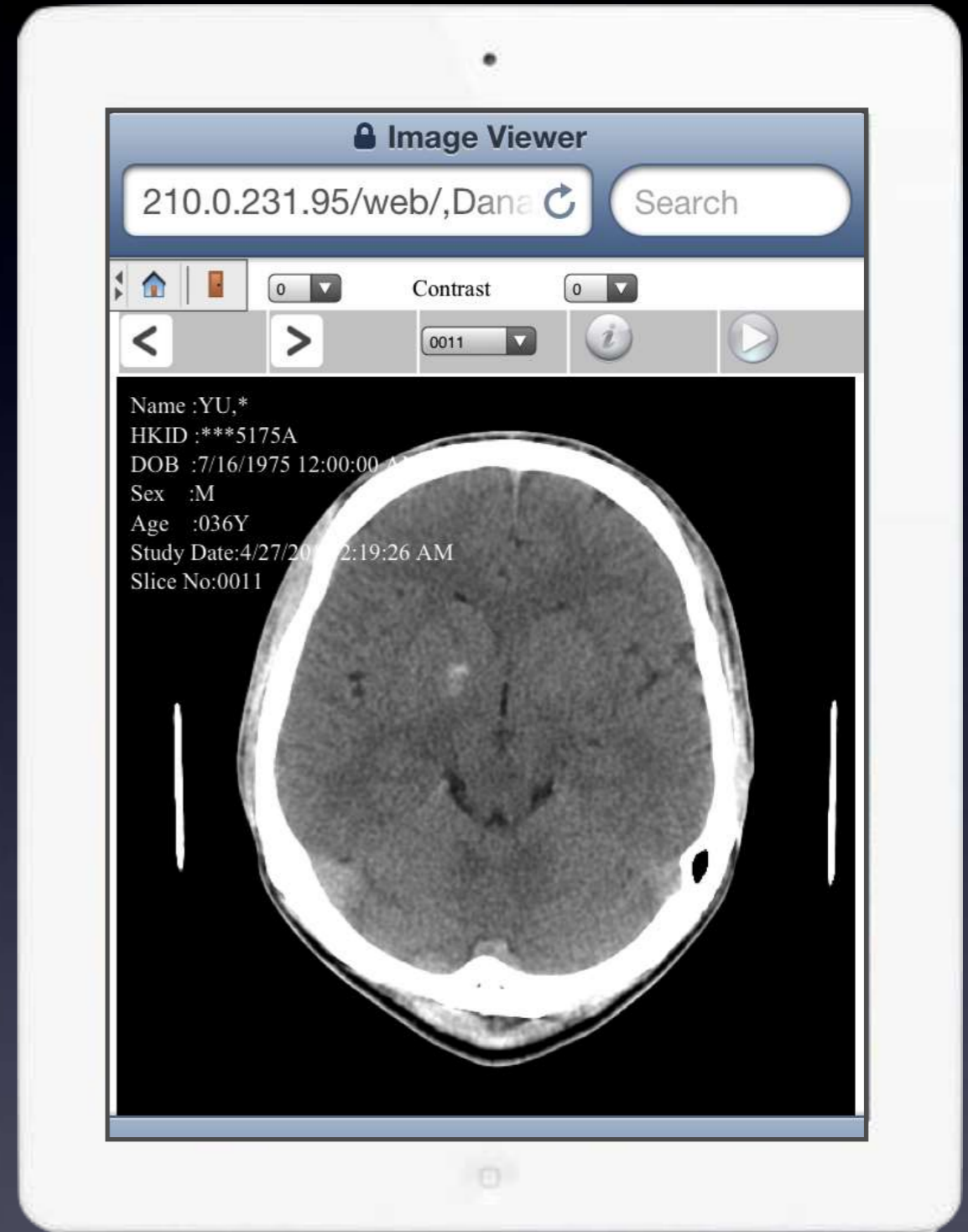
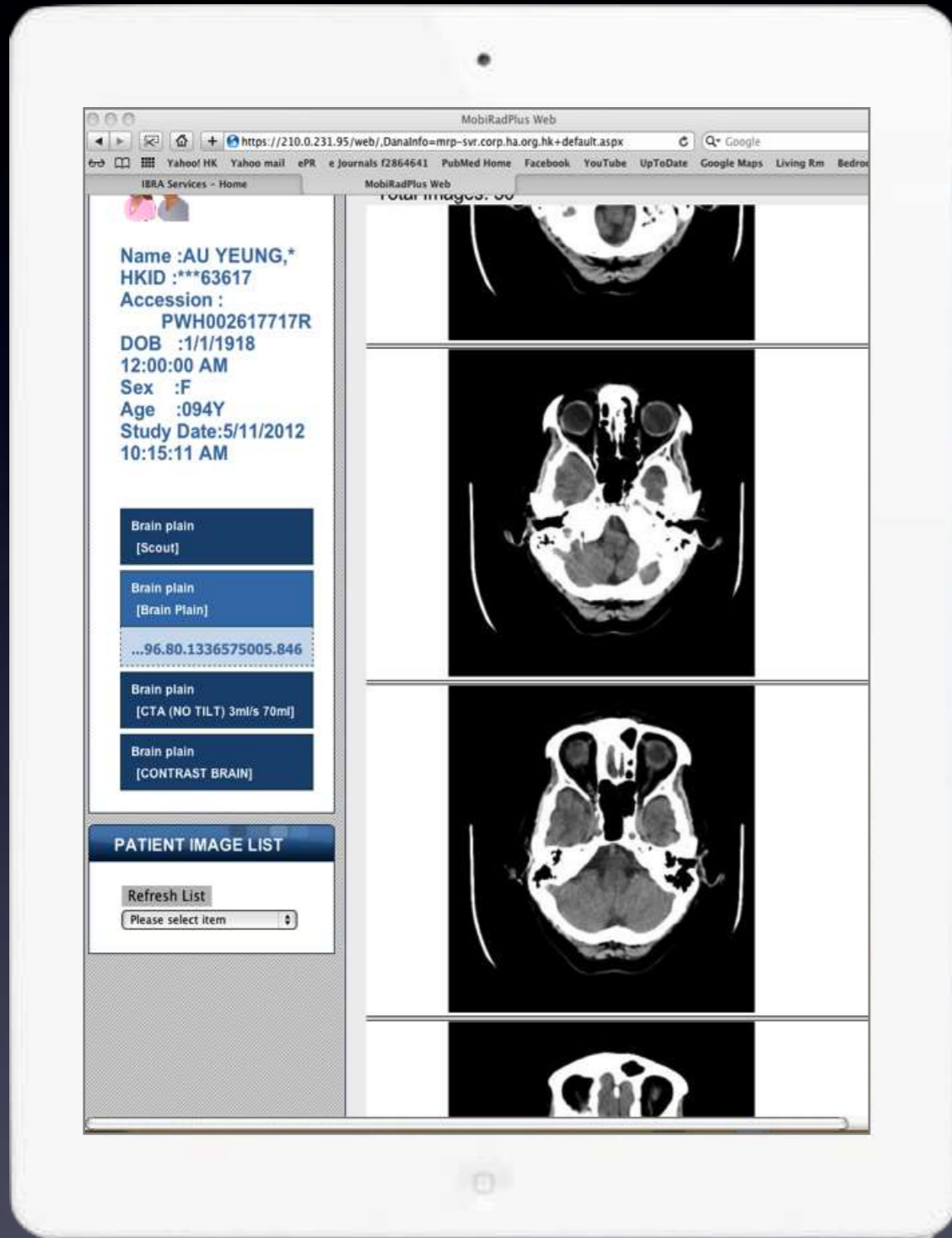


Stroke Nurse Special Training 中風護士特殊訓練

- Diagnosis of stroke 中風診斷
- Determination of onset time 發作時間的評定
- Accurate history taking 正確的病史採集
- Physical examination 體格檢查
- SEMIDS operation SEMIDS 操作系統
- Post-thrombolysis care. 溶栓後護理



Viewing CT brain images through SEMIDS 通過SEMIDS看CT腦腦像





TeleStroke through SEMIDS Facilitates 24-hour Thrombolysis Service SEMIDS 遠程中風治療服務使溶栓治療更加便利

- 24小时溶栓服務直到2012年5月才開始
- 共有90名患者受益
- 其中59名患者接受溶栓治療
- 接受溶栓治療患者數目已經提升到3倍（23名患者/年 Vs 72名患者/年）
- 每名患者平均住院是10天，少於未接受治療的患者

Comparison of Treatment Outcome By TeleStroke vs On-site Neurologists

遠程中風治療服務使溶栓治療療效對比

3 Mths Recovery & Complication 3 月後的結果	TPA by TeleStroke 遠程 (59 patients)	TPA by on-site Neurologist 駐 院 (57 patients)	*p
mRS 0-1 No or minimal symptoms 輕度	19 (32.2%)	21 (36.8%)	> 0.1
mRS 2-3 Mild to moderate disability. Need mild degree of help in self-care. Can walk unaided. 中度	7 (11.8%)	4 (7%)	> 0.1
mRS 4-5 Severe disability. Need frequent help in self-care. Need to walk with aids or bed-ridden. 嚴重	12 (20.3%)	15 (26.3%)	> 0.1
Symptomatic intracranial bleed 出血	4 (6.7%)	2 (3.5%)	> 0.1
Death 死亡	6 (10.1%)	6 (10.5%)	> 0.1

2013亞太區HIMSS 數碼醫療 傑出資訊及傳訊技術獎

2013 Asia Pacific HIMSS
Digital Healthcare
Outstanding Information &
Communication Technology Award



治疗- 不同层面

急性
卒中

预防再次卒中

康复治疗

预防首次卒中

急性治疗



缺血性中風



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Disease

大动脉疾病

33%



Small Vessel
Disease

小血管疾病

33%



Cardioembolism

心源性栓塞

15%

WARFARIN

新抗凝血藥

Medicine

Dabigatran (Direct Thrombin Inhibitor)

- RELY and subgroup analysis. NEJM Sept 2010.
- Approved by FDA for AF in Oct 2010

Rivaroxaban (Factor Xa Inhibitor)

- ROCKET-AF. NEJM Sept 2011
- FDA for AF in Nov 2011

Apixaban (Factor Xa Inhibitor)

- AVERROSE (c.w. Aspirin). NEJM March 2011
- ARISTOTLE (c.w. Warfarin). NEJM Sept 2011

無需驗血

與其它食物/一般藥物沒有相互影響

小出血得副作用

Hong Kong Institute of Integrative Medicine 香港中西醫結合醫學研究所

威爾斯親王醫院四樓
9月29日開幕



治療

科研

教育



中西合璧

THE STORM WARRIORS



CU
Medicine
HONG KONG